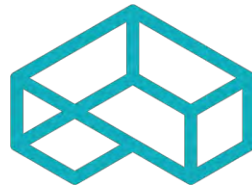


**RCRA CORRECTIVE ACTION
INTERIM MEASURES WORK PLAN
ELLIOTT DITCH – LEVEE SOIL REMEDIATION**

**ARCONIC LAFAYETTE OPERATIONS
3131 EAST MAIN STREET
LAFAYETTE, INDIANA 47905**

PREPARED FOR:



ARCONIC

**MR. ROBERT PREZBINDOWSKI
TENNESSEE OPERATIONS – NORTH PLANT
2300 NORTH WRIGHT ROAD
ALCOA, TENNESSEE 37701**

PREPARED BY:

**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
2704 CHEROKEE FARM WAY, SUITE 101
KNOXVILLE, TENNESSEE 37920**

CEC PROJECT: 172-367.0010

NOVEMBER 2019



Civil & Environmental Consultants, Inc.

TABLE OF CONTENTS

	<u>Page</u>
1.0 INTRODUCTION.....	1
1.1 GENERAL.....	1
1.1.1 Facility Description.....	1
1.1.2 Description of Elliott Ditch.....	1
1.2 CONSENT DECREE AND RCRA CORRECTIVE ACTION.....	2
1.3 RISK-BASED REMEDIATION	2
2.0 ELLIOTT DITCH FIELD SAMPLING ASSESSMENT	4
2.1 GENERAL.....	4
2.2 INVESTIGATION STRATEGY	4
2.3 INVESTIGATION SCOPE	5
2.4 INVESTIGATIONS RESULTS SUMMARY	6
3.0 ELLIOTT DITCH LEVEE SOIL INTERIM MEASURES	7
3.1 INTRODUCTION	7
3.2 OBJECTIVE	7
3.3 REGULATIONS OR GUIDANCE TO SUPPORT INTERIM MEASURES APPROACH.....	8
3.3.1 Date of Release	8
3.3.2 Clean Up Plan	9
3.4 CONSTRUCTION PLANS, PERMITS, AND NON-TSCA REGULATIONS	10
3.4.1 Community Relations Plan	10
3.4.2 Private Property Owner Access and Use Agreements.....	11
3.4.3 Tippecanoe County Drainage Board Coordination.....	12
3.4.4 Erosion and Sedimentation Control	12
3.4.5 Utility Clearance	12
3.5 INTERIM MEASURES – REMEDIAL APPROACH.....	13
3.6 DECONTAMINATION OF HEAVY EQUIPMENT	16
3.7 WASTE MANAGEMENT.....	17
3.7.1 Liquid Waste.....	17
3.7.2 Solid Waste.....	17
3.7.2.1 Potential RCRA Subtitle D Facilities	18
3.7.2.2 Potential RCRA Subtitle C Facilities.....	18
3.7.2.3 Potential TSCA Landfills.....	18
3.8 POST EXCAVATION CONFIRMATION SAMPLING	19
3.9 SAMPLE PROCESSING AND ANALYSIS	21
3.10 POST CONSTRUCTION REPORT	22

TABLE OF CONTENTS

TABLES

Levee Soil Sampling PCB Analytical Results	Table 1
--	-------------------

FIGURES

Elliott Ditch Vicinity Map	Figure 1
Decision Unit Overview	2
Decision Units 1-3	3
Decision Units 4-6	4
Decision Units 7-9	5
Decision Units 9-11	6

APPENDICES

Elliott Ditch Geomorphic Surface Mapping and Historic Data Review (TetraTech CES)	Appendix I
Field Sampling Plan – Elliott Ditch (TetraTech CES).....	II
Elliott Ditch Reaches 1 – 3 Field Sampling Report (CEC)	III

1.0 INTRODUCTION

1.1 GENERAL

Arconic Inc. (Arconic), formerly Alcoa Inc., Lafayette Operation (Facility), located at 3131 East Main Street in Fairfield Township, Tippecanoe County, Lafayette, Indiana is engaged in the production of aluminum extrusions serving an international market. Manufactured materials include tube, aerospace components, and oil and gas drilling products.

The purpose of this Interim Measures Work Plan (IMWP) is to outline the approach for the remediation of PCB impacted soil on a levee of Elliott Ditch. These impacts are believed to be in association with historic discharges from Outfall 001 into Elliott Ditch from the Facility. A risk-based remedial approach, as identified in 40 CFR 761.61(c), is proposed for the levee soil. This IMWP is being submitted to the Indiana Department of Environmental Management (IDEM) and the U.S. Environmental Protection Agency (USEPA) to satisfy the notification requirements in 40 CFR 761.61(c). The remedial strategy is to remove the PCB impacted soil to meet the project-specific, risk-based remedial objective (RBRO) for PCBs. The removed materials will be managed off-site at an appropriately permitted facility.

1.1.1 Facility Description

Arconic began production at the Facility in 1937 and currently it includes 2.3 million square feet of operations on 172 acres. The Facility is located within the northwest 1/4 of Section 34, Township 23 North, Range 4 West on the Lafayette East Indiana, USGS 7.5 Minute Topographic Series Map (Latitude: 040° 23' 26", Longitude: 086° 51' 43"). Topographic relief in the area ranges from approximately 650 to 670 feet above mean sea level (MSL). The locations of the Facility and Elliott Ditch are shown on **Figure 1**.

1.1.2 Description of Elliott Ditch

Elliott Ditch is a tributary to Wea Creek, which is a tributary to the Wabash River, just downstream of Lafayette, Indiana. Please refer to **Figure 1** for the location of Elliott Ditch and its associated streams. The ditch is identified as a regulated drain until the 9th Street crossing, slightly more than 1.60 miles downstream of Facility Outfall 001. The Tippecanoe County Drainage Board maintains the regulated drains within the county, subject to Indiana Code (IC) 36-9-27. Regulated drains include an easement that typically extends 75 feet from each bank. These easements are intended to provide access for maintenance activities to support proper functionality of the drain. The easement areas have construction restrictions regarding the types of improvements that can be made by private property owners without drainage board approval.

In addition to its base flow, Elliott Ditch receives wastewater and storm water discharges from local, industrial sources that are monitored under the National Pollution Discharge Elimination

System (NPDES). This includes receiving water from a NPDES permitted outfall (Outfall 001) of the Facility. Water from Outfall 001 discharges to Elliott Ditch approximately 1-mile south of the Facility. Discharge from the outfall includes treated sanitary and industrial process water, as well as storm water. The distance from Outfall 001 to the Elliott Ditch and Wea Creek confluence is 4.1 miles and to the Wabash River and Wea Creek confluence is 7.5 miles. The geomorphic surface mapping completed for Elliott Ditch by TetraTech CES, as documented in its *Elliott Ditch Geomorphic Surface Mapping and Historic Data Review* dated July 6, 2015, suggests that Elliott Ditch has eight distinct reaches (erosional/depositional regimes) downgradient of the outfall:

- Reach 1: Outfall 001 to downstream of the railroad bridge;
- Reach 2: The railroad bridge to the South 18th Street Bridge;
- Reach 3: South 18th Street Bridge to upstream of the 9th Street Bridge;
- Reach 4: South 9th Street Bridge to north of Brookside Drive;
- Reach 5: North of Brookside Drive to downstream of Poland Hill Road;
- Reach 6: Downstream of Poland Hill Road to downstream of Old Romney Road Bridge;
- Reach 7: Downstream of Old Romney Road Bridge to upstream of US Hwy 231 South Bridge; and,
- Reach 8: Upstream of US Hwy to the Elliott Ditch – Wea Creek confluence.

This IMWP is for levee soil, which is situated on the eastern bank of Elliott Ditch from near Outfall 001 (Milepost 0.00) to approximately Milepost 0.50, within Reach 1. This includes a channelized portion of Elliott Ditch that is identified as a regulated drain and therefore subject to IC 36-9-27 statues and enforcement by the Tippecanoe County Drainage Board. Please refer to **Figure 2** for the extent of the levee that is subject of this IMWP.

1.2 CONSENT DECREE AND RCRA CORRECTIVE ACTION

Investigations of Elliott Ditch from the early 2000s through 2012 were conducted per the Consent Decree (CD) between Arconic and the USEPA. The CD is associated with Clean Water Act findings and these issues are in the process of being closed. The Facility is subject to Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) and is in the process of implementing a RCRA Facility Investigation (RFI). This Interim Measures (IM) Project is being performed as part of the RCRA CA process.

1.3 RISK-BASED REMEDIATION

The primary constituents of concern (COCs) at the Facility and Elliott Ditch are PCBs. There are a few options for remediating PCB impacted sites as outlined in the Toxic Substances Control Act (TSCA) found in 40 CFR Chapter I, Subchapter R. More specifically, clean up and disposal options for PCB remediation projects are found in 40 CFR 761.61. A risk-based clean up and

disposal approach is presented as an option in 40 CFR 761.61(c) and is the remedial approach being implemented by this IM Project. An entity wishing to perform a remedial project using the risk-based approach is required to request and receive approval from the USEPA prior to conducting the project in this manner.

The RBRO for this IM Project and subsequent soil and sediment remediation projects at Elliott Ditch is 1.0 mg/Kg. This RBRO has been selected based on conversations with the USEPA and the IDEM, including its respective risk assessors, and the use of this objective on other, like projects. The use of this more restrictive RBRO will eliminate the need for further risk assessments in association with remedial efforts and not subject the remediated areas to future activity or use restrictions.

2.0 ELLIOTT DITCH FIELD SAMPLING ASSESSMENT

2.1 GENERAL

Arconic is in the process of conducting SWMU and AOC investigations to assess current conditions and potential releases in support of the RCRA Corrective Action process. Arconic retained Civil & Environmental Consultants, Inc. (CEC) to implement the regulatory-approved *Field Sampling Plan* (FSP), as prepared by TetraTech CES and dated February 2, 2016. Implementation of the FSP included the assessment of sediment and soil in Reaches 1 through 3 (Milepost 0.00 to 1.59) of Elliott Ditch. A portion of the FSP soil sampling occurred on the levee. CEC performed two, targeted investigations (February and June 2018) after the implementation of the FSP, conducted in October and November 2017, to further assess PCB impacts to levee soil. These targeted investigations followed the Standard Operating Procedures (SOPs) of the FSP to maintain consistency between the different field efforts. The results of implementing the FSP and the two, targeted investigations are summarized in the *Elliott Ditch Reaches 1-3 Field Sampling Report* dated August 2018, as prepared by CEC. The following references are included as appendices to provide the necessary background information for this IMWP:

- *Elliott Ditch Geomorphic Surface Mapping and Historic Data Review*, TetraTech CES, July 6, 2015 (Appendix I);
- *Field Sampling Plan – Elliott Ditch*, TetraTech CES, February 2, 2016 (Appendix II); and,
- *Elliott Ditch Reaches 1-3 Field Sampling Report*, CEC, August 2018 (Appendix III).

2.2 INVESTIGATION STRATEGY

The FSP was designed based on geomorphic principals, which influenced the sampling locations and depth intervals. The strategy for the FSP was developed following a stepwise process that included the following.

1. Use of fluvial geomorphology to define the erosional and depositional patterns for Elliott Ditch and its floodplain. This step included a desktop review, field survey to verify the results of the desktop review, and identification of sample transects and sample locations perpendicular to the stream. The sample locations were selected to assess the various geomorphic surfaces and erosional and depositional features of the ditch.
2. The second step of the investigation strategy was to use the geomorphic characteristics of Elliott Ditch to determine the area of investigation. The Elliott Ditch area of investigation includes the channel, the floodplain, and terrace surfaces to the upland boundary. The in-channel area includes the parts of the ditch that have deposits of silt and clay because PCBs absorb to these particle sizes. In the overbank areas, flood deposits on the floodplain and terraces during and after the time of release may also be subject to PCB deposition.

3. The third step of the investigation strategy was to assess what portion of the channel and overbank could be remediated in a single field season.

The sample locations were selected in depositional areas to assess the materials for the concentration of PCBs. An important part of the sampling strategy was to sample in areas that are not depositional to prove the absence of PCBs. This approach allows for confirmation of the erosional surfaces and a confidence that the fluvial geomorphology model of the stream is accurate. Additionally, the sampling strategy was designed to allow for iterative sample locations to be incorporated into the FSP based on data obtained during the field work and the analytical results. This aspect was applied during the two, targeted investigations.

Sample intervals varied based on the thickness of the soil horizon/sediment layer. The focus of the investigations was to understand the depositional pattern(s) and this was accomplished by sampling specific soil horizons and sediment layers. The horizon/layer based sampling provides a context of the geomorphic and pedogenic (soil profile) environment and allows an accurate assessment to characterize the PCB distribution. The fluvial geomorphology approach is beneficial to determine where PCBs may be located in Elliott Ditch and its floodplain and why the deposits are located where they are. In any investigation, a limited number of sample locations are collected to characterize a large area. It is important to have a scientific method to interpolate or extrapolate data from where it was collected to the other areas of the project.

2.3 INVESTIGATION SCOPE

The FSP and two subsequent, targeted investigations were conducted within and along the first 1.59 miles (Reaches 1 through 3) of Elliott Ditch. Provided in the following is a summary of the field activities performed in association with each assessment.

FSP Implementation

- Sediment piling and surveying;
- Sediment boring installation and sampling at 13 locations; and,
- Soil boring installation and sampling at 33 locations.

February 2018 Targeted Assessment

- Sediment boring installation and sampling at one location; and,
- Soil boring installation and sampling at 11 locations, including a boring at one previously assessed location.

June 2018 Targeted Assessment

- Soil boring installation and sampling at 17 locations, including a boring at one previously assessed location.

Of the 61 soil boring locations across the three different assessments, 23 were on the levee surface and four were in the upland swale soil located to the east of the levee. There were 79 discrete soil samples and 12 duplicate samples collected from the levee soil and nine discrete samples and no duplicates collected from the upland swale soil. Samples were collected of the observed soil horizons at each location. These sampling locations and targeted depths were selected to assess the lateral and vertical distribution of PCB impacts in these areas. This IMWP is for the levee soil of Elliott Ditch; therefore, subsequent summary discussion will focus on these portions of the assessments only.

2.4 INVESTIGATIONS RESULTS SUMMARY

Subsurface geology of the man-made levee along Elliott Ditch was indicative of soils introduced through anthropogenic activity. Soils varied in distinct horizons below ground surface and showed evidence of the levee construction through lifts of fill material. For the assessed areas of the levee, a soil horizon of organic material and silty loam was typically present at 0.0 to 0.5 feet below grade. Under this horizon, the majority of soils consist of an aggregate of clay loam, silty clay, and clay with sand. Between 0.5 and 4.0 feet below grade, soils were typically reddish brown or brown to dark brown in color, moderately to very plastic with fine granular structure. Very plastic, black clay with sand was present at some locations along the levee at depths between 2.5 feet and 4.0 below grade. While most samples had gravel content less than 15-percent, isolated horizons less than 0.5 feet in thickness were identified containing greater than 60-percent gravel. This is indicative of the levee construction taking place in lifts and possibly including graveled access roads or varying amounts of aggregate in the fill material.

The highest concentrations of PCBs and widest extent of soil impacts were observed in the levee surface with concentrations greater than 50 mg/Kg being observed in five samples, one of which was a duplicate. PCB concentrations exceeding 10 mg/Kg were observed in 11 samples from the levee surface. The PCB impacts to the levee vary in depth across the anthropogenic feature; however, it appears to be limited to the upper three feet of material. The deepest soil sample with a concentration exceeding 1.0 mg/Kg was collected from 1.75 to 2.75 feet below grade at Milepost 00.17. Impacts exceeding the RBRO of 1.0 mg/Kg are observed from Milepost 0.00 to Milepost 0.41.

The results of the FSP support the application of a geomorphology based assessment. More specifically, the distribution of PCB impacts to the levee appear exclusively within surface and shallow soil. PCBs were not detected in the upland swale geomorphic surface, located immediately east of the levee and away from Elliott Ditch. The consistent lack of PCB detections outside of the levee bound the lateral extent of soil needing remediation. Additional detail regarding the results of the field sampling of Elliott Ditch can be found in the *Elliott Ditch Reaches 1-3 Field Sampling Report*, as prepared by CEC and August 2018 in Appendix III.

3.0 ELLIOTT DITCH LEVEE SOIL INTERIM MEASURES

3.1 INTRODUCTION

Arconic has unilaterally decided to remediate PCB impacted soil on the levee of Elliott Ditch and has prepared this IMWP to address the safe movement and disposal of these materials. The intent of the IMWP is to demonstrate that the proposed remedial approach will not pose an unreasonable risk to human health or the environment during the remedial actions or in the manner of disposal. As part of the RCRA Corrective Action process, this IMWP is being submitted to the IDEM and the USEPA Region 5 for review and coordinated approval. This IMWP is to address PCB impacts to soil on the levee situated in Reach 1 of Elliott Ditch. Subsequent efforts will be conducted to delineate and remediate, if necessary, other PCB impacted media within Reach 1 and the down gradient reaches of Elliott Ditch exceeding the RBRO of 1.0 mg/Kg.

3.2 OBJECTIVE

The IM objective of this project is to remove PCB impacted soil from the levee portion of Reach 1 of Elliott Ditch that contains concentrations exceeding the RBRO, as determined by the geomorphology-based assessments. The proposed excavation depths have been defined by the soil sampling analytical testing that has been performed to date and includes those where PCBs were detected above the RBRO. The horizontal extent of proposed excavation perpendicular to Elliott Ditch will be the full width of the levee and parallel to Elliott Ditch. PCBs were not detected in the upland swale geomorphic surface, located immediately east of the levee and away from Elliott Ditch. The consistent lack of PCB detections outside of the levee bound the lateral extent of soil needing remediation and support the geomorphology based assessment approach that is being used to guide this IM Project.

The RBRO for the levee soil at Elliott Ditch is total PCBs of 1.0 mg/Kg. The removed soil will be managed offsite at an Arconic-approved and appropriately permitted landfill. Specifically, soil exhibiting PCB concentrations greater than or equal to 50 mg/Kg will be disposed at a RCRA Subtitle C facility or TSCA landfill, as allowed by 40 CFR 761.61(a)(5). Soil exhibiting PCB concentrations less than 50 mg/Kg but greater than or equal to 1.0 mg/Kg will be disposed at a RCRA Subtitle D facility permitted to accept PCB-containing waste.

The limits of excavation for this IM Project of the levee soil at Elliott Ditch are illustrated on **Figure 2**. The final excavation footprint and depths are dependent upon the confirmation sample results.

3.3 REGULATIONS OR GUIDANCE TO SUPPORT INTERIM MEASURES APPROACH

The USEPA exempts PCB waste from the RCRA waste requirements specified in 40 CFR Parts 261 through 265, parts 268, and 270. PCB wastes are instead regulated under TSCA. The exemption is described in 40 CFR Part 261.8, and includes the notification requirements specified in RCRA. The TSCA regulations governing the manufacturing, processing, distribution in commerce and use prohibitions, including remediation and disposal, are codified in 40 CFR Part 761. Additional TSCA regulatory guidance and criteria used to develop the IM approach is discussed in the following sections.

3.3.1 Date of Release

Arconic has performed a detailed review of historic operations at the Facility to determine the source and release date of the PCB impacts identified in Elliott Ditch. Provided in the following is a summary of the review results. Please note that Alcoa is used interchangeably with Arconic in this section of the IMWP.

To reduce the potential for a recurrence of an April 1955 petroleum oil fire at an Alcoa facility in Texas, Alcoa issued guidance to facility managers for the replacement of petroleum-based oils with non-flammable fluids. Recommended non-flammable fluids included Monsanto Pydraul-branded fluids known to contain PCBs. The Lafayette Operations (Facility) followed this guidance and changed some of its petroleum-based oils to Pydraul-branded fluids. In the late-1950s and 1960s, the Facility documented leaks of equipment containing non-flammable fluids including locations that flowed to the industrial storm sewer and to the sewage treatment plant.

As a response to a 1970 bulletin from Monsanto to consumers on the potential environmental effects of Pydraul-branded fluids, the Facility immediately began to discontinue use of these oils and implement policy to prevent discharge of the oils to the sewers. More specifically, in 1972, the Facility implemented a program to change several of the fire-resistant fluids from chlorinated biphenyl-based fluids to ester-based fluids. Later correspondence indicated that by 1974, all PCB-containing Pydraul had been eliminated from Facility reserves.

Starting in the summer of 1978, the Facility initiated an inventory, comprehensive testing, and fluid replacement program for all equipment previously containing or potentially contaminated by PCB-based fluids. In April 1979, the Alcoa Technical Center completed the first of two wastewater characterization studies identifying PCBs in the industrial sewer sediment, wastewater treatment plant sludge, and industrial influent.

In September 1979, the Facility notified the Stream Pollution Control Board of the presence of PCBs in confirmatory samples collected from the sewage treatment plant sludge. On December 7,

1979, the Indiana State Board of Health (ISBH) collected a sample from the Outfall 001 discharge, which according to the ISBH, “confirmed the presence of PCB in the discharge”. The confirmation is believed to be resultant from documented leaks of equipment containing non-flammable fluids including locations that flowed to the industrial storm sewer and to the sewage treatment plant.

In summary, based on the results of the record search for the Facility the following conclusions can be reached:

- Following a fire at an Alcoa facility in 1955, the Facility followed corporate guidance to change some of its petroleum-based oils to Pydraul-branded, and PCB-containing, fluids;
- In the 1970s, the Facility implemented a program to rid equipment of containing PCB-containing fluids and PCB-contaminated materials (primarily sludges, press waters, and oils). Stores of PCB-containing Pydraul non-flammable fluid were eliminated from Facility reserves by 1974;
- A release occurred prior to April 18, 1978. No spill from equipment with PCB-containing fluids, which resulted in a discharge to Elliott Ditch, was documented after this date;
- The source concentration is believed to be greater than 50 parts per million; and,
- Based on the facts presented above, any exceedance of the NPDES permit and/or discharge of impacted media to surface waters would be derived from pre-April 18, 1978, original release.

3.3.2 Clean Up Plan

The following outlines the clean-up plan proposed to be completed under 40 CFR 761.61(c).

1. Clear underground utilities and remove overgrown brush, small trees, and other vegetation, as necessary, in support of preparing for the soil removal project.
2. Soil requiring excavation and offsite disposal due to detected PCB concentrations will be handled based on the concentration at which the PCBs are found, as outlined in 40 CFR 761.61.
3. Temporary storage of excavated, TSCA regulated soil is subject to the requirements of 40 CFR 761.65(c)(9). Temporary storage is permitted for a period of 180 days from the accumulation start date. Soil that is stockpiled within the excavation footprint for truck loading purposes will not be subject to these requirements so long as the stockpile is diminished by the end of the working day.
4. Soil containing less than the 1.0 mg/Kg total PCBs will be left in place. Once it is confirmed via sampling that the remediation of the levee soil has achieved the RBRO, the excavation will be backfilled with clean, borrow soil, and the levee will be restored to pre-project grades.

5. Soil containing greater than or equal to 1.0 mg/Kg and less than 50 mg/Kg PCBs will be excavated and disposed offsite at a RCRA Subtitle D facility, as outlined in 40 CFR 761.61(a)(5)(i)(B)(2)(ii) and §761.61(a)(5)(v)(A). Note that some RCRA Subtitle D facilities have a PCB concentration waste acceptance criteria slightly lower than 50 mg/Kg and no soil will be shipped to RCRA Subtitle D facility that have PCBs concentrations in excess of the facility waste acceptance criteria. The landfill(s) will be notified in writing of the amount and concentration of the waste at least 15 days prior to the first shipment, as outlined in §761.61(a)(5)(i)(B)(2)(iv).
6. Soil containing greater than or equal to 50 mg/Kg PCBs will be excavated and disposed offsite at a RCRA Subtitle C facility or TSCA landfill, as outlined in 40 CFR 761.61(a)(5)(i)(B)(2)(iii). If a RCRA Subtitle C facility is used for disposal, it will be notified in writing of the amount and concentration of the waste at least 15 days prior to the first shipment, as outlined in §761.61(a)(5)(i)(B)(2)(iv).
7. Material shipped off-site will be managed in accordance with the storage and disposal requirements defined in 40 CFR 761 Subpart D.
8. Waste disposal records and reports will be maintained for PCB remediation waste shipped off-site in accordance with 40 CFR 761 Subpart K.
9. Equipment used during the remediation project that potentially contacts impacted materials will be decontaminated following the standards and procedures described in 40 CFR 761.79.

3.4 CONSTRUCTION PLANS, PERMITS, AND NON-TSCA REGULATIONS

There are other regulatory and legal requirements that are being considered other than TSCA. Provided in this section are those requirements identified as being applicable to this IM Project.

3.4.1 Community Relations Plan

The IM Project will include the preparation and implementation of a Community Relations Plan (CRP). The CRP will include at least the following content:

- Identify all property owners and property occupants that abut the properties that are subject to IM Project activities.
- Identify all known or registered neighborhood organizations serving the location of the IM Project, if any.
- Include a sample of a written notice to be sent to the property owners/property occupants and neighborhood organizations, which shall include:
 - a short description of the IM Project to be performed;

- information concerning the public comment period, including the time period and procedures for public comment, and the address to which comments are to be directed; and,
- the location of the record repository where the IMWP has been placed.
- Provide the name(s) and mailing address(es) of all affected local governmental units with jurisdiction within one mile of the property(ies) affected by the proposed IM Project. IDEM will notify the affected local government units about the IM Project and the anticipated remediation. In addition, local government units that are affected by the proposed IM Project will be notified by IDEM of the IMWP at the beginning of the public comment period as soon as an internal review of the document has been completed. These local government units will include those located in the county of the project only since no other counties are within one mile of the project.
- Provide the name(s) and mailing address(es) of at least two newspaper(s) or other appropriate circulars in which notice of the public comment period will be published.
- Identify the location of the public library and other public repositories in which a copy of the proposed IMWP will be placed. The proposed IMWP must be placed in the public library closest to the site and in the county affected by the project. If more than one repository is selected, the participant shall provide one additional copy of the proposed IMWP for each additional repository.
- In addition, a sign shall be posted that:
 - identifies the location as a IM Project site;
 - provides USEPA Region 5 project manager, IDEM OLQ project manager, and Arconic project manager phone numbers;
 - shall meet the following criteria:
 - be visible/readable from 20 feet;
 - be in English and the language predominantly used in the neighborhood if other than English;
 - place one sign per site access point and no more than three signs total; and,
 - shall be posted starting with the end of the public comment period for the IMWP, before any work begins and remain posted until the project has been completed.

The CRP will be prepared by Arconic and submitted for USEPA Region 5 and IDEM for review and approval. Once it has been approved, Arconic will implement the CRP in support of the successful execution of this IM Project.

3.4.2 Private Property Owner Access and Use Agreements

This IM project is to take place on six private property parcels that have four different owners. *Access and Use Agreements* have been provided by each of the four owners and the agreements

include remediation and restoration as part of the permitted activities. That said, these private property owners will be engaged during planning for the IM Project to provide information regarding remediation and project logistics. If access to other private property(ies) with different ownership is required to support access to the levee or other project functions, the *Access and Use Agreement* used during implementation of the FSP will be used to document approval.

3.4.3 Tippecanoe County Drainage Board Coordination

The Tippecanoe County Drainage Board has regulatory authority over easements associated with regulated drains. As noted previously, the easement for the regulated portion of Elliott Ditch extends 75 feet from the top of both banks. The majority of this IM Project will take place within this easement and coordination with the Tippecanoe County Drainage Board will be required. It is understood that Tippecanoe County Surveyor's Office is the ex-officio, non-voting, member of the Drainage Board. This provides the County Surveyor with authority over construction, reconstruction, and maintenance of all regulated drains and proposed regulated drains within the county. It is understood that the Drainage Board meets on the 1st Wednesday of every month at 10 a.m. If needed, this meeting time can be used to engage the Drainage Board to discuss the project and outline the information that will be needed for review such that approval of the IM Project can be provided. Ultimately, approval of the IM Project, including removal and restoration of portions of the levee, will be required from the Tippecanoe County Drainage Board.

3.4.4 Erosion and Sedimentation Control

The area of disturbance associated with the IM Project will exceed the 1.0-acre threshold for requiring an Erosion and Sediment Control Plan and coverage under the NPDES General Permit Rule Program. Therefore, an Erosion and Sediment Control Plan will be implemented in accordance with applicable Indiana Administrative Code (IAC) requirements, specifically outlined in 327 IAC 15-5 (Rule 5) "Stormwater Run-off Associated with Construction Activity", and local regulations. It is assumed that the process will include submitting an Erosion and Sediment Control Plan to the City of Lafayette (City) for review, since it is its own Municipal Separate Storm Sewer System (MS4). Once the City has reviewed and approved the plan, a Notice of Intent (NOI) will then be filed with the City. A City Inspector will periodically visit the project to review and assess the adequacy of in-place erosion and sedimentation control measures. Sediment control devices will be installed before or concurrently with initial clearing and grubbing, and prior to land disturbing activities. Removal of the devices will not occur until the construction site is stabilized. The Erosion and Sedimentation Control Plan, NOI, and approval letter from the City will be provided to the USEPA Region 5 and the IDEM, upon request, for informational purposes.

3.4.5 Utility Clearance

Prior to earthwork activities, it is required by law to contact the public underground utility locating service. In the State of Indiana, that service is Indiana811. Contact to Indiana811 will occur at

least 2-weeks in advance of ground-breaking activities. In addition to the required Indiana811 notification, information regarding the IM Project will also be provided to the local utility companies. If it becomes necessary to adjust, move, or relocate existing utility structures, utility poles, lines, services, or other utility appurtenances located in or affected by construction, the appropriate service provider will be contacted to discuss the process necessary to relocate the utility.

3.5 INTERIM MEASURES – REMEDIAL APPROACH

The remediation process will include the removal of PCB impacted soil from the levee that exceeds the RBRO. The excavation extents will be based on the geomorphic principals used in the assessment of this reach of Elliott Ditch and the soil sampling analytical results that confirm the use of this approach. Please refer to **Figure 2** for the proposed excavation extents of the levee. The following outlined steps describe the conceptual approach to the IM Project.

1. Mobilization – Transport materials, equipment, and personnel to the site.
2. Benchmarks – Field benchmarks will be established by the Owner/Engineer and maintained during construction. A minimum of four permanent benchmarks will be established by a State of Indiana Professional Land Surveyor and used for delineating the excavation extent and establishing machine control (if necessary).
 - a. Benchmark locations will be recorded with horizontal and vertical data on Project Record Documents. The datum used will be a known coordinate system, such as Indiana State Plane. The use of a local coordinate system will not occur.
 - b. Where the actual location or elevation of layout points cannot be marked, temporary reference points will be provided as necessary to locate the extents of the IM Project.
 - c. Temporary reference points will be removed when no longer needed.
3. Project Stakeout – Prior to starting construction, improvement features will be field located, including: construction entrance(s), access road(s), erosion and sedimentation controls, project support area(s), and excavation footprints.
4. Site preparation – Furnish and install silt fence, stabilized construction entrance, access road(s), heavy equipment decontamination area and other sedimentation control devices as applicable.
5. Clearing, grubbing, and disposal of vegetative waste – Trees, shrubs, and plants will be designated for removal using boundary markers or spray paint. Vegetation within the remedial footprint will be cut off approximately 2 inches above the ground surface and the stump and roots removed during excavation of PCB impacted soil. Grubbed materials (vegetative material only) from below surface grades that are in contact with PCB impacted

material will be transported offsite for disposal along with the soil removed from the area. Cleared materials from above surface grades will either be chipped and used onsite or transported offsite for disposal at a RCRA Subtitle D (non-hazardous, municipal solid waste) facility.

6. Removal of targeted materials – The excavation plans will be used to direct remediation. The excavation process will be conducted to efficiently handle removed materials; for example, excavated materials may be direct loaded into lined trucks instead of stockpiling. In general, these materials will be managed as follows:
 - a. Soil containing greater than or equal to 1.0 mg/Kg and less than 50 mg/Kg total PCBs will be excavated, loaded, and hauled off-site to an approved RCRA Subtitle D landfill.
 - b. Soil containing greater than or equal to 50 mg/Kg total PCBs will be excavated, loaded, and hauled off-site to an approved RCRA Subtitle C or TSCA landfill.
7. Precipitation accumulation management – Rain water that collects within the open excavation footprint and is in contact with soil potentially containing PCBs will be treated the same as the decontamination wastewater as discussed in Section 3.5.
8. Excavation equipment management – To the extent practical, equipment will remain either within or outside of the disturbed excavation footprint during the IM Project. This will protect against mobilizing potentially impacted materials into other areas along the ditch. Haul trucks will remain out of the excavation footprint or on clean materials placed within to protect against mobilizing impacted materials.
9. Confirmation sample collection – Confirmation samples will be collected from the bottom of the excavation to confirm the removal of materials containing total PCBs greater than or equal to 1.0 mg/Kg. See Post Excavation Confirmation Sampling, Section 3.7, for additional detail.
10. Borrow soil specification and confirmation sample collection – An offsite borrow source(s) will be needed to backfill and compact the excavations. Borrow soil will be subject to the following requirements:
 - a. Consist of clean, well-graded, natural soil classified as SW, SM, SM-SC, SC, ML, CL-ML, or CL (ASTM D 2488) containing no topsoil or other deleterious material.
 - b. Stones or rock fragments will not exceed one quarter the maximum lift thickness (9-inches) as compacted in any dimension. Isolated rocks will be a maximum of 6-inches in any dimension and removed if observed.
 - c. Fill materials will have a 10-percent maximum loss on ignition (ASTM D 2974).

The levee will need to be restored to at least pre-project conditions to prevent flooding on properties it was constructed to protect. The vendor(s) of the offsite source will provide certification statements or documentation (i.e. analytical testing reports) indicating the soil is free of contamination. If no certification statement is provided or the source of the borrow material is suspect, environmental samples will be collected to confirm it is free of contamination prior to use. Additionally, geotechnical samples will be collected to establish the Standard Proctor curve for the material if it is not provided by the vendor.

11. Retrieve borrow soil from the offsite source(s) – Borrow soil will be excavated and placed into dump trucks and transported to Elliott Ditch for use in backfilling the excavation. It is assumed that reconstructing the levee will occur immediately following excavation and confirmation that the decision unit meets the RBRO. The fill material will be directly dumped into the excavation footprint or temporarily stockpiled. If temporary stockpiles for the borrow material are created, erosion and sedimentation controls will be installed as necessary.
12. Place, grade, and compact the backfill soil – Soil backfill materials are to be placed in loose lifts not to exceed 9 inches in depth for material compaction by heavy equipment. Placement will occur in a manner such that equipment is not in direct contact to the completed excavation bottom. Backfill materials are to be compacted to not less than 95-percent of maximum dry unit weight according to ASTM D-698 (Standard Proctor Test) using mechanical equipment. Compacted fill will be placed to at least pre-project elevations such that the levee is fully restored.
13. Backfill equipment management – Equipment will take special precautions to not track PCB impacted soil across clean areas. If equipment is suspected of coming into contact with impacted materials, it will be properly decontaminated, as discussed in Section 3.5, prior to mobilization into clean areas.
14. Removal of access road(s), sump(s), and temporary stockpile areas – Any project support features, i.e. sump(s), temporary stockpile areas, etc. will be removed, unless specifically requested to be left in place by the Tippecanoe County Drainage Board or the private property(ies) owner, or identified as being needed for subsequent remedial efforts, after successful execution of the IM Project.
15. Post excavation and post backfill topographic surveys – Periodic topographic surveys will be conducted after successful excavation of PCB impacted soil to the RBRO. The surveys will collect information regarding the depth and extent of the completed excavation and be used to estimate the volume of material removed during the IM Project. The periodic surveys will be conducted by onsite staff trained to use survey-grade GPS equipment. A State of Indiana Professional Land Surveyor will perform the post backfill topographic

survey to document completed conditions meet or exceed pre-project conditions and record it in a known coordinate system, such as Indiana State Plane, and elevation datum.

16. Vegetative planting – Areas disturbed by the IM Project will receive at least a single, loose 3-inch lift of topsoil and be subject to vegetative planting. The topsoil will be pH of 5.5 to 7.0 and contain a minimum of 6-percent organic matter and no stones larger than 1-inch in any dimension. Phosphorus free fertilizer (12 – 0 – 12) will be applied at a rate of 23 pounds per 1,000 square feet to assist in germination and growth. The selected seed mixture and application rate will be determined based on the completion date of the project and soil conditions. Erosion and sedimentation controls will not be removed until adequate vegetative coverage has been established and the Notice of Termination for the NPDES General Permit has been submitted.

3.6 DECONTAMINATION OF HEAVY EQUIPMENT

Decontamination areas will be constructed and maintained at the equipment exits for remedial footprint. The locations for these areas will be selected by the contractor and approved by Arconic. Clean gravel will cover the areas to prevent potential recontamination of vehicles after being decontaminated. The decontamination area will be lined with construction-grade plastic to prevent infiltration of fluids into the subsurface and sloped to drain to a collection sump, preferable away from Elliott Ditch. Dry soil removal from heavy equipment will occur by using disposable brushes, trowels, and hand tools. Removed dry soil will be returned to the soil staging area or live loaded for offsite management. The remaining soil removal from heavy equipment will be in accordance with 40 CFR 761.79 *Decontamination Standards and Procedures*. The process is likely to include using a pressure washer followed by cleaning with environmentally friendly detergent/water, rinsing with potable water, and wiping down equipment areas that were in contact with impacted soil with a solvent (e.g. hexane, acetone, diesel fuel, or others). Management of decontamination fluids, including spent solvents, will be in 55-gallon drums or tanks that will be stored in a secure area for characterization sampling and analytical testing purposes. Management of these materials will be according to the analytical results.

Residual sediment present in the pressure washer run-off will collect in a sump. Once the sediment accumulation in the sump is at least half of the sump depth, it will be sampled and analyzed for PCBs. Excavation and offsite management of the sediments will be per the PCB analytical results. Sediment containing greater than or equal to 50 mg/Kg PCBs will be removed and disposed of offsite at a RCRA Subtitle C facility or TSCA landfill. Sediment containing concentrations of PCBs less than 50 mg/Kg will be removed and disposed of offsite at a RCRA Subtitle D facility.

Sediment to be hauled offsite for disposal must first pass the “paint filter test”. If necessary, the sediment will be amended with bulking agents such as sawdust, so long as the selected disposal

facility approves the use. Amendments, such as lime, that can cause an exothermic reaction that raises the temperature of the sediment, are not planned for use.

Wastewater from the decontamination process will also collect in the sump. Sampling of the wastewater may occur to establish PCB concentrations prior to treatment. This information will help estimate the treatment system operations, such as the flow rate and contact time. Removal of the wastewater will be by pump to an adjacent treatment system consisting of storage tanks, bag/cartridge filter units, and carbon filter units. The storage tanks and treatment system will be within secondary containment. Pumping will occur at a frequency necessary such that the sump does not overflow and at a flow rate for adequate contact time with the carbon filter media to achieve the necessary removal efficiency.

The wastewater will be pumped into a storage tank after it has passed through the carbon filtration process. Once the storage tank is full with filtered wastewater, the collection of a treated wastewater sample will occur for PCB analytical testing. The wastewater will be reused for decontamination purposes if the PCB analytical result is less than 0.5 ug/L threshold required for reuse, in accordance with 40 CFR 761.79(b)(1)(iii). At the end of the project, the containerized water will be transported to a licensed and permitted facility for treatment and disposal.

3.7 WASTE MANAGEMENT

3.7.1 Liquid Waste

Management of the wastewater generated during the decontamination of heavy equipment will be handled as described previously. The amount of reused water, sampling analytical results, and volume transported offsite for treatment and disposal will be identified in the Post Construction Report.

3.7.2 Solid Waste

The proposed IM project includes the excavation and offsite disposal of impacted material with PCB concentrations greater than or equal to 1.0 mg/Kg. Based on the soil sampling conducted to-date, the estimated mass of soil that is expected to be removed is approximately 5,680 tons. Of the 5,680 tons, an estimated 760 tons have been identified as having PCBs greater than or equal to 50 mg/Kg and will be disposed of at a RCRA Subtitle C or TSCA landfill. The remaining approximately 4,920 tons contain total PCBs concentrations less than 50 mg/Kg and will be disposed of at a RCRA Subtitle D facility. Following removal of this material, confirmation samples will be collected for laboratory analysis of PCBs, as described in Section 3.7. If confirmation sampling identifies remaining material containing greater than or equal to 50 mg/Kg PCBs, this material will excavated and disposed of at a RCRA Subtitle C facility or TSCA landfill. If remaining soil contains PCBs exceeding the respective RBRO, but are less than 50 mg/Kg PCBs,

this material will be excavated and disposed at a RCRA Subtitle D facility. Excavation will continue until confirmation sampling demonstrates successful remediation of each decision unit.

The management of solid waste includes the management of sediment that has accumulated in the heavy equipment decontamination pad run-off collection sump (as described in Section 3.5 above), as well as any used filters, spent carbon, and sediment that has been generated from the wastewater treatment process.

During the implementation of this IM Project, Arconic will work with the disposal facilities to profile each waste stream such that it complies with the permits for the respective disposal facility prior to transportation. The mode of transportation will be by rail car or lined and covered truck. Also, Arconic will comply with applicable USEPA and Department of Transportation (DOT) regulations for either transportation method. In support of this IM Project, Arconic has identified the following potential disposal facilities. Other disposal facilities will be considered so long as it is Arconic approved and permitted to accept the identified waste streams. If RCRA Subtitle C or D facilities are used for PCB waste disposal, notification to the facility will be made at least 15 days prior to the date of the first shipment of material.

3.7.2.1 Potential RCRA Subtitle D Facilities

Soil containing greater than or equal to 1.0 mg/Kg and less than 50 mg/Kg PCBs can be sent to:

- Waste Management – Liberty Landfill (White County, Indiana)
- Waste Management – Oak Ridge Recycling and Disposal (Cass County, Indiana)
- Republic – Clinton County Landfill (Clinton County, Indiana)

3.7.2.2 Potential RCRA Subtitle C Facilities

Soil containing greater than 50 mg/Kg PCBs can be sent to:

- Heritage – Heritage Landfill (Roachdale, Indiana)
- US Ecology – US Ecology Alabama (Sulligent, Alabama)
- Clean Harbors – Lone Mountain Landfill (Waynoka, Oklahoma)

3.7.2.3 Potential TSCA Landfills

Soil containing greater than 50 mg/Kg PCBs can be sent to:

- US Ecology – US Ecology Michigan (Belleville, Michigan)
- Clean Harbors – Grassy Mountain Landfill (Grantsville, Utah)
- Chemical Waste Management – Hazardous Waste Facility (Emelle, Alabama)

Upon selection of the appropriate disposal facilities, Arconic will conduct additional sampling, if necessary, to complete profile development for the solid waste stream.

3.8 POST EXCAVATION CONFIRMATION SAMPLING

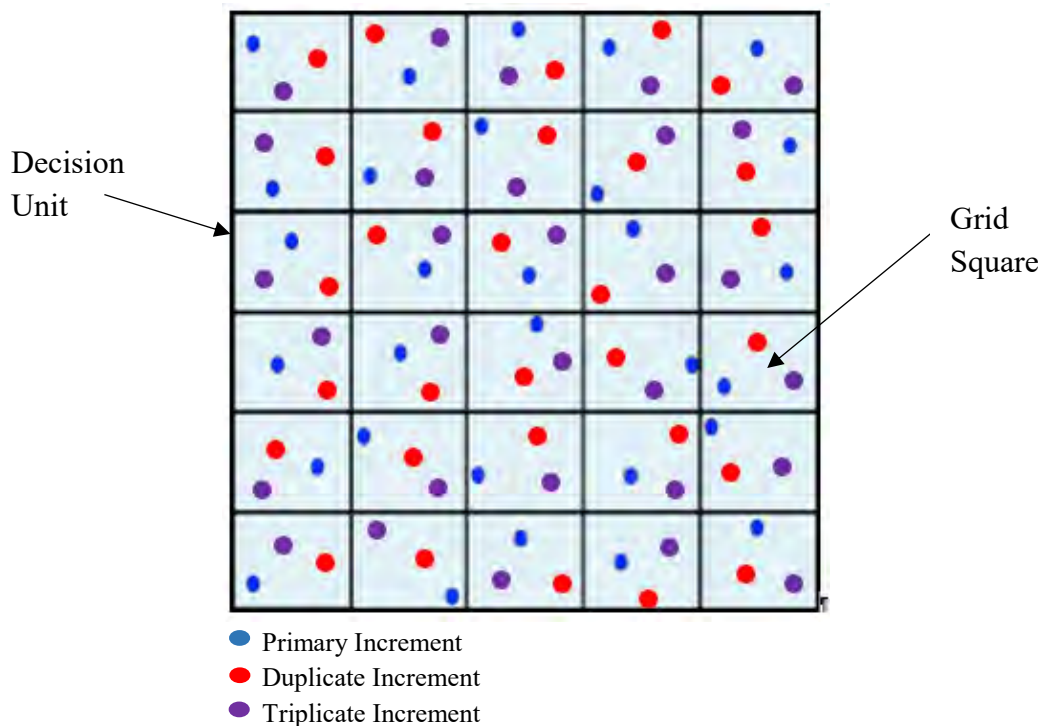
Confirmation sampling will occur from within the remedial excavation areas to document the successful excavation of PCB impacted soils containing concentrations greater than or equal to 1.0 mg/Kg. Confirmation sampling will be conducted in accordance with the Interstate Technology Regulatory Council (ITRC) document *Incremental Sampling Methodology (ISM)* dated February 2012. Incremental sampling utilizes a normalized composite sampling and processing approach to reduce variability. The use of ISM in this confirmation sampling application, including how the increments will be processed, will provide a slightly enriched representation (overestimate) of the constituent concentration in the sampled material over the assessed area by biasing the analyzed portion of the increment to the finer soil grain sizes. PCBs tend to more readily absorb to these size particles. This approach leads to more consistent, conservative, and reproducible results that are more representative and protective of human health and the environment. Use of this sampling approach is appropriate given the exposure pathways that exist on and around the levee. The results will be more representative of potential future exposure than a discrete or small, composite sampling approach.

For this IM Project, there will be eleven excavation areas designated Decision Units (DUs) 1 through 11 (**Figure 2**). The DUs are subject to the same decision criteria, which is the RBRO of 1.0 mg/Kg. Each DU is less than or equal to a quarter of an acre and was selected to coincide with the varying proposed excavation depths. Confirmation sampling at DUs 1 through 11 will be conducted following the ISM. To determine the number of composite points, or increments, per DU, the coefficient of variation (CV) was calculated using the data in Table 1. The CV was calculated as 1.39; therefore, per the ISM, 20-31 increments and ≥ 3 replicates (i.e., primary, duplicate, and triplicate samples) are required for each DU. The sampling method within each decision unit will be random sampling within grids, where the number of grid squares is equal to the number of increments. Each grid will be approximately the same square footage, but not necessarily the same shape due to the irregularities of the levee footprint. The sample, duplicate, and triplicate sample increments will be collected from within a grid location at random while maintaining at least 3 feet of separation from one another. Please refer to **Figures 3** through **5** that depicts the grids within each DU and the illustration on the following depicting the layout of the primary, duplicate, and triplicate increments.

The perimeter of the grids making up each DU will be located and marked using a real-time kinetic (RTK) GPS unit or similar. Increments will be collected using a 1-inch diameter barrel sampler, or similar, advanced to 3 inches below the bottom of the excavation with a slide hammer, such that the recovered increment volume is consistent between locations. Should refusal be encountered without reaching 3 inches in depth, the increment location will be offset and sample collection retried. This procedure will be followed until adequate soil recovery is retrieved in the sampler. The soil from the individual increments obtained from each of the grids will be placed into laboratory provided glassware and appropriately labeled while wearing nitrile gloves. Processing

of the individual increments and compositing into the incremental sample will be performed by the laboratory following the procedure described in Section 3.9. Each DU will include primary, duplicate, and triplicate incremental samples, i.e. three unique samples made up of different increments from each of the grids. Based on an estimated density of the levee soil between 1.0-1.1 grams per cubic centimeter (g/cm^2), individual soil increments will weigh approximately 40-45 grams, with the final incremental samples weighing approximately 800-1,400 grams. Upon collection, the increments will be placed into laboratory provided containers, labelled, and stored in a cooler on ice for shipment to the laboratory under proper chain-of-custody control. Increment processing in support of preparing the incremental sample is as described in Section 3.9. An example illustration of the random sampling within grids approach is provided in the following.

**Example Illustration – Primary, Duplicate, & Triplicate Incremental Samples
Increment Collection Locations in Grids Using Random Sampling Approach**



Reusable sampling equipment will be grossly decontaminated between each increment by removing solids and rinsing with distilled water. The sampling equipment will also be decontaminated using brushes, Alconox and distilled water mixture, and rinsed with clean distilled water upon collection of the final increment of an incremental sample. Decontamination solids and fluids will be containerized in matrix specific, 55-gallon drums near the ditch. Management of these materials will be based on the analytical testing results.

The criteria to demonstrate that a DU has achieved the remedial objective will be a comparison of the highest incremental sample (primary, duplicate, or triplicate) result to the RBRO of 1.0 mg/Kg

total PCBs. If 1.0 mg/Kg is exceeded, at least an additional 6 inches of material will be excavated from the DU and hauled offsite for disposal. The DU will then be subjected to the confirmation sampling procedure a second time, i.e. all three incremental samples will be collected again. The process will continue until each of the three incremental samples from the same depth interval achieves the remedial objective.

3.9 SAMPLE PROCESSING AND ANALYSIS

The collected increments will be processed in the analytical testing laboratory to prepare the primary, duplicate, and triplicate incremental samples. The processing procedure for compositing the increments into an incremental sample are provided in the following:

1. Initial sample screening – The increments will be subjected to the removal of rocks, vegetative debris (roots, sticks, leaves, etc.), and water decanted prior to processing.
2. Sample conditioning – The increments will be oven dried at 103 degrees Celsius (°C), or an acceptable alternate temperature, to remove residual moisture. No percent moisture analysis will be performed since water will be removed from the increments during this step and prior to analytical testing for PCBs.
3. Particle size reduction and selection – The increments will be subjected to particle size reduction using grinding, mortar/pestle, dish and puck, pulverizer, or another approved technique. The increment will then be passed through the #60 sieve [250 micrometer (µm)]. Material that does not pass will be subjected to further particle size reduction and again attempted to pass through the #60 sieve. This process will continue until as much of the increment can be passed through the sieve as practicable. The retained volume will be used for subsequent processing.
4. Sample mixing – Each of the increments will then be mixed by tumbling in a container with adequate headspace. This will homogenize the increments prior to splitting and subsampling.
5. Splitting and subsampling – The increments will then be split, including compositing, using a riffle splitter or 2-dimensional slab cake. A subsample will then be selected after splitting and subjected to further splitting and the process repeated until approximately 30 grams of the incremental sample remains, at which point it will be subjected to analytical testing.

PCBs are the COCs for Elliott Ditch and the levee soil. Therefore, the laboratory analysis of the incremental soil samples will be for PCBs by USEPA Method 8082, following sample preparation Method 3540/3541 Soxhlet extraction. Under current USEPA and IDEM guidelines, a trip blank is only appropriate for aqueous VOC samples. Aqueous VOC samples will not occur as part of the IM Project, thus trip blanks are not appropriate. Soil samples are typically heterogeneous and

field duplicate soil samples frequently do not have good reproducibility due to that heterogeneity. Use of the incremental sampling approach and the associated laboratory processing (drying and sieving) results should provide more reproducible results than discrete or field compositing sampling techniques. Therefore, field duplicates will occur at a rate of one per every 20 incremental samples to assess the level of heterogeneity present in the soil. Should a duplicate sample indicate an exceedance of the RBRO, where the original sample did not, the DU will be subjected to additional excavation and resampling, as discussed previously. Due to the consistent nature of the soil present on the levee, one matrix spike/matrix spike duplicate (MS/MSD) sample for every 20 incremental samples will also be collected to assess for matrix interferences. Additionally, aqueous equipment blank sample(s) will be collected periodically by running distilled water over decontaminated sampling equipment and collecting the water in laboratory provided containers. These blank samples will be subjected to laboratory analysis for PCBs by USEPA Method 8082 and the results reviewed to assess the potential for cross-contamination.

3.10 POST CONSTRUCTION REPORT

A Post Construction Report will be developed and submitted to the IDEM and the USEPA Region 5 within 120 days after completion of the IM Project and successful closeout of any associated permits. The following activities will be documented in the Post Construction Report.

1. Summary of IM activities, including:
 - a. Discussion of IM Project sequencing.
 - b. Types (TSCA and non-TSCA) and volumes of materials removed – volumes will be included showing the type and number of tons hauled off-site disposal.
 - c. Method of solid and liquid waste management including discussion regarding the processes and copies of disposal documents (weight tickets, manifests, and certificates of disposal).
 - d. Post excavation confirmation sampling locations, results, and analytical reports.
 - e. Photos documenting completion of the IM Project according to the IMWP.
2. Copies of the Erosion and Sedimentation Control Plan, NOI, approval letter from the City, and the Notice of Termination (NOT). If the disturbed areas have not achieved the required vegetative coverage for NPDES Permit closure and the Post Construction Report has been prepared, it will be submitted without the NOT. The NOT will be provided upon filing.
3. Final engineering as-built drawing showing: the completed excavation extents and grades, as well as the completed backfill grades. The as-built drawing(s) will be prepared in AutoCAD and labelled to include: the project name, date, owner's name, name of the engineer, surveyors signed seal, name of the construction manager, and the contractor.
4. Engineer certification statement.

TABLES

Table 1. Levee Soil Sampling PCB Analytical Results (Page 1 of 3)
RCRA CA IMWP - Elliott Ditch Levee Soil
Lafayette, Tippecanoe County, Indiana
November 2019

Boring/Sample ID	Geomorphic Surface	PCB Aroclor									Total PCBs (mg/Kg)
		1016	1221	1232	1242	1248	1254	1260	1262	1268	
ED-00.00-SL01											
0 - 0.91'	Levee	ND	ND	ND	ND	0.08	ND	ND	ND	ND	0.08
0.91 - 2.21'		ND	ND	ND	ND	3.12	ND	ND	ND	ND	3.12
2.21 - 3.12'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.00-SL03											
0 - 0.9'	Levee	ND	ND	ND	ND	1.26	ND	ND	ND	ND	1.26
0.9 - 1.7'		ND	ND	ND	ND	0.06	ND	ND	ND	ND	0.06
1.7 - 2.5'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.00-SL04											
0 - 0.9'	Levee	ND	ND	ND	ND	0.04	ND	ND	ND	ND	0.04
0 - 0.9' FD		ND	ND	ND	ND	0.03	ND	ND	ND	ND	0.03
0.9 - 1.8'		ND	ND	ND	ND	0.03	ND	ND	ND	ND	0.03
1.8 - 2.7'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.02-SL01											
0 - 0.63'	Levee	ND	ND	ND	ND	1.02	ND	ND	ND	ND	1.02
0.63 - 1.76'		ND	ND	ND	ND	0.07	ND	ND	ND	ND	0.07
1.76 - 2.18'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2.18 - 3.43'		ND	ND	ND	ND	0.04	ND	ND	ND	ND	0.04
ED-00.05-SL01											
0 - 0.67'	Levee	ND	ND	ND	ND	3.19	ND	0.36	ND	ND	3.55
0.67 - 1.2'		ND	ND	ND	ND	0.03	ND	ND	ND	ND	0.03
1.4 - 2.3'		ND	ND	ND	ND	0.05	ND	ND	ND	ND	0.05
2.3 - 3.3'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.08-SL03											
0 - 0.5'	Levee	ND	ND	ND	ND	7.15	ND	0.84	ND	ND	7.99
0.5 - 0.97'		ND	ND	ND	ND	1.93	ND	0.13	ND	ND	2.06
0.97 - 1.47'		ND	ND	ND	ND	66.00	ND	2.72	ND	ND	68.72
1.50 - 2.0'		ND	ND	ND	ND	78.30	ND	4.30	ND	ND	82.60
2.25 - 2.75'		ND	ND	ND	ND	0.05	ND	ND	ND	ND	0.05
2.75 - 3.5'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.08-SL05											
0 - 0.67'	Levee	ND	ND	ND	ND	17.00	ND	1.23	ND	ND	18.23
0.67 - 1.25'		ND	ND	ND	ND	5.49	ND	0.26	ND	ND	5.75
1.25 - 2.1'		ND	ND	ND	ND	0.04	ND	ND	ND	ND	0.04
2.1 - 3.0'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.13-SL01											
0 - 0.67'	Levee	ND	ND	ND	ND	5.56	ND	0.35	ND	ND	5.91
0.67 - 1.67'		ND	ND	ND	ND	0.30	ND	ND	ND	ND	0.30
1.6 - 2.75'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2.75 - 3.08'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES

ND = constituent was not detected above the laboratory method detection limit
Yellow indicates and exceedance of the 1.0 mg/Kg RBO and will be excavated.

Table 1. Levee Soil Sampling PCB Analytical Results (Page 2 of 3)
RCRA CA IMWP - Elliott Ditch Levee Soil
Lafayette, Tippecanoe County, Indiana
November 2019

Boring/Sample ID	Geomorphic Surface	PCB Aroclor									Total PCBs (mg/Kg)
		1016	1221	1232	1242	1248	1254	1260	1262	1268	
ED-00.17-SL01											
0 - 0.75'	Levee	ND	ND	ND	ND	2.94	ND	0.43	ND	ND	3.37
0 - 0.75' FD		ND	ND	ND	ND	2.64	ND	ND	ND	ND	2.64
0.75 - 1.75'		ND	ND	ND	ND	13.50	ND	0.97	ND	ND	14.47
1.75 - 2.75'		ND	ND	ND	ND	51.60	ND	ND	ND	ND	51.60
2.75 - 3.75'		ND	ND	ND	ND	0.03	ND	ND	ND	ND	0.03
ED-00.17-SL02											
0 - 0.8'	Levee	ND	ND	ND	ND	94.20	ND	ND	ND	ND	94.20
0 - 0.8' FD		ND	ND	ND	ND	60.40	ND	ND	ND	ND	60.40
0.8 - 1.8'		ND	ND	ND	ND	3.94	ND	ND	ND	ND	3.94
1.8 - 2.8'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.19-SL01											
0 - 0.8'	Levee	ND	ND	ND	ND	1.50	ND	ND	ND	ND	1.50
0.8 - 1.5'		ND	ND	ND	ND	0.18	ND	ND	ND	ND	0.18
0.8 - 1.5' FD		ND	ND	ND	ND	0.17	ND	ND	ND	ND	0.17
1.5' - 1.8'		ND	ND	ND	ND	1.58	ND	ND	ND	ND	1.58
1.8 - 2.3'		ND	ND	ND	ND	1.69	ND	ND	ND	ND	1.69
ED-00.21-SL01											
0 - 1.0'	Levee	ND	ND	ND	ND	0.83	ND	ND	ND	ND	0.83
1.0 - 2.0'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1.0 - 2.0' FD		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.23-SL01											
0 - 0.7'	Levee	ND	ND	ND	ND	11.40	ND	1.26	ND	ND	12.66
0.7' - 1.2'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
0.7 - 1.2' FD		ND	ND	ND	ND	0.03	ND	ND	ND	ND	0.03
1.2 - 2.0'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.25-SL02											
0 - 0.5'	Levee	ND	ND	ND	ND	4.14	ND	0.50	ND	ND	4.64
0 - 0.5' FD		ND	ND	ND	ND	4.71	ND	0.54	ND	ND	5.25
0.5 - 1.0'		ND	ND	ND	ND	0.69	ND	0.09	ND	ND	0.77
1.0 - 1.5'		ND	ND	ND	ND	1.60	ND	0.17	ND	ND	1.77
ED-00.25-SL04											
0 - 0.5'	Upland	ND	ND	ND	ND	ND	0.07	ND	ND	ND	0.07
0.5 - 1.0'		ND	ND	ND	ND	ND	0.04	ND	ND	ND	0.04
1.0 - 1.5'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1.5' - 2.0'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.27-SL01											
0 - 1.0'	Levee	ND	ND	ND	ND	25.50	ND	ND	ND	ND	25.50
1.0 - 1.9'		ND	ND	ND	ND	0.13	ND	ND	ND	ND	0.13
1.9 - 2.8'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES

ND = constituent was not detected above the laboratory method detection limit
Yellow indicates and exceedance of the 1.0 mg/Kg RBO and will be excavated.

Table 1. Levee Soil Sampling PCB Analytical Results (Page 3 of 3)
RCRA CA IMWP - Elliott Ditch Levee Soil
Lafayette, Tippecanoe County, Indiana
November 2019

Boring/Sample ID	Geomorphic Surface	PCB Aroclor									Total PCBs (mg/Kg)
		1016	1221	1232	1242	1248	1254	1260	1262	1268	
ED-00.29-SL01											
0 - 0.7'	Levee	ND	ND	ND	ND	6.46	ND	ND	ND	ND	6.46
0.7 - 1.7'		ND	ND	ND	ND	0.05	ND	ND	ND	ND	0.05
1.7 - 2.7'		ND	ND	ND	ND	0.07	ND	ND	ND	ND	0.07
1.7 - 2.7' FD		ND	ND	ND	ND	0.05	ND	ND	ND	ND	0.05
ED-00.31-SL01											
0 - 1.0'	Levee	ND	ND	ND	ND	22.40	ND	ND	ND	ND	22.40
1.0 - 2.0'		ND	ND	ND	ND	0.37	ND	ND	ND	ND	0.37
ED-00.33-SL01											
0 - 0.7'	Levee	ND	ND	ND	ND	0.98	ND	0.17	ND	ND	1.14
0.7 - 1.6'		ND	ND	ND	ND	0.33	ND	ND	ND	ND	0.33
1.6 - 2.3'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.36-SL01											
0 - 0.4'	Levee	ND	ND	ND	ND	0.37	ND	ND	ND	ND	0.37
0.4 - 1.0'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1.0 - 1.5'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1.5 - 2.0'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1.5 - 2.0' FD		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.39-SL03											
0 - 0.69'	Levee	ND	ND	ND	ND	5.00	ND	ND	ND	ND	5.00
0 - 0.69' FD		ND	ND	ND	ND	6.09	ND	0.39	ND	ND	6.48
0.69 - 0.98'		ND	ND	ND	ND	0.58	ND	ND	ND	ND	0.58
0.98 - 1.17'		ND	ND	ND	ND	5.02	ND	0.77	ND	ND	5.79
1.17 - 1.5'		ND	ND	ND	ND	0.11	ND	ND	ND	ND	0.11
ED-00.41-SL01											
0 - 0.5'	Levee	ND	ND	ND	ND	19.20	ND	ND	ND	ND	19.20
0.5 - 1.0'		ND	ND	ND	ND	1.98	ND	ND	ND	ND	1.98
1.0 - 1.5'		ND	ND	ND	ND	0.45	ND	ND	ND	ND	0.45
1.5 - 2.0'		ND	ND	ND	ND	0.04	ND	0.77	ND	ND	0.81
1.5 - 2.0' FD		ND	ND	ND	ND	0.04	ND	ND	ND	ND	0.04
ED-00.44-SL01											
0 - 0.5'	Levee	ND	ND	ND	ND	0.34	ND	ND	ND	ND	0.34
0.5 - 1.0'		ND	ND	ND	ND	0.41	ND	ND	ND	ND	0.41
1.0 - 1.5'		ND	ND	ND	ND	0.45	ND	ND	ND	ND	0.45
1.5 - 1.8'		ND	ND	ND	ND	0.03	ND	ND	ND	ND	0.09
1.8 - 2.0'		ND	ND	ND	ND	0.14	ND	ND	ND	ND	0.29
ED-00.47-SL03											
0 - 0.77'	Levee	ND	ND	ND	ND	0.37	ND	ND	ND	ND	0.37
0 - 0.77' FD		ND	ND	ND	ND	0.75	ND	ND	ND	ND	0.75

NOTES

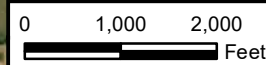
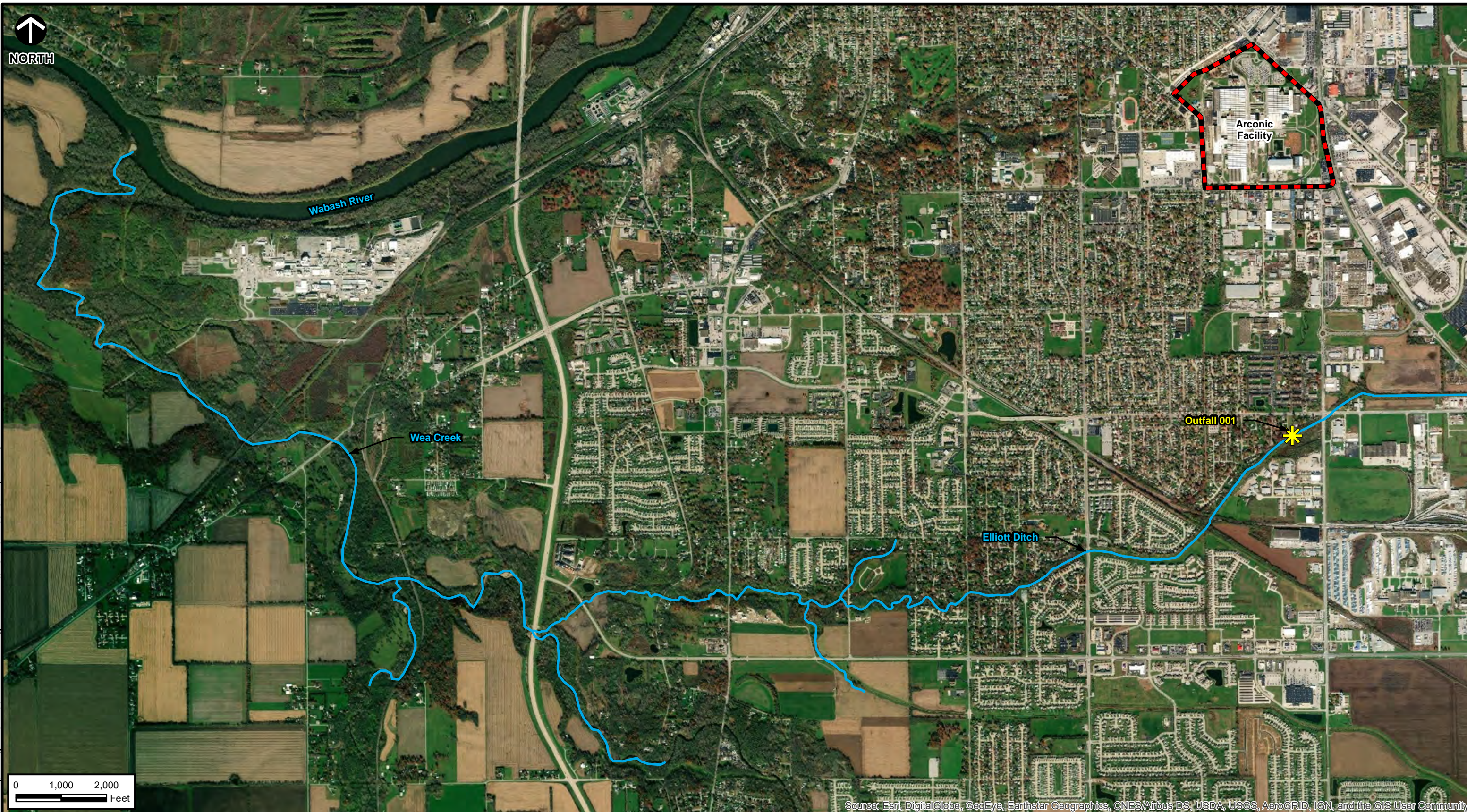
ND = constituent was not detected above the laboratory method detection limit
Yellow indicates and exceedance of the 1.0 mg/Kg RBO and will be excavated.

FIGURES






NORTH

P:\2017\172-367\GIS\Maps\Elliott Ditch Report Figures\172-367 Elliott Ditch Figure 1.mxd - 9/21/2018 - 4:53:13 PM (mbruck)



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

-  Outfall 001
-  Arconic Facility
-  Elliott Ditch

REFERENCE

ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY
ACCESSED 9/21/2018



Civil & Environmental Consultants, Inc.

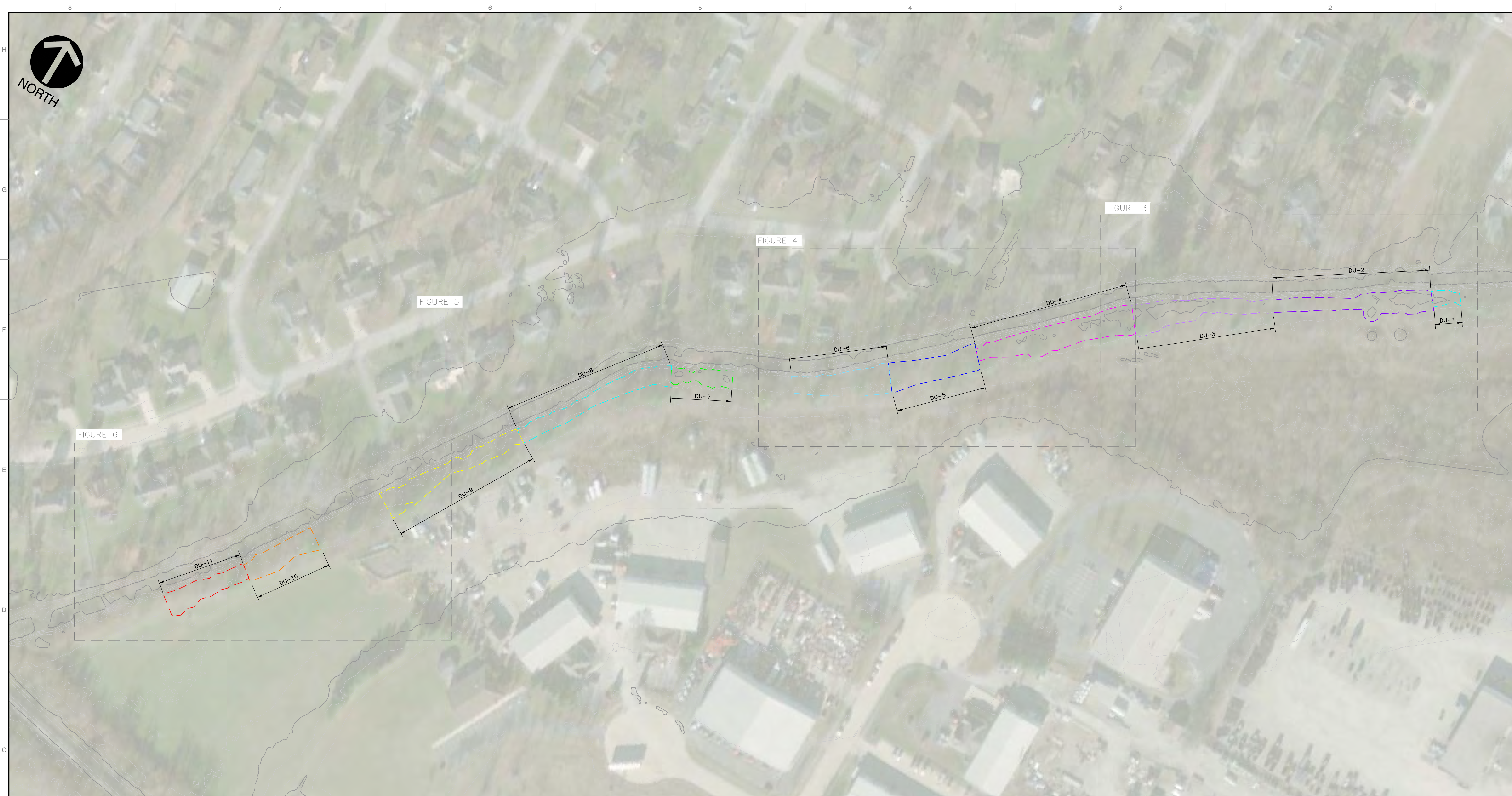
2704 Cherokee Farm Way, Suite 101 Knoxville, TN 37920
865-977-9997 • 865-774-7767
www.cecinc.com

**ARCONIC INC. - LAFAYETTE OPERATIONS
INTERIM MEASURES WORK PLAN
ELLIOTT DITCH - LEVEE SOIL REMEDIATION
LAFAYETTE, INDIANA**

ELLIOTT DITCH VICINITY MAP

DRAWN BY:	DMM	CHECKED BY:	JMB	APPROVED BY:	TLM*	FIGURE NO:	1
DATE:	SEPTEMBER 21, 2018	SCALE:	1" = 2,000'	PROJECT NO:	172-367.0002		

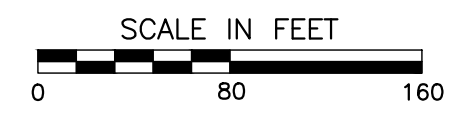
Signature on File *



- REFERENCE**
- EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM DATA PROVIDED BY INDIANA'S STATEWIDE IMAGERY AND LIDAR PROGRAM AND AVAILABLE AT WWW.OPENTOPO.SDSC.EDU. AIRBORNE LIDAR SURVEY PERFORMED BETWEEN 3/13/2011 AND 4/30/2012.
 - INFORMATION FOR EXISTING STORM, SANITARY, AND WATER UTILITIES IN THE VICINITY OF THE PROJECT WERE PROVIDED TO CEC BY BUTLER, FAIRMAN, AND SEUFERT, INC. FROM THE CITY OF LAFAYETTE GIS. DATA PROVIDED ON 5/23/2019.

- NOTES**
- CONFIRMATION SAMPLING WILL BE CONDUCTED IN ACCORDANCE WITH THE INTERSTATE TECHNOLOGY REGULATORY COUNCIL (ITRC) INCREMENTAL SAMPLING METHODOLOGY (ISM) DOCUMENT AND THE SPECIFIC PROTOCOLS OUTLINED IN THE REVISED INTERIM MEASURES WORKPLAN (MWP) DATED NOVEMBER 2019.
 - THE LIMITS OF SOIL EXCAVATION AND REMOVAL HAVE BEEN DIVIDED INTO 11 DECISION UNITS THAT ARE LESS THAN A QUARTER OF AN ACRE EACH. DECISION UNIT BOUNDARIES ARE SELECTED TO COINCIDE WITH THE VARYING EXCAVATION DEPTHS.
 - DECISION UNITS AREA DESIGNED TO EACH CONTAIN 20 TO 31 APPROXIMATELY EQUALLY SIZED GRIDS. THE SAMPLING METHOD WITHIN EACH DECISION UNIT WILL BE RANDOM SAMPLING WITHIN THE GRIDS, WHERE THE NUMBER OF GRID SQUARES IS EQUAL TO THE NUMBER OF INCREMENTS (I.E. ONE SAMPLE INCREMENT WILL BE COLLECTED FROM EACH GRID SQUARE. EACH INCREMENT WILL BE COLLECTED FROM THE TOP 6 INCHES OF SOIL.
 - A PRIMARY, DUPLICATE, AND TRIPPLICATE SAMPLE WILL BE COLLECTED FROM EACH OF THE DECISION UNITS FOLLOWING THE RANDOM SAMPLING WITHIN GRIDS METHOD. THE PRIMARY, DUPLICATE, AND TRIPPLICATE LOCATIONS WITHIN A GRID WILL BE AT LEAST 3 FEET FROM EACH OTHER. REFER TO SECTION 3.7 OF THE MWP FOR ADDITIONAL DETAIL.
 - THE CRITERIA TO DEMONSTRATE THAT A DECISION UNIT HAS ACHIEVED THE REMEDIAL OBJECTIVE WILL BE A COMPARISON OF THE HIGHEST ISM SAMPLE RESULT (PRIMARY, DUPLICATE, OR TRIPPLICATE) TO 1.0 MG/KG TOTAL PCBs. IF 1.0 MG/KG IS EXCEEDED, AT LEAST AN ADDITIONAL 6 INCHES OF MATERIAL WILL BE EXCAVATED FROM THE DECISION UNIT FOR OFFSITE DISPOSAL. THE DECISION UNIT WILL THEN BE SUBJECT TO THE CONFIRMATION SAMPLING PROCEDURE A SECOND TIME (I.E. PRIMARY, DUPLICATE, AND TRIPPLICATE SAMPLES WILL BE COLLECTED AGAIN). THE PROCESS WILL CONTINUE UNTIL EACH OF THE THREE ISM SAMPLES FROM THE SAME DEPTH MEET THE REMEDIAL OBJECTIVE.

- LEGEND**
- EXISTING MAJOR CONTOUR
 - EXISTING MINOR CONTOUR
 - - - DECISION UNIT BOUNDARIES



FOR PLANNING

REVISION RECORD	
NO	DATE

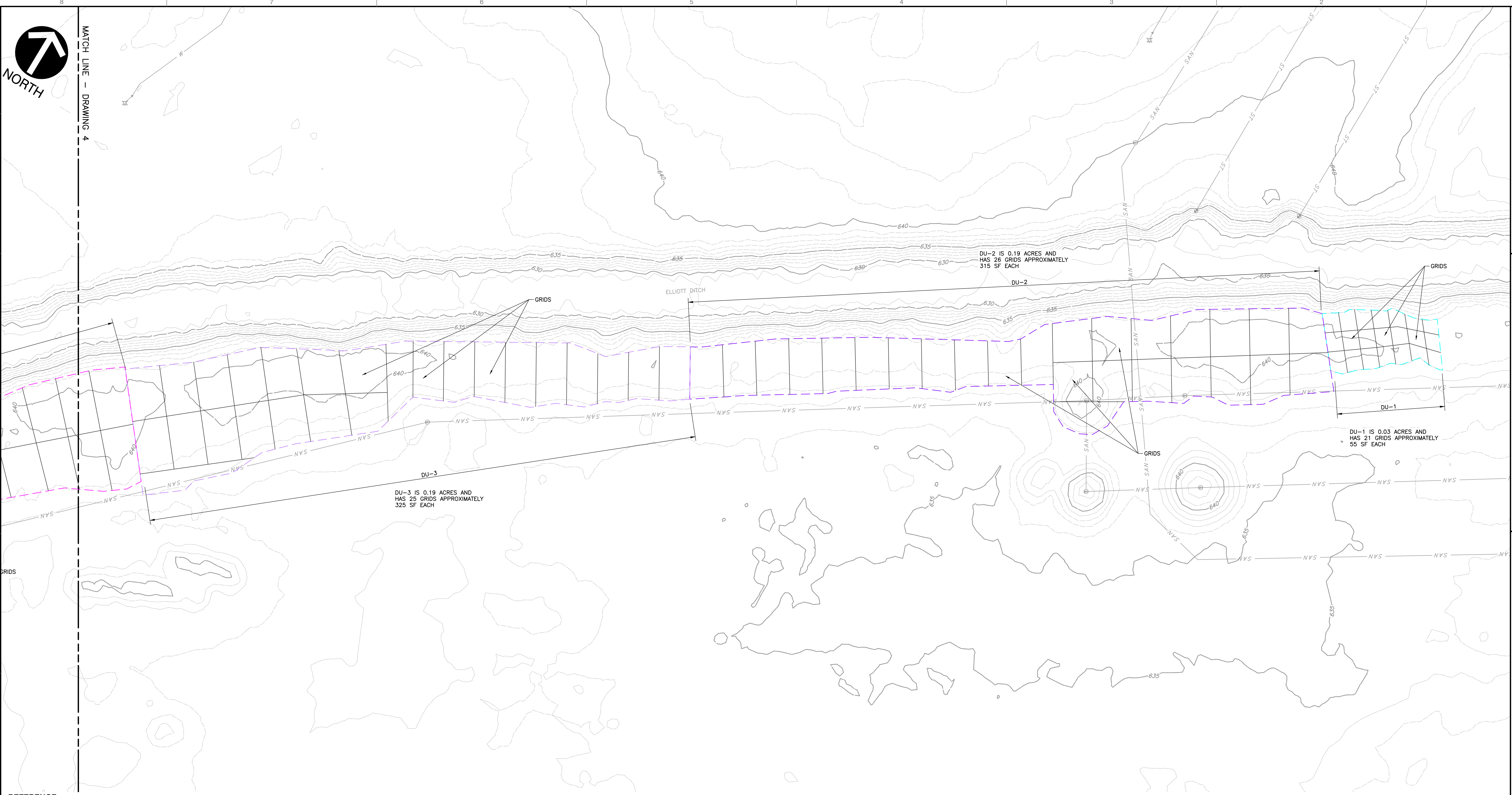
CEC
Civil & Environmental Consultants, Inc.
 2704 Cherokee Farm Way · Suite 101 · Knoxville, TN 37920
 Ph: 865.977.9997 · Fax: 865.977.9919
 www.cecinc.com

ARCONIC INC.
LAFAYETTE OPERATIONS
ELLIOTT DITCH
LEVEE SOIL REMEDIATION
LAFAYETTE, INDIANA

DECISION UNIT OVERVIEW	
DATE:	OCTOBER 18, 2019
DRAWN BY:	KAM
DWG SCALE:	1"=80'
CHECKED BY:	GAW
PROJECT NO.:	172-387.0023
APPROVED BY:	JMB

FIGURE NO. **2**

P:\12071\172-3871-2000\Draw\172387-0023-Decision Unit Overview.dwg (Rev. 2) LS(11/12/2019 - Monday) - LP: 11/12/2019 4:09 PM



- REFERENCE**
- EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM DATA PROVIDED BY INDIANA'S STATEWIDE IMAGERY AND LIDAR PROGRAM AND AVAILABLE AT WWW.OPENTOPO.SDSC.EDU. AIRBORNE LIDAR SURVEY PERFORMED BETWEEN 3/13/2011 AND 4/30/2012.
 - INFORMATION FOR EXISTING STORM, SANITARY, AND WATER UTILITIES IN THE VICINITY OF THE PROJECT WERE PROVIDED TO CEC BY BUTLER, FAIRMAN, AND SEUFERT, INC. FROM THE CITY OF LAFAYETTE GIS. DATA PROVIDED ON 5/23/2019.

- NOTES**
- CONFIRMATION SAMPLING WILL BE CONDUCTED IN ACCORDANCE WITH THE INTERSTATE TECHNOLOGY REGULATORY COUNCIL (ITRC) INCREMENTAL SAMPLING METHODOLOGY (ISM) DOCUMENT AND THE SPECIFIC PROTOCOLS OUTLINED IN THE REVISED INTERIM MEASURES WORKPLAN (MWP) DATED NOVEMBER 2019.
 - THE LIMITS OF SOIL EXCAVATION AND REMOVAL HAVE BEEN DIVIDED INTO 11 DECISION UNITS THAT ARE LESS THAN A QUARTER OF AN ACRE EACH. DECISION UNIT BOUNDARIES ARE SELECTED TO COINCIDE WITH THE VARYING EXCAVATION DEPTHS.
 - DECISION UNITS AREA DESIGNED TO EACH CONTAIN 20 TO 31 APPROXIMATELY EQUALLY SIZED GRIDS. THE SAMPLING METHOD WITHIN EACH DECISION UNIT WILL BE RANDOM SAMPLING WITHIN THE GRIDS, WHERE THE NUMBER OF GRID SQUARES IS EQUAL TO THE NUMBER OF INCREMENTS (I.E. ONE SAMPLE INCREMENT WILL BE COLLECTED FROM EACH GRID SQUARE). EACH INCREMENT WILL BE COLLECTED FROM THE TOP 3 INCHES OF SOIL.
 - A PRIMARY, DUPLICATE, AND TRIPPLICATE SAMPLE WILL BE COLLECTED FROM EACH OF THE DECISION UNITS FOLLOWING THE RANDOM SAMPLING WITHIN GRIDS METHOD. THE PRIMARY, DUPLICATE, AND TRIPPLICATE LOCATIONS WITHIN A GRID WILL BE AT LEAST 3 FEET FROM EACH OTHER. REFER TO SECTION 3.8 OF THE MWP FOR ADDITIONAL DETAIL.
 - THE CRITERIA TO DEMONSTRATE THAT A DECISION UNIT HAS ACHIEVED THE REMEDIAL OBJECTIVE WILL BE A COMPARISON OF THE HIGHEST ISM SAMPLE RESULT (PRIMARY, DUPLICATE, OR TRIPPLICATE) TO 1.0 MG/KG TOTAL PCBs. IF 1.0 MG/KG IS EXCEEDED, AT LEAST AN ADDITIONAL 6 INCHES OF MATERIAL WILL BE EXCAVATED FROM THE DECISION UNIT FOR OFFSITE DISPOSAL. THE DECISION UNIT WILL THEN BE SUBJECTED TO THE CONFIRMATION SAMPLING PROCEDURE A SECOND TIME (I.E. PRIMARY, DUPLICATE, AND TRIPPLICATE SAMPLES WILL BE COLLECTED AGAIN). THE PROCESS WILL CONTINUE UNTIL EACH OF THE THREE ISM SAMPLES FROM THE SAME DEPTH MEET THE REMEDIAL OBJECTIVE.

- LEGEND**
- EXISTING MAJOR CONTOUR
 - EXISTING MINOR CONTOUR
 - DECISION UNIT BOUNDARIES



FOR PLANNING

REVISION RECORD	
NO	DESCRIPTION

CEC
Civil & Environmental Consultants, Inc.
 2704 Cherokee Farm Way · Suite 101 · Knoxville, TN 37920
 Ph: 865.977.9997 · Fax: 865.977.9919
 www.cecinc.com

ARCONIC INC.
LAFAYETTE OPERATIONS
ELLIOTT DITCH
LEVEE SOIL REMEDIATION
LAFAYETTE, INDIANA

DECISION UNITS 1 - 3	
DATE: OCTOBER 18, 2019	DRAWN BY: KAM
DWG SCALE: 1"=20'	CHECKED BY: GAW
PROJECT NO: 172-387-0023	APPROVED BY: JMB

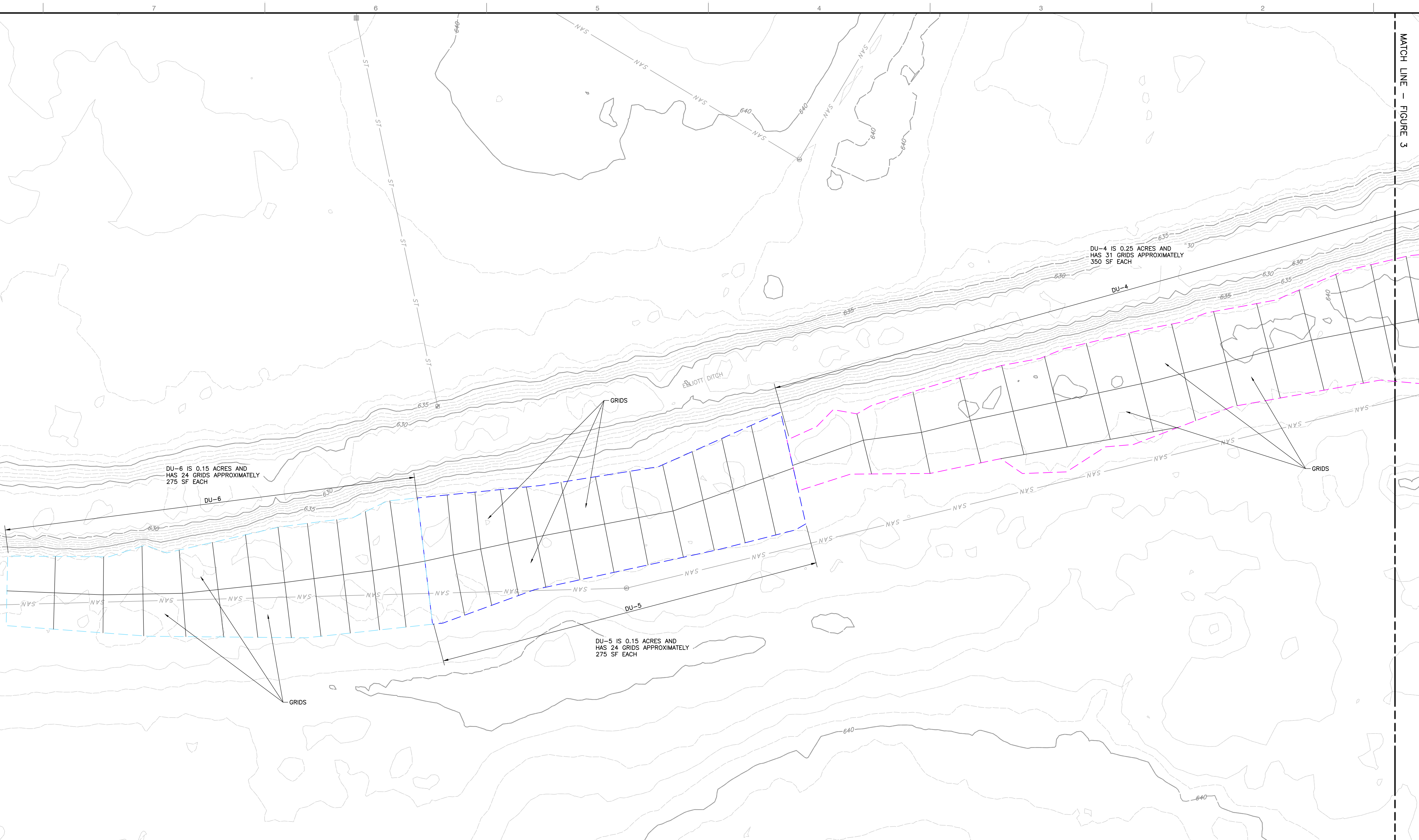
FIGURE NO. 3

P:\12071\172-387-0023\DWG\172387-0023-Decision Unit Detail.dwg of LS(1/1/2019 - Internal) - 11/12/2019 4:09 PM



MATCH LINE - FIGURE 5

MATCH LINE - FIGURE 3



DU-6 IS 0.15 ACRES AND HAS 24 GRIDS APPROXIMATELY 275 SF EACH

DU-4 IS 0.25 ACRES AND HAS 31 GRIDS APPROXIMATELY 350 SF EACH

DU-5 IS 0.15 ACRES AND HAS 24 GRIDS APPROXIMATELY 275 SF EACH

REFERENCE

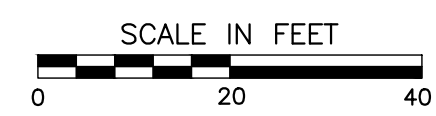
1. EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM DATA PROVIDED BY INDIANA'S STATEWIDE IMAGERY AND LIDAR PROGRAM AND AVAILABLE AT WWW.OPENTOPO.SDSC.EDU. AIRBORNE LIDAR SURVEY PERFORMED BETWEEN 3/13/2011 AND 4/30/2012.
2. INFORMATION FOR EXISTING STORM, SANITARY, AND WATER UTILITIES IN THE VICINITY OF THE PROJECT WERE PROVIDED TO CEC BY BUTLER, FAIRMAN, AND SEUFERT, INC. FROM THE CITY OF LAFAYETTE GIS. DATA PROVIDED ON 5/23/2019.

NOTES

1. CONFIRMATION SAMPLING WILL BE CONDUCTED IN ACCORDANCE WITH THE INTERSTATE TECHNOLOGY REGULATORY COUNCIL (ITRC) INCREMENTAL SAMPLING METHODOLOGY (ISM) DOCUMENT AND THE SPECIFIC PROTOCOLS OUTLINED IN THE REVISED INTERIM MEASURES WORKPLAN (MWP) DATED NOVEMBER 2019.
2. THE LIMITS OF SOIL EXCAVATION AND REMOVAL HAVE BEEN DIVIDED INTO 11 DECISION UNITS THAT ARE LESS THAN A QUARTER OF AN ACRE EACH. DECISION UNIT BOUNDARIES ARE SELECTED TO COINCIDE WITH THE VARYING EXCAVATION DEPTHS.
3. DECISION UNITS AREA DESIGNED TO EACH CONTAIN 20 TO 31 APPROXIMATELY EQUALLY SIZED GRIDS. THE SAMPLING METHOD WITHIN EACH DECISION UNIT WILL BE RANDOM SAMPLING WITHIN THE GRIDS, WHERE THE NUMBER OF GRID SQUARES IS EQUAL TO THE NUMBER OF INCREMENTS (I.E. ONE SAMPLE INCREMENT WILL BE COLLECTED FROM EACH GRID SQUARE). EACH INCREMENT WILL BE COLLECTED FROM THE TOP 3 INCHES OF SOIL.
4. A PRIMARY, DUPLICATE, AND TRIPPLICATE SAMPLE WILL BE COLLECTED FROM EACH OF THE DECISION UNITS FOLLOWING THE RANDOM SAMPLING WITHIN GRIDS METHOD. THE PRIMARY, DUPLICATE, AND TRIPPLICATE LOCATIONS WITHIN A GRID WILL BE AT LEAST 3 FEET FROM EACH OTHER. REFER TO SECTION 3.8 OF THE MWP FOR ADDITIONAL DETAIL.
5. THE CRITERIA TO DEMONSTRATE THAT A DECISION UNIT HAS ACHIEVED THE REMEDIAL OBJECTIVE WILL BE A COMPARISON OF THE HIGHEST ISM SAMPLE RESULT (PRIMARY, DUPLICATE, OR TRIPPLICATE) TO 1.0 MG/KG TOTAL PCBs. IF 1.0 MG/KG IS EXCEEDED, AT LEAST AN ADDITIONAL 6 INCHES OF MATERIAL WILL BE EXCAVATED FROM THE DECISION UNIT FOR OFFSITE DISPOSAL. THE DECISION UNIT WILL THEN BE SUBJECTED TO THE CONFIRMATION SAMPLING PROCEDURE A SECOND TIME (I.E. PRIMARY, DUPLICATE, AND TRIPPLICATE SAMPLES WILL BE COLLECTED AGAIN). THE PROCESS WILL CONTINUE UNTIL EACH OF THE THREE ISM SAMPLES FROM THE SAME DEPTH MEET THE REMEDIAL OBJECTIVE.

LEGEND

- EXISTING MAJOR CONTOUR
- - - EXISTING MINOR CONTOUR
- - - - - DECISION UNIT BOUNDARIES



FOR PLANNING

REVISION RECORD

NO	DATE	DESCRIPTION

CEC
Civil & Environmental Consultants, Inc.
 2704 Cherokee Farm Way · Suite 101 · Knoxville, TN 37920
 Ph: 865.977.9997 · Fax: 865.977.9919
 www.cecinc.com

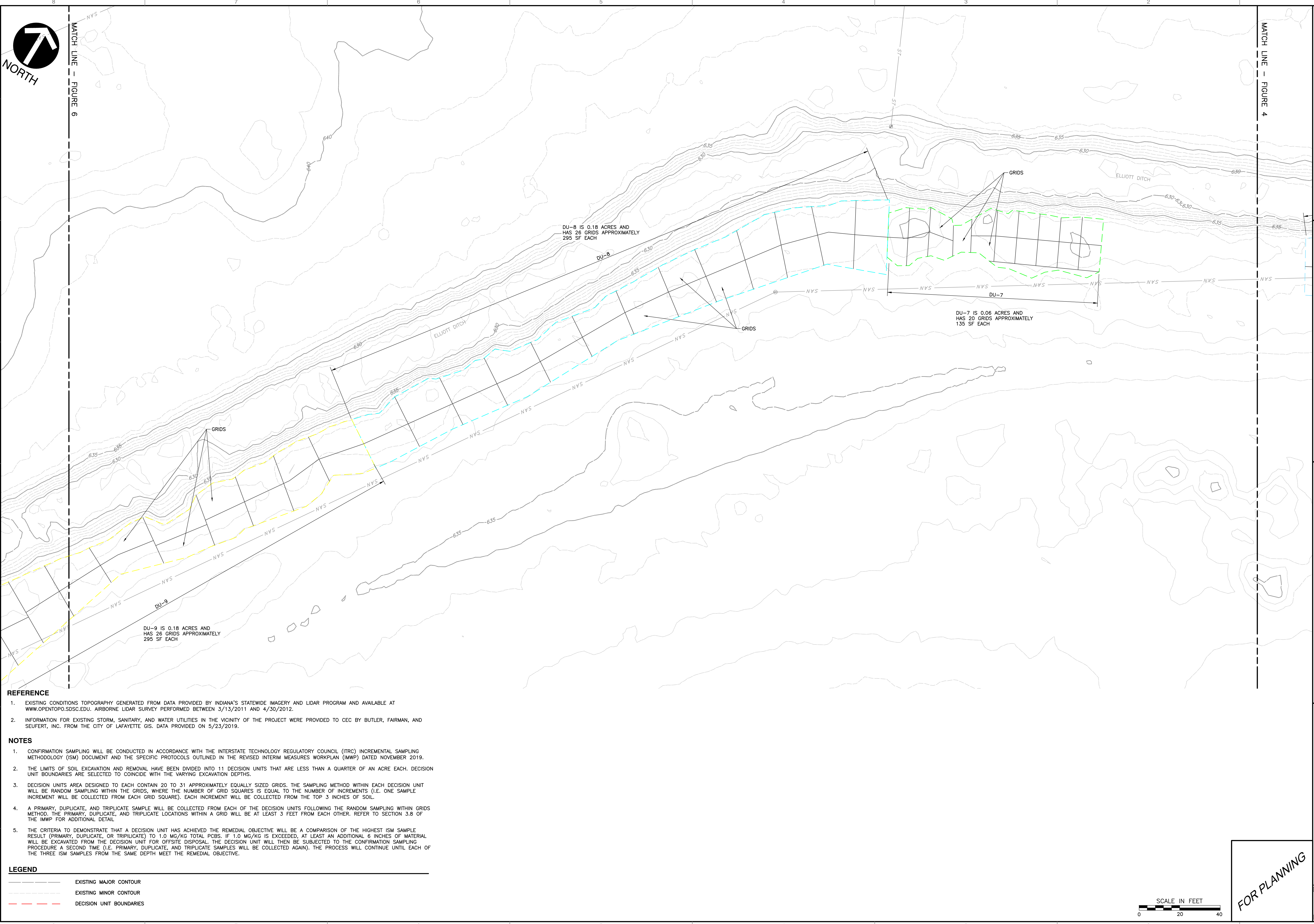
ARCONIC INC.
LAFAYETTE OPERATIONS
ELLIOTT DITCH
LEVEE SOIL REMEDIATION
LAFAYETTE, INDIANA

DECISION UNITS 4 - 6

DATE:	OCTOBER 18, 2019	DRAWN BY:	KAM
DWG SCALE:	1"=20'	CHECKED BY:	GAW
PROJECT NO.:	172-387.0023	APPROVED BY:	JMB

FIGURE NO. **4**

P:\2017\172-387-0023\Drawings\172387-0023-Decision Unit Details\figs 4 - LS(1/17/2019 - Internal) - EP - 11/12/2019 4:09 PM



REFERENCE

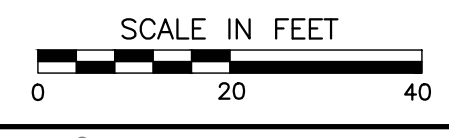
- EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM DATA PROVIDED BY INDIANA'S STATEWIDE IMAGERY AND LIDAR PROGRAM AND AVAILABLE AT WWW.OPENTOPD.SDSC.EDU. AIRBORNE LIDAR SURVEY PERFORMED BETWEEN 3/13/2011 AND 4/30/2012.
- INFORMATION FOR EXISTING STORM, SANITARY, AND WATER UTILITIES IN THE VICINITY OF THE PROJECT WERE PROVIDED TO CEC BY BUTLER, FAIRMAN, AND SEUFERT, INC. FROM THE CITY OF LAFAYETTE GIS. DATA PROVIDED ON 5/23/2019.

NOTES

- CONFIRMATION SAMPLING WILL BE CONDUCTED IN ACCORDANCE WITH THE INTERSTATE TECHNOLOGY REGULATORY COUNCIL (ITRC) INCREMENTAL SAMPLING METHODOLOGY (ISM) DOCUMENT AND THE SPECIFIC PROTOCOLS OUTLINED IN THE REVISED INTERIM MEASURES WORKPLAN (MWP) DATED NOVEMBER 2019.
- THE LIMITS OF SOIL EXCAVATION AND REMOVAL HAVE BEEN DIVIDED INTO 11 DECISION UNITS THAT ARE LESS THAN A QUARTER OF AN ACRE EACH. DECISION UNIT BOUNDARIES ARE SELECTED TO COINCIDE WITH THE VARYING EXCAVATION DEPTHS.
- DECISION UNITS AREA DESIGNED TO EACH CONTAIN 20 TO 31 APPROXIMATELY EQUALLY SIZED GRIDS. THE SAMPLING METHOD WITHIN EACH DECISION UNIT WILL BE RANDOM SAMPLING WITHIN THE GRIDS, WHERE THE NUMBER OF GRID SQUARES IS EQUAL TO THE NUMBER OF INCREMENTS (I.E. ONE SAMPLE INCREMENT WILL BE COLLECTED FROM EACH GRID SQUARE). EACH INCREMENT WILL BE COLLECTED FROM THE TOP 3 INCHES OF SOIL.
- A PRIMARY, DUPLICATE, AND TRIPPLICATE SAMPLE WILL BE COLLECTED FROM EACH OF THE DECISION UNITS FOLLOWING THE RANDOM SAMPLING WITHIN GRIDS METHOD. THE PRIMARY, DUPLICATE, AND TRIPPLICATE LOCATIONS WITHIN A GRID WILL BE AT LEAST 3 FEET FROM EACH OTHER. REFER TO SECTION 3.8 OF THE MWP FOR ADDITIONAL DETAIL.
- THE CRITERIA TO DEMONSTRATE THAT A DECISION UNIT HAS ACHIEVED THE REMEDIAL OBJECTIVE WILL BE A COMPARISON OF THE HIGHEST ISM SAMPLE RESULT (PRIMARY, DUPLICATE, OR TRIPPLICATE) TO 1.0 MG/KG TOTAL PCBs. IF 1.0 MG/KG IS EXCEEDED, AT LEAST AN ADDITIONAL 6 INCHES OF MATERIAL WILL BE EXCAVATED FROM THE DECISION UNIT FOR OFFSITE DISPOSAL. THE DECISION UNIT WILL THEN BE SUBJECTED TO THE CONFIRMATION SAMPLING PROCEDURE A SECOND TIME (I.E. PRIMARY, DUPLICATE, AND TRIPPLICATE SAMPLES WILL BE COLLECTED AGAIN). THE PROCESS WILL CONTINUE UNTIL EACH OF THE THREE ISM SAMPLES FROM THE SAME DEPTH MEET THE REMEDIAL OBJECTIVE.

LEGEND

- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- DECISION UNIT BOUNDARIES



FOR PLANNING

NO	DATE	REVISION RECORD DESCRIPTION

CEC
Civil & Environmental Consultants, Inc.
 2704 Cherokee Farm Way · Suite 101 · Knoxville, TN 37920
 Ph: 865.977.9997 · Fax: 865.977.9919
 www.cecinc.com

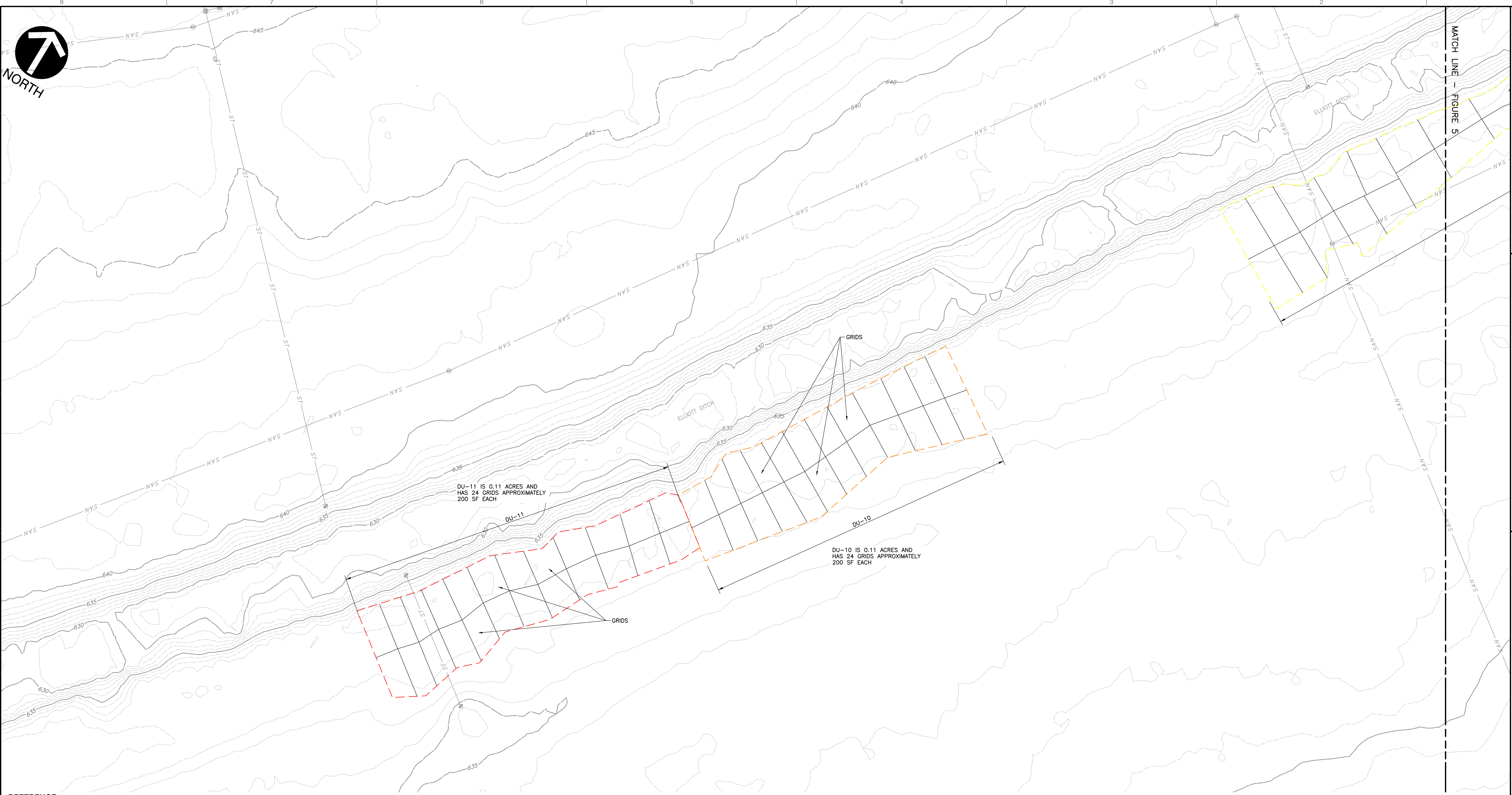
ARCONIC INC.
LAFAYETTE OPERATIONS
ELLIOTT DITCH
LEVEE SOIL REMEDIATION
LAFAYETTE, INDIANA

DECISION UNITS 7 - 9

DATE: OCTOBER 18, 2019
 DRAWN BY: KAM
 DWG SCALE: 1"=20'
 PROJECT NO: 172-387.0023
 APPROVED BY: JMB

FIGURE NO. 5

P:\12071\172-387-0023\DWG\172387-0023-Decision Unit Details\DWG of LS(1/1/2019 - Internal) - 09-11/12/2019 4:09 PM



DU-11 IS 0.11 ACRES AND HAS 24 GRIDS APPROXIMATELY 200 SF EACH

DU-10 IS 0.11 ACRES AND HAS 24 GRIDS APPROXIMATELY 200 SF EACH

- REFERENCE**
- EXISTING CONDITIONS TOPOGRAPHY GENERATED FROM DATA PROVIDED BY INDIANA'S STATEWIDE IMAGERY AND LIDAR PROGRAM AND AVAILABLE AT WWW.OPENTOPD.SDSC.EDU. AIRBORNE LIDAR SURVEY PERFORMED BETWEEN 3/13/2011 AND 4/30/2012.
 - INFORMATION FOR EXISTING STORM, SANITARY, AND WATER UTILITIES IN THE VICINITY OF THE PROJECT WERE PROVIDED TO CEC BY BUTLER, FAIRMAN, AND SEUFERT, INC. FROM THE CITY OF LAFAYETTE GIS. DATA PROVIDED ON 5/23/2019.

- NOTES**
- CONFIRMATION SAMPLING WILL BE CONDUCTED IN ACCORDANCE WITH THE INTERSTATE TECHNOLOGY REGULATORY COUNCIL (ITRC) INCREMENTAL SAMPLING METHODOLOGY (ISM) DOCUMENT AND THE SPECIFIC PROTOCOLS OUTLINED IN THE REVISED INTERIM MEASURES WORKPLAN (MWP) DATED NOVEMBER 2019.
 - THE LIMITS OF SOIL EXCAVATION AND REMOVAL HAVE BEEN DIVIDED INTO 11 DECISION UNITS THAT ARE LESS THAN A QUARTER OF AN ACRE EACH. DECISION UNIT BOUNDARIES ARE SELECTED TO COINCIDE WITH THE VARYING EXCAVATION DEPTHS.
 - DECISION UNITS AREA DESIGNED TO EACH CONTAIN 20 TO 31 APPROXIMATELY EQUALLY SIZED GRIDS. THE SAMPLING METHOD WITHIN EACH DECISION UNIT WILL BE RANDOM SAMPLING WITHIN THE GRIDS, WHERE THE NUMBER OF GRID SQUARES IS EQUAL TO THE NUMBER OF INCREMENTS (I.E. ONE SAMPLE INCREMENT WILL BE COLLECTED FROM EACH GRID SQUARE). EACH INCREMENT WILL BE COLLECTED FROM THE TOP 3 INCHES OF SOIL.
 - A PRIMARY, DUPLICATE, AND TRIPPLICATE SAMPLE WILL BE COLLECTED FROM EACH OF THE DECISION UNITS FOLLOWING THE RANDOM SAMPLING WITHIN GRIDS METHOD. THE PRIMARY, DUPLICATE, AND TRIPPLICATE LOCATIONS WITHIN A GRID WILL BE AT LEAST 3 FEET FROM EACH OTHER. REFER TO SECTION 3.8 OF THE MWP FOR ADDITIONAL DETAIL.
 - THE CRITERIA TO DEMONSTRATE THAT A DECISION UNIT HAS ACHIEVED THE REMEDIAL OBJECTIVE WILL BE A COMPARISON OF THE HIGHEST ISM SAMPLE RESULT (PRIMARY, DUPLICATE, OR TRIPPLICATE) TO 1.0 MG/KG TOTAL PCBs. IF 1.0 MG/KG IS EXCEEDED, AT LEAST AN ADDITIONAL 6 INCHES OF MATERIAL WILL BE EXCAVATED FROM THE DECISION UNIT FOR OFFSITE DISPOSAL. THE DECISION UNIT WILL THEN BE SUBJECT TO THE CONFIRMATION SAMPLING PROCEDURE A SECOND TIME (I.E. PRIMARY, DUPLICATE, AND TRIPPLICATE SAMPLES WILL BE COLLECTED AGAIN). THE PROCESS WILL CONTINUE UNTIL EACH OF THE THREE ISM SAMPLES FROM THE SAME DEPTH MEET THE REMEDIAL OBJECTIVE.

- LEGEND**
- EXISTING MAJOR CONTOUR
 - EXISTING MINOR CONTOUR
 - DECISION UNIT BOUNDARIES



FOR PLANNING

NO	DATE	DESCRIPTION

CEC
Civil & Environmental Consultants, Inc.
 2704 Cherokee Farm Way · Suite 101 · Knoxville, TN 37920
 Ph: 865.977.9997 · Fax: 865.977.9919
 www.cecinc.com

**ARCONIC INC.
 LAFAYETTE OPERATIONS
 ELLIOTT DITCH
 LEVEE SOIL REMEDIATION
 LAFAYETTE, INDIANA**

DECISION UNITS 9 - 11

DATE: OCTOBER 18, 2019
 DRAWN BY: KAM
 DWG SCALE: 1"=20'
 CHECKED BY: GAW
 PROJECT NO: 172-387.0023
 APPROVED BY: JMB

FIGURE NO. 6

P:\12071\172-387-0023\DWG\172387-0023-Decision Unit Details.dwg (1/2) of 1/2 (11/12/2019 4:09 PM)

APPENDICES

APPENDIX I

**ELLIOTT DITCH GEOMORPHIC SURFACE MAPPING AND
HISTORIC DATA REVIEW (TETRATECH CES)**



**Elliott Ditch Geomorphic
Surface Mapping and Historic Data Review
July 6, 2015**

Prepared for Alcoa

**Prepared by Tetra Tech CES
Submitted: July 6, 2015**

TABLE OF CONTENTS

1.0 OVERVIEW.....	1
2.0 PURPOSE AND TASKS.....	1
2.1 Purpose.....	1
2.1.1 Fluvial Geomorphology and Geomorphic Sampling Approach.....	1
2.2 Tasks.....	2
3.0 METHODS.....	3
3.1 Desktop Tasks.....	3
3.1.1 Preliminary Geomorphic Surface Mapping.....	3
3.2 Field Tasks.....	4
3.2.1 Topographic Survey Data Collection.....	4
3.2.2 Geomorphic Surface Mapping Field Confirmation.....	5
4.0 RESULTS.....	5
4.1 Geomorphic History of Wabash River Basin.....	5
4.2 Geomorphic Surface Mapping.....	6
4.2.1 Geomorphic Surface Mapping Results.....	7
4.2.2 Geomorphic Interpretation.....	8
4.2.3 Geomorphic Interpretation of Historic Data.....	10
4.2.4 Example Sampling Locations.....	11
5.0 SUMMARY.....	12
6.0 WORKS CITED.....	13

APPENDICES

- APPENDIX A** - Figures
- APPENDIX B** - Photographs

LIST OF ACRONYMS

GPS	Global Positioning System
USEPA	United States Environmental Protection Agency
PCB	Polychlorinated Biphenyl
PPM	parts per million
RTK	Real Time Kinematic
PPB	parts per billion
USGS	United States Geological Survey
DEM	Digital Elevation Model
FEMA	Federal Emergency Management Agency
DEM	Digital Elevation Model
GIS	Geographic Information System
LDB	Left descending bank
RDB	Right descending bank

1.0 OVERVIEW

Tetra Tech performed a geomorphology and depositional pattern assessment of Elliott Ditch (between Alcoa's Outfall 001 and Wea Creek) and the surrounding floodplain in Lafayette, Indiana in 2013 and 2014. Assessment work proceeded, over this period, on an iterative basis. In 2013, preliminary geomorphic surface mapping (desktop) was conducted to evaluate the depositional/erosional pattern in the channel and surrounding floodplain. Field work included a detailed survey of the upstream 0.5 mile of Elliott Ditch and the 100-year floodplain to complete detailed channel profiles. In 2014, the desktop geomorphic surfaces were field confirmed and edited to reflect the field confirmation findings.

This report describes the purpose and tasks, methods, and results of the work completed in 2013 and 2014 by Tetra Tech.

2.0 PURPOSE AND TASKS

2.1 PURPOSE

The purpose of this study was to use geomorphic methods to evaluate the deposition and erosion patterns in Elliott Ditch and the surrounding floodplain. A geomorphology based approach will be implemented to guide an investigation of Elliott Ditch. The objective of this investigation is to support a site conceptual model to understand the distribution of potential PCB impacts in Elliott Ditch and the adjacent floodplain caused by historical releases from Alcoa's storm water outfall. Elliott Ditch is a dynamic fluvial system. A typical grid-based sampling investigation approach often provides results that are difficult to interpret. Fluvial geomorphology provides a framework for sampling and data analysis that incorporates the predictable environmental and fluvial processes ongoing in Elliott Ditch and the surrounding floodplain.

2.1.1 Fluvial Geomorphology and Geomorphic Sampling Approach

Geomorphology is the science of landform evolution. Fluvial geomorphology focuses on river formation, evolution, and function. Fluvial geomorphology can be used to identify, delineate, and remediate impacts in river systems. The science provides an understanding of the depositional and erosional pattern of river systems.

A grid network sampling approach has been used to define sediment and soil sample locations on many sediment projects. The advantage of this approach is that sample locations are readily established by superimposing a grid pattern with predefined transects over a map that includes the area of concern. A significant disadvantage of grid network sampling is the probability that physical conditions influencing spatial distribution of sediment are not considered because

rivers are not homogeneous surfaces. The sample density distribution within areas of low potential for impacted sediment is similar to that of areas with high potential for impacted sediment. Therefore, sampling efficiency and data optimization are compromised because grid networks are adapted to conditions with limited spatial variability; which is not typical of a fluvial system.

An environmental investigation based upon geomorphic principles assumes that deposition, erosion, and impacted sediment distribution are not random; rather they are predictable and the result of known physical processes. A geomorphic sampling approach is based on focusing the sampling effort in areas with high potential for impacted sediment. Using geomorphic analysis, the sample location density distribution is based on potential for deposition and spatial variability. This approach is more efficient and it provides more informative data compared to a uniform sample location distribution (grid network). The geomorphic sampling approach is based on selection of sample transects and locations for each geomorphic surface category because each geomorphic surface type represents a specific depositional/erosional environment.

Tetra Tech completed desktop and field activities sufficient to establish a baseline geomorphic conceptual model for Elliott Ditch in 2013 and 2014. The methods and results of the geomorphic analysis of Elliott Ditch are presented in this report. Additionally, a summary of the historic sampling efforts conducted in Elliott Ditch is presented, as well as a brief summary of the geologic history.

2.2 TASKS

The Tetra Tech scope of work included the following tasks:

- Desktop Tasks
 - Background data collection and desktop geomorphic surface mapping
 - Review of historic data
 - Elliott Ditch longitudinal profile
 - Floodplain data collection and review
 - Landowner parcel mapping
 - Survey transect mapping
 - Incorporate historic data analysis, where appropriate, into geomorphic analysis of Elliott Ditch
 - Determine geologic history of Elliott Ditch

- Field Tasks
 - Global positioning survey (GPS)/total station topographic survey data collection
 - Photo log
 - Geomorphic surface mapping field confirmation
 - Top of water and water depth measurement

3.0 METHODS

The methods that were used to complete the tasks listed in Section 2.2 are described below.

3.1 DESKTOP TASKS

3.1.1 Preliminary Geomorphic Surface Mapping

A geomorphic surface is an area formed by similar physical factors related to morphology and time (e.g. elevation, floodplain configuration, and deposition/erosion environment). Fluvial geomorphology provides a basis for supporting the development of depositional or erosional environments, and therefore contaminant distribution, using multiple lines of evidence. Each line of evidence is evaluated independently within a Geographic Information System (GIS) to develop an understanding of its effect on deposition or erosion. Geomorphic surfaces are edited on an iterative basis to incorporate each dataset into the surface mapping process.

The multiple lines of evidence are merged to support geomorphic interpretation and contaminant distribution for a river system. This method provides a means to identify inconsistencies and data gaps that may require additional review or data collection. For Elliott Ditch, the following lines of evidence were available for desktop geomorphic surface mapping:

- Aerial Photographs (recent and historic)
- One foot contour intervals, derived from a ten-meter Digital Elevation Model (DEM)
- Channel longitudinal profile (gradient)
- Surface aspect
- Geomorphic setting
- Water velocity
- Water depth
- Channel width
- Valley width
- Land use
- Anthropogenic impacts (e.g. channel armoring, dams, bridges, dredging, etc.)

The initial geomorphic surfaces developed for Elliott Ditch were based on changes in topography. Aerial photographs and one-foot topographic contours were used to support the development of geomorphic surface boundaries. Several topographic factors were considered when delineating geomorphic surfaces using contours. Elevation changes were identified by tight groupings of contours. Abrupt changes in elevation are indicative of two different geomorphic surface boundaries. The best example for Elliott Ditch elevation change is the steep slope associated with the valley wall between the geomorphic surfaces in the floodplain and the upland area outside of the floodplain. Subtle changes in topography were also used in

the delineation. For example, broad surfaces of relatively uniform elevation were delineated as the same surface.

Information related to geologic history and past anthropogenic activities were reviewed to understand past influences on the fluvial process. Historical information was obtained from public records and published literature sources. The historical information was used to relate evolution and formation to past development and constituent release over time. The information discussed in the preliminary geomorphic analysis, including the historical aerial photographs, was used to support the historical analysis. Industrial and urban development, structures (e.g. dams, channel alignment), and watershed condition including land use change from agricultural to industrial were incorporated in the geomorphic surface mapping.

To assist in data analysis and mapping, a milepost system was developed for Elliott Ditch using GIS. The stream channel was digitized using the most recent aerial photos and used as an input for a GIS tool that creates equally spaced points based on a user-defined distance. The distance between mileposts for Elliott Ditch is 0.10 miles (Figure 1, Appendix A).

3.2 FIELD TASKS

Tetra Tech conducted work in 2014 to perform a topographic field survey of the lower reaches of Elliott Ditch. The survey was performed within the Elliott Ditch stream channel and the adjacent Federal Emergency Management Agency (FEMA) mapped 100-year floodplain. The survey was conducted along 66 transects on Elliott Ditch from Alcoa's Outfall 001 to the confluence with Wea Creek, a distance of approximately 4.10 miles (Figure 2, Appendix A). Field work was completed in coordination with TBIRD Design Services Corp., a professionally licensed survey company based in Lafayette, IN. TBIRD provided notification to landowners within the survey area prior to the start of field work.

Tetra Tech conducted the field activities in two mobilizations. In mid-March, the upper 0.5 miles from Outfall 001 to the railroad bridge was surveyed. In mid-November, the remaining 3.6 miles from the railroad bridge to the confluence with Wea Creek were surveyed. The field crew consisted of one TBIRD survey crew chief and one Tetra Tech geomorphologist.

The methods used to conduct the topographic survey are described below.

3.2.1 Topographic Survey Data Collection

Tetra Tech and TBIRD collected topographic survey data to support the geomorphic surface mapping during leaf-off conditions. Collecting surface boundary information during periods of sparse vegetation increases surface boundary visibility in the field.

A Real Time Kinematic Global Positioning System (RTK-GPS) and total station were used to collect topographic survey data in Indiana State Plane West (NAD83 datum) coordinate system.

The linear units were collected in US survey feet and the horizontal and vertical accuracy was set to a tolerance of ten centimeters.

Survey point data was collected at the following locations on each transect:

- Top of the water surface
- Top of sediment surface in the thalweg
- Edges of stream channel
- Top of channel banks
- Edge of escarpments marking the boundaries between stream terraces or floodplain surfaces
- Edge of FEMA mapped 100-year floodplain boundaries
- A location that is approximately half the horizontal distance from the channel banks to the 100-year floodplain boundaries

3.2.2 Geomorphic Surface Mapping Field Confirmation

Desktop geomorphic surface mapping provided a preliminary estimate of the geomorphology of Elliott Ditch. A field assessment of geomorphic surfaces was required to confirm the surface boundaries. The preliminary geomorphic surfaces were mapped from one-foot contours derived from ten meter DEMs. All data derived from secondary sources like DEMs have inherent inaccuracies. Field confirmation of surfaces reduces the errors introduced by the secondary datasets.

Geomorphic surface boundaries were confirmed by evaluating elevation changes at the edges of surfaces (e.g. terrace scarps) observed in the field. Additionally, anthropogenic features were identified or confirmed and incorporated into the geomorphic surface mapping.

A photo log was developed to document the channel morphology and sequence of geomorphic surfaces at each survey transect as well as photograph any significant natural or anthropogenic impacts to stream flow. Site photographs are provided in Appendix B.

4.0 RESULTS

The results of the desktop and field activities completed in 2013 and 2014 are presented below.

4.1 GEOMORPHIC HISTORY OF WABASH RIVER BASIN

Elliott Ditch is located in the Wabash River Basin in Tippecanoe County, IN, and flows west into Wea Creek, a tributary of the Wabash River. The streams of the Wabash River Basin formed in glacial outwash deposited during the Pleistocene epoch. During the Pleistocene, various glaciations leveled plains and filled in valleys, resulting in a gently undulating plain. As glaciers

receded, meltwater streams cut drainage ways and stream valleys that drain toward the Wabash River. The streams draining the Wea Plains (which includes Elliott Ditch), were formed after glaciers receded from the area. Generally, the topography of the area is relatively unchanged by stream development since glaciation, as most streams are typically shallow and have gently sloping gradients. Glacial landforms (e.g. kames, eskers, swales, etc.) are plentiful (USDA, 1958).

Review of the aerial photographs provided by Alcoa reveals that Elliott Ditch formed sometime before 1939; the Ditch is clearly visible in the 1939 aerial photo. The 1939 aerial suggests that at least part of Elliott Ditch originated as a naturally formed stream that was later modified by human activity. The stream appears to be free flowing and naturally meandering along the western portion of the stream in 1939. Some channelization may have occurred prior to the photo because the stream channel appears abnormally straight where Elliott Ditch crosses the railway.

4.2 GEOMORPHIC SURFACE MAPPING

Geomorphic surface mapping is an iterative, science-based process that uses multiple lines of evidence to assess the erosional/depositional pattern in streams. Flowing bodies of water have specific characteristics resulting from factors that affect flow regime. Channel gradient, width, and geometry, bed texture, water velocity, valley wall width, watershed soil type, and anthropogenic features all affect the flow of the water and the resulting geomorphology. To interpret stream geomorphology as a cohesive system, geomorphologists look at the flow regime factors and organize streams into river reaches and further into geomorphic surfaces for both the in-channel and overbank areas.

For Elliott Ditch, river reaches were developed based on similarities (within a reach) and differences (between reaches), resulting in areas grouped by broad depositional characteristics. The factors used to define the Elliott Ditch reaches were channel gradient, sinuosity, land use, and geomorphic surfaces. The Elliott Ditch reaches are further described in Section 4.3.2.

Overbank geomorphic surfaces were initially based on their spatial and topographic relationships including topography, proximity to the river, and the elevation differences between the surfaces. Aerial photographs were used to determine anthropogenic influences to stream function. Additional anthropogenic impacts (not visible on the aerial photos) and surface soil development were incorporated into surface boundaries during the field confirmation process. Other lines of evidence incorporated during the field process include evidence of high water (e.g. high water marks, sediment deposited over vegetation, etc.), and differences in vegetation cover.

The results of the desktop and field confirmed geomorphic surface mapping are presented below.

4.2.1 Geomorphic Surface Mapping Results

Floodplains are areas of low-lying ground directly adjacent to streams subject to regular flooding. Floodplains typically have relatively young soils formed in river sediments. Based on topography and the relative lack of soil development, the lowest surfaces in the overbank were categorized as floodplain (Figure 3, Appendix A). Approximately 0.2 acres of floodplain were mapped adjacent to Elliott Ditch.

The other surfaces mapped were stream terraces. Stream terraces are the remnants of historic floodplains that existed at a time when a stream was flowing at a higher elevation than present. Streams down cut into sediments and/or bedrock and create new floodplains over time. This process results in a series of stream terraces that reflect the stream's channel at a given point in the history of the stream. These surfaces are denoted by increasing elevations relative to each other. Terraces are typically level, discontinuous surfaces along the sides of the stream valley. Each surface that has the same relative elevation above the stream is given the same designation. In fluvial geomorphology, the terrace 1 (T-1) is the geomorphic surface with an elevation immediately above that of the floodplain. Each surface higher in elevation from the T-1 is sequentially numbered in ascending order (i.e. T-2, T-3, T-4, etc.). The lower numbered terraces are considered to be younger surfaces (i.e. the most recent active floodplain of a stream). The highest numbered terrace is the oldest surface. Within the portion of the Elliott Ditch valley mapped for this task, a total of seven stream terraces were identified.

Below is a summary of the area in square feet (ft²) and acres of each geomorphic surface mapped within the Elliott Ditch valley from Outfall 001 to the confluence with Wea Creek.

Geomorphic Surface	Area (ft ²)	Acres
Floodplain	10,068	0.2
T-1	194,823	4.5
T-2	3,923,312	90.0
T-3	604,721	13.9
T-4	583,998	13.4
T-5	290,788	6.7
T-6	776,714	17.8
T-7	28,020	0.6
TOTAL	6,412,444	147.1

The preservation of active floodplain and T-1 surfaces along Elliott Ditch appears to be extremely rare. Combined, they account for less than 5 acres of the 147 acres mapped. The floodplains found along Elliott Ditch appeared to be mainly erosional surfaces based on the abundance of coarse grain material found on this surface with little to no vegetation cover. Often, the floodplains consisted of surfaces of sand and/or gravel. Based on this evidence, the floodplain appears to be inundated by flood waters at a high frequency. Surface soils on the T-

1 were typically loosely consolidated sandy material, suggesting relatively limited soil development. Some patchy vegetation, such as forbs and groundcover, covered the T-1 surface, implying the surface is likely flooded several times per year.

The T-2 surface comprised the largest portion of the surfaces mapped along Elliott Ditch, 90 acres in total. Based on the exposed soils of the T-2 along the stream, soils appeared to be fully developed. Vegetation on the T-2 surface consisted of forbs, shrubs and trees. Flood debris, such as organic detritus and garbage, was often present on the T-2 surface, suggesting that flood waters reach that elevation on occasion.

The remaining stream terrace surfaces comprise about 52 acres. These surfaces all displayed well developed soils and vegetation included groundcover, shrubs and trees, indicating rare inundation by floodwaters.

4.2.2 Geomorphic Interpretation

The overbank depositional pattern for Elliott Ditch is a result of elevation and proximity to the channel. Sediment deposition will decrease as distance from the stream and elevation increase. For example, older terraces like the T-5 will flood less often than the T-2 terrace, because the T-5 is higher in elevation. Higher elevations require larger floods to become inundated and subject to sediment deposition.

The floodplain and younger terraces that are flooded during the one and two year flood events will have the most sediment deposition. The floodplain is not vegetated, suggesting it is inundated regularly. Additionally, the surface soils on the floodplain are typically coarse grained (i.e. sand, gravel, cobbles), suggesting fine-grained materials (silt, clays) have eroded away during high-velocity flood events. In Elliott Ditch, the floodplain is an erosional surface rather than a depositional surface.

The in-channel depositional pattern for Elliott Ditch is characterized by pool and riffle systems common in running water bodies. Streams develop pool and riffle systems based on channel gradient, water velocity, channel width, sinuosity (a stream's tendency to move back and forth across its floodplain, in an s-shaped pattern, over time), and bed type. The pools are deeper areas of the stream that have a reduced water velocity, resulting in a depositional area. The riffles are shallow parts of the stream with steeper gradients and higher water velocities, resulting in erosional areas.

The geomorphic surface mapping completed for Elliott Ditch suggests that Elliott Ditch has eight distinct reaches (erosional/depositional regimes):

- Reach 1: Outfall 001 to just downstream of the railroad bridge (Transects 1-14)
- Reach 2: Transect 14 to the South 18th Street Bridge (Transect 19)

- Reach 3: South 18th Street Bridge to just upstream of the 9th Street Bridge (Transects 19-30)
- Reach 4: South 9th Street Bridge (Transect 30) to Transect 39, located north of Brookside Drive
- Reach 5: Transect 39 to Transect 50 (located downstream of Poland Hill Road)
- Reach 6: Transect 50 to Transect 60 (located just downstream of the Old Romney Road Bridge)
- Reach 7: Transect 60 to Transect 64 (located just upstream of US Highway 231 South Bridge)
- Reach 8: Transect 64 to Transect 66 (Elliott Ditch –Wea Creek confluence)

Reach 1 of Elliott Ditch is characterized by a relatively straight channel, steep valley walls, and no stream terraces (Figure 2, Appendix A). The longitudinal profile (Figure 4, Appendix A) for Segment 1 indicates a relatively shallow gradient (0.4 feet/mile) compared to downstream reaches. While some erosion is occurring along the channel banks and immediately downstream of the outfall, deposition is occurring within the stream in pools in areas of relatively fine-grained sediment. The erosional/depositional areas of Reach 1 are presented in Figure 5 (Appendix A).

Reach 2 of Elliott Ditch is characterized by a straight channel and a steeper channel gradient of approximately 8 feet/mile (Figure 4, Appendix A). The north side of the channel is upland, but the south side has a preserved T-4 terrace adjacent to the ditch. Deposition in this reach may occur on the T-4 terrace after large flood events and locally in-channel associated with pools.

Reach 3 has a relatively straight channel with only minor meandering. The channel banks are steeper than in Reach 2 and the channel gradient is similar (8 feet/mile). Elliott Ditch has a deeply incised channel and steep channel banks in Reach 3. T-6 and T-7 terraces are preserved adjacent to both sides of the ditch. Additionally, a T-5 terrace is present on the north side of the ditch at the downstream end of the reach. Deposition in the overbank is unlikely except for large flood events; in-channel deposition will be limited to the pool areas.

Reach 4 is the first naturally occurring reach of the ditch downstream of Outfall 001, featuring meanders and increased sinuosity compared to upstream reaches. Channel gradient increases to 20 feet/mile. Terraces adjacent to the ditch include T-4 through T-6, indicating steep banks. Deposition in the overbank is still limited to larger flood events.

Reach 5 is similar to Reach 4 in channel gradient and sinuosity; however, Reach 5 has the T-2 through T-4 terraces preserved adjacent to the ditch. The terrace segments are smaller than upstream and their development is more affected by the sinuosity. The terraces on the inside of the meander bends are fairly well preserved, with depositional point bars often found at the apex of the meanders. This reach has more potential for overbank deposition than Reaches 1 – 4 due to the sinuosity of the ditch and the lower elevation terrace development.

Reach 6 is characterized by an increased gradient relative to upstream reaches (28 feet/mile) and an increase in valley wall width. The broader valley allows terrace development and promotes overbank deposition as the ditch meanders over time. The terrace sequence ranges from T-1 to T-6 terraces. The lower terraces are subject to overbank deposition.

Reach 7 has a similar channel gradient to Reach 6 and a broader valley width. Terrace development in Reach 7 is limited to T-1 through T-3. Reach 7 has potential for overbank deposition because the terraces are relatively low in elevation and the valley is wide.

Reach 8 has a similar channel gradient and amount of terrace development as Reach 7. However, several geomorphic and anthropogenic factors result in an erosional environment in Reach 8. Wea Creek has eroded an outside meander upstream of the bridge, moving the confluence with Elliott Ditch east. The channel banks are high, limiting flood waters outside of the channel and increasing erosion potential in-channel. Further, the US 231S Bridge constricts the channel, increasing water velocity and erosion potential during flood events. For example, a historic point bar under and downstream of the US 231S Bridge, predominately composed of sand and cobbles, suggests fine-grained materials have eroded away.

4.2.3 Geomorphic Interpretation of Historic Data

A review of the most recent historic sediment data provides some insights into the geomorphology of Elliott Ditch. The Anchor 2004 and 2010 sample locations ranged from upstream of Outfall 001 (#2) to the Veterans Parkway/Co Road 350 S Bridge (#9) (Anchor, 2013). This discussion is limited to the sampling locations inside the current project area (locations 3-9). Anchor sampling locations are presented on the geomorphic surfaces in Figure 6 (Appendix A). The geomorphic analysis of historic data is summarized below.

4.2.3.1 Sampling in Erosional Areas

Several Anchor sample locations were placed in erosional environments such as the downstream side of bridges and adjacent to Outfall 001:

- Locations 6-9 were placed at bridges
- Location 4-6 placed in dredged portion of Elliott Ditch (1990/1991) and between two bridges
- Location 3 was placed at Outfall 001

The conclusion from the results of these sample events suggests that natural recovery may be occurring; however, variability in PCB concentrations hindered trend observation (Alcoa, 2013). The variability in the data from the same locations between sampling events is the result of the sample location (erosional environments), anthropogenic features, and flood history. The data from the Anchor sampling events support the geomorphic interpretation for Elliott Ditch.

The increased gradient downstream, the historic point bar consisting of cobbles and gravel, and the amount of debris moving in the channel suggests high velocity water flow during flood events. The presence of several bridges will exacerbate natural flood processes ongoing in the channel. The dynamic nature of deposition and erosion at bridges requires a review of the flood history to understand whether the bridge area is in a low flow depositional mode or a post flood event erosion mode.

The overall distribution of geomorphic surfaces identified within the Elliott Ditch valley is displayed in Figure 3, Appendix A: Geomorphic Surface Map.

4.2.4 Example Sampling Locations

Example sampling locations were developed for Elliott Ditch based on the geomorphic surface mapping. Locations were placed to maximize sampling in depositional areas, with some locations placed to verify the absence of impacts (erosional areas).

The fate and transport characteristics of PCBs is important when determining the depositional pattern. The PCBs attach to silt and clay sediment particles and are transported as a silt and clay (soft sediment). The deposition areas for silt and clay need to have little to no water velocity to allow time for the silt and clay particles to settle out of the water column. These soft sediment depositional areas are the areas identified in the geomorphology approach.

The sample locations are divided into groups of transects with one location in-channel and one or two adjacent locations overbank, based on the stream morphology (Figure 5, Appendix A). The following summarizes the sample location rationale:

- Sample Transect 1 is placed along anthropogenic bank armoring. Areas upstream of bank armoring may be depositional because they are wider and thus have slower water velocities. The overbank locations will determine if spoils from past dredging activity are present along the top of the channel banks. The left-descending bank (LDB) of this section of Elliott Ditch has a fairly continuous levee that appears to be man-made. No levee is present on the right-descending bank (RDB); the sample location on the RDB will verify the absence of a man-made feature.
- Sample Transect 2 is located at a slight meander bend. The in-channel proposed sample location is on the inside of the meander bend (depositional surface). The overbank location is on the inside meander bend of the stable upland surface. This location is assumed to be relatively untouched by stream erosion and therefore, a good sample location.
- Sample Transect 3 is located near the upstream end of a depositional area (implied by a fine-grained sediment bed type). The overbank samples are located on upland surfaces with slightly different elevations. The LDB is slightly higher due to the presence of the levee. The RDB side is about 0.5 foot lower in elevation. If flooding reached the top of

the channel banks, the flood waters would naturally flow (and deposit sediment) towards the RDB.

- Sample Transect 4 is located just downstream of the depositional area. The in-channel sample here would confirm the absence of sediment deposition. The overbank sample locations on the RDB and LDB here are lower relative to the channel banks upstream, perhaps due to the anthropogenic impact of the railroad bridge.

5.0 SUMMARY

Elliott Ditch is a unique water body because the combination of natural stream evolution and anthropogenic activities have altered natural depositional/erosional processes. Typically, stream gradient decreases downstream as the channel erodes toward local base level. However, the gradient in Elliott Ditch increases downstream. Anthropogenic features such as the additional water from storm water outfalls and dredging downstream of Outfall 001, combined with glacial deposits that feature a significant amount of cobbles that armor the channel bed have resulted in a unique geomorphic environment in Elliott Ditch.

The geomorphic surface mapping suggest Elliott Ditch is regularly affected by high water velocities that limit sediment deposition in-channel. The majority of the overbank deposition is present on the lower terraces, T-1, T-2, and T-3. Large flood events could deposit sediment on the higher terraces. The primary area of overbank deposition is in the downstream reaches where the low terraces are present and the valley walls are wider.

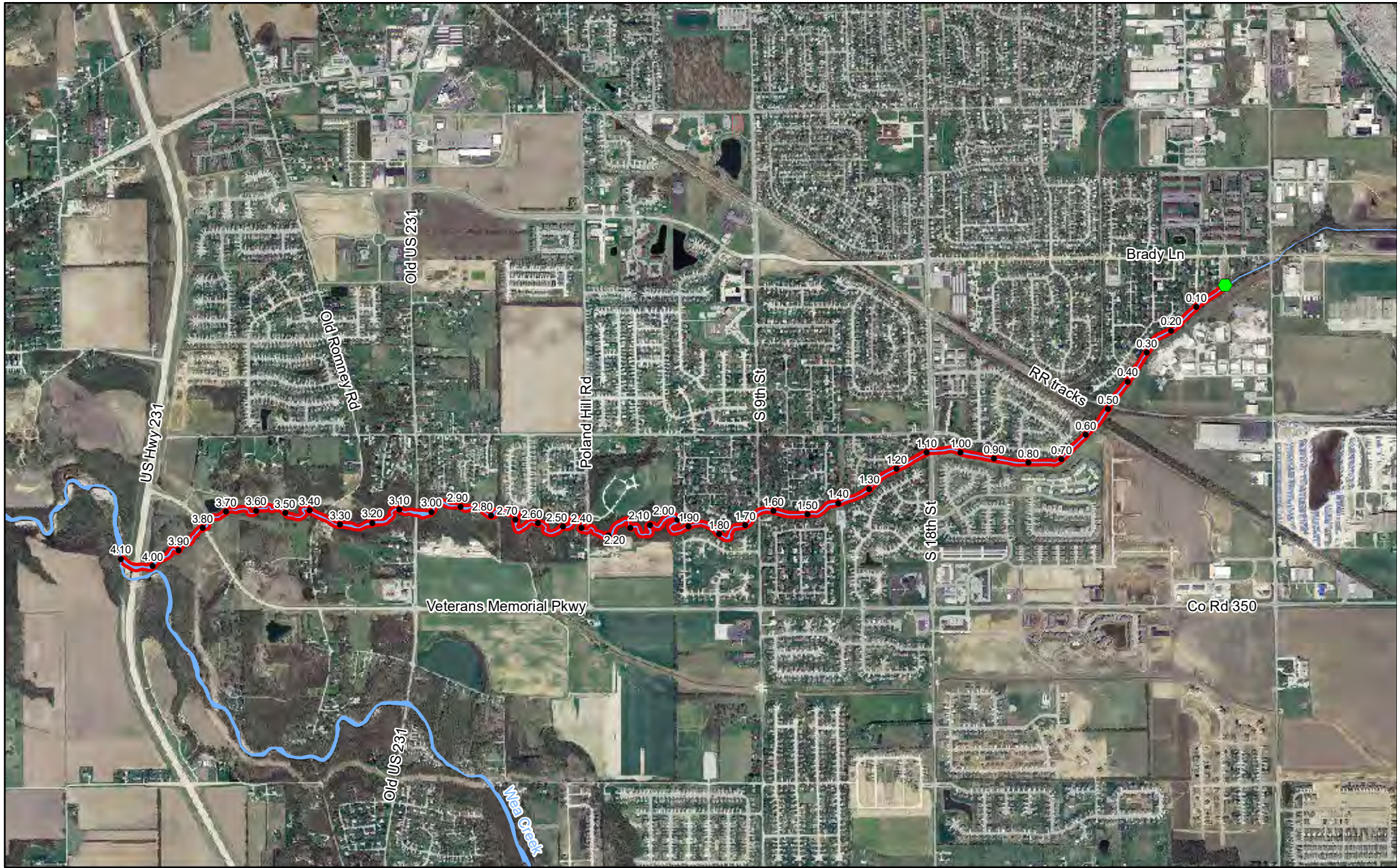
6.0 WORKS CITED

- Alcoa. 1979. "PCBs in Waste Water and Sediment Samples."
- Anchor. 2013. "Elliott Ditch/Wea Creek Investigation Phase V Report."
- Chemical Waste Management, INC. 1990a. "Elliott Ditch Remediation Plan."
- . 1990b. "Elliott Ditch Post-Removal Sampling and Analysis Plan."
- USDA. 1958. "Soil Survey of Tippecanoe County, Indiana." Washington, D.C.
- Yanko Environmental. 1982. "A Survey For Polychlorinated Biphenyls in Water, Sediments and Fish for the Aluminum Company of America Facility Lafayette, Indiana."
- . 1985. "1985 Mar A Survey for PCB in Water, Sediment and Fish for ALCOA-Yanko.pdf."
- . 1986. "A Survey for PCB in Water, Sediment and Fish for ALCOA."
- Young-Morgan & Associates, INC. 1988a. "Historical Data Analysis of Elliott Ditch/WEA Creek Watershed."
- . 1988b. "Characterization of PCBs, Reach 2 Elliott Ditch."

Appendix A

Figure 1

Overview – Elliott Ditch



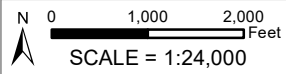
Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

OVERVIEW - Elliott Ditch

- Outfall 001
- Milepost
- Survey Area



Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/31/2014
 Approved By: DBR



Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd

Appendix A

Figure 2

Stream Reaches and Survey Transects

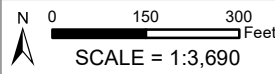


STREAM REACHES & SURVEY TRANSECTS - Elliott Ditch



Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

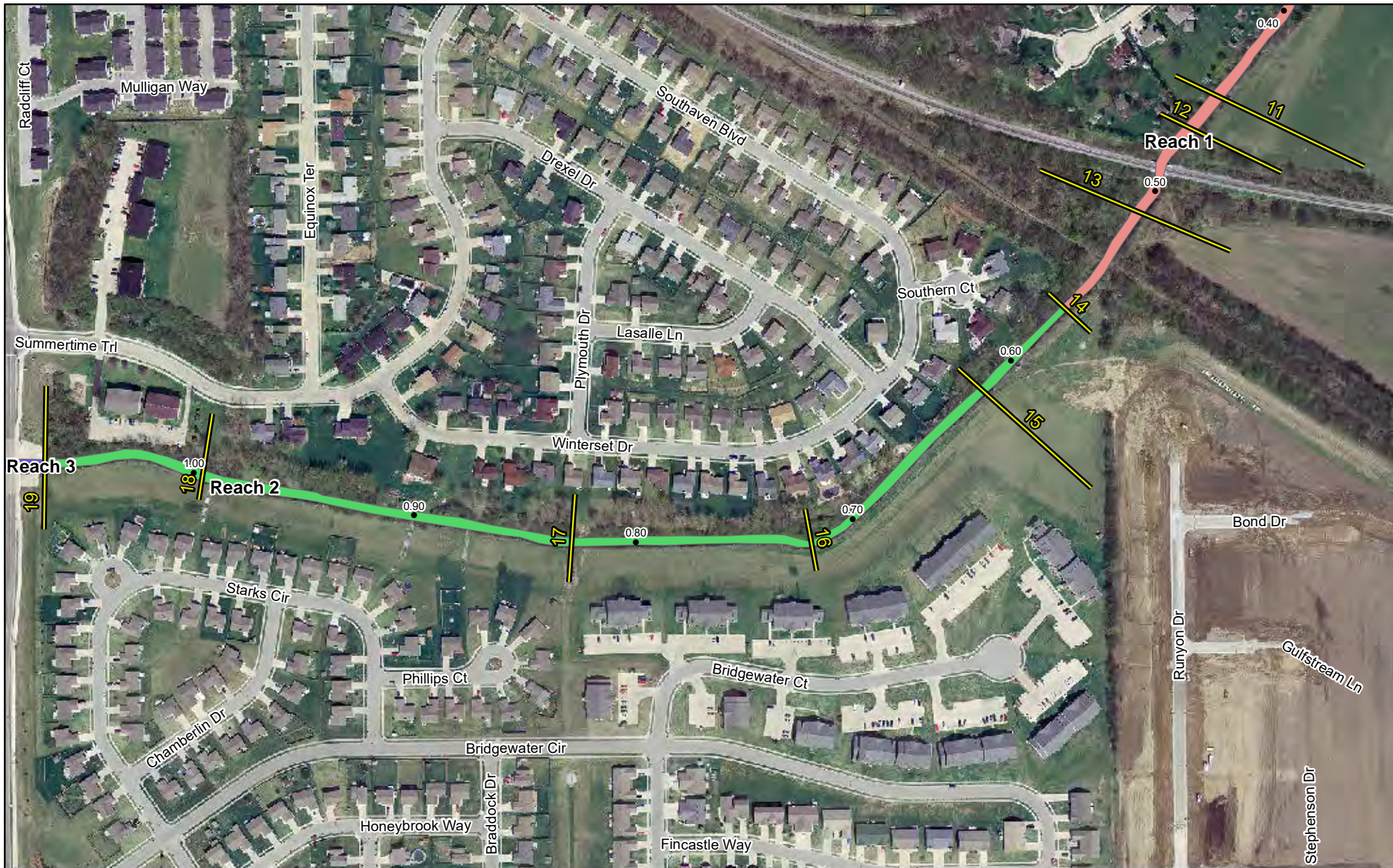
Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/30/2014
 Approved By: DBR



Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd

Outfall 001	Stream Reach	Reach 3	Reach 6
Milepost	Reach 1	Reach 4	Reach 7
Transect	Reach 2	Reach 5	Reach 8





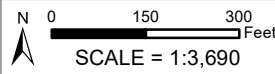
STREAM REACHES & SURVEY TRANSECTS - Elliott Ditch

- Milepost
- Transect
- Reach 1
- Reach 2
- Reach 3
- Reach 4
- Reach 5
- Reach 6
- Reach 7
- Reach 8



Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/30/2014
 Approved By: DBR



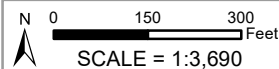
Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd





Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

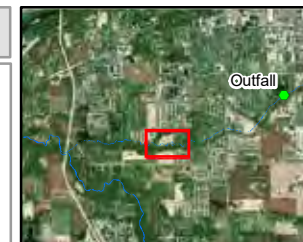
Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/30/2014
 Approved By: DBR

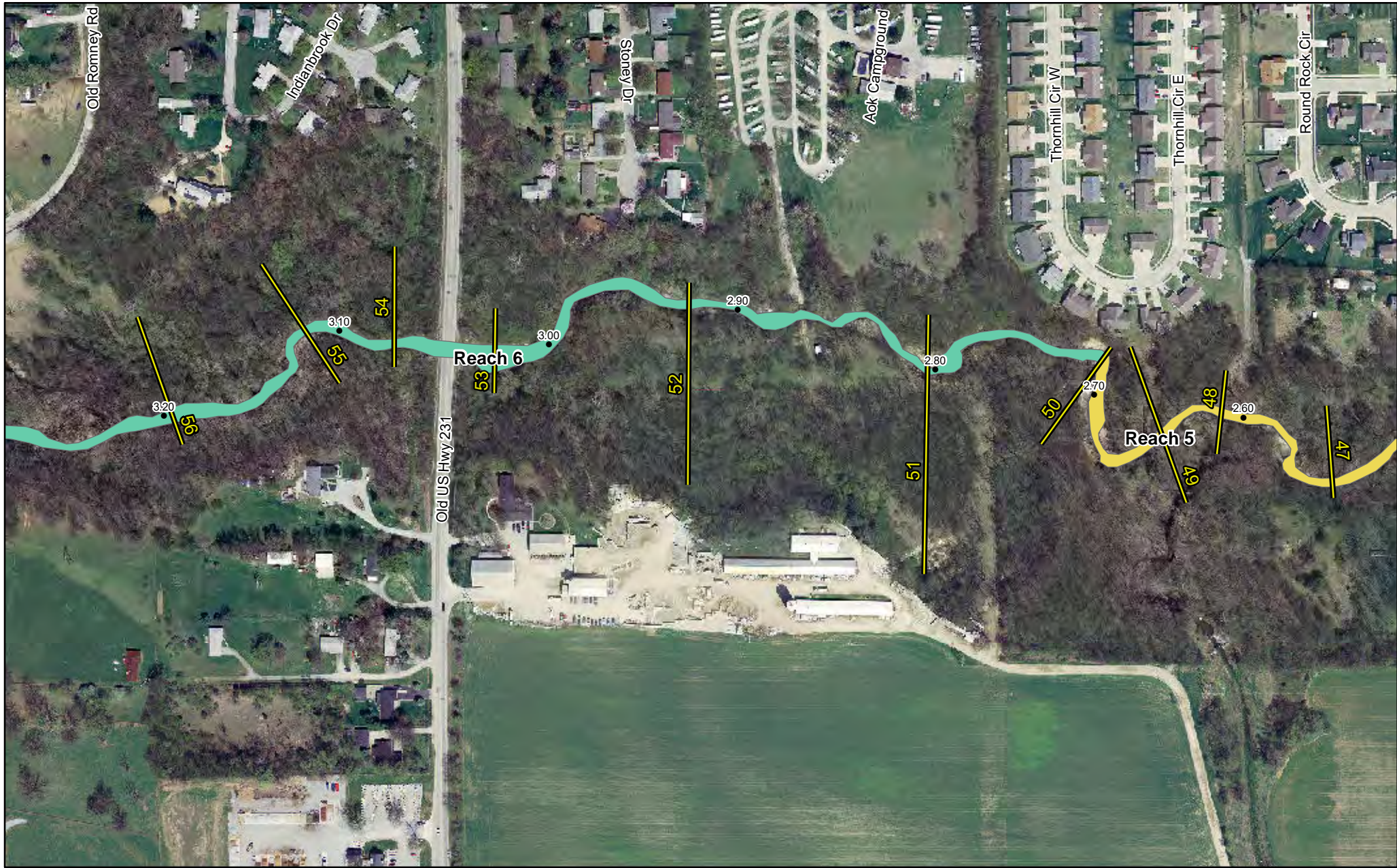


Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd

STREAM REACHES & SURVEY TRANSECTS - Elliott Ditch

- Milepost
- Transect
- Stream Reach
- Reach 1
- Reach 2
- Reach 3
- Reach 4
- Reach 5
- Reach 6
- Reach 7
- Reach 8





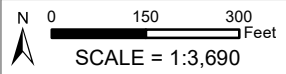
STREAM REACHES & SURVEY TRANSECTS - Elliott Ditch

- Milepost
 - Transect
- | | | |
|---|---|---|
| Stream Reach | Reach 3 | Reach 6 |
| Reach 1 | Reach 4 | Reach 7 |
| Reach 2 | Reach 5 | Reach 8 |



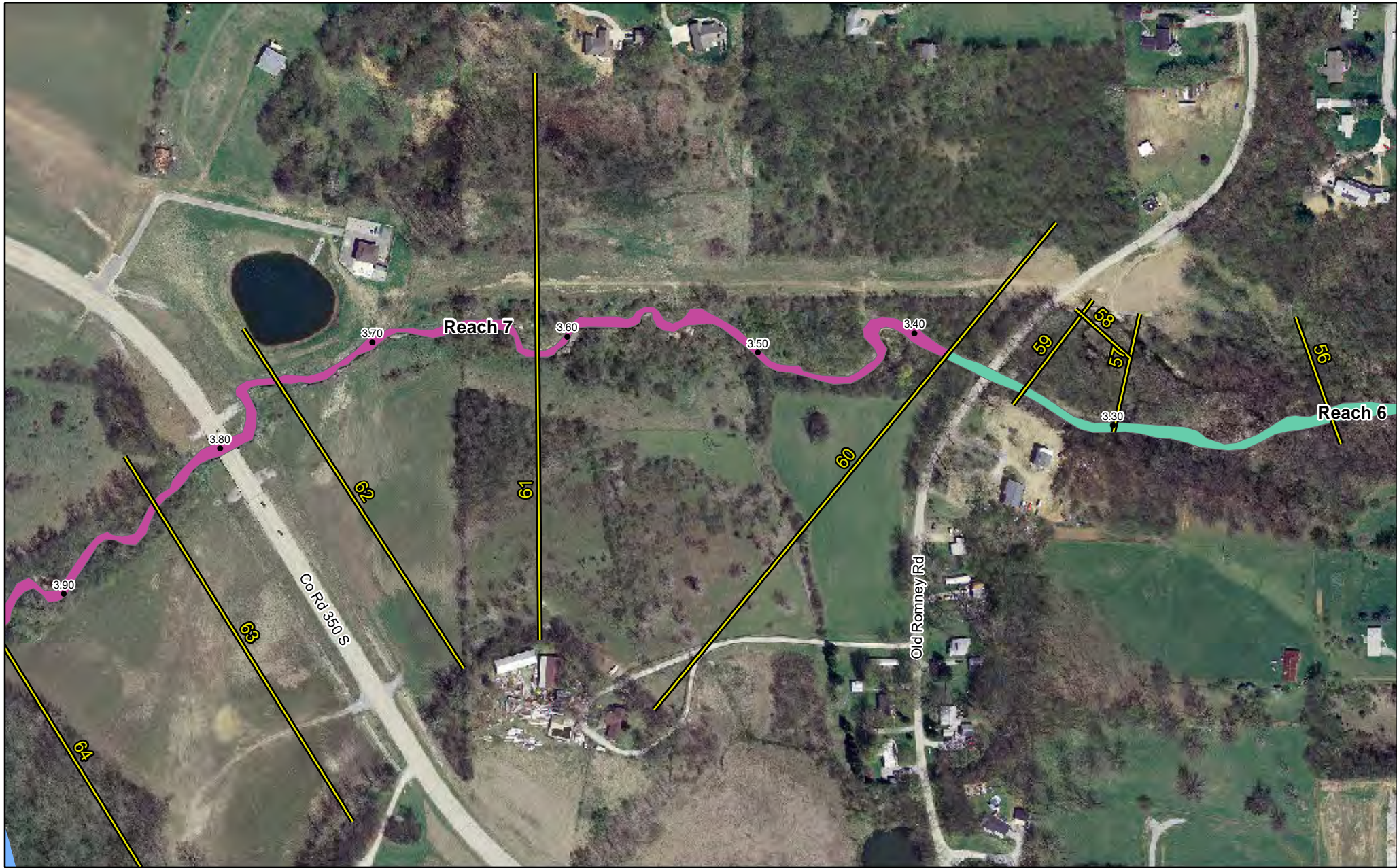
Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/30/2014
 Approved By: DBR



Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd





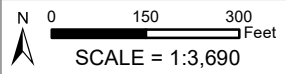
STREAM REACHES & SURVEY TRANSECTS - Elliott Ditch

• Milepost	Stream Reach	Reach 3	Reach 6
— Transect	Reach 1	Reach 4	Reach 7
	Reach 2	Reach 5	Reach 8



Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/30/2014
 Approved By: DBR



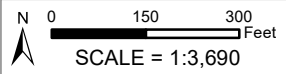
Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd





Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/30/2014
 Approved By: DBR
 Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd



STREAM REACHES & SURVEY TRANSECTS - Elliott Ditch

• Milepost	Stream Reach	Reach 3	Reach 6
— Transect	Reach 1	Reach 4	Reach 7
	Reach 2	Reach 5	Reach 8



Appendix A

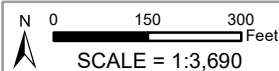
Figure 3

Geomorphic Surfaces



Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/29/2014
 Approved By: DBR



Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd

GEOMORPHIC SURFACES - Elliott Ditch

- Outfall 001
 - Milepost
 - Geomorphic Surface Boundary
- | | | | |
|------------|-----|-----|---------------|
| stream | T-1 | T-5 | depression |
| floodplain | T-2 | T-6 | oxbow |
| | T-3 | T-7 | anthropogenic |
| | T-4 | | upland |

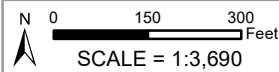




Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/29/2014
 Approved By: DBR

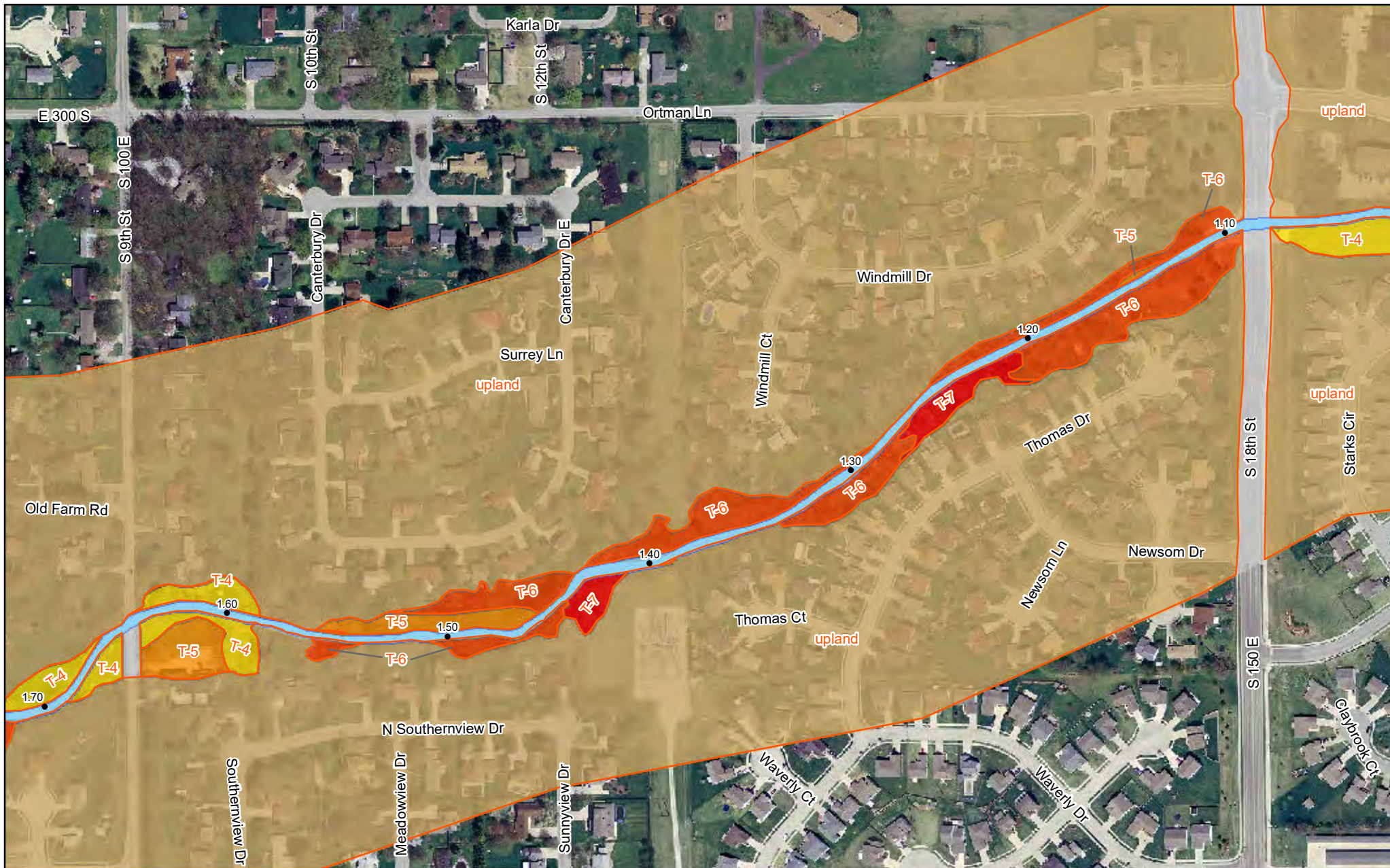
Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd



GEOMORPHIC SURFACES - Elliott Ditch

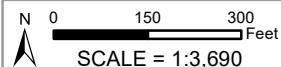
• Milepost	Geomorphic Surface	T-1	T-5	depression
Geomorphic Surface Boundary	stream	T-2	T-6	oxbow
	floodplain	T-3	T-7	anthropogenic
		T-4		upland





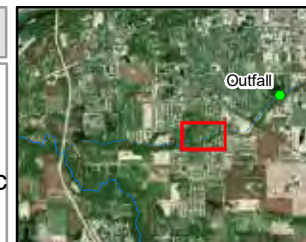
Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

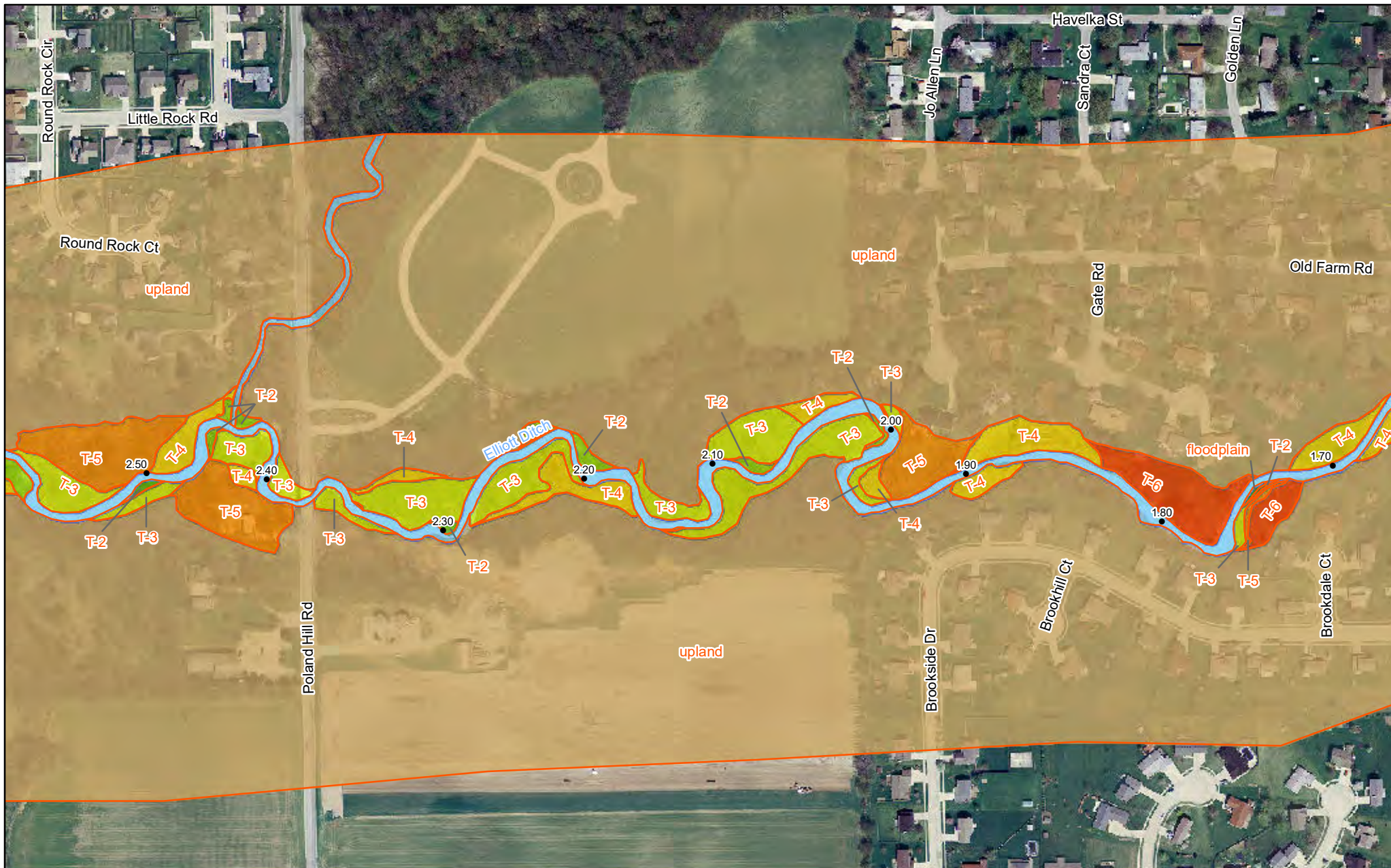
Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/29/2014
 Approved By: DBR
 Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd



GEOMORPHIC SURFACES - Elliott Ditch

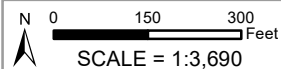
• Milepost	Geomorphic Surface	T-1	T-5	depression
Geomorphic Surface Boundary	stream	T-2	T-6	oxbow
	floodplain	T-3	T-7	anthropogenic
		T-4		upland





Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

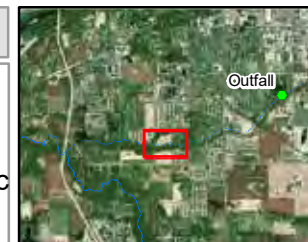
Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/29/2014
 Approved By: DBR

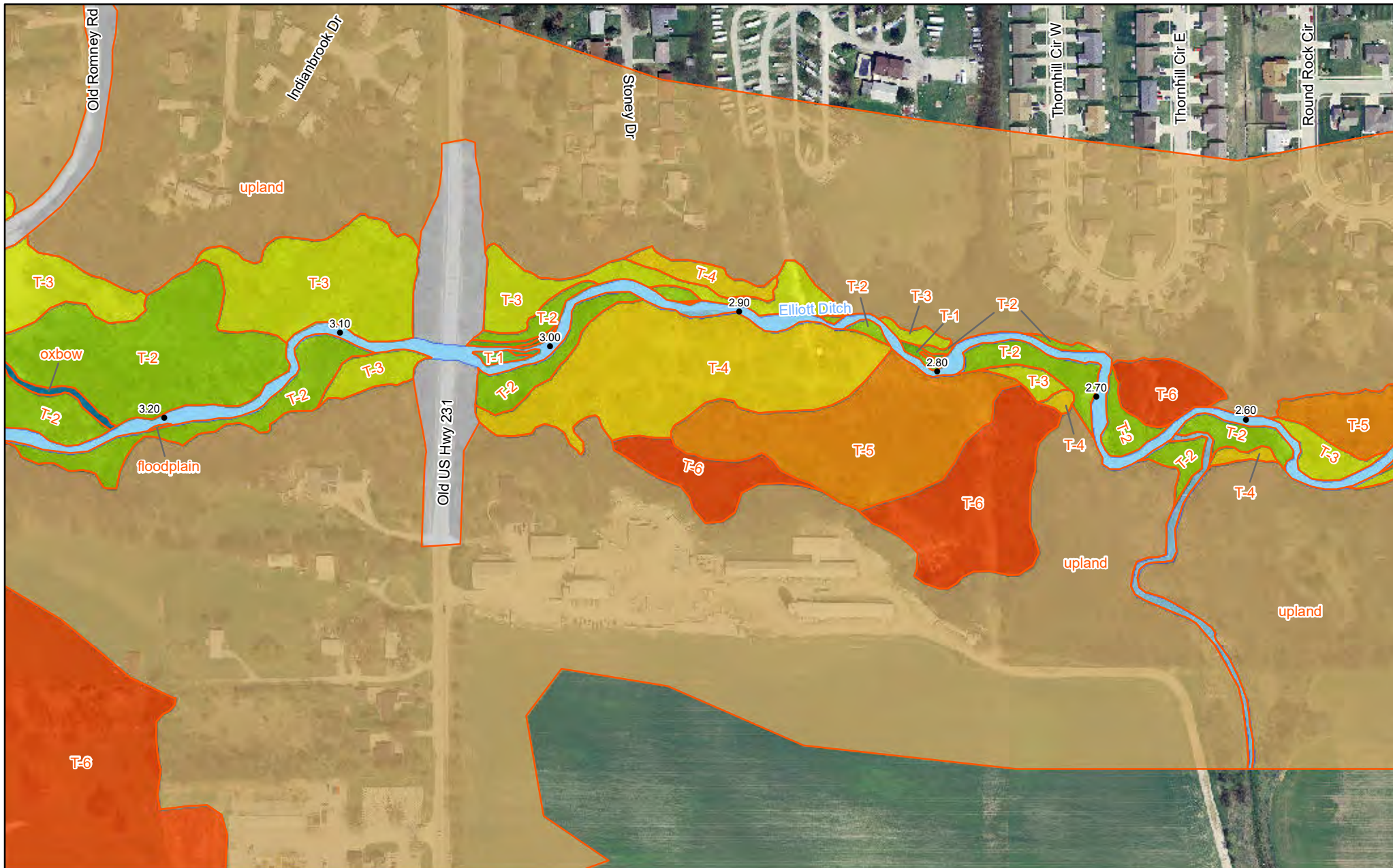


Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd

GEOMORPHIC SURFACES - Elliott Ditch

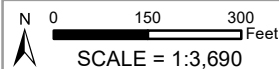
• Milepost	Geomorphic Surface	T-1	T-5	depression
Geomorphic Surface Boundary	stream	T-2	T-6	oxbow
	floodplain	T-3	T-7	anthropogenic
		T-4		upland





Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

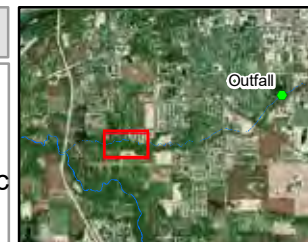
Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/29/2014
 Approved By: DBR

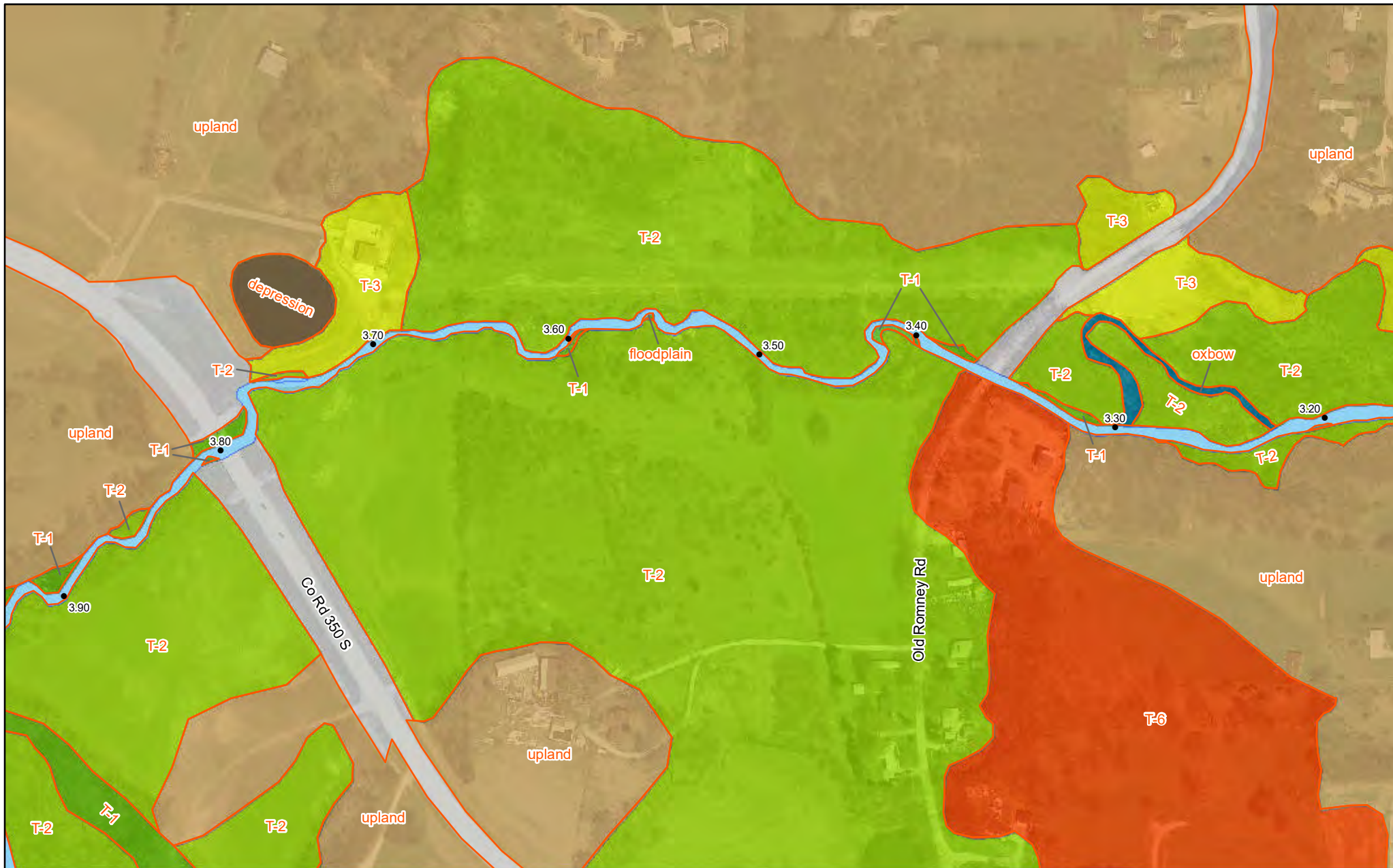


Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd

GEOMORPHIC SURFACES - Elliott Ditch

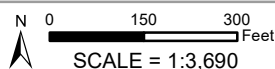
• Milepost	Geomorphic Surface	T-1	T-5	depression
○ Geomorphic Surface Boundary	stream	T-2	T-6	oxbow
	floodplain	T-3	T-7	anthropogenic
		T-4		upland





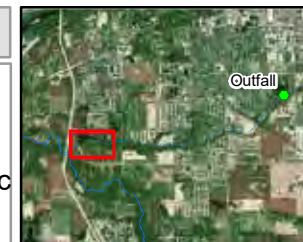
Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

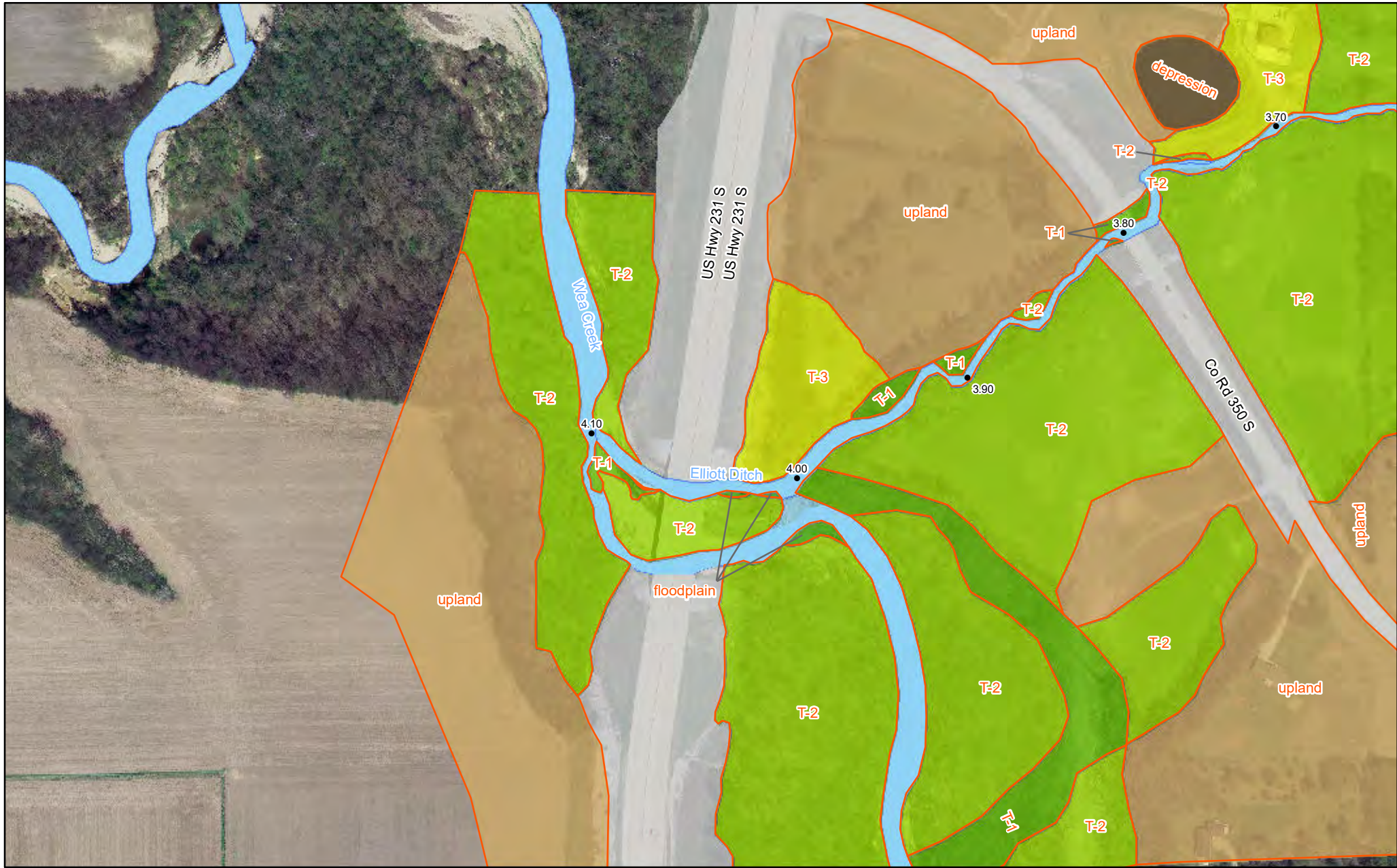
Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/29/2014
 Approved By: DBR
 Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd



GEOMORPHIC SURFACES - Elliott Ditch

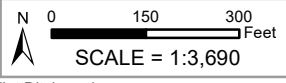
• Milepost	Geomorphic Surface	T-1	T-5	depression
○ Geomorphic Surface Boundary	stream	T-2	T-6	oxbow
	floodplain	T-3	T-7	anthropogenic
		T-4		upland





Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/29/2014
 Approved By: DBR



Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd

GEOMORPHIC SURFACES - Elliott Ditch

• Milepost	Geomorphic Surface	T-1	T-5	depression
Geomorphic Surface Boundary	stream	T-2	T-6	oxbow
	floodplain	T-3	T-7	anthropogenic
		T-4		upland

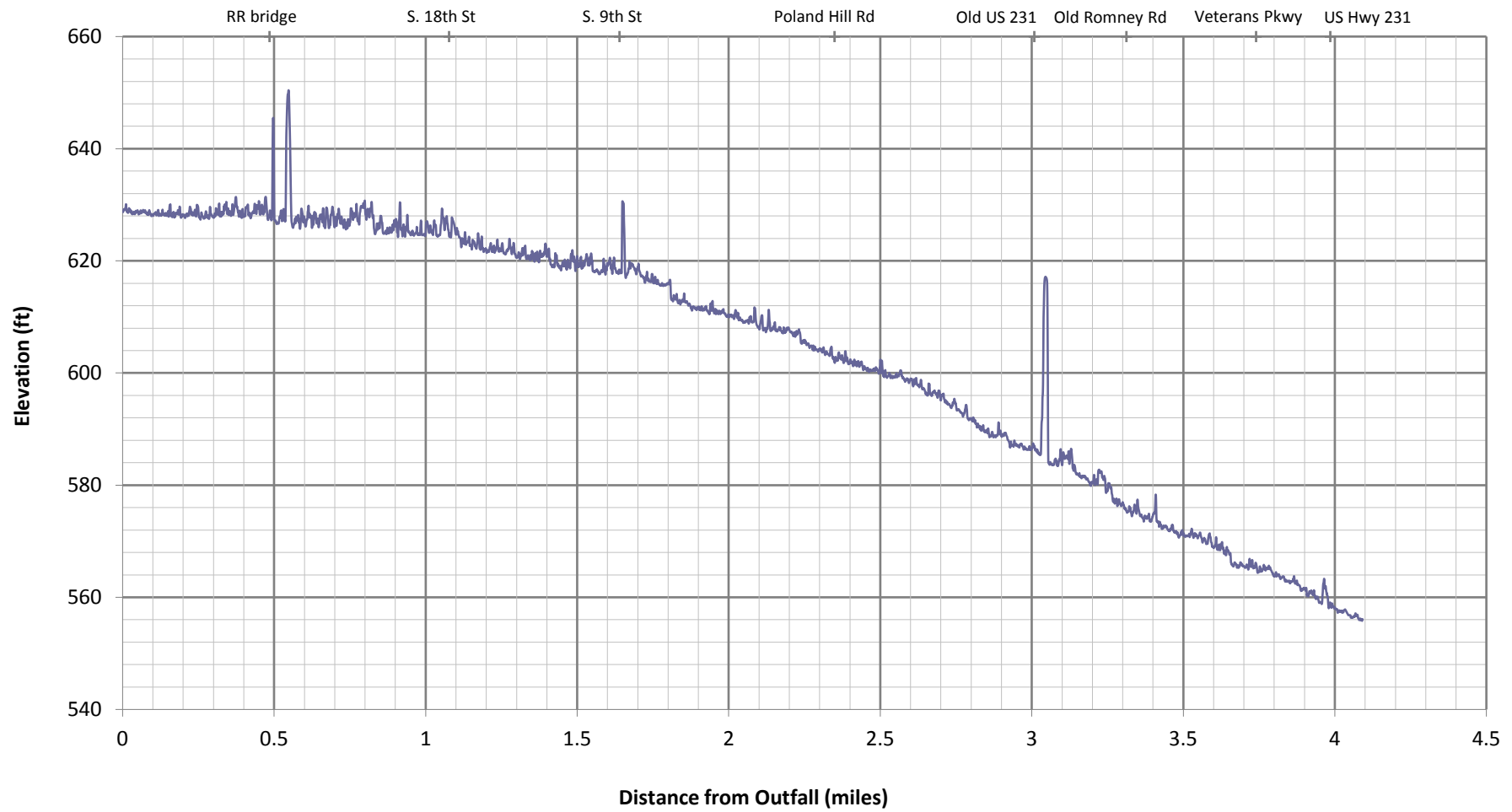


Appendix A

Figure 4

Longitudinal Profile

Elliott Ditch Longitudinal Profile - *Outfall 001 to Confluence with Wea Creek*



Appendix A

Figure 5

Example Proposed Sample Locations and Erosion/Deposition Surfaces

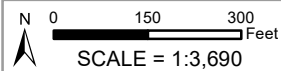


Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

PROPOSED SAMPLE LOCATIONS & EROSION/DEPOSITION SURFACES - Elliott Ditch

- ◆ Outfall 001
- Deposition Surface
- Milepost
- Erosion Surface
- Proposed Sample Location

Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/30/2014
 Approved By: DBR



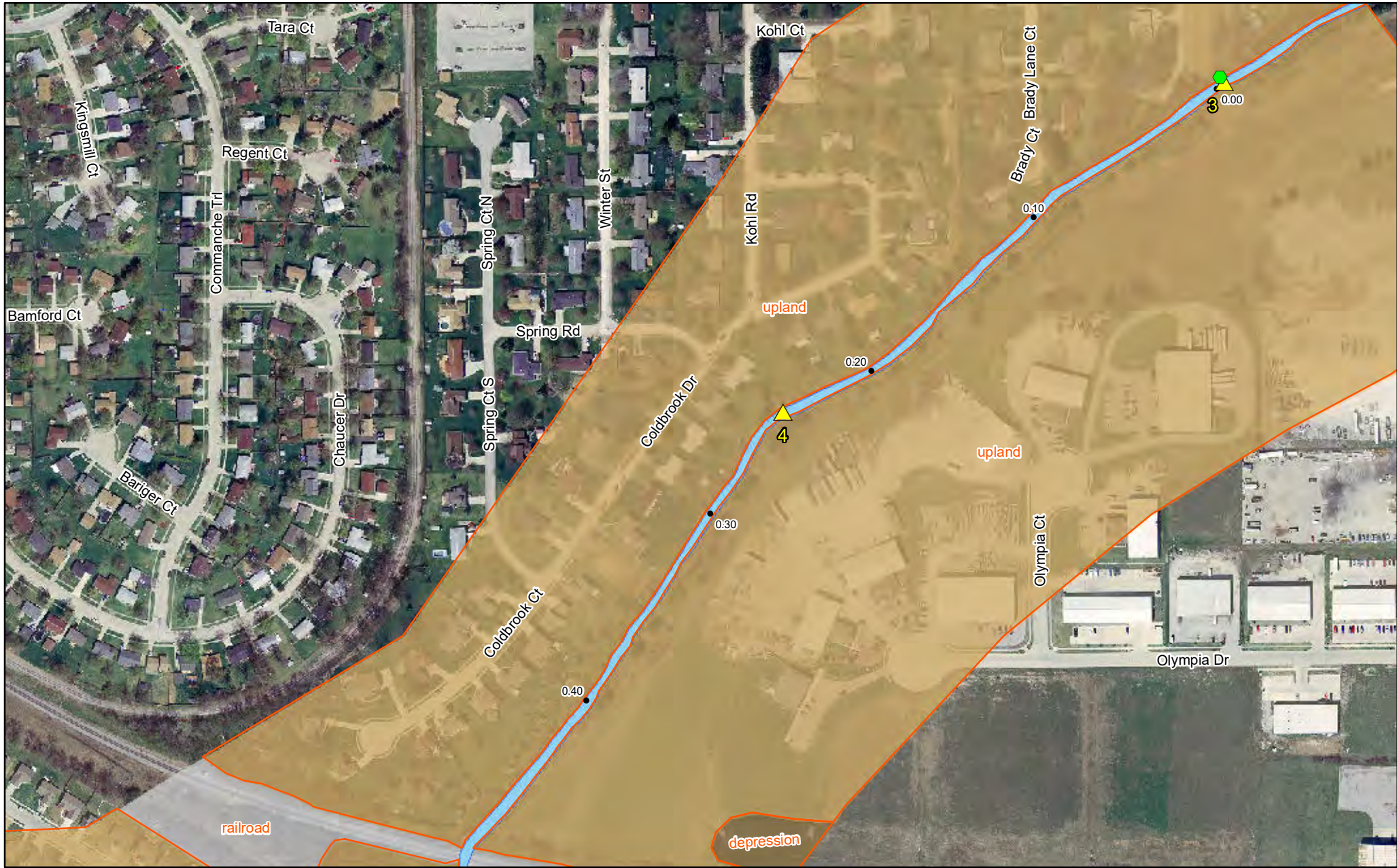
Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd



Appendix A

Figure 6

Anchor Sample Stations and Geomorphic Surfaces



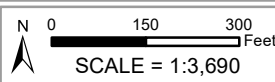
Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

ANCHOR SAMPLE STATIONS & GEOMORPHIC SURFACES - Elliott Ditch

Outfall 001	stream	T-1	T-5	depression
Anchor Sample Station (approx. location)	floodplain	T-2	T-6	oxbow
Milepost	T-3	T-4	T-7	anthropogenic
Geomorphic Surface Boundary				upland



Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/30/2014
 Approved By: DBR
 Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd





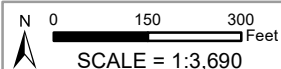
Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

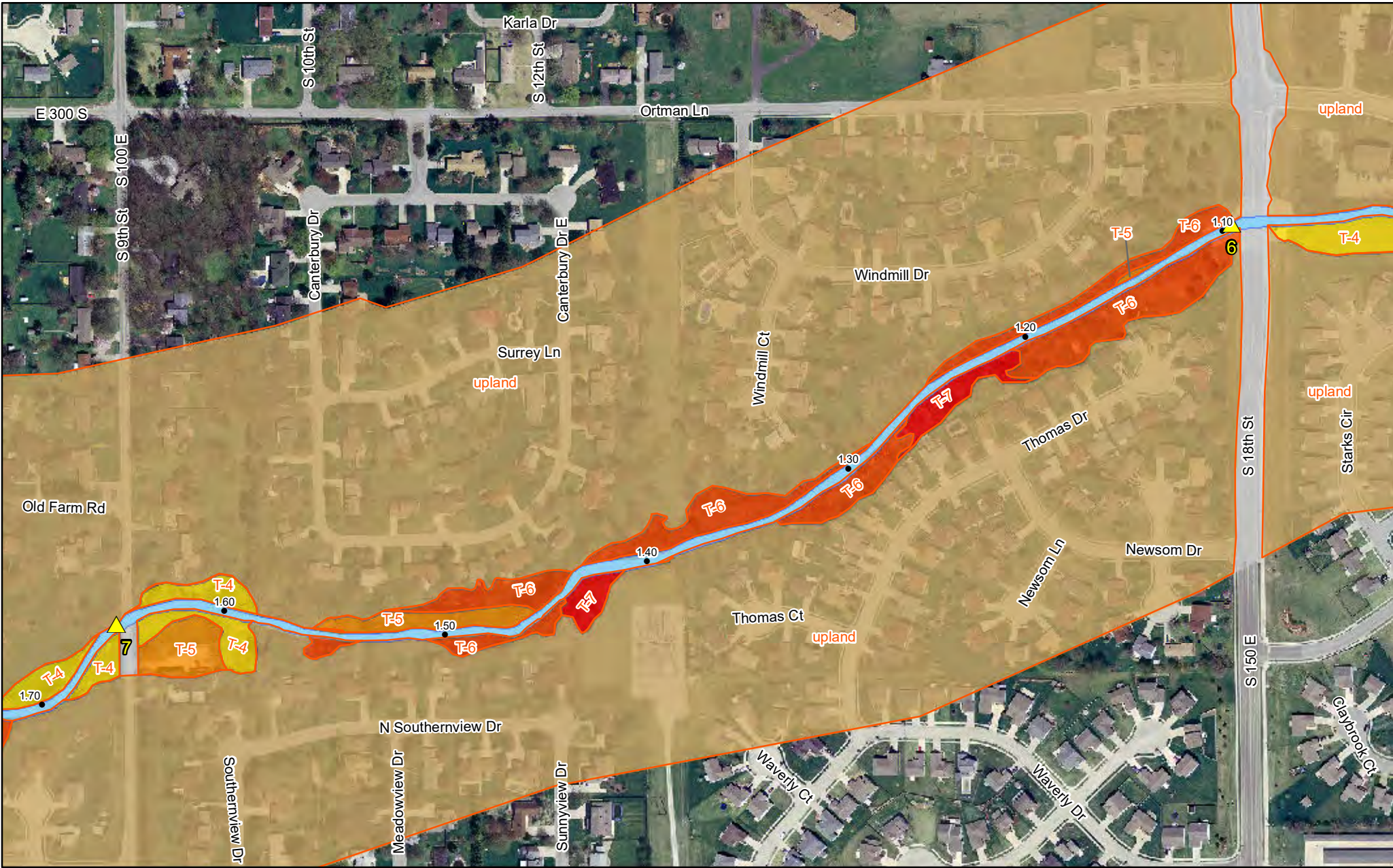
ANCHOR SAMPLE STATIONS & GEOMORPHIC SURFACES - Elliott Ditch

- | | | | | |
|--|--------------------|-------|-------|-----------------|
| ▲ Anchor Sample Station (approx. location) | Geomorphic Surface | ■ T-1 | ■ T-5 | ■ depression |
| ● Milepost | ■ stream | ■ T-2 | ■ T-6 | ■ oxbow |
| ○ Geomorphic Surface Boundary | ■ floodplain | ■ T-3 | ■ T-7 | ■ anthropogenic |
| | | ■ T-4 | | ■ upland |



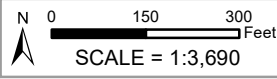
Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/30/2014
 Approved By: DBR
 Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd





Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/30/2014
 Approved By: DBR

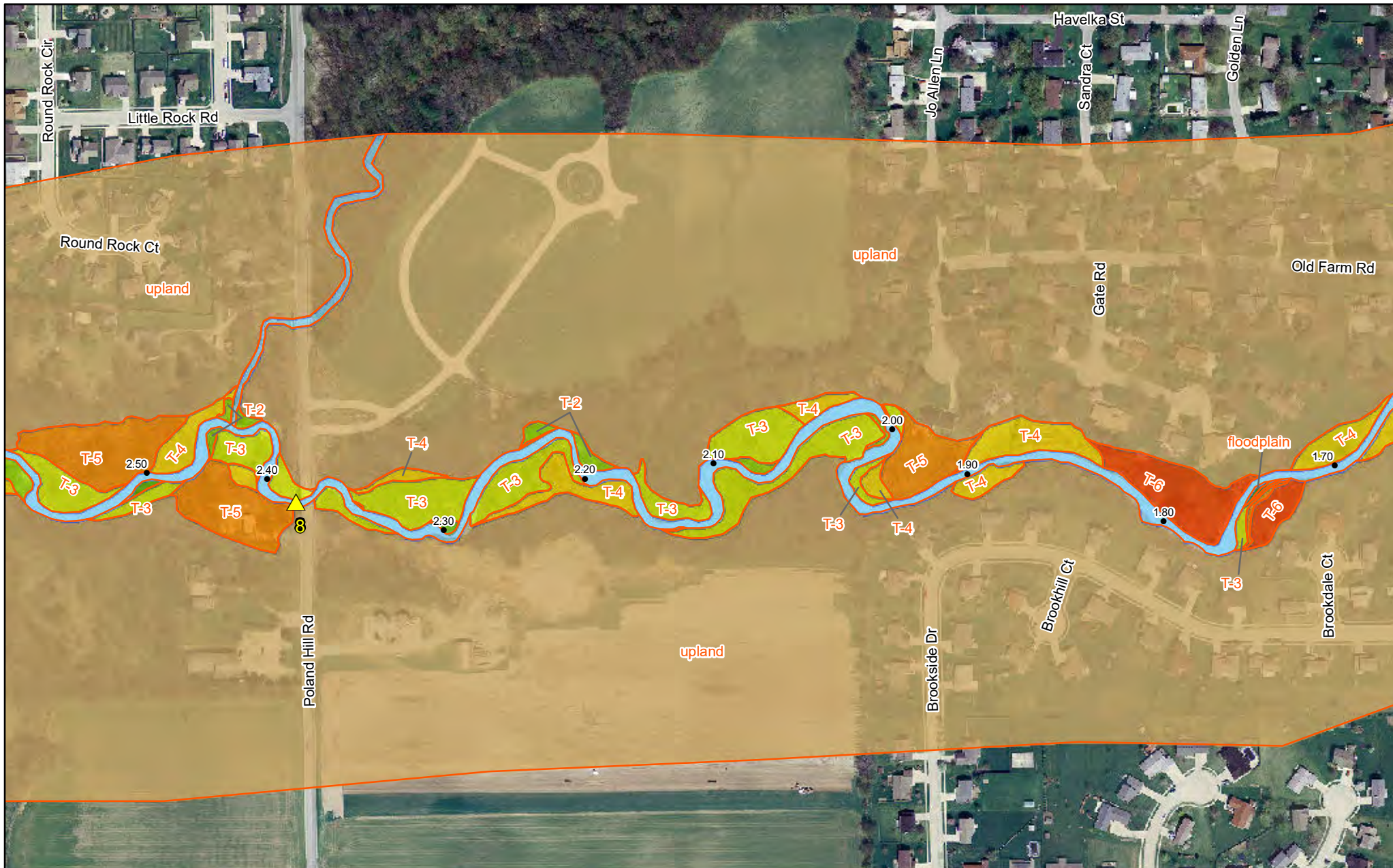


ANCHOR SAMPLE STATIONS & GEOMORPHIC SURFACES - Elliott Ditch

- | | | | | |
|--|------------|-----|---------------|------------|
| Anchor Sample Station (approx. location) | stream | T-1 | T-5 | depression |
| Milepost | floodplain | T-2 | T-6 | oxbow |
| Geomorphic Surface Boundary | T-3 | T-7 | anthropogenic | upland |
| | T-4 | | | |



Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd



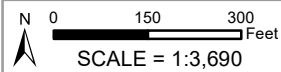
Tetra Tech, Inc.

630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

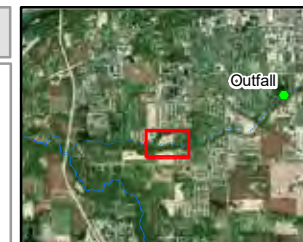
ANCHOR SAMPLE STATIONS & GEOMORPHIC SURFACES - Elliott Ditch

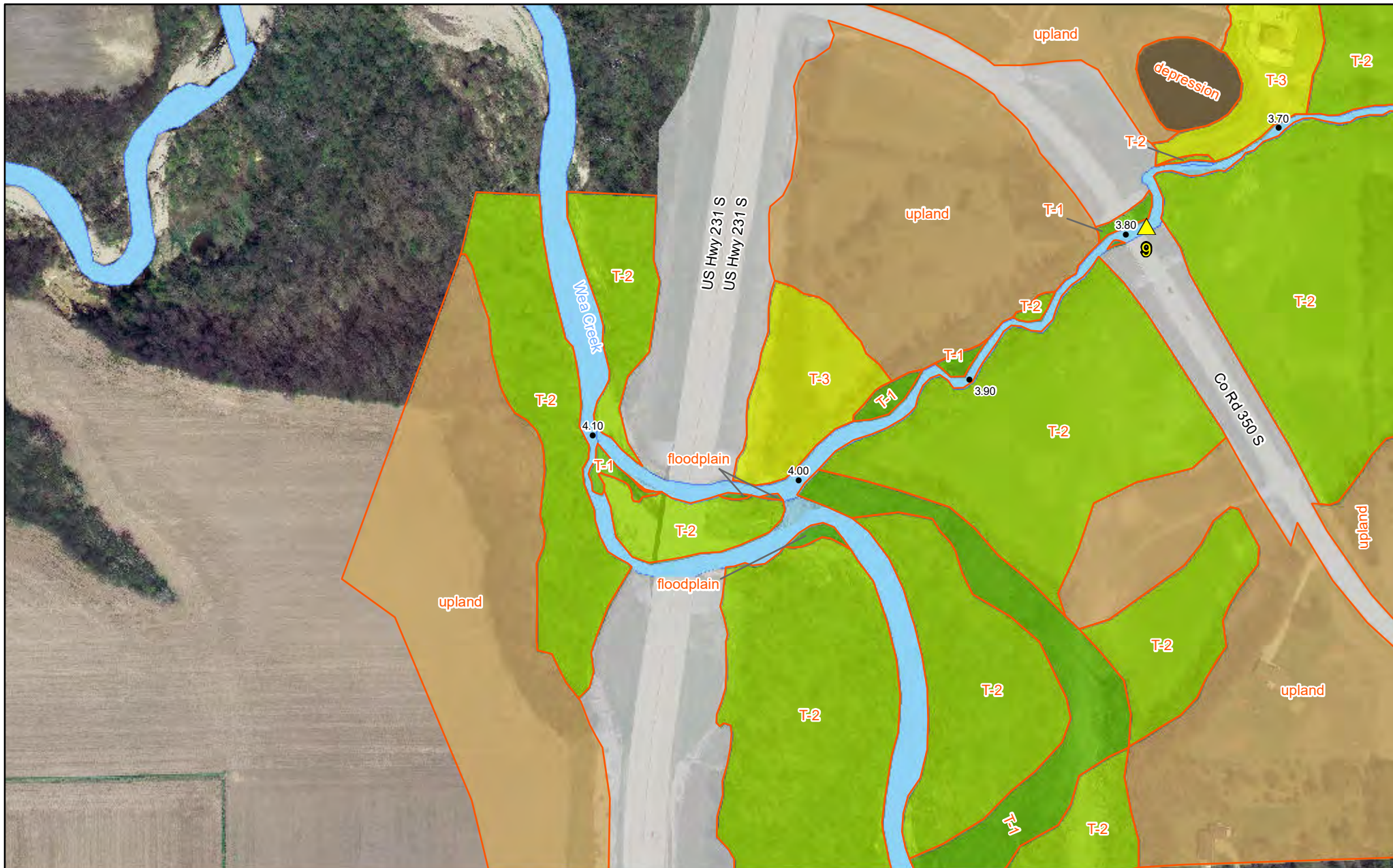
- | | | | | |
|--|---------------------------|-----|-----|---------------|
| ▲ Anchor Sample Station (approx. location) | Geomorphic Surface | T-1 | T-5 | depression |
| • Milepost | stream | T-2 | T-6 | oxbow |
| ○ Geomorphic Surface Boundary | floodplain | T-3 | T-7 | anthropogenic |
| | | T-4 | | upland |

Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/30/2014
 Approved By: DBR



Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd

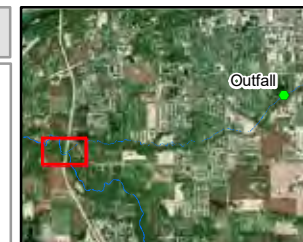




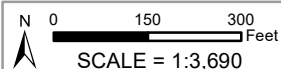
Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

ANCHOR SAMPLE STATIONS & GEOMORPHIC SURFACES - Elliott Ditch

- | | | | | |
|--|---------------------------|-------|-------|-----------------|
| ▲ Anchor Sample Station (approx. location) | Geomorphic Surface | ■ T-1 | ■ T-5 | ■ depression |
| ● Milepost | ■ stream | ■ T-2 | ■ T-6 | ■ oxbow |
| ○ Geomorphic Surface Boundary | ■ floodplain | ■ T-3 | ■ T-7 | ■ anthropogenic |
| | | ■ T-4 | | ■ upland |



Drawn By: MEB
 Date Created: 6/17/2013
 Last Revised: 12/30/2014
 Approved By: DBR
 Document Name: AlcoaElliottDitch.mxd
 File Path: F:\Alcoa Elliott Ditch\GIS\AlcoaElliottDitch.mxd



Appendix B

Photographs



Photo 1: Two outfall culverts on RDB. These outfalls are located on transect 1 at Outfall 001.



Photo 2: Looking upstream from transect 12. Bank height on LDB (right side of photo) is ~ 10 feet. Top of the bank on LDB is the upland.



Photo 3: Looking upstream at active railroad bridge between transects 12 and 13. Stream bed consists of sand, gravel and cobbles. Poured concrete floor under bridge arches is completely exposed on RDB side bridge arch.



Photo 4: Looking downstream at transect 35. Person is standing on T-6. House in background is sitting on the upland.



Photo 5: Looking at LDB on transect 48. The bare sand in the foreground is the floodplain surface. The T-1 surface is covered with forbs and has flood debris (garbage) and leaf litter. The T-2 surface is in background and is covered by trees and shrubs.



Photo 6: Looking at upstream side of meander bend near transect 60. The cobble surface is the floodplain. A small T-1 is visible where the clump of brown vegetation is located. The T-2 surface is marked by the trees and shrubs on the left of the photo.



Photo 7: Looking at RDB near transect 62. ATV is parked on T-3 surface. The brown vegetation marks the T-2 surface and the T-1 surface is marked by the green vegetation by the edge of the channel.



Photo 8: Looking downstream near transect 39. Point bar in foreground has T-1 (bare gravel & leaf litter), T-2 (single tree), T-3 (exposed tree roots). Flood debris (garbage) is visible on the T-2 surface on the right of the photo. The house is sitting on the upland surface.



Photo 9: Looking at LDB near transect 25. Gravel surface in foreground is the floodplain. The trampoline is on the T-6 and the houses are located on the upland surface.



Photo 10: Looking upstream near transect 65. The sand and gravel surface in the middle of the photo is the floodplain. The T-1 is located on the right of the photo at one end of the protruding log. The T-2 is covered by trees and shrubs on both sides of the channel.



Photo 11: Old wooden bridge pylons and debris under the 9th Street Bridge.

APPENDIX II

FIELD SAMPLING PLAN – ELLIOTT DITCH (TETRATECH CES)

FIELD SAMPLING PLAN

Elliott Ditch

Lafayette, Tippecanoe County, Indiana

Prepared for:

Alcoa

3131 Main Street
Lafayette, IN 47905

Prepared by:

Tetra Tech, INC.

630 Riverfront Drive
Sheboygan, WI 53081

February 2, 2016

FIELD SAMPLING PLAN

Elliott Ditch Lafayette, Tippecanoe County, Indiana

Prepared for:
Alcoa
3131 Main Street
Lafayette, IN 47905

Prepared by:
Tetra Tech, INC.
630 Riverfront Drive
Sheboygan, WI 53081

Prepared by: _____ Date:
Dave Richardson, Technical Manager
Tetra Tech, Inc.

Reviewed by: _____ Date:
Robert Prezbindowski, Project Manager
Alcoa

Reviewed by: _____ Date:
Don Stilz, Senior Environmental Manager
Indiana Department of Environmental Management

Approved by: _____ Date:
Jean Greensley, Remedial Project Manager
USEPA Region 5 TSCA

Table of Contents

1. INTRODUCTION	6
1.1. Problem Definition	7
1.2 Project Management.....	8
2. PROJECT DESCRIPTION	9
2.1 Site Location and Background.....	9
2.2 Target Analyte - PCBs.....	10
3. INVESTIGATION STRATEGY	11
4. PROPOSED SCHEDULE	14
5.1 In-Channel Poling	15
5.2 Sample Locations	16
5.3 In-Channel Sediment Sampling.....	16
5.4 Overbank Soil Sampling.....	18
6. SAMPLING PROCEDURES	20
6.1 Sample Nomenclature	20
6.2 Management of Investigative-Derived Wastes.....	21
6.3 Decontamination Procedures	22
6.4 Sample Handling, Tracking, and Custody Procedures.....	22
6.5 Sampling SOPs	23
6.6 Soil/Sediment Core Processing.....	23
7. LABORATORY INFORMATION	25
7.1 Measurement and Performance Criteria	25
7.2 Data Quality Objectives	26
8. QUALITY CONTROL ACTIVITES	27
8.1 Field Quality Control	27
8.2 Analytical Quality Control.....	27
8.3 Performance Evaluation Samples.....	28
8.4 Documentation, Records, and Data Management.....	28
8.5 Data Validation Requirements.....	28
8.6 Data Analysis	28

LIST OF TABLES

- Table 1** FSP Revision Form
Table 2 Sampling and Analysis Summary
Table 3 Sample Identification and Justification Summary

LIST OF FIGURES

- Figure 1** Site Location Map
Figure 2 Elliott Ditch Overview Map
Figure 3 Stream Reaches/Milepost Map
Figure 4 Sediment and Soil Sampling Location and Geomorphic Surfaces Maps
Figure 5 Elliott Ditch Longitudinal Profile and Soil Sample Elevation Profile

LIST OF ATTACHMENTS

- Attachment A:** Standard Operating Procedures

LIST OF ABBREVIATIONS AND ACRONYMS

ALO	Alcoa's Lafayette Operations
C	Degrees Celsius
COC	Chain of Custody
FSP	Field Sampling Plan
GPS	Global Positioning System
HASP	Health and Safety Plan
IDEM	Indiana Department of Environmental Management
mg/kg	Milligram per kilogram
MS	Matrix Spike
MSD	Matrix Spike Duplicate
NRCS	Natural Resource Conservation Service
oz	Ounces
PCBs	Polychlorinated Biphenyls
PPE	Personal Protective Equipment
ppm	Parts per Million
PRP	Potentially Responsible Party
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control
RPM	Remedial Project Manager
SOP	Standard Operating Procedure
TSCA	Toxic Substances Control Act
Tt	Tetra Tech
USCS	Unified Soil Classification System
USDA	United States Department of Agriculture Soil Classification System
USEPA	United States Environmental Protection Agency

1. INTRODUCTION

Elliott Ditch is a tributary to Wea Creek, which is a tributary to the Wabash River, downstream of Lafayette, Indiana (Figure 1). In addition to its base flow, Elliott Ditch receives wastewater discharges through an outfall (Outfall 001) from Alcoa's Lafayette Operations (ALO). These discharges include treated sanitary and industrial process water, as well as storm water. The distance from the outfall to the Wabash River is 7.5 miles. The distance from the outfall to the Elliott Ditch and Wea Creek confluence is 4.1 miles. This Field Sampling Plan (FSP) is focused on the area from the outfall (Milepost 0.0) to Milepost 1.59, the end of the channelized portion of Elliott Ditch.

Tetra Tech performed a geomorphology and depositional pattern assessment of Elliott Ditch (between Alcoa's Outfall 001 and Wea Creek) and the surrounding floodplain in Lafayette, Indiana in 2013 and 2014. Assessment work proceeded, over this period, on an iterative basis. In 2013, preliminary geomorphic surface mapping (desktop) was conducted to evaluate the depositional/erosional pattern in the channel and surrounding floodplain. Field work included a detailed survey of the upstream 0.5 mile of Elliott Ditch and the 100-year floodplain to complete detailed channel profiles. In 2014, the desktop geomorphic surfaces were field confirmed and edited to reflect the field conditions.

The objective of this FSP is to support a site conceptual model to understand the distribution of potential PCB impacts in Elliott Ditch and the adjacent floodplain caused by historical releases from Alcoa's storm water outfall. This objective will be met by poling and GPS readings to define the horizontal and vertical extent of fine grained deposits in-channel, sediment sampling to characterize the sediment profile, soil sampling to characterize the soil profile and sediment and soil analytical samples to determine the presence/absence and concentration of PCBs.

The purpose of this FSP is to describe site-specific tasks that will be performed in support of the stated objectives. The FSP will reference the Quality Assurance Project Plan (QAPP) for generic tasks common to all data collection activities including routine procedures for sampling and analysis, sample documentation, equipment decontamination, sample handling, data management,

assessment, and data review. Any deviations or modifications to the approved FSP will be documented using Table 1: FSP Revision Form.

1.1. Problem Definition

Polychlorinated Biphenyls (PCBs) are present in the Elliott Ditch watershed from the Alcoa Outfall to the County Road 350 South Bridge based on sediment samples collected by Anchor QEA in 2004 and 2010. The PCB concentrations range from <1 ppm to 27 ppm at sample locations. The horizontal and vertical extent of the PCB concentrations are currently not understood within the channel or floodplain.

The natural processes of a flowing stream develop a pool and riffle system which means the channel gradient will alternate from a relatively steeper gradient (riffle) to a relatively shallower gradient (pool). The lengths of a stream's pool and riffle system are affected by a number of stream characteristics including; channel width, channel bed type, floodplain width, water velocity, sediment load, and sinuosity. The pool and riffle system is unique to each stream and also variable within a single stream. An effective sampling strategy requires an understanding of the pool and riffle system for the given stream.

The fate and transport of PCBs is dictated by their affinity to adsorb to silt and clay size particles in the stream system. The silt and clay size particles stay in suspension in a stream until the velocity drops to near zero for a number of hours. The silt and clay particles can be re-suspended with an increase in water velocity. Since PCBs adsorb to sediment, the PCB deposition pattern corresponds to the deposition of the fine-grained sediments. Within the pool and riffle system, the silts and clays typically deposit in the pools (shallower stream gradient) and not within the riffles.

The stream's geomorphic and anthropogenic characteristics define the depositional patterns within the channel and on the adjacent floodplain. Streams are linear features that vary longitudinally (pool and riffle system), vertically due to varying water depths, and horizontally within the channel (thalweg vs. point bars) and on the floodplain due to elevation changes and historic stream development (floodplain and terraces). A fluvial environment like Elliott Ditch is not homogeneous, therefore, a biased sampling approach based on an understanding of the silt and

clay (fine-grained) deposition pattern is the most effective approach to define the horizontal and vertical extent of contamination.

1.2 Project Management

The following personnel will be involved in planning and/or technical activities.. Each will receive a copy of the approved FSP. A copy of the FSP will also be retained in the site file.

Personnel	Title	Organization	Phone Number	Email
Robert Prezbindowski	Alcoa Project Manager	Alcoa	(865) 977-3811	Robert.Prezbindowski@alcoa.com
Dave Richardson	Senior Fluvial Geomorphologist	Tetra Tech	(920) 634-5531	Dave.Richardson@tetrattech.com
Heather Phelan	Tetra Tech Project Manager	Tetra Tech	(920) 857-8422	Heather.Phelan@tetrattech.com
Don Stilz	Senior Environmental Manager	Indiana Dept. of Env. Management	(317) 232-3409	DSTILZ@ idem.IN.gov
Jean Greensley	Geologist	USEPA Region V	(312) 353-1171	Greensley.Jean@epa.gov

2. PROJECT DESCRIPTION

2.1 Site Location and Background

Elliott Ditch is located in the Wabash River Basin in Tippecanoe County, IN, and flows west into Wea Creek, a tributary of the Wabash River. The streams of the Wabash River Basin formed in glacial outwash deposited during the Pleistocene epoch. During the Pleistocene, various glaciations leveled plains and filled in valleys, resulting in a gently undulating plain. As glaciers receded, meltwater streams cut drainage ways and stream valleys that drain toward the Wabash River. The streams draining the Wea Plains (which includes Elliott Ditch), were formed after glaciers receded from the area. Generally, the topography of the area is relatively unchanged by stream development since glaciation, as most streams are typically shallow and have gently sloping gradients. Glacial landforms (e.g. kames, eskers, swales, etc.) are plentiful (USDA, 1958).

Review of the aerial photographs provided by Alcoa reveals that Elliott Ditch formed sometime before 1939 since the Ditch is clearly visible in the 1939 aerial photo. The 1939 aerial suggests that at least part of Elliott Ditch originated as a naturally formed stream that was later modified by human activity. The stream appears to be free flowing and naturally meandering along the western portion of the stream in 1939. Some channelization may have occurred prior to the photo because the stream channel appears abnormally straight where Elliott Ditch crosses the railway.

Elliott Ditch is a tributary to Wea Creek, which is a tributary to the Wabash River, just downstream of Lafayette, Indiana (Figure 1). In addition to its base flow, Elliott Ditch receives wastewater discharges through an outfall (Outfall 001) from Alcoa's Lafayette Operations (ALO). These discharges include treated sanitary and industrial process water, as well as storm water. The distance from the outfall to the Wabash River is 7.5 miles. The distance from the outfall to the Elliott Ditch and Wea Creek confluence is 4.1 miles. This FSP is focused on the area from the outfall (Milepost 0.0) to Milepost 1.59, the end of the channelized portion of Elliott Ditch (Figure 2).

The geomorphic surface mapping completed for Elliott Ditch suggests that Elliott Ditch has eight distinct reaches (erosional/depositional regimes):

- Reach 1: Outfall 001 to downstream of the railroad bridge (Transects 1-14)
- Reach 2: Transect 14 to the South 18th Street Bridge (Transect 19)
- Reach 3: South 18th Street Bridge to upstream of the 9th Street Bridge (Transects 19-30)
- Reach 4: South 9th Street Bridge (Transect 30) to Transect 39, located north of Brookside Drive
- Reach 5: Transect 39 to Transect 50 (located downstream of Poland Hill Road)
- Reach 6: Transect 50 to Transect 60 (located downstream of the Old Romney Road Bridge)
- Reach 7: Transect 60 to Transect 64 (located upstream of US Highway 231 South Bridge)
- Reach 8: Transect 64 to Transect 66 (Elliott Ditch –Wea Creek confluence)

This FSP is focused on Reaches 1 – 3 or the upstream 1.59 miles downstream of Outfall 001 (Figure 3).

2.2 Target Analyte - PCBs

Samples of fish, water, and sediment collected in the 1980s from Elliott Ditch and Wea Creek indicated that PCBs were present in these media. In response to these findings, Alcoa pursued two approaches to reducing PCB levels in fish from Elliott Ditch and Wea Creek: in-stream remediation and source reduction. In 1990, Alcoa remediated sediments in the first mile (to the 18th Street Bridge). Then, in the late 1990s, Alcoa instituted a wastewater management program, which significantly reduced flow to Outfall 001 through removal of non-contact cooling water. To further reduce PCB loadings to Elliott Ditch, Alcoa began to treat its dry weather discharge to Elliott Ditch using canister filter systems in January 2000. In 2007, Alcoa developed and implemented a Natural Media Filtration treatment process. These actions have reduced PCB loadings from Outfall 001 by at least tenfold (Anchor QEA 2009).

PCBs are present in the Elliott Ditch watershed from the Alcoa Outfall to the County Road 350 South Bridge based on sediment samples collected by Anchor QEA in 2004 and 2010. The PCB concentrations range from <1 ppm to 27 ppm at sample locations. The distribution of the PCB concentrations are currently not well understood within the channel or floodplain.

3. INVESTIGATION STRATEGY

The soil and sediment investigation for Elliott Ditch is designed with geomorphic principals which dictate the strategy for sample location and sample intervals. The first step is using fluvial geomorphology to define the erosional and depositional patterns for Elliott Ditch and its floodplain. This process started as a desktop review of aerial photographs and topographic maps to determine preliminary geomorphic surfaces on the Elliott Ditch floodplain. The desktop review was supplemented with a field survey to verify and review the preliminary mapping. The boundaries were documented in the field using a GPS. The results of the geomorphic mapping were used to develop the sample transects and sample locations perpendicular to the stream. The distance between transects varies based on the complexity of the local fluvial geomorphology. The geomorphic surfaces represent areas of similar depositional or erosional characteristics and these surfaces are important in the interpretation of the field sampling results.

A second step of the investigation strategy is the use of geomorphic characteristics of Elliott Ditch to determine the area of investigation. The Elliott Ditch area of investigation includes the channel and the floodplain and terrace surfaces up to the upland boundary. The in-channel area includes the parts of the ditch that have deposits of silt and clay because PCBs absorb to these particle sizes. In the overbank areas, flood deposits on the floodplain and terraces during and after the time of release are subject to PCB deposition.

After the geomorphic surface mapping was field confirmed, a broad review of Elliott Ditch and the geomorphic surfaces allowed reaches to be mapped based on the similarity of geomorphic setting, anthropogenic features, and/or stream/floodplain characteristics. For example, the 2016 FSP area was selected based on the portion of Elliott Ditch that was anthropogenically straightened, Reaches 1 – 3. This part of the ditch is relatively straight, incised, and has limited geomorphic surface development. Although there will be some variability, the deposition pattern for Reaches 1 – 3 will be similar.

A third criteria of the investigation strategy is to determine what portion of the channel and overbank could be remediated in a single field season. Rivers and streams flow continuously so conducting an investigation that will not be remediated within a short period of time may alter the original deposition pattern if a significant flood event impacts the watershed. The objective is to

investigate an area and define the depositional pattern during one field season, remediate the investigated area the following field season and investigate the next downstream portion of the stream while the remediation is being conducted on the adjacent upstream segment.

The sample locations are selected in depositional areas to define the concentration and extent of the target analyte. An important part of the sampling strategy is to sample in areas that are not depositional to prove they do not include the target analyte. This approach allows for a confirmation of the erosional surfaces and a confidence that the fluvial geomorphology of the stream is accurate. The sampling strategy is designed to allow for iterative sample locations to be incorporated into the FSP based on data obtained during the field work and from the analytical results. For example, if the lab results from a sample location at the end of the sample transect (away from the channel) contains PCBs above the target cleanup level, an additional sample location(s) may be added to define the horizontal extent.

In order to fully understand the spatial distribution of PCBs within the investigation area we must also define the vertical extent of PCBs. Target sample depths have been defined for each sample location based on the NRCS Soil Survey mapping. The soil survey provides the typical profile thickness to the parent material or C horizon. The target depths are conservative to attempt to obtain a clean horizon with only one sampling mobilization to a location. Although a longer soil profile will be collected and logged, the sample selection and laboratory analysis will be iterative based on the soil profile characteristics. For example, a soil profile may be sampled into the C horizon but during the logging it is decided to only submit the A horizon for lab analysis. If the A horizon contains PCBs above the target cleanup level, the B horizon will be submitted. If the B horizon has a concentration below the target cleanup level, the vertical boundary has been defined and the C horizon will not be submitted for analysis.

Sample intervals will vary based on the thickness of the soil horizon/sediment layer. The focus of this investigation is to understand the deposition pattern and the best way to accomplish this is to sample specific soil horizons or sediment layers regardless of their thickness. Soil horizons/sediment layers form under specific conditions which creates a unique horizon/layer. A change in conditions means a change in the horizon/layer. An exception to this sampling approach will be made if a horizon/layer is greater than 12 inches thick, the horizon/layer will be sampled by its top half and bottom half to gain a detailed understanding of the vertical extent of contamination.

The horizon/layer based sampling provides a context of the geomorphic and pedogenic (soil profile) environment and it is easier to characterize the PCB distribution.

The fluvial geomorphology approach is beneficial to determine where PCBs are located in Elliott Ditch and its floodplain but more importantly, why the deposits are located where they are. In any investigation, a limited number of sample locations are collected to characterize a large area. It is important to have a scientific way to interpolate or extrapolate data from where it was collected to the other areas of the project.

4. PROPOSED SCHEDULE

Upon verbal approval of the FSP, the QAPP and Health and Safety Plans will be prepared. The FSP field work can begin after snow melt and the spring flooding period. The preliminary start date based on flow conditions is mid-May 2016.

The results of the field work and chemical analysis will be prepared in a report and submitted for review by Indiana Department of Environmental Management (IDEM) and United States Environmental Protection Agency (USEPA) Region 5 by October 1, 2016.

5. FIELD PROCEDURES AND SAMPLE COLLECTION

In-channel sediment samples and overbank soil samples will be collected to determine if PCBs are present in the sediment of Elliott Ditch and adjacent overbank soils of various geomorphic surfaces. The proposed sampling locations are depicted on Figure 4.

5.1 In-Channel Poling

In-channel poling will be conducted to define the volume and extent of soft sediment within the channel. The term ‘poling’ refers to procedure by which a pole that is marked with unit length graduations is used to measure soft sediment thickness on the bed of a waterbody. A metal pole marked with 0.1-foot graduations is advanced vertically through the river bed sediment to document the material present (i.e., soft, hard, granular, etc.) and to determine the overall soft material thickness (depth to refusal). The pole is extended downward through the soft sediment using manual force only until resistance inhibits additional advancement. Poling data will be obtained by or supervised by personnel with experience in poling methods.

The occurrence of PCBs in sediment is most probable within depositional areas of Elliott Ditch. Poling locations will be selected based on field observations of possible depositional areas. Poling will be conducted throughout the channel length and width to define the horizontal extent of soft sediment. The boundaries of the soft sediment will be defined using the poling and documented with GPS coordinates. The volume of the soft sediment for a given area will be determined by measuring the soft sediment thickness over the extent of the soft sediment area. Soft sediment thickness will be defined as the difference in elevation between the top of sediment and the depth of refusal (bottom of sediment). Poling data will be evaluated prior to sediment sampling to refine in-channel sampling locations, determine the proper length of core to be used at each location, and to assess potential sample recovery.

Global Positioning System (GPS) coordinates, water depth, advancement depth, soft sediment thickness, sediment type, geomorphic setting, and presence/absence of aquatic vegetation will be documented at each location.

5.2 Sample Locations

Sediment and soil cores will be collected at the locations described in Table 3. Cores will be advanced to the target depth unless prevented by refusal. Overbank soil sample locations have been pre-selected based on desktop and field geomorphic surface mapping. Soil sample locations were chosen to be representative of the various geomorphic surfaces encountered. Geomorphic surfaces represent unique fluvial environments and typically represent different relative heights above the stream surface (Figure 5). In-channel sample locations were selected based on channel morphology and geomorphic setting (e.g., meander bend, pool) observed during the 2014 topographic survey of Elliott Ditch. Poling data, described in the previous section, will be used to refine the exact location of in-channel sample locations prior to sediment sampling.

Exact sediment and soil sampling locations will be determined in the field based on accessibility and geomorphic features which may indicate the location of PCB deposition.

5.3 In-Channel Sediment Sampling

Sediment core sampling will be conducted using a piston corer, check valve sampler, or Russian Peat Borer (discrete interval sampler). The location, date-time, sample advancement length from the sediment surface, sediment core recovery length, and percent recovery will be documented. The target depth for each location will be based on the poling results as described in Section 4.1. The project target for sample recovery is 80 percent. If the initial sampling does not obtain at least 80 percent recovery, additional attempts will be made using the equipment and methods determined most appropriate by the Field Manager or his/her designee in the field.

Sediment sampling and decontamination procedures for each sampling device are described in Tetra Tech SOPs in Attachment A. Specific procedures for sediment sampling are listed below:

- Coordinates of the sampling location will be recorded using a geographic position system (GPS) receiver with sub-meter accuracy.
- A tape measure or pole with minimum graduations of 0.1 foot attached to a 6-inch diameter disc will be used to determine the water depth prior to sampling. In the event of deep/swift water, a lead line will be used to determine the water depth.

- The core sampler will be advanced to the target depth and retracted. The core sample retrieved is capped on the bottom and removed from the core sampler.
- The core sample is then capped on top and labeled with the location, date, time, and sample recovery lengths
- The core sample is stored in an upright position and then transferred to the processing area.
- The cores will be cut open and placed on a designated logging table.
- The cores will then be logged by a field geomorphologist using the methods described in the Sediment Logging SOP found in Attachment A.
- Laboratory-provided glass jars will be filled with sediment for PCB analysis. Sediment samples will be collected based on the sediment layers and may vary in length.
- Sample jars will be labeled using the nomenclature outlined in Section 5.1.

Field team members will wear a new pair of disposable nitrile gloves prior to the collection of each sample. The sediment sampling equipment will be decontaminated after collection of each core interval by washing in an Alconox solution and rinsing with distilled water.

The table below summarizes the container and analytical requirements for sediment sampling.

Sample Collection Equipment

- Laboratory-provided sample containers
- Plastic spoons

Container and Analytical Requirements List

Matrix	Containers (Numbers, Size, and Type)	Analytical Parameter	Analytical Method	Preservation Requirements	Holding Time
Sediment	One 8 oz glass jar	PCBs	SW846-8082	Cool to 4°C	6 Months

5.4 Overbank Soil Sampling

Soil sampling will be conducted at 33 locations in 13 transects using a soil recovery auger or sampling tube. A soil recovery auger or soil sampling tube will be used to collect soil in one-foot cores for soil profile description and laboratory analysis. The location, date, time, advancement depth, and recovered interval are documented.

Soil sampling and decontamination procedures for the soil recovery auger or soil sampling tube are described in Tetra Tech SOPs in Attachment A. Specific procedures for soil sampling are summarized below:

- Coordinates of the sampling location will be recorded using a geographic position system (GPS) receiver with sub-meter accuracy.
- A soil recovery auger or soil sampling tube capable of taking a one-foot sample equipped with a liner will be used to collect samples at each location. The first sample will be collected from the surface to a depth of 12 inches. The next sample will be collected by inserting the soil recovery auger into the boring created by the first sample, the sample will be collected at a depth of 12 – 24 inches below the ground surface. The soil recovery auger or soil sampling tube will be decontaminated between each sample or multiple augers/sampling tubes will be used at a location and the equipment decontaminated after sampling at a location is complete.
- The soil core liners will be capped at both ends. The location, date, time, and sample interval will be labeled on the core and the cores will be stored in an upright position and transported to the processing area.
- The cores will be cut open and placed on a designated logging table.
- The lithology for each boring will be classified by a field geomorphologist in accordance with the Unified Soil Classifications System (USCS) and United States Department of Agriculture Soil Classification System (USDA).
- Laboratory-provided glass jars will be filled with soil for PCB analysis. Soil samples will be collected in based on the soil horizons. If the A horizon is 12 inches thick or more, the horizon will be split into a 0 - 6 inch interval and a 6 – 12 inch interval. The overbank

deposition will be from flood deposits so a thick A horizon may require a tighter sampling interval.

- Sample jars will be labeled using the nomenclature outlined in Section 5.1.

Field team members will wear a new pair of disposable nitrile gloves prior to the collection of each sample. The soil recovery auger or soil sampling tube will be decontaminated after collection of each core interval by washing in an Alconox solution and rinsing with distilled water.

The table below summarizes the container and analytical requirements for soil sampling.

Sample Collection Equipment

- Laboratory-provided sample containers
- Plastic spoons

Container and Analytical Requirements List

Matrix	Containers (Numbers, Size, and Type)	Analytical Parameter	Analytical Method	Preservation Requirements	Holding Time
Soil	One 8 oz glass jar	PCBs	SW846-8082	Cool to 4°C	6 Months

6. SAMPLING PROCEDURES

This section describes the project-specific sample nomenclature, management of investigative-derived waste, decontamination, custody procedures and other standard operating procedures.

6.1 Sample Nomenclature

All samples for analysis, including QC samples, will be given a unique sample identification (ID). The sample numbers will be recorded in the field tablet (or similar), on the sample jars, and on the COC paperwork. The sample ID will be used to track field data and laboratory analytical results, as well as presentation of analytical data in memoranda and reports. Tetra Tech will assign each sample a unique identification based on the nomenclature outlined below.

Project ID Code

ED = Elliott Ditch

Four-Digit Milepost Code

Nearest milepost (XX.XX) of sample location.

Examples:

- 01.22
- 00.15

Sample Location

Sample location will consist of an in-channel sediment (SD) or overbank soil (SL) code followed by a two-digit numerical identifier (XX). Numerical identifiers will be ordered from north to south and west to east when possible.

Examples:

- SD02
- SL05

Two-Digit Sample Start Depth

Indicates the sample start depth to the nearest 10th of a foot (X.X).

Examples:

- 0.5
- 2.3

Sample End Depth

Indicates the sample end depth to the nearest 10th of a foot (X.X).

Examples:

- 1.1
- 2.0

QA/QC Code

If applicable, the following QA/QC codes will be included in the sample ID:

- FD = Field duplicate
- MS = MS/MSD

Sample IDs will be constructed in the following sequence: project identification code, four-digit milepost code, the sample location, sample start depth, sample end depth, and the QA/QC code, if applicable.

Example sample IDs:

- In-channel sediment sample 01 collected at milepost 2.4 from 1.2 to 1.9 feet would be “ED-02.40-SD01-1.2-1.9”
- Overbank field duplicate soil sample 03 collected at milepost 0.11 from 0.0 to 0.7 feet would be “ED-00.11-SL03-0.0-0.7-FD”

6.2 Management of Investigative-Derived Wastes

The field activities described in this FSP will generate investigative-derived wastes (IDW) consisting of water from decontamination of the equipment, used personal protective equipment, and

sample core liners. There may also be excess soil and sediment, although it is anticipated that the majority of the soil and sediments collected will be transferred into the sample containers and delivered to the analytical laboratory. The wastes will be placed in appropriate containers and labeled with the waste type, the generation date and the generator information. Waste specific testing will be conducted, if appropriate. The volume of the IDW generated will be minimized to the least extent possible.

6.3 Decontamination Procedures

Effective decontamination procedures are required to prevent potential cross contamination. The decontamination procedures are in accordance with approved procedures. All equipment that comes into contact with potentially contaminated media will be decontaminated. Disposable sampling equipment will be used when applicable. Such equipment will be removed from protective packaging immediately before use and will be discarded after use. Reusable sampling equipment that is in direct contact with the media to be sampled will be decontaminated before each use. Decontamination will be conducted as follows:

1. Remove all visible contaminants (solids) using a non-phosphate laboratory detergent (e.g., Alconox).
2. Rinse with distilled or deionized water.
3. All water will be discarded into appropriate containers and disposed of properly.

6.4 Sample Handling, Tracking, and Custody Procedures

Sample custody must be strictly maintained and carefully documented each time the sample material is collected, transported, received, prepared, and analyzed. Custody procedures are necessary to ensure the integrity of the samples. Samples collected during the field investigation must be traceable from the time the samples are collected until disposal and/or storage, and their derived data are used in the final report. Sample custody is defined as (1) being in the sampler's possession; (2) being in the sampler's view, after being in the sampler's possession; (3) being

locked in a secured container, after being in the sampler's possession; and (4) being placed in a designated secure area.

Field custody procedures will be implemented for each sample or sediment core collected. The Tetra Tech Team member performing the sampling, as overseen by the Project Quality Manager or designee, will be responsible for the care and custody of the samples or cores until they are properly transferred or dispatched. To ensure the integrity of the samples, the samples are to be maintained in a designated, secure area and/or be custody sealed in the appropriate containers prior to shipment.

6.5 Sampling SOPs

The following SOPs will be used during the site evaluation, if applicable for the site conditions:

- SOP – Check Valve Sampling
- SOP – Piston Core Sampling
- SOP – Russian Peat Borer Sampling
- SOP – Soil Recovery Auger
- SOP – Poling
- SOP – Sediment Logging
- SOP – Soil Logging

6.6 Soil/Sediment Core Processing

Soil and sediment core analytical sampling will occur in a dedicated on-land sampling area. Cores will be collected in 0 to 4-foot sections for sediment locations and 1 foot sections for soil locations (filled to the desired depth based on the requirements for that location). The cores will be capped and stored upright on the sampling vessel prior to transport to the sampling area. This will maintain the integrity of the core section, ensure minimal disturbance during transport, and allow safe handling.

All cores collected on a given day will be transported to the sampling area during or at the end of the day's activities. The core sections not logged and sampled the day they are collected will be stored upright overnight in a cooler in the building for subsequent processing. At that time, each core section will be split longitudinally and logged by Tetra Tech trained logging personnel. Sediment samples will be collected from the appropriate intervals (as specified in the applicable planning documents), homogenized, and placed in the proper containers for shipment to the laboratory.

7. LABORATORY INFORMATION

Investigative samples will be delivered by a courier or shipped under chain of custody to the laboratories.

7.1 Measurement and Performance Criteria

Generic measurement and performance criteria will be used. These criteria will ensure that data are sufficiently sensitive, precise, accurate, and representative to support site decisions. The criteria are summarized below.

- Sensitivity–Sensitivity is the ability of the method or instrument to detect the contaminant of concern and other target analytes at the level of interest. For this project, the laboratory quantitation limits are below the site action levels for PCBs as required.
- Accuracy–Accuracy is a measure of the agreement between an observed value and an accepted reference value. It is a combination of the random error (precision) and systematic error (bias), which are due to sampling and analytical operations. Accuracy is determined by percent recovery calculations of laboratory QC samples.
- Precision–Precision is a measure of the closeness of agreement among individual measurements. Precision is determined by relative percent difference (RPD) and/or standard deviation calculations for laboratory duplicate samples.
- Completeness–Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected. Completeness is project specific but is generally around 90 percent.

- Representativeness—Representativeness is a measure of the degree to which data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Simply, this is the degree to which samples represent the conditions for which they were taken.
- Comparability—Comparability is a measure of the degree to which one data set can be compared with another. Some conditions of comparability of data sets are as follows: standardized sampling and analysis, consistency of reporting units, and standardized data format.

7.2 Data Quality Objectives

Data quality objectives address requirements that include when, where, and how to collect samples; the number of samples; and the limits on tolerable error rates. These steps should periodically be revisited as new information about a problem is learned.

Analytical sampling results for total PCBs will be compared to the EPA's Removal Management Levels (RMLs) residential and industrial criteria (based on a Hazard Quotient (HQ) of 3 for non-carcinogens chemical contaminants. RMLs are risk-based, although not necessarily protective for long term exposures, concentrations derived from standardized equations combining exposure assumptions with toxicity data from the Superfund program's hierarchy. RMLs are generic. In other words, they are calculated without site-specific information (e.g., the time- frame over which individuals may have been exposed to site contaminants). RMLs help identify areas, contaminants, and conditions where a removal action may be appropriate. Sites where contaminant concentrations fall below RMLs, are not necessarily “clean,” and further action or study may be warranted. In addition, sites with contaminant concentrations above the RMLs may not necessarily warrant a removal action dependent upon such factors as background concentrations, the use of site-specific exposure scenarios or other program considerations. This data will help determine the risk to the immediate community and the environment.

8. QUALITY CONTROL ACTIVITIES

The following sections describe the field and laboratory quality control procedures.

8.1 Field Quality Control

QC samples will be collected for sediment and soil samples to evaluate the field sampling and decontamination methods, and the overall reproducibility of the laboratory analytical results. Specifically, QC samples will be collected at the following frequencies:

- Field duplicate samples
 - 1 per 10 investigative samples

- Matrix spike/matrix spike duplicate samples
 - 1 per 20 investigative samples

Field duplicate samples will be collected from the homogenized sample removed from the same disposable polycarbonate core tube as its associated investigative sample. Field duplicate samples will be processed, stored, packaged, and analyzed by the same methods as the investigative samples. Sample nomenclature specific to QC samples is listed in Section 5.1. Corrective actions may include resampling, reassessment of the laboratory's methods, and/or the addition of data qualifiers to laboratory results.

8.2 Analytical Quality Control

QC for analytical procedures will be performed at the frequency described in the laboratory SOPs. In addition, method-specific QC requirements will be used to ensure data quality.

8.3 Performance Evaluation Samples

Performance evaluation samples will not be used in this site assessment.

8.4 Documentation, Records, and Data Management

The laboratories will be expected to provide analytical results in electronic data deliverable (EDD) and report formats, with QA/QC data included for a Level II data report (case narrative, investigated data results summary, and QC sample summary results). Laboratory-generated data will be imported to a project database for mapping, reporting, and archival activities. Laboratory reports and data validation reports will be archived in the project file.

8.5 Data Validation Requirements

Analytical and QA/QC data will be reviewed to determine if the data are usable or require additional qualification. A data validation report will be produced for each discrete report received from each laboratory.

8.6 Data Analysis

The data collected from the field and laboratory analysis will be provided for statistical analysis of the data. The data will be reviewed to determine the likely spatial extent of elevated PCB concentrations.

9.0 REFERENCES

Anchor QEA 2009. *Final Draft Phase IV Report for Elliott Ditch/Wea Creek Investigation*

USDA. 1958. "Soil Survey of Tippecanoe County, Indiana." Washington, D.C.

TABLES

Table 2
Sampling and Analysis Summary

Site: Elliott Ditch

Matrix	Analytical Parameters	Number of Sampling Locations	Number of Samples¹	Number of Field Duplicates	Number of MS/MSDs	Number of Blanks (Trip, Field, Equip. Rinsate)²	Total Number of Samples to Lab
Soil	Total PCBs	33	99	10	5	0	114
Sediment	Total PCBs	13	39	4	2	1	46

Notes:

¹ Number of samples estimated via the assumption of 3 sediment/soil layers per coring location.

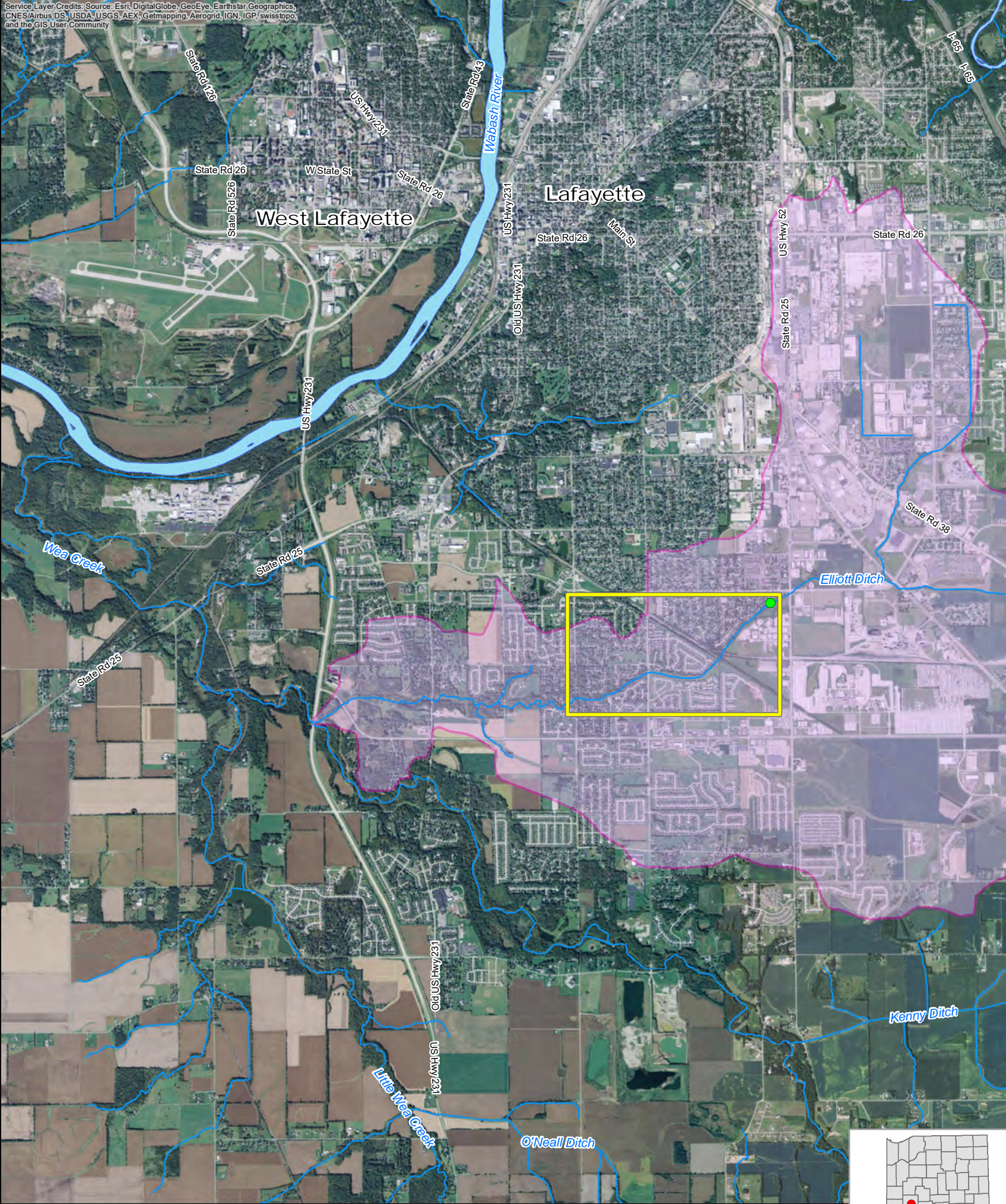
² Core tubes are single use disposable. A equipment rinsate sample will be collected if the piston sampler is used to collect sediment cores.

MS/MSD – Matrix Spike/Matrix Spike Duplicate

Table 3. Sample Identification and Justification Summary

Location ID	Reach	Primary Sampler	Latitude	Longitude	Target Core Depth	Geomorphic Position	Justification
ED-00.08-SD02	1	Check Valve/Piston Corer/Russian Peat Borer	40.3799	-86.86106	4 ft	In-channel	Possible area of depositions due to bank armoring
ED-00.08-SL01	1	Auger/Core Sampler	40.37997	-86.86115	2 ft	Upland	Verify the absence on RDB upland
ED-00.08-SL03	1	Auger/Core Sampler	40.37982	-86.86098	2 ft	Levee	Possible man-made levee on LDB
ED-00.08-SL04	1	Auger/Core Sampler	40.37963	-86.86074	2 ft	Upland swale	Spatial coverage on lower LDB surface
ED-00.25-SD01	1	Check Valve/Piston Corer/Russian Peat Borer	40.37834	-86.86362	4 ft	In-channel	Inside of the meander bend (depositional surface)
ED-00.25-SL02	1	Auger/Core Sampler	40.3783	-86.86355	2 ft	Levee	Inside of the meander bend on levee should be relatively untouched by stream erosion
ED-00.25-SL03	1	Auger/Core Sampler	40.37812	-86.8633	2 ft	Upland swale	Spatial coverage on lower LDB surface
ED-00.39-SD02	1	Check Valve/Piston Corer/Russian Peat Borer	40.37673	-86.86501	4 ft	In-channel	Upstream end of depositional area (implied by a fine-grain bed type)
ED-00.39-SL01	1	Auger/Core Sampler	40.37676	-86.8651	2 ft	Upland	RDB bank is ~ 0.5 ft lower in elevation than LDB which would cause flood waters to naturally flow towards the RDB
ED-00.39-SL03	1	Auger/Core Sampler	40.37669	-86.8649	2 ft	Levee	Possible man-made levee on LDB
ED-00.39-SL04	1	Auger/Core Sampler	40.37657	-86.86459	2 ft	Upland swale	Spatial coverage on lower LDB surface
ED-00.47-SD02	1	Check Valve/Piston Corer/Russian Peat Borer	40.37583	-86.86592	4 ft	In-channel	Downstream of the depositional area (implied by coarse-grain bed type)
ED-00.47-SL01	1	Auger/Core Sampler	40.37586	-86.86606	2 ft	Upland	The channel banks are lower than upstream and RR bridge downstream may cause ponding during flooding
ED-00.47-SL03	1	Auger/Core Sampler	40.37578	-86.86581	2 ft	Levee	The channel banks are lower than upstream and RR bridge downstream may cause ponding during flooding
ED-00.47-SL04	1	Auger/Core Sampler	40.37566	-86.86548	2 ft	Upland swale	Spatial coverage on lower LDB surface
ED-00.51-SD02	1	Check Valve/Piston Corer/Russian Peat Borer	40.37526	-86.86635	4 ft	In-channel	In-channel location near original Anchor location (Possible petroleum sheen observed during topo survey)
ED-00.51-SL01	1	Auger/Core Sampler	40.37531	-86.86651	2 ft	Upland	Characterize upland
ED-00.51-SL03	1	Auger/Core Sampler	40.37523	-86.86624	2 ft	Upland	Characterize upland (possible dredge spoils pile on LDB)
ED-00.60-SD02	2	Check Valve/Piston Corer/Russian Peat Borer	40.37426	-86.86753	4 ft	In-channel	Pool - soft sediment observed during topographic survey
ED-00.60-SL01	2	Auger/Core Sampler	40.37433	-86.86762	2 ft	Upland	Verify the absence on RDB of the upland
ED-00.60-SL03	2	Auger/Core Sampler	40.37421	-86.86746	2 ft	T-4	Furthest upstream T-4 surface within study area. Deposition on the T-4 surface is possible after large flood events.
ED-00.72-SD03	2	Check Valve/Piston Corer/Russian Peat Borer	40.37314	-86.86914	4 ft	In-channel	In-channel location is upstream of knickpoint where soft sediment was noted.
ED-00.72-SL01	2	Auger/Core Sampler	40.37326	-86.86918	2 ft	Upland	Verify the absence on RDB of the upland
ED-00.72-SL02	2	Auger/Core Sampler	40.37317	-86.86915	2 ft	Floodplain	Small floodplain surface on inside meander may have deposited fine grain sediment
ED-00.72-SL04	2	Auger/Core Sampler	40.3731	-86.86912	2 ft	T-4	Deposition on the T-4 surface is possible after large flood events
ED-00.82-SD02	2	Check Valve/Piston Corer/Russian Peat Borer	40.37315	-86.87107	4 ft	In-channel	Pool - soft sediment observed during topographic survey
ED-00.82-SL01	2	Auger/Core Sampler	40.37324	-86.87104	2 ft	Upland	Verify the absence on RDB of the upland
ED-00.82-SL03	2	Auger/Core Sampler	40.3731	-86.87114	2 ft	Depression	Man-made depression due to outfall may collect fine grain sediment during flooding
ED-00.82-SL04	2	Auger/Core Sampler	40.37298	-86.87106	2 ft	T-4	Deposition on the T-4 surface is possible after large flood events
ED-01.03-SD02	2	Check Valve/Piston Corer/Russian Peat Borer	40.37371	-86.87484	4 ft	In-channel	Deposition on inside meander bend possible
ED-01.03-SL01	2	Auger/Core Sampler	40.37379	-86.87479	2 ft	Upland	Verify the absence on RDB of the upland
ED-01.03-SL03	2	Auger/Core Sampler	40.37356	-86.87493	2 ft	T-4	Deposition on the T-4 surface is possible after large flood events
ED-01.14-SD02	3	Check Valve/Piston Corer/Russian Peat Borer	40.37327	-86.87695	4 ft	In-channel	Downstream of concrete channel section, possible deposition area
ED-01.14-SL01	3	Auger/Core Sampler	40.37334	-86.87708	2 ft	T-7	Furthest upstream T-7 surface within study area
ED-01.14-SL03	3	Auger/Core Sampler	40.37323	-86.87686	2 ft	T-6	Furthest upstream T-6 surface within study area
ED-01.24-SD02	3	Check Valve/Piston Corer/Russian Peat Borer	40.37261	-86.87859	4 ft	In-channel	In-channel near the inside of meander bend
ED-01.24-SL01	3	Auger/Core Sampler	40.37272	-86.87857	2 ft	T-6	Characterize T-6 surface on outside meander bend
ED-01.24-SL03	3	Auger/Core Sampler	40.37258	-86.87854	2 ft	T-7	Characterize T-7 surface on inside of slight meander bend
ED-01.39-SD02	3	Check Valve/Piston Corer/Russian Peat Borer	40.37153	-86.88094	4 ft	In-channel	In-channel near sand bar
ED-01.39-SL01	3	Auger/Core Sampler	40.37163	-86.881	2 ft	T-6	Located in shallow depression on T-6 surface
ED-01.39-SL03	3	Auger/Core Sampler	40.37148	-86.88091	2 ft	T-1	Furthest upstream T-1 surface in study area
ED-01.39-SL04	3	Auger/Core Sampler	40.37141	-86.88088	2 ft	Upland	Verify the absence on LDB of the upland
ED-01.49-SD03	3	Check Valve/Piston Corer/Russian Peat Borer	40.37102	-86.88256	4 ft	In-channel	Channel width increases possibly causing depositional area
ED-01.49-SL01	3	Auger/Core Sampler	40.37118	-86.88255	2 ft	T-7	Characterize T-7 surface
ED-01.49-SL02	3	Auger/Core Sampler	40.37111	-86.88255	2 ft	T-6	Characterize T-6 surface
ED-01.49-SL04	3	Auger/Core Sampler	40.37092	-86.88255	2 ft	T-6	Characterize T-6 surface

FIGURES



Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

Figure 1 - Site Location Map
 Elliott Ditch - Lafayette, Tippecanoe County, Indiana

- Alcoa Outfall 001
- ~ River or Stream
- Site Boundary
- Elliott Ditch Watershed

N
 0 0.5 1 Miles
 1:50,000

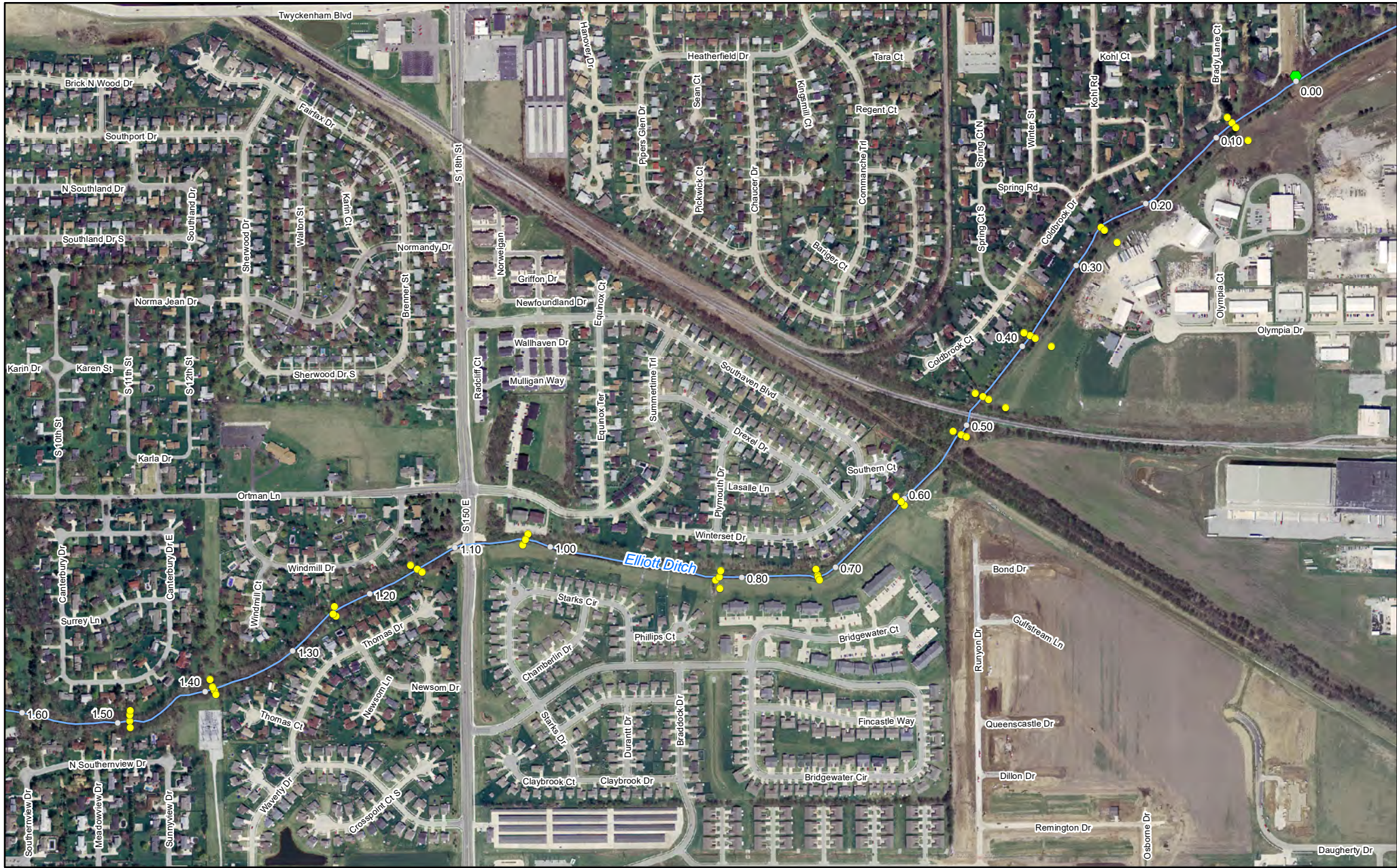


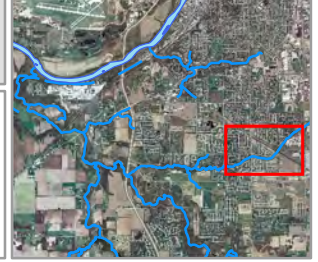
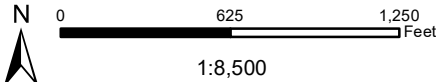
Figure 2 - Site Overview Map

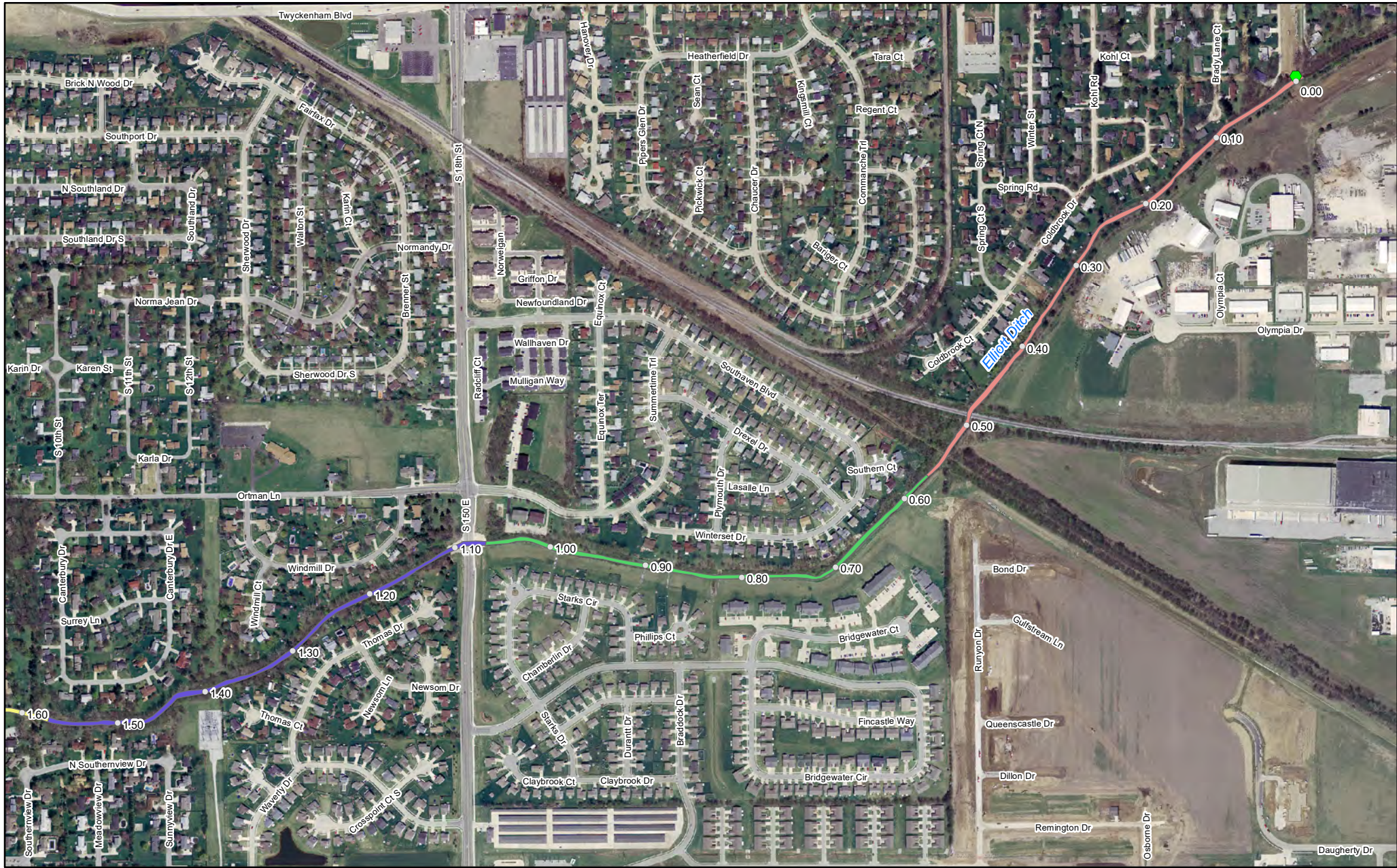
Elliott Ditch - Lafayette, Tippecanoe County, Indiana

- Proposed Sample Location
- Milepost
- Alcoa Outfall 001



Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357



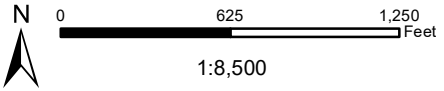


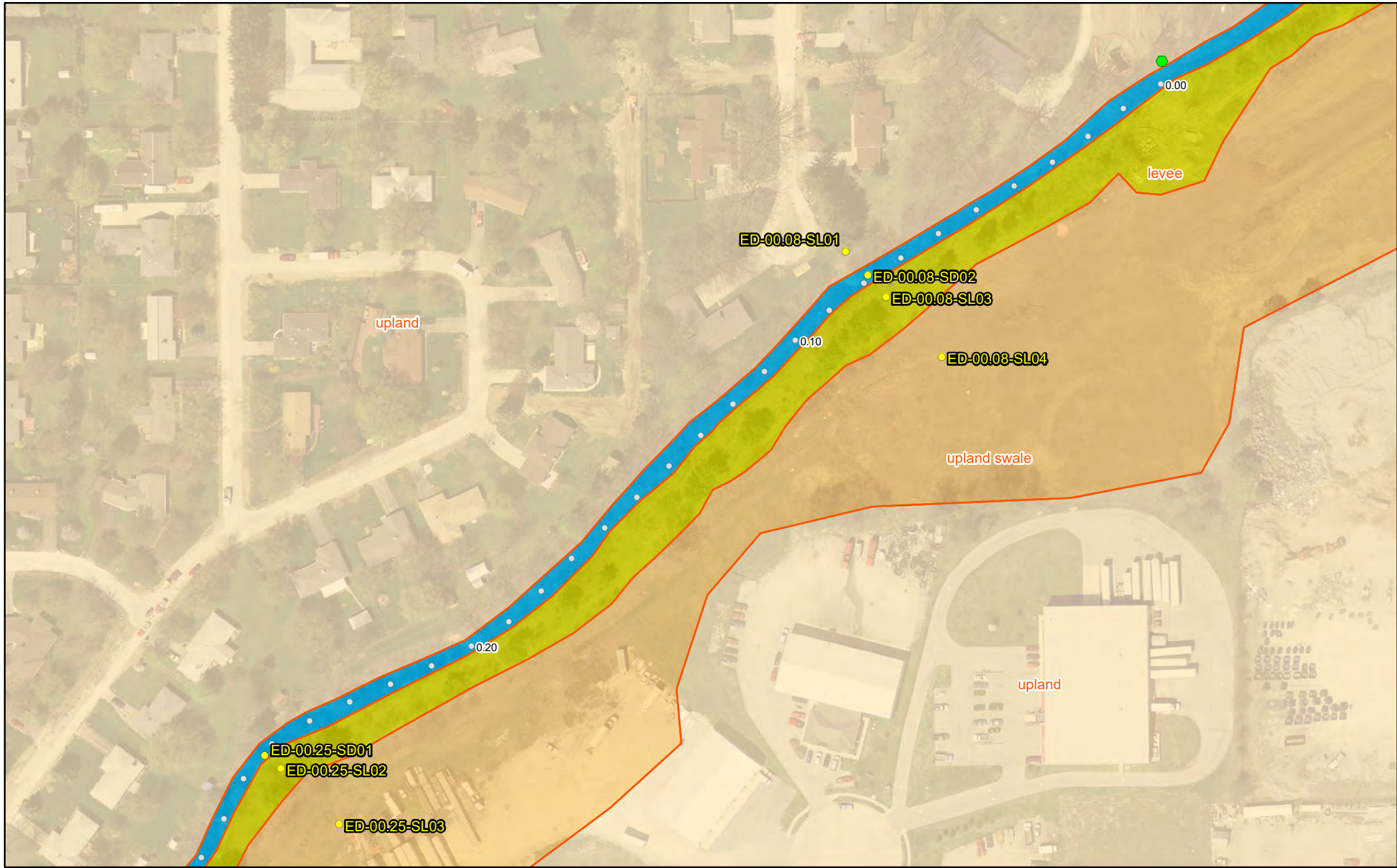
Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

Figure 3 - Stream Reaches

Elliott Ditch - Lafayette, Tippecanoe County, Indiana

- Milepost
- Alcoa Outfall 001
- Stream Reach**
- Reach 1
- Reach 2
- Reach 3
- Reach 4





Tetra Tech, Inc.

630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

Figure 4 - Proposed Sample Locations & Geomorphic Surfaces

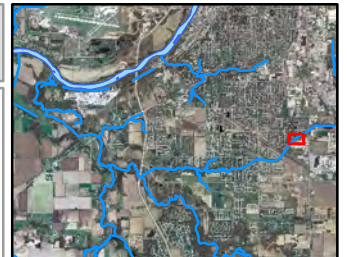
Elliott Ditch - Lafayette, Tippecanoe County, Indiana

- Milepost
 - Proposed Sample Location
 - Alcoa Outfall 001
 - ⬮ Geomorphic Surface Boundary
- | | | |
|---------------------------|--|--|
| Geomorphic Surface | levee | upland |
| | stream | upland swale |



0 120 240 Feet

1:1,850



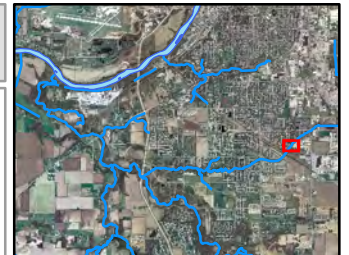
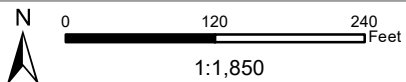


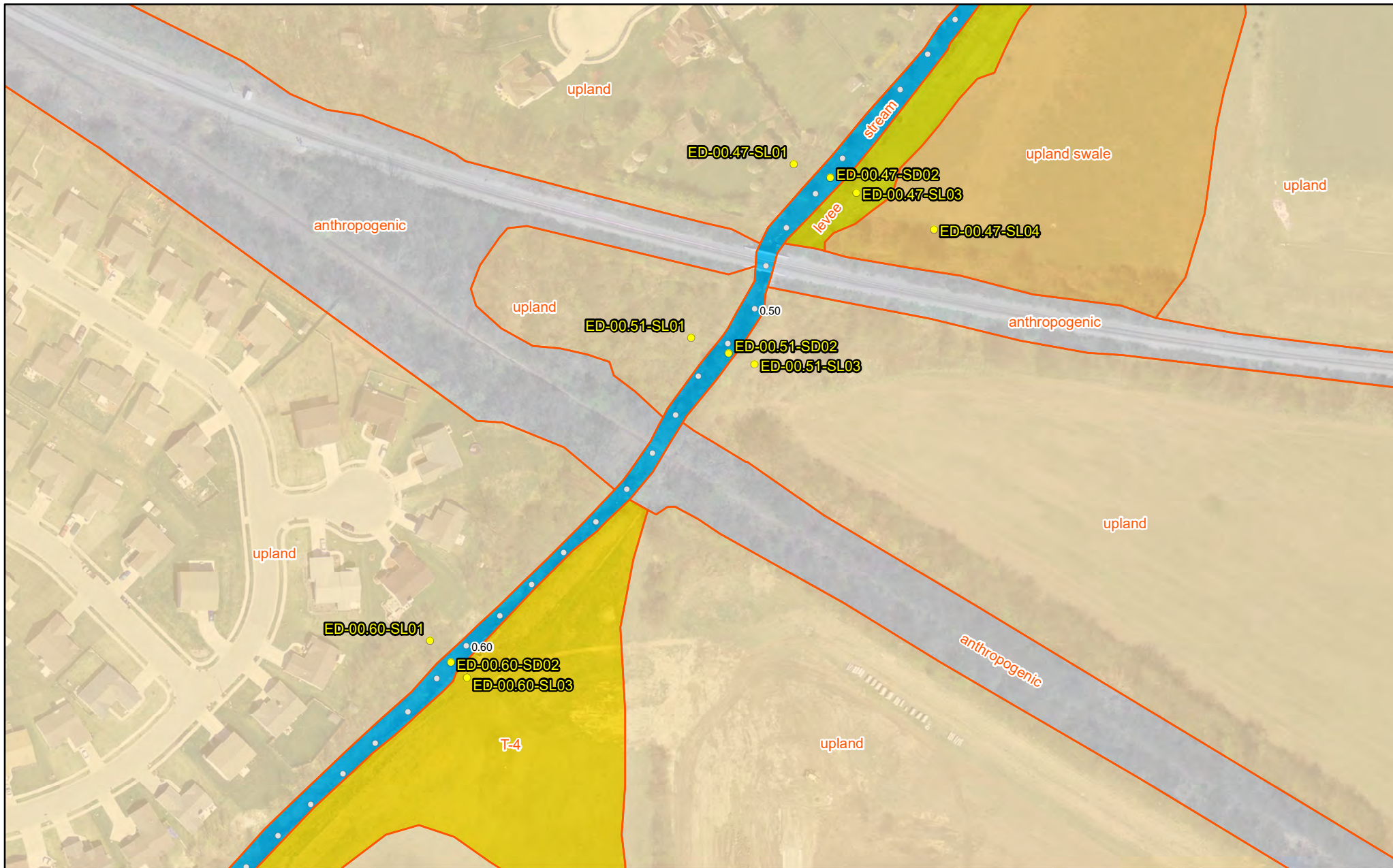
Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

Figure 4 - Proposed Sample Locations & Geomorphic Surfaces

Elliott Ditch - Lafayette, Tippecanoe County, Indiana

- Milepost
 - Proposed Sample Location
 - ⬭ Geomorphic Surface Boundary
- | | | |
|---------------------------|---|--|
| Geomorphic Surface | <ul style="list-style-type: none"> ■ levee ■ upland swale | <ul style="list-style-type: none"> ■ upland |
| | <ul style="list-style-type: none"> ■ stream | |





Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

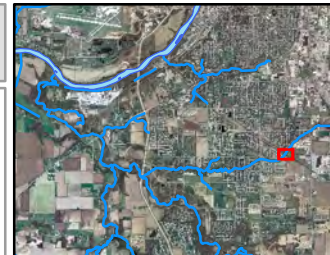
Figure 4 - Proposed Sample Locations & Geomorphic Surfaces

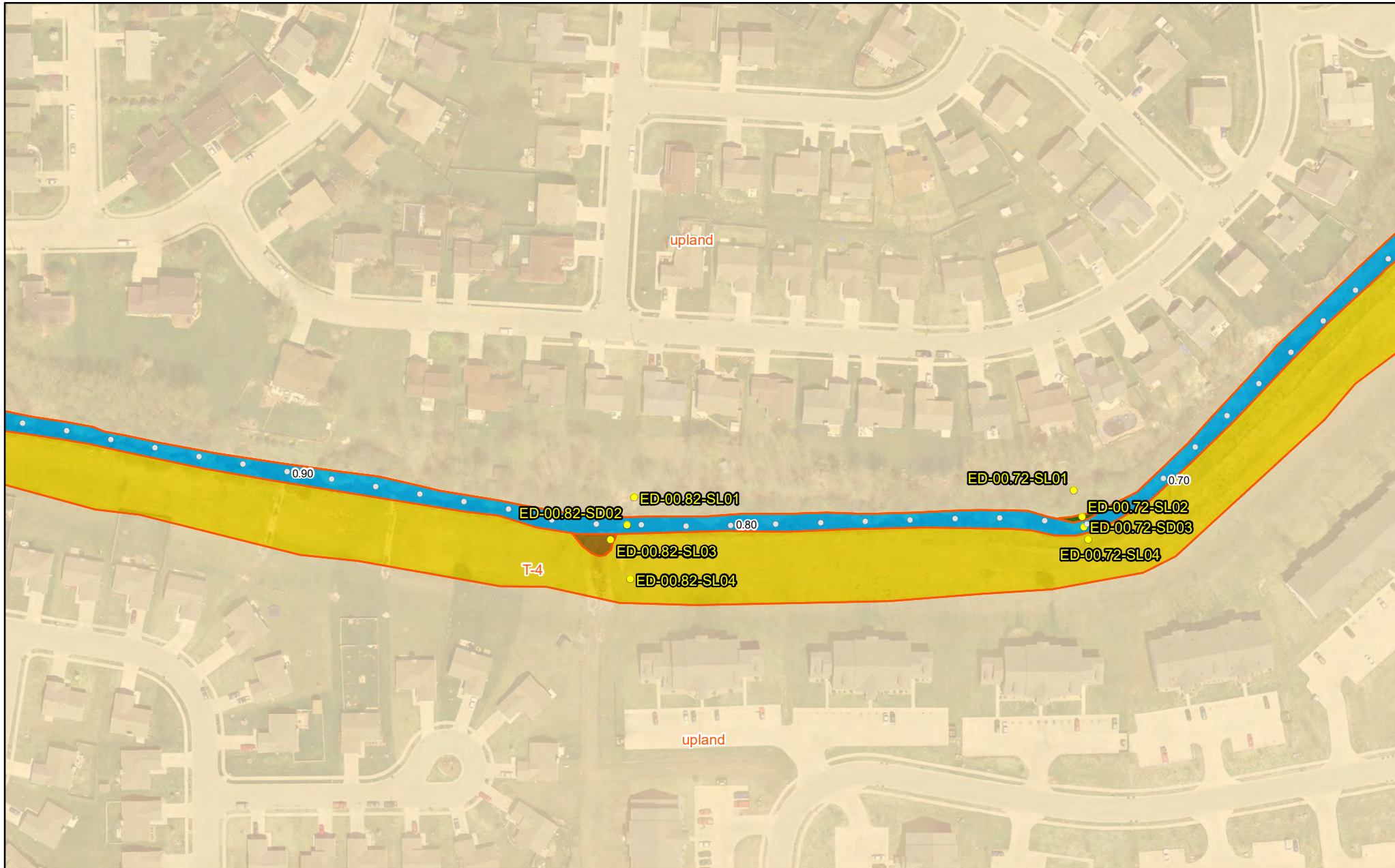
Elliott Ditch - Lafayette, Tippecanoe County, Indiana

- | | | | |
|-------------------------------|---------------------------|-----------------|----------|
| ○ Milepost | Geomorphic Surface | □ anthropogenic | □ upland |
| ● Proposed Sample Location | ■ stream | ■ levee | |
| ⊞ Geomorphic Surface Boundary | ■ T-4 | ■ upland swale | |



0 120 240 Feet
 1:1,850



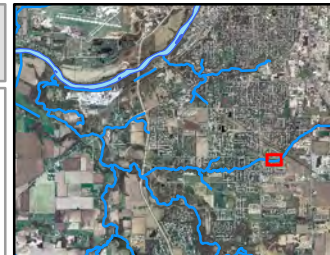
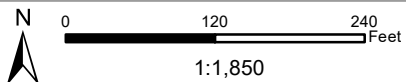


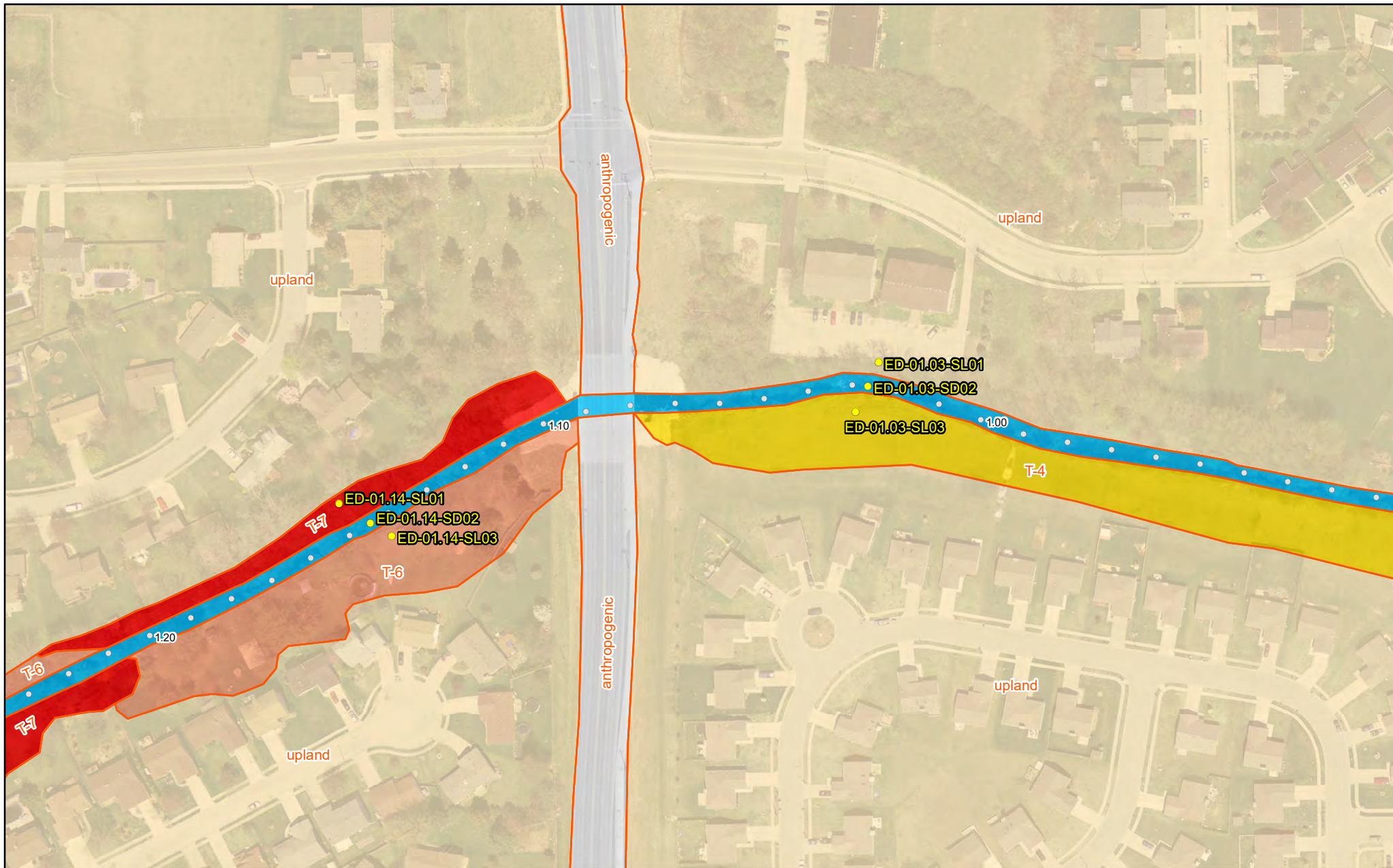
Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

Figure 4 - Proposed Sample Locations & Geomorphic Surfaces

Elliott Ditch - Lafayette, Tippecanoe County, Indiana

- Milepost
 - Proposed Sample Location
 - ⊞ Geomorphic Surface Boundary
- | | | |
|--|---|---|
| Geomorphic Surface | ■ floodplain | ■ depression |
| ■ stream | ■ T-4 | ■ upland |





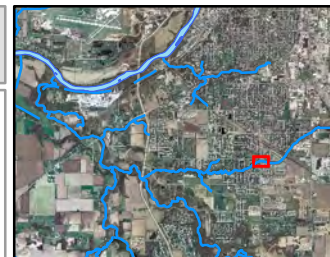
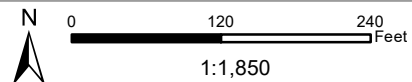
Tetra Tech, Inc.

630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

Figure 4 - Proposed Sample Locations & Geomorphic Surfaces

Elliott Ditch - Lafayette, Tippecanoe County, Indiana

- Milepost
 - Proposed Sample Location
 - ⊞ Geomorphic Surface Boundary
- | | | | |
|---------------------------|--------|---------------|--------|
| Geomorphic Surface | stream | T-6 | upland |
| T-7 | T-4 | anthropogenic | |



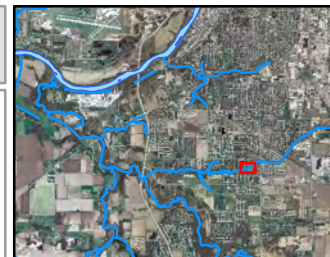
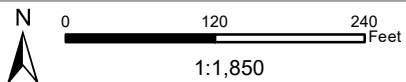


Tetra Tech, Inc.
 630 Riverfront Drive, Suite 100
 Sheboygan, WI 53081
 Tel: (920) 452-7962
 Fax: (920) 457-2357

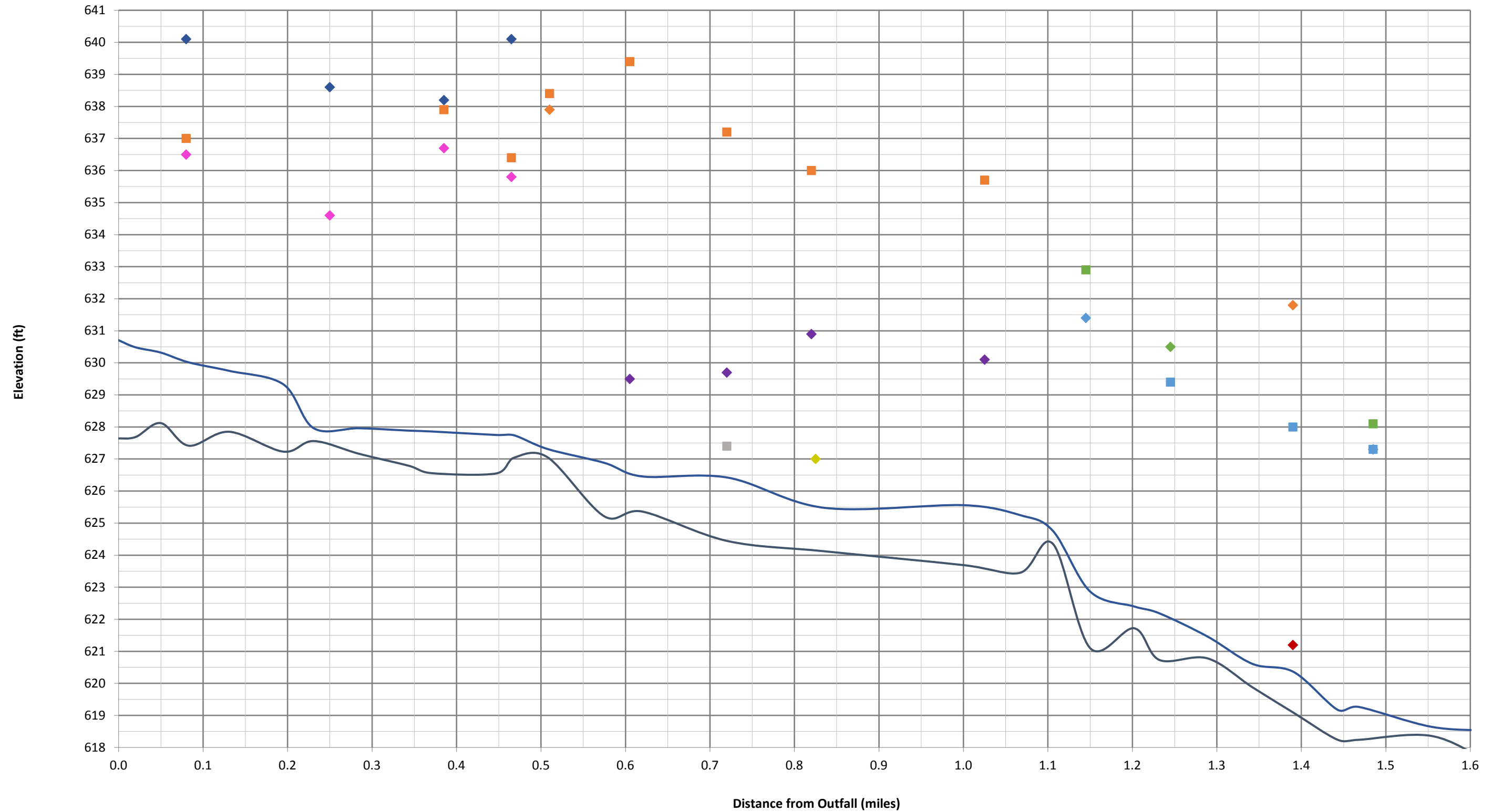
Figure 4 - Proposed Sample Locations & Geomorphic Surfaces

Elliott Ditch - Lafayette, Tippecanoe County, Indiana

- Milepost
 - Proposed Sample Location
 - ⊞ Geomorphic Surface Boundary
- | | | |
|--|--|--|
| Geomorphic Surface | ■ T-1 | ■ T-7 |
| ■ stream | ■ T-6 | ■ upland |



Elliott Ditch Longitudinal Profile - Outfall 001 to MP 1.6, with overbank sample locations



Water Surface Elevation Thalweg Bed Elevation ◆ LDB Levee ◆ LDB Upland □ RDB Upland ◆ LDB Upland Swale ◆ LDB T-7 □ RDB T-7 ◆ LDB T-6 □ RDB T-6 ◆ LDB T-4 ◆ LDB T-1 □ RDB F ◆ LDB Depression

ATTACHMENT A

**STANDARD OPERATING PROCEDURE
CHECK VALVE SAMPLING**

**Elliott Ditch
Lafayette, IN**

Prepared by:
Tetra Tech CES, Inc.

Prepared for:
Tetra Tech CES, Inc.
Elliott Ditch Sampling Plan

January 2016

ACRONYM LIST

GPS	Global Positioning System
NAD	North American Datum
PPE	Personal Protective Equipment
QAPP	Quality Assurance Project Plan
RTK	Real Time Kinematic
SHSP	Site Health and Safety Plan
SOP	Standard Operating Procedure

1.0 SCOPE AND APPLICATION

The purpose of this Standard Operating Procedure (SOP) is to establish a standard procedure for the collection of sediment core samples using a check valve core sampler. Procedures are described for the collection of soft sediments and fine-grained sands. This SOP should be consulted during the preparation of any plan requiring procedures for sediment sample collection using a check valve core sampler.

2.0 SUMMARY OF METHOD

A tape measure or pole with minimum graduations of 0.1 feet attached to a 6-inch diameter disc is used to determine the depth from the water surface to sediment surface prior to sampling. In the event of deep/swift water, a lead line will be permissible to determine the depth from the water surface to sediment surface. The check valve sampler is advanced to the specified depth and retracted. The core sample retrieved is capped on the bottom and removed from the check valve sampler. The core sample is then capped on top, labeled and stored upright in a rack. The location, date-time, sample advancement length from the sediment surface, sediment core recovery length, and percent recovery are documented using the data collector (e.g., Leica Viva) or alternative documentation method. The project target for sample recovery is 80 percent. If the initial sampling does not obtain at least 80 percent recovery, additional attempts will be made using the equipment and methods determined most appropriate by the Field Manager or his/her designee in the field.

3.0 SAFETY

All work must be performed under the approved Site Health and Safety Plan (SHSP) for the project. The SHSP identifies proper personal protective equipment (PPE) and potential site/work hazards. Daily safety meetings will be conducted before work begins.

4.0 APPARATUS AND EQUIPMENT

- Vessel (sampling platform) that complies with U.S. Coast Guard regulations with a minimum of 3 anchors or two anchoring spuds
- PPE specified in the SHSP
- Tape measure, lead line, and/or pole with minimum graduations of 0.1 feet attached to disc to determine depth from water surface to sediment surface
- Check valve sampler
- Core tubes (typically about 3-inch diameter) with end caps
- Core rack used to store sediment cores vertically
- Electronic data storage unit for core collection documentation
- Nut driver and/or Phillips screwdriver
- Duct and/or electrical tape
- Permanent marker/paint pen to label core liners
- Real Time Kinematic (RTK) Global Positioning System (GPS) or equivalent, with horizontal accuracy of ± 1 meter

5.0 PROCEDURES

5.1 Sample Location Positioning

Positioning for sampling will be achieved using an RTK GPS, or equivalent, that is capable of locating stations with an accuracy and repeatability of ± 1 meter.

5.2 Depth from Water Surface to Sediment Surface

A tape measure, pole with minimum graduations of 0.1 feet attached to a disc, or lead line will be used to determine the depth from the water surface to sediment surface prior to sampling. The depth to sediment from the water surface is used to establish a reference for sample advancement.

5.3 Core Sample Collection

1. Add the depth that the sample core will be advanced into the sediment to the measured depth to sediment from the water surface. Mark the total depth with tape on the sample rod or tube after the sample tube is connected to the check valve. Use this mark as a reference for depth of advancement from the water surface.
2. Advance the sampler into the sediment surface slowly to the specified depth. Rotate sampler to shear core sample from sediment column. Retract the sampler.
3. Cap the bottom of the core. Remove the core from the sampler. Cap the top of core. Place duct tape over the core caps. Use permanent marker to denote the top of the core with the location identification (ID), date, time, and sample recovery length/sample advancement length and store it in an upright position.
4. Record location, date, time, core sample advancement length, sample recovery length, and percent recovery ($[\text{sample recovery length} / \text{sample advancement length}] \times 100$) in electronic data collection device or using alternative documentation method.

Note: The project target for sample recovery is 80 percent. Excess sediment that is not used in the processed sample will be discarded into the appropriate waste container. A core barrel will be reused at the same sample location but will not be reused at another sample location unless it is decontaminated.

**STANDARD OPERATING PROCEDURE
PISTON CORE SAMPLING**

**Elliott Ditch
Lafayette, IN**

Prepared by:
Tetra Tech CES, Inc.

Prepared for:
Tetra Tech CES, Inc.
Elliott Ditch Sampling Plan

January 2016

ACRONYM LIST

GPS	Global Positioning System
NAD	North American Datum
PPE	Personal Protective Equipment
QAPP	Quality Assurance Project Plan
RTK	Real Time Kinematic
SHSP	Site Health and Safety Plan
SOP	Standard Operating Procedure

1.0 SCOPE AND APPLICATION

This Standard Operating Procedure (SOP) establishes standards for collecting sediment samples using a piston core sampling device. Procedures are described for the collection of soft sediments and fine-grained sands. This SOP should be consulted during the preparation of any plan requiring procedures for sediment sample collection using a piston core sampler.

A piston core device can be used to collect sediment samples for polychlorinated biphenyl (PCB) analysis. This device can be used to collect continuous, undisturbed, surface sediment samples up to 7 feet long (depending on the type of underlying deposit), in water depths up to approximately 32 feet.

2.0 SUMMARY OF METHOD

The techniques and tools for sampling soft sediment with a core tube depend on river current, depth of water, substrate characteristics, and the objective of the sampling program. Once a sampling location is determined, the sampling vessel is anchored or spudded in place using at least three anchors or two spuds. Typically, the boat is anchored with the front or back facing directly into the wind or current, whichever exerts a stronger force on the sampling vessel.

A sub-meter accuracy reference surface location will be obtained at each sample location using Real Time Kinematic Global Positioning System (RTK GPS) equipment and recorded.

The reference surface elevation will be used to establish the depth-to-sediment surface at each sample location. Sampling and depth-to-sediment surface measurements will be conducted by experienced personnel who can differentiate the water/sediment surface interface using methods described in this SOP. Prior to sampling, a surveyor's rod, graduated pole (marked with minimum 0.1 foot graduations and attached to a 6-inch diameter disc), or lead line will be used to determine the vertical distance from the reference surface to the sediment surface. This distance, plus the target sample depth, will be marked on the sampler core tube or on the aluminum rod attached to the piston sampler head.

The sampling device will be slowly lowered into the water just below the surface. This slow motion will allow the tube to be completely filled with water, eliminating any vacuum effect that can occur. After the core tube has filled with water, it will be lowered completely to the marked depth. The pull rope or cable that is attached to the piston core will be pulled gently up towards the surface of the water/sampling platform until it is taut and then it will be attached to an anchor point such as a sampling vessel or sampling platform with the use of a t-bar. Once the pull rope or cable has been attached, the sampler rod will be first advanced/pushed and if required driven with a 10 pound drive hammer into the substrate until refusal or until the target depth has been reached. When performed, the distance the core tube is driven/hammered will be noted in the daily field log sheet. Once the piston core is pushed to refusal or desired depth, the depth of core advancement will be measured and recorded.

Upon retrieval of the core tube, the bottom of the core sample will be capped underwater. Two holes will be drilled in the core tube between the top of the sediment and the bottom of the piston, with the bottom hole no closer than 0.5 inch from the top of the captured sediment. Water will be allowed to drain. The thickness of the sediment recovered in the core tube will be measured and recorded, and the

contents of the core tube will be described and documented in the daily field logs. The sampling head and piston will then be removed from the core tube. After the water has drained from the core, an end cap will be placed on top of the core tube with the sample location, date, time, total advancement, and recovery noted. Both the top and bottom end caps should be taped at this time using either duct or electrical tape. The sample core tube will then be placed upright in a storage rack and all data will be recorded in the daily field logs and also in the Leica Viva or equivalent system.

The percent recovery (recovered sediment length/tube advancement length x 100) will be determined by measuring the sediment length in the recovered core and comparing that value to the distance the core was advanced. The recovery must be equal to or greater than 80 percent. If the required recovery is not reached on the first attempt, the first core should be saved and the location should be resampled (following the listed procedures). If the second attempt results in a greater recovery than the first attempt, and there is a recovery of 80 percent or greater, the first core will be brought back to the processing area and properly disposed of.

After each attempt, the sampler will be decontaminated following the procedures outlined below:

- Remove all visible contaminants (solids) using a brush and a non-phosphate laboratory detergent (e.g., Alconox).
- Rinse with distilled or deionized water.

3.0 SAFETY

All work must be performed under the approved Site Health and Safety Plan (SHSP) for the project. The SHSP identifies proper personal protective equipment (PPE) and potential site/work hazards. Daily safety meetings will be conducted before work begins.

4.0 APPARATUS AND EQUIPMENT

- Vessel (sampling platform) that complies with U.S. Coast Guard regulations with a minimum of three anchors or two anchoring spuds.
- PPE specified in the SHSP
- Tape measure, lead line, or graduated pole with minimum graduations of 0.1 foot and 6-inch diameter disc to determine water depth
- Pole to measure soft sediment thickness with minimum graduations of 0.1 foot
- Piston core sampler
- Plastic core tubes (3-inch outside diameter) with end caps
- Core rack to store sediment cores vertically
- Duct tape
- Electrical tape
- Permanent marker/paint pen to label core tubes
- Measuring tape to measure sample recovered

- Real Time Kinematic (RTK) Global Positioning System (GPS) or equivalent, with horizontal accuracy of ± 1 meter
- Truck with core rack to transport sediment cores vertically
- T-bar
- Nut driver and/or Phillips screwdriver
- Alconox
- Deionized water
- Aluminum sampling rod, length as needed per field conditions
- Scrub brushes
- Garden sprayer

5.0 PROCEDURES

5.1 Sample Location Positioning

Positioning for sample collection will be achieved using an RTK GPS, or equivalent, that is capable of locating stations with an accuracy and repeatability of ± 1 meter.

5.2 Water and Sediment Surface Elevations

A reference surface elevation will be established for all vertical measurements using the boat deck or water surface. The elevation for the reference elevation will be obtained with RTK GPS. If the boat deck is the reference surface elevation, the water surface elevation will be documented once before daily sampling is initiated and once after completion of sampling. The water surface elevation will be obtained by measuring (tape or equivalent) the vertical distance from the boat deck to the water surface. The sediment surface elevation will be determined using the reference surface elevation prior to collection of each sample. A surveyor's rod, graduated pole, lead line, or tape measure (secondary) will be used to measure vertical distance from the reference surface to the sediment surface. The measuring device will have minimum graduations of 0.1 foot and will be attached to a 6-inch diameter disc. The measurement of the depth from the reference elevation (water surface or boat deck) to sediment surface will be conducted by experienced personnel that are capable of establishing the interface between the water and sediment surface. Sample advancement will be done by taping the piston core sampler rod to indicate the advancement depth from the established reference. The significant figures used to record measurements will be dependent on conditions. Data should be reported within the precision of measurement that is possible at the time of measurement considering wave action, boat stability, or other factors. Work should be conducted when the precision of measurement is at least 0.1 foot so all measurements can be documented accordingly. All data will be documented in an electronic database and/or field forms.

5.3 Sample Collection

The sample collection method is as follows:

1. If the boat deck is the reference surface elevation, measure (tape or equivalent) the vertical distance from the boat deck to the water surface before and after daily sampling to obtain the water surface elevation.

2. Mark the sum of the measured distance (result of step 1) and the target sample depth (below the sediment bed) on the sampler core tube or on the aluminum rod attached to the piston sampler head using colored electrical tape.
3. Slowly lower the sampling device to just below the surface of the water (leaving the pull rope or cable attached to the piston core on the deck of the boat) to allow the tube to be completely filled with water, eliminating any vacuum effect that can occur.
4. Lower sampler to the marked depth.
5. Gently pull the pull rope or cable that is attached to the piston core up towards the surface of the boat until it is taut. Attach the rope or cable to the T-bar that is stabilized on the boat or sampling platform.
6. The sampler rod will be first advanced/pushed by hand, and if required, driven with a 10 pound drive hammer into the substrate until refusal or until the target depth has been reached. When performed, note the distance the core tube is advanced/driven on the daily field log sheet.
7. Measure and record the depth of core advancement once the piston core is pushed to refusal or desired depth. Retrieve the sample, place the bottom cap, and wipe free any sediment that remains on the core tube exterior and bring sampler/core tube to the deck of the sampling boat.
8. Drill two holes in the core tube between the top of the sediment and the bottom of the piston, with the bottom hole no closer than 0.5 inches from the top of the captured sediment.
9. Drain water from the core tube.
10. Remove the sampling head and piston from the core tube.
11. Place an end cap on top of the core tube and note the sample ID, date, time, total advancement, and recovery.
12. Record in the daily field log: 1) the measurement of the thickness of the sediment recovered in the core tube, 2) a description of the sediment composition, and 3) the percent recovery (recovered sediment length/tube advancement length x 100) for each core while on the sampling vessel by measuring the sediment length in the recovered core and comparing that value to the distance the core was advanced. Note: The project target for sample recovery is 80 percent.
 - If the required recovery is not reached on the first attempt, save the first core, off-set from the original sample position, and resample the location following the listed procedures.
 - If the second attempt results in a greater recovery than the first attempt, and the recovery is 80 percent or greater, the first core will be brought back to the processing facility and properly disposed of.
 - If the required recovery is not reached on the second attempt, off-set again and resample the location using a different sampling device.

13. Place upright in a storage rack and record all data in the daily field logs and also in the Leica Viva or equivalent system.
14. Decontaminate the piston with Alconox solution and rinse with deionized water.
15. Collect rinsate sample as required (see project QAPP) by pouring deionized water over and into the top of the decontaminated sampler and collecting the rinsate with a glass jar.

5.4 Sampler Decontamination and Field Quality Control Sampling

The sampler decontamination process for non-disposable sampling equipment is described below:

1. Remove all visible contaminants (solids) using a non-phosphate laboratory detergent (e.g., Alconox).
2. Rinse with distilled or deionized water.

6.0 REFERENCES

Tetra Tech EC, Inc. (Tetra Tech), Anchor QEA, L.L.C., J.F. Brennan, and Stuyvesant Projects Realization, Inc. 2013a. Quality Assurance Project Plan for Remedial Action of Operable Units 2, 3, 4, and 5 Lower Fox River and Green Bay Site Brown, Outagamie, and Winnebago Counties, Wisconsin. Prepared for Lower Fox River Remediation LLC. May 2013.

Tetra Tech EC, Inc. (Tetra Tech), Anchor QEA, L.L.C., J.F. Brennan, and Stuyvesant Projects Realization, Inc. 2013b. Final Site Specific Health and Safety Plan. Phase 2B for the Implementation of the Remedial Action at the Lower Fox River Operable Units 2 through 5. February 2013.

U.S. Environmental Protection Agency (EPA). 1999. Innovative Technology Verification Report, Sediment Sampling Technology, Aquatic Research Instruments, Russian Peat Borer. EPA.

**STANDARD OPERATING PROCEDURE
POLING MEASUREMENTS TO ESTIMATE SOFT SEDIMENT THICKNESS**

**Elliott Ditch
Lafayette, IN**

Prepared by:
Tetra Tech CES, Inc.

Prepared for:
Tetra Tech CES, Inc.
Elliott Ditch Sampling Plan

January 2016

ACRONYM LIST

GPS	global positioning system
NAD	North American Datum
PPE	personal protective equipment
QAPP	Quality Assurance Project Plan
RTK	Real Time Kinematic
SHSP	Site Health and Safety Plan
SOP	Standard Operating Procedure

1.0 SCOPE AND APPLICATION

Poling is conducted to define soft sediment thickness in areas where soft sediment is present. The soft sediment thickness is based on the difference in elevation from the top of sediment to the depth of refusal. Poling data will be evaluated prior to sediment sampling to refine in-channel sampling locations, determine the proper length of core to be used at each location, and to assess potential sample recovery. Poling data will also be used to support design delineation. This standard operating procedure (SOP) describes the procedures and methods that will be used to estimate soft sediment thickness using poling measurements.

2.0 SUMMARY OF METHOD

The term ‘poling’ refers to the procedure by which a pole that is marked with unit length graduations is used to measure soft sediment thickness on the bed of a waterbody. A metal pole marked with 0.1-foot graduations and with a base probe (minimum 1-foot length by 1-inch diameter) is advanced vertically through the river bed sediment to document the material present (i.e., soft, hard, granular, etc.) and to determine the overall soft material thickness (depth to refusal). The pole is extended downward through the soft sediment using manual force only until resistance inhibits additional advancement. Poling data will be obtained by or supervised by personnel with experience in poling methods.

3.0 SAFETY

All work must be performed under the approved Site Health and Safety Plan (SHSP) for the project. The SHSP identifies proper personal protective equipment (PPE) and potential site/work hazards. Daily safety meetings will be conducted before work begins.

4.0 APPARATUS AND EQUIPMENT

- Vessel (sampling platform) that complies with U.S. Coast Guard regulations with a minimum of three anchors or two anchoring spuds. (Note: If conditions warrant, hovering using engine power against current or wind forces may be substituted for an anchoring system).
- Personal protective equipment specified in the SHSP
- Tape measure and/or rod with maximum graduations of tenths of feet attached to a 6-inch diameter disc, to determine the distance from either the water surface or the sampling platform to the sediment surface
- Metal pole with maximum graduations of tenths of feet with a base probe of minimum 1-foot length by 1-inch diameter
- Maps and field forms
- Real Time Kinematic (RTK) GPS, or equivalent, with +/- 1 meter horizontal accuracy
- Database available on portable computer (or optional field log book)

5.0 PROCEDURES

5.1 Sample Location Positioning

Positioning for sampling will be achieved using an RTK GPS, or equivalent, that is capable of locating stations with an accuracy and repeatability of ± 1 meter.

5.2 Poling Data Collection

Poling data should be obtained or supervised by personnel with experience in poling methods. A 6-inch diameter disc attached to a tape measure or rod with maximum 0.1 foot graduations will be used by experienced/qualified personnel capable of detecting the sediment surface (mudline). The measurement will be from the water surface or boat deck reference elevation to the top of sediment to determine the vertical distance to the sediment surface. A pole with maximum 0.1-foot graduations and a base probe (minimum 1-foot length by 1-inch diameter) will be used to advance vertically through the river bed sediment to document the material present with a soft push, using arm strength only, and a hard push using arm strength and body weight. A soft [S] push is defined as the depth of penetration to refusal achieved using one hand (arm strength only). A hard [H] push is defined as the additional depth of penetration to refusal achieved by the same sampler using two hands (arm strength plus body weight). The overall [O] push is the combined total of the soft and hard push [S+H=O]. A qualified individual will conduct the poling and estimate the type of material (e.g., soft sediment, sand, gravel, rocks, rip rap, till, etc.) probed with the pole during advancement and observation of material present on the pole upon retrieval. The following data will be recorded in an electronic data collection device and/or on a field form for each poling location:

- Surface water elevation (reference method dependent);
- Vertical distance from the water surface to the sediment surface;
- Probing depth measurements or vertical distance from the water surface to refusal (S, H, and O); and estimated type of material present.

**STANDARD OPERATING PROCEDURE
RUSSIAN PEAT BORER**

**Elliott Ditch
Lafayette, IN**

Prepared by:
Tetra Tech CES, Inc.

Prepared for:
Tetra Tech CES, Inc.
Elliott Ditch Sampling Plan

January 2016

ACRONYM LIST

GPS	Global Positioning System
NAD	North American Datum
PPE	Personal Protective Equipment
QAPP	Quality Assurance Project Plan
RTK	Real Time Kinematic
SHSP	Site Health and Safety Plan
SOP	Standard Operating Procedure

1.0 SCOPE AND APPLICATION

The purpose of this Standard Operating Procedure (SOP) is to establish a standard procedure for the collection of sediment samples using a Russian Peat Borer Sampler. The Russian Peat Borer Sampler is a discrete interval sampler that collects sediment using a lateral in-place collection technique, as opposed to traditional core sample collection through the face of the advancing core (EPA 1999). The sampler is used to obtain samples for specified intervals and/or to support traditional core sampling methods when sample recovery or disturbance may influence sample integrity.

2.0 SUMMARY OF METHOD

The Russian Peat Borer (RPB) Sampler collects sediment/peat by rotating the core barrel around the sampler core axis to obtain a discrete interval sample. Sampling and measuring the depth to the sediment surface should be conducted by qualified and experienced personnel who can differentiate the water/sediment surface interface using the methods described in this SOP.

A reference surface elevation (boat deck or water surface) will be obtained at each sample location using Real Time Kinematic Global Positioning System (RTK GPS) equipment, or equivalent, and recorded. If the boat deck is the reference surface elevation, the water surface elevation will be obtained by measuring (tape or equivalent) the vertical distance from the boat deck to the water surface before and after daily sampling.

The reference surface elevation will be used to establish the depth to the sediment surface at each sample location. Prior to sampling, a surveyor's rod, pole, or tape measure (marked, at a minimum, in tenths of feet graduations and attached to a 6-inch diameter disc) will be used to determine the distance from the reference elevation to the sediment surface. Because the water provides almost no resistance to the dropping of the rod (due to the rod's weight), the rate of advancement must be controlled so that detection of the minimal resistance provided by the sediment surface is possible. This distance (e.g., depth), plus the target sample depth, will then be marked on the RPB Sampler, which will be lowered through the water column slowly to the marked depth.

Once at the required sediment depth, the sampler rod will be rotated to initiate the sampling while the pivotal cover plate supports the cutting action of the bore. As the sampler is turned, the edge of the bore will longitudinally cut a semi-cylindrical shaped sample until the cover plate encloses an interval of relatively undisturbed sediment.

After the sampler is retrieved and placed on the deck of the boat/sampling platform, the sediment will be removed from the sampler by rotating the cover plate to displace captured sediment. The sample will be photographed and sampled in 0.5-foot intervals (three sample intervals with 1.65-foot length collection chamber). The 0.5-foot sample intervals of all targeted intervals sampled with the RPB will be placed in labeled quart-size plastic bags. All samples from a given location will be stored in a labeled gallon-size plastic bag. For each sample location, the date-time, location coordinates, reference surface elevation (boat deck or water surface), vertical distance from reference elevation to sediment surface, sample advancement length from the sediment surface, target interval, and sediment sample length (intervals) will be documented on an electronic data collection device (e.g. tablet computer) and/or on field forms.

3.0 SAFETY

All work must be performed under the approved Site Health and Safety Plan (SHSP) for the project. The SHSP identifies proper personal protective equipment (PPE) and potential site/work hazards. Daily safety meetings will be conducted before work begins.

4.0 APPARATUS AND EQUIPMENT

The following equipment is recommended to perform discrete sampling with the RPB Sampler:

- Boat (sampling platform) that complies with U.S. Coast Guard regulations with a minimum of three anchors or two anchoring spuds
- PPE specified in the SHSP
- Pole, surveyor's rod, or tape measure (secondary) with maximum 0.1-foot graduations attached to a disc (6-inch diameter) to determine depth from boat deck or water surface to sediment surface
- Tape measure with maximum 0.1-foot graduations
- RPB Sampler
- Quart- and gallon-size plastic bags
- Permanent marker to label sample bags
- Electronic data storage unit for core collection documentation
- Electrical tape
- White board and dry erase markers
- Digital camera
- RTK GPS equipment with horizontal accuracy of ± 1 meter

5.0 PROCEDURES

5.1 Sample Location Positioning

Positioning for sampling will be achieved using an RTK GPS, or equivalent, that is capable of locating stations with an accuracy and repeatability of ± 1 meter.

5.2 Water and Sediment Surface Elevations

A reference surface elevation will be established for all vertical measurements using the boat deck or water surface. The elevation for the reference elevation will be obtained with RTK GPS, or equivalent. If the boat deck is the reference surface elevation, the water surface elevation will be documented once before daily sampling is initiated and once after completion of sampling. The water surface elevation will be obtained by measuring (tape or equivalent) the vertical distance from the boat deck to the water surface. The sediment surface elevation will be determined using the reference surface elevation prior to collection of each sample. Vertical distance measurement from the reference to the sediment surface will be done with a surveyor's rod, pole, or tape measure (secondary), all with maximum graduations of 0.1 foot and attached to a 6-inch diameter disc. The measurement of the depth from the reference elevation (water surface or boat deck) to sediment surface will be conducted by qualified and experienced personnel who are capable of establishing the interface between the water and sediment surface. The RPB rod will be taped to indicate the advancement depth from the established reference. The significant figures used to record measurements will be dependent on conditions. Data should be reported within the precision of measurement that is possible at the time of measurement considering wave action, boat

stability, or other factors. Work should be conducted when the precision of measurement is at least 0.1 foot so all measurements can be documented accordingly. All data will be documented on an electronic data collection device (e.g. tablet computer) and/or on field forms.

5.3 Sample Collection

The sample collection method is as follows:

1. Add the planned core length to the measured water depth (reference point [water surface or boat deck] to top of sediment). Mark this length with tape on the sample rod from the bottom of the sample core chamber and use this measurement for depth of advancement from the reference.
2. Advance the sampler into the sediment surface slowly to the specified depth. Rotate the sampler to capture the sample. Retract the sampler.
3. Place a clean barrier on the deck, then keeping the sampler horizontal at the boat's deck, rotate the cover plate to open the sampler and extrude the sample. Evaluate sample profile and/or characteristics to verify sampler performance and identify intervals that may not represent in-situ sediment (e.g., slough). Replace any samplers that do not function properly. Resample any sample intervals that do not represent the in-situ sediment. Do not retain the misrepresentative samples.
4. Label white board with date, core sample location identification (ID), and depth interval. Place white board next to the sample and photograph. The photo will be used to assist in sample characterization.
5. Sample in 0.5-foot intervals (site sampler includes 1.65-foot length collection chamber that accommodates three sample intervals) and place all samples from the target interval sampled into labeled (sample ID, depth interval, date) quart-size plastic bags. Transfer the sample from the sampler to the container bag using clean spoons (cohesive sediment) or clean nitrile gloves (non-cohesive sediment) for each sample interval. Place all samples in a 5-gallon bucket for storage on the sampling vessel and transportation to the processing facility.
6. For each sample location, record the following in electronic data collection unit and/or field forms:
 - Date and time
 - Core sample ID and coordinates (note distance [feet] sample was offset from location if additional sampling is required)
 - Depth from reference surface elevation (boat deck or surface water) to the top of the sediment
 - Sample advancement depth from reference surface
 - Target depth interval and collected sample length associated with target depth interval
 - Deliver samples to processing facility for characterization, if required, and processing/packaging for shipment to laboratory.

5.4 Sampler Decontamination and Field Quality Control Sampling

The sampler decontamination process for non-disposal sampling equipment is described below:

1. Remove all visible contaminants (solids) using a non-phosphate laboratory detergent (e.g., Alconox).
2. Rinse with distilled or deionized water.

REFERENCES

U.S. Environmental Protection Agency (EPA). 1999. Innovative Technology Verification Report, Sediment Sampling Technology, Aquatic Research Instruments, Russian Peat Borer. EPA/600/R-01/010.

**STANDARD OPERATING PROCEDURE
SEDIMENT LOGGING**

**Elliott Ditch
Lafayette, IN**

Prepared by:
Tetra Tech CES, Inc.

Prepared for:
Tetra Tech CES, Inc.
Elliott Ditch Sampling Plan

January 2016

1 **SCOPE AND APPLICATION**

This Standard Operating Procedure for Sediment Logging is intended for use specifically during field activities.

2 **SUMMARY OF METHOD**

The purpose of the Standard Operating Procedure (SOP) is to provide a step-by step process for describing in-channel sediments using United States Department of Agriculture (USDA) and Unified Soil Classification System (USCS) official descriptors. Boring logs are to be completed using either hard copy hand written or an electronic data logging form (Figure 1). Hard-copy print-outs (Figure 2) from the electronic data logging system will be archived as a backup to the electronic data. A project-specific paper data form (Figure 3) will be used only in the event that electronic data collection is unavailable. At a minimum, sediment will be described using the steps outlined below. For each step, approved descriptors (USDA and/or USCS) have been listed in bold type, followed by official descriptions. Logging of sediments will be done prior to sampling unless otherwise specified in the approved Work Plan, Sampling and Analysis Plan, and/or Quality Assurance Project Plan. Additional sediment characteristics may be included at the direction and approval of the Field Manager.

Following this Standard Operating Procedure ensures that sediment logging procedures are scientifically defensible and meet the task-specific data quality objectives identified in the specific Work Plan. It provides specific quality assurance and quality control mechanisms that validate the information that is collected, and ensure it is useable to all study participants.

3 **COMMENTS**

Reusable sampling and processing equipment that comes into contact with sediments must be decontaminated prior to reuse in accordance with section 5.3 Decontamination Procedures, of the Field Sampling Plan.

4 **SAFETY**

All work must be performed under an approved health and safety plan (HASP). The HASP identifies proper personnel protective equipment (PPE) and identifies

potential site hazards. Daily safety tailgate meetings must take place before fieldwork begins.

5 APPARATUS AND EQUIPMENT

- 5.1 Personal protective equipment specified in the Health and Safety Plan
- 5.2 Core liner cutter.
- 5.3 Full-spectrum fluorescent lighting, if access to natural sunlight is not available.
- 5.4 Stainless steel utensils or appropriate disposable utensils.
- 5.5 Electronic data logging computer or tablet (e.g. iPad).
- 5.6 For back up in the event the appropriate software and/or computer are not available, use the paper Sediment Logging Form (Figure 3) and waterproof ink pens.
- 5.7 Disposable non-powdered nitrile gloves.
- 5.8 Calibrated measuring stick.
- 5.9 Decontamination equipment (see section 5.3 of the Field Sampling Plan)

6 REAGENTS

- 6.1 Distilled water.
- 6.2 Tap water
- 6.3 Non-phosphate cleaner (e.g., Alconox, or equivalent)

7 SEDIMENT LOGGING PROCEDURE

- 7.1 Prepare the sediment core for description by cutting the plastic liner lengthwise. Use only an approved cutting device with Kevlar or heavy leather gloves.
- 7.2 Remove the upper half of the cut plastic liner, leaving the sediment exposed and resting in the bottom half of the liner.
- 7.3 Using approved nitrile gloves and stainless steel utensils, inspect the sediment under natural sunlight or full-spectrum light to determine the natural layers that are present across the core. Do not include thin laminations, bedding planes, varves, or other thin sedimentary structures as individual layers. Group these features into layers according to overall pattern.

7.4 For each layer, list the sediment logger (person describing the sediment), data entry technician (even if the same as the sediment logger), the layer number (number layers sequentially starting with 1 at the surface), the interval (range of depth below the surface for that layer), and any gap in the sample (difference between the distance the core was pushed and the amount of sediment recovered).

7.5 For each layer, describe the characteristics listed below.

a. *Sediment Color*

Sediment color should be described using an approved Munsell Soil Color Chart. Whenever possible, describe color under natural sunlight. If this is not feasible, use only strong, full-spectrum light at close range. While wearing nitrile gloves, place a small amount of sediment behind the chart apertures until the closest match is found to a chart color chip. Record the hue, value, and chroma of the closest match.

i. Hue (Munsell Color, 2000)

1. **10YR**
2. **7.5YR**
3. **2.5Y**
4. **5Y**
5. **5YR**
6. **2.5YR**
7. **10R**
8. **5PB**
9. **10B**
10. **10BG**
11. **5BG**
12. **10G**
13. **5G**
14. **10GY**
15. **10Y**
16. **N**

ii. Value (Munsell Color, 2000)

1. **8**
2. **7**
3. **6**
4. **5**
5. **4**

6. **3**
7. **2.5**
8. **2**

iii. Chroma (Munsell Color, 2000)

1. **0**
2. **1**
3. **2**
4. **3**
5. **4**
6. **6**
7. **8**

b. *Second sediment color* (if applicable; same hue, value, and chroma categories as above)

c. *Texture*

i. USDA Texture (Schoeneberger et al., 2002)

USDA texture should be estimated by hand texturing. Fine earth texture classes from the textural triangle (Figure 4) should be used. Sand, loamy sand, and sandy loam categories can be further subdivided based on the dominant size of the sand fraction. Absence of a modifier implies a “medium” size.

1. **Gravel** – only used if sample is 90+ % gravel
2. **Coarse sand**
3. **Sand**
4. **Fine sand**
5. **Very fine sand**
6. **Loamy coarse sand**
7. **Loamy sand**
8. **Loamy fine sand**
9. **Loamy very fine sand**
10. **Coarse sandy loam**
11. **Sandy loam**
12. **Fine sandy loam**
13. **Very fine sandy loam**
14. **Loam**
15. **Silt loam**
16. **Silt**
17. **Sandy clay loam**
18. **Clay loam**
19. **Silty clay loam**
20. **Sandy clay**
21. **Silty clay**

22. Clay

ii. *USCS Texture* (ASTM, 1985)

USCS texture should be estimated by hand texturing and a 2-letter code should be chosen to describe the texture. The first letter refers to the size fraction of the dominant particle: G = gravel, S = sand, M = silt, C = clay, O = organic. The second letter is a modifier of the dominant particle size: P = poorly graded (well sorted/uniform particle size), W = well graded (poorly sorted/diversified particle size), H = high plasticity, L = low plasticity. Pt is used for sediment that is almost entirely organic.

1. **GP**
2. **GW**
3. **GM**
4. **GC**
5. **SP**
6. **SW**
7. **SM**
8. **SC**
9. **ML**
10. **MH**
11. **CL**
12. **CH**
13. **OL**
14. **OH**
15. **Pt**

d. *Structure*

Structure denotes the tendency for a soil or sediment to break, upon pressure being applied, into aggregates resulting from pedogenic processes (Figure 5). To determine structure, apply pressure to an appropriately sized block of sediment placed between the thumb and forefinger. After the block ruptures or deforms, determine which of the 9 structure types the resulting peds most resemble. Determine the appropriate grade by observing in situ peds in the liner. Single grain and massive types always have a grade of structureless.

i. Type (Schoeneberger et al., 2002)

1. **Granular** – small polyhedrals, with curved or very irregular faces
2. **Angular blocky** – polyhedrals with faces that intersect at sharp angles (planes)
3. **Subangular blocky** – polyhedrals with sub-rounded and planar faces, lack sharp angles

4. **Platy** – flat and tabular-like units (not common; must be due to pedogenesis; do not confuse with sedimentary structure)
5. **Wedge** – elliptical, interlocking lenses that terminate in acute angles, bounded by slickensides; not limited to vertic materials (not common)
6. **Prismatic** – vertically elongated units with flat tops (not common)
7. **Columnar** – vertically elongated units with rounded tops which are commonly “bleached” (not common)
8. **Single grain** – no structural units; entirely noncoherent (e.g. loose sand)
9. **Massive** – no structural units; material is a coherent mass (not necessarily cemented)

ii. Grade (Schoeneberger et al., 2002)

1. **Structureless** – no discrete units observable in place or in hand sample
2. **Weak** – units are barely observable in place or in a hand sample
3. **Moderate** – units well-formed and evident in place or in a hand sample
4. **Strong** – units are distinct in place (undisturbed soil), and separate cleanly when disturbed

e. *Plasticity*

Plasticity is the degree to which reworked sediment can be permanently deformed without rupturing. To determine plasticity mix a small amount of sediment with an amount of water sufficient to give the sediment its maximum plasticity. If too much water is added, more sediment can be added. Make a roll of sediment 4cm long and evaluate it using the criteria below.

i. Class (Schoeneberger et al., 2002)

1. **Non-plastic** – will not form a 6mm diameter roll, or if formed, can't support itself if held on end
2. **Slightly plastic** – 6mm diameter roll supports itself; 4mm diameter roll does not
3. **Moderately plastic** – 4mm diameter roll supports itself, 2mm diameter roll does not
4. **Very plastic** – 2mm diameter roll supports its weight

f. *Density (Optional)*

Density describes the degree of firmness for coarse-grained sediments. Official density determination uses the Standard Penetration Test, in a field setting. When describing sediment in a

lab setting, an estimate of the density should be made using undisturbed sediment in the plastic liner. Density should only be described for sediments in which the USCS texture is GW, GP, GM, GC, SW, SP, SM, or SC. For other textures, consistency should be used.

i. Class

1. **Very Loose** (0-4 SPT)
2. **Loose** (5-10 SPT)
3. **Medium Dense** (11-30 SPT)
4. **Dense** (31-50 SPT)
5. **Very Dense** (>50 SPT)

g. *Consistency (Optional)*

Consistency describes the degree of firmness for intact fine-grained sediments. Official consistency determination uses the Standard Penetration Test, in a field setting. When describing sediment in a lab setting, an estimate of the consistency should be made using undisturbed sediment in the plastic liner. Consistency should only be described for fine-grained sediments.

i. Class

1. **Very Soft** (<2 SPT)
2. **Soft** (2-4 SPT)
3. **Firm** (5-15 SPT)
4. **Hard** (16-30 SPT)
5. **Very Hard** (>30 SPT)

h. *Roots*

Describe the quantity and size class of roots per unit area. The area in which to assess root quantity is based on the size of the roots being assessed. For very fine and fine roots, record the average quantity from 3 to 5 units of 1cm by 1cm. For medium and coarse roots, record the average quantity from 3 to 5 units of 10cm by 10cm. For very coarse roots, the appropriate unit area is 1m by 1m. Because of limited sample size when describing sediment from a core sample, very coarse root quantity should be estimated.

i. Quantity (Schoeneberger et al., 2002)

1. **Few** - <1 per area
2. **Common** - 1 to <5 per area
3. **Many** - ≥ 5 per area

ii. Size (Schoeneberger et al., 2002)

1. **Very fine** - <1mm
2. **Fine** - 1 to <2mm

3. **Medium** – 2 to <5mm
4. **Coarse** – 5 to <10mm
5. **Very Coarse** - \geq 10mm

i. *Rock fragments*

Estimate rock fragment percentage by volume. Use a ruler to estimate the average rock fragment size for the entire layer. If multiple size classes are present, use the largest size class, unless the smaller size class has more than twice the percentage by volume of the larger (e.g. 30% fine gravel and 20% coarse gravel, choose “35-60% coarse gravel”; 40% fine gravel and 10% coarse gravel, choose “35-60% fine gravel”). Use comparison samples if available.

i. Quantity (Schoeneberger et al., 2002)

1. **<15%** - no texture adjective added to USDA texture
2. **15 to <35%** - use adjective for appropriate size (e.g. gravelly)
3. **35 to <60%** - use “very” with the appropriate size adjective (e.g. very gravelly)
4. **60 to <90%** - use “extremely” with the appropriate size adjective (e.g. extremely gravelly)
5. **\geq 90%** - no modifier; use the appropriate noun for the dominant size class (e.g. gravel)

ii. Size (Schoeneberger et al., 2002)

1. **fine gravel** – >2 to 5mm diameter
2. **medium gravel** – >5 to 20mm diameter
3. **coarse gravel** – >20 to 75mm diameter
4. **cobbles** – >75 to 250mm diameter

iii. Angularity

1. **angular** (fragments have sharp edges and relatively planar sides with unpolished surfaces)
2. **subangular** (fragments are similar to angular description but with rounded edges)
3. **subrounded** (fragments have nearly planar sides but well-rounded corners and edges)
4. **rounded** (fragments have smoothly curved sides and no edges)

j. *Shells*

Note the presence of shells or shell fragments in the layer.

k. *Plant fragments*

Note the presence of plant fragments in the layer.

l. Wood

Note the dominant wood type if wood is found in the layer. Do not include roots here. Secondary wood types that are deemed important should be listed in the comments section. Estimate the percentage of the layer that is composed of the dominant wood type using the increments listed below.

i. Type

1. **wood** – wood in a generally natural state, any color but black
2. **black wood** – wood that is black, but unburned, inside and out
3. **burned wood** – visibly burned wood
4. **sawdust** – fine wood shavings, either dispersed or clumped together
5. **wood chips** – non-naturally cut small wood pieces
6. **wood pulp** – fibrous, ground wood used in making paper
7. **charcoal** – compressed carbon residue of burned wood

ii. Quantity

1. **<5%**
2. **10%**
3. **20%**
4. **30%**
5. **40%**
6. **50%**
7. **60%**
8. **70%**
9. **80%**
10. **90%**
11. **95%**
12. **100%**

m. Odor

Note any odor detected from the layer after the core has been cut open. Use the wafting method to avoid overexposure to strong chemicals. If the odor is strong and is easily detected without wafting, it may indicate a hazard. Leave the logging area immediately until proper equipment (PID, etc.) can be utilized to verify, monitor, and/or mitigate the risk. Because certain volatile compounds are only released during mixing, an odor may not be detectable until a layer is being composited during sampling. Pay specific attention during this step of the sampling process and adjust the sediment description accordingly.

i. Type

1. **Petrochemical**
 2. **Sulfur**
 3. **Other**
- ii. Amount
1. **Slight** – odor is barely detectable, even at close range
 2. **Moderate** – odor is detectable when wafting from the proper distance
 3. **Strong** – odor permeates after the core liner is cut open and/or during mixing of the sediment; no wafting is needed to detect the odor.

n. *Sublayers*

Sublayers are thin but distinct bands of sediment within the larger layer. A layer may be composed of many sublayers, in a repeating pattern, or it may be generally uniform but with a few thin bands that differ from the rest of the layer in regards to certain major characteristics, like texture or color. These thin bands should not be separated as individual layers but should be noted and described here. Sublayers include characteristics such as varves, sedimentary structures, thin bedding planes, or stratification.

i. Thickness

1. **<0.05 ft**
2. **0.05 – 0.1 ft**
3. **0.1 – 0.2 ft**
4. **0.2 – 0.5 ft**
5. **>0.5 ft**

ii. Texture

1. Same options as section c. i. (USDA texture)

iii. Color

1. Same options as section a. i, ii, and iii. (Munsell color)

o. Geomorphic Setting

If possible, note the geomorphic setting of the layer in its natural state, based on the characteristics already described. Choose one of the three options below. If none apply, leave this section blank.

- i. **Till**
- ii. **Lacustrine**
- iii. **Sand/gravel bed**

7.6 For each layer, after describing the characteristics above, note any additional remarks. These can be elaborations on characteristics already mentioned or notable layer characteristics that do not fit in any of the categories above. Any speculative comments should be noted as internal sample remarks.

7.7 For each sample interval, fill out the appropriate lab information as listed below.

a. *Duplicate*

List whether a field duplicate sample will be collected for this interval.

b. *Grab/Composite*

Identify whether the sample for this interval is a grab sample or composite sample (intervals with field duplicates will always be composite).

c. *Matrix*

Identify the sample matrix for each sample interval. Default is 'sediment'. Other values are not common.

- i. **Sediment**
- ii. **Soil**
- iii. **Air**
- iv. **Water**

d. *# of Containers*

Identify the number of sample containers used when sampling the interval. Default is 1.

- i. **1**
- ii. **2**
- iii. **3**
- iv. **4**
- v. **5**
- vi. **6**
- vii. **7**
- viii. **8**
- ix. **9**
- x. **10**

e. *Priority*

Identify the lab priority for the sample interval. Methods for prioritizing of samples will be decided by the Field Manager in consultation with the lab.

- i. **Urgent (1)** – Samples from this interval will receive expedited lab analysis
- ii. **Standard (2)** – Samples from this interval will be analyzed according to the standard lab schedule

- iii. **As able (3)** – Samples from this interval will be analyzed after all outstanding ‘urgent’ and ‘standard’ samples
- iv. **As needed (4)** – Samples from this interval will not be analyzed unless determined necessary at a later date
- v. **Archive (5)** – Samples from this interval will not be analyzed unless determined necessary at a later date and will be archived to allow for future chemistry analysis

7.8 Repeat steps 7.4, 7.5, 7.6, and 7.7 for each layer until all layers have been described. If multiple samples will be collected from a single layer, or if sample intervals will not align with sediment layers, repeat step 7.7 for each sample interval, making sure to indicate prominently the sampled interval.

8 **QUALITY CONTROL**

- 8.1 Initial review of sediment logs will occur immediately after logging of a core. This review will be completed by a qualified soil scientist, geomorphologist, or geologist, with experience in the USDA and USCS systems. Changes will be noted on a paper print-out from the electronic data form. Any changes necessary will be promptly made in the electronic data form. After the changes are made, the reviewer will sign and date the paper print-out, which will be archived.

- 8.2 A second review of sediment logs will occur by the Field Manager, or their designee, who is independent and separate of the scientist who initially described the sediment. Once the second review is complete, sediment log data will be transferred to the project database.

9 FIGURES

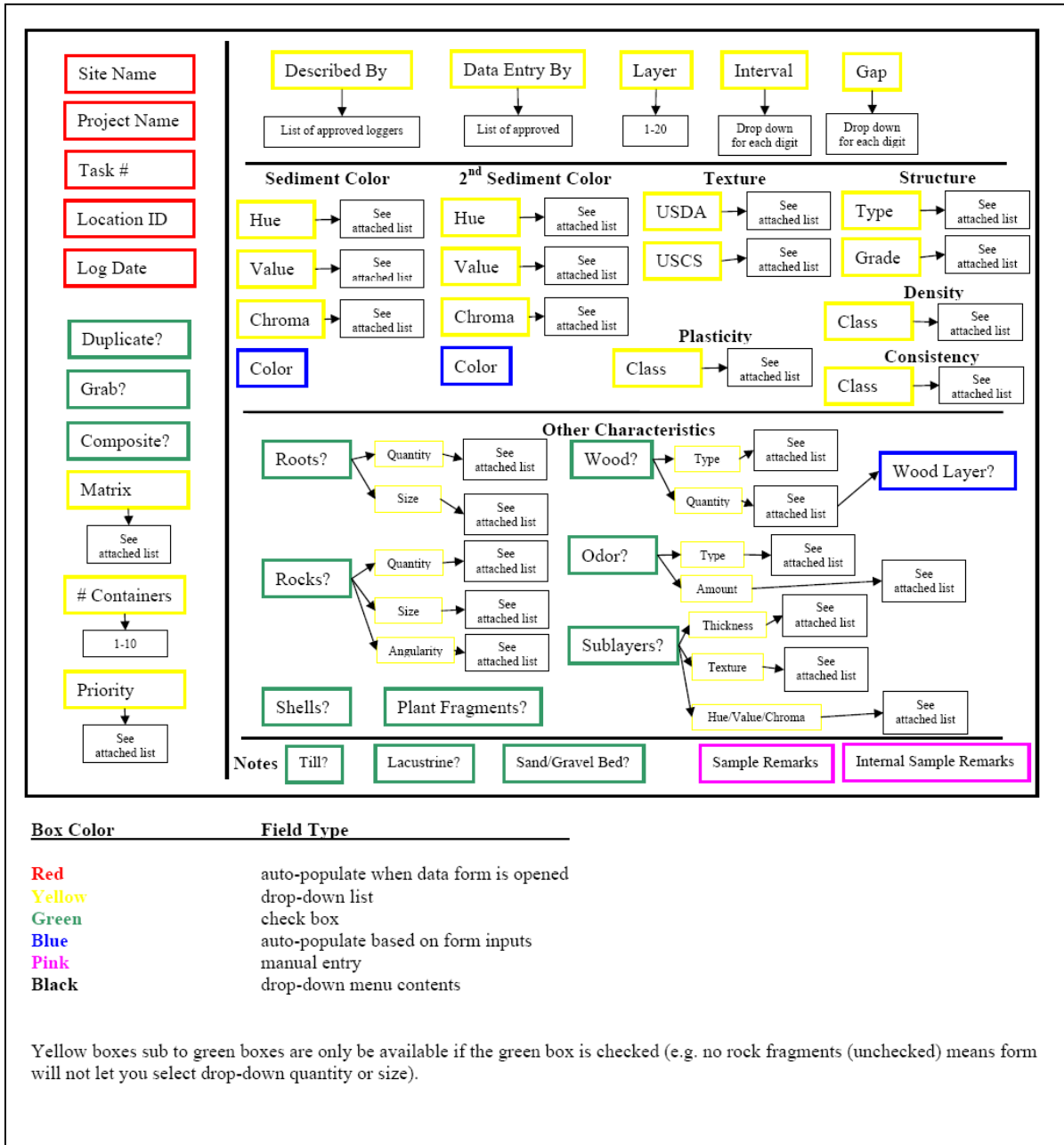


Figure 1. Diagram of typical electronic data collection form. “Attached list” refers to values described in this SOP.

Sediment Data Sheet

Project Name:
Project Number:
Field Location ID:
Core Type:
Field Remarks:
Northing: (ft)
Easting: (ft)

Cored By:
Cored Date:
Described By:
Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery

Reviewed By _____ Date _____

Figure 2. Sample hard-copy print-out from electronic data logging system. Hard copies will be archived as a backup to the electronic system

Page _____ of _____

Sediment Log Version 1.2 1/20/16

Client: _____

Site Name: _____

Project Name: _____

Task #: _____

Log Date: _____

Location ID: _____

Interval: _____ ft. to _____ ft.

Layer:

Gap:

Sediment Color:

2nd Sediment Color:

Color:

Lab Data

Duplicate?

Grab?

Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers:

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture:

USCS Texture:

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Structure

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other:

Grade: Weak
 Moderate
 Strong

Other Characteristics

Roots? Few
 Common
 Many

Rocks? <15%
 15-35%
 35-60%
 60-90%
 90%

Odor? Petrochemical
 Sulfur
 Other

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood %: %

Shells? Plant Fragments?

Sublayers? <0.05 ft.
 0.05-0.1 ft.
 0.1-0.2 ft.
 0.2-0.5 ft.
 >0.5 ft.

Color:

USDA Texture:

Field Personnel

Logged By:

Data Entry By:

Same as above

Notes

Till? Lactus/lime? Sand/gravel bed?

Sample Remarks

Internal Remarks

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

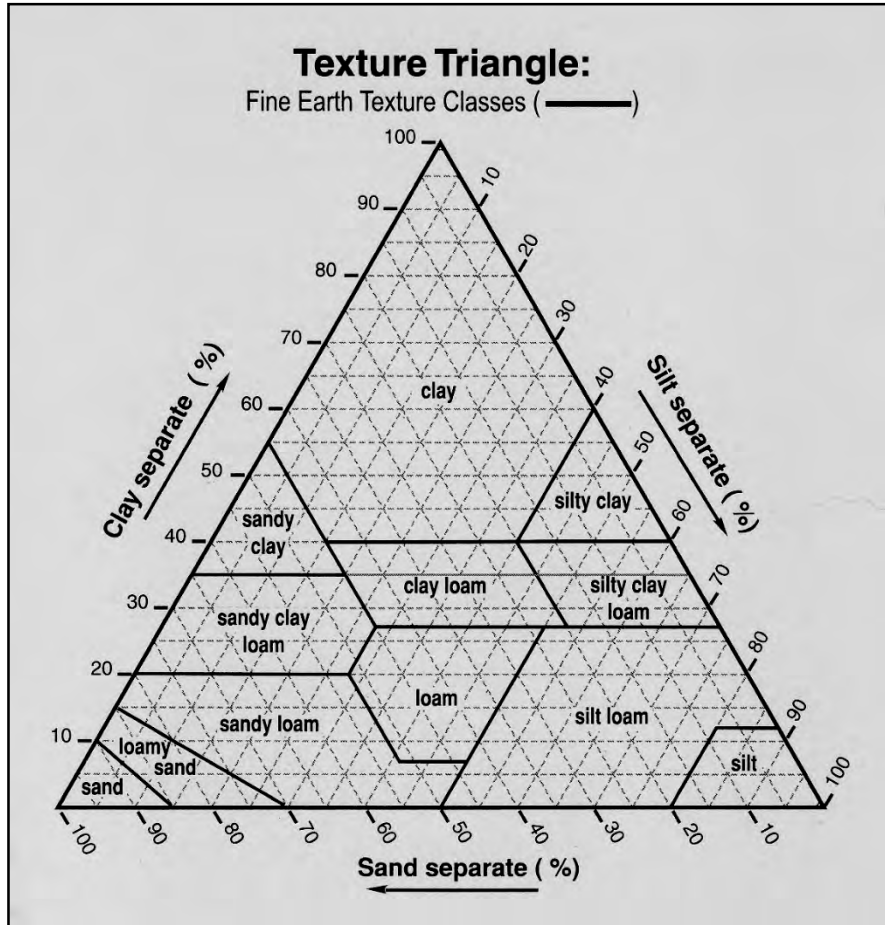


Figure 4. USDA Textural Triangle (from Schoeneberger et al., 2002).

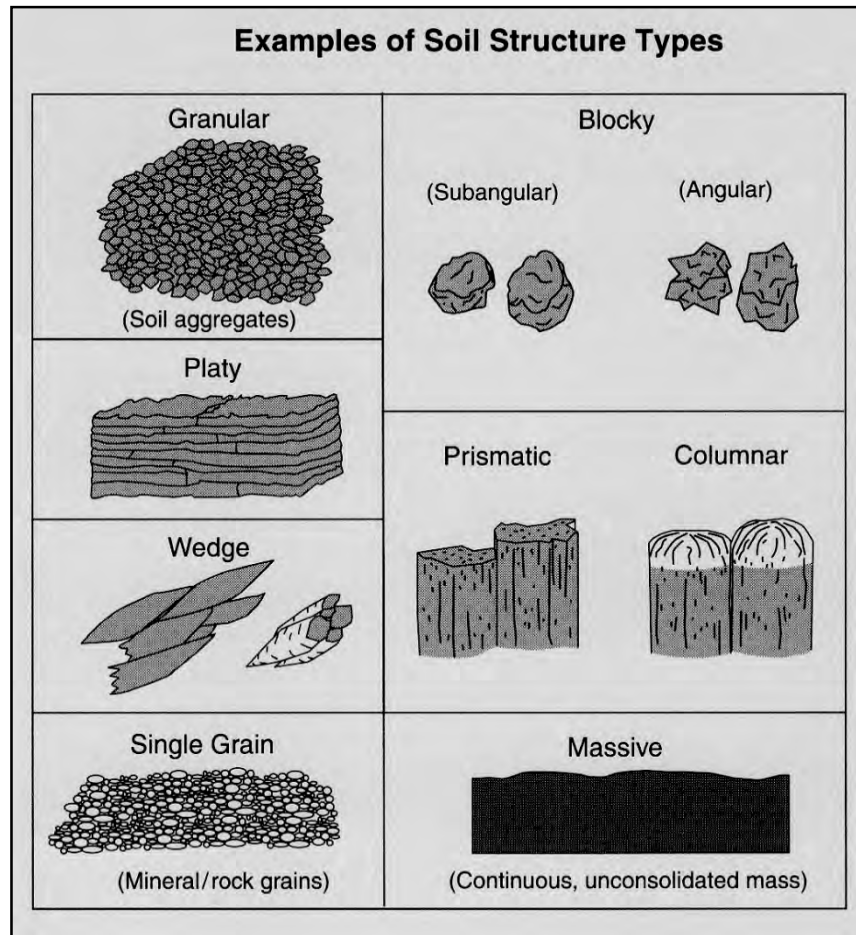


Figure 5. Examples of soil structure types (from Schoeneberger et al., 2002).

10 REFERENCES

- American Society for Testing and Materials (ASTM), 1985. Classification of Soils for Engineering Purposes: Annual Book of ASTM Standards. Vol. 4 (8), 395-408.
- Munsell Color, 2000. Munsell Soil Color Charts. Revised washable ed. GretagMacbeth, New Windsor, NY.
- Schoeneberger, P.J., Wysocki, D.A., Benham, E.C., and Broderson, W.D. (editors), 2002. Field book for describing and sampling soils, Version 2.0. Natural Resources Conservation Service, National Soil Survey Center, Lincoln, NE.

**STANDARD OPERATING PROCEDURE
SOIL LOGGING**

**Elliott Ditch
Lafayette, IN**

Prepared by:
Tetra Tech CES, Inc.

Prepared for:
Tetra Tech CES, Inc.
Elliott Ditch Sampling Plan

January 2016

1 **SCOPE AND APPLICATION**

This Standard Operating Procedure for Soil Logging is intended for use specifically during field activities.

2 **SUMMARY OF METHOD**

The purpose of the Standard Operating Procedure (SOP) is to provide a step-by step process for describing overbank soils using United States Department of Agriculture (USDA) and Unified Soil Classification System (USCS) official descriptors. Boring logs are to be completed using either hard copy hand written or an electronic data logging form (Figure 1). Hard-copy print-outs (Figure 2) from the electronic data logging system will be archived as a backup to the electronic data. A project-specific paper data form (Figure 3) will be used only in the event that electronic data collection is unavailable. At a minimum, soil will be described using the steps outlined below. For each step, approved descriptors (USDA and/or USCS) have been listed in bold type, followed by official descriptions. Logging of soils will be done prior to sampling unless otherwise specified in the approved Work Plan, Sampling and Analysis Plan, and/or Quality Assurance Project Plan. Additional soil characteristics may be included at the direction and approval of the Field Manager.

Following this Standard Operating Procedure ensures that soil logging procedures are scientifically defensible and meet the task-specific data quality objectives identified in the specific Work Plan. It provides specific quality assurance and quality control mechanisms that validate the information that is collected, and ensure it is useable to all study participants.

3 **COMMENTS**

Reusable sampling and processing equipment that comes into contact with soil must be decontaminated prior to reuse in accordance with section 5.3 Decontamination Procedures, of the Field Sampling Plan.

4 **SAFETY**

All work must be performed under an approved health and safety plan (HASP). The HASP identifies proper personnel protective equipment (PPE) and identifies

potential site hazards. Daily safety tailgate meetings must take place before fieldwork begins.

5 APPARATUS AND EQUIPMENT

- 5.1 Personal protective equipment specified in the Health and Safety Plan
- 5.2 Core liner cutter.
- 5.3 Full-spectrum fluorescent lighting, if access to natural sunlight is not available.
- 5.4 Stainless steel utensils or appropriate disposable utensils.
- 5.5 Electronic data logging computer or tablet (e.g. iPad).
- 5.6 For back up in the event the appropriate software and/or computer are not available, use the paper Soil Logging Form (Figure 3) and waterproof ink pens.
- 5.7 Disposable non-powdered nitrile gloves.
- 5.8 Calibrated measuring stick.
- 5.9 Decontamination equipment (see section 5.3 of the Field Sampling Plan)

6 REAGENTS

- 6.1 Distilled water.
- 6.2 Tap water
- 6.3 Non-phosphate cleaner (e.g., Alconox, or equivalent)

7 SOIL LOGGING PROCEDURE

- 7.1 Prepare the soil core for description by cutting the plastic liner lengthwise. Use only an approved cutting device with Kevlar or heavy leather gloves.
- 7.2 Remove the upper half of the cut plastic liner, leaving the soil exposed and resting in the bottom half of the liner.
- 7.3 Using approved nitrile gloves and stainless steel utensils, inspect the soil under natural sunlight or full-spectrum light to determine the natural layers that are present across the core. Do not include thin laminations, bedding planes, varves, or other thin sedimentary structures as individual layers. Group these features into layers according to overall pattern.
- 7.4 For each layer, list the sediment logger (person describing the sediment), data entry technician (even if the same as the sediment logger), the horizon (use

only official taxonomic designations from Soil Survey Staff, 1999), the interval (range of depth below the surface for that layer), and any gap in the sample (difference between the distance the core was pushed and the amount of soil recovered).

7.5 For each layer, describe the characteristics listed below.

a. *Soil Color*

Soil color should be described using an approved Munsell Soil Color Chart. Whenever possible, describe color under natural sunlight. If this is not feasible, use only strong, full-spectrum light at close range. While wearing nitrile gloves, place a small amount of sediment behind the chart apertures until the closest match is found to a chart color chip. Record the hue, value, and chroma of the closest match.

i. Hue (Munsell Color, 2000)

1. **10YR**
2. **7.5YR**
3. **2.5Y**
4. **5Y**
5. **5YR**
6. **2.5YR**
7. **10R**
8. **5PB**
9. **10B**
10. **10BG**
11. **5BG**
12. **10G**
13. **5G**
14. **10GY**
15. **10Y**
16. **N**

ii. Value (Munsell Color, 2000)

1. **8**
2. **7**
3. **6**
4. **5**
5. **4**
6. **3**
7. **2.5**
8. **2**

iii. Chroma (Munsell Color, 2000)

1. **0**
2. **1**
3. **2**
4. **3**
5. **4**
6. **6**
7. **8**

b. *Second soil color* (if applicable; same hue, value, and chroma categories as above)

c. *Texture*

i. USDA Texture (Schoeneberger et al., 2002)

USDA texture should be estimated by hand texturing. Fine earth texture classes from the textural triangle (Figure 4) should be used. Sand, loamy sand, and sandy loam categories can be further subdivided based on the dominant size of the sand fraction. Absence of a modifier implies a “medium” size.

1. **Gravel** – only used if sample is 90+ % gravel
2. **Coarse sand**
3. **Sand**
4. **Fine sand**
5. **Very fine sand**
6. **Loamy coarse sand**
7. **Loamy sand**
8. **Loamy fine sand**
9. **Loamy very fine sand**
10. **Coarse sandy loam**
11. **Sandy loam**
12. **Fine sandy loam**
13. **Very fine sandy loam**
14. **Loam**
15. **Silt loam**
16. **Silt**
17. **Sandy clay loam**
18. **Clay loam**
19. **Silty clay loam**
20. **Sandy clay**
21. **Silty clay**
22. **Clay**

ii. *USCS Texture* (ASTM, 1985)

USCS texture should be estimated by hand texturing and a 2-letter code should be chosen to describe the texture. The first letter refers to the size fraction of the dominant particle: G = gravel, S = sand, M = silt, C = clay, O = organic. The second letter is a modifier of the dominant particle size: P = poorly graded (well sorted/uniform particle size), W = well graded (poorly sorted/diversified particle size), H = high plasticity, L = low plasticity. Pt is used for sediment that is almost entirely organic.

1. **GP**
2. **GW**
3. **GM**
4. **GC**
5. **SP**
6. **SW**
7. **SM**
8. **SC**
9. **ML**
10. **MH**
11. **CL**
12. **CH**
13. **OL**
14. **OH**
15. **Pt**

d. Structure

Structure denotes the tendency for a soil to break, upon pressure being applied, into aggregates resulting from pedogenic processes (Figure 5). To determine structure, apply pressure to an appropriately sized block of sediment placed between the thumb and forefinger. After the block ruptures or deforms, determine which of the 9 structure types the resulting peds most resemble. Determine the appropriate grade by observing in situ peds in the liner. Single grain and massive types always have a grade of structureless.

- i. Type (Schoeneberger et al., 2002)
 1. **Granular** – small polyhedrals, with curved or very irregular faces
 2. **Angular blocky** – polyhedrals with faces that intersect at sharp angles (planes)
 3. **Subangular blocky** – polyhedrals with sub-rounded and planar faces, lack sharp angles
 4. **Platy** – flat and tabular-like units (not common; must be due to pedogenesis; do not confuse with sedimentary structure)

5. **Wedge** – elliptical, interlocking lenses that terminate in acute angles, bounded by slickensides; not limited to vertic materials (not common)
6. **Prismatic** – vertically elongated units with flat tops (not common)
7. **Columnar** – vertically elongated units with rounded tops which are commonly “bleached” (not common)
8. **Single grain** – no structural units; entirely noncoherent (e.g. loose sand)
9. **Massive** – no structural units; material is a coherent mass (not necessarily cemented)

ii. Grade (Schoeneberger et al., 2002)

1. **Structureless** – no discrete units observable in place or in hand sample
2. **Weak** – units are barely observable in place or in a hand sample
3. **Moderate** – units well-formed and evident in place or in a hand sample
4. **Strong** – units are distinct in place (undisturbed soil), and separate cleanly when disturbed

e. *Plasticity*

Plasticity is the degree to which reworked soil can be permanently deformed without rupturing. To determine plasticity mix a small amount of soil with an amount of water sufficient to give the soil its maximum plasticity. If too much water is added, more soil can be added. Make a roll of soil 4cm long and evaluate it using the criteria below.

i. Class (Schoeneberger et al., 2002)

1. **Non-plastic** – will not form a 6mm diameter roll, or if formed, can't support itself if held on end
2. **Slightly plastic** – 6mm diameter roll supports itself; 4mm diameter roll does not
3. **Moderately plastic** – 4mm diameter roll supports itself, 2mm diameter roll does not
4. **Very plastic** – 2mm diameter roll supports its weight

f. *Density (Optional)*

Density describes the degree of firmness for coarse-grained soils. Official density determination uses the Standard Penetration Test, in a field setting. When describing soil in a lab setting, an estimate of the density should be made using undisturbed soil in the plastic liner. Density should only be described for soils in which the USCS

texture is GW, GP, GM, GC, SW, SP, SM, or SC. For other textures, consistency should be used.

i. Class

1. **Very Loose** (0-4 SPT)
2. **Loose** (5-10 SPT)
3. **Medium Dense** (11-30 SPT)
4. **Dense** (31-50 SPT)
5. **Very Dense** (>50 SPT)

g. *Consistency (Optional)*

Consistency describes the degree of firmness for intact fine-grained soils. Official consistency determination uses the Standard Penetration Test, in a field setting. When describing soil in a lab setting, an estimate of the consistency should be made using undisturbed soil in the plastic liner. Consistency should only be described for fine-grained soil.

i. Class

1. **Very Soft** (<2 SPT)
2. **Soft** (2-4 SPT)
3. **Firm** (5-15 SPT)
4. **Hard** (16-30 SPT)
5. **Very Hard** (>30 SPT)

h. *Roots*

Describe the quantity and size class of roots per unit area. The area in which to assess root quantity is based on the size of the roots being assessed. For very fine and fine roots, record the average quantity from 3 to 5 units of 1cm by 1cm. For medium and coarse roots, record the average quantity from 3 to 5 units of 10cm by 10cm. For very coarse roots, the appropriate unit area is 1m by 1m. Because of limited sample size when describing soil from a core sample, very coarse root quantity should be estimated.

i. Quantity (Schoeneberger et al., 2002)

1. **Few** - <1 per area
2. **Common** - 1 to <5 per area
3. **Many** - ≥5 per area

ii. Size (Schoeneberger et al., 2002)

1. **Very fine** - <1mm
2. **Fine** - 1 to <2mm
3. **Medium** - 2 to <5mm
4. **Coarse** - 5 to <10mm
5. **Very Coarse** - ≥10mm

i. *Rock fragments*

Estimate rock fragment percentage by volume. Use a ruler to estimate the average rock fragment size for the entire layer. If multiple size classes are present, use the largest size class, unless the smaller size class has more than twice the percentage by volume of the larger (e.g. 30% fine gravel and 20% coarse gravel, choose “35-60% coarse gravel”; 40% fine gravel and 10% coarse gravel, choose “35-60% fine gravel”). Use comparison samples if available.

i. Quantity (Schoeneberger et al., 2002)

1. **<15%** - no texture adjective added to USDA texture
2. **15 to <35%** - use adjective for appropriate size (e.g. gravelly)
3. **35 to <60%** - use “very” with the appropriate size adjective (e.g. very gravelly)
4. **60 to <90%** - use “extremely” with the appropriate size adjective (e.g. extremely gravelly)
5. **≥90%** - no modifier; use the appropriate noun for the dominant size class (e.g. gravel)

ii. Size (Schoeneberger et al., 2002)

1. **fine gravel** – >2 to 5mm diameter
2. **medium gravel** – >5 to 20mm diameter
3. **coarse gravel** – >20 to 75mm diameter
4. **cobbles** – >75 to 250mm diameter

iii. Angularity

1. **angular** (fragments have sharp edges and relatively planar sides with unpolished surfaces)
2. **subangular** (fragments are similar to angular description but with rounded edges)
3. **subrounded** (fragments have nearly planar sides but well-rounded corners and edges)
4. **rounded** (fragments have smoothly curved sides and no edges)

j. *Shells*

Note the presence of shells or shell fragments in the horizon.

k. *Plant fragments*

Note the presence of plant fragments in the horizon.

l. *Wood*

Note the dominant wood type if wood is found in the horizon. Do not include roots here. Secondary wood types that are deemed

important should be listed in the comments section. Estimate the percentage of the layer that is composed of the dominant wood type using the increments listed below.

i. Type

1. **wood** – wood in a generally natural state, any color but black
2. **black wood** – wood that is black, but unburned, inside and out
3. **burned wood** – visibly burned wood
4. **sawdust** – fine wood shavings, either dispersed or clumped together
5. **wood chips** – non-naturally cut small wood pieces
6. **wood pulp** – fibrous, ground wood used in making paper
7. **charcoal** – compressed carbon residue of burned wood

ii. Quantity

1. **<5%**
2. **10%**
3. **20%**
4. **30%**
5. **40%**
6. **50%**
7. **60%**
8. **70%**
9. **80%**
10. **90%**
11. **95%**
12. **100%**

m. *Odor*

Note any odor detected from the horizon after the core has been cut open. Use the wafting method to avoid overexposure to strong chemicals. If the odor is strong and is easily detected without wafting, it may indicate a hazard. Leave the logging area immediately until proper equipment (PID, etc.) can be utilized to verify, monitor, and/or mitigate the risk. Because certain volatile compounds are only released during mixing, an odor may not be detectable until a layer is being composited during sampling. Pay specific attention during this step of the sampling process and adjust the soil description accordingly.

i. Type

1. **Petrochemical**
2. **Sulfur**
3. **Other**

- ii. Amount
 1. **Slight** – odor is barely detectable, even at close range
 2. **Moderate** – odor is detectable when wafting from the proper distance
 3. **Strong** – odor permeates after the core liner is cut open and/or during mixing of the soil; no wafting is needed to detect the odor.

n. *Sublayers*

Sublayers are thin but distinct bands of soil within the larger horizon. A horizon may be composed of many sublayers, in a repeating pattern, or it may be generally uniform but with a few thin bands that differ from the rest of the horizon in regards to certain major characteristics, like texture or color. These thin bands should not be separated as individual horizons but should be noted and described here. Sublayers include characteristics such as varves, sedimentary structures, thin bedding planes, or stratification. They are often found in the soil parent material (C horizon) and are uncommon in the solum.

i. Thickness

1. <0.05 ft
2. 0.05 – 0.1 ft
3. 0.1 – 0.2 ft
4. 0.2 – 0.5 ft
5. >0.5 ft

ii. Texture

1. Same options as section c. i. (USDA texture)

iii. Color

1. Same options as section a. i, ii, and iii. (Munsell color)

o. Geomorphic Setting

If possible, note the geomorphic setting of the horizon in its natural state, based on the characteristics already described. Choose one of the three options below. If none apply, leave this section blank. Only complete this section for the soil parent material (C horizon).

- i. **Till**
- ii. **Lacustrine**
- iii. **Sand/gravel bed**

7.6 For each horizon, after describing the characteristics above, note any additional remarks. These can be elaborations on characteristics already mentioned or notable horizon characteristics that do not fit in any of the categories above. Any speculative comments should be noted as internal sample remarks.

7.7 For each sample interval, fill out the appropriate lab information as listed below.

a. *Duplicate*

List whether a field duplicate sample will be collected for this sample interval.

b. *Grab/Composite*

Identify whether the sample interval is a grab sample or composite sample (intervals with field duplicates will always be composite).

c. *Matrix*

Identify the sample matrix for each sample interval. Default is 'soil'. Other values are not common.

- i. **Soil**
- ii. **Sediment**
- iii. **Air**
- iv. **Water**

d. *# of Containers*

Identify the number of sample containers used when sampling the sample interval. Default is 1.

- i. **1**
- ii. **2**
- iii. **3**
- iv. **4**
- v. **5**
- vi. **6**
- vii. **7**
- viii. **8**
- ix. **9**
- x. **10**

e. *Priority*

Identify the lab priority for the sample interval. Methods for prioritizing of samples will be decided by the Field Manager in consultation with the lab.

- i. **Urgent (1)** – Samples from this interval will receive expedited lab analysis
- ii. **Standard (2)** – Samples from this interval will be analyzed according to the standard lab schedule

- iii. **As able (3)** – Samples from this interval will be analyzed after all outstanding ‘urgent’ and ‘standard’ samples
- iv. **As needed (4)** – Samples from this interval will not be analyzed unless determined necessary at a later date
- v. **Archive (5)** – Samples from this interval will not be analyzed unless determined necessary at a later date and will be archived to allow for future chemistry analysis

7.8 Repeat steps 7.4, 7.5, 7.6, and 7.7 for each horizon until all horizons have been described. If multiple samples will be collected from a single horizon, repeat step 7.7 for each sample interval, making sure to indicate prominently the sampled interval, since it will be different from the horizon interval.

8 QUALITY CONTROL

- 8.1 Initial review of soil logs will occur immediately after logging of a core. This review will be completed by a qualified soil scientist, geomorphologist, or geologist, with experience in the USDA and USCS systems. Changes will be noted on a paper print-out from the electronic data form. Any changes necessary will be promptly made in the electronic data form. After the changes are made, the reviewer will sign and date the paper print-out, which will be archived.

- 8.2 A second review of soil logs will occur by the Field Manager, or their designee, who is independent and separate of the scientist who initially described the sediment. Once the second review is complete, soil log data will be transferred to the project database.

9 FIGURES

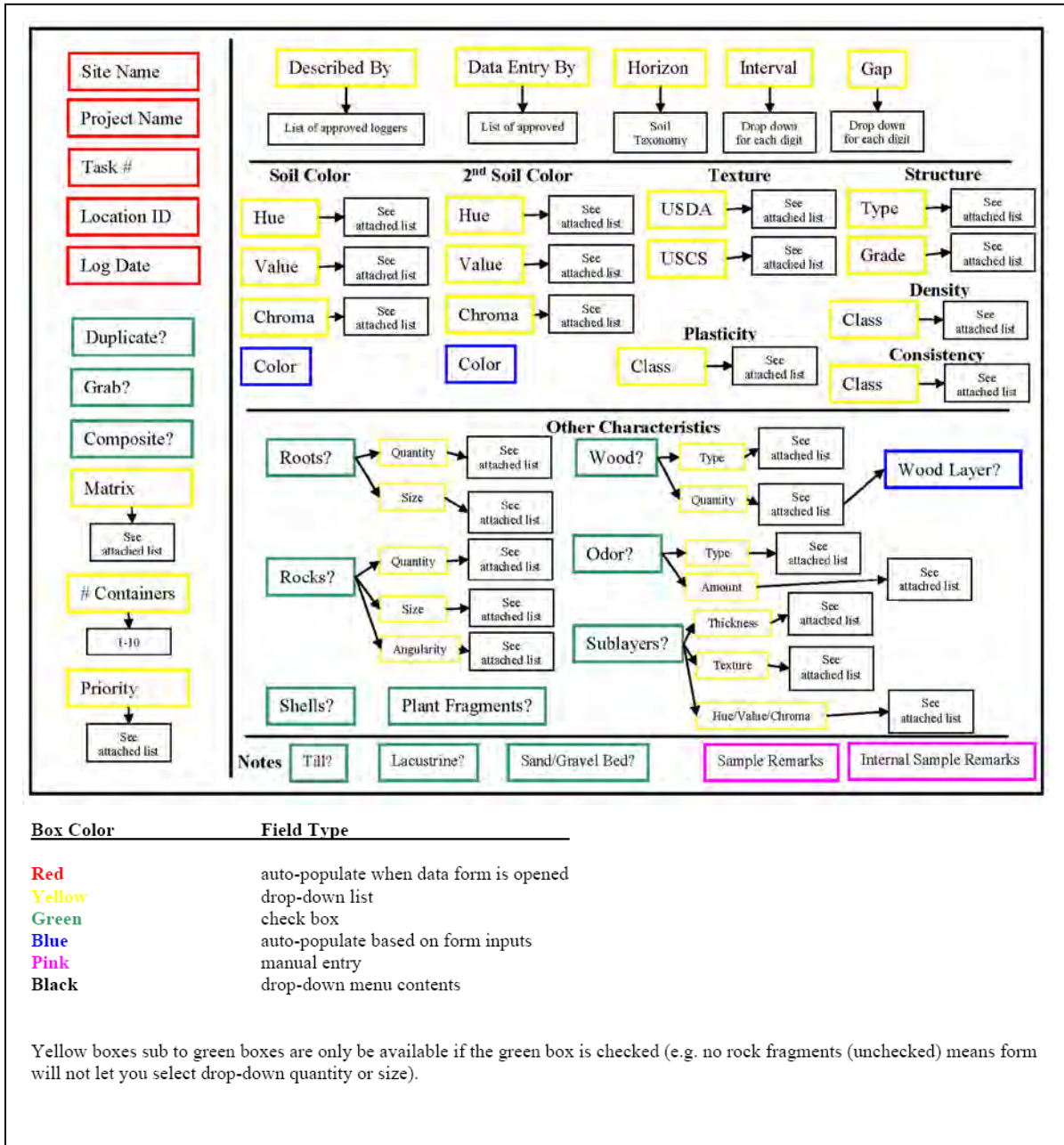


Figure 1. Diagram of typical electronic data collection form. “Attached list” refers to values described in this SOP.

Sediment Data Sheet

Project Name:
Project Number:
Field Location ID:
Core Type:
Field Remarks:
Northing: (ft)
Easting: (ft)


Cored By:
Cored Date:
Described By:
Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery

Reviewed By _____ Date _____

Figure 2. Sample hard-copy print-out from electronic data logging system. Hard copies will be archived as a backup to the electronic system



Soil Log

(Version 1.2, 1/20/16)

Page of

Client: _____ Location ID: _____ Interval: _____ ft to _____ ft

Site Name: _____ Horizon: _____ Gap: _____ ft

Project Name: _____

Task #: _____

Log Date: _____

Lab Data

Duplicate?

Grab?

Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers:

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture:

USCS Texture:

Structure

Type	Grade
<input type="checkbox"/> Granular	<input type="checkbox"/> Weak
<input type="checkbox"/> Subangular Blocky	<input type="checkbox"/> Moderate
<input type="checkbox"/> Angular Blocky	<input type="checkbox"/> Strong
<input type="checkbox"/> Single Grain	
<input type="checkbox"/> Massive	
<input type="checkbox"/> Other: _____	

Soil Color: 2nd Soil Color:

Color:

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel: _____

Logged By: _____ Data Entry By: Same as above

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Notes

Till? Lacustrine? Sand/gravel bed?

Sample Remarks:

Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

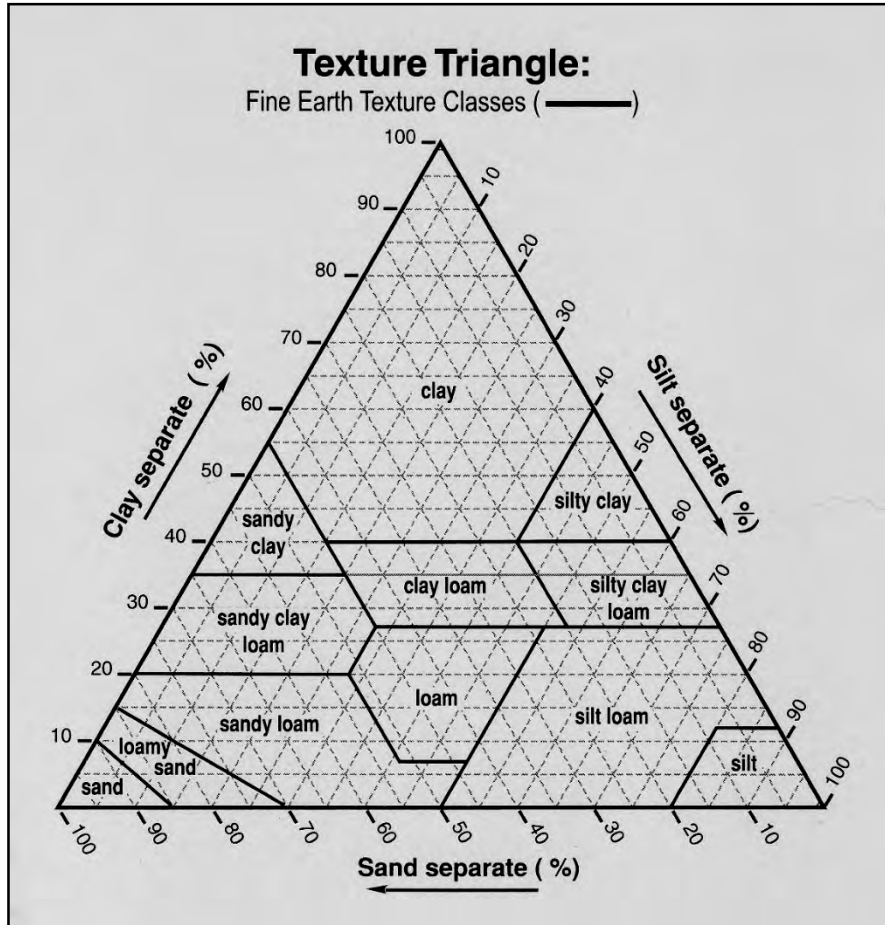


Figure 4. USDA Textural Triangle (from Schoeneberger et al., 2002).

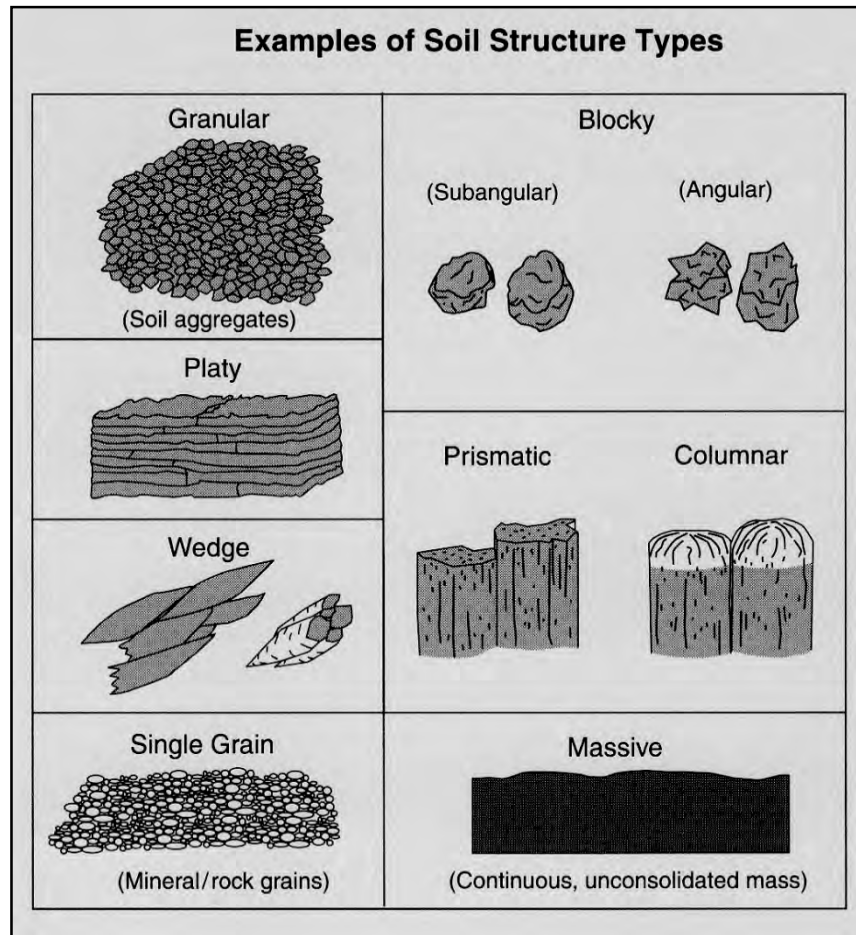


Figure 5. Examples of soil structure types (from Schoeneberger et al., 2002).

10 REFERENCES

- American Society for Testing and Materials (ASTM), 1985. Classification of Soils for Engineering Purposes: Annual Book of ASTM Standards. Vol. 4 (8), 395-408.
- Munsell Color, 2000. Munsell Soil Color Charts. Revised washable ed. GretagMacbeth, New Windsor, NY.
- Schoeneberger, P.J., Wysocki, D.A., Benham, E.C., and Broderson, W.D. (editors), 2002. Field book for describing and sampling soils, Version 2.0. Natural Resources Conservation Service, National Soil Survey Center, Lincoln, NE.
- Soil Survey Staff, 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, National Soil Survey Center, Lincoln, NE.

**STANDARD OPERATING PROCEDURE
SOIL RECOVERY AUGER**

**Elliott Ditch
Lafayette, IN**

Prepared by:
Tetra Tech CES, Inc.

Prepared for:
Tetra Tech CES, Inc.
Elliott Ditch Sampling Plan

January 2016

ACRONYM LIST

GPS	Global Positioning System
NAD	North American Datum
PPE	Personal Protective Equipment
QAPP	Quality Assurance Project Plan
RTK	Real Time Kinematic
SHSP	Site Health and Safety Plan
SOP	Standard Operating Procedure

1.0 SCOPE AND APPLICATION

The purpose of this Standard Operating Procedure (SOP) is to establish a standard procedure for the collection of soil core samples using a soil recovery auger with a plastic liner. Procedures are described for the collection of soil, soft sediments, and fine-grained sands. This SOP should be consulted during the preparation of any plan requiring procedures for soil sample collection using a soil recovery auger.

2.0 SUMMARY OF METHOD

The soil recovery auger will be marked to the advancement depth and then placed on the spot to be sampled. The soil recovery auger is then spun clockwise until the advancement depth mark is level with the soil surface. To take a subsurface sample, mark the advancement depth on the soil recovery auger and then place it in the bore hole that was created by the previous sample/s. This step may be repeated to recover multiple intervals from one location. The location, date-time, and the sample advancement length from the soil surface or soil interval collected (e.g. 0.0' – 1.0') are documented using the data collector (e.g., Leica Viva) or alternative documentation method.

3.0 SAFETY

All work must be performed under the approved Site Health and Safety Plan (SHSP) for the project. The SHSP identifies proper personal protective equipment (PPE) and potential site/work hazards. Daily safety meetings will be conducted before work begins.

4.0 APPARATUS AND EQUIPMENT

- PPE specified in the SHSP
- Tape measure, lead line, and/or pole with minimum graduations of 0.1 foot attached to disc to measure the advancement depth on the soil recovery auger
- Electrical tape to mark the advancement depth on the soil recovery auger
- Soil recovery auger
- One foot plastic core liners
- Alconox
- Distilled or deionized water
- Scrub brushes
- Garden Sprayer
- Electronic data storage unit for core collection documentation
- Real Time Kinematic (RTK) Global Positioning System (GPS) or equivalent, with horizontal accuracy of ± 1 meter

5.0 PROCEDURES

5.1 Sample Location Positioning

Positioning for sampling will be achieved using an RTK GPS, or equivalent, that is capable of locating stations with an accuracy and repeatability of ± 1 meter.

5.2 Soil recovery auger Sample Collection

1. Insert a plastic core liner.

2. Mark the soil recovery auger to set the advancement depth.
3. While holding the t-handle and using a clockwise motion advance the sampler into the soil surface slowly to the specified depth.
4. Without spinning, carefully remove the soil recovery auger from the soil.
5. Wearing nitrile gloves, carefully remove the plastic core liner with soil/sediment from the auger. If necessary, use a clean needle nose pliers to assist in pulling out the plastic liner.
6. Cap the core at both ends.
7. Label the core sample with sample location identification (ID), date, time, and depth interval (e.g. 0.0' – 1.0').
8. Place all samples upright in a 5-gallon bucket for storage while in the field and transportation to the processing area.
9. Record location, date, time, and depth interval into the Leica Viva or using alternative documentation method.

5.3 Decontamination

The soil recovery auger should be decontaminated after every core interval collection attempt by following the procedures outlined below:

- Remove all visible contaminants (solids) using a brush and a non-phosphate laboratory detergent (e.g., Alconox).
- Rinse with distilled or deionized water.

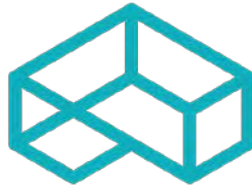
APPENDIX III

ELLIOTT DITCH REACHES 1 – 3 FIELD SAMPLING REPORT (CEC)

**ELLIOTT DITCH
REACHES 1 – 3
FIELD SAMPLING REPORT**

**ARCONIC LAFAYETTE OPERATIONS
3131 EAST MAIN STREET
LAFAYETTE, INDIANA 47905**

PREPARED FOR:



ARCONIC

ARCONIC INC.

**MR. ROBERT PREZBINDOWSKI
TENNESSEE OPERATIONS – NORTH PLANT
2300 NORTH WRIGHT ROAD
ALCOA, TENNESSEE 37701**

PREPARED BY:

**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
2704 CHEROKEE FARM WAY, SUITE 101
KNOXVILLE, TENNESSEE 37920
PHONE: (865) 977-9997**

CEC Project 172-367.0002

AUGUST 2018



Civil & Environmental Consultants, Inc.

TABLE OF CONTENTS

	Page
1.0 INTRODUCTION.....	1
1.1 SAMPLNG SCOPE	2
1.2 FACILITY DESCRIPTION	2
1.3 DESCRIPTION OF ELLIOTT DITCH.....	3
1.4 TIMELINE OF RELEVANT EVENTS	4
1.5 REGULATORY CONSIDERATIONS.....	5
1.5.1 Consent Decree and RCRA Corrective Action.....	5
1.5.2 PCB Source and Release Date	5
1.6 INVESTIGATION OBJECTIVE AND STRATEGY	7
2.0 PREMOBILIZATION TASK SUMMARY	8
2.1 PRIVATE PROPERTY ACCESS COORDINATION	8
2.1.1 Implementation of the FSP	8
2.1.1.1 Targeted Properties	8
2.1.1.2 Alternate Properties	9
2.1.2 Implementation of the Targeted Assessments	9
2.2 OTHER PLANNING CONSIDERATIONS	10
3.0 FIELD TASK SUMMARY	11
3.1 POLING AND SURVEYING	11
3.2 SEDIMENT SAMPLING.....	12
3.3 SOIL SAMPLING	13
3.3.1 Implementation of the FSP	13
3.3.2 Implementation of the Targeted Assessments	13
3.4 SAMPLE LOGGING AND PROCESSING	14
3.5 INVESTIGATION DERIVED WASTE MANAGEMENT	15
4.0 FINDINGS.....	17
4.1 SEDIMENT THICKNESS AND VOLUME EVALUATION.....	17
4.2 SEDIMENT CHARACTERISTICS.....	17
4.3 SEDIMENT PCB ANALYTICAL RESULTS.....	17
4.4 SOIL CHARACTERISTICS	18
4.5 SOIL PCB ANALYTICAL RESULTS	19
4.6 GEOMORPHOLOGY ASSESSMENT.....	20
4.7 PCB AROCLOR OBSERVATIONS	21
5.0 DATA QUALITY.....	23
5.1 PRECISION.....	23
5.2 ACCURACY	24
5.3 REPRESENTATIVENESS	24
5.4 COMPLETENESS.....	25
5.5 COMPARABILITY.....	26

FIGURES

Elliott Ditch Vicinity Map 1
Elliott Ditch Study Area..... 2
Accessed Properties and Sampling Locations (Milepost 0.0 to 1.0) 3
Sample Locations and Identifications 3A
Sample Locations and Identifications 3B
Sample Locations and Identifications 3C
Accessed Properties and Sampling Locations (Milepost 1.0 to 1.59) 4
Sample Locations and Identifications 4A
Sample Locations and Identifications 4B
Poling Summary Map 5
Sediment Poling Site A 5A
Sediment Poling Site B 5B
Sediment Poling Site C 5C
Sediment Poling Site D 5D
Sediment Poling Site E 5E
Sediment Poling Site F 5F
Sediment Poling Site G 5G
Sediment Poling Site H 5H
Sediment Poling Site I 5I
Sediment Poling Site J 5J
Sediment Poling Site K 5K
Sediment Poling Site L 5L
Sediment Poling Site M 5M

TABLES

Sediment and Soil Sampling Locations 1
Sediment Poling Volume Estimates..... 2
Sediment Sampling PCB Analytical Results 3
Soil Sampling PCB Analytical Results 4

APPENDICES

Study Area Access Plan I
Poling Data Sheets II
Sediment Field Data Sheets III
Soil Field Data Sheets IV
Laboratory Analytical Reports..... V

1.0 INTRODUCTION

Arconic Inc. (Arconic), formerly Alcoa Inc. (Alcoa), retained Civil & Environmental Consultants, Inc. (CEC) to implement the Elliott Ditch Field Sampling Plan (FSP, Project) prepared by TetraTech CES and dated February 2, 2016. Two targeted sampling events were conducted after implementation of the FSP to collect additional data within the first 1.59 miles of Elliott Ditch. This assessed segment of Elliott Ditch includes the first three of eight reaches identified in the Elliott Ditch Geomorphic Surface Mapping and Historic Data Review (geomorphic study) prepared by TetraTech CES. The sampling study incorporated these three reaches because of their similar geomorphic nature caused by anthropogenic activities to control storm water drainage. Elliott Ditch is under the jurisdiction of the Tippecanoe County Drainage Board as a regulated drainage feature until it crosses 9th Street. The Tippecanoe County Drainage Board maintains a 75-foot easement on both sides of the ditch for maintenance activities.

As noted, this assessment focused on the first three of eight reaches. The general geomorphic nature of these three reaches, as documented in geomorphic study, is as follows:

- Reach 1 of Elliott Ditch is characterized by a relatively straight channel, steep valley walls, and no stream terraces. The geomorphology study showed a relatively shallow gradient of 0.4 feet/mile. Some erosion was observed occurring along the channel banks and immediately downstream of the outfall, deposition of relatively fine-grained sediment is occurring in pooled areas within the stream.
- Reach 2 of Elliott Ditch is characterized by a straight channel with a steeper channel gradient of approximately 8 feet/mile. The north side of the channel is upland area and the south side is a preserved T-4 terrace. Sediment deposition occurs in this reach on the T-4 terrace after large flood events and in-channel deposition is associated with pools.
- Reach 3 has a relatively straight channel with only minor meandering. The channel banks are steeper than in Reach 2, but the channel gradient is similar at 8 feet/mile. Elliott Ditch has a deeply incised channel and steep channel banks within this reach. Natural T-6 and T-7 terraces are preserved adjacent to both sides of the ditch. Additionally, a T-5 terrace is present on the north side of the ditch at the downstream end of the reach. Deposition in the overbank area is unlikely except for large flood events and in-channel deposition is limited to the pool areas.

The investigation of soils and sediments was performed in accordance with the regulatory-approved FSP, as prepared by TetraTech CES and dated February 2, 2016. This report presents our observations, findings, and discussion regarding the Project.

1.1 SAMPLING SCOPE

The FSP and two subsequent, targeted sampling events were conducted within and along the first 1.59 miles of Elliott Ditch. Provided in the following is a summary of the field activities performed in association with each assessment and the sample locations are shown on Figures 3, 3A, 3B, 3C, 4, 4A, and 4B.

FSP Sampling Event

- Sediment poling and surveying;
- Sediment boring installation and sampling at 13 locations; and,
- Soil boring installation and sampling at 33 locations.

February 2018 Targeted Assessment

- Sediment boring installation and sampling at one location; and,
- Soil boring installation and sampling at 11 locations, including boring at one previously assessed location.

June 2018 Targeted Assessment

- Soil boring installation and sampling at 17 locations, including boring at one previously assessed location.

1.2 FACILITY DESCRIPTION

The Arconic Lafayette Operations (Facility) reside at 3131 East Main Street in Fairfield Township, Tippecanoe County, Lafayette, Indiana, and produces aluminum extrusions serving an international market. The extrusions include tube, aerospace components, and oil and gas drilling products. Arconic began production at the Facility in 1937 and the Facility currently includes roughly 2.3 million square feet of operations on 172 acres. Topographic relief in the area of the

Facility ranges from approximately 650 to 670 feet above mean sea level (MSL). The locations of the Facility and Elliott Ditch are shown on Figure 1.

1.3 DESCRIPTION OF ELLIOTT DITCH

Elliott Ditch is a tributary to Wea Creek, which is a tributary to the Wabash River, just downstream of Lafayette, Indiana. Please refer to Figure 1 for the location of Elliott Ditch and associated streams. In addition to its base flow, Elliott Ditch receives wastewater and storm water discharges from local industrial and residential sources, including from a National Pollution Discharge Elimination System (NPDES) permitted outfall (Outfall 001) from the Facility. Outfall 001 is situated approximately 1-mile south of the Facility. Discharge from the outfall includes treated sanitary and industrial process water, as well as storm water. The distance from the outfall to the Elliott Ditch and Wea Creek confluence is approximately 4.1 miles and to the Wabash River is approximately 7.5 miles. The geomorphic surface mapping completed for Elliott Ditch by TetraTech CES, as documented in the geomorphic study, suggests that Elliott Ditch has eight distinct reaches (erosional/depositional regimes):

- Reach 1: Outfall 001 to downstream of the railroad bridge
- Reach 2: The railroad bridge to the South 18th Street Bridge
- Reach 3: South 18th Street Bridge to upstream of the 9th Street Bridge
- Reach 4: South 9th Street Bridge to north of Brookside Drive
- Reach 5: North of Brookside Drive to downstream of Poland Hill Road
- Reach 6: Downstream of Poland Hill Road to downstream of Old Romney Road Bridge
- Reach 7: Downstream of Old Romney Road Bridge to upstream of US Hwy 231 South Bridge
- Reach 8: Upstream of US Hwy 231 South to the Elliott Ditch – Wea Creek confluence

This Field Sampling Report is focused on the portion from the outfall (Milepost 0.0) to Milepost 1.59 or Reaches 1 through 3, which includes the channelized portion of Elliott Ditch. Please refer to Figure 2 for the portion of Elliott Ditch included in this assessment.

1.4 TIMELINE OF RELEVANT EVENTS

Elliott Ditch has been subject to previous assessments and remediation due to evidence of PCBs having been released through Outfall 001. Samples of fish, water, and sediment collected in the 1980s from Elliott Ditch and Wea Creek indicate that PCBs are present in these media. In response to these findings, Arconic conducted in-stream remediation of sediment and instituted an enhanced wastewater treatment program for targeted removal of PCBs. In 1990, Arconic excavated sediments in the Elliott Ditch starting 100 feet upstream of Outfall 001 and ending at the 18th Street Bridge. In the late 1990s, Arconic instituted a wastewater management program, which significantly reduced flow to Outfall 001 through removal of non-contact cooling water. Arconic also began to treat its dry weather discharge to Elliott Ditch using canister filter systems in January 2000. In 2007, Arconic developed and implemented a Natural Media Filtration treatment process. The combination of these actions have reduced PCB loadings from Outfall 001 by at least tenfold. Provided in the following is a brief chronological summary of the investigations that led to the preparation and implementation of the FSP and subsequent targeted assessments.

- 1980s – Sampling of sediment, water, and fish by Indiana Department of Environmental (IDEM)
- Late 1980s – Sampling of sediment, water, and fish by Arconic
- Late 1990-Early 1991 – Arconic removed sediment starting 100 feet upstream of Outfall 001 and ending at the 18th Street Bridge
- Late 1990s through 2008 – Arconic developed and implemented changes to its wastewater management program
- 1999 – Comprehensive sediment and fish sampling by IDEM
- 1999-2002 – IDEM/U.S. Environmental Protection Agency (USEPA) sued Arconic under Clean Water Act (CWA) for discharges in excess of NPDES permit limits
- 2002 – USEPA and Arconic entered into Consent Decree (CD), which required, among other things, investigation of Elliott Ditch
- 2003/4 – Arconic performed Phase I, Phase II, and Phase III of Elliott Ditch investigation, which included sediment, water, and fish sampling
- 2008 – Arconic performed Phase IV of the Elliott Ditch investigation, which included fish and water sampling, and submitted a Report to USEPA
- 2010 – Arconic performed Phase V-A of Elliott Ditch investigation, which included sediment sampling

- 2011 – Arconic performed a monitoring program, which included sediment and water sampling, for a soluble oil spill
- 2012 – Arconic Phase V-B of Elliott Ditch investigation planned, which included fish tissue and water sampling
- 2012/2013 – Arconic performed the Phase V-B investigation of Elliott Ditch to assess fish tissue and water for PCB impacts
- 2014/2015 – Arconic performed a geomorphologic mapping study of Elliott Ditch
- 2016 – Arconic prepared a FSP to collect sediment and soil samples to further assess PCB impacts to the ditch

1.5 REGULATORY CONSIDERATIONS

1.5.1 Consent Decree and RCRA Corrective Action

Investigations of Elliott Ditch from the early 2000s through 2012 were conducted per the Consent Decree (CD) between Arconic and USEPA. The CD is associated with Clean Water Act violations and is in the process of being closed. The Facility is subject to Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) and is in the process of implementing a RCRA Facility Investigation (RFI). This Project is being performed as part of the RCRA CA process.

1.5.2 PCB Source and Release Date

Arconic has performed a detailed review of historic operations at the Facility to determine the source and release date of the PCB impacts identified in Elliott Ditch. Provided in the following is a summary of the review results. Please note that Alcoa is used interchangeably with Arconic in this section of the report.

To reduce the potential for a recurrence of an April 1955 petroleum oil fire at an Alcoa facility in Texas, Alcoa issued guidance to facility managers for the replacement of petroleum-based oils with non-flammable fluids. Recommended non-flammable fluids included Monsanto's Pydraul-branded fluids known to contain PCBs. The Lafayette Operations (Facility) followed this guidance and changed some of its petroleum-based oils to Pydraul-branded fluids. In the late-1950s and

1960s, the Facility documented leaks of equipment containing non-flammable fluids including locations that flowed to the industrial storm sewer and to the sewage treatment plant.

As a response to a 1970 bulletin from Monsanto to facility consumers on the potential environmental effects of Pydraul-branded fluids, the Facility immediately began to discontinue use of certain oils and implement policy to prevent discharge of the oils to the sewers. More specifically, in 1972, the Facility implemented a program to change several of the fire-resistant fluids from chlorinated bi-phenyl-based fluids to ester-based fluids. Later correspondence indicated that by 1974, all PCB-containing Pydraul had been eliminated from Facility reserves. Starting in the summer of 1978, the Facility initiated an inventory, comprehensive testing, and fluid replacement program for all equipment previously containing PCB-based fluids and equipment potentially contaminated by PCB-based fluids. In April 1979, the Alcoa Technical Center completed the first of two wastewater characterization studies identifying PCBs in the industrial sewer sediment, wastewater treatment plant sludge, and industrial influent.

In September 1979, the Facility notified the Stream Pollution Control Board of the presence of PCBs in confirmatory samples collected from the sewage treatment plant sludge. On December 7, 1979, the Indiana State Board of Health (ISBH) collected a sample from the Outfall 001 discharge, which according to the ISBH, “confirmed the presence of PCB in the discharge”. The confirmation is believed to be a result of documented leaks from equipment containing non-flammable fluids including locations that flowed to the industrial storm sewer and to the sewage treatment plant.

In summary, based on the results of the record search for the Facility the following conclusions can be reached:

- In the 1970s, the Facility implemented a program to rid equipment of containing PCB-containing fluids and PCB-contaminated materials (sludges, press waters, oils). Stores of PCB-containing Pydraul non-flammable fluid were eliminated from Facility reserves by 1974;
- A release occurred prior to April 18, 1978. No spills from equipment with PCB-containing fluids that resulted in a discharge to Elliott Ditch were documented after April 18, 1978;
- The source concentration is believed to be greater than 50 mg/kg and included predominantly Aroclor 1248; and,

- Based on the facts presented above, any exceedance of the NPDES permit and/or discharge of impacted media to surface waters would be derived from pre-April 18, 1978 original release.

1.6 INVESTIGATION OBJECTIVE AND STRATEGY

Per the FSP, the objective of this Project is to support the development of a conceptual model to understand the distribution of PCB impacts in Elliott Ditch and the adjacent floodplain caused by historical releases from Outfall 001. This objective has been met by poling and the collection of GPS readings to define the horizontal and vertical extent of fine-grained deposits in-channel, sediment sampling to characterize its profile, soil sampling to characterize its profile, and sediment and soil analytical testing to assess the presence/absence and concentration of PCBs. The additional targeted investigations conducted after implementation of the scope of the FSP were primarily focused on assessing the extent of PCB impacts to upland soils, particularly along the levee (anthropogenic surface). The levee is present on the eastern bank of Elliott Ditch, from Outfall 001 to the first railroad crossing, approximately 0.5 miles from the outfall.

2.0 PREMOBILIZATION TASK SUMMARY

CEC initiated the Project by preparing a series of plans to support field activities. Provided in the following is a brief summary of the efforts that occurred prior to implementing the FSP and subsequent targeted assessments.

2.1 PRIVATE PROPERTY ACCESS COORDINATION

2.1.1 Implementation of the FSP

2.1.1.1 *Targeted Properties*

The sampling associated with the Project took place on private property. As such, CEC prepared a Study Area Access Plan to guide outreach to private property owners in support of executing the Project. CEC initially gathered property boundaries and ownership information from the Tippecanoe County Geographic Information System (GIS) Department for parcels where samples were to be collected. The ownership information available only included the property owner address; no phone numbers or e-mail addresses. There were 24 private properties with 18 different owners targeted for access in support of implementing the FSP. Initially, CEC used this information to engage the private property owners with a mailing that included an introductory letter and Project fact sheet. The initial mailing resulted in a number of the private property owners calling CEC to discuss the Project and arrange face-to-face meetings. For those owners that did not contact CEC, a canvassing approach (i.e. knocking on doors) was implemented for outreach.

CEC met with many of the property owners privately to discuss the Project, their concerns, answer questions, and obtain access approval. Permission to access property was required from 18 private property owners and was needed to complete sampling at locations identified in the FSP. Of those 18 property owners, CEC obtained verbal or written approvals from 14. Of the four property owners that would not provide access, one was a vacant property, two did not support the Project, and the other was Duke Energy (Duke). Duke requested copies of the Project files to perform its own environmental and legal review before providing access. Duke has since completed its review

and prepared its own agreement that provides access for sampling, along with other terms and conditions. As of the date of this report, the sample(s) from the Duke property has not been collected.

2.1.1.2 Alternate Properties

A subset of the sampling locations proposed in the FSP had to be relocated due to the inability to reach the private property owners or the unwillingness to grant access. All but one of these sampling locations were relocated to the same geomorphic surfaces, at a similar distance downstream from the outfall, and on accessible properties. The one sample that was not relocated is present on the T-1 surface on the Duke Energy property. This boring could not be relocated due to no other T-1 surfaces being present within the reaches of the assessment. The other locations were moved to either the property on the other side of the stream, if access had been obtained from its owner and it contained the same geomorphic surface(s) as the property that would not provide access. Alternatively, the locations were moved to a nearby (adjacent if possible) property on the same side of the stream if it contained the necessary geomorphic surface(s) for sampling. In total, two sampling locations were moved across the stream and five were moved to nearby properties on the same side of the stream. The sampling locations moved to nearby properties required access to be provided verbally by three other private property owners. Please refer to Figures 3 and 4 for the properties where access was unattainable, the accessed properties, as well as the final sampling locations. This approach to modifying sampling locations due to inaccessible properties was reviewed and approved by the IDEM via teleconference.

2.1.2 Implementation of the Targeted Assessments

The two targeted sampling assessments took place on both private properties that had already provided access approval and those that had yet to be involved with the Project. Seven of the fourteen private property owners identified previously were involved in the targeted sampling projects. Permission for additional sampling was granted by phone or e-mail from these private property owners. The additional assessments required CEC to engage two new private property owners in a manner consistent with those property owners contacted previously. These two new

private property owners provided authorization for sample collection, one via e-mail and the other via a signed Access Agreement. In accordance with the Access Plan, all property owners were contacted at least 7 days prior to the commencement of sampling activities on their property.

Please refer to Appendix I for the Study Area Access Plan that includes figures, example mailer, fact sheet, and the Access Agreement prepared and implemented in support of this Project.

2.2 OTHER PLANNING CONSIDERATIONS

A site and project-specific Contractor Safety Plan (CSP), Project Safety, Health, and Environmental Review (PSHER), and Safe Work Plan were prepared for the field activities. The CSP incorporated critical components such as fatality prevention, human performance, and stop criteria. The CSP was reviewed in detail and formally accepted by all field personnel prior to the commencement of field activities. The PSHER and Safe Work Plan are Facility-specific planning requirements identified in the Site Conditions document. The PSHER and Safe Work Plan were prepared and submitted to the Facility and reviewed by field staff prior to the commencement of field activities.

CEC also prepared a Waste Management Plan (WMP) that identified wastes that would be generated during the field effort and outlined how those wastes would be stored, characterized, and managed. The WMP included information applicable to transporting waste materials back to the Facility for secure staging until the material was transported offsite for disposal or managed onsite. The WMP was reviewed by field personnel and understood prior to commencement of field activities.

Lastly, CEC contacted Indiana 811, the underground utility locating service in advance of each sampling event. Indiana 811 marked those utilities present within the drainage easement right-of-way. In general, underground cable lines are present along Elliott Ditch and laterals run to those private properties with service.

3.0 FIELD TASK SUMMARY

Implementation of the field portion of the FSP included two separate mobilizations. The first was to conduct sediment poling along the proposed sampling transects to assess the thicknesses and finalize the sampling locations. The second mobilization was to collect soil and sediment samples at the finalized locations. Two subsequent mobilizations, one in February 2018 and the other in June 2018, occurred as part of the targeted investigations, which were focused primarily on the PCBs impacts to upland soils within the first three reaches of Elliott Ditch.

3.1 POLING AND SURVEYING

CEC conducted a poling assessment of Elliott Ditch near the proposed 13 sediment sampling locations following the procedure outlined in Section 5.1 and the Standard Operating Procedure (SOP) for Poling Measurements to Estimate Soft Sediment Thickness of the FSP. Field staff performed the poling task in chest waders without the need of a boat. The poling exercise was conducted using a survey grade, real time kinetic (RTK)-global positioning system (GPS) unit, total station, and extendable rod with 0.1-foot gradations. The rod was fitted with a 6-inch diameter disc to collect the depth of water above the sediment surface. The water surface, stream bottom, and advancement depth (surface, hard, and overall push) elevations, and spatial locations were collected real time in the RTK-GPS unit or total station. The total station was used for data collection in areas of dense canopy. Poling was conducted following a grid-based approach with spacing based on the apparent size of the sediment deposits and extended one grid spacing beyond the apparent boundary of the depositional feature. Observations, i.e. sediment type, geomorphic setting, and presence/absence of aquatic vegetation, collected from each rodding location were also collected electronically in the surveying equipment. The data summary tables from the poling and surveying can be found in Appendix II.

The poling assessment was used to finalize the sediment sampling locations. In general, the locations were moved such that the samples were collected from the area containing the thickest deposits on each transect. The sediment sampling locations were finalized in the office before mobilizing into the field for collection.

3.2 SEDIMENT SAMPLING

CEC collected sediment samples following the SOPs found in the FSP at the locations selected based on access coordination and poling. Field staff navigated to the sediment sampling locations using a RTK-GPS unit. The sediment samples were collected using a Russian Peat Borer after unsuccessful attempts to collect the samples with check valve and recovery auger samplers. The latter two pieces of equipment were unable to meet the 80-percent recovery requirement specified in the FSP due to granular materials present within the sediment profile. The gravel and sand would cause the check valve to stick or get caught in the catcher of the recovery auger, limiting recovery to approximately 20 to 40-percent. The sediment samples were collected by field staff donning chest waders and nitrile gloves. The Russian Peat Borer was advanced to the discrete sampling interval using manual pressure and, when necessary, a slide hammer. Once at the targeted depth interval, the sampler rod was rotated to simultaneously open the sampling chamber and cut the core. Sediment recovery using the Russian Peat Borer was in excess of 90-percent at most sampling locations. Each recovered core was removed from the sampling chamber and placed onto plastic sheeting near the ditch for logging purposes. The cores were then placed into labeled plastic bags for subsequent processing and sampling. This process continued until sampler refusal. Please refer to Figures 3, 3a, 3b, 3c, 4, 4a, and 4b and Table 1 for the sediment sampling locations.

Reusable sampling equipment was grossly decontaminated between each sampling interval at the same location by removal solids and rinsing with distilled water. The sampling equipment was also decontaminated using brushes, Alconox and distilled water mixture, and rinsed with distilled water between sampling locations. Decontamination solids and fluids were containerized in matrix specific 55-gallon drums near the ditch.

3.3 SOIL SAMPLING

3.3.1 Implementation of the FSP

CEC collected these soil samples following the SOPs and at the selected locations found in the FSP. As discussed previously, a subset of these locations had to be moved due to access considerations. Field staff navigated to the approximate soil sampling locations using a RTK-GPS unit. Slight modifications to the soil sampling locations were made in the field to account for physical obstructions such as trees, man-made features (i.e. structures), underground utilities, large roots, and fences. The actual sampling locations were collected in the field using the RTK-GPS unit. When possible, soil samples were collected using a soil recovery auger fitted with a stainless steel core and 6-inch poly liners per the FSP. The auger was advanced in 6-inch intervals by hand, using a gas powered rotary hammer drill, manual force or a combination of the two. The recovery auger was then extracted from the borehole by threading a T-handle to the top of the extension rod and pulling it out while limiting rotation. Each recovered core in the poly liner was removed from the sampling auger and capped on both ends, noting the orientation of the sample as “top” and “bottom”. The cores were then labeled with location and depth information for subsequent processing and sampling.

Reusable sampling equipment was grossly decontaminated between each sampling interval at the same location by removal solids and rinsing with distilled water. The sampling equipment was also decontaminated using brushes, Alconox and distilled water mixture, and rinsed with distilled water between sampling locations. Decontamination solids and fluids were containerized in matrix specific 55-gallon drums near the ditch.

3.3.2 Implementation of the Targeted Assessments

The soil sampling locations and depths for the targeted assessments were selected based on the results of the FSP and access considerations. These samples and associated analytical results were used to supplement the data from the FSP to provide a better understanding of the spatial distribution of PCB impacts. For shallow soil borings with a targeted depth of 2 feet below grade,

field staff collected samples according to the following. If field staff was able to advance to the targeted depth and obtain the required recovery using the soil auger and manual force, samples were collected in this fashion as described previously. However, at several locations, the soil recovery auger could not achieve the required depth or provide sufficient recovery due to soil characteristics (clay content, moisture, and density) and friction and an 8-inch stainless steel hand trowel was used to sample these locations. Samples were collected and processed per the FSP to ensure consistency between sample locations and across different field efforts. Soil samples were collected in 6-inch intervals, placed in 6-inch poly liners while maintaining orientation of the recovered media, and capped on both ends with “top” and “bottom” being noted on liner. The soil sampling process continued at each location until met with refusal or a depth of 2 feet below grade, whichever occurred first.

Additionally, nineteen soil borings were advanced on the levee surface located on the east side of Elliott Ditch between Outfall 001 and the first railroad crossing utilizing a small, track-mounted Geoprobe. A Geoprobe was utilized to advance these borings due to the increase in targeted depth and soil conditions. These borings were advanced in two-foot increments to four feet or eight feet below grade and processed per the FSP. The borings were advanced in two-foot increments to increase the amount of soil recovery. Please refer to Figures 3, 3a, 3b, 3c, 4, 4a, and 4b and Table 1 for the soil sampling locations.

Reusable sampling equipment, including the drill rig and all downhole tooling, was grossly decontaminated between each sampling interval at the same location by removal solids and rinsing with distilled water. The sampling equipment was also decontaminated using brushes, Alconox and distilled water mixture, and rinsed with distilled water between sampling locations. Decontamination solids and fluids were containerized in matrix specific 55-gallon drums near the ditch.

3.4 SAMPLE LOGGING AND PROCESSING

The sediment and soil cores were processed, logged, and sampled by a soil scientist. Logging of both materials was performed in accordance with the SOPs in the FSP and documented by hand

on the appropriate field forms. Copies of the forms for the sediment and soil samples can be found in Appendices III and IV, respectively. Sediment samples were collected from each of the observed depositional layers found in the cores. Soil samples were collected from each of the observed horizons, and if a horizon was more than 12-inches in length, it was split into multiple samples. Similarly, if there were distinctly different material present within the same horizon, samples of each were collected. The samples were placed into 4-ounce laboratory provided glass jars and stored in a cooler on ice. Each of the samples was named according to the convention identified in Section 6.1 of the FSP. The samples were transported under chain of custody to the TestAmerica Laboratory in North Canton, Ohio. The sediment samples were analyzed for PCBs via EPA Method 8082 following sample preparation Method 3540. Preparation Method 3540 used both polar and nonpolar solvent extractions to provide more accurate and precise results. The soil samples were analyzed for PCBs via EPA Method 8082 following sample preparation Method 3540. The preparation for the soil samples used a nonpolar solvent only due to relatively low moisture content.

There were 42 sediment samples and 165 soil samples, not including quality assurance/quality control samples, collected as part of the FSP and subsequent targeted assessments. For QA/QC purposes, field duplicates were collected at a ratio of approximately one per ten samples and matrix spike/matrix spike duplicates were collected at a ratio of approximately one per twenty samples, per the FSP. Five duplicates, three matrix spike/matrix spike duplicates (MS/MSDs), and one equipment/rinsate blank collected as part of sediment sampling. Similarly, there were nineteen duplicates and six MS/MSDs collected as part of soil sampling. The QA/QC sample nomenclature followed the same convention discussed previously and used qualifiers such as “FD” for field duplicate and “MS/MSD” for matrix spike/matrix spike duplicate.

3.5 INVESTIGATION DERIVED WASTE MANAGEMENT

There was little excess sediment and soil generated during the sampling efforts. The majority of the recovered media was placed into laboratory provided glassware. Decontamination water and disposable materials (i.e. spent personal protective equipment, plastic sleeves, etc.) that were generated as part of this investigation were stored in matrix-specific 55-gallon drums. The

contents of each drum were sampled by CEC and analyzed for PCBs via EPA Method 8082 in support of characterization. Each drum was labeled with a “Pending Analysis” sticker and the contents and accumulation start date were noted on the drum. The drums were temporarily staged in a secure area near the ditch and transported to the Facility by a third party vendor for secure staging prior to disposal. The drummed solids contained less than 50 mg/Kg PCBs and were managed by the Facility at a RCRA Subtitle D landfill under an existing waste profile for these materials. The drummed liquids did not contain detectable concentrations of PCBs and were managed by the Facility at its wastewater treatment plant.

4.0 FINDINGS

4.1 SEDIMENT THICKNESS AND VOLUME EVALUATION

The data collected during poling was processed for an analysis of depositional areas within the 13 sediment sampling areas of Elliott Ditch. The analysis included estimating the extents of depositional areas, the thicknesses of the observed soft sediment layers, and volume estimates. CEC has prepared figures identifying the confirmed depositional area extents and sediment thicknesses. AutoCAD Civil3D software was used to perform the described analysis and generate the figures. Please refer to Figure 5 and Figures 5A through 5M for the results of the poling task.

A summary of each of the 13 depositional areas can be found in Table 2. Detailed poling log sheets including the point name, water depth, soft, hard, and total push depths, sediment type, geomorphic feature, and if aquatic vegetation was present can be found in Appendix II.

4.2 SEDIMENT CHARACTERISTICS

Sediment samples were collected within Elliott Ditch to the depths identified during the poling and surveying field effort. The majority of the sediment samples included an initial layer of medium to coarse sand with varying gravel content (typically in the range of 15 to 35-percent) followed by intermixed layers of sandy and silty loam. At greater depths (i.e. greater than 3-feet below grade) samples included a horizon of silty or sandy clay. The sediment samples were typically black to very dark brown in color. The majority of the sediment samples did not contain appreciable wood or organic content. Shells were identified in less than 10-percent of the samples. The field sampling sheets for the sediment can be found in Appendix III.

4.3 SEDIMENT PCB ANALYTICAL RESULTS

The sediment samples were collected and analyzed as discussed previously. A summary of the PCB analytical results for the sediment samples is provided in Table 3 and the associated laboratory analytical reports can be found in Appendix V. A total of 47 sediment samples,

including 5 field duplicates, were submitted for analytical testing for PCBs via EPA Method 8082 and preparation Method 3540, using both polar and nonpolar solvents for extraction. PCBs were detected in all 47 samples ranging from 0.28 milligrams per Kilogram (mg/Kg) to 39.9 mg/Kg. PCBs were detected at concentrations greater than 1 mg/Kg in 32 of the 47 sediment samples and at concentrations greater than 10 mg/Kg in eight of the samples. Of the PCB concentrations exceeding 10 mg/Kg, six of the eight samples were collected from Milepost 00.60 to Milepost 1.03. Relatively higher concentrations of PCBs (i.e. greater than 10 mg/Kg) in sediment were typically observed from 1.5 to 3.5-feet below grade. The lowest PCB concentrations (i.e. less than 5 mg/Kg) were typically seen at or near the sediment surface.

4.4 SOIL CHARACTERISTICS

The subsurface geology encountered in the soil borings advanced through the various naturally occurring geomorphic surfaces was indicative of native, residual, materials. Soils were typically dark brown to black in color, very plastic, and significant increases in soil consolidation were noted as the depth below ground surface increased. Root and wood content was typically less than 15-percent. Rock and other granular materials were observed in the majority of the soil borings at less than 15-percent; however, a portion of the soil samples contained between 15 and 35 percent. Odors were not observed in the soil samples. The granular structure of the soils was typically fine to very fine with an isolated group of samples exhibiting medium grain characteristics. The vast majority of the subsurface geology within the investigation area was a loam material with varying amounts of sand and silt. The presence of sand and silt typically decreased with depth. Isolated horizons of clay, clayey loam, and silty clay were observed in a subset of borings typically at depths greater than 1.25-feet below grade.

Subsurface geology of the man-made levee along Elliott Ditch was indicative of soils introduced through anthropogenic activity. Soils were varied in distinct horizons below ground surface and showed evidence of the levee construction through lifts of fill material. For the assessed areas of the levee, a soil horizon of organic material and silty loam was typically present at 0.0 to 0.5 feet below grade. Under this horizon, the majority of soils consist of an aggregate of clay loam, silty clay, and clay with sand. Between 0.5 and 4.0 feet below grade, soils were typically reddish brown

or brown to dark brown in color, moderately to very plastic with fine granular structure. Very plastic, black clay with sand was present at some locations along the levee at depths between 2.5 feet and 4.0 below grade. While most samples had gravel content less than 15-percent, isolated horizons less than 0.5 feet in thickness were identified containing greater than 60-percent gravel. This is indicative of the levee construction taking place in lifts and possibly including graveled access roads. The soil field sampling sheets can be found in Appendix IV.

4.5 SOIL PCB ANALYTICAL RESULTS

The soil samples were collected and analyzed as discussed previously. Please refer to Table 4 for a summary of the PCB analytical results for the soil samples and Appendix V for the associated laboratory analytical reports. A total of 184 soil samples, including 19 field duplicates, were submitted for analytical testing during implementation of the FSP. PCBs were detected in 124 of the 184 soil samples at concentrations ranging from 0.02 mg/Kg to 94.2 mg/Kg. PCBs were detected at concentrations greater than 1 mg/Kg in 51 of the 184 soil samples and at concentrations greater than 10 mg/Kg in 12 of the samples. Five samples, including one duplicate, exceeded 50 mg/Kg and all were collected from the levee.

PCB concentrations, if detected, in the upland soil were typically observed to be less than 1 mg/Kg. The lone exception comes from the upland surface at Milepost 00.51, which contained PCB concentrations in the range of 2 to 7 mg/Kg. This upland area is situated between the two sets of railroad tracks, which may subject it to flooding conditions dissimilar to the other areas. PCB detections from the fourth terrace (T-4) surfaces were all less than 1 mg/Kg; whereas, PCB detections from the T-6 surfaces ranged from non-detect to 4.65 mg/Kg. Of the 16 samples from the T-6 surface, three exceeded 1 mg/Kg. The T-7 geomorphic surface did not contain concentrations of PCBs greater than 1 mg/Kg with the exception of the samples at Milepost 01.14, which contained samples from four different boring locations that exceed this concentration. The depression and floodplain surfaces contained PCB concentrations ranging from approximately 0.07 to 2.44 mg/Kg, with the relatively higher concentrations being observed at greater than six inches in depth.

The highest concentrations of PCBs and widest extent of impacts were observed in the levee surface with concentrations greater than 50 mg/Kg being observed in five samples, one of which was a duplicate. PCB concentrations exceeding 10 mg/Kg were observed in 11 samples from the levee surface. The PCB impacts to the levee vary in depth across the anthropogenic feature; however, it appears to be limited to the upper two to three feet of material. The deepest soil sample with a concentration exceeding 1 mg/Kg was collected from 1.75 to 2.75 feet below grade at Milepost 00.17.

4.6 GEOMORPHOLOGY ASSESSMENT

The FSP is based on the geomorphology of Elliott Ditch and the understanding that PCBs tend to adsorb to finer grained materials, i.e. silt and clay sized particles that often contain organic matter. The geomorphic and anthropogenic features of the ditch have influenced depositional patterns both within the channel sediment and floodplain soil. The assessment approach includes the collection of sediment and soil samples along transects of known depositional and erosional features. The transects included sediment samples being collected from within the ditch itself, and soil samples being collected from the observed geomorphic surfaces or terraces and upland areas to assess the distribution of PCBs associated with historic releases from Outfall 001. Justification for sampling locations is provided in Table 3 of the FSP.

The geomorphology based sampling approach is supported by the results of this assessment. In regards to the sediment results, the assessed portion of the ditch should be discussed in two different sections. The first being from the outfall to Milepost 01.00, which contains thicker depositional areas, ranging from 0.7 to 4.3 feet in depth, and more sediment horizons than the subsequent section. This is to be expected based on the geomorphic study since this portion is less steep (Reach 1) and deposition is expected in areas of pooled water (Reaches 1 and 2). The highest PCB concentrations are detected in samples at depth in these reaches. More specifically, from the outfall to Milepost 00.47, the highest PCB detections came from the deepest samples at each of the four locations, with the highest concentration (16.87 mg/Kg) being found nearest the outfall. From Milepost 00.47 to 01.00, the highest PCB concentrations tend to occur from 1.75 to 3.50 feet below the top of sediment. PCBs were detected in the shallow sediments at lower concentrations

than at depth. The shallower sediment contains more granular material, which is less likely to support adsorption of PCBs. These results indicate that the release of PCBs is likely historic in nature since the appreciable impacts occur at depth and have been covered over time. The impacts observed in the shallower sediments could be attributable to resuspension and migration of historically accumulated PCBs, likely in finer grained materials.

The sediment deposits from Milepost 01.00 to 01.59 are less prevalent and thick, ranging from 0.29 to 2.25 feet in depth, and contain fewer distinct horizons. This is to be expected given the Elliott Ditch channel characteristics, i.e. steep, deeply incised channel, etc., within this stretch. PCB concentrations are less than 2.03 mg/Kg in all but two samples collected from this section. Appreciable PCB detections, greater than 16.0 mg/Kg, occur at Milepost 1.03 in the two samples collected from 1 to 2 feet below the top of sediment.

The PCB concentrations in soil samples from the various, naturally occurring geomorphic surfaces tend to be similar. For example, the upland and T-4 surface samples were all less than 1 mg/Kg, with the exception of what was observed in the upland soil from Milepost 00.51. As noted previously, this sample location is between the two railroad tracks and could be subject to different flooding conditions than other upland sampling locations. Similarly, the T-7 surface only contained PCB concentrations in excess of 1 mg/Kg in samples from four different boring locations at Milepost 01.14. The remainder of the soil samples from this surface exhibited similar soil characteristics and PCB concentrations. The levee, an anthropogenic feature, is inherently heterogeneous given how it appears to be constructed with different fill material sources over time. The observed soil conditions and PCB concentrations in the collected samples vary over the levee; however, impacts greater than 1 mg/Kg tend to be limited to the upper two to three feet of material.

4.7 PCB AROCLOR OBSERVATIONS

The PCB Aroclor patterns provide insight into the historic source material associated with the PCB impacts. In all but five of the soil samples, the detected PCBs were quantified as Aroclors 1248 and/or 1260, which agrees with Aroclors typically observed at the Facility and in the Pydraul source material. The Aroclor patterns in the sediment are more difficult to assess and understand.

In all but one of the sediment samples upgradient of the railroad crossings, the second crossing is approximately at Milepost 00.53, the detected PCBs were quantified as Aroclors 1248 and/or 1260. The sample containing different Aroclors, quantified as Aroclors 1242 and 1254, was located at Milepost 00.25 from a depth of 3.51 to 4.3 feet below the top of sediment surface. From Milepost 00.54 to 1.03, the stretch of Elliott Ditch from the second railroad crossing to the 18th Street crossing, the majority of the detected PCBs were quantified as Aroclors 1242 and 1254. After the 18th Street crossing, the detected PCBs were quantified again as Aroclors 1248 and/or 1260. The shift in the PCB Aroclor quantified for the samples from Milepost 00.54 to 1.03 could be the result of anaerobic dechlorination weathering resulting in lighter chlorinated Aroclors being reported from sources of heavier chlorinated Aroclors. It could also be the result of a different source material.

5.0 DATA QUALITY

Data quality objectives (DQOs) were evaluated by assessing the following quality indicators: precision, accuracy, representativeness, completeness, and comparability.

5.1 PRECISION

Precision is a measure of the reproducibility of analyses under a given set of conditions (i.e., the degree to which two or more measurements are in agreement). Precision evaluates how far different individual reported values are from the average or mean. Precision is thus a measure of the magnitude of random error and will be expressed as the relative percent difference (RPD). The lower the RPD value is, the more precise (i.e., reproducible) the data.

Precision is evaluated using the RPD, which is determined according to the following equation:

$$RPD = \frac{|Value\ 1 - Value\ 2|}{Arithmetic\ Mean\ of\ Value\ 1\ and\ 2} \times 100$$

This equation above is appropriate when the analytical results are greater than 5 times the reporting limit (RL). For results that are near the limit of quantitation, acceptable precision is demonstrated by the absolute value of the difference between Value 1 and Value 2 being within 2 times the RL. For results that are reported between the RL and the method detection limit (MDL), precision is considered poor by definition (i.e., the results are considered qualitatively acceptable in that a constituent can be identified, but are quantitatively suspect since the concentration cannot be accurately quantified). This is the reason that results between the RL and MDL are “J” flagged as estimated.

For this investigation, precision for sediment samples was evaluated using the analytical results for samples ED-00.08-SD02-0.75-1.4, ED-00.25-SD01-3.51-4.3, ED-00.72-SD03-2.40-3.50, ED-01.03-SD02-0-0.98, ED-1.03-SD02-0.98-1.65 and the respective duplicate samples. Acceptable precision for field duplicates in sediment is typically RPD < 40-percent. Four of the five sediment

samples met this precision criteria. The one sample that does not, ED-1.03-SD02-0.98-1.65, is likely the result of chemical heterogeneity across the sediment matrix and heterogeneity of the sediment matrix itself.

The soil samples precision was evaluated in a similar fashion. Of the 19 soil samples with duplicates, the RPD was only able to be calculated for 11 of them due to non-detects in almost half of these samples. The RPD met the 40-percent precision criteria in six of the 11 samples, indicative of chemical heterogeneity across the soil matrix and heterogeneity of the soil matrix itself. However, these analyses of precision is not expected to impact the usability of the data.

5.2 ACCURACY

Accuracy is a measure of the bias that exists in a measurement system (i.e., the degree of agreement between an observed value and a reference or true value). Accuracy measures the average or systematic error of a measurement method or sampling method. Accuracy in the field is determined through the collection of equipment and trip blanks and review of the results for evidence of sample contamination stemming from field activities or sample transport.

Non-disposable sampling equipment used throughout the investigation was thoroughly cleaned between each sample location, thus minimizing the potential for impacts to sampling stemming from field activities. One equipment blank sample, identified as “Equip Rinsate”, was collected from the stainless steel soil augering equipment to verify that constituents were not being introduced into the sample due to improper decontamination between boring locations. PCBs were not detected in the rinsate sample.

5.3 REPRESENTATIVENESS

Representativeness expresses the degree to which data accurately and precisely represent the environmental condition. Representativeness is accomplished by maintaining sample integrity with appropriate preservation and meeting technical holding times and by collecting a statistically

significant number of samples. Field representativeness is dependent upon the proper design of the sampling program and will be satisfied by following proper sampling techniques.

Field work was conducted in accordance the regulatory approved FSP and the associated SOPs. Samples were collected using laboratory provided containers, preserved in a cooler on ice, and were immediately delivered to the laboratory within specified hold times. Sample locations are as justified in Table 3 of the FSP and designed to assess the erosional and depositional features of Elliott Ditch from Facility Outfall 001 to Milepost 1.59. Accordingly, the analytical results are considered to be representative of this reach of Elliott Ditch.

5.4 COMPLETENESS

Completeness is the measurement of the amount of valid data obtained from a measurement system compared to the amount that was expected to be obtained under “normal” conditions. Completeness establishes whether a sufficient number of valid measurements were obtained. The closer this value is to 100, the more complete the measurement process. Data rejected, whether due to sampling design error, measurement error, or bias or sample matrix interferences, will be considered invalid measurements. The following formula was used to estimate completeness:

$$\text{Percent Completeness} = \frac{V}{T} \times 100$$

Where:

V = number of measurements judged valid

T = total number of measurements

The sampling location situated on the T-1 surface on Duke Energy Property is the only data that is missing from this assessment that was specified in the FSP. All other sampling points were collected, not necessarily in the exact specified location due to access issues, but on the targeted geomorphic surface near the specified Milepost. Two additional field sampling efforts were performed in accordance with the FSP to collect targeted information. Therefore, the dataset for this portion of the Elliott Ditch assessment is considered complete.

5.5 COMPARABILITY

Comparability expresses the confidence with which one set of data can be compared to another. It is a qualitative measurement to ensure sampling and analytical procedures are consistent within and between data sets, such as split sampling or monitoring. Analytical data is comparable when similar sampling, analytical methods, and reporting limits are consistently used for assessments of Elliott Ditch. Comparability was controlled by requiring the use of specific nationally-recognized analytical methods and requiring consistent method performance criteria.

Sampling was conducted in accordance with the approved FSP and associated SOPs. Because of this, the sampling procedure between sample locations and across different sampling events was consistent. Additionally, the same laboratory analyzed samples using consistent analytical methods. Thus, the data set is considered comparable.

TABLES

**Table 1. Sediment and Soil Sampling Locations
Elliott Ditch Field Sampling Report
Lafayette, Tippecanoe County, Indiana
August 2018**

Boring ID	Northing (feet)	Easting (feet)	Assessment
ED-00.00-SL01	1,869,378.92	3,015,067.30	Additional Sampling
ED-00.00-SL03	1,869,400.56	3,015,093.48	Additional Sampling
ED-00.00-SL04	1,869,294.01	3,015,043.12	Additional Sampling
ED-00.02-SL01	1,869,315.12	3,014,964.44	Additional Sampling
ED-00.05-SL01	1,869,223.98	3,014,825.12	Additional Sampling
ED-00.08-SD02	1,869,094.82	3,014,604.72	FSP
ED-00.08-SL01	1,869,190.16	3,014,650.63	FSP
ED-00.08-SL03	1,869,135.64	3,014,698.12	FSP
ED-00.08-SL04	1,869,066.59	3,014,765.16	FSP
ED-00.08-SL05	1,869,067.08	3,014,613.53	Additional Sampling
ED-00.13-SL01	1,868,975.28	3,014,519.78	Additional Sampling
ED-00.17-SL01	1,868,850.93	3,014,389.57	Additional Sampling
ED-00.17-SL02	1,868,799.18	3,014,349.04	Additional Sampling
ED-00.19-SL01	1,868,726.19	3,014,254.17	Additional Sampling
ED-00.21-SL01	1,868,677.98	3,014,170.09	Additional Sampling
ED-00.23-SL01	1,868,631.70	3,014,076.12	Additional Sampling
ED-00.25-SD01	1,868,643.99	3,014,036.70	FSP
ED-00.25-SL02	1,868,580.11	3,013,983.51	FSP
ED-00.25-SL03	1,868,514.71	3,014,053.32	FSP
ED-00.25-SL04	1,868,616.44	3,013,941.63	FSP
ED-00.27-SL01	1,868,506.18	3,013,932.37	Additional Sampling
ED-00.29-SL01	1,868,418.53	3,013,878.38	Additional Sampling
ED-00.31-SL01	1,868,316.15	3,013,813.16	Additional Sampling
ED-00.33-SL01	1,868,217.98	3,013,748.65	Additional Sampling
ED-00.36-SL01	1,868,114.90	3,013,689.75	Additional Sampling
ED-00.39-SD02	1,868,039.02	3,013,597.07	FSP
ED-00.39-SL01	1,868,018.03	3,013,553.06	FSP
ED-00.39-SL03	1,867,992.66	3,013,608.85	FSP
ED-00.39-SL04	1,867,949.16	3,013,695.32	FSP
ED-00.41-SL01	1,867,899.62	3,013,539.41	Additional Sampling
ED-00.44-SL01	1,867,757.97	3,013,433.80	Additional Sampling
ED-00.47-SD02	1,867,703.13	3,013,346.80	FSP
ED-00.47-SL01	1,867,689.50	3,013,286.40	FSP
ED-00.47-SL03	1,867,660.53	3,013,356.13	FSP
ED-00.47-SL04	1,867,617.04	3,013,448.18	FSP
ED-00.51-SD02	1,867,474.48	3,013,175.15	FSP
ED-00.51-SL01	1,867,488.83	3,013,161.52	FSP

Boring ID	Northing (feet)	Easting (feet)	Assessment
ED-00.51-SL03	1,867,459.87	3,013,236.82	FSP
ED-00.51-SL06	1,867,415.72	3,013,207.87	Additional Sampling
ED-00.54-SD03	1,867,300.71	3,013,071.29	Additional Sampling
ED-00.55-SL01	1,867,284.67	3,013,090.86	Additional Sampling
ED-00.55-SL02	1,867,269.43	3,013,110.90	Additional Sampling
ED-00.60-SD02	1,867,085.05	3,012,861.47	FSP
ED-00.60-SL01	1,867,131.06	3,012,853.13	FSP
ED-00.60-SL03	1,867,087.45	3,012,897.81	FSP
ED-00.72-SD03	1,866,696.52	3,012,430.68	FSP
ED-00.72-SL01	1,866,625.21	3,012,465.50	FSP
ED-00.72-SL02	1,866,707.44	3,012,427.86	FSP
ED-00.72-SL04	1,866,681.96	3,012,436.28	FSP
ED-00.82-SD02	1,866,704.14	3,011,826.97	FSP
ED-00.82-SL01	1,866,731.67	3,011,901.21	FSP
ED-00.82-SL03	1,866,680.60	3,011,873.47	FSP
ED-00.82-SL04	1,866,636.94	3,011,895.86	FSP
ED-01.03-SD02	1,866,900.88	3,010,838.13	FSP
ED-01.03-SL01	1,866,929.55	3,010,855.90	FSP
ED-01.03-SL03	1,866,845.67	3,010,817.09	FSP
ED-01.14-SD02	1,866,726.26	3,010,229.29	FSP
ED-01.14-SL01	1,866,764.12	3,010,218.24	FSP
ED-01.14-SL03	1,866,724.19	3,010,279.63	FSP
ED-01.14-SL04	1,866,776.90	3,010,260.89	Additional Sampling
ED-01.14-SL05	1,866,791.34	3,010,178.80	Additional Sampling
ED-01.14-SL06	1,866,737.60	3,010,182.01	Additional Sampling
ED-01.24-SD02	1,866,557.13	3,009,897.96	FSP
ED-01.24-SL01	1,866,577.39	3,009,886.95	FSP
ED-01.24-SL03	1,866,533.34	3,009,904.12	FSP
ED-01.24-SL04	1,866,609.54	3,009,882.92	Additional Sampling
ED-01.24-SL05	1,866,572.43	3,009,873.63	Additional Sampling
ED-01.24-SL06	1,866,593.40	3,009,920.68	Additional Sampling
ED-01.37-SD02	1,866,141.98	3,009,262.65	FSP
ED-01.37-SL01	1,866,198.53	3,009,244.15	FSP
ED-01.37-SL03	1,866,264.58	3,009,228.30	FSP
ED-01.49-SD03	1,865,918.07	3,008,753.35	FSP
ED-01.49-SL01	1,865,973.73	3,008,695.96	FSP
ED-01.49-SL02	1,865,948.23	3,008,696.02	FSP
ED-01.49-SL04	1,865,879.01	3,008,696.18	FSP

NOTE:

1. All coordinates are Indiana State Plane West, units are feet.
2. "SD" in the boring ID indicates sediment and "SL" is soil.

Table 2. Sediment Poling Volume Estimates
 Elliott Ditch Field Sampling Report
 Lafayette, Tippecanoe County, Indiana
 August 2018

Transect	Area (SF)	Max Thickness (Feet)	Volume (CY)
A	2,285.78	3.80	137
B	2,307.03	4.36	118
C	2,861.56	4.60	183
D	1,391.03	3.53	85
E	586.70	3.00	14
F	850.18	2.62	37
G	292.68	4.34	12
H	295.94	0.80	5
I	366.50	2.35	13
J	230.31	1.84	5
K	285.27	3.00	7
L	846.82	3.36	15
M	236.17	1.30	5

**Table 3. Sediment Sampling PCB Analytical Results
Elliott Ditch Field Sampling Report
Lafayette, Tippecanoe County, Indiana
August 2018**

Boring/Sample ID	PCB Aroclor									Total PCBs (mg/Kg)
	1016	1221	1232	1242	1248	1254	1260	1262	1268	
ED-00.08-SD02										
0 - 0.45'	ND	ND	ND	ND	0.68	ND	ND	ND	ND	0.68
0.45 - 0.75'	ND	ND	ND	ND	4.31	ND	0.17	ND	ND	4.48
0.75 - 1.4'	ND	ND	ND	ND	1.14	ND	0.05	ND	ND	1.19
0.75 - 1.4' FD	ND	ND	ND	ND	1.15	ND	0.06	ND	ND	1.21
1.4 - 2.03'	ND	ND	ND	ND	7.73	ND	ND	ND	ND	7.73
ED-00.25-SD01										
0 - 0.57'	ND	ND	ND	ND	0.48	ND	ND	ND	ND	0.48
0.57 - 3.51'	ND	ND	ND	ND	0.30	ND	ND	ND	ND	0.30
3.51 - 4.3'	ND	ND	ND	13.50	ND	3.37	ND	ND	ND	16.87
3.51 - 4.3' FD	ND	ND	ND	12.30	ND	1.33	ND	ND	ND	13.63
ED-00.39-SD02										
0 - 2.20'	ND	ND	ND	ND	0.91	ND	ND	ND	ND	0.91
2.20 - 2.41'	ND	ND	ND	ND	2.77	ND	ND	ND	ND	2.77
2.41 - 3.54'	ND	ND	ND	ND	2.89	ND	ND	ND	ND	2.89
3.54 - 4.30'	ND	ND	ND	ND	4.64	ND	0.14	ND	ND	4.78
ED-00.47-SD02										
0 - 0.33'	ND	ND	ND	ND	1.09	ND	0.05	ND	ND	1.14
0.33 - 1.46'	ND	ND	ND	ND	2.74	ND	0.15	ND	ND	2.89
1.46 - 1.96'	ND	ND	ND	ND	1.38	ND	0.08	ND	ND	1.46
1.96 - 3.13'	ND	ND	ND	ND	2.48	ND	ND	ND	ND	2.48
ED-00.51-SD02										
0 - 0.36'	ND	ND	ND	ND	0.62	ND	0.03	ND	ND	0.64
0.36 - 0.68'	ND	ND	ND	ND	1.31	ND	0.04	ND	ND	1.35
0.68 - 1.65'	ND	ND	ND	ND	0.55	ND	ND	ND	ND	0.55
1.65 - 1.75'	ND	ND	ND	ND	0.95	ND	0.06	ND	ND	1.01
ED-00.54-SD03										
0 - 0.45'	ND	ND	ND	0.55	ND	0.11	ND	ND	ND	0.66
0.45 - 0.9'	ND	ND	ND	0.29	ND	0.10	ND	ND	ND	0.40
ED-00.60-SD02										
0 - 1.76'	ND	ND	ND	ND	1.03	ND	0.03	ND	ND	1.06
1.76 - 2.22'	ND	ND	ND	ND	23.80	ND	ND	ND	ND	23.80
2.22 - 2.39'	ND	ND	ND	8.09	ND	1.19	ND	ND	ND	9.28
2.39 - 2.63'	ND	ND	ND	0.51	ND	0.06	ND	ND	ND	0.56
2.63 - 3.30'	ND	ND	ND	4.42	ND	0.44	ND	ND	ND	4.86

Boring/Sample ID	PCB Aroclor									Total PCBs (mg/Kg)
	1016	1221	1232	1242	1248	1254	1260	1262	1268	
ED-00.72-SD03										
0 - 2.06'	ND	ND	ND	ND	0.84	ND	0.04	ND	ND	0.88
2.06 - 2.40'	ND	ND	ND	1.45	ND	0.16	ND	ND	ND	1.61
2.40 - 3.50'	ND	ND	ND	12.10	ND	1.96	ND	ND	ND	14.06
2.40 - 3.50' FD	ND	ND	ND	11.00	ND	1.71	ND	ND	ND	12.71
3.50 - 3.84'	ND	ND	ND	6.57	ND	1.01	ND	ND	ND	7.58
3.84 - 4.05'	ND	ND	ND	6.98	ND	1.44	ND	ND	ND	8.42
4.05 - 4.30'	ND	ND	ND	4.54	ND	0.64	ND	ND	ND	5.18
0.39 - 0.70'	ND	ND	ND	ND	0.34	ND	ND	ND	ND	0.34
ED-01.03-SD02										
0 - 0.98'	ND	ND	ND	1.58	ND	ND	0.05	ND	ND	1.63
0 - 0.98' FD	ND	ND	ND	ND	1.76	ND	0.05	ND	ND	1.81
0.98 - 1.65'	ND	ND	ND	39.90	ND	ND	ND	ND	ND	39.90
0.98 - 1.65' FD	ND	ND	ND	17.10	ND	ND	ND	ND	ND	17.10
1.65 - 1.87'	ND	ND	ND	ND	16.00	ND	ND	ND	ND	16.00
1.87 - 2.25'	ND	ND	ND	1.79	ND	0.24	ND	ND	ND	2.03
ED-01.14-SD02										
0 - 1.05'	ND	ND	ND	ND	0.62	ND	0.04	ND	ND	0.65
ED-01.24-SD02										
0 - 0.17'	ND	ND	ND	ND	0.54	ND	ND	ND	ND	0.54
0.17 - 0.29'	ND	ND	ND	ND	0.28	ND	ND	ND	ND	0.28
ED-01.37-SD02										
0 - 0.90'	ND	ND	ND	ND	1.46	ND	0.05	ND	ND	1.51
ED-01.49-SD03										
0 - 0.70'	ND	ND	ND	ND	0.42	ND	ND	ND	ND	0.42
NOTES										
ND = constituent was not detected above the method detection limit										

ED-00.25-SL04											
0 - 0.5'	Upland	ND	ND	ND	ND	ND	0.07	ND	ND	ND	0.07
0.5 - 1.0'		ND	ND	ND	ND	ND	0.04	ND	ND	ND	0.04
1.0 - 1.5'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1.5' - 2.0'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.27-SL01											
0 - 1.0'	Levee	ND	ND	ND	ND	25.50	ND	ND	ND	ND	25.50
1.0 - 1.9'		ND	ND	ND	ND	0.13	ND	ND	ND	ND	0.13
1.9 - 2.8'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.29-SL01											
0 - 0.7'	Levee	ND	ND	ND	ND	6.46	ND	ND	ND	ND	6.46
0.7 - 1.7'		ND	ND	ND	ND	0.05	ND	ND	ND	ND	0.05
1.7 - 2.7'		ND	ND	ND	ND	0.07	ND	ND	ND	ND	0.07
1.7 - 2.7' FD		ND	ND	ND	ND	0.05	ND	ND	ND	ND	0.05
ED-00.31-SL01											
0 - 1.0'	Levee	ND	ND	ND	ND	22.40	ND	ND	ND	ND	22.40
1.0 - 2.0'		ND	ND	ND	ND	0.37	ND	ND	ND	ND	0.37
ED-00.33-SL01											
0 - 0.7'	Levee	ND	ND	ND	ND	0.98	ND	0.17	ND	ND	1.14
0.7 - 1.6'		ND	ND	ND	ND	0.33	ND	ND	ND	ND	0.33
1.6 - 2.3'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.36-SL01											
0 - 0.4'	Levee	ND	ND	ND	ND	0.37	ND	ND	ND	ND	0.37
0.4 - 1.0'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1.0 - 1.5'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1.5 - 2.0'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1.5 - 2.0' FD		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.39-SL01											
0 - 0.5'	Upland	ND	ND	ND	ND	0.09	ND	ND	ND	ND	0.09
0.5 - 1.0'		ND	ND	ND	ND	0.13	ND	ND	ND	ND	0.13
ED-00.39-SL03											
0 - 0.69'	Levee	ND	ND	ND	ND	5.00	ND	ND	ND	ND	5.00
0 - 0.69' FD		ND	ND	ND	ND	6.09	ND	0.39	ND	ND	6.48
0.69 - 0.98'		ND	ND	ND	ND	0.58	ND	ND	ND	ND	0.58
0.98 - 1.17'		ND	ND	ND	ND	5.02	ND	0.77	ND	ND	5.79
1.17 - 1.5'		ND	ND	ND	ND	0.11	ND	ND	ND	ND	0.11
ED-00.39-SL04											
0 - 0.5'	Upland Swale	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
0.5 - 1.0'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-00.41-SL01											
0 - 0.5'	Levee	ND	ND	ND	ND	19.20	ND	ND	ND	ND	19.20
0.5 - 1.0'		ND	ND	ND	ND	1.98	ND	ND	ND	ND	1.98
1.0 - 1.5'		ND	ND	ND	ND	0.45	ND	ND	ND	ND	0.45
1.5 - 2.0'		ND	ND	ND	ND	0.04	ND	0.77	ND	ND	0.81
1.5 - 2.0' FD		ND	ND	ND	ND	0.04	ND	ND	ND	ND	0.04

ED-01.24-SL05											
0 - 0.42'	T-6	ND	ND	ND	ND	0.80	ND	0.18	ND	ND	0.99
0 - 0.42' FD		ND	ND	ND	ND	0.90	ND	0.19	ND	ND	1.09
0.5 - 1.46'		ND	ND	ND	ND	1.10	ND	0.21	ND	ND	1.31
ED-01.24-SL06											
0 - 0.84'	T-6	ND	ND	ND	ND	0.13	ND	0.03	ND	ND	0.16
1 - 1.96'		ND	ND	ND	ND	0.14	ND	0.03	ND	ND	0.16
ED-01.37-SL01											
0 - 0.9'	Upland	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
0 - 0.9' FD		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-01.37-SL03											
0 - 0.27'	T-7	ND	ND	ND	ND	0.77	ND	0.12	ND	ND	0.89
0.27 - 0.92'		ND	ND	ND	ND	0.16	ND	ND	ND	ND	0.16
0.92 - 1.07'		ND	ND	ND	ND	0.24	ND	0.03	ND	ND	0.27
1.07 - 2.0'		ND	ND	ND	ND	0.19	ND	ND	ND	ND	0.19
ED-01.49-SL01											
0 - 0.5'	T-7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
0 - 0.5' FD		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
ED-01.49-SL02											
0 - 0.5'	T-6	ND	ND	ND	ND	0.16	ND	0.02	ND	ND	0.19
0.5 - 1.0'		ND	ND	ND	ND	0.12	ND	ND	ND	ND	0.12
ED-01.49-SL04											
0 - 0.5'	T-6	ND	ND	ND	ND	ND	0.03	ND	ND	ND	0.03
0.5 - 1.0'		ND	ND	ND	ND	ND	0.02	ND	ND	ND	0.02
1.0 - 1.81'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1.81 - 2.0'		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

NOTES

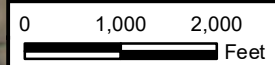
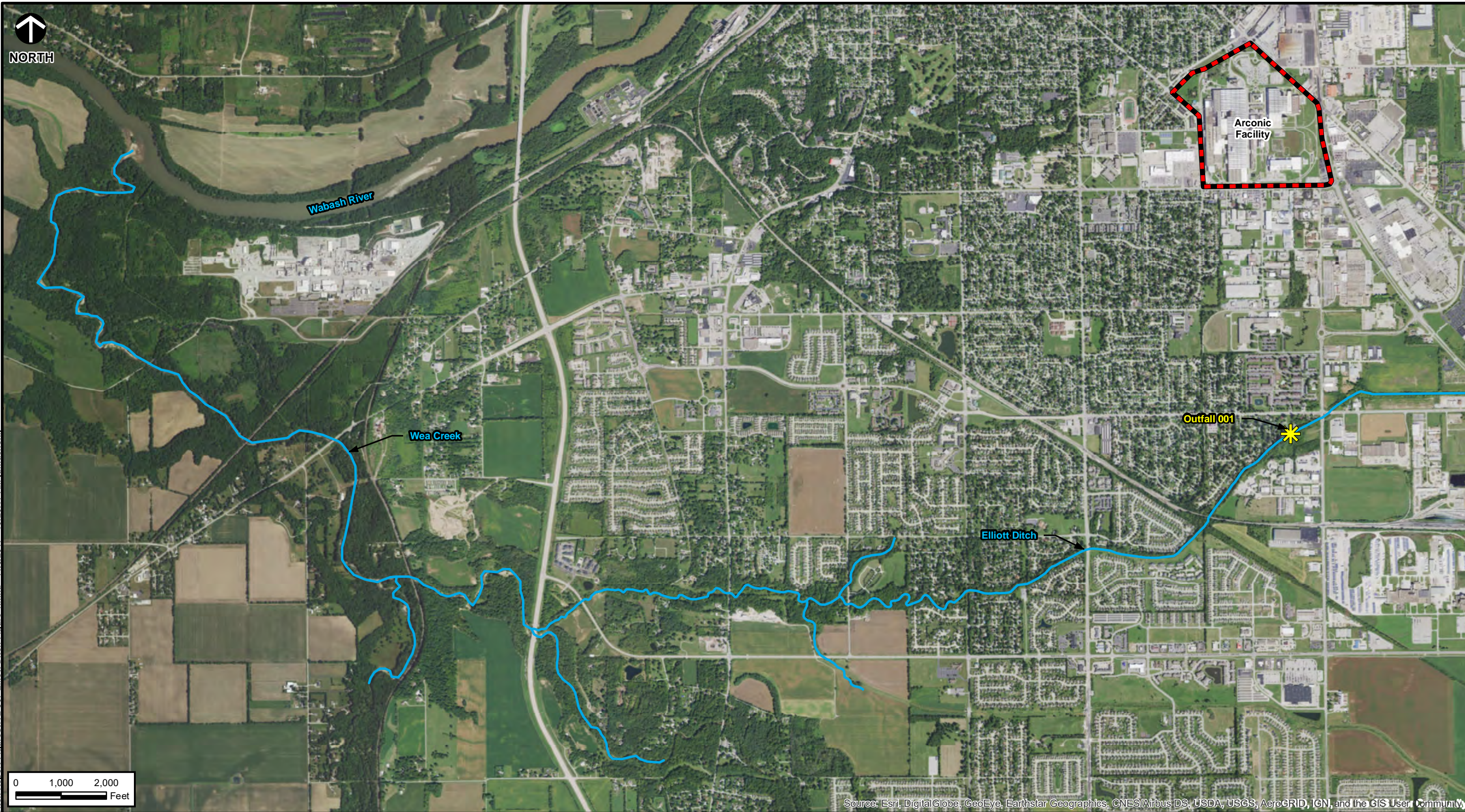
ND = constituent was not detected above the laboratory method detection limit

FIGURES



NORTH

P:\2017\172-367\GIS\Maps\Elliott Ditch Report Figures\172-367 Elliott Ditch Figure 1.mxd - 11/9/2017 - 10:26:17 AM (dmuchoki)



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

-  Outfall 001
-  Arconic Facility
-  Water Features

REFERENCE

ESRI WORLD IMAGERY / ARCGIS MAP SERVICE:
HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY
ACCESSED 11/9/2017



Civil & Environmental Consultants, Inc.

2704 Cherokee Farm Way, Suite 101 Knoxville, TN 37920
865-977-9997 • 865-774-7767
www.cecinc.com

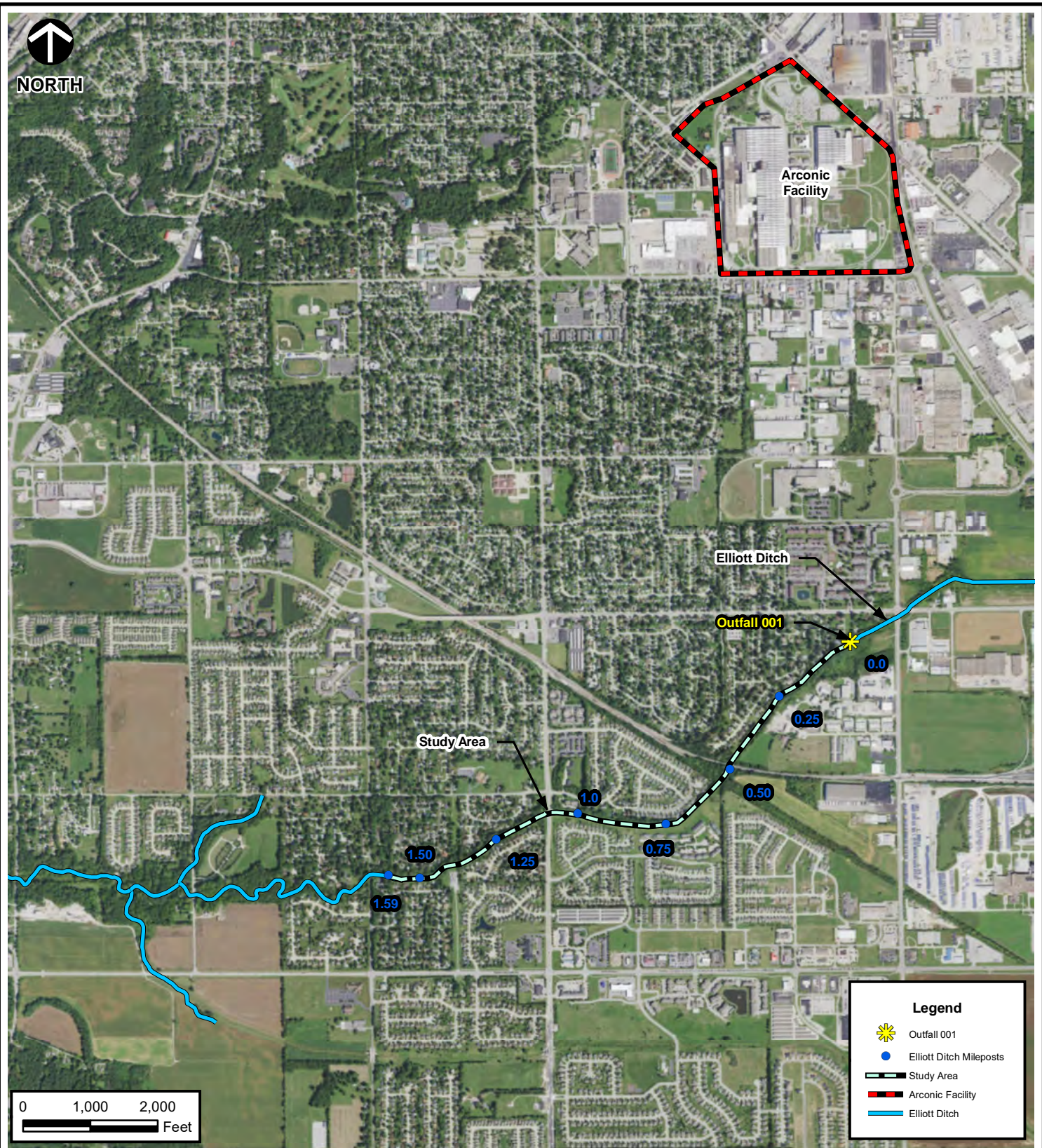
ARCONIC INC. - LAFAYETTE OPERATIONS
ELLIOTT DITCH
FIELD SAMPLING REPORT
LAFAYETTE, INDIANA

ELLIOTT DITCH VICINITY MAP

DRAWN BY:	DMM	CHECKED BY:	JMB	APPROVED BY:	TLM*	FIGURE NO:	1
DATE:	NOVEMBER 09, 2017	SCALE:	1" = 2,000'	PROJECT NO:	172-367.0002		

Signature on File *

P:\2017\172-367-GIS\Maps\Elliott Ditch Report Figures\172-367 Elliott Ditch Figure 2.mxd - 11/9/2017 - 9:47:37 AM (dmuchoki)



SOURCE: ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY. LAST ACCESSED: 11/9/2017
 IMAGE DATE: 03/12/2011



Civil & Environmental Consultants, Inc.
 2704 Cherokee Farm Way, Suite 101 Knoxville, TN 37920
 865-977-9997 - 865-774-7767
 www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
 ELLIOTT DITCH
 FIELD SAMPLING REPORT
 LAFAYETTE, INDIANA

ELLIOTT DITCH STUDY AREA

DRAWN BY: DMM	CHECKED BY: JMB	APPROVED BY: TLM*	FIGURE NO: 2
DATE: NOVEMBER 09, 2017	DWG SCALE: 1" = 2,000'	PROJECT NO: 172-367.0002	

Signature on File *



P:\2017\172-367-GIS\Maps\Elliott Ditch Report Figures\172-367 Elliott Ditch Figure 3.mxd - 8/28/2018 - 4:26:22 PM (mbruck)

SOURCE: ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: [HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://gto.arcgis.com/maps/world_imagery). LAST ACCESSED: 8/28/2018
 IMAGE DATE: 03/12/2011



Civil & Environmental Consultants, Inc.
 2704 Cherokee Farm Way, Suite 101 Knoxville, TN 37920
 865-977-9997 - 865-774-7767
www.cecinc.com

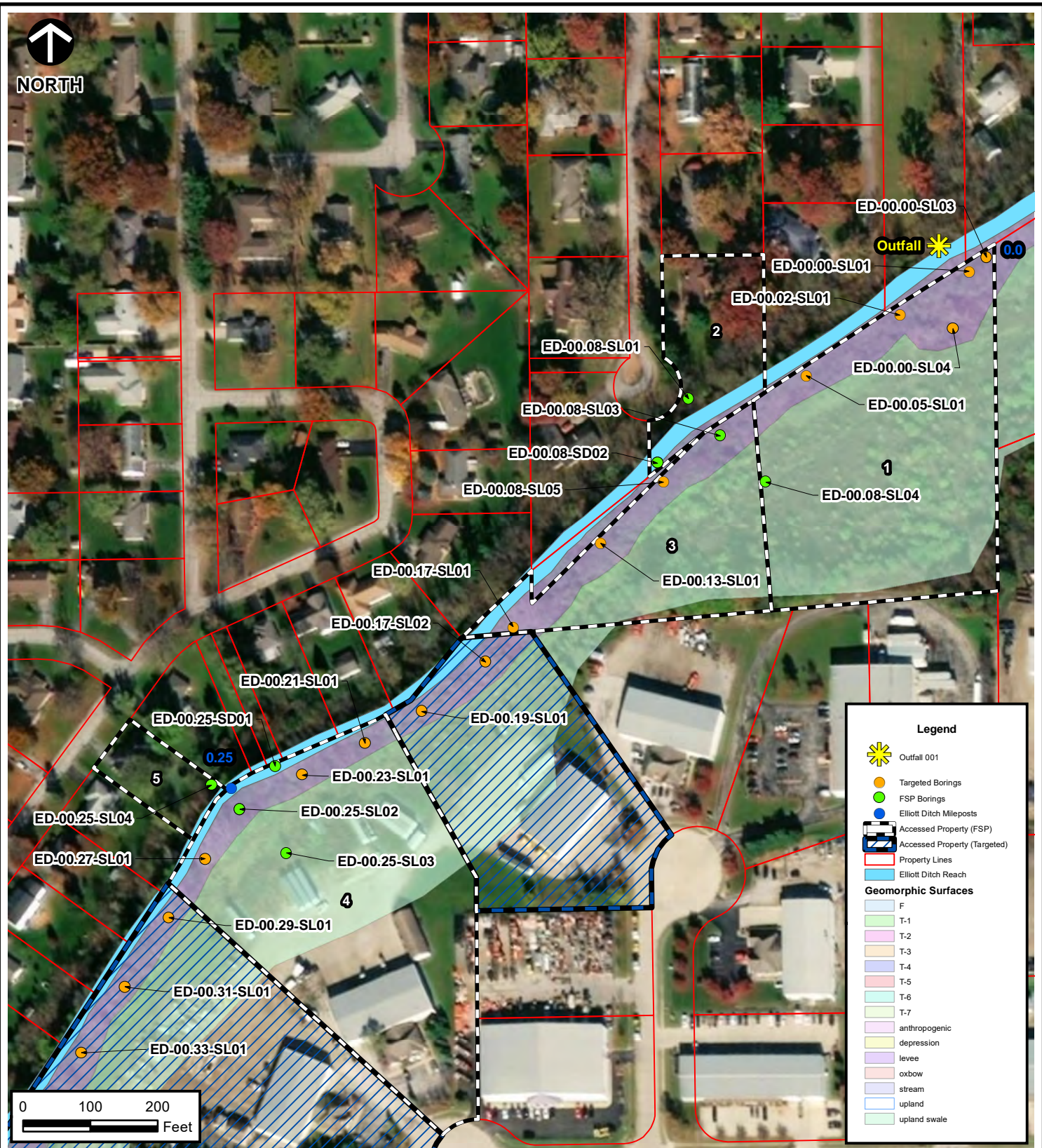
**ARCONIC INC. - LAFAYETTE OPERATIONS
 ELLIOTT DITCH
 FIELD SAMPLING REPORT
 LAFAYETTE, INDIANA**

ACCESSED PROPERTIES AND SAMPLING LOCATIONS (MILEPOST 0.0 -1.0)

DRAWN BY:	DMM	CHECKED BY:	JMB	APPROVED BY:	TLM*	FIGURE NO:
DATE:	AUGUST 28, 2018	DWG SCALE:	1" = 600'	PROJECT NO:	172-367.0002	3

Signature on File *

P:\2017\172-367\GIS\Maps\Elliott Ditch Report Figures\172-367 Elliott Ditch Figure 3A.mxd - 8/24/2018 - 3:31:58 PM (mbruck)



SOURCE: ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: [HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://gto.arcgis.com/maps/world_imagery). LAST ACCESSED: 8/24/2018
 IMAGE DATE: 03/12/2011



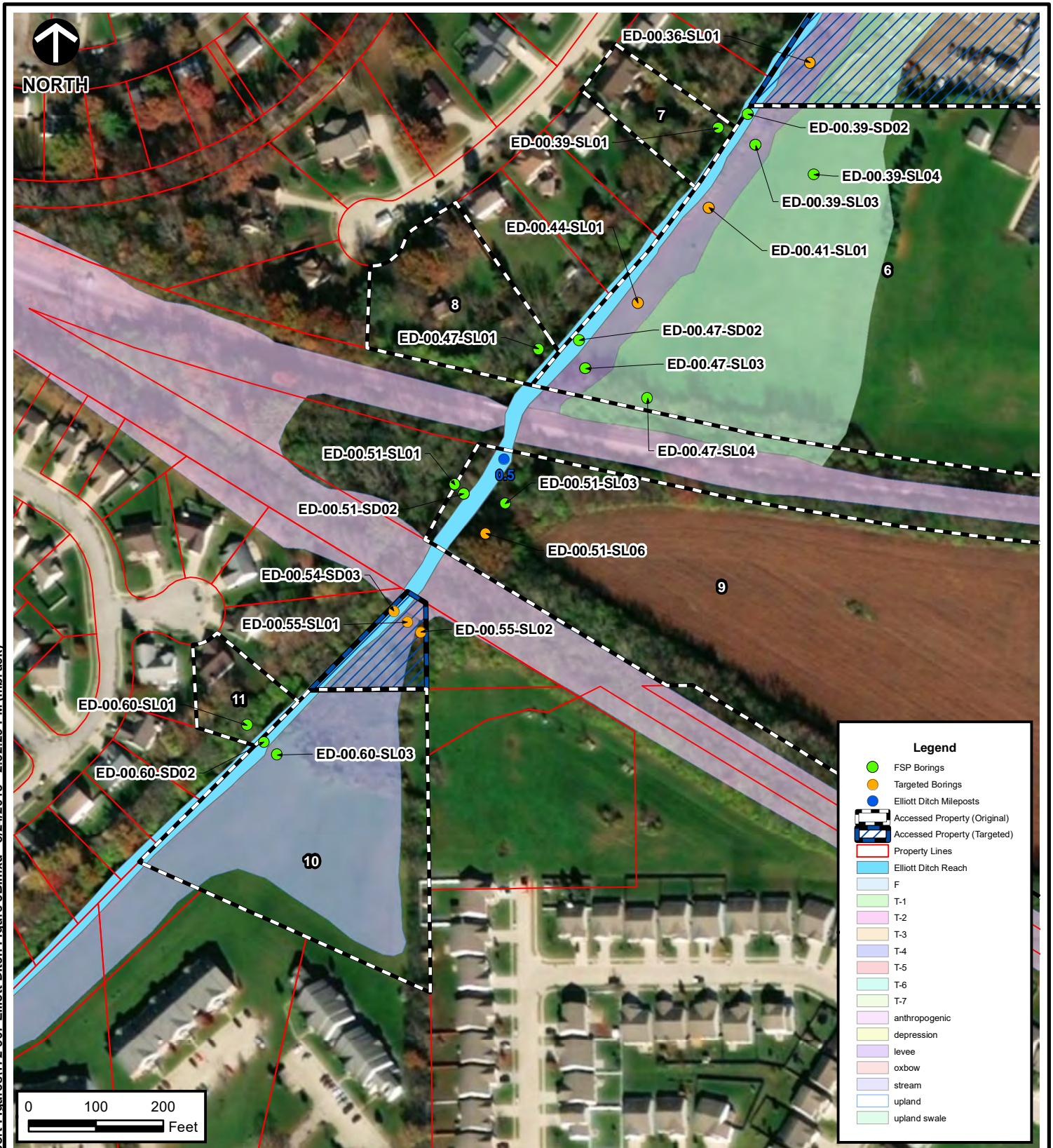
Civil & Environmental Consultants, Inc.
 2704 Cherokee Farm Way, Suite 101 Knoxville, TN 37920
 865-977-9997 - 865-774-7767
 www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
 ELLIOTT DITCH
 FIELD SAMPLING REPORT
 LAFAYETTE, INDIANA

SAMPLE LOCATIONS AND IDENTIFICATIONS

DRAWN BY:	DMM	CHECKED BY:	JMB	APPROVED BY:	TLM*	FIGURE NO:
DATE:	AUGUST 24, 2018	DWG SCALE:	1" = 200'	PROJECT NO:	172-367.0002	3A

Signature on File *



P:\2017\172-367\GIS\Maps\Elliott Ditch Report Figures\172-367 Elliott Ditch Figure 3B.mxd - 8/24/2018 - 2:52:29 PM (mbruck)

SOURCE: ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: [HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://gto.arcgis.com/maps/world_imagery). LAST ACCESSED: 8/24/2018
 IMAGE DATE: 03/12/2011



Civil & Environmental Consultants, Inc.
 2704 Cherokee Farm Way, Suite 101 Knoxville, TN 37920
 865-977-9997 - 865-774-7767
 www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
 ELLIOTT DITCH
 FIELD SAMPLING REPORT
 LAFAYETTE, INDIANA

SAMPLE LOCATIONS AND IDENTIFICATIONS

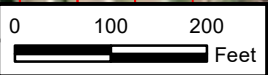
DRAWN BY:	DMM	CHECKED BY:	JMB	APPROVED BY:	TLM*	FIGURE NO:
DATE:	AUGUST 24, 2018	DWG SCALE:	1" = 200'	PROJECT NO:	172-367.0002	3B

Signature on File *



NORTH

P:\2017\172-367\GIS\Maps\Elliott Ditch Figure 3C.mxd - 8/28/2018 - 4:12:14 PM (mbruck)



Legend

- Targeted Borings
- FSP Borings
- Elliott Ditch Mileposts
- Accessed Property
- Inaccessible Property
- Property Lines
- Elliott Ditch Reach
- F
- T-1
- T-2
- T-3
- T-4
- T-5
- T-6
- T-7
- anthropogenic depression
- levee
- oxbow
- stream
- upland
- upland swale

SOURCE: ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: [HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://gto.arcgis.com/maps/world_imagery). LAST ACCESSED: 8/28/2018
 IMAGE DATE: 03/12/2011



Civil & Environmental Consultants, Inc.

2704 Cherokee Farm Way, Suite 101 Knoxville, TN 37920

865-977-9997 - 865-774-7767

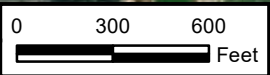
www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS ELLIOTT DITCH FIELD SAMPLING REPORT LAFAYETTE, INDIANA

SAMPLE LOCATIONS AND IDENTIFICATIONS

DRAWN BY:	DMM	CHECKED BY:	JMB	APPROVED BY:	TLM*	FIGURE NO:	3C
DATE:	AUGUST 28, 2018	DWG SCALE:	1" = 200'	PROJECT NO:	172-367.0002		

Signature on File *



Legend

- Targeted Borings
- Elliott Ditch Mileposts
- FSP Borings
- Substitute Sample Points
- Not Sampled
- Substitute Property
- Inaccessible Property
- Accessed Property
- Property Lines
- Elliott Ditch Reach

SOURCE: ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: [HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://gto.arcgis.com/maps/world_imagery). LAST ACCESSED: 8/28/2018
 IMAGE DATE: 03/12/2011



Civil & Environmental Consultants, Inc.
 2704 Cherokee Farm Way, Suite 101 Knoxville, TN 37920
 865-977-9997 - 865-774-7767
www.cecinc.com

**ARCONIC INC. - LAFAYETTE OPERATIONS
 ELLIOTT DITCH
 FIELD SAMPLING REPORT
 LAFAYETTE, INDIANA**

ACCESSED PROPERTIES AND SAMPLING LOCATIONS (MILEPOST 1.0-1.59)

DRAWN BY:	DMM	CHECKED BY:	JMB	APPROVED BY:	TLM*	FIGURE NO:
DATE:	AUGUST 28, 2018	DWG SCALE:	1" = 600'	PROJECT NO:	172-367.0002	4

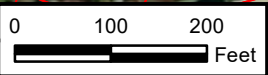
Signature on File *

P:\2017\172-367-GIS\Maps\Elliott Ditch Report Figures\172-367 Elliott Ditch Figure 4.mxd - 8/28/2018 - 2:38:14 PM (mbruck)



NORTH

P:\2017\172-367\GIS\Maps\Elliott Ditch Figure 4A.mxd - 8/24/2018 - 3:26:04 PM (mbruck)



SOURCE: ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: [HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://gto.arcgis.com/maps/world_imagery). LAST ACCESSED: 8/24/2018
 IMAGE DATE: 03/12/2011



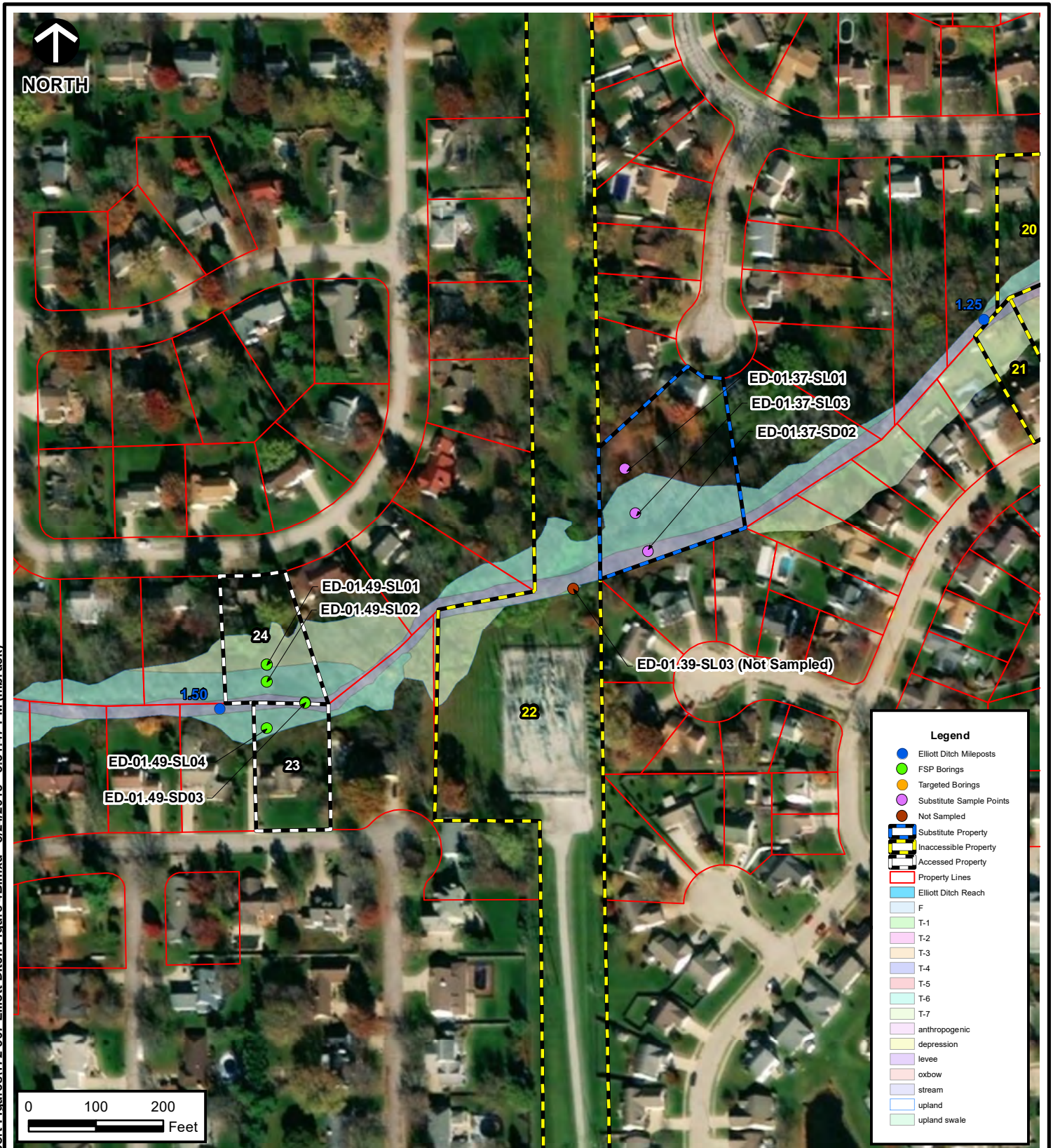
Civil & Environmental Consultants, Inc.
 2704 Cherokee Farm Way, Suite 101 Knoxville, TN 37920
 865-977-9997 - 865-774-7767
 www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
 ELLIOTT DITCH
 FIELD SAMPLING REPORT
 LAFAYETTE, INDIANA

SAMPLE LOCATIONS AND IDENTIFICATIONS

DRAWN BY:	DMM	CHECKED BY:	JMB	APPROVED BY:	TLM*	FIGURE NO:
DATE:	AUGUST 24, 2018	DWG SCALE:	1" = 200'	PROJECT NO:	172-367.0002	4A

Signature on File *



P:\2017\172-367-GIS\Maps\Elliott Ditch Figure 4B.mxd - 8/24/2018 - 3:31:47 PM (mbruck)

SOURCE: ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: [HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://gto.arcgis.com/maps/world_imagery). LAST ACCESSED: 8/24/2018
 IMAGE DATE: 03/12/2011



Civil & Environmental Consultants, Inc.
 2704 Cherokee Farm Way, Suite 101 Knoxville, TN 37920
 865-977-9997 - 865-774-7767
www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
ELLIOTT DITCH
FIELD SAMPLING REPORT
LAFAYETTE, INDIANA

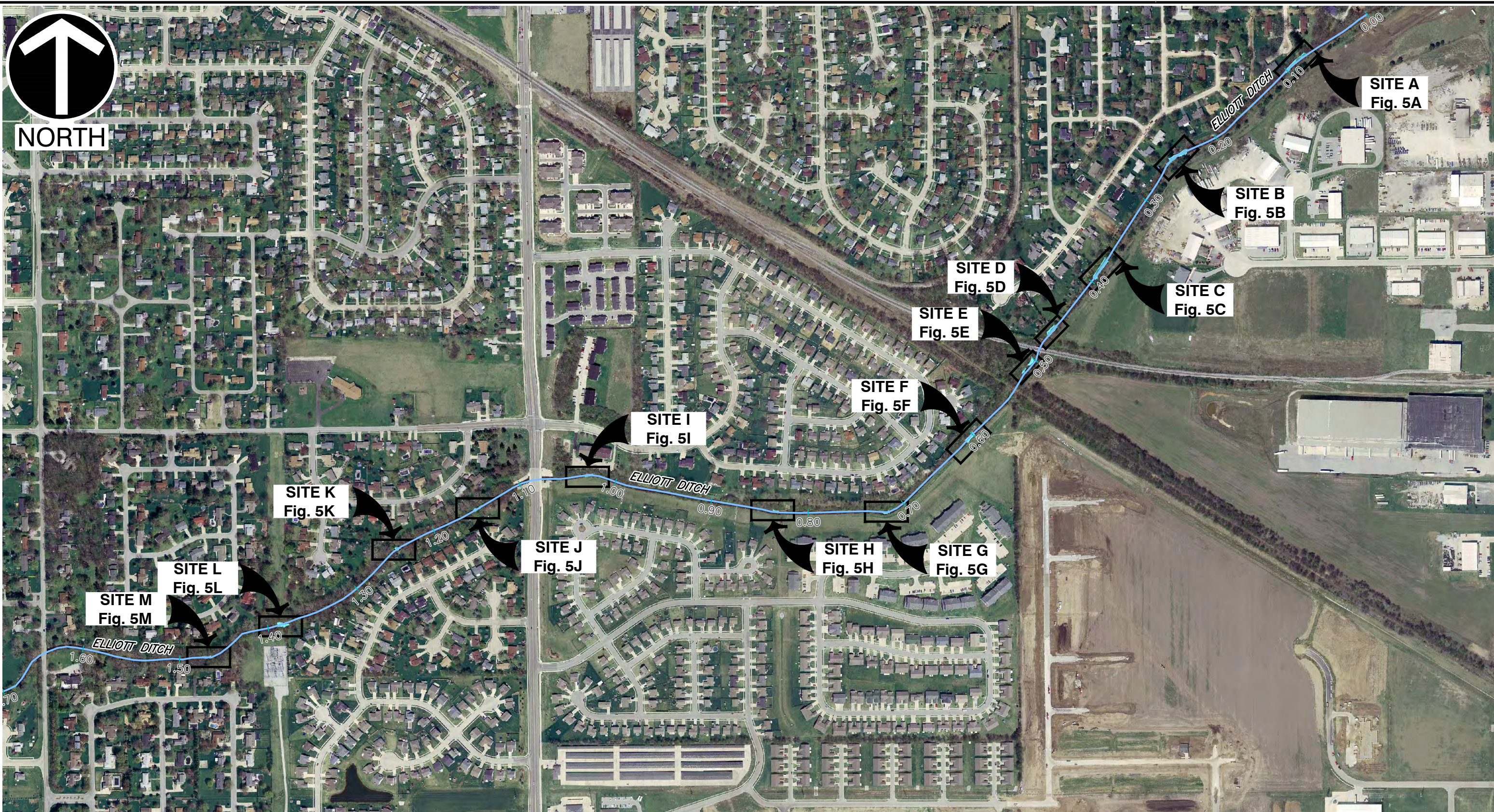
SAMPLE LOCATIONS AND IDENTIFICATIONS

DRAWN BY: DMM	CHECKED BY: JMB	APPROVED BY: TLM*	FIGURE NO: 4B
DATE: AUGUST 24, 2018	DWG SCALE: 1" = 200'	PROJECT NO: 172-367.0002	Signature on File *



NORTH

\\svr-knoxville\projects\2017\172-367-CADD\DWG\EC01\172367-EC01-ISOPACH LAYOUT.dwg(KEY MAP) LS(10/25/2017 9:00 AM - dmartinez)

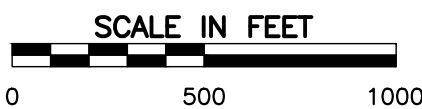


LEGEND

✕ SEDIMENT POLING LOCATION

REFERENCE

1. SEDIMENT COLLECTION DATA TAKEN BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC BY SURVEY CONDUCTED IN OCTOBER OF 2017.
2. IMAGERY FROM GOOGLE EARTH. IMAGERY DATE: 03/26/2016. DATE DOWNLOADED: 10/23/2017.



Civil & Environmental Consultants, Inc.

600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330

Ph: 304.933.3119 · Fax: 304.933.3327

www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS

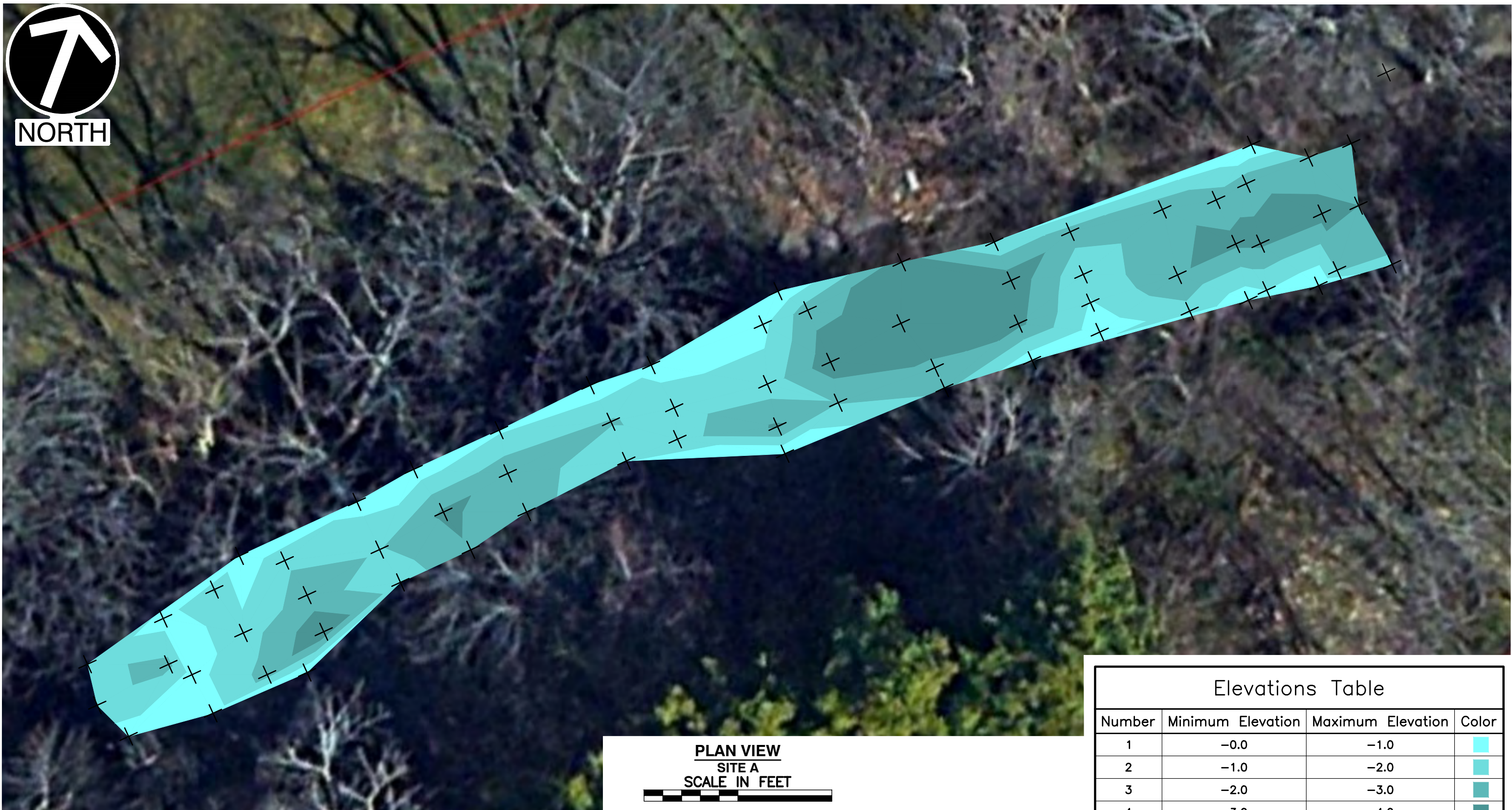
ELLIOTT DITCH

FIELD SAMPLING REPORT

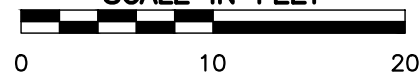
LAFAYETTE, INDIANA

POLING SUMMARY MAP

DRAWN BY:	DAM	CHECKED BY:	NSO	APPROVED BY:	JMB	FIGURE NO.:	5
DATE:	OCTOBER 2017	DWG SCALE:	AS NOTED	PROJECT NO.:	172-367		



PLAN VIEW
SITE A
SCALE IN FEET



Elevations Table

Number	Minimum Elevation	Maximum Elevation	Color
1	-0.0	-1.0	
2	-1.0	-2.0	
3	-2.0	-3.0	
4	-3.0	-4.0	

LEGEND

SEDIMENT POLING LOCATION

REFERENCE

1. SEDIMENT COLLECTION DATA TAKEN BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC BY SURVEY CONDUCTED IN OCTOBER OF 2017.
2. IMAGERY FROM GOOGLE EARTH. IMAGERY DATE: 03/26/2016. DATE DOWNLOADED: 10/23/2017.



Civil & Environmental Consultants, Inc.

600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330

Ph: 304.933.3119 · Fax: 304.933.3327

www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
ELLIOTT DITCH
FIELD SAMPLING REPORT
LAFAYETTE, INDIANA

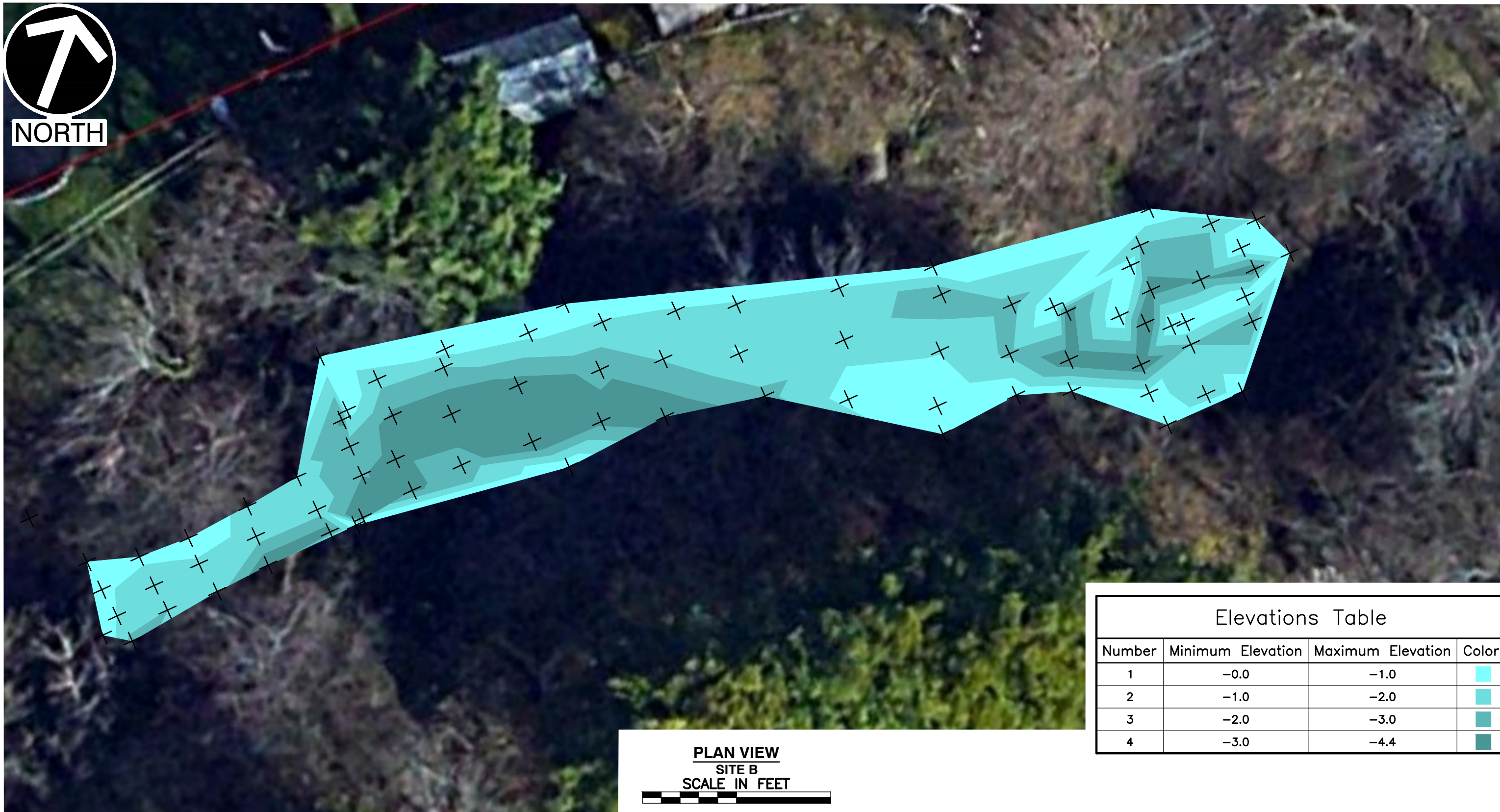
SEDIMENT POLING SITE A

DRAWN BY: DAM	CHECKED BY: NSO	APPROVED BY: JMB	FIGURE NO.:
DATE: OCTOBER 2017	DWG SCALE: AS NOTED	PROJECT NO: 172-367	5A

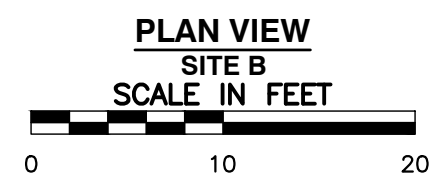
I:\svr-knoxville\projects\2017\172-367\CADD\DWG\EC01\172367-EC01-ISOPACH_LAYOUT.dwg[1] LS:(10/25/2017 - dmartinez) - LP: 10/25/2017 9:00 AM



NORTH



Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-0.0	-1.0	
2	-1.0	-2.0	
3	-2.0	-3.0	
4	-3.0	-4.4	



LEGEND

✕ SEDIMENT POLING LOCATION

REFERENCE

1. SEDIMENT COLLECTION DATA TAKEN BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC BY SURVEY CONDUCTED IN OCTOBER OF 2017.
2. IMAGERY FROM GOOGLE EARTH. IMAGERY DATE: 03/26/2016. DATE DOWNLOADED: 10/23/2017.



Civil & Environmental Consultants, Inc.
600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330
Ph: 304.933.3119 · Fax: 304.933.3327
www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
ELLIOTT DITCH
FIELD SAMPLING REPORT
LAFAYETTE, INDIANA

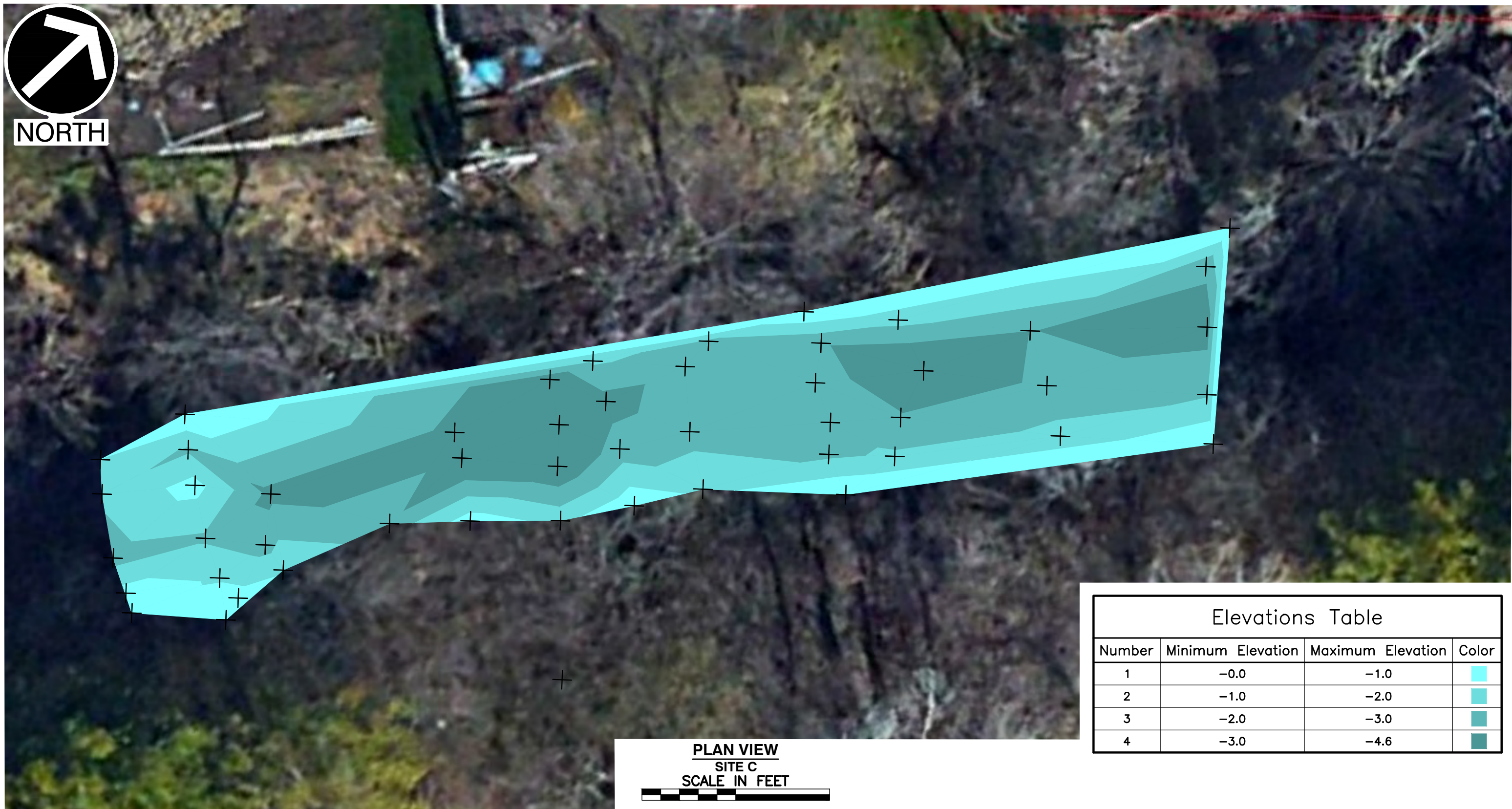
SEDIMENT POLING SITE B

DRAWN BY: DAM	CHECKED BY: NSO	APPROVED BY: JMB	FIGURE NO.:
DATE: OCTOBER 2017	DWG SCALE: AS NOTED	PROJECT NO: 172-367	5B

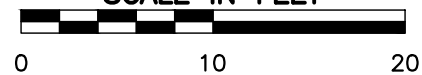
\\sr-knoxville\projects\2017\172-367\CADD\DWG\EC01\172367-EC01-ISOPACH_LAYOUT.dwg[10/25/2017 9:00 AM] LP: 10/25/2017 9:00 AM



NORTH



PLAN VIEW
SITE C
SCALE IN FEET



Elevations Table

Number	Minimum Elevation	Maximum Elevation	Color
1	-0.0	-1.0	
2	-1.0	-2.0	
3	-2.0	-3.0	
4	-3.0	-4.6	

LEGEND

✕ SEDIMENT POLING LOCATION

REFERENCE

1. SEDIMENT COLLECTION DATA TAKEN BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC BY SURVEY CONDUCTED IN OCTOBER OF 2017.
2. IMAGERY FROM GOOGLE EARTH. IMAGERY DATE: 03/26/2016. DATE DOWNLOADED: 10/23/2017.



Civil & Environmental Consultants, Inc.

600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330

Ph: 304.933.3119 · Fax: 304.933.3327

www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
ELLIOTT DITCH
FIELD SAMPLING REPORT
LAFAYETTE, INDIANA

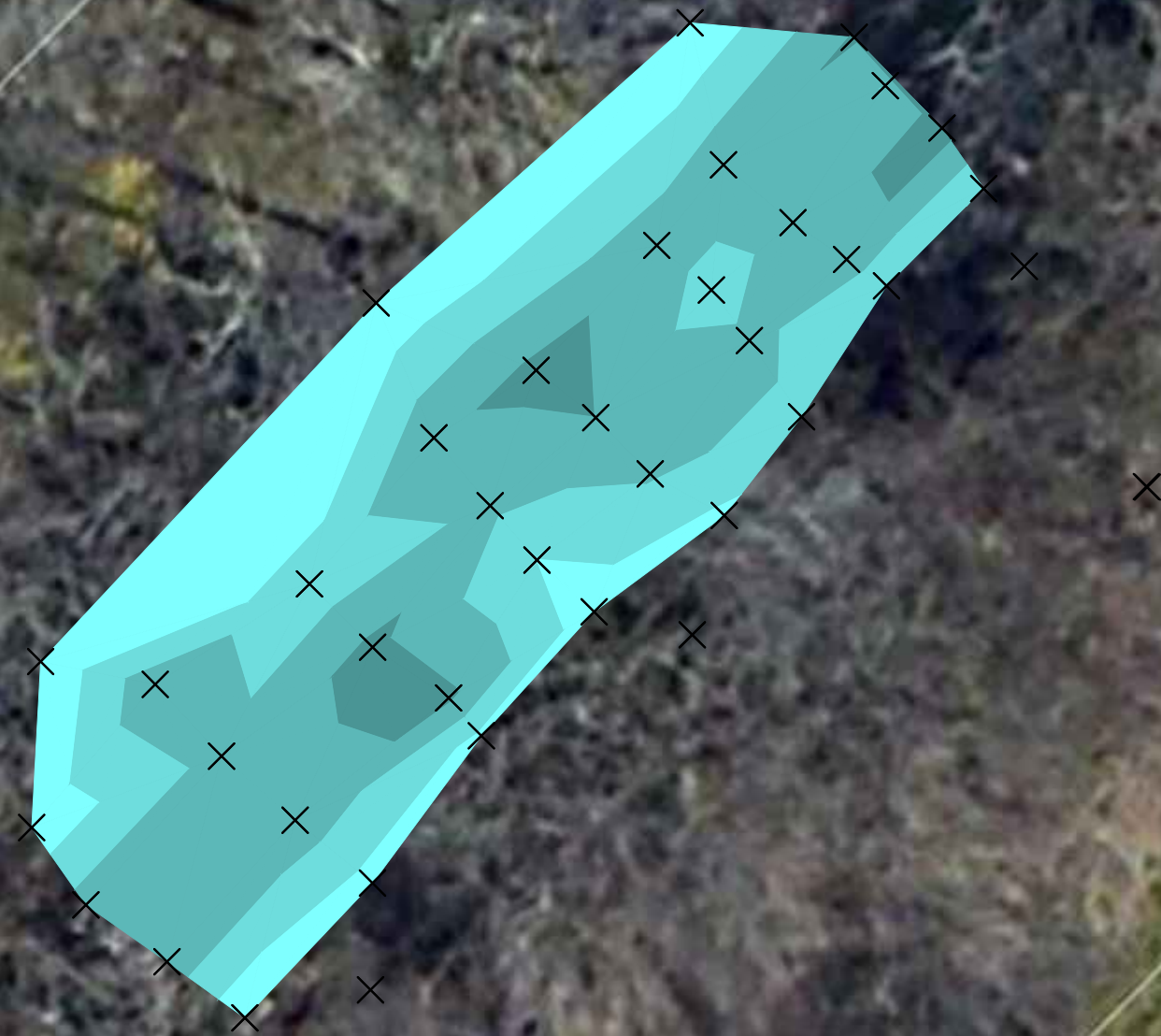
SEDIMENT POLING SITE C

DRAWN BY: DAM	CHECKED BY: NSO	APPROVED BY: JMB	FIGURE NO.:
DATE: OCTOBER 2017	DWG SCALE: AS NOTED	PROJECT NO: 172-367	5C

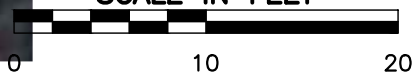
\\sr-knoxville\projects\2017\172-367\CADD\DWG\EC01\172367-EC01-ISOPACH_LAYOUT.dwg EC01 - LP: 10/25/2017 9:01 AM



NORTH



PLAN VIEW
SITE D
SCALE IN FEET



Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-0.0	-1.0	
2	-1.0	-2.0	
3	-2.0	-3.0	
4	-3.0	-3.5	

LEGEND

X SEDIMENT POLING LOCATION

REFERENCE

1. SEDIMENT COLLECTION DATA TAKEN BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC BY SURVEY CONDUCTED IN OCTOBER OF 2017.
2. IMAGERY FROM GOOGLE EARTH. IMAGERY DATE: 03/26/2016. DATE DOWNLOADED: 10/23/2017.



Civil & Environmental Consultants, Inc.

600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330

Ph: 304.933.3119 · Fax: 304.933.3327

www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
ELLIOTT DITCH
FIELD SAMPLING REPORT
LAFAYETTE, INDIANA

SEDIMENT POLING SITE D

DRAWN BY: DAM	CHECKED BY: NSO	APPROVED BY: JMB	FIGURE NO.:
DATE: OCTOBER 2017	DWG SCALE: AS NOTED	PROJECT NO: 172-367	5D

\\sr-knoxville\projects\2017\172-367\CADD\DWG\EC01\172367-EC01-ISOPACH LAYOUT.dwg LS:(10/25/2017 - dmartinez) - LP: 10/25/2017 9:01 AM



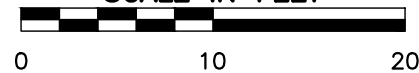
NORTH

\\sr-knoxville\projects\2017\172-367\CADD\DWG\EC01\172367-EC01-ISOPACH LAYOUT.dwg[E] LS:(10/25/2017 - dmartinez) - LP: 10/25/2017 9:01 AM



Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-0.0	-1.0	
2	-1.0	-2.0	
3	-2.0	-3.0	

PLAN VIEW
SITE E
SCALE IN FEET



LEGEND

✕ SEDIMENT POLING LOCATION

REFERENCE

1. SEDIMENT COLLECTION DATA TAKEN BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC BY SURVEY CONDUCTED IN OCTOBER OF 2017.
2. IMAGERY FROM GOOGLE EARTH. IMAGERY DATE: 03/26/2016. DATE DOWNLOADED: 10/23/2017.



Civil & Environmental Consultants, Inc.

600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330

Ph: 304.933.3119 · Fax: 304.933.3327

www.cecinc.com

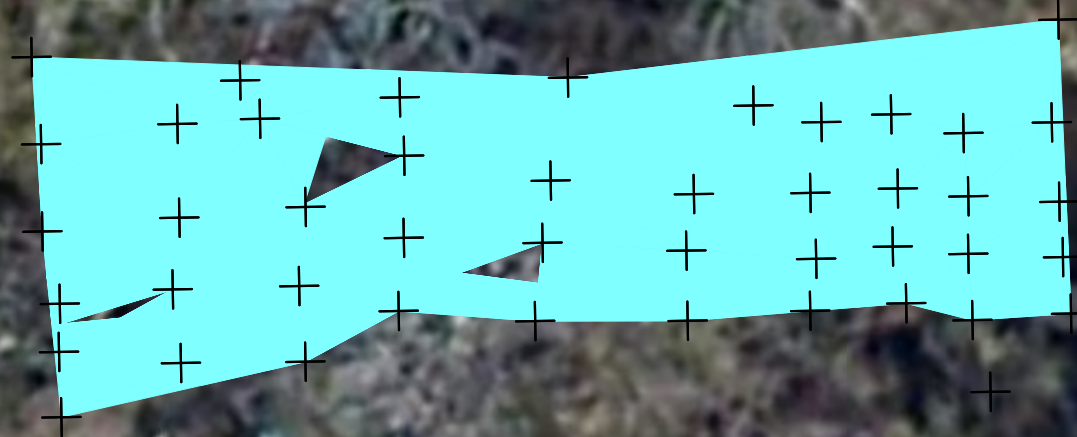
ARCONIC INC. - LAFAYETTE OPERATIONS
ELLIOTT DITCH
FIELD SAMPLING REPORT
LAFAYETTE, INDIANA

SEDIMENT POLING SITE E

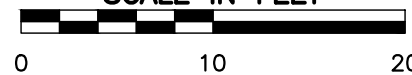
DRAWN BY: DAM	CHECKED BY: NSO	APPROVED BY: JMB	FIGURE NO.:
DATE: OCTOBER 2017	DWG SCALE: AS NOTED	PROJECT NO: 172-367	



NORTH



PLAN VIEW
SITE F
SCALE IN FEET



Elevations Table

Number	Minimum Elevation	Maximum Elevation	Color
1	-0.0	-5.0	
2	-1.0	-1.5	
3	-1.5	-2.0	
4	-2.0	-2.6	

LEGEND

✕ SEDIMENT POLING LOCATION

REFERENCE

1. SEDIMENT COLLECTION DATA TAKEN BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC BY SURVEY CONDUCTED IN OCTOBER OF 2017.
2. IMAGERY FROM GOOGLE EARTH. IMAGERY DATE: 03/26/2016. DATE DOWNLOADED: 10/23/2017.



Civil & Environmental Consultants, Inc.

600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330

Ph: 304.933.3119 · Fax: 304.933.3327

www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
ELLIOTT DITCH
FIELD SAMPLING REPORT
LAFAYETTE, INDIANA

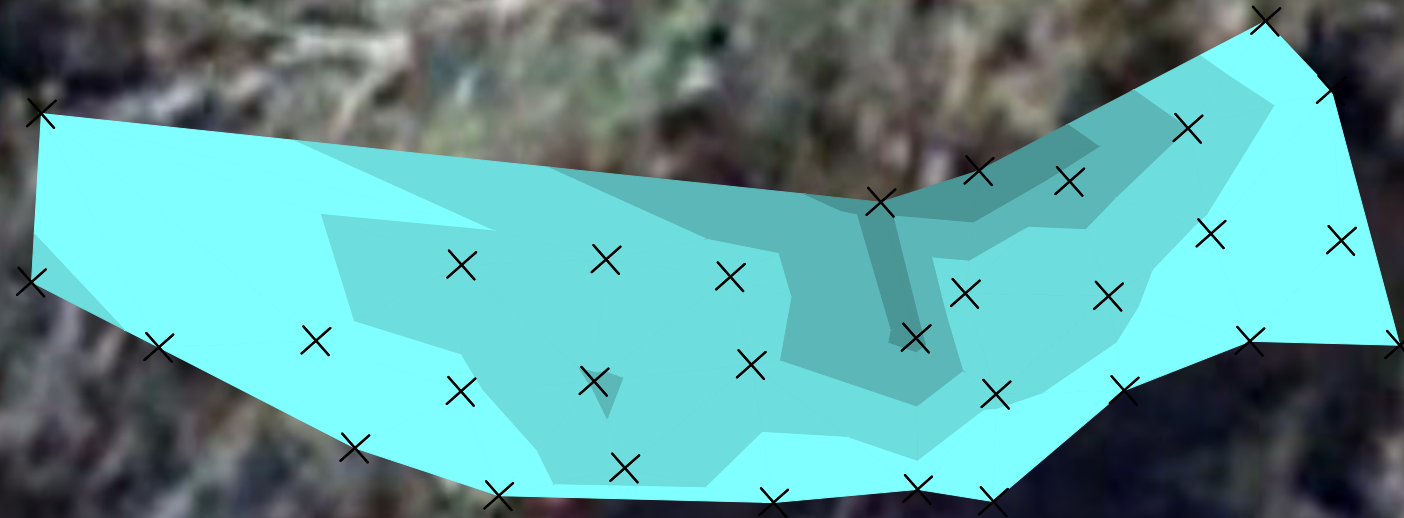
SEDIMENT POLING SITE F

DRAWN BY: DAM	CHECKED BY: NSO	APPROVED BY: JMB	FIGURE NO.:
DATE: OCTOBER 2017	DWG SCALE: AS NOTED	PROJECT NO: 172-367	5F

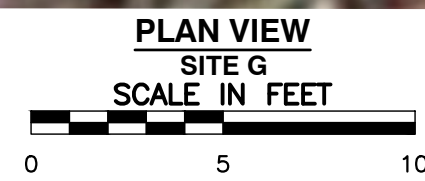
\\sr-knoxville\projects\2017\172-367\CADD\DWG\ECO1\172367-ECO1-ISOPACH LAYOUT.dwg LS:(10/25/2017 - dmartinez) - LP: 10/25/2017 9:01 AM



NORTH



Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-0.0	-1.0	
2	-1.0	-2.0	
3	-2.0	-3.0	
4	-3.0	-4.4	



LEGEND

X SEDIMENT POLING LOCATION

REFERENCE

1. SEDIMENT COLLECTION DATA TAKEN BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC BY SURVEY CONDUCTED IN OCTOBER OF 2017.
2. IMAGERY FROM GOOGLE EARTH. IMAGERY DATE: 03/26/2016. DATE DOWNLOADED: 10/23/2017.



Civil & Environmental Consultants, Inc.
600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330
Ph: 304.933.3119 · Fax: 304.933.3327
www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
ELLIOTT DITCH
FIELD SAMPLING REPORT
LAFAYETTE, INDIANA

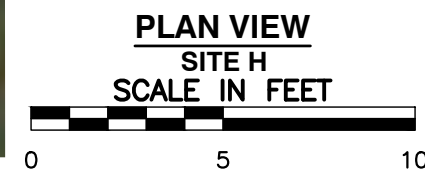
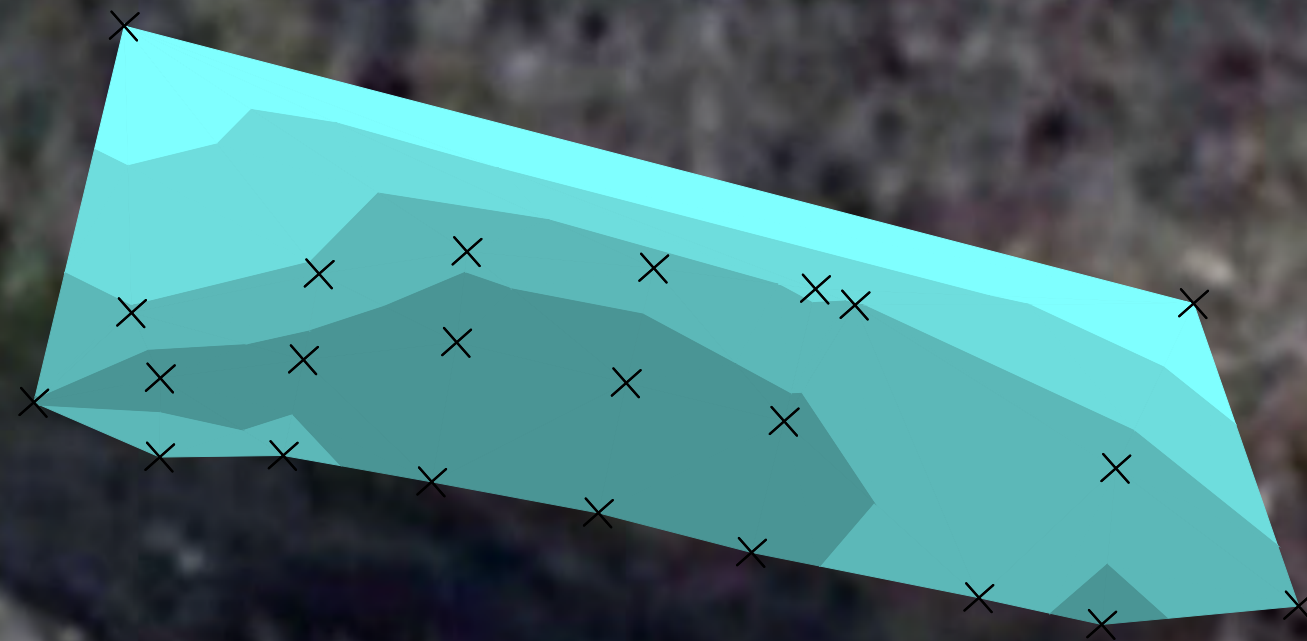
SEDIMENT POLING SITE G

DRAWN BY: DAM	CHECKED BY: NSO	APPROVED BY: JMB	FIGURE NO.:
DATE: OCTOBER 2017	DWG SCALE: AS NOTED	PROJECT NO: 172-367	5G

\\sr-knoxville\projects\2017\172-367\CADD\DWG\EC01\172367-EC01-ISOPACH LAYOUT.dwg LS:(10/25/2017 - dmartinez) - LP: 10/25/2017 9:01 AM



NORTH



Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-0.0	-0.2	
2	-0.2	-0.4	
3	-0.4	-0.6	
4	-0.6	-0.8	

LEGEND

X SEDIMENT POLING LOCATION

REFERENCE

1. SEDIMENT COLLECTION DATA TAKEN BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC BY SURVEY CONDUCTED IN OCTOBER OF 2017.
2. IMAGERY FROM GOOGLE EARTH. IMAGERY DATE: 03/26/2016. DATE DOWNLOADED: 10/23/2017.

CEC
Civil & Environmental Consultants, Inc.
 600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330
 Ph: 304.933.3119 · Fax: 304.933.3327
 www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
 ELLIOTT DITCH
 FIELD SAMPLING REPORT
 LAFAYETTE, INDIANA

SEDIMENT POLING SITE H

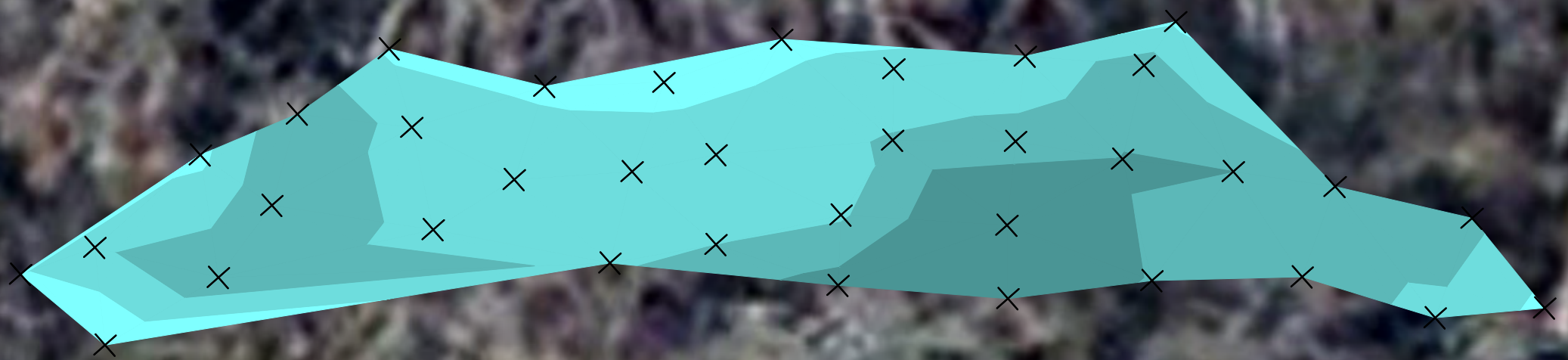
DRAWN BY: DAM	CHECKED BY: NSO	APPROVED BY: JMB	FIGURE NO.:
DATE: OCTOBER 2017	DWG SCALE: AS NOTED	PROJECT NO: 172-367	5H

\\syr-knoxville\projects\2017\172-367\CADD\DWG\EC01\172367-EC01-ISOPACH LAYOUT.dwg{H} LS:(10/25/2017 - dmartinez) - LP: 10/25/2017 9:02 AM

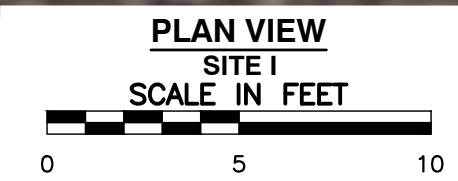


NORTH

\\sr-knoxville\projects\2017\172-367\CADD\DWG\EC01\172367-EC01-ISOPACH_LAYOUT.dwg LS:(10/25/2017 - dmartinez) - LP: 10/25/2017 9:02 AM



Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-0.0	-0.5	
2	-0.5	-1.0	
3	-1.0	-1.5	
4	-1.5	-2.4	



LEGEND

X SEDIMENT POLING LOCATION

REFERENCE

1. SEDIMENT COLLECTION DATA TAKEN BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC BY SURVEY CONDUCTED IN OCTOBER OF 2017.
2. IMAGERY FROM GOOGLE EARTH. IMAGERY DATE: 03/26/2016. DATE DOWNLOADED: 10/23/2017.



Civil & Environmental Consultants, Inc.
600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330
Ph: 304.933.3119 · Fax: 304.933.3327
www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
ELLIOTT DITCH
FIELD SAMPLING REPORT
LAFAYETTE, INDIANA

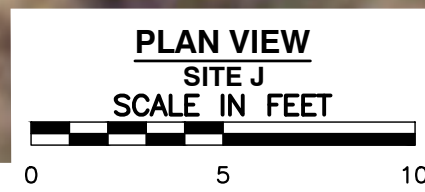
SEDIMENT POLING SITE I

DRAWN BY: DAM	CHECKED BY: NSO	APPROVED BY: JMB	FIGURE NO.:
DATE: OCTOBER 2017	DWG SCALE: AS NOTED	PROJECT NO: 172-367	51



NORTH

\\sr-knoxville\projects\2017\172-367\CADD\DWG\EC01\172367-EC01-ISOPACH_LAYOUT.dwg LS:(10/25/2017 - dmartinez) - LP: 10/25/2017 9:02 AM



Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-0.0	-0.4	
2	-0.4	-0.6	
3	-0.6	-0.8	
4	-0.8	-1.8	

LEGEND

✕ SEDIMENT POLING LOCATION

REFERENCE

1. SEDIMENT COLLECTION DATA TAKEN BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC BY SURVEY CONDUCTED IN OCTOBER OF 2017.
2. IMAGERY FROM GOOGLE EARTH. IMAGERY DATE: 03/26/2016. DATE DOWNLOADED: 10/23/2017.



Civil & Environmental Consultants, Inc.
 600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330
 Ph: 304.933.3119 · Fax: 304.933.3327
 www.cecinc.com

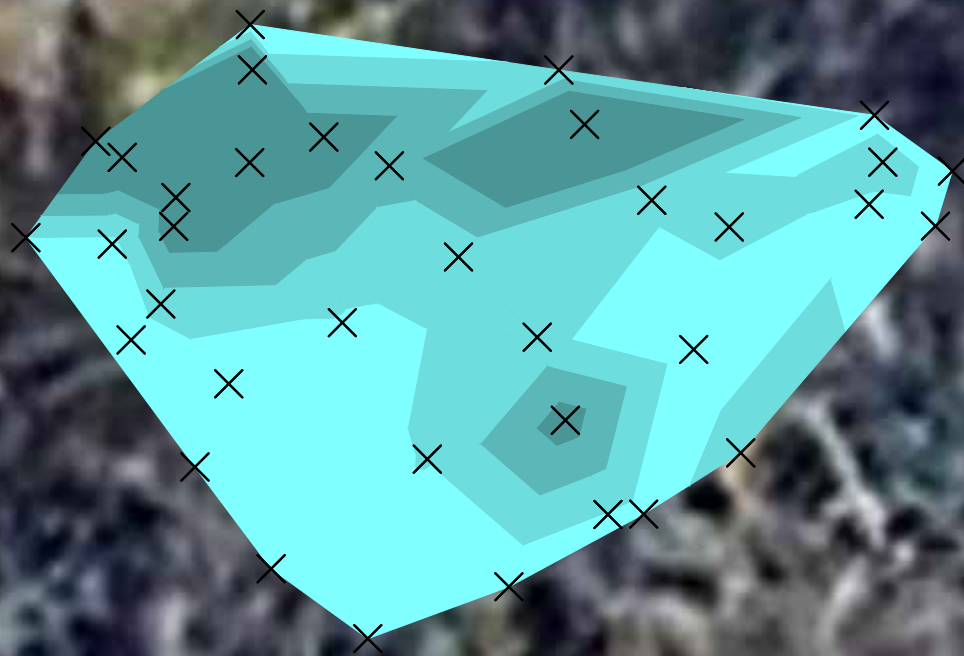
ARCONIC INC. - LAFAYETTE OPERATIONS
 ELLIOTT DITCH
 FIELD SAMPLING REPORT
 LAFAYETTE, INDIANA

SEDIMENT POLING SITE J

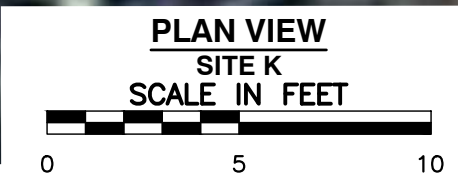
DRAWN BY: DAM	CHECKED BY: NSO	APPROVED BY: JMB	FIGURE NO.:
DATE: OCTOBER 2017	DWG SCALE: AS NOTED	PROJECT NO: 172-367	5J



NORTH



Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-0.0	-0.5	
2	-0.5	-1.0	
3	-1.0	-1.5	
4	-1.5	-3.0	



LEGEND

X SEDIMENT POLING LOCATION

REFERENCE

1. SEDIMENT COLLECTION DATA TAKEN BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC BY SURVEY CONDUCTED IN OCTOBER OF 2017.
2. IMAGERY FROM GOOGLE EARTH. IMAGERY DATE: 03/26/2016. DATE DOWNLOADED: 10/23/2017.

Civil & Environmental Consultants, Inc.
600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330
Ph: 304.933.3119 · Fax: 304.933.3327
www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
ELLIOTT DITCH
FIELD SAMPLING REPORT
LAFAYETTE, INDIANA

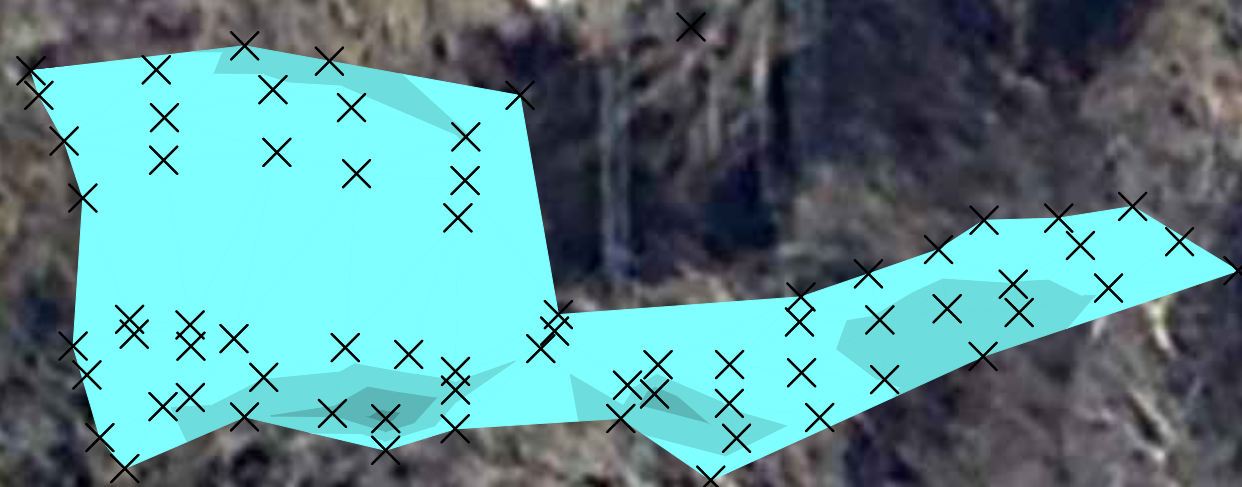
SEDIMENT POLING SITE K

DRAWN BY: DAM	CHECKED BY: NSO	APPROVED BY: JMB	FIGURE NO.:
DATE: OCTOBER 2017	DWG SCALE: AS NOTED	PROJECT NO: 172-367	5K

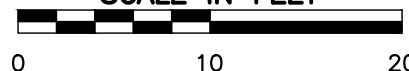
\\sr-knoxville\projects\2017\172-367\CADD\DWG\EC01\172367-EC01-ISOPACH LAYOUT.dwg{k} LS:(10/25/2017 - dmartinez) - LP: 10/25/2017 9:02 AM



NORTH



PLAN VIEW
SITE L
SCALE IN FEET



Elevations Table

Number	Minimum Elevation	Maximum Elevation	Color
1	-0.0	-1.0	
2	-1.0	-2.0	
3	-2.0	-3.0	
4	-3.0	-3.4	

LEGEND

X SEDIMENT POLING LOCATION

REFERENCE

1. SEDIMENT COLLECTION DATA TAKEN BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC BY SURVEY CONDUCTED IN OCTOBER OF 2017.
2. IMAGERY FROM GOOGLE EARTH. IMAGERY DATE: 03/26/2016. DATE DOWNLOADED: 10/23/2017.



Civil & Environmental Consultants, Inc.

600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330

Ph: 304.933.3119 · Fax: 304.933.3327

www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
ELLIOTT DITCH
FIELD SAMPLING REPORT
LAFAYETTE, INDIANA

SEDIMENT POLING SITE L

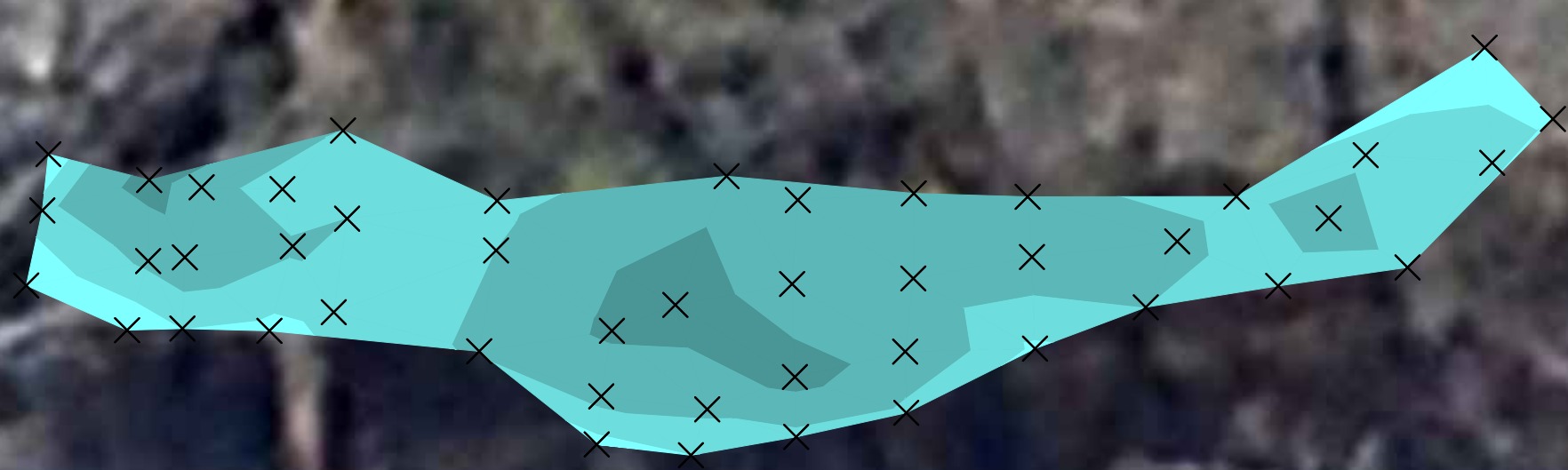
DRAWN BY: DAM	CHECKED BY: NSO	APPROVED BY: JMB	FIGURE NO.:
DATE: OCTOBER 2017	DWG SCALE: AS NOTED	PROJECT NO: 172-367	5L

\\sr-knoxville\projects\2017\172-367\CADD\DWG\EC01\172367-EC01-ISOPACH LAYOUT.dwg\LS:(10/25/2017 - dmartinez) - LP: 10/25/2017 9:03 AM

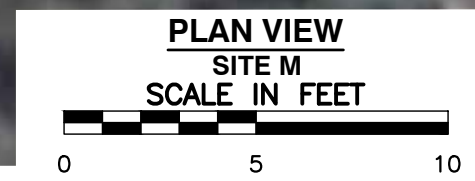


NORTH

\\sr-knoxville\projects\2017\172-367\CADD\DWG\EC01\172367-EC01-ISOPACH LAYOUT.dwg[M] LS:(10/25/2017 9:03 AM - LP: 10/25/2017 9:03 AM - dmartinez)



Elevations Table			
Number	Minimum Elevation	Maximum Elevation	Color
1	-0.0	-0.2	
2	-0.2	-0.5	
3	-0.5	-1.0	
4	-1.0	-1.3	



LEGEND

X SEDIMENT POLING LOCATION

REFERENCE

1. SEDIMENT COLLECTION DATA TAKEN BY CIVIL & ENVIRONMENTAL CONSULTANTS, INC BY SURVEY CONDUCTED IN OCTOBER OF 2017.
2. IMAGERY FROM GOOGLE EARTH. IMAGERY DATE: 03/26/2016. DATE DOWNLOADED: 10/23/2017.

Civil & Environmental Consultants, Inc.
600 Marketplace Ave · Suite 200 · Bridgeport, WV 26330
Ph: 304.933.3119 · Fax: 304.933.3327
www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
ELLIOTT DITCH
FIELD SAMPLING REPORT
LAFAYETTE, INDIANA

SEDIMENT POLING SITE M

DRAWN BY: DAM	CHECKED BY: NSO	APPROVED BY: JMB	FIGURE NO.:
DATE: OCTOBER 2017	DWG SCALE: AS NOTED	PROJECT NO: 172-367	5M

APPENDIX I
STUDY AREA ACCESS PLAN

**STUDY AREA ACCESS PLAN
REACHES 1, 2, AND 3 OF ELLIOTT DITCH
IMPLEMENTATION OF THE FIELD SAMPLING PLAN**

PREPARED FOR:



ARCONIC

**ARCONIC LAFAYETTE OPERATIONS
3131 EAST MAIN STREET
LAFAYETTE, INDIANA**

PREPARED BY:

**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
2704 CHEROKEE FARM WAY, SUITE 101
KNOXVILLE, TENNESSEE 37920**

CEC PROJECT 172-367.0002

JULY 2017



Civil & Environmental Consultants, Inc.

TABLE OF CONTENTS

	Page
1.0 INTRODUCTION.....	1
1.1 PURPOSE.....	1
1.2 ELLIOTT DITCH BACKGROUND.....	1
1.3 GENERAL AREA DESCRIPTION.....	2
1.4 FIELD SAMPLING PLAN SUMMARY.....	2
2.0 ACCESS PLAN.....	4
2.1 CONSIDERATIONS.....	4
2.2 RODDING.....	4
2.3 SOIL AND SEDIMENT SAMPLING.....	5
2.4 LOCAL GOVERNMENT OUTREACH.....	7
2.5 PRIVATE PROPERTY OWNER OUTREACH.....	7
3.0 RECORD KEEPING.....	9

TABLES

- Table 1. Properties Expected to be Accessed in Support of Rodding
Table 2. Properties Expected to be Accessed in Support of Sampling

FIGURES

- Figure 1. Elliott Ditch Study Area
Figure 2. Properties to Access Milepost 0.0 to 1.0
Figure 3. Properties to Access Milepost 1.0 to 1.59

APPENDICES

- Appendix A. Example E-Mail or Mail Correspondence
Appendix B. Elliott Ditch Field Sampling Fact Sheet
Appendix C. Example Access Agreement

1.0 INTRODUCTION

1.1 PURPOSE

The purpose of this Study Area Access Plan, or Access Plan for short, is to provide the framework for engaging private property owners whose parcels contain proposed upland soil sampling locations or preferred access points to Elliott Ditch in support of implementing the Field Sampling Plan (FSP). This plan will specify the strategy and media to be used when engaging private property owners. An Access Agreement prepared and executed by Arconic, Inc. (Arconic) will be used as the vehicle to authorize members of the project team to access private property for either reason. The Access Plan will also identify local government officials that will be informed of the project such that they can either answer questions from concerned citizens or direct them to members of the project team. Implementation of this Access Plan and procurement of the necessary Access Agreements will occur prior to the implementation of field tasks associated with the Elliott Ditch FSP.

1.2 ELLIOTT DITCH BACKGROUND

The project setting includes an approximate 1.59-mile section of Elliott Ditch starting at Arconic Outfall 001 (Milepost 0.0) and ending at Milepost 1.59. This represents the portion of the stream that appears to have been anthropogenically straightened and channelized over time. Elliott Ditch receives industrial discharges from the Arconic Lafayette Operations Outfall 001. The discharges include treated sanitary and industrial process water, as well as storm water runoff from the facility. Polychlorinated biphenyls (PCBs) are present in the Elliott Ditch watershed from historical releases at Outfall 001 and extend to the County Road 350 South Bridge based on samples collected by Anchor QEA in 2004 and 2010. The PCB concentrations range from less than 1 milligram per Kilogram (mg/Kg) to 27 mg/Kg at the previously sampled locations. The horizontal and vertical extent of PCB impacts are not currently delineated within the channel or floodplain. Arconic is subject to Resource Conservation and Recovery Act (RCRA) Corrective Action (CA) per the Indiana Department of Environmental Management (IDEM) letter (dated February 11, 2011). As such, the FSP was prepared by TetraTech CES and approved by IDEM

and the United States Environmental Protection Agency (EPA) Region 5 in support of the assessment of PCB impacts to Elliott Ditch.

1.3 GENERAL AREA DESCRIPTION

Elliott Ditch resides roughly a mile to the south of the Arconic Lafayette Operations in Lafayette, Indiana. The general area includes residential, commercial, and industrial developments. Bordering the stream in the 1.59-mile project area is primarily residential properties to the north and to the south after the railroad crossing near the Milepost 0.5. To the south of Elliott Ditch prior to the railroad crossing are properties used for commercial and industrial purposes. The residential properties appear to include both single-family dwellings as well as apartment complexes. Few properties appear to have paved access from local roads to the backsides of the dwellings, near Elliott Ditch. Close to the Milepost 1.4, there is an overhead power line right-of-way that includes a substation on the southern bank of the stream.

The dense residential development and few public access points limit access to the stream bank. Once at the stream bank, access to the stream itself is further limited by the steep banks associated with the anthropogenic straightening and overgrown vegetation within the study area. Please refer to Figure 1 for the portion of Elliott Ditch included in the implementation of this FSP and an overview of the general area.

1.4 FIELD SAMPLING PLAN SUMMARY

The FSP includes two separate field tasks. The first task includes rodding within the stream channel to assess sediment thicknesses and extents. This task will require only a few access points since the field staff will remain within the footprint of Elliott Ditch for the majority of the effort. Access in support of this task will target public points, where available, then rely on permissions from private property owners as a secondary option.

The second field effort includes the collection of soil and sediment samples from a series of transects situated throughout the targeted 1.59-mile stretch of Elliott Ditch. The transects run

perpendicular to flow in the stream and, by design, target soil and sediment from different geomorphic surfaces. Many of the upland soil sampling locations are situated outside of the stream bank on private property and will require access in order to collect samples.

2.0 ACCESS PLAN

The proposed Access Plan will be followed in support of implementing the FSP. Deviations from the plan, when necessary, will be communicated to Arconic, local government, and private property owners to maintain trustworthy relationships and prevent against unauthorized access.

2.1 CONSIDERATIONS

There are a number of factors that were taken into consideration when preparing this Access Plan, as identified in the following. Each of the following factors was used to support the development of a plan that prioritizes the safety of CEC employees and engages and builds trustworthy relationships with targeted, private property owners and local government:

- Safety
- Public Access Locations
- Private Access Locations
- Proposed Sampling Locations
- Vegetation and Streambank Slope
- Field Task Requirements

2.2 RODDING

The rodding task will require CEC field staff to mobilize surveying equipment and rods into the stream to collect sediment thickness information. Ideally, the field staff would be able to park relatively close to Elliott Ditch to don chest waders and prepare equipment before accessing the stream. Based on a review of property information provided by the Tippecanoe County GIS Department, public access points on this stretch of Elliott Ditch do not exist. Therefore, access via private property will be required to support the rodding task. CEC will access Elliott Ditch in support of the rodding task from parcels that contain upland soil sampling locations such that additional access agreements are not required. The parcels targeted for use are identified in the following table. These parcels may provide paved areas near the stream that are ideal in support of this task. Other parcels with access agreements will be used if necessary.

Table 1. Properties Expected to be Accessed in Support of Rodding
Study Area Access Plan
Elliott Ditch Implementation of Field Sampling Plan
July 2017

Map ID	Parcel Address	City/Zip	Owner
5	108 COLDBROOK DR	Lafayette, 47909	BROOKS EDITH D
8	195 COLDBROOK CT	Lafayette, 47909	GRAYSON DANIEL C I SUSAN
11	50 SOUTHAVEN CT	Lafayette, 47909	BETTY BILLY W & VICKI J
15	2301 WINTERSET DR	Lafayette, 47909	FISHER BETTY M & EHRIE LISA A
17	1851 SUMMERTIME TRL	Lafayette, 47909	BUCKLEY ROBERT W TRUST ANN TRUST
20	1325 WINDMILL DR	Lafayette, 47909	KOOPMAN JACK H
22	300S	Lafayette, 47909	PSI ENERGY INC

2.3 SOIL AND SEDIMENT SAMPLING

Each of the 13 transects contain soil sampling locations on private property on both sides of the stream bank. Figures 2 and 3 show the sampling locations and the boundaries for the private properties on which they reside. Access onto these private properties will be required in order to collect the specified samples. Therefore, access agreements will be needed from at least the 21 private property owners identified in Table 2. One parcel did not contain ownership information in the Tippecanoe County GIS Department provided information. CEC will use other resources, i.e. phone books, appraisal/tax records, etc., in an attempt to identify the owner of this parcel. This parcel could have an owner other than those currently identified and require an additional agreement. There is a sampling transect proposed at the overhead power line right-of-way near Milepost 1.4 and the utility company has ownership on both sides of the bank. Also, the Mill Creek Home Owners Association (MCHOA) owns four parcels that contain sampling locations. It is expected that a single access agreement referencing each of the targeted parcels will be obtained from each the power company and the MCHOA. Should the proposed upload soil sampling locations be moved based on the geomorphological conditions encountered such that they reside on other private properties or if additional sample locations on additional private properties are required to delineate the extent of impacts, additional agreements will be needed.

Table 2. Properties Expected to be Accessed in Support of Sampling
Study Area Access Plan
Elliott Ditch Implementation of Field Sampling Plan
July 2017

Map ID	Parcel Address	City/Zip	Owner	Owner Mailing Address
1	50 OLYMPIA CT	Lafayette, 47909	RATHJE DAVID W ETAL	2454 N 27th St., Decatur, IL 62526
2	21 BRADY CT	Lafayette, 47909	SMITH KYLE & ERIKA R	Same as Parcel Address
3	30 OLYMPIA CT	Lafayette, 47909	R & B MANAGEMENT LLC	3223 Olympia Dr., Lafayette, IN 47909
4	3116 OLYMPIA DR	Lafayette, 47909	WINSTEAD LLC	3223 Olympia Dr., Lafayette, IN 47909
5	108 COLDBROOK DR	Lafayette, 47909	BROOKS EDITH D	Same as Parcel Address
6	3107 OLYMPIA DR	Lafayette, 47909	LOCAL UNION #2317 UAW BUILDING CORP	Same as Parcel Address
7	155 COLDBROOK CT	Lafayette, 47909	HOLWERDA MYRON D CAROL S	Same as Parcel Address
8	195 COLDBROOK CT	Lafayette, 47909	GRAYSON DANIEL C I SUSAN	Same as Parcel Address
9	S 250E	Lafayette, 47909	ABS REAL ESTATE LLC	3460 Concord Rd., Lafayette, IN 47909
10	BRIDGEWATER CT	Lafayette, 47909	MILL CREEK HOMEOWNERS ASSOC. INC	PO Box 2332, West Lafayette, IN 47996
11	50 SOUTHAVEN CT	Lafayette, 47909	BETTY BILLY W & VICKI J	Same as Parcel Address
12	2329 WINTERSET DR	Lafayette, 47909	KENNEDY TAMARA E	Same as Parcel Address
13	BRIDGEWATER CT	Lafayette, 47909	MILL CREEK HOMEOWNERS ASSOC. INC	PO Box 2332, West Lafayette, IN 47996
14	BRIDGEWATER CT	Lafayette, 47909	MILL CREEK HOMEOWNERS ASSOC. INC	PO Box 2332, West Lafayette, IN 47996
15	2301 WINTERSET DR	Lafayette, 47909	FISHER BETTY M & EHRIE LISA A	Same as Parcel Address
16	BRIDGEWATER CT	Lafayette, 47909	MILL CREEK HOME OWNERS ASSOC. INC	PO Box 2332, West Lafayette, IN 47996
17	1851 SUMMERTIME TRL	Lafayette, 47909	BUCKLEY ROBERT W TRUST ANN TRUST	1842 Summertime Trail Ste 17, Lafayette, IN 47909
18	3114 THOMAS DR	Lafayette, 47909	BROOKS RYAN A & SHANNON D	Same as Parcel Address
19	1337 WINDMILL DR	Lafayette, 47909	ADE GEORGE L KATY L	Same as Parcel Address
20	1325 WINDMILL DR	Lafayette, 47909	KOOPMAN JACK H	Same as Parcel Address
21	3202 THOMAS DR	Lafayette, 47909	JUDGE RUSSELL R CYNTHIA A	Same as Parcel Address
22	300S	Lafayette, 47909	PSI ENERGY INC	550 S Tryon St., Charlotte, NC 28202
23	1004 N SOUTHERNVIEW DR	Lafayette, 47909	STEWART C ROBERT & KAREN J CO-TTEES	Same as Parcel Address
24	3555 CANTERBURY DR	Lafayette, 47909	BOLLOCK JAMES M LORI L	Same as Parcel Address

CEC will access Elliott Ditch from these private properties in order to collect sediment and soil samples within its bank. This will prevent field staff from encountering unnecessary safety concerns by having to carry sampling equipment while wading through the stream.

2.4 LOCAL GOVERNMENT OUTREACH

Prior to engaging the private property owners, CEC will call local government officials. The targeted portion of Elliott Ditch resides in Lafayette, Indiana, and City of Lafayette government officials will be briefed on the project. Below is a list of the City of Lafayette Departments that will be contacted in support of this Access Plan.

- Engineering and Public Works
- Fire Department
- Parks and Recreation
- Police Department
- Stormwater Programs
- Mayor's Office
- City Council

The process will include a phone call to introduce CEC and the project, and include a follow-up e-mail with the Fact Sheet. CEC will also provide City of Lafayette officials the contact information of key project team members to be points of contact for follow-up questions. Meetings with local government officials will be provided upon their request.

2.5 PRIVATE PROPERTY OWNER OUTREACH

Private property owners from which CEC will request access will first be engaged either through e-mail (if an e-mail address is known) or mail. This initial correspondence will include a brief introductory letter introducing the purpose of the project, project participants (Arconic, CEC, IDEM, and USEPA), outlining the FSP, and identifying the week that field staff will be canvassing the area for face-to-face introductions. It will also include the Fact Sheet that Arconic has developed with coordination with the IDEM. Please refer to Appendix A for example e-mail or mail correspondence and Appendix B for the Fact Sheet.

CEC will follow-up with phone calls (if phone numbers are available) to property owners roughly two weeks after the mailings to try to schedule a brief meeting. Staff will be in Lafayette over the course of a week to hold these face-to-face meetings. The meeting will be used to introduce CEC staff to the private property owners, answer questions, and begin the development of a trustworthy relationship. The follow-up meeting will also be used to review the Access Agreement, as provided in Appendix C. CEC will attempt to obtain signed Access Agreements from each of the private property owners during the meetings; however, in all likelihood, follow-up e-mails or phone calls will likely be needed in support of this effort. In the event CEC encounters private property owners opposed to the project, intervention by other project participants may be needed or alternative sampling locations on other parcels may need to be considered.

3.0 RECORD KEEPING

CEC will keep a repository on its network of communications related to this Access Plan. It is expected to include at a minimum: e-mails, notes from important phone calls and meetings, and copies of executed Access Agreements. This information can be made available to Arconic upon request.

FIGURES



NORTH



Arconic Facility

Elliott Ditch

Outfall 001

0.0

0.25

0.50

0.75

1.0






1.25

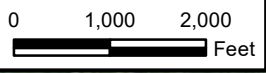
1.50

1.59

Study Area

Legend

-  Outfall 001
-  Elliott Ditch Mileposts
-  Study Area
-  Arconic Facility
-  Elliott Ditch



SOURCE: ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY. LAST ACCESSED: 7/24/2017
 IMAGE DATE: 03/12/2011



Civil & Environmental Consultants, Inc.
 2704 Cherokee Farm Way, Suite 101 Knoxville, TN 37920
 865-977-9997 - 865-774-7767
 www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS
 ELLIOTT DITCH ACCESS PLAN
 FIELD SAMPLING
 LAFAYETTE, INDIANA

ELLIOTT DITCH STUDY AREA

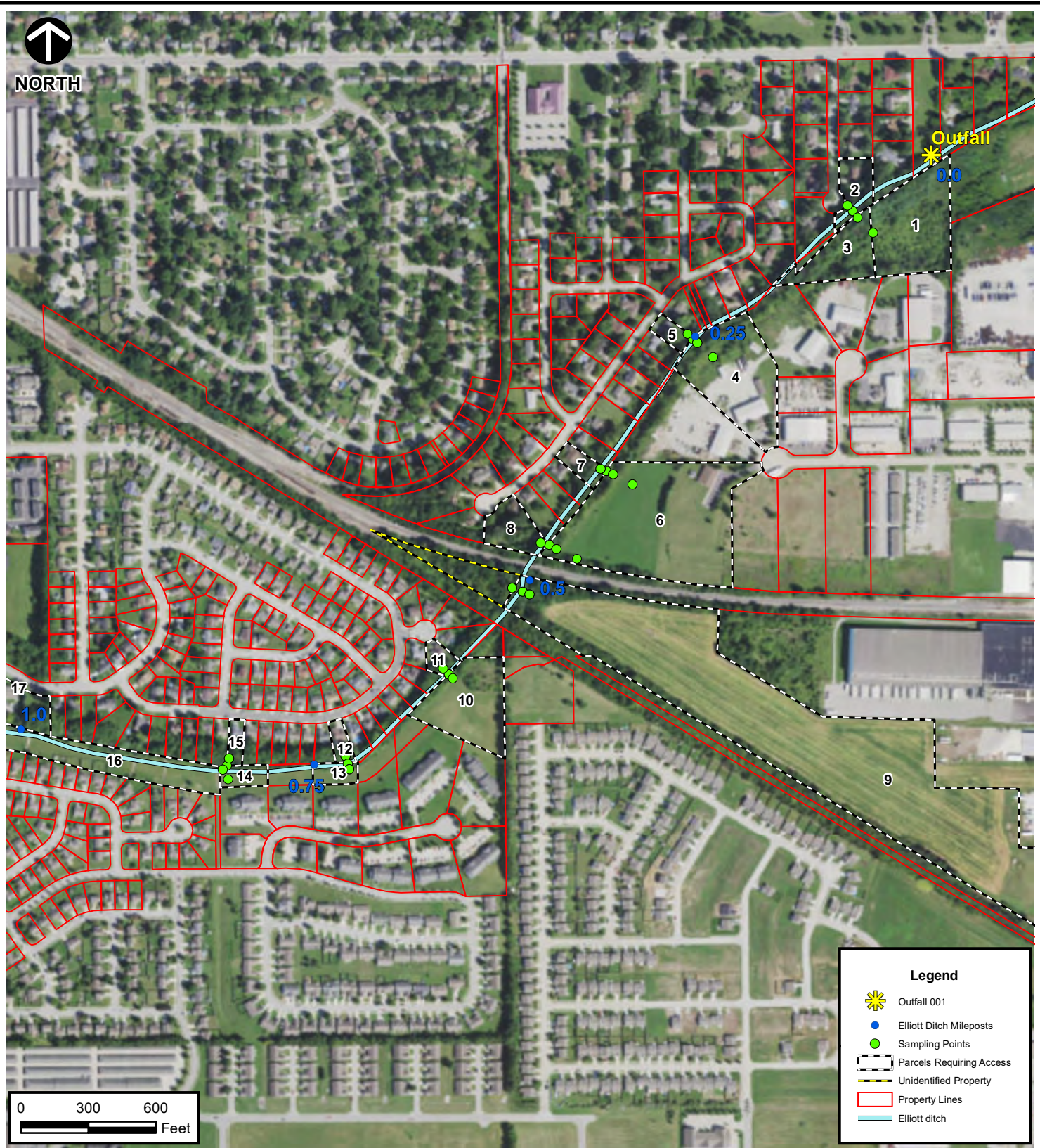
P:\2017\172-367-GIS\Maps\172-367-Elliott Ditch Figure 1.mxd - 7/24/2017 - 3:20:20 PM (mbruck)

DRAWN BY:	DMM	CHECKED BY:	JMB	APPROVED BY:	TLM*	FIGURE NO:
DATE:	JULY 24, 2017	DWG SCALE:	1" = 2,000'	PROJECT NO:	172-367.0002	1

Signature on File *



NORTH



Legend

- Outfall 001
- Elliott Ditch Mileposts
- Sampling Points
- Parcels Requiring Access
- Unidentified Property
- Property Lines
- Elliott ditch

\\svr-knoxville\projects\2017\172-367-GIS\Maps\172-367 Elliott Ditch Figure 2.mxd - 7/20/2017 - 10:27:45 AM (mbruck)

SOURCE: ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY. LAST ACCESSED: 7/20/2017
IMAGE DATE: 03/12/2011



Civil & Environmental Consultants, Inc.

2704 Cherokee Farm Way, Suite 101 Knoxville, TN 37920

865-977-9997 - 865-774-7767

www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS ELLIOTT DITCH ACCESS PLAN FIELD SAMPLING LAFAYETTE, INDIANA

PROPERTIES TO ACCESS MILEPOST 0.0 TO 1.0

DRAWN BY:	DMM	CHECKED BY:	JMB	APPROVED BY:	TLM*	FIGURE NO:	2
DATE:	JULY 20, 2017	DWG SCALE:	1" = 600'	PROJECT NO:	172-367.0002		

Signature on File *



NORTH



Legend

- Elliott Ditch Mileposts
- Sampling Points
- Parcels Requiring Access
- Property Lines
- Elliott ditch

SOURCE: ESRI WORLD IMAGERY / ARCGIS MAP SERVICE: [HTTP://GOTO.ARCGISONLINE.COM/MAPS/WORLD_IMAGERY](http://gto.arcgis.com/maps/world_imagery). LAST ACCESSED: 8/7/2017
 IMAGE DATE: 03/12/2011



Civil & Environmental Consultants, Inc.

2704 Cherokee Farm Way, Suite 101 Knoxville, TN 37920

865-977-9997 - 865-774-7767

www.cecinc.com

ARCONIC INC. - LAFAYETTE OPERATIONS ELLIOTT DITCH ACCESS PLAN FIELD SAMPLING LAFAYETTE, INDIANA

PROPERTIES TO ACCESS MILEPOST 1.0 TO 1.59

DRAWN BY:	DMM	CHECKED BY:	JMB	APPROVED BY:	TLM*	FIGURE NO:
DATE:	AUGUST 07, 2017	DWG SCALE:	1" = 600'	PROJECT NO:	172-367.0002	3

Signature on File *

P:\2017\172-367\GIS\Maps\172-367_Elliott Ditch Figure 3.mxd - 8/7/2017 - 2:33:40 PM (mbruck)

APPENDICES

APPENDIX A
EXAMPLE E-MAIL OR MAIL CORRESPONDENCE



August 7, 2017

Property Owner Name
Property Address
Lafayette, Indiana 47905

Dear Property Owner:

Subject: Request for Property Access Coordination
Arconic Lafayette Operations – Elliott Ditch Field Sampling

Civil & Environmental Consultants, Inc. (CEC) on behalf of Arconic Inc. (Arconic), formerly Alcoa Inc., is providing this **[letter or e-mail]** to notify you of a need to access your property in support of an environmental assessment of Elliott Ditch (Project). The assessment is required by and conducted with oversight and approval from the United States Environmental Protection Agency (USEPA) Region 5 and the Indiana Department of Environmental Management (IDEM).

Elliott Ditch, located adjacent to your property, is a tributary to Wea Creek, which is a tributary to the Wabash River, downstream of Lafayette, Indiana. In addition to its base flow, Elliott Ditch receives industrial discharges from various industries, including an outfall from the Arconic Lafayette Operations (Facility). Historically, polychlorinated biphenyls (PCBs) were used at the Facility and unintentionally released through the outfall into Elliott Ditch. Over time, the released PCBs have collected in upland soil and sediment near and within the ditch. This environmental assessment will be used to collect information for delineating the extent of the PCBs in support of stream remediation and restoration. Please refer to the attached Elliott Ditch Field Sampling Fact Sheet for additional information regarding the Project.

As stated previously, CEC is conducting this assessment on behalf of Arconic with oversight from the EPA Region 5 and the IDEM. Arconic and CEC are committed to working with the homeowners to keep you informed of activities performed on your property and avoiding unnecessary inconvenience. CEC is a consulting firm that is recognized for providing innovative design solutions and integrated expertise in the primary practice areas of civil engineering, ecological sciences, environmental engineering and sciences, survey, waste management and water resources. The CEC staff involved with this assessment are experienced professionals and will execute the Project as such.

The information contained herein is to provide you, the property owner, an introduction and background information related to the upcoming Project and formally request access to the portions of your property located adjacent to Elliott Ditch. CEC will be in the Lafayette area from **[date1]** through **[date2]** and would like to schedule a meeting with you to discuss the Project and potential access to Elliott Ditch from your property. Access will include providing an entry point to the stream for rodding and sediment sampling purposes, as well as the collection of upland soil

Request for Property Access Coordination – Elliott Ditch Field Sampling

Page 2

August 7, 2017

samples from your property. If you are open to meeting with CEC and discussing the Project, please contact the undersigned at 865-977-9997 or mbruck@cecinc.com.

CEC and Arconic greatly appreciate your time and effort in regards to this matter, and we look forward to speaking with you further about the upcoming assessment of Elliott Ditch.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

J. Matt Bruck, P.E.
Project Manager

Thomas L. Maher, Jr.
Principal

cc: Robert Prezbindowski, Arconic Inc.
Don Stilz, IDEM
Jean Greensley, USEPA Region 5

APPENDIX B
ELLIOTT DITCH FIELD SAMPLING FACT SHEET

Elliott Ditch Field Sampling

Summer of 2017

Question or Comments Call 24 hours a day (317) 613-4514

Background Information:

- Arconic Lafayette Operations (formerly Alcoa) is working with the Indiana Department of Environmental Management (IDEM) and U.S. Environmental Protection Agency (U.S. EPA) Region 5 to implement environmental remedial action for Elliott Ditch.
- Previous investigations conducted by U.S. EPA and Arconic, revealed historical polychlorinated biphenyl (PCB) impacts to some overbank and sediment deposits in Elliott Ditch.
- PCBs were used widely by electrical utilities and manufacturing industries across the nation as coolants, lubricants, electrical fluids, and in fire retardant materials from the 1950s to the early 1970s. PCBs were valued for their insulating qualities and were considered an important tool in safeguarding employees and public against fire risks. PCBs were not recognized as a contaminant at that time.
- The Company's Lafayette Operations phased out the use of PCB containing materials in the mid-1970s.

Next Steps:

- As part of the environmental remedial process for Elliott Ditch, Arconic or its consultant [Civil & Environmental Consultants, Inc. (CEC)], with oversight of IDEM and U.S. EPA Region 5, will begin field activities to collect sediment and overbank deposit samples in Elliott Ditch, from the Arconic Outfall to approximately 1.59 miles downstream (see attached figure). This work is being performed to verify current environmental conditions and determine if further action is necessary.
- Sampling is scheduled to begin late summer 2017.
- Arconic will be contacting residents and businesses to request permission to access their properties, and in some places, to access the ditch.
 - Property owners aiding in this investigation will be asked to sign a property access agreement.
 - The sampling will be conducted at no cost to the property owner and disturbed areas will be repaired.
 - The sampling will have little to no impact on residents' day-to-day activities.
 - Arconic will provide the sampling results to property owners upon request.

Environmental and Health Impacts:

Specific questions about health impacts of PCBs should be directed to the U.S. EPA or the Indiana Department of Environmental Management.

Project Contact Information:

- The public may leave a message with their questions and concerns regarding this investigation at (317) 613-4514, or contact Donald Stilz, IDEM Project Manager, at (317) 232-3409; toll free at (800) 451-6027; or by email at dstilz@idem.IN.gov. or Jean Greensley, U.S. Environmental Protection Agency Corrective Action Section 1, at (312) 353-1171; or by email at greensley.jean@epa.gov
- The news media may contact Alisha Hipwell, Arconic Inc. at (412) 553-2072 or by email at Alisha.Hipwell@arconic.com

APPENDIX C
EXAMPLE ACCESS AGREEMENT



ACCESS AND USE AGREEMENT

This Access and Use Agreement (“Agreement”) is entered into this ____ day of _____ 2017, by and between Arconic Inc. (“Arconic”), formerly known as Alcoa, and **[insert property owner]**.

In connection with an environmental cleanup project concerning Elliott Ditch in Lafayette, Indiana, which project is under the oversight of the United States Environmental Protection Agency (U.S. EPA) and the Indiana Department of Environmental Management (IDEM), your property has been identified as an appropriate location in support of the assessment, remediation, restoration, and/or monitoring of the ditch. By signing below, I represent that I am in fact the owner of the property described as **[insert property address and parcel ID]** (“Property”).

This Agreement allows Arconic, its agents, consultants, or other authorized representatives including employees and authorized representatives of the U.S. EPA and the IDEM, to access your Property and perform assessment (including the collection of soil samples), remediation, restoration, and monitoring on your Property (“Permitted Activities”). At least one week in advance of accessing your Property to perform any of such Permitted Activities, Arconic will notify you and provide you with the precise locations and scope of Permitted Activities. While performing any of the Permitted Activities, Arconic will as best as possible ensure that impacts and/or other damage to your Property are minimized, and if any damage is caused, Arconic shall be responsible for repairs prior to the expiration of this Agreement.

This Agreement shall become effective on the date written above and shall expire when U.S. EPA and IDEM advise Arconic that the assessment, remediation, restoration, and/or monitoring of Elliott Ditch are no longer needed. At such time, Arconic will notify you of this and thereafter, this Agreement shall be null and void.

ARCONIC INC.

[PROPERTY OWNER]

Name: _____

Name: _____

Title: _____

Title (if necessary): _____

APPENDIX II
POLING DATA SHEETS

Transect A Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
A-1	0.85	1.9	2.58	1.73	sand/silt	pool	no
A-2	0.74	1.85	2.47	1.73	sand/silt	pool	no
A-3	0.83	0.92	1.29	0.46	sand/silt	pool	no
A-4	0.56	1.06	1.2	0.64	sand/silt	pool	no
A-5	0.97	1.56	1.56	0.59	sand/silt	pool	no
A-6	1.32	2.16	3.59	2.27	sand/silt	pool	no
A-7	0.82	1.3	1.34	0.52	sand/silt	pool	no
A-8	0.75	2.16	3.11	2.36	sand/silt	pool	no
A-9	0.86	1.81	2.27	1.41	sand/silt	pool	no
A-10	0.84	2.65	2.91	2.07	sand/silt	pool	no
A-11	0.5	1.64	4.3	3.8	sand/silt	pool	no
A-12	0.93	2.05	3.29	2.36	sand/silt	pool	no
A-13	0.71	1.8	2.56	1.85	sand/silt	pool	no
A-14	0.25	1.41	1.69	1.44	sand/silt	pool	no
A-15	0.44	1.8	2.36	1.92	sand/silt	pool	no
A-16	0.86	1.3	1.46	0.6	sand/silt	pool	no
A-17	0.2	1.15	3.12	2.92	sand/silt	glide	no
A-18	0.35	1.16	3.52	3.17	sand/silt	glide	no
A-19	0.7	0.95	0.95	0.25	sand/silt	glide	no
A-20	0.18	1.18	2.6	2.42	sand/silt	glide	no
A-21	0.24	1.5	3.01	2.77	sand/silt	glide	no
A-22	0.4	1.14	1.23	0.83	sand/silt	riffle	no
A-23	0.22	1.09	1.25	1.03	sand/silt	riffle	no
A-24	0.25	1.55	2.34	2.09	sand/silt	riffle	no
A-25	0.31	0.48	0.52	0.21	sand/silt	riffle	no
A-26	0.15	0.68	1.75	1.6	sand/silt	riffle	no
A-27	0.23	1.01	1.67	1.44	sand/silt	riffle	no
A-28	0.29	0.55	0.97	0.68	sand/silt	riffle	no
A-29	0.31	2.36	3.45	3.14	sand/silt	riffle	no
A-30	0.18	0.62	1.56	1.38	sand/silt	riffle	no
A-31	0.24	0.86	0.98	0.74	sand/silt	riffle	no
A-32	0.21	1.36	2.26	2.05	sand/silt	riffle	no
A-33	0.15	1.62	3.8	3.65	sand/silt	riffle	no
A-34	0.19	0.93	2.76	2.57	sand/silt	riffle	no
A-35	0.76	1.5	3.03	2.27	sand/silt	central bar	no
A-36	0.3	2.36	3.14	2.84	sand/silt	central bar	no
A-37	0.15	1.54	3.89	3.74	sand/silt	central bar	no
A-38	0.19	0.5	3.69	3.5	sand/silt	central bar	no
A-39	0.34	0.49	0.61	0.27	sand/silt	central bar	no
A-40	0.2	1.24	3.46	3.26	sand/silt	central bar	no
A-41	0.26	1.24	3.95	3.69	sand/silt	central bar	no
A-42	0.5	1.54	1.54	1.04	sand/silt	central bar	no
A-43	0.34	0.66	0.66	0.32	sand/silt	central bar	no
A-44	0.26	1.12	1.19	0.93	sand/silt	central bar	no
A-45	0.28	1.15	1.49	1.21	sand/silt	central bar	no
A-46	0.4	1.26	2.87	2.47	sand/silt	central bar	no
A-47	0.4	0.7	2.02	1.62	sand/silt	central bar	no
A-48	0.2	1.45	3.15	2.95	sand/silt	central bar	no
A-49	0.35	2.76	3.2	2.85	sand/silt	central bar	no

Transect A Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
A-50	0.34	0.53	0.6	0.26	sand/silt	central bar	no
A-51	0	1.3	3.17	3.17	sand/silt	central bar	no
A-52	0.3	1.15	2.9	2.6	sand/silt	central bar	no
A-53	0.25	0.88	1.25	1	sand/silt	central bar	no
A-54	0	0.4	3.18	3.18	sand/silt	central bar	no
A-55	0.27	2.25	3.05	2.78	sand/silt	central bar	no
A-56	0.13	1.25	2.15	2.02	sand/silt	central bar	no
A-57	0.12	1.55	3.55	3.43	sand/silt	central bar	no
A-58	0.43	2.28	2.6	2.17	sand/silt	central bar	no
A-59	0.13	1.64	1.94	1.81	sand/silt	central bar	no
A-60	0	1.4	3	3	sand/silt	central bar	no
A-61	0.41	1.39	2.42	2.01	sand/silt	riffle	no

Transect B Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
B-01	0	1.45	2.3	2.3	Sand	Head of Riffle/PB	NO
B-02	0.5	1.45	1.5	1	Sand	TWG	NO
B-03	0.5	1.23	1.25	0.75	Sand	TWG	NO
B-04	0.54	0.84	0.84	0.3	Sand	TWG	NO
B-05	1.1	1.53	1.8	0.7	Sand	Point Bar	NO
B-06	0.35	1.2	2.09	1.74	Sand	Point Bar	NO
B-07	0	1.15	2	2	Sand	Point Bar	NO
B-08	1.15	1.43	1.45	0.3	Sand	Point Bar	NO
B-09	0.5	1.3	1.68	1.18	Sand	Point Bar	NO
B-10	0	0.4	1.4	1.4	Sand	Point Bar	NO
B-11	0.7	1.9	1.98	1.28	Sand	Point Bar	NO
B-12	0.58	1.84	2	1.42	Sand	Point Bar	NO
B-13	0.25	0.58	4.2	3.95	Sand	Point Bar	NO
B-14	1.05	2.4	2.55	1.5	Sand	Point Bar	NO
B-15	0.48	1.88	1.88	1.4	Sand	Point Bar	NO
B-16	0	1.8	3.55	3.55	Sand	Point Bar	NO
B-17	1.2	3.3	3.7	2.5	Sand	Point Bar	NO
B-18	1.4	3.38	4.55	3.15	Sand	Point Bar	NO
B-19	1.6	1.78	2	0.4	Sand	Point Bar	NO
B-20	0.6	2.81	3.55	2.95	Sand	Point Bar	NO
B-21	0.05	0.65	4.03	3.98	Sand/Silt	Point Bar	NO
B-22	0.81	2.11	2.39	1.58	Sand	Point Bar	NO
B-23	1.25	3.29	4.49	3.24	Sand	Point Bar	NO
B-24	0.6	2.46	3.81	3.21	Sand	Point Bar	NO
B-25	0.05	2.8	3.3	3.25	Sand		NO
B-26	0.74	1.7	2.74	2	Sand		NO
B-27	0.41	0.78	0.97	0.56	Sand		NO
B-28	0.85	3.96	4.92	4.07	Sand		NO
B-29	0.39	2.76	2.81	2.42	Sand		NO
B-30	0.45	1.09	1.09	0.64	Sand		NO
B-31	0.93	2.24	4.4	3.47	Sand		NO
B-32	0.56	1.34	4.81	4.25	Sand		NO
B-33	0.7	1.35	1.8	1.1	Sand		NO
B-34	1.2	2.24	4	2.8	Sand		NO
B-35	0.6	2.55	3.9	3.3	Sand		NO
B-36	0.8	1.54	1.94	1.14	Sand		NO
B-37	1	1.94	2.91	1.91	Sand		NO
B-38	0.9	2.3	4.73	3.83	Sand		NO
B-39	0.95	1.85	2.08	1.13	Sand		NO
B-40	1.03	1.83	2.01	0.98	Sand		NO
B-41	1.3	3.09	3.57	2.27	Sand/Silt	Longitudinal Bar	NO
B-43	0.89	1.9	1.9	1.01	Sand/Silt	Longitudinal Bar	NO
B-44	0.69	1.95	2	1.31	Sand/Silt	Longitudinal Bar	NO
B-45	1.24	1.75	1.85	0.61	Sand/Silt	Longitudinal Bar	NO
B-46	1.35	2.89	4.09	2.74	Sand/Silt	Longitudinal Bar	NO
B-47	0.8	1.79	1.87	1.07	Sand/Silt	Longitudinal Bar	NO
B-48	0.6	0.6	0.65	0.05	Sand/Silt	Longitudinal Bar	NO
B-49	0.84	2.52	3.15	2.31	Sand		NO

Transect B Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
B-50	0.65	2.81	2.83	2.18	Sand		NO
B-51	0.59	0.71	0.71	0.12	Sand		NO
B-52	0	1.34	3.5	3.5	Sand	Longitudinal Bar	NO
B-53	0.15	1.61	3.89	3.74	Sand	Longitudinal Bar	NO
B-54	0.45	0.64	0.78	0.33	Sand	Longitudinal Bar	NO
B-55	0.39	1.64	2.45	2.06	Sand		NO
B-56	0	0.89	3.41	3.41	Sand		NO
B-57	0.15	0.21	4.51	4.36	Sand/Silt		NO
B-58	0.21	1.1	4.02	3.81	Sand/Silt		NO
B-59	0.3	0.5	0.87	0.57	Sand/Silt	TWG	NO
B-60	0.34	1.55	2.14	1.8	Sand/Silt	TWG	NO
B-61	0	1.38	3	3	Sand/Silt	Longitudinal Bar	NO
B-62	0.3	2.1	2.3	2	Sand/Silt	Longitudinal Bar	NO
B-63	0.2	1.82	1.95	1.75	Sand/Silt	TWG	NO
B-64	0.59	1.35	1.44	0.85	Sand/Silt	TWG	NO
B-65	0	1.53	3.7	3.7	Sand/Silt	Longitudinal Bar	NO
B-66	0	1.87	2.8	2.8	Sand/Silt	Longitudinal Bar	NO
B-67	0.2	0.59	0.59	0.39	Sand/Silt	TWG	NO

Transect C Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
C-01	1.19	1.68	1.75	0.56	Silt/Clay		NO
C-02	1.35	1.9	1.9	0.55	Silt/Clay		NO
C-03	1.25	3.54	3.65	2.4	Sand		NO
C-04	1.53	2.8	3.35	1.82	Sand		NO
C-05	1.36	2.18	2.37	1.01	Sand		NO
C-06	0.7	1.04	1.29	0.59	Clay		NO
C-07	1.18	2.29	2.29	1.11	Clay		NO
C-08	1.05	2.1	3.2	2.15	Sand		NO
C-09	1.09	1.59	1.7	0.61	Sand		NO
C-10	0.91	2.65	3.05	2.14	Sand/Silt		NO
C-11	0.91	1	2.05	1.14	Sand/Silt		NO
C-12	1.5	3.76	3.9	2.4	Sand		NO
C-13	0.73	1.82	4	3.27	Sand	Point Bar/Inner Berm	NO
C-14	0.74	1.56	3.4	2.66	Sand	Point Bar/Inner Berm	NO
C-15	0.53	0.95	1	0.47	Sand	twg	NO
C-16	0.44	1.55	4.79	4.35	Sand	Point Bar/Inner Berm	NO
C-17	0.65	3.44	3.91	3.26	Sand	Point Bar/Inner Berm	NO
C-18	0.46	1.43	1.75	1.29	Clay	twg	NO
C-19	0.44	2.7	4.44	4	Sand	Point Bar/Inner Berm	NO
C-20	0.5	1.5	4.87	4.37	Sand		NO
C-21	0.6	1.35	4.45	3.85	Sand/Silt		NO
C-22	0.4	0.6	0.6	0.2	Sand		NO
C-23	0.4	2.55	2.95	2.55	Sand		NO
C-24	0.55	1.94	3.94	3.39	Sand		NO
C-25	0.67	1.25	2.51	1.84	Sand		NO
C-26	0.45	1.46	1.73	1.28	Silt/Clay		NO
C-27	0.59	2.56	2.95	2.36	Sand		NO
C-28	0.4	1.7	2.99	2.59	Sand		NO
C-29	0.5	2.35	2.74	2.24	Sand/Silt		NO
C-30	0.58	2.09	2.79	2.21	Sand		NO
C-31	0.55	1.35	3.01	2.46	Sand		NO
C-32	0.45	2.5	2.69	2.24	Sand		NO
C-33	0.37	1.88	3.2	2.83	Sand		NO
C-34	0.7	1.61	2.53	1.83	Sand/Silt		NO
C-35	0.53	1.3	3.35	2.82	Sand	Point Bar/Inner Berm	NO
C-36	0.2	1.5	1.84	1.64	Sand	Point Bar/Inner Berm	NO
C-37	0	2	4.6	4.6	Sand	Point Bar/Inner Berm	NO
C-38	0.97	1.67	2.69	1.72	Sand/Silt		NO
C-39	0.7	1.45	3.29	2.59	Sand	Point Bar/Inner Berm	NO
C-40	0.2	1.94	3.18	2.98	Sand	Point Bar/Inner Berm	NO
C-41	0.2	2.25	3.02	2.82	Sand	Point Bar/Inner Berm	NO
C-42	0.4	1.65	3.85	3.45	Sand	Point Bar/Inner Berm	NO
C-43	1	3.05	3.1	2.1	Sand	twg	NO

Transect D Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
D-01	1.66	1.73	1.8	0.14	Sand		No
D-02	1.93	3.36	4.6	2.67	Sand/Silt		No
D-03	1.91	3.42	4.35	2.44	Sand/Silt		No
D-04	1.68	1.91	1.92	0.24	Sand		No
D-05	1.8	3.21	4.49	2.69	Sand		No
D-06	1.96	3.44	4.31	2.35	Sand/Silt		No
D-07	1.77	2.54	4.46	2.69	Sand/Silt		No
D-08	1.54	2.13	2.13	0.59	Sand/Clay		No
D-09	1.67	2.22	2.4	0.73	Sand/Clay		No
D-10	1.94	3.85	5.11	3.17	Sand/Clay		No
D-11	2.13	3.84	5.37	3.24	Sand/Clay		No
D-12	1.9	2.67	3.19	1.29	Sand/Clay		No
D-13	2.1	2.21	2.51	0.41	Clay		No
D-14	2.26	2.89	3.24	0.98	Sand/Clay	Point Bar	No
D-15	2.18	3.5	4.39	2.21	Sand	Point Bar	No
D-16	1.6	2.5	4.39	2.79	Sand	Inner Berm	No
D-17	2.31	2.98	3.09	0.78	Sand/Clay		No
D-18	2.36	4.09	4.48	2.12	Sand		No
D-19	2.24	3.8	5.23	2.99	Sand		No
D-20	1.49	2.5	4.78	3.29	Sand		No
D-21	1.68	2.57	4.3	2.62	Sand		No
D-22	2.45	3.76	3.99	1.54	Sand		No
D-23	2.58	4.32	4.8	2.22	Sand/Gravel		No
D-24	2.05	2.48	3.86	1.81	Clay		No
D-25	2.11	3.29	3.3	1.19	Sand		No
D-26	2.8	5.1	5.38	2.58	Sand/Silt		No
D-27	2.6	4.74	5	2.4	Sand/Silt		No
D-28	1.89	2.79	4.6	2.71	Sand/Silt		No
D-29	1.8	3.44	4.9	3.1	Sand/Silt		No
D-30	2.65	4.56	4.62	1.97	Sand		No
D-31	2.5	5.05	6.03	3.53	Sand/Silt		No
D-32	2.38	3.23	3.34	0.96	Sand/Silt		No

Transect E Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
E-01	1.39	1.79	1.84	0.45	Sand	Large Debris Jam	No
E-02	1.51	2.05	2.2	0.69	Sand	Large Debris Jam	No
E-03	1.57	2.12	2.25	0.68	Clay	Large Debris Jam	No
E-04	1.1	1.37	1.38	0.28	Sand	Large Debris Jam	No
E-05	1.48	1.56	1.56	0.08	Sand	Large Debris Jam	No
E-06	1.1	2	2.02	0.92	Sand	Large Debris Jam	No
E-07	1.8	2.04	2.08	0.28	Sand	Large Debris Jam	No
E-08	1.3	1.35	1.35	0.05	Sand	Large Debris Jam	No
E-09	0.95	1.67	1.76	0.81	Sand	Large Debris Jam	No
E-10	0.41	1.77	1.77	1.36	Sand	Large Debris Jam	No
E-11	1.15	1.4	1.41	0.26	Sand	Large Debris Jam	No
E-12	0.56	1.24	1.34	0.78	Sand	Large Debris Jam	No
E-13	0.46	1.45	1.45	0.99	Sand	Large Debris Jam	No
E-14	0.89	1.15	1.15	0.26	Sand	Large Debris Jam	No
E-15	0.45	0.94	1.02	0.57	Sand	Large Debris Jam	No
E-16	0.43	0.78	0.81	0.38	Sand	Large Debris Jam	No
E-17	1.16	2.11	2.19	1.03	Sand	Small Debris Jam	No
E-18	0.25	1.4	3.25	3	Sand/Silt	Small Debris Jam	No
E-19	1.14	1.78	1.97	0.83	Sand/Silt	Small Debris Jam	No
E-20	0	0.8	2.5	2.5	Sand/Silt	Small Debris Jam	No
E-21	0.35	1.2	1.49	1.14	Sand/Silt	Small Debris Jam	No
E-22	0.43	1.48	1.5	1.07	Sand	Small Debris Jam	No
E-23	0.6	1.4	2.13	1.53	Sand	Small Debris Jam	No
E-24	0.24	1.26	1.26	1.02	Sand	Small Debris Jam	No
E-25	0	1	1	1	Sand/Silt	Small Debris Jam	No

Transect F Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
F-01	1.35	1.84	3.2	1.85	Sand		NO
F-02	1.3	2.48	2.54	1.24	Sand		NO
F-03	1.29	1.94	3.91	2.62	Sand		NO
F-04	1.23	1.7	1.75	0.52	Sand/Clay		NO
F-05	1.35	1.94	2.85	1.5	Sand		NO
F-06	1.04	1.99	2.24	1.2	Sand		NO
F-07	1.4	2.4	3.2	1.8	Sand		NO
F-08	1.3	2.41	2.49	1.19	Sand		NO
F-09	1.27	2.7	3	1.73	Sand		NO
F-10	1.42	2.37	3.35	1.93	Sand		NO
F-11	1.29	2.03	2.3	1.01	Sand		NO
F-12	1.72	2.35	2.4	0.68	Sand		NO
F-13	1.48	2.9	3.09	1.61	Sand		NO
F-14	1.4	2.1	3.28	1.88	Sand/Silt		NO
F-15	1.25	2.25	2.48	1.23	Sand		NO
F-16	1.22	2.28	2.6	1.38	Sand		NO
F-17	1.49	2.03	3	1.51	Sand		NO
F-18	1.37	2.07	3.24	1.87	Sand		NO
F-19	1.25	1.97	2.35	1.1	Sand		NO
F-20	1.35	2.26	2.65	1.3	Sand		NO
F-21	1.06	2.04	2.64	1.58	Sand		NO
F-22	1.37	2.04	3.09	1.72	Sand		NO
F-23	1.4	2.03	2.24	0.84	Sand		NO
F-24	1.3	2.3	2.4	1.1	Sand		NO
F-25	1.33	2.48	3.23	1.9	Sand		NO
F-26	1.29	1.57	3.85	2.56	Sand/Silt		NO
F-27	1.48	2.02	2.1	0.62	Sand		NO
F-28	1.52	2.39	3.18	1.66	Sand		NO
F-29	1.45	2.73	3.12	1.67	Sand		NO
F-30	1.36	1.7	2.8	1.44	Sand		NO
F-31	1.4	2.3	3.33	1.93	Sand		NO
F-32	1.54	2.48	2.63	1.09	Sand		NO
F-33	1.64	2.32	3.15	1.51	Sand		NO
F-34	1.35	1.66	2.43	1.08	Sand		NO
F-35	1.36	2.03	2.15	0.79	Sand		NO
F-36	1.5	2.28	2.41	0.91	Sand		NO
F-37	1.6	2.03	2.05	0.45	Sand/Gravel		NO
F-38	1.3	2.18	3.17	1.87	Sand/Clay		NO
F-39	1.64	2.8	3.48	1.84	Sand		NO
F-40	1.57	2.9	2.96	1.39	Sand		NO
F-41	1.54	2.28	2.36	0.82	Sand		NO

Transect G Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
G-01	1.96	2.18	2.22	0.26	Sand	Point Bar	NO
G-02	1.97	2.33	2.41	0.44	Sand	Point Bar	NO
G-03	1.61	1.94	1.94	0.33	Sand	Point Bar	NO
G-04	1.7	2.05	2.07	0.37	Sand	Point Bar	NO
G-05	1.39	2.1	2.16	0.77	Sand	Point Bar	NO
G-06	1.09	2.03	3.09	2	Sand	Point Bar	NO
G-07	1.36	2.18	2.18	0.82	Sand	Point Bar	NO
G-08	1.2	2.11	2.37	1.17	Sand	Point Bar	NO
G-09	0.99	2	3.57	2.58	Sand	Point Bar	NO
G-10	1.68	2	2.03	0.35	Sand	Point Bar	NO
G-11	1.28	2.2	2.38	1.1	Sand	Point Bar	NO
G-12	0.98	2	2.11	1.13	Sand	Point Bar	NO
G-13	0.4	1.3	4.74	4.34	Sand/Silt	Point Bar	NO
G-14	1.64	2.01	2.1	0.46	Sand	Point Bar	NO
G-15	1	2.35	4.25	3.25	Sand/Silt	Point Bar	NO
G-16	0.4	1.77	3.7	3.3	Sand	Point Bar	NO
G-17	1.78	1.95	2	0.22	Sand	Point Bar	NO
G-18	0.97	2.2	2.7	1.73	Sand	Point Bar	NO
G-19	0.66	1.89	2.04	1.38	Sand	Point Bar	NO
G-20	1.44	1.85	3.36	1.92	Sand	Point Bar	NO
G-21	1.1	2.03	3.16	2.06	Sand/Silt	Point Bar	NO
G-22	0.86	1.98	2.1	1.24	Sand	Point Bar	NO
G-23	1.55	1.84	1.84	0.29	Sand	Point Bar	NO
G-24	1.3	2	2.09	0.79	Sand	Point Bar	NO
G-25	0.5	1.1	2	1.5	Sand/Silt	Point Bar	NO
G-26	1.58	1.86	2.21	0.63	Sand	Point Bar	NO
G-27	1.12	1.81	1.94	0.82	Sand	Point Bar	NO
G-28	0.85	1.55	1.7	0.85	Sand	Point Bar	NO
G-29	0.5	0.9	1.9	1.4	Sand	Point Bar	NO

Transect H Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
H-01	0.95	1.27	1.45	0.5	Sand	Longitudinal Bar	No
H-02	0.65	1.15	1.3	0.65	Sand	Longitudinal Bar	No
H-03	1	1.49	1.52	0.52	Sand	Longitudinal Bar	No
H-04	0.59	0.97	1	0.41	Sand	Longitudinal Bar	No
H-05	0.61	1.08	1.14	0.53	Sand	Longitudinal Bar	No
H-06	0.6	1.16	1.23	0.63	Sand	Longitudinal Bar	No
H-07	0.6	1.22	1.26	0.66	Sand	Longitudinal Bar	No
H-08	0.47	0.84	0.84	0.37	Sand	Longitudinal Bar	No
H-09	0.35	0.83	0.85	0.5	Sand	Longitudinal Bar	No
H-10	0.35	1.04	1.1	0.75	Sand	Longitudinal Bar	No
H-11	0.54	1.18	1.19	0.65	Sand	Longitudinal Bar	No
H-12	0.64	1.26	1.35	0.71	Sand	Longitudinal Bar	No
H-13	0.25	1	1.05	0.8	Sand	Longitudinal Bar	No
H-14	0.47	0.89	1.01	0.54	Sand	Longitudinal Bar	No
H-15	0.58	1	1	0.42	Sand	Longitudinal Bar	No
H-16	0.45	1.1	1.14	0.69	Sand	Longitudinal Bar	No
H-17	0.72	1.22	1.25	0.53	Sand	Longitudinal Bar	No
H-18	0.8	1.21	1.21	0.41	Sand	Longitudinal Bar	No
H-19	0.58	1.26	1.32	0.74	Sand	Longitudinal Bar	No
H-20	0.8	1.18	1.21	0.41	Sand	Longitudinal Bar	No
H-21	0.89	1.45	1.5	0.61	Sand	Longitudinal Bar	No

Transect I Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
I-01	2.05	2.35	2.42	0.37	Sand		No
I-02	2.04	2.26	3.17	1.13	Sand		No
I-03	1.95	2.7	2.89	0.94	Clay		No
I-04	2.08	3.24	3.24	1.16	Sand		No
I-05	1.78	2.28	2.9	1.12	Sand		No
I-06	2	2.25	3.5	1.5	Sand/Gravel		No
I-07	1.55	2.46	3	1.45	Sand/Gravel		No
I-08	1.85	3.3	3.37	1.52	Sand/Gravel		No
I-09	2.1	3.3	3.35	1.25	Sand/Gravel		No
I-10	2.05	2.42	2.47	0.42	Sand		No
I-11	2.22	2.85	2.85	0.63	Sand		No
I-12	1.9	3.06	3.08	1.18	Sand		No
I-13	1.75	3.48	4.1	2.35	Sand/Clay		No
I-14	1.52	2.27	3.48	1.96	Sand/Clay		No
I-15	2.2	2.84	2.86	0.66	Sand/Clay		No
I-16	1.91	2.94	2.95	1.04	Sand/Clay		No
I-17	1.68	2.59	2.6	0.92	Sand/Clay		No
I-18	1.65	2.9	3.35	1.7	Sand/Clay		No
I-19	2.34	2.68	2.69	0.35	Sand		No
I-20	2.08	2.79	2.8	0.72	Sand/Silt		No
I-21	1.6	2.38	2.6	1	Clay		No
I-22	2.19	2.34	2.56	0.37	Sand		No
I-23	1.85	2.56	2.6	0.75	Sand		No
I-24	1.4	2.26	2.3	0.9	Sand		No
I-25	2.06	2.42	2.46	0.4	Sand		No
I-26	1.75	2.64	2.65	0.9	Sand		No
I-27	1.39	1.98	2.2	0.81	Sand		No
I-28	1.78	2.53	2.58	0.8	Sand		No
I-29	2.09	2.44	2.51	0.42	Sand		No
I-30	1.9	3.36	3.36	1.46	Sand/Clay		No
I-31	1.66	3.09	3.09	1.43	Sand/Clay		No
I-32	0.93	2	2.35	1.42	Sand/Clay		No
I-33	2.04	2.37	2.4	0.36	Sand/Clay		No
I-34	1.24	2	2.15	0.91	Sand		No
I-35	1.05	1.4	1.49	0.44	Clay		No

Transect J Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
J-01	0.63	0.74	0.8	0.17	Sand	UPS of Debris Jam	No
J-02	0.75	1.38	1.39	0.64	Sand	UPS of Debris Jam	No
J-03	0.72	1.09	1.14	0.42	Sand	UPS of Debris Jam	No
J-04	0.76	1.44	1.5	0.74	Sand	UPS of Debris Jam	No
J-05	1.05	1.68	1.68	0.63	Sand	UPS of Debris Jam	No
J-06	1.4	1.68	1.75	0.35	Sand	UPS of Debris Jam	No
J-07	1	1.72	1.79	0.79	Sand	UPS of Debris Jam	No
J-08	0.8	1.3	1.45	0.65	Sand	UPS of Debris Jam	No
J-09	0.89	1.24	1.44	0.55	Sand	UPS of Debris Jam	No
J-10	1	1.4	2.18	1.18	Sand	UPS of Debris Jam	No
J-11	1.2	1.76	1.82	0.62	Sand	UPS of Debris Jam	No
J-12	1.3	2.34	2.95	1.65	Sand	UPS of Debris Jam	No
J-13	1.25	2.2	2.8	1.55	Sand	UPS of Debris Jam	No
J-14	1.46	2.6	2.82	1.36	Sand	UPS of Debris Jam	No
J-15	1.64	2.47	2.64	1	Sand	UPS of Debris Jam	No
J-16	1.54	1.91	1.94	0.4	Sand	UPS of Debris Jam	No
J-17	1.48	2.25	2.5	1.02	Sand	UPS of Debris Jam	No
J-18	1.35	2.02	3.19	1.84	Sand	UPS of Debris Jam	No
J-19	1.32	2.08	2.15	0.83	Sand	UPS of Debris Jam	No
J-20	1.43	2.02	2.23	0.8	Sand	UPS of Debris Jam	No
J-21	1.2	1.89	2.29	1.09	Sand	UPS of Debris Jam	No
J-22	1.28	1.89	2	0.72	Sand	UPS of Debris Jam	No
J-23	1.05	1.41	1.42	0.37	Sand	UPS of Debris Jam	No
J-24	1.42	1.71	2.75	1.33	Sand	UPS of Debris Jam	No
J-25	1.2	1.91	2.66	1.46	Sand	UPS of Debris Jam	No
J-26	1.8	1.81	1.81	0.01	Sand	UPS of Debris Jam	No
J-27	1.05	1.3	1.35	0.3	Sand	UPS of Debris Jam	No
J-28	0.8	0.93	1	0.2	Sand	UPS of Debris Jam	No
J-29	1.58	1.66	1.71	0.13	Sand	UPS of Debris Jam	No
J-30	1.05	1.39	1.49	0.44	Sand	UPS of Debris Jam	No
J-31	0.75	1.15	1.2	0.45	Sand	DS of Debris Jam	No
J-32	0.37	0.87	0.87	0.5	Sand	DS of Debris Jam	No
J-33	0.76	1.98	2.1	1.34	Sand	DS of Debris Jam	No
J-34	1.06	1.46	1.5	0.44	Sand	DS of Debris Jam	No
J-35	0.92	1.58	1.68	0.76	Sand	DS of Debris Jam	No
J-36	1.63	1.81	1.81	0.18	Sand	DS of Debris Jam	No
J-37	1.13	1.48	1.5	0.37	Sand	DS of Debris Jam	No
J-38	0.7	1.4	1.45	0.75	Sand	DS of Debris Jam	No
J-39	1.05	1.75	1.8	0.75	Sand	DS of Debris Jam	No
J-40	0.35	1	1.05	0.7	Sand	DS of Debris Jam	No
J-41	0.75	1	1	0.25	Sand	DS of Debris Jam	No
J-42	1.05	1.05	1.05	0	Sand	DS of Debris Jam	No
J-43	0.9	1	1	0.1	Sand	DS of Debris Jam	No
J-44	0.28	0.98	1.15	0.87	Sand	DS of Debris Jam	No
J-45	0.49	1.02	1.15	0.66	Sand	DS of Debris Jam	No
J-46	0.54	1	1.02	0.48	Sand	DS of Debris Jam	No
J-47	0.83	1.15	1.28	0.45	Sand	DS of Debris Jam	No
J-48	0.45	1.14	1.15	0.7	Sand	DS of Debris Jam	No

Transect J Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
J-49	1.06	1.19	1.24	0.18	Sand	DS of Debris Jam	No
J-50	0.44	0.85	0.85	0.41	Sand	DS of Debris Jam	No
J-51	0.44	0.6	0.62	0.18	Sand	DS of Debris Jam	No

Transect K Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
K-01	1.25	1.44	1.54	0.29	Sand	Debris Jam/Pool	No
K-02	1.25	1.85	1.97	0.72	Sand	Debris Jam/Pool	No
K-03	1.25	1.47	1.6	0.35	Sand	Debris Jam/Pool	No
K-04	1.3	1.51	1.6	0.3	Sand	Debris Jam/Pool	No
K-05	1.12	1.35	1.52	0.4	Sand	Debris Jam/Pool	No
K-06	0.91	1.4	1.53	0.62	Sand	Debris Jam/Pool	No
K-07	1.18	1.6	1.75	0.57	Sand	Debris Jam/Pool	No
K-08	1.3	2.09	4.2	2.9	Sand	Debris Jam/Pool	No
K-09	1.5	2	2.1	0.6	Sand	Debris Jam/Pool	No
K-10	1.04	1.21	1.21	0.17	Sand	Debris Jam/Pool	No
K-11	1.22	1.92	1.95	0.73	Sand	Debris Jam/Pool	No
K-12	1.65	1.91	1.94	0.29	Sand	Debris Jam/Pool	No
K-13	0.45	0.81	2.2	1.75	Sand	Debris Jam/Pool	No
K-14	1	1.56	1.59	0.59	Sand	Debris Jam/Pool	No
K-15	1.4	1.96	2.06	0.66	Sand	Debris Jam/Pool	No
K-16	1.3	2.47	2.5	1.2	Sand	Debris Jam/Pool	No
K-17	1.36	2.91	3.26	1.9	Silt	Debris Jam/Pool	No
K-18	1.43	3.26	3.3	1.87	Silt	Debris Jam/Pool	No
K-19	1.33	3.2	3.22	1.89	Sand/Silt	Debris Jam/Pool	No
K-20	1.51	1.68	1.84	0.33	Sand	Debris Jam/Pool	No
K-21	1.51	1.71	2.27	0.76	Sand	Debris Jam/Pool	No
K-22	1.26	1.34	1.42	0.16	Sand	Debris Jam/Pool	No
K-23	1.33	1.71	1.76	0.43	Sand	Debris Jam/Pool	No
K-24	0.99	1.47	1.51	0.52	Sand	Debris Jam/Pool	No
K-25	1.54	1.6	1.62	0.08	Sand	Debris Jam/Pool	No
K-26	1.68	2.11	2.15	0.47	Sand	Debris Jam/Pool	No
K-27	1.14	1.3	1.32	0.18	Sand	Debris Jam/Pool	No
K-28	0.91	1.16	1.16	0.25	Sand	Debris Jam/Pool	No
K-29	1.04	1.2	1.2	0.16	Sand	Debris Jam/Pool	No
K-30	1.45	1.5	1.5	0.05	Sand	Debris Jam/Pool	No
K-31	1.54	3.41	3.41	1.87	Silt	Debris Jam/Pool	No
K-32	1.1	3.3	3.3	2.2	Silt	Debris Jam/Pool	No
K-33	0.7	1.09	3.4	2.7	Silt	Debris Jam/Pool	No
K-34	1.1	1.5	1.59	0.49	Silt	Debris Jam/Pool	No
K-35	0.65	0.84	3.65	3	Silt	Debris Jam/Pool	No

Transect L Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
L-01	2.7	2.9	2.9	0.2	Clay	Point Bar 1	NO
L-02	2.01	2.76	2.76	0.75	Clay	Point Bar 1	NO
L-03	1.3	1.44	1.44	0.14	Clay	Point Bar 1	NO
L-04	3.1	3.15	3.15	0.05	Clay	Point Bar 1	NO
L-05	2.85	3.4	3.55	0.7	Clay	Point Bar 1	NO
L-06	1.8	2.65	2.7	0.9	Clay	Point Bar 1	NO
L-07	3.3	3.35	3.38	0.08	Clay	Point Bar 1	NO
L-08	2.81	3.36	3.4	0.59	Silt/Clay	Point Bar 1	NO
L-09	1.91	2.29	2.29	0.38	Silt/Clay	Point Bar 1	NO
L-10	3.29	3.3	3.3	0.01	Silt/Clay	Point Bar 1	NO
L-11	1.42	2.49	3.34	1.92	Sand/Clay	Point Bar 1	NO
L-12	2.46	3.3	3.4	0.94	Clay	Point Bar 1	NO
L-13	1.5	2.94	3.69	2.19	Clay	Point Bar 1	NO
L-14	2.95	3.25	3.25	0.3	Clay	Point Bar 1	NO
L-15	0.35	2.78	3.71	3.36	Clay	Point Bar 1	NO
L-16	3.13	3.2	3.2	0.07	Gravel	Point Bar 1	NO
L-17	1.78	3.25	3.25	1.47	Silt/Clay	Point Bar 1	NO
L-18	2.7	2.9	3.05	0.35	Gravel	Point Bar 1	NO
L-19	2.15	2.52	2.95	0.8	Sand/Silt	Point Bar 1	NO
L-20	2.67	3.2	3.25	0.58	Sand/Silt	Point Bar 1	NO
L-21	2.44	2.45	2.45	0.01	Sand/Clay	Point Bar 1	NO
L-22	2.05	2.45	2.5	0.45	Sand/Clay	Point Bar 1	NO
L-23	1.61	2.5	2.95	1.34	Sand/Silt	Point Bar 1	NO
L-24	0.94	2.13	3.45	2.51	Sand	Point Bar 1	NO
L-25	2.28	2.5	2.51	0.23	Sand	Point Bar 1	NO
L-26	2.15	2.65	2.7	0.55	Sand	Point Bar 1	NO
L-27	1.61	2.45	2.45	0.84	Sand/Silt	Point Bar 1	NO
L-28	1.5	2.05	3.21	1.71	Clay	Point Bar 1	NO
L-29	2.56	3.2	3.4	0.84	Sand	Point Bar 1	NO
L-30	2.9	3.1	3.15	0.25	Sand	Point Bar 1	NO
L-31	1.94	2.6	2.85	0.91	Silt	Point Bar 1	NO
L-32	1.78	2.26	2.3	0.52	Silt	Point Bar 1	NO
L-33	2.96	3.2	3.3	0.34	Sand	Point Bar 1	NO
L-34	2.39	3.1	3.5	1.11	Sand	Point Bar 1	NO
L-35	2.09	2.9	3.1	1.01	Silt/Clay	Point Bar 1	NO
L-36	3.28	3.7	3.75	0.47	Sand/Gravel	Point Bar 1	NO
L-37	2.52	3.52	4.05	1.53	Silt	Point Bar 1	NO
L-38	1.71	2.45	3.2	1.49	Silt	Point Bar 1	NO
L-39	3.34	3.72	3.72	0.38	Gravel	Point Bar 1	NO
L-40	1.95	2.85	2.96	1.01	Silt	Point Bar 1	NO
L-41	1.68	2.7	2.81	1.13	Sand/Silt	Point Bar 1	NO
L-42	1.5	2.44	2.44	0.94	Sand	Point Bar 1	NO
L-43	1.54	2.3	2.4	0.86	Sand	Point Bar 1	NO
L-44	1.9	2.3	2.39	0.49	Gravel	Point Bar 1	NO
L-45	2.01	2.14	2.14	0.13	Gravel	Point Bar 1	NO
L-46	1.15	1.3	1.3	0.15	Clay	Point Bar 1	NO
L-47	1.51	1.68	1.72	0.21	Clay	Point Bar 1	NO
L-48	2.25	2.84	3.29	1.04	Sand	Point Bar 2/3	NO

Transect L Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
L-49	2.5	3.1	3.11	0.61	Sand	Point Bar 2/3	NO
L-50	3.9	4.3	4.3	0.4	Sand/Gravel	Point Bar 2/3	NO
L-51	3.11	3.35	3.4	0.29	Sand	Point Bar 2/3	NO
L-52	2.25	2.8	2.8	0.55	Sand	Point Bar 2/3	NO
L-53	1.3	2.7	2.78	1.48	Silt	Point Bar 2/3	NO
L-54	3.04	3.29	3.3	0.26	Sand	Point Bar 2/3	NO
L-55	2.04	2.81	2.86	0.82	Silt/Clay	Point Bar 2/3	NO
L-56	1.1	1.98	2.41	1.31	Silt/Clay	Point Bar 2/3	NO
L-57	2.8	3	3.15	0.35	Sand/Gravel	Point Bar 2/3	NO
L-58	1.95	2.3	2.44	0.49	Clay	Point Bar 2/3	NO
L-59	0.95	1	1	0.05	Clay	Point Bar 2/3	NO
L-60	2.71	2.86	2.94	0.23	Gravel	Point Bar 2/3	NO
L-61	0.31	0.4	0.45	0.14	Clay	Point Bar 2/3	NO
L-62	0.94	0.95	0.95	0.01	Clay	Point Bar 2/3	NO

Transect M Poling Data

Point	Water Depth (Feet)	Soft Push (Feet)	Hard Push (Feet)	Total Depth (Feet)	Sediment Type	Geomorphic Feature	Aquatic Veg
M-01	3.23	3.25	3.26	0.03	Sand	Point Bar	No
M-02	2.97	3.34	3.34	0.37	Sand	Point Bar	No
M-03	3.49	3.49	3.49	0	Clay	Point Bar	No
M-04	3.15	3.18	3.18	0.03	Sand	Point Bar	No
M-05	2.6	3.15	3.16	0.56	Sand	Point Bar	No
M-06	2.49	2.36	3.7	1.21	Sand/Clay	Point Bar	No
M-07	2.5	3.15	3.21	0.71	Sand/Clay	Point Bar	No
M-08	2.36	3	3.09	0.73	Sand	Point Bar	No
M-09	2.8	3.04	3.05	0.25	Sand	Point Bar	No
M-10	2.63	2.79	2.8	0.17	Sand	Point Bar	No
M-11	2.2	2.7	2.75	0.55	Sand	Point Bar	No
M-12	2.34	2.6	2.6	0.26	Sand	Point Bar	No
M-13	2.48	2.77	2.8	0.32	Sand	Point Bar	No
M-14	2.1	2.54	2.6	0.5	Sand	Point Bar	No
M-15	2.33	2.75	2.8	0.47	Silt/Clay	Point Bar	No
M-16	2.25	2.5	2.79	0.54	Sand	Point Bar	No
M-17	2.25	2.74	2.75	0.5	Sand	Point Bar	No
M-18	1.92	2.3	2.3	0.38	Sand/Clay	Point Bar	No
M-19	2	3	3.09	1.09	Gravel	Point Bar	No
M-20	2.25	2.8	2.85	0.6	Gravel	Point Bar	No
M-21	2.5	2.6	2.65	0.15	Gravel	Point Bar	No
M-22	2.24	2.7	2.8	0.56	Gravel	Point Bar	No
M-23	2.46	2.6	2.7	0.24	Gravel	Point Bar	No
M-24	1.8	2.35	3.1	1.3	Sand	Point Bar	No
M-25	1.56	2.19	2.36	0.8	Clay	Point Bar	No
M-26	2.39	2.7	2.75	0.36	Gravel	Point Bar	No
M-27	2	2.65	3.2	1.2	Silt/Gravel	Point Bar	No
M-28	1.69	2.34	2.4	0.71	Sand/Gravel	Point Bar	No
M-29	1.65	2.34	2.35	0.7	Sand/Silt	Point Bar	No
M-30	2.3	2.64	2.7	0.4	Gravel	Point Bar	No
M-31	1.95	2.64	2.75	0.8	Sand/Silt	Point Bar	No
M-32	1.74	2.38	2.45	0.71	Sand	Point Bar	No
M-33	1.54	2.29	2.3	0.76	Sand	Point Bar	No
M-34	1.9	2.09	2.1	0.2	Gravel	Point Bar	No
M-35	1.65	2.35	2.36	0.71	Sand	Point Bar	No
M-36	1.74	2.3	2.35	0.61	Sand	Point Bar	No
M-37	1.7	2.05	2.2	0.5	Gravel	Point Bar	No
M-38	1.69	2.3	2.3	0.61	Sand	Point Bar	No
M-39	1.55	1.9	1.91	0.36	Sand	Point Bar	No
M-40	1.65	1.79	1.9	0.25	Sand	Point Bar	No
M-41	1.4	2.15	2.15	0.75	Sand	Point Bar	No
M-42	1.45	1.69	1.85	0.4	Sand	Point Bar	No
M-43	1.65	1.88	2	0.35	Sand	Point Bar	No
M-44	1.45	1.85	1.95	0.5	Sand	Point Bar	No
M-45	1.45	1.6	1.61	0.16	Clay	Point Bar	No

APPENDIX III
SEDIMENT FIELD DATA SHEETS

Sediment Data Sheet

Project Name: Eliot Ditch
 Project Number: 172-367
 Field Location ID: ED-0008-SP02
 Core Type: Sediment - Peat Borer
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: SMF/MKD/LDC/JAS
 Cored Date: 10/30/2017
 Described By: MKD/JAS
 Described Date: 10/30/2017

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
2.45	2.03	83%

Pictures 1-8
 11:20 - 11:43am

Reviewed By _____ Date _____



Sediment Log

Client: CEC / Arconic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 10/30/2017

Location ID: ED-00.08-SDOZ Interval: 0 ft to 0.45 ft

Layer: 1 of 4

Gap: 0.42 ft

Sediment Color: 5Y 2.5/1
 2nd Sediment Color: 5Y 2.5/1

Lab Data

Duplicates?
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 1 Jar
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: coarse sand
 USCS Texture: SP

Structure

Type	Grade
<input type="checkbox"/> Granular	<input type="checkbox"/> Weak
<input type="checkbox"/> Subangular Blocky	<input type="checkbox"/> Moderate
<input type="checkbox"/> Angular Blocky	<input type="checkbox"/> Strong
<input checked="" type="checkbox"/> Single Grain	<input type="checkbox"/> Structureless
<input type="checkbox"/> Massive	
<input type="checkbox"/> Other	

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots?	<input checked="" type="checkbox"/> Few <input type="checkbox"/> Common <input type="checkbox"/> Many	Wood?	<input checked="" type="checkbox"/> Wood <input type="checkbox"/> Black Wood <input type="checkbox"/> Burned Wood <input type="checkbox"/> Sawdust <input type="checkbox"/> Wood Chips <input type="checkbox"/> Wood Pulp <input type="checkbox"/> Charcoal
Rocks?	<input checked="" type="checkbox"/> <15% <input type="checkbox"/> 15-35% <input type="checkbox"/> 35-60% <input type="checkbox"/> 60-80% <input type="checkbox"/> >80%	Wood %	<u>15</u> %
Odor?	<input type="checkbox"/> Petrochemical <input type="checkbox"/> Sulfur <input checked="" type="checkbox"/> Other <u>organic</u>	Shells?	<input checked="" type="checkbox"/> Plant Fragments? <input checked="" type="checkbox"/>
Notes		Sublayers?	<input type="checkbox"/> <0.05 ft <input type="checkbox"/> 0.05-0.1 ft <input type="checkbox"/> 0.1-0.2 ft <input type="checkbox"/> 0.2-0.5 ft <input type="checkbox"/> >0.5 ft
<input type="checkbox"/> TM? <input type="checkbox"/> Lacustrine? <input checked="" type="checkbox"/> Sand/gravel bed?		Color	<input type="checkbox"/> USDA Texture

Field Personnel

Logged By: MKD
 Data Entry By: Same as above
 JAS

Sample Remarks

Internal Remarks: 10/30 1120

Client: CEC/Accorn
 Site Name: Elliot Ditch
 Project Name: 17a-367
 Task #: 0002
 Log Date: 10/30/2017

Location ID: ED-00.08 - S002

Interval: 0.45 ft to 0.75 ft

Layer: 2 of 4 Gap: 0.48 ft

Sediment Color: N 2.5 (Black) 2nd Sediment Color: N 2.5 (Black)

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Loamy sand

USCS Texture: SM

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: _____

Grade: Weak Moderate Strong

Structureless

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% (None) 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other organic

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 5 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: _____ USDA Texture: _____

Field Personnel

Logged By: mkd

Data Entry By: Same as above JAS

Internal Remarks

10/30 1125

Notes

Tim? Lacustrine? Sand/gravel bed?

Client: Cec/Arronic
 Site Name: Ellint Ditch
 Project Name: 17A-367
 Task #: 0002
 Log Date: 10/30/2017

Location ID: ED-0A.08 - SDO2

Interval: 0.75 ft to 1.4 ft

Layer: 3 of 4
 Gap: 0.42 ft

Lab Data

Duplicate? - FD LDC
 Grab?
 Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 2 JARS

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Sediment Color: 5Y 4/1
 2nd Sediment Color: 5Y 4/1

Texture

USDA Texture: Sand 40-50% silt 30% clay 15-20
loamy sand

USCS Texture: SM

Structure

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other: _____

Grade: Weak
 Moderate
 Strong
structureless

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few
 Common
 Many
None

Rocks? <15% NONE
 15-35%
 35-60%
 60-90%
 >90%

Odor? Petrochemical
 Sulfur
 Other None

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood % 0 %

Sheets? Plant Fragments?
None None

Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color: _____
 USDA Texture: None

Field Personnel

Logged By: MKD
 Data Entry By: Same as above
 JAS

Sample Remarks

Internal Remarks

10/30 1130

Notes

TIII? Lacustrine? Sand/gravel bed?

Client: CEC/Arconic
 Site Name: Elliott Blvd
 Project Name: 072-367
 Task #: 0007
 Log Date: 10/30/2017

Location ID: ED-00.08-SD02 Interval: 1.4 ft to 2.03 ft

Layer: 4 of 4 Gap: 0.42 ft

Sediment Color: 5Y 4/2
 2nd Sediment Color: 2.5Y 2.5/1

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1 jar

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

80 sand 15-20 silt

USDA Texture: loamy sand

USCS Texture: SM

Structure

Granular	Weak
Subangular Blocky	Moderate
Angular Blocky	Strong
Single Grain	
Massive	
Other:	

Structureless

Plasticity

<input checked="" type="checkbox"/>	Non-plastic
<input type="checkbox"/>	Slightly Plastic
<input type="checkbox"/>	Moderately Plastic
<input type="checkbox"/>	Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other

Shells? None Plant Fragments? None

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Color: 2.5Y 8/1

USDA Texture: coarse sand

Field Personnel

Logged By: MKD

Data Entry By: Same as above

JAS

Sample Remarks

Internal Remarks

10/30 1146

Notes

TM? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name: Elliot Ditch
 Project Number: 172-367
 Field Location ID: ED-00.25-SD01
 Core Type: Russian Peat Borer, push & hammer
 Field Remarks: used same hole for all 3 cores sediment
 Northing: (ft)
 Easting: (ft)

Cored By: LDC/JAS
 Cored Date: 11/1/2017 (11:46-12:19)
 Described By: JAS
 Described Date: 11/1/2017
 Poked 4.3 ft

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery	
0-1.65'	1.35'	82%	
1.65'-3.30'	1.65'	100%	
3.30-4.30'	1.00'	100%	
0-4.30'	4.00	93%	overall

Reviewed By _____ Date _____

Client: CEC / Accorac
 Site Name: Flood Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/1/17

Location ID: ED-0025 S001 Interval: 0 ft to 0.5 ft

Layer: 1 Gap: ft

Sediment Color: 2.5Y 3/2 Color:
 2nd Sediment Color: 2.5Y 3/2

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Loamy Sand

USCS Texture: SW

Structure

Type	Grade
<input type="checkbox"/> Granular	<input type="checkbox"/> Weak
<input type="checkbox"/> Subangular Blocky	<input type="checkbox"/> Moderate
<input type="checkbox"/> Angular Blocky	<input type="checkbox"/> Strong
<input checked="" type="checkbox"/> Single Grain	
<input type="checkbox"/> Massive	
<input type="checkbox"/> Other: <u>structureless</u>	

Plasticity

<input type="checkbox"/> Non-plastic
<input checked="" type="checkbox"/> Slightly Plastic
<input type="checkbox"/> Moderately Plastic
<input type="checkbox"/> Very Plastic

Other Characteristics

Roots? Few None Common Many

Rocks? <15% None 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other

Shells? Plant Fragments?

Sublayers? <0.05 ft None Color
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % % 0

USDA Texture:

Field Personnel

Logged By: JAS

Data Entry By: Same as above DAK/JAS

Sample Remarks

Internal Remarks: 11/1/17

Notes

Tim? Lacustrine? Sand/gravel bed?



TETRA TECH

Sediment Log

Version 1.2, 1/20/16

Client: CEC / Arconic
 Site Name: Elliott Ditch
 Project Name: 172367
 Task #: 002
 Log Date: 11/11/17

Location ID: ED-00.25SD01 Interval: 0.57 ft to 3.9 ft

Layer: 2 Gap: ft

Color

Sediment Color: 2.5Y 2.5/1
 2nd Sediment Color: 2.5Y 2.5/1

Lab Data

Duplicate?
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: Loam, Coarse Sand

USCS Texture: SW

Type

Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other

Structure

Grade
 Weak
 Moderate
 Strong

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few Common Many
 Rocks? <15%
 15-35%
 35-60%
 60-80%
 >80%
 Odor? Petrochemical
 Sulfur
 Other
 Note

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft
 Color Note

Notes

Thin? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS
 Data Entry By: Same as above
 WCC / JSAK

Sample Remarks

Internal Remarks
11/1 12:01

USDA Texture

N/A



Sediment Log

Location ID: ED-0025-SD01 Interval: 351 ft to 43 ft

Client: CEC/Arconic
Site Name: Elliott Ditch
Project Name: 172 367
Task #: 0002
Log Date: 11/1/17

Layer: 3 Gap: [] ft

Color

Sediment Color: 5Y 2.5/2
2nd Sediment Color: 2.5/N 13A

Lab Data

Duplicate? FD
Grab?
Composite?
Matrix: Sediment
 Soil
 Air
 Water

of Containers: 2

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Field Personnel

Logged By: JAS
Data Entry By: Same as above
 [Signature]

Texture

USDA Texture: sandy clay

USCS Texture: CH

Type

Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other: structureless

Structure

Grade
Weak
Moderate
Strong

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Rocks? Few None
 Common
 Many
Rocks? <15%
 15-35%
 35-60%
 60-90%
 >90%
Odor? Petrochemical
 Sulfur
 Other None
Roots? Very Fine
 Fine
 Medium
 Coarse
 Very Coarse
Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal
Wood % %
Shells? Plant Fragments?
Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft
Color: 5Y 5/2
USDA Texture: Clay with medium gravel
Notes: Lacustrine? Sand/gravel bed?
TIN?

Internal Remarks

11/1 12:19

Sample Remarks

Sublayer appears thin at a thickness of 0.08 ft

Sediment Data Sheet

Project Name: Elliot Ditch
 Project Number: 172-367
 Field Location ID: ED-00.39-SDD2
 Core Type: Russian Peat Borer / Push & Hammer
 Field Remarks: used same hole for all 3 cores
 Northing: (ft)
 Easting: (ft)

Cored By: LDC/JAS (13:35-14:00)
 Cored Date: 11/1/2017
 Described By: JAS
 Described Date: 11/1/2017
 poled 4.3 ft

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery	
0-1.65	1.50	91%	push
1.65-3.30	1.60	97%	push
3.30-4.30	1.00	100%	push, little hammer
0-4.30	4.10	95%	overall

Reviewed By _____ Date _____



Sediment Log

1.65
1.55
2.20

Client: CEC / Arionix
 Site Name: Elkhorn Ditch
 Project Name: 172 367
 Task #: 60002
 Log Date: 11/1/17

Location ID: ED-0039-SD02 Interval: 0 ft to 2.20 ft

Layer: 1 ft
 Gap: ft

Sediment Color: 10YR 2/2
 2nd Sediment Color: 10YR 3/4

Lab Data

Duplicate? MS/MSD
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 3
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Structure

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other:
 Grade: Weak
 Moderate
 Strong

Texture

USDA Texture: loamy coarse sand
 USCS Texture: SM

Other Characteristics

Wood? Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal
 Wood % 5%
 Shells? Plant Fragments?
 Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft
 Color:
 USDA Texture: N/A

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Roots? Few None
 Common
 Many
 Rocks? <15%
 15-35%
 35-60%
 60-90%
 >90%
 Odor? Petrochemical
 Sulfur
 Other None

Field Personnel

Logged By: JAS
 Data Entry By: Same as above
 LDC

Internal Remarks

11/1 1335

Notes

Tin? Lacustrine? Sand/gravel bed?



Sediment Log

Version 1.2, 11/2016

Client: CEC / Arroyo
 Site Name: Ellisett Ditch
 Project Name: 172 367
 Task #: 0002
 Log Date: 11/17

Location ID: ED-00.39-SD02 Interval: 2.70 ft to 2.41 ft

Layer: 2 Gap: ft

Sediment Color: 2.5Y 4/3 2nd Sediment Color: 2.5Y 4/3

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Sandy Clay loam

USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: structureless

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few None Common Many

Rocks? <15% 15-35% 35-60% 60-90% 90%

Odor? Petrochemical Sulfur Other None

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 % Plant Fragments?

Shells?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: None USDA Texture:

Field Personnel

Logged By: JAS

Data Entry By: Same as above LOC / BAK / JAS

Sample Remarks

Clay floccular

Internal Remarks

11/1 13210

T1H? Lacustrine? Sand/gravel bed?

Client: CEC / Arconic
 Site Name: Elliot Ditch
 Project Name: 172 367
 Task #: 0002
 Log Date: 11/1/17

Location ID: ED-0039-SD02 Interval: 2.41 ft to 3.54 ft

Layer: 3 Gap: ft

Sediment Color: 2.5Y 2.5/1 2nd Sediment Color: 5Y 6/3

Lab Data

Duplicates? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Sandy Clay with fine shell

USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 2.5Y (black)

USDA Texture: clay

Notes

TIH? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above LA

Sample Remarks

M/I 1349

Client: CEC / Arconic
 Site Name: Ellett Ditch
 Project Name: 172 367
 Task #: 0002
 Log Date: 11/17

Location ID: ED-00, 34-SD02 Interval: 3.54 ft to 4.30 ft

Layer: 4 Gap: ft

Sediment Color: 2.5/1 (2.5/10) Color:
 2nd Sediment Color: 5Y 6/3

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Silty Clay

USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: structureless

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 2.5/1 2.5/1 USDA Texture: Coarse Sandy loam

Field Personnel

Logged By: JAS

Data Entry By: Same as above WOC / BAK / JAS

Sample Remarks

Internal Remarks: 11/1 14:00

Notes

Tilt? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name: Elliot Ditch
Project Number: 172-367
Field Location ID: ED-00.47-SD02
Core Type: sediment-Russian Reat Borer
Field Remarks:
Northing: (ft)
Easting (ft):

Cored By: SMF
Cored Date: 10/30/17
Described By: JAS/MKD
Described Date: 10/30/17



Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
3.3	3.13	95%

Reviewed By _____ Date _____

Client: SEC/Arconic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 000Z
 Log Date: 10/30/2017

Location ID: ED-00.47-SDOZ Interval: 0 ft to 0.33 ft

Layer: 1 of 4 Gap: 0.17 ft

Sediment Color: 7.5YR3/1 2nd Sediment Color: 7.5YR3/1

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Coarse sand

USCS Texture: SP

Structure

Type	Grade
<input type="checkbox"/> Granular	Weak <input type="checkbox"/>
<input type="checkbox"/> Subangular Blocky	Moderate <input type="checkbox"/>
<input type="checkbox"/> Angular Blocky	Strong <input type="checkbox"/>
<input checked="" type="checkbox"/> Single Grain	<u>Structureless X</u>
<input type="checkbox"/> Massive	
<input type="checkbox"/> Other	

Plasticity

<input checked="" type="checkbox"/> Non-plastic
<input type="checkbox"/> Slightly Plastic
<input type="checkbox"/> Moderately Plastic
<input type="checkbox"/> Very Plastic

Other Characteristics

Roots? Few NONE Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other NONE

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % %

Color

USDA Texture

Notes

Till? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above MKD

Sample Remarks

Some silt in sample

Internal Remarks

10/30 1410



TETRA TECH

Sediment Log

Version 1.2, 1/20/15

Client: CEC/Alconic
 Site Name: Elliot Ditch
 Project Name: 17Z-367
 Task #: 0002
 Log Date: 10/30/2017

Location ID: ED-00.47-SDOZ Interval: 0.33 ft to 1.46 ft

Layer: 2 of 4

Gap: 0.17 ft

Sediment Color: N2.5 (black) 2nd Sediment Color: N2.5 (black)

Texture: Silty clay

USDA Texture: CL

USCS Texture: CL

Structure

Type	Grade
<input type="checkbox"/> Granular	<input type="checkbox"/> Weak
<input type="checkbox"/> Subangular Blocky	<input type="checkbox"/> Moderate
<input type="checkbox"/> Angular Blocky	<input type="checkbox"/> Strong
<input type="checkbox"/> Single Grain	<input checked="" type="checkbox"/> structureless X
<input checked="" type="checkbox"/> Massive	
<input type="checkbox"/> Other: _____	

Lab Data

Duplicate?

Grab?

Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few None
 Common
 Many

Rocks? <15%
 15-35%
 35-60%
 60-80%
 >80%

Odor? Petrochemical
 Sulfur
 Other

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood % 0 %

Shells? Plant Fragments?
None None

Sublayers? <0.05 ft Color _____
 0.05-0.1 ft _____
 0.1-0.2 ft _____
 0.2-0.5 ft _____
 >0.5 ft _____

USDA Texture: None

Field Personnel

Logged By: JAS

Data Entry By: Same as above
 MKD

Sample Remarks

Internal Remarks: 10/30 1415

Notes

TII? Lacustrine? Sand/gravel bed?

Client: CEC/Arcenic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 002
 Log Date: 10/30/2017

Location ID: FD-00.47-SDOZ Interval: 1.46 ft to 1.96 ft

Layer: 3 of 4 Gap: 0.17 ft

Sediment Color: 5Y2.5/2 2nd Sediment Color: 5Y2.5/2

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Coarse Sand

USCS Texture: SP

Type

<input type="checkbox"/>	Granular
<input type="checkbox"/>	Subangular Blocky
<input type="checkbox"/>	Angular Blocky
<input checked="" type="checkbox"/>	Single Grain
<input type="checkbox"/>	Massive
<input type="checkbox"/>	Other: _____

Structure

<input type="checkbox"/>	Weak
<input type="checkbox"/>	Moderate
<input type="checkbox"/>	Strong

Grade

Structureless X

Plasticity

<input checked="" type="checkbox"/>	Non-plastic
<input type="checkbox"/>	Slightly Plastic
<input type="checkbox"/>	Moderately Plastic
<input type="checkbox"/>	Very Plastic

Other Characteristics

Roots? Few None Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other None

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments? ? None possibly

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture None

Field Personnel

Logged By: JAS

Data Entry By: Same as above MKD

Sample Remarks

Internal Remarks

10136 1420

These were leaves at top of core however we think they got caught in instrument when it was pushed down through sediment

Notes

THH? Lacustrine? Sand/gravel bed?

Location ID: ED-00.47-SD02 Interval: 1.96 ft to 3.13 ft

Client: CEC/Akronic
 Site Name: Eliot Ditch
 Project Name: 172-367
 Task #: 000Z
 Log Date: 10/30/2017

Layer: 4 of 4 Gap: 0.17 ft

Sediment Color: 10Y 3/1 2nd Sediment Color: N 2.5 (Black)

Texture: Silty clay Structure: Structureless X

Type	Grade
<input type="checkbox"/> Granular	<input type="checkbox"/> Weak
<input type="checkbox"/> Subangular Blocky	<input type="checkbox"/> Moderate
<input type="checkbox"/> Angular Blocky	<input type="checkbox"/> Strong
<input type="checkbox"/> Single Grain	
<input checked="" type="checkbox"/> Massive	
<input type="checkbox"/> Other:	

USDA Texture: CL

USCS Texture: CL

Duplicate? Grab? Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Plasticity

<input type="checkbox"/> Non-plastic
<input type="checkbox"/> Slightly Plastic
<input checked="" type="checkbox"/> Moderately Plastic
<input type="checkbox"/> Very Plastic

Field Personnel

Logged By: JAS

Data Entry By: Same as above
 MKD

Other Characteristics

Roots?	Wood?
<input checked="" type="checkbox"/> Few <u>NONE</u>	<input type="checkbox"/> Wood
<input type="checkbox"/> Common	<input type="checkbox"/> Black Wood
<input type="checkbox"/> Many	<input type="checkbox"/> Burned Wood
	<input type="checkbox"/> Sawdust
	<input type="checkbox"/> Wood Chips
	<input type="checkbox"/> Wood Pulp
	<input type="checkbox"/> Charcoal

Shells? Plant Fragments?

Wood % 0 %

Sublayers? Color None

<input type="checkbox"/> <0.05 ft	<input type="checkbox"/> USDA Texture
<input type="checkbox"/> 0.05-0.1 ft	
<input type="checkbox"/> 0.1-0.2 ft	
<input type="checkbox"/> 0.2-0.5 ft	
<input type="checkbox"/> >0.5 ft	

Notes

TIH? Lacustrine? Sand/gravel bed?

Internal Remarks: 10/30 1425

Sediment Data Sheet

Project Name: Elliot Ditch
 Project Number: 172-367
 Field Location ID: ED-00.51-SD02
 Core Type: Russian peat borer, push & hammer
 Field Remarks: The 2nd core was mostly a very liquidy slurry.
 Northing: (ft)
 Easting (ft):

Cored By: LDC/BAK
 Cored Date: 11/1/2017
 Described By: JAS
 Described Date: 11/1/2017

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery	
0 - 1.65'	1.65'	100%	
1.65 - 2.30'	1.65'	254%	
1.65 - 1.75'	0.1	690	- competent material (above slurry as noted above)

Reviewed By _____ Date _____



Sediment Log

Version 1.2, 11/20/16

Client: CEC / Arconic
 Site Name: Elliot Ditch
 Project Name: 17a-367
 Task #: 0002
 Log Date: 11/1/2017

Location ID: ED-00.51-SD02 Interval: 0 ft to 0.36 ft

Layer: 1 Gap: _____ ft

Color
 Sediment Color: 10YR 3/4
 2nd Sediment Color: 10YR 3/4

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: loamy coarse sand
 USCS Texture: SW

Structure

Granular	<input type="checkbox"/>
Subangular Blocky	<input type="checkbox"/>
Angular Blocky	<input type="checkbox"/>
Single Grain	<input checked="" type="checkbox"/>
Massive	<input type="checkbox"/>
Other:	<input type="checkbox"/>

Grade: Weak
 Moderate
 Strong
 Structureless

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few None
 Common
 Many

Rocks? <15% None
 15-35%
 35-60%
 60-90%
 >90%

Odor? Petrochemical
 Sulfur
 Other None

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood % 3 %

Shells? Plant Fragments?

Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color
 USDA Texture N/A

Field Personnel

Logged By: JAS
 Date Entry By: Same as above
 LOC

Notes

TH? Lacustrine? Sand/gravel bed?

Sample Remarks: 11/1 14:40

Internal Remarks:



Sediment Log

Version 1.2, 1/30/16

Client: REC / Arconic
 Site Name: Ellet Ditch
 Project Name: 172 367
 Task #: 0002
 Log Date: 11/17

Location ID: ED-00.51-S002 Interval: 0.36 ft to 0.68 ft

Layer: 2 Gap: ft

Color

Sediment Color: 10YR 2/2
 2nd Sediment Color: few mottles 10YR 4/6

Lab Data

Duplicate?
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 1
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: sandy clay loam
 USCS Texture: MH

Structure

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other:
 Grade: Weak
 Moderate
 Strong
structureless

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few NONE
 Common
 Many
 Rocks? <15% NONE
 15-35%
 35-60%
 60-90%
 >90%
 Odor? Petrochemical
 Sulfur
 Other NONE
 Shells? Plant Fragments?
 Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft
 Color:
 USDA Texture: N/A

Field Personnel

Logged By: JAS
 Data Entry By: Same as above
 LOC

Internal Remarks

Sample Remarks:
 Internal Remarks: 11/17 1445

Notes

Till? Lacustrine? Sand/gravel bed?

Sediment Log

Client: CEC/ARRONIC
 Site Name: Fireth Ditch
 Project Name: 172 367
 Task #: 0002
 Log Date: 11/11/17

Location ID: CD-00-51-5002 Interval: 0.68 ft to 1.65 ft

Layer: 3 Gap: ft

Color

Sediment Color: 2.5/N (black) 2nd Sediment Color: 2.5/N black

Texture

USDA Texture: very fine sandy loam

USCS Texture: ML

Structure

Type

<input type="checkbox"/>	Granular
<input type="checkbox"/>	Subangular Blocky
<input type="checkbox"/>	Angular Blocky
<input type="checkbox"/>	Single Grain
<input checked="" type="checkbox"/>	Massive
<input type="checkbox"/>	Other: <u> </u>

Grade

<input type="checkbox"/>	Weak
<input type="checkbox"/>	Moderate
<input type="checkbox"/>	Strong

Structureless

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity

<input type="checkbox"/>	Non-plastic
<input type="checkbox"/>	Slightly Plastic
<input checked="" type="checkbox"/>	Moderately Plastic
<input type="checkbox"/>	Very Plastic

Other Characteristics

Rocks? Few None Common Many

Rocks? <15% None 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other None

Shells? Plant Fragments?

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 15 %

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color 7.5YR4/6

USDA Texture loamy coarse sand

Notes

Lacustrine? Sand/gravel bed?

Thin?

Field Personnel

Logged By: JAS

Data Entry By: Same as above LOC/JAS

Internal Remarks

Sample Remarks

11/1 1450



Sediment Log

Client: CEC/Arconic
 Site Name: Elvert Ditch
 Project Name: 17a-367
 Task #: 0002
 Log Date: 11/1/2017

Location ID: FED-00.51-SD08 Interval: 1.65 ft to 1.75 ft

Layer: 4 Gap: ft

Color

Sediment Color: 2.5 | 1 (2.5/104)
 2nd Sediment Color: 2.5/1 (2.5/104)

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: fine sandy loam
 USCS Texture: ML

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong Structureless

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other None

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 3 %

Color USDA Texture N/A

Field Personnel

Logged By: JAS
 Data Entry By: Same as above LOC

Internal Remarks

11/1 1455

Notes

Tim? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name: Elliot Ditch
 Project Number: 172-367
 Field Location ID: ED-00.60-SD02
 Core Type: Russian Peat Borer/Hammer
 Field Remarks: sediment
 Northing: (ft)
 Easting: (ft)

Cored By: SMF/LDC/JAS
 Cored Date: 10/31/2017 11:40-11:45
 Described By: JAS
 Described Date: 11/2/17

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
--------------	-------	----------	----------------------	----------------	-------------------------

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery	
0 - 1.65	1.53	93%	11:45 AM
1.65 - 3.30	1.65	100%	12:09 PM
0 - 3.30	3.17	96%	Overall

Reviewed By _____ Date _____



Sediment Log

Version 1.2, 11/20/16

Client: Cec/Arcenic
 Site Name: Elliot Ditch
 Project Name: 172 367
 Task #: 2002
 Log Date: 11/2/17

Location ID: ED-00.60-SDG2 Interval: 0 ft to 1.76 ft

Layer: 1 Gap: 0.12 ft

Sediment Color: 10YR 3/2 2nd Sediment Color: 2.5N (black)
grades downward

Lab Data

Duplicate? NS/MSD
 Grab?
 Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 3
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: loamy coarse sand
 USCS Texture: SW

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: _____
 Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rocks? Few None Common Many
 Rocks? <15% 15-35% 35-60% 60-90% >90%
 Petrochemical Sulfur Other None
 Odor? Slight Moderate Strong
 Roots? Very Fine Fine Medium Coarse Very Coarse
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood % 0 %
 Shells? Plant Fragments?
 Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
 Color: _____
 USDA Texture: _____

Field Personnel

Logged By: JAS
 Data Entry By: Same as above LDC

Notes

Till? Lacustrine? Sand/gravel bed?
 Internal Remarks: 10/31 1140



TETRA TECH

Sediment Log

Version 1.2, 1/20/16

Client: CEC / Arconic
 Site Name: Elliot Ditch
 Project Name: 172 367
 Task #: 0002
 Log Date: 11/2/17

Location ID: ED-00-60-SD02 Interval: 1.76 ft to 2.22 ft

Layer: 2 Gap: 0 ft

Sediment Color: 5Y 3/1 2nd Sediment Color: 2.5Y 4/2

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: sandy clay

USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: _____

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few None Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other NONE

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 2.5Y 4/1 USDA Texture: loamy coarse sand

Field Personnel

Logged By: JAS

Data Entry By: Same as above LDC

Sample Remarks

Sublayer located @ bottom of layer 2 (0.04ft)

Internal Remarks

10/31 11:41

Notes

Till? Lacustrine? Sand/gravel bed?

Client: Cec / Arcenic
 Site Name: Elliott Ditch
 Project Name: 172 367
 Task #: 0007
 Log Date: 11/2/17

Location ID: ED-00.60-SD02 Interval: 2.22 ft to 2.39 ft

Layer: 3 Gap: 0 ft

Sediment Color: 2.5/N (black) 2nd Sediment Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: silty clay

USCS Texture: 0

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few None Common Many

Rocks? <15% None 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other None

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Field Personnel

Logged By: JAS

Data Entry By: Same as above WPC

Internal Remarks

Sample Remarks: 10131 1142

Notes: Tilt? Lacustrine? Sand/gravel bed?

USDA Texture: NIA

Client: CCC / Arcovis
 Site Name: Elliot Ditch
 Project Name: 172 367
 Task #: 0002
 Log Date: 11/2/17

Location ID: ED-00.60-SD07 Interval: 2.39 ft to 2.63 ft

Layer: 4 Gap: 0 ft

Sediment Color: 2.5-5/4 2nd Sediment Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers:

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: sandy clay

USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other None

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture: N/A

Field Personnel

Logged By: JAS

Data Entry By: Same as above LDC

Sample Remarks

10/31 1143

Internal Remarks

Tilt? Lacustrine? Sand/gravel bed?

Notes

Client: CEC / Arcenic
 Site Name: Elizbeth Ditch
 Project Name: 172 367
 Task #: 0007
 Log Date: 11/2/17

Location ID: CD-00.60-SD02 Interval: 2.63 ft to 3.3 ft

Layer: S Gap: 0 ft

Color

Sediment Color: 5Y 2.5/1
 2nd Sediment Color: 2.5Y 4/4
grades downward in color to ↑

Lab Data

Duplicate?
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Field Personnel

Logged By: JAS
 Data Entry By: Same as above
 LOX

Texture

USDA Texture: loamy sand
 USCS Texture: SW

Type

Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other

Structure

Weak
 Moderate
 Strong

Other Characteristics

Roots? Few None
 Common
 Many

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Rocks? <15%
 15-35%
 35-60%
 60-90%
 >90%

Wood % %

Odor? Petrochemical
 Sulfur
 Other None

Shells? Plant Fragments?
 Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Notes

Till? Lacustrine? Sand/gravel bed?

Sample Remarks

10/31 1144

USDA Texture

N/A

Sediment Data Sheet

Project Name: Elliot Ditch
 Project Number: 172-367
 Field Location ID: ED-00.72-SD03
 Core Type: Russian Peat Borer
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: SMF/LDC/JAS
 Cored Date: 10/31/2017
 Described By: JAS
 Described Date: 10/31/2017

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-1.65			^{core type} Russian Peat Borer/ Push sediment	^{time} (13:15)	
1.65-3.30			Russian Peat Borer/ Push Sediment	(13:25)	
3.30-4.30			Russian Peat Borer/ Hammer Sediment	(13:44)	

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery	
st 0-1.65	1.37	83%	Had full recovery, but top washed out
nd 1.65-3.30	1.65	100%	
rd 3.30-4.30	1.0	100%	

Reviewed By _____ Date _____

Client: Cec/Arcenic
 Site Name: Elliott Ditch
 Project Name: 17a-367
 Task #: 0002
 Log Date: 10/31/2017

Location ID: ED-00.7a-SD03 Interval: 0.0 ft to 2.06 ft

Layer: 1 Gap: 0.28 ft

Color

Sediment Color: Gley 1 (2.5/10Y)
 2nd Sediment Color: Gley 1 (2.5/10Y)

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Loamy coarse sand

USCS Texture: SW

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Structureless

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few None Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other None

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % %

Color USDA Texture N/A

Field Personnel

Logged By: JAS

Data Entry By: Same as above

Internal Remarks

13:15
10/31

Notes

TIN? Lacustrine? Sand/gravel bed?

Client: CEC / Arroyo
 Site Name: Elisatt Ditch
 Project Name: 172-367
 Task #: 002
 Log Date: 10/31/2017

Location ID: GD-0072-SD03 Interval: 2.06 ft to 2.40 ft

Layer: 2 Gap: 0.28 ft

Color

Sediment Color: 2.5Y 4/2 2nd Sediment Color: Grey 3/N

Lab Data

Duplicate? Gmb? Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: sandy clay
 USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other
 Grade: Weak Moderate Strong
structureless

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel

Logged By: JAS
 Data Entry By: Same as above LDC/SAS

Other Characteristics

Roots? Few Common Many
 Rocks? <15% 15-35% 35-60% 60-90% >90%
 Odor? Petrochemical Sulfur Other
 Shells? Plant Fragments?
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood % 0 %
 Shells? Plant Fragments?
 Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
 Color: N/A
 USDA Texture:

Internal Remarks

Sample Remarks: 13.25 10/31

Notes

Lacustrine? Sand/gravel bed?
 TIF?

Client: CCC / Arconic
 Site Name: Elliott Ditch
 Project Name: F72-367
 Task #: 0607
 Log Date: 10/31/17

Location ID: CD-06.72-SD03 Interval: 2.40 ft to 3.50 ft

Layer: 3 Gap: ft

Color

Sediment Color: 2.5Y 3/2 2nd Sediment Color: 2.5N (black)

Lab Data

Duplicate? FD
 Grab?
 Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 2
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: sandy clay loam
 USCS Texture: ML

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other
 Grade: Weak Moderate Strong
Structureless X

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel

Logged By: JAS
 Data Entry By: Same as above LOC/JAS

Other Characteristics

Roots? Few None Common Many
 Rocks? <15% 15-35% 35-60% 60-90% ≥90%
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood %: 0 %
 Shells? Plant Fragments?
 Sublayers? <0.05 ft multiple Color 2.5Y 3/2
 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
 Odor? Petrochemical Slight Moderate Strong
 Sulfur Other
 Notes: Lacustrine? Sand/gravel bed?
 T11? USDA Texture: silty clay

Internal Remarks

Sample Remarks: 13:30
10/31

Client: CEC / Arconic
 Site Name: Elliott Ditch
 Project Name: 172 367
 Task #: 0002
 Log Date: 10/31/17

Location ID: EO-0072-5003 Interval: 3.50 ft to 3.84 ft

Layer: 4 ft
 Gap: ft

3rd Sediment
 Color:
2.5Y 6/3

Sediment Color: 2.5Y 2.5/1
 2nd Sediment Color: 2.5N (black)

Lab Data

Duplicate?
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 1
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: sandy clay
 USCS Texture: CH

Structure

Type	Grade
<input type="checkbox"/> Granular	<input type="checkbox"/> Weak
<input type="checkbox"/> Subangular Blocky	<input type="checkbox"/> Moderate
<input type="checkbox"/> Angular Blocky	<input type="checkbox"/> Strong
<input type="checkbox"/> Single Grain	<input type="checkbox"/> Structureless <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Massive	
<input type="checkbox"/> Other: <u> </u>	

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few NONE
 Common
 Many

Rocks? <15% NONE
 15-35%
 35-60%
 60-90%
 >90%

Odor? Petrochemical
 Sulfur
 Other NONE

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color
 USDA Texture N/A

Field Personnel

Logged By: JAS
 Data Entry By: Same as above
 LPC/JAS

Sample Remarks

13.35
10/31

Notes

Lacustrine? Sand/gravel bed?



Sediment Log

Client: CEC / Arconic
 Site Name: Elliott Ditch
 Project Name: 172 367
 Task #: 0007
 Log Date: 10/31/17

Location ID: EO-0072-SD03 Interval: 3.81 ft to 4.05 ft

Layer: 5 Gap: ft

Sediment Color: 5Y 4/3 Color
 2nd Sediment Color: 5Y 2.5/1

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: coarse sandy loam

USCS Texture: MH

Structure

Granular	<input type="checkbox"/>
Subangular Blocky	<input type="checkbox"/>
Angular Blocky	<input type="checkbox"/>
Single Grain	<input type="checkbox"/>
Massive	<input checked="" type="checkbox"/>
Other:	<input type="checkbox"/>

Grade: Weak Moderate Strong Structureless

Plasticity

Non-plastic	<input type="checkbox"/>
Slightly Plastic	<input type="checkbox"/>
Moderately Plastic	<input checked="" type="checkbox"/>
Very Plastic	<input type="checkbox"/>

Other Characteristics

Rocks? Few NONE Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other NONE

Shells? Plant Fragments?

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture

Notes: TMI? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above LOC / JAS

Internal Remarks

Sample Remarks:

Internal Remarks: 13:40 10/31

Client: CEC
 Site Name: Ellisport Ditch
 Project Name: 172 367
 Task #: 0002
 Log Date: 10/31/17

Location ID: CD-00772-SD03 Interval: 4.05 ft to 4.30 ft

Layer: 6 ft
 Gap: ft

Sediment Color: G1EY1
2.5/1 (2.5/EGY)
 2nd Sediment Color: 101R 516

Lab Data

Duplicate?
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 1
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: sandy loam
 USCS Texture: ML

Structure

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other:
 Grade: Weak
 Moderate
 Strong
Structureless

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Rocks? Few NONE
 Common
 Many
 Rocks? <15%
 15-35%
 35-60%
 60-90%
 ≥90%
 Odor? Petrochemical
 Sulfur
 Other NONE
 Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal
 Wood % 0 %
 Shells? Plant Fragments?
 Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft
 Color
 USDA Texture N/A

Field Personnel

Logged By: JAS
 Data Entry By: Same as above
 LDC/JAS

Internal Remarks

13:45
10/21

Notes

Tim? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name: Elliot Ditch
Project Number: 172-367
Field Location ID: ED-00.82-SD02
Core Type: Push, Lexan 2" tube, sediment
Field Remarks:
Northing: (ft)
Easting (ft):

Cored By: SMF/LDC/JAS
Cored Date: 10/31/2017
Described By: JAS
Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0-0.8	0.7	88%

10:53 Am

Reviewed By _____ Date _____

Client: CFC / Arcenic
 Site Name: Elmth Ditch
 Project Name: H2 367
 Task #: 0002
 Log Date: 11/2/17

Location ID: ED-00.82-SD02 Interval: 0 ft to 0.39 ft

Layer: 1 Gap: ft

Sediment Color: 2.5Y 3/2 Color:
 2nd Sediment Color:

Lab Data

Duplicate? MS, MD
 Grab?
 Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 3
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: coarse sand
 USCS Texture: SW

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other
 Grade: Weak Moderate Strong
structureless

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few None Common Many
 Rocks? <15% None 15-35% 35-60% 60-90% 90%
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood %: 0 %
 Shells? Plant Fragments?
 Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
 Color:
 USDA Texture: N/A

Notes

T/H? Lacustrine? Sand/gravel bed?
 Odor? Petrochemical Sulfur Other N/A
 Slight Moderate Strong

Field Personnel

Logged By: JAS
 Data Entry By: Same as above

Internal Remarks

10/31 1050

Client: CCC / Arcanite
 Site Name: Elliot's Ditch
 Project Name: 177 367
 Task #: 0007
 Log Date: 11/1/2017

Location ID: ED-00.82-SD02 Interval: 0.39 ft to 0.7 ft

Layer: 2 Gap: ft

Sediment Color: 2.5Y 3/2 Color
 2nd Sediment Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers:

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: Loamy Sand

USCS Texture: SM

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

structureless

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few N/A Common Many

Rocks? <15% None 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other N/A

Wood? Very Fine Fine Medium Coarse Very Coarse

Wood % <5 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture N/A

Field Personnel

Logged By: JAS

Date Entry By: Same as above

Internal Remarks

10/31 1055

Notes

TIN? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name: Elliot Ditch
 Project Number: 172-367
 Field Location ID: ED-01.03-SD02
 Core Type: Sediment- Peat Borer/Hammer
 Field Remarks: sediment
 Northing: (ft)
 Easting (ft):

Cored By: SMF/LDC/JAS
 Cored Date: 10/30/2017 19 05-17:30
 Described By: JAS
 Described Date: 11/2/17

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
--------------	-------	----------	----------------------	----------------	-------------------------

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
st 0-1.65	1.26	76%
nd 1.65-2.25	0.6	100%
0-2.25	1.86	83% overall

Reviewed By _____ Date _____



Sediment Log

Version 1.2, 11/20/16

Client: CEC / Arcconic
 Site Name: ELIOTT DITCH
 Project Name: 172 367
 Task #: 0007
 Log Date: 11/2/17

Location ID: ED-01.03-SD02 Interval: 0 ft to 0.98 ft

Layer: 1 Gap: 0.39 ft

Color

Sediment Color: 5Y 3/2
 2nd Sediment Color: []

Lab Data

Duplicate? FD
 Grab?
 Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 2
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: loamy coarse sand
 USCS Texture: SM

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: []
 Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many
 Rocks? <15% 15-35% 35-60% 60-80% >80%
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood %: <15 %
 Shells? Plant Fragments?
 Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
 Color: []
 USDA Texture: N/A

Field Personnel

Logged By: JAS
 Data Entry By: Same as above VOC

Notes

Tim? Lacustrine? Sand/gravel bed?
 Internal Remarks: 10/30 1705



Soil Log

Version 1.2, 1/20/16

Sediment

Client: CEC / Avconic
 Site Name: Elliott Ditch
 Project Name: 172 367
 Task #: 0002
 Log Date: 11/2/17

Location ID: EP-01.03-SD03
 Interval: 0.98 ft to 1.65 ft

Layer Horizon: 2
 Gap: 0 ft

Soil Color: 5Y2.5/1
 2nd Soil Color:

Lab Data

Duplicate? FD
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 2
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: sandy clay loam
 USCS Texture: MLT

Structure

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other: _____

Grade: Weak
 Moderate
 Strong

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few None
 Common
 Many

Rocks? <15%
 15-35%
 35-60%
 60-90%
 >90%

Odor? Petrochemical
 Sulfur
 Other None

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color: _____
 USDA Texture: N/A

Field Personnel

Logged By: JAS
 Data Entry By: Same as above
 LOC

Sample Remarks

Internal Remarks: 10/30 1710

Notes

Till? Lacustrine? Sand/gravel bed?

Client: CFC / Arconic
 Site Name: Alliant Ditch
 Project Name: 72 367
 Task #: 0002
 Log Date: 11/2/17

Location ID: ED-0103-SD02 Interval: 1.65 ft to 1.87 ft

Layer Horizon: 3 Gap: 0 ft

Soil Color: 2.5/N (black) 2nd Soil Color: []

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Sandy clay loam

USCS Texture: WH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: []

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other: NONE

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: [] USDA Texture: N/A

Field Personnel

Logged By: JAS

Data Entry By: Same as above LDC

Sample Remarks

[]

Internal Remarks

K130 1730

Notes

Lacustrine? Sand/gravel bed?

Client: Cec Arconic
 Site Name: Ellitt Ditch
 Project Name: # 177 367
 Task #: 0002
 Log Date: 11/2/17

Location ID: FD-01.03-SD02 Interval: 1.87 ft to 2.25 ft

Layer: L4 Horizon: 0 ft Gap: 0 ft

Soil Color: 2.5/1 (2.5/10y) 2nd Soil Color:
 Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: sandy clay

USCS Texture: CH

Structure

Type	Grade
Granular	Weak
Subangular Blocky	Moderate
Angular Blocky	Strong
Single Grain	
Massive	
Other	

Plasticity

Non-plastic	<input type="checkbox"/>
Slightly Plastic	<input type="checkbox"/>
Moderately Plastic	<input type="checkbox"/>
Very Plastic	<input checked="" type="checkbox"/>

Other Characteristics

Roots?	<input type="checkbox"/> Few <u>NONE</u>	<input type="checkbox"/> Very Fine	<input type="checkbox"/> Wood
	<input type="checkbox"/> Common	<input type="checkbox"/> Fine	<input type="checkbox"/> Black Wood
	<input type="checkbox"/> Many	<input type="checkbox"/> Medium	<input type="checkbox"/> Burned Wood
		<input type="checkbox"/> Coarse	<input type="checkbox"/> Sawdust
		<input type="checkbox"/> Very Coarse	<input type="checkbox"/> Wood Chips
			<input type="checkbox"/> Wood Pulp
			<input type="checkbox"/> Charcoal

Rocks? <15% NONE Fine Gravel Wood % 0 %

15-35% Medium Gravel Shells? Plant Fragments?

35-60% Coarse Gravel Sublayers? <0.05 ft Color

60-90% Cobbles 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Odor? Petrochemical Slight Moderate Strong

Sulfur Other NONE

Notes: N/A

Tim? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above LDC

Sample Remarks

Internal Remarks: 10130 1735

Sediment Data Sheet

Project Name: Elliot Ditch
Project Number: 172-367
Field Location ID: ED-01.14-SD02
Core Type: Russian peat borer, push
Field Remarks: piling depth 1.56t
Northing: (ft)
Easting (ft):

Cored By: LDC/JMS
Cored Date: 11/1/2017
Described By: JAS
Described Date: 11/2/17

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0 - 1.05'	0.841	76%

Reviewed By _____ Date _____



Sediment Log

Version 1.2, 11/20/18

Client: cec / Arconic
 Site Name: Ellisott Ditch
 Project Name: 172 367
 Task #: 0002
 Log Date: 11/21/17

Location ID: ED-0114-SD02 Interval: 0 ft to 1.05 ft

Layer: 1 Gap: 0.21 ft

Sediment Color: 2.5Y 3/2 Color: []
 2nd Sediment Color: []

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: loamy coarse sand

USCS Texture: SW

Structure

Type	Grade
<input type="checkbox"/> Granular	<input type="checkbox"/> Weak
<input type="checkbox"/> Subangular Blocky	<input type="checkbox"/> Moderate
<input type="checkbox"/> Angular Blocky	<input type="checkbox"/> Strong
<input type="checkbox"/> Single Grain	
<input checked="" type="checkbox"/> Massive	
<input type="checkbox"/> Other: <u>[]</u>	

Plasticity

<input checked="" type="checkbox"/> Non-plastic
<input type="checkbox"/> Slightly Plastic
<input type="checkbox"/> Moderately Plastic
<input type="checkbox"/> Very Plastic

Other Characteristics

Roots? Few None Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other None

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: [] USDA Texture: N/A

Field Personnel

Logged By: JAS

Data Entry By: Same as above LDC

Internal Remarks

Sample Remarks: 12017

Notes: 11/6 0924

TH? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

substitute point for ED-01.24-SD02

Project Name: Elliot Ditch
Project Number: 17a-367
Field Location ID: ED-01.22-SD02 + ms
Core Type: Lexan, 2" ϕ , push
Field Remarks: piling depth 0.7ft
Northing: (R)
Easting (ft):

Cored By: LDC/JAS
Cored Date: 11/11/2017 10:50
Described By: JAS
Described Date: 11/2/17

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0-0.68	0.33	49%

Reviewed By _____ Date _____



Sediment Log

Version 1.2, 1/20/16

Client: CEC/Arconic Location ID: ED-01.22-SD02 Interval: 0 ft to 0.17 ft

Site Name: Elliot Ditch Layer: 1 Gap: ft

Project Name: 172-367 Sediment Color: 10YR 3/2

Task #: 0002 2nd Sediment Color:

Log Date: 11/2/2017 Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Fine sandy loam

USCS Texture: SW

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: structureless

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel

Logged By: JAS

Data Entry By: Same as above

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other None

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color:

USDA Texture: N/A

Notes

THP? Lacustrine? Sand/gravel bed?

Internal Remarks

11/1 10:50

Sample Remarks

This is a replacement point for ED-01.24-SD02. Mile marker distance is approximate. Check GPS for coordinates.

Client: CEC / Anderson
 Site Name: Elliott Ditch
 Project Name: FZ 367
 Task #: 0002
 Log Date: 11/2/17

Location ID: ED-01.22-SD02 Interval: 0.17 ft to 0.29 ft

Layer: 2 ft Gap: ft

Sediment Color: 5Y 5/4 Color
 2nd Sediment Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: sandy clay

USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

structureless

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other N/A

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Sheiks? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture N/A

Field Personnel

Logged By: JFS

Date Entry By: Same as above

Internal Remarks

11/1 10:55

Notes

Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Replacement for ED-01.39-

Project Name: Elliott Ditch
Project Number: 172367
Field Location ID: ED-01.37-SD03
Core Type: Russian peat borer, push
Field Remarks: piling depth 0.9ft
Northing: (ft)
Easting: (ft)

Cored By: LDC/BAK
Cored Date: 11/2/17
Described By: JAS
Described Date: 11/2/17

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
--------------	-------	----------	----------------------	----------------	-------------------------

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
--------------------	--------------------------------	------------

0-0.9'	0.86	96%
--------	------	-----

Reviewed By _____ Date _____

Client: CEC / Arconic
 Site Name: Clayton Dick
 Project Name: 172 367
 Task #: 0007
 Log Date: 11/2/17

Location ID: ED-0137-SD03 Interval: 0 ft to 0.9 ft

Layer: 1 Gap: 0.04 ft

Sediment Color: 10YR 2/2 2nd Sediment Color: []

Lab Data

Duplicate?
 Grab?
 Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Loamy coarse sand

USCS Texture: SW

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: structureless

Grade: Weak Moderate Strong

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few None Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 10YR 2/2 USDA Texture: Loamy fine sand

Field Personnel

Logged By: JAS
 Data Entry By: Same as above

Internal Remarks

Sample Remarks: Replacement for ED-0139-SD03
0.86/0.90'

Internal Remarks: 11/2/2017
0950

11.07

Sediment Data Sheet

Project Name: Elliot Ditch
Project Number: 172-367
Field Location ID: ED-01.49-SD03
Core Type: Russian Peat Borer/Hammer
Field Remarks: sediment
Northing (ft):
Easting (ft):

Cored By: SMF/LDC/JAS
Cored Date: 10/31/2017
Described By: JAS
Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery	
0-1.1	1.05	95%	10:23 AM
Poled to 1.3'; could not drive deeper than 1.1'			

Reviewed By _____ Date _____

Client: CCC/Arconic
 Site Name: Elliot Ditch
 Project Name: 172367
 Task #: 000Z
 Log Date: 11/2/17

Location ID: ED-0149-SD03 Interval: 0 ft to 0.7 ft

Layer: 1 ft
 Gap: ft

Sediment Color: 10YR 4/4 2nd Sediment Color:
 Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: coarse sand
 USCS Texture: SW

Structure

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other

Grade: Weak
 Moderate
 Strong

Structureless

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few None
 Common
 Many

Rocks? <15%
 15-35%
 35-60%
 60-90%
 >90%

Odor? Petrochemical
 Sulfur
 Other None

Shells? Plant Fragments?

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood % 0 %

Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color:
 USDA Texture: None

Field Personnel

Logged By: JAS
 Data Entry By: Same as above

Sample Remarks

Internal Remarks

10/31/17
10:23

Notes

Tim? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name: *Elliott Ditch*
 Project Number: *172-367*
 Field Location ID: *ED-00.54-SD03*
 Core Type: *Sediment Pent - Borer*
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: *BAK/DMM*
 Cored Date: *1/30/18*
 Described By: *MWB*
 Described Date: *1/31/18*

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
1.0' <i>1.0'</i>	<i>0.91'</i>	

Picture 3
Time: 07:50 - 07:57

Reviewed By _____ Date _____

Figure 2. Sample hard-copy print-out from electronic data logging system. Hard copies will be archived as a backup to the electronic system

Page 1 of 2

Sediment Log

Version 1.2, 1/20/16

Client: CEC/Arcadis Location ID: ED-00.54-SD03 Interval: 0 ft to 0.45 ft

Site Name: Elliott Ditch Layer: 1 of 2 Gap: 0 ft

Project Name: 172-367 Sediment Color: 10YR 2/1 2nd Sediment Color: 10YR 2/2

Task #: 0006 Texture: coarse sand Structure: Structureless

Log Date: 1/31/18 USDA Texture: SP USCS Texture: SP

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1 jar Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: MWS

Data Entry By: Same as above

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 5 % Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Odor? Petrochemical Sulfur Other Asph

Till? Lacustrine? Sand/gravel bed?

Internal Remarks

1/30/18

07:56-07:57

Notes

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 2 of 2

Sediment Log
Version 1.2, 1/20/16

Client: CEC/Arconic
 Site Name: Elliott Ditch
 Project Name: 172-367
 Task #: 0006
 Log Date: 1/31/18

Location ID: ED-00-54-SD03
 Interval: 0.45 ft to 0.91 ft
 Layer: 2 of 2
 Gap: 0 ft

Lab Data
 Duplicate?
 Grab?
 Composter?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 1
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture
 USDA Texture: loamy sand
 USCS Texture: SM

Color
 Sediment Color: 2.5Y 3/1
 2nd Sediment Color: 5Y 2.5/1

Structure
 Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other:
 Grade: Weak
 Moderate
 Strong
Structureless

Other Characteristics
 Rocks? Few
 Common
 Many
 Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal
 Wood % 0 %
 Shells? Plant Fragments?
 Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft
 Color:
 USDA Texture:
 Rocks? <15%
 15-35%
 35-60%
 60-90%
 >90%
 Odor? Petrochemical
 Sulfur
 Other Hydro
 Slight
 Moderate
 Strong
 Notes: Tail? Lacustrine? Sand/gravel bed?

Plasticity
 Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Field Personnel
 Logged By: MPS
 Data Entry By: Same as above

Internal Remarks
1/30/18
07:50-07:57

Sample Remarks

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

APPENDIX IV
SOIL FIELD DATA SHEETS

Sediment Data Sheet

Soil

Project Name:
 Project Number:
 Field Location ID: GD-06.08-SLG1
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: BAK M WB
 Cored Date: 10/30 11:07-11:34
 Described By: JAS
 Described Date: 11/2/17

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
<u>1.5-2.0</u>					
<u>1.8</u>					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
<u>2.0-1.5</u>	<u>0.4</u>	
<u>1.5-1.0</u>	<u>0.34</u>	
<u>0.5-1.0</u>	<u>0.5</u>	
<u>0.0-0.5</u>	<u>0.5</u>	

Reviewed By _____ Date _____



Client: CEC / Arconic
 Site Name: Elliott Ditch
 Project Name: 177 367
 Task #: 0007
 Log Date: 11/2/17

Location ID: ED-00.08-56.01 Interval: 0 ft to 0.5 ft

Horizon: 1A Gap: 0 ft

Soil Color: 6YR 2.5/1 2nd Soil Color:
 Color

Lab Data

Duplicate? MS(MSP)
 Grab?
 Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 3

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: 10AM
 USCS Texture: MH

Structure

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other:

Grade: Weak
 Moderate
 Strong

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few
 Common
 Many

Rocks? <15% NONE
 15-35%
 35-60%
 60-90%
 >90%

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color
 USDA Texture

Odor? Petrochemical
 Sulfur
 Other NONE

Slight
 Moderate
 Strong

Notes

T/H? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS
 Data Entry By: Same as above
 LSC

Sample Remarks

10/30 1107

So. | Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: ED-00.08-SLO4
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: BAK MWB
 Cored Date: 10/30 13:18-13:44
 Described By: JAS
 Described Date: 11/2

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0-0.5	0.46	
0.5-1.0	0.36	
1.0-1.5	0.35	
1.5-2.0	0.5	

Reviewed By _____ Date _____

Client: CFL/Arconk
 Site Name: ~~ED-00-08-SLO4~~ Elliot Ditch
 Project Name: ED-00-08-SLO4
 Task #: 0002
 Log Date: 11/2/2017

Location ID: ED-00-08-SLO4 Interval: 0 ft to 0.67 ft

Horizon: 0 Gap: 0.18 ft

Soil Color: 7.5 YR 3/1 2nd Soil Color:
 Color

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: silt loam

USCS Texture: MH

Structure

Granular	<input type="checkbox"/>	Weak	<input checked="" type="checkbox"/>
Subangular Blocky	<input type="checkbox"/>	Moderate	<input type="checkbox"/>
Angular Blocky	<input checked="" type="checkbox"/>	Strong	<input type="checkbox"/>
Single Grain	<input type="checkbox"/>		
Massive	<input type="checkbox"/>		
Other	<input type="checkbox"/>		

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other None

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture

Till? Lacustrine? Sand/gravel bed?

Notes

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK/JAS/LDC

Sample Remarks

10/30 1318

Client: CEC / Arroyo
 Site Name: Elleot Ditch
 Project Name: 122-367
 Task #: 0000
 Log Date: 1/2/2017

Location ID: ED-00.08-SLO4 Interval: 0.67 ft to 0.86 ft

Horizon: 1A

Gap: 0 ft

Soil Color: 2.5 Y 5/3 2nd Soil Color: 7.5YR 5/8 3rd Soil Color: 2.5/N (block)
 Color: MOISTLES

Texture: sandy clay
 USDA Texture: CH

Structure: Weak
 Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other:

Lab Data
 Duplicate?
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 1
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Plasticity
 Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics
 Roots? Few Common Many
 Rocks? <15% None 15-35% 35-60% 60-90% >90%
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood % 0 %
 Shells? Plant Fragments?
 Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
 Color:
 USDA Texture:

Field Personnel
 Logged By: JAS
 Data Entry By: Same as above BLK

Sample Remarks:
 Internal Remarks: 10/30 1327

Notes
 Till? Lacustrine? Sand/gravel bed?

Client: Cec / Arcenic
 Site Name: Ellisott Ditch
 Project Name: 172-367
 Task #: 0502
 Log Date: 11/2/17

Location ID: ED-00.08-SLO4 Interval: 0.86 ft to 2.0 ft

Horizon: 2A Gap: 6.15 ft

Soil Color: 5YR 2.5/1 2nd Soil Color:
 Color

Texture: sandy loam Structure:
 USDA Texture: MH Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:
 USCS Texture: Grade: Weak Moderate Strong

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other None

Shells? Plant Fragments?

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % %

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture

Notes: Tilt? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS
 Data Entry By: Same as above LDC

Sample Remarks: 0.86-1.36 bag extra soil if needed for FD

Internal Remarks: 10130 0.86-1.86 13:39 1.5-2.0 13:44

Sediment Data Sheet

Soil

Project Name:
 Project Number:
 Field Location ID: ED-00-008-SLO3
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: BAK
 Cored Date: 10/30/2017
 Described By: [Signature]
 Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5					12:20
0.5-1.0					12:33
1.0-1.5					12:45
1.5-2					12:53

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
.5	.45	90%
.5	.34	68%
.5	.48	96%
.5	.32	64%

Reviewed By _____ Date _____

Client: CFC/Aconic
 Site Name: Ellie's Ditch
 Project Name: 172-367
 Task #: 002
 Log Date: 11/21/2017

Location ID: ED-00.08-SLO3 Interval: 0 ft to 0.5 ft

Horizon: 0 Gap: 0.05 ft

Soil Color: S1R 3/1 2nd Soil Color:
 Color

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: sandy clay loam

USCS Texture: ML

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Slight Moderate Strong Other: None

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % <5 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture

Notes

Till? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: SJS

Data Entry By: Same as above BAK WSC

Sample Remarks

Internal Remarks

10/30 12:20

Client: CEC / Arcane
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2017

Location ID: ED-00.08-SLO3 Interval: 0.5 ft to 0.97 ft

Horizon: 1A Gap: 0.16 ft

Soil Color: 10YR 5/6 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: loamy sand

USCS Texture: SM

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few None Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other NO

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 6 %

Color USDA Texture

Field Personnel

Logged By: TAS

Data Entry By: Same as above BAK WOC

Internal Remarks

Sample Remarks

Internal Remarks 10/30 12:33

Notes

Tim? Lacustrine? Sand/gravel bed?



Soil Log

Client: CEC / Arroyo
 Site Name: Elliot Ditch
 Project Name: 172 367
 Task #: 2
 Log Date: 11/2/17

Location ID: ED-00.08-203 Interval: 0.97 ft to 2.0 ft

Horizon: 2A Gap: 0.20 ft

Soil Color: 5YR 2.5/1 2nd Soil Color:
 Color

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: very fine sandy loam

USCS Texture: ML

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other: None

Shells? Plant Fragments?

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % %

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture

Field Personnel

Logged By: JAS

Data Entry By: Same as above LX

Internal Remarks

10/30
0.97 - 1.17 @ 12:45
1.5 - 2.0 @ 12:53

Notes

TM? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: ED-00.25-5602
 Core Type:
 Field Remarks:
 Northing: (R)
 Easting (ft):

Cored By: BAK
 Cored Date: 10/30/2017
 Described By:
 Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5					16:01
0.5-1	-			hole in center of core in top 0.45' - incr in diameter w/ depth they terminate 5' - not observed in 1 st core	16:09

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5	0.5	100%
0.5	0.5	100%

Reviewed By _____ Date _____

Client: CEC / Arconic
 Site Name: Eliot Ditch
 Project Name: 173-367
 Task #: 0002
 Log Date: 11/3/2017

Location ID: ED-00.25-SLO2 Interval: 0 ft to 0.5 ft

Horizon: 0 Gap: 0 ft

Soil Color: 2.5YR 2.5/1 2nd Soil Color:

Lab Data

Duplicate? FD
 Grab? UDC
 Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: loam

USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other None

Roots? Very Fine Fine Medium Coarse Very Coarse

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 4 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK UDC

Sample Remarks

Internal Remarks

10/30 16:01

Notes

TM? Lacustrine? Sand/gravel bed?

Location ID: ED-00.25-SLO2 Interval: 0.5 ft to 0.62 ft

Client: CEC/Arcenic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 1/2/2017

Horizon: 1A Gap: 0 ft

Soil Color: 10YR 5/6 2nd Soil Color: 10YR 2/1

Lab Data

Duplicate?
 Grab?
 Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Field Personnel

Logged By: JAS
 Data Entry By: Same as above
 ISAK WCC

Structure

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other: _____

Grade: Weak
 Moderate
 Strong

Texture

USDA Texture: loam

USCS Texture: ML

Other Characteristics

Roots? Few
 Common
 Many

Rocks? <15%
 15-35%
 35-60%
 60-90%
 >90%

Odor? Petrochemical
 Sulfur
 Other: NOA

Plasticity: Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color: _____
 USDA Texture: _____

Notes

TM? Lacustrine? Sand/gravel bed?

Internal Remarks

note thru center of core missing root?

10/30 16:09

Client: CEL/Arroyo
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 002
 Log Date: 11/2/2017

Location ID: ED-0025-SL02 Interval: 0.62 ft to 1.0 ft

Horizon: 2A Gap: 0 ft

Soil Color: 7.5YR3/2 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: Sandy loam

USCS Texture: MH

Type

Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other:

Structure

Weak
 Moderate
 Strong

Color

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 15 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color

USDA Texture

Notes

TM? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK LOC

Sample Remarks

hole through center

Internal Remarks

10/30/17 16:10

Sediment Data Sheet

Soil

Project Name:

Project Number:

Field Location ID: ED - 00 25 - S104

Core Type:

Field Remarks:

Northings (ft)

Easting (ft):

Cored By: BAK

Cored Date: 10/30/2017

Described By:

Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0.-0.5					14:54
0.5-1.0					15:01
1.0-1.5					15:20
1.5-2					15:27

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5	0.5	100%
0.5	0.34	68%
0.5	0.3	60%
0.5	0.5	100%

Reviewed By _____

Date _____



TETRA TECH

Soil Log

Version 1.2, 1/20/16

Client: CEL / Arcville
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2017

Location ID: ED-00.25-SLO4 Interval: 0 ft to 2.0 ft
 Horizon: 0A Gap: 0.36 ft

Soil Color: 7.5YR 2.5/1 2nd Soil Color:
 Color

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 4

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Sandy loam

USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other N/A

Shells? Plant Fragments?

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % %

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 10YR 5/3

USDA Texture: Sandy clay loam

Field Personnel

Logged By: JAS

Data Entry By: Same as above JAK ioc

Sample Remarks

Internal Remarks

10/30 @ 1454
0-0.5 @ 1501
0.5-1.0 @ 1526
1.0-1.5 @ 1527
1.5-2.0 @ 1527

Notes

Lacustrine? Sand/gravel bed?

Till?

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: **FD-06.25-SLO3**
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: **BAK**
 Cored Date: **10/30/2017**
 Described By:
 Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5					16-30
0.5-1.0					16-51
0.0-0.5					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5	.46	92%
0.5	.25	50%
	.71	
	.29	

Reviewed By _____ Date _____

Client: Arroyo / CEL
 Site Name: El Estero D. Tech
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2017

Location ID: ED-00.25-SLO3 Interval: 0 ft to 1.0 ft
 Horizon: A Gap: 0.29 ft
 Color

Soil Color: 5YR 2.5/1 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: sandy loam

USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few 0.3-1.0 Common 0.0-0.3 Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other NO

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 % Plant Fragments?

Shells? Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture

Notes

Till? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK LDC

Sample Remarks

10/30/17
0-0.5 1630
0.5-1.0 1651

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: **ED-00.39-5601**
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: **BAK**
 Cored Date: **10/31/2017**
 Described By:
 Described Date: **11/2**

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5					8:11
0.5-1.0					8:17

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5	0.5	100%
0.5	0.2	40%

Reviewed By _____ Date _____



Client: CEL/Arcenic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 1/2/2012

Location ID: ED-00.39-SLO1 Interval: 0 ft to 1.0 ft

Horizon: 0 Gap: 0.3 ft

Soil Color: 7.5YR 3/2 2nd Soil Color: 10R 4/6
 (mottles found from 0.25-0.5' from non nodules)

Lab Data

Duplicate? MS(MSD) (0-0.5)
 Grab?
 Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 1 loc
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: loam
 USCS Texture: ML

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: _____
 Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many
in top 0.25'
 Rocks? <15% 15-35% 35-60% 60-90% >90%
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood % _____
 Shells? Plant Fragments?
 Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
 Color _____
 USDA Texture _____

Field Personnel

Logged By: TAS
 Data Entry By: Same as above BAK loc

Internal Remarks

10/31 8:11 MS(MSD)
0-0.5 8:17
0.5-1.0 8:17

Notes

Lacustrine? Sand/gravel bed?
 Till?

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: ED - 00.39 - SL03
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: RAK
 Cored Date: 10/31/2017
 Described By:
 Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5					8:31
0.5-1.0					8:37
1.0-1.5					8:44

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5	0.5	100%
0.5	0.41	82%
0.5	0.5	100%

Reviewed By _____ Date _____

Client: CEC/Arcenic
 Site Name: Elliott Ditch
 Project Name: 17P-367
 Task #: 0002
 Log Date: 11/2/2017

Location ID: ED-0039 - SLO3 Interval: 0 ft to 0.69 ft

Horizon: 0 Gap: 0.09 ft

Soil Color: 10 YR 2/1 2nd Soil Color:
 Color

Lab Data

Duplicate? FD
 Grab?
 Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 22
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:
 Grade: Weak Moderate Strong

Texture

USDA Texture: loam
 USCS Texture: MH

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood %: 10 %
 Shells? Plant Fragments?
 Rocks? <15% 15-35% 35-60% 60-90% >90%
 Color: 2.5 YR 5/8
 Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
 USDA Texture: Redox concretions

Field Personnel

Logged By: JAS
 Data Entry By: Same as above BAK LPC

Notes

TM? Lacustrine? Sand/gravel bed?
 Internal Remarks: 10/31 0831

Location ID: ED-00.39-SLO3 Interval: 0.69 ft to 0.98 ft

Client: CEC/Aronic
 Site Name: Elliot Ditch
 Project Name: 170-367
 Task #: 0007
 Log Date: 11/2/2017

Horizon: 1A Gap: 0 ft

Soil Color: 7.5YR 4/3 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 2

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: Sandy loam

USCS Texture: SM

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few Common (1-4) Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other None

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color:

USDA Texture:

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK DC

Internal Remarks

10/31 0837

Notes

Till? Lacustrine? Sand/gravel bed?

Client: CEC / Arcadia
 Site Name: Elliot Ditch
 Project Name: 172-767
 Task #: 0002
 Log Date: 11/2/2017

Location ID: ED-10.34-SLO3 Interval: 0.98 ft to 1.17 ft

Horizon: 2A Gap: 0 ft

Soil Color: 7.5YR 2.5/1 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: 100mm

JSCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Notes

TH? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK/DC

Sample Remarks

10/31 6840

Internal Remarks

Client: CEC / Arcenic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2017

Location ID: ED-00.39-SL03

Interval: 1.17 ft to 1.5 ft

Horizon: B

Gap: 0 ft

Soil Color: 10YR 4/4 2nd Soil Color: 10YR 3/1

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Silty loam

USCS Texture: ML

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other None

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Field Personnel

Logged By: TAS

Data Entry By: Same as above BAK 100

Internal Remarks

Sample Remarks: 10/31 0844

Notes: Tilt? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: ED-00.39-SLO4
 Core Type:
 Field Remarks:
 Northing (ft):
 Easting (ft):

Corer By: BAK
 Cored Date: 10/31/2017
 Described By:
 Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5			0.25	50 %	9:02
0.5-1.0			0.5	100 %	9:06
1.0-1.5			0.2	40 %	9:13

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery

Reviewed By _____ Date _____

Client: CEL/Arconic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2017

Location ID: ED-0039-SC04 Interval: 0 ft to 1.5 ft

Horizon: 0 Gap: ft

Soil Color: 5YR 2.5/1 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 3.2 (LDC)

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Texture

USDA Texture: 10cm

USCS Texture: MH

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% None 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other NONE

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Field Personnel

Logged By: SAS

Data Entry By: Same as above BAK LDC

Sample Remarks

insuff. recovery 1-1.5' to sample

Internal Remarks

10/31 0.0-0.5 @ 0902 0.5-1.0 @ 0906

Notes

TM? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: **0E1D-00.47-SL01**
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: **BAK**
 Cored Date: **10/31/2017**
 Described By:
 Described Date: **11/2**

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5					10:04
0.5-1					10:11

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5	0.5	100%
0.5	0.19	38%

Reviewed By _____ Date _____

Client: CEL/Aconic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2012

Location ID: ED-00.47-SLO1 Interval: 0 ft to 1.0 ft

Horizon: 0 ft
 Gap: ft

Soil Color: 5YR 2.5/2 2nd Soil Color:
 Color

Texture

USDA Texture: sandy loam
 USCS Texture: SM

Type

<input checked="" type="checkbox"/>	Granular
<input type="checkbox"/>	Subangular Blocky
<input type="checkbox"/>	Angular Blocky
<input type="checkbox"/>	Single Grain
<input type="checkbox"/>	Massive
<input type="checkbox"/>	Other: <u> </u>

Structure

<input checked="" type="checkbox"/>	Weak
<input type="checkbox"/>	Moderate
<input type="checkbox"/>	Strong

Grade

Lab Data

Duplicate?
 Grab?
 Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Plasticity

<input type="checkbox"/>	Non-plastic
<input type="checkbox"/>	Slightly Plastic
<input type="checkbox"/>	Moderately Plastic
<input checked="" type="checkbox"/>	Very Plastic

Other Characteristics

Roots? Few
 Common
 Many

Rocks? <15%
 15-35%
 35-60%
 60-90%
 >90%

Odor? Petrochemical
 Sulfur
 Other

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood % <5 %

Shells? Plant Fragments?

Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color
 USDA Texture

Field Personnel

Logged By: SAS
 Data Entry By: Same as above
 BAK LO

Sample Remarks

insuff recovery / to sample 0.5-1.0

Internal Remarks

10/31 1004

Notes

Tim? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: ED-00.47-SL03
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: BAK
 Cored Date: 10/31/2017
 Described By: 11/2/17
 Described Date: JAS

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5					10:23
0.5-1.0			total depth 0.77 (LDC)		10:31

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5	.34	68%
0.5	.43	86%

Reviewed By _____ Date _____



Soil Log

Version 1.2, 1/20/16

Client: CEL / ~~ABC~~ Account
 Site Name: Elliot Dike
 Project Name: 172-83
 Task #: 0002
 Log Date: 11/2/2017

Location ID: ED-0047-SLO3 Interval: 0 ft to 0.77 ft

Horizon: A Gap: 0.23 ft

Soil Color: 10YR 3/1 2nd Soil Color: 10YR 5/3
Found around some roots

Lab Data

Duplicate? FD
 Grab?
 Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 2
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: sandy clay loam
 USCS Texture: SC

Structure

<input type="checkbox"/> Granular	<input type="checkbox"/> Weak
<input checked="" type="checkbox"/> Subangular Blocky	<input type="checkbox"/> Moderate
<input type="checkbox"/> Angular Blocky	<input type="checkbox"/> Strong
<input type="checkbox"/> Single Grain	
<input type="checkbox"/> Massive	
<input type="checkbox"/> Other:	

Plasticity

<input type="checkbox"/> Non-plastic
<input type="checkbox"/> Slightly Plastic
<input type="checkbox"/> Moderately Plastic
<input type="checkbox"/> Very Plastic

Other Characteristics

Roots?	<input checked="" type="checkbox"/> Few	<input type="checkbox"/> Common	<input type="checkbox"/> Many	Wood?	<input type="checkbox"/> Wood
Rocks?	<input checked="" type="checkbox"/> <15%	<input type="checkbox"/> 15-35%	<input type="checkbox"/> 35-60%	<input type="checkbox"/> Burned Wood	<input type="checkbox"/> Black Wood
Odor?	<input type="checkbox"/> Petrochemical	<input type="checkbox"/> Sulfur	<input type="checkbox"/> Other	<input type="checkbox"/> Sawdust	<input type="checkbox"/> Wood Chips
	<input type="checkbox"/> Slight	<input type="checkbox"/> Moderate	<input type="checkbox"/> Strong	<input type="checkbox"/> Wood Pulp	<input type="checkbox"/> Charcoal
	<input type="checkbox"/> None	<input type="checkbox"/> None	<input type="checkbox"/> None	Wood %	<input type="checkbox"/> %
	<input type="checkbox"/> None	<input type="checkbox"/> None	<input type="checkbox"/> None	Shells?	<input type="checkbox"/> Plant Fragments?
	<input type="checkbox"/> None	<input type="checkbox"/> None	<input type="checkbox"/> None	Sublayers?	<input type="checkbox"/> <0.05 ft
	<input type="checkbox"/> None	<input type="checkbox"/> None	<input type="checkbox"/> None		<input type="checkbox"/> 0.05-0.1 ft
	<input type="checkbox"/> None	<input type="checkbox"/> None	<input type="checkbox"/> None		<input type="checkbox"/> 0.1-0.2 ft
	<input type="checkbox"/> None	<input type="checkbox"/> None	<input type="checkbox"/> None		<input type="checkbox"/> 0.2-0.5 ft
	<input type="checkbox"/> None	<input type="checkbox"/> None	<input type="checkbox"/> None		<input type="checkbox"/> >0.5 ft

Color:
 USDA Texture:

Field Personnel

Logged By: JAS
 Data Entry By: Same as above BAK / JAS

Internal Remarks

10/31 2023

Notes

Tim? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name:
 Project Number: ED-00.47-SLO4
 Field Location ID:
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: BAK
 Cored Date: 10/31/2017
 Described By:
 Described Date: 11/2

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
<u>0-0.5</u>					<u>10:46</u>
<u>0.5-1.0</u>	<u>0.80</u>		<u>WDC</u>		<u>10:53</u>

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
<u>0.5</u>	<u>0.39</u>	<u>78%</u>
<u>0.5</u>	<u>0.30</u>	<u>60% 100%</u>

Reviewed By _____ Date _____

Client: CGL/Arconic
 Site Name: Elliot Ditch
 Project Name: 17A-367
 Task #: 0002
 Log Date: 11/2/2017

Location ID: ED-00.47-SLO4 Interval: 0 ft to 0.80 ft

Horizon: 0 Gap: 0.11 ft

Soil Color: 5YR 2.5/1 2nd Soil Color:
 Color

Lab Data

Duplicate? Grab? Composite?

Metric: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: loam

USCS Texture: SM

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture

Odor? Petrochemical Slight Moderate Strong Sulfur Other NONE

Notes: Lacturine? Sand/gravel bed? Till?

Field Personnel

Logged By: BAS

Data Entry By: Same as above BAS LOC

Sample Remarks

Internal Remarks

10/31 1046

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: **ED - 00.51 - SLO3**
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: **BAK**
 Cored Date: **10/31/2017**
 Described By:
 Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5					12:05
0.5-1.0					12:12

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5	0.5	100%
0.5	0.47	94%

Reviewed By _____ Date _____

Client: CEL/Arconic
 Site Name: 172-367 → Elliot Ditch
 Project Name:
 Task #: 0002
 Log Date: 11/2/2017

Location ID: FD-00.51 - SLO3 Interval: 0 ft to 1.0 ft

Horizon: A Gap: 0.03 ft

Soil Color: 5Y 2.5/1 2nd Soil Color: 10YR 6/14

Lab Data

Duplicate? FD-0-0.5
 Grab? 0.5-1.0
 Composite? FD-0-0.5

Matrix: Sediment Soil Air Water

of Containers: 13

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Silty loam

USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rocks? Few None Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other None

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 2.5YR 2.5/1

USDA Texture: loam and decaying leaves

Field Personnel

Logged By: SAS

Data Entry By: Same as above BAK/LOC

Internal Remarks

10/31
 0.0-0.5 @ 12.05
 0.5-1.0 @ 12.12

Notes

Tim? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: *ED-00.51-SLO1*
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: *BAK*
 Cored Date: *6/31/2017*
 Described By:
 Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
<i>0-0.5</i>					<i>11:35</i>
<i>0.5-1.0</i>					<i>11:41</i>

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
<i>0.5</i>	<i>0.39</i>	<i>78%</i>
<i>0.5</i>	<i>0.5</i>	<i>100%</i>

Reviewed By _____ Date _____

Client: C&L/Accenic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0602
 Log Date: 11/2/2017

Location ID: ED-00.S1-SLA Interval: 0 ft to 1.0 ft

Horizon: A Gap: ft

Soil Color: 5YR 2.5/1 2nd Soil Color: 10YR 6/6

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 72 (20)

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Structure

Type

<input type="checkbox"/>	Granular
<input checked="" type="checkbox"/>	Subangular Blocky
<input type="checkbox"/>	Angular Blocky
<input type="checkbox"/>	Single Grain
<input type="checkbox"/>	Massive
<input type="checkbox"/>	Other

Grade

<input checked="" type="checkbox"/>	Weak
<input type="checkbox"/>	Moderate
<input type="checkbox"/>	Strong

Texture

USDA Texture: very fine sandy loam

USCS Texture: MH

Plasticity

<input type="checkbox"/>	Non-plastic
<input type="checkbox"/>	Slightly Plastic
<input type="checkbox"/>	Moderately Plastic
<input checked="" type="checkbox"/>	Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other NOV

Roots? Very Fine Fine Medium Coarse Very Coarse

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % <5 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture

Field Personnel

Logged By: JAS

Data Entry By: Same as above JAK/LDC

Internal Remarks

Sample Remarks: Bottom 0.5-1.0' wet

Internal Remarks: 10/31
0.5-0.5 @ 1135
0.5-1.0 @ 1141

Notes

TIN? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: ED - 00.60 - SLO1
 Core Type:
 Field Remarks:
 Northing: (N)
 Easting (ft):

Cored By: BAK
 Cored Date: 10/31
 Described By:
 Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5					13:23
0.5-1.0					13:29

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5	0.5	100%
0.5	0.28	56%

Reviewed By _____ Date _____

Client: CFC / Arconic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/7/2017

Location ID: ED-00.60-SLO3 Interval: 0 ft to 0.89 ft

Horizon: 0 Gap: 0.22 ft

Soil Color: 2.5Y 3/2 2nd Soil Color:

Lab Data

Duplicate? MS (MSD)
 Grab?
 Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 43
 Priority: Urgent Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: 100m
 USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other None

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 43 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Field Personnel

Logged By: JAS
 Data Entry By: Same as above BAK VDC

Sample Remarks

Internal Remarks

10/31 1323

Notes

Till? Lacustrine? Sand/gravel bed?

Client: LEC / Areas
 Site Name: Elliott Ditch
 Project Name: 177-367
 Task #: 0002
 Log Date: 11/2/2017

Location ID: E1-00.50 - SLOZ Interval: 0.89 ft to 1.0 ft

Horizon: A Gap: ft

Soil Color: 10YR 5/4 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Sandy clay

USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few None Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Odor? Petrochemical Slight Moderate Strong Sulfur Other: None

Notes:

Till? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK WCC

Internal Remarks

10/31 1329

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: *ED - 00.60 - SLO3*
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: *BAK*
 Cored Date: *10/31/2017*
 Described By:
 Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
<i>0-0.5</i>					<i>13:41</i>
<i>0.5-1.0</i>					<i>13:49</i>

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
<i>0.5</i>	<i>0.38</i>	<i>76%</i>
<i>0.5</i>	<i>0.47</i>	<i>94%</i>

Reviewed By _____ Date _____

Client: CEC / Arcenic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2017

Location ID: ED-0060-SLO1 Interval: 0 ft to 0.19 ft

Horizon: 0 Gap: 0 ft

Soil Color: 5YR 3/1 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: silt loam

USCS Texture: ML

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% None 15-35% 35-60% 60-90% ≥80%

Odor? Petrochemical Sulfur Other NOVA

Roots? Very Fine Fine Medium Coarse Very Coarse

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Notes

Till? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK LOC

Sample Remarks

10/31 1341

Internal Remarks

Client: CEL / Aronic
 Site Name: Felton Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2016

Location ID: FD-00.60-SLO1 Interval: 0.25 ft to 1.0 ft

Horizon: A Gap: 0.15 ft

Soil Color: 10YR 5/6 2nd Soil Color: 10YR 4/2

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: loamy sand

USCS Texture: SM

Structure

Type

<input checked="" type="checkbox"/>	Granular
<input type="checkbox"/>	Subangular Blocky
<input type="checkbox"/>	Angular Blocky
<input type="checkbox"/>	Single Grain
<input type="checkbox"/>	Massive
<input type="checkbox"/>	Other

Grade

<input checked="" type="checkbox"/>	Weak
<input type="checkbox"/>	Moderate
<input type="checkbox"/>	Strong

Plasticity

<input type="checkbox"/>	Non-plastic
<input type="checkbox"/>	Slightly Plastic
<input checked="" type="checkbox"/>	Moderately Plastic
<input type="checkbox"/>	Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Slight Moderate Strong Sulfur Other None

Roots? Very Fine Fine Medium Coarse Very Coarse

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture

Notes

Lacustrine? Sand/gravel bed?

Thin?

Field Personnel

Logged By: BTAS

Data Entry By: Same as above BAK LOC

Sample Remarks

Internal Remarks

10/31 1349

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: EP-00.72-SL01
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: BAK
 Cored Date: 10/31/2017
 Described By: JAS
 Described Date: 11/2

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5					14:05
0.5- 1.0					14:13

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5	0.5	100%
0.5	0.28	56%

Reviewed By _____ Date _____

Client: CEL/Acroinc
 Site Name: Ellist Ditch
 Project Name: 172-267
 Task #: 0002
 Log Date: 11/2/2017

Location ID: E1D-0072-SL01 Interval: 0 ft to 1.0 ft

Horizon: 0 Gap: 0.22 ft

Soil Color: 5YR 2.5/1 2nd Soil Color: 2.5/W (black)
gradual change color grades

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: clay loam

USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Rocks? <15% None 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other XXX

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color:

USDA Texture:

Field Personnel

Logged By: SAS

Data Entry By: Same as above ISAK LOC

Sample Remarks

10/31 0-0.5 @ 1405
0.5-1.0 @ 1413

Notes

THI? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: *ED-00.72-5602*
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: *Bak*
 Cored Date: *10/31/2017*
 Described By:
 Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
<i>0-0.5</i>					<i>14:56</i>
<i>0.5-1.0</i>					<i>14:57</i>
<i>1.0-1.5</i>					<i>15:04</i>

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
<i>0.5</i>	<i>0.5</i>	<i>100%</i>
<i>0.5</i>	<i>0.30</i>	<i>60%</i>
<i>0.5</i>	<i>0.48</i>	<i>96%</i>
	<i>1.28</i>	

Reviewed By _____ Date _____

Client: CEL/ARRCO Location ID: ED-0072-SL02 Interval: 0 ft to 1.5 ft

Site Name: Ellet Ditch Horizon: A Gap: 0.22 ft

Project Name: 172-367 Task #: 0002 Log Date: 11/2/07 11/3/17

Lab Data LOC

Soil Color: 10YR 2/2 2nd Soil Color:

Color

USDA Texture: Sandy loam

USCS Texture: SM

Structure

Type

Grade

Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other

Weak
 Moderate
 Strong

Duplicate?

Grab?

Composite?

Matrix:

Sediment
 Soil
 Air
 Water

of Containers: 3 (LOC)

Priority:

Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Field Personnel

Logged By: SAS

Data Entry By: SAS Same as above

Sample Remarks: LOC SAS

Internal Remarks

10/31	0. - 0.5	14 50
	0.5 - 1.0	14 51
	1.0 - 1.5	15 04

moist @ bottom (1.25") but not wet

Other Characteristics

Rocks? None

Few
 Common
 Many

Very Fine
 Fine
 Medium
 Coarse
 Very Coarse

Wood? Wood 21.5%

Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood % < 5 %

Shells? Plant Fragments?

Rocks? <15%
 15-35%
 35-60%
 60-90%
 90%

Fine Gravel
 Medium Gravel
 Coarse Gravel
 Cobbles

Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color

USDA Texture

Notes

Odor? Petrochemical
 Sulfur
 Other NONE

Slight
 Moderate
 Strong

TP? Lacustrine? Sand/gravel bed?

Few redox concretions at bottom of core

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: *EA-00.72-SL04*
 Core Type:
 Field Remarks:
 Northing (ft):
 Easting (ft):

Cored By: *BAK*
 Cored Date: *10/21/2017*
 Described By:
 Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
<i>0-0.5</i>					<i>15.39</i>
<i>0.5-1.0</i>					<i>15.46</i>

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
<i>0.5</i>	<i>0.50</i>	<i>100%</i>
<i>0.5</i>	<i>0.20</i>	<i>40%</i>

Reviewed By _____ Date _____

Client: LEC / Arroyo
 Site Name: Ellick Ditch
 Project Name: 172 - 367
 Task #: 1007
 Log Date: 11/20/17 LOC

Location ID: ED-00.72-SLO4 Interval: 0 ft to 0.1 ft

Horizon: 0 ft
 Gap: 0 ft

Soil Color: 7.5YR 2.5/1 2nd Soil Color:
 Color

Lab Data

Duplicate?
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 1
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: sandy clay loam
 USCS Texture: MH

Structure

Type	Grade
<input type="checkbox"/> Granular	Weak <input type="checkbox"/>
<input checked="" type="checkbox"/> Subangular Blocky	Moderate <input checked="" type="checkbox"/>
<input type="checkbox"/> Angular Blocky	Strong <input type="checkbox"/>
<input type="checkbox"/> Single Grain	
<input type="checkbox"/> Massive	
<input type="checkbox"/> Other: <u> </u>	

Plasticity

<input type="checkbox"/> Non-plastic
<input type="checkbox"/> Slightly Plastic
<input type="checkbox"/> Moderately Plastic
<input checked="" type="checkbox"/> Very Plastic

Other Characteristics

Rocks? Few
 Common
 Many

Rocks? <15% None
 15-35%
 35-60%
 60-90%
 90%

Odor? Petrochemical
 Sulfur
 Other None

Roots? Very Fine
 Fine
 Medium
 Coarse
 Very Coarse

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color
 USDA Texture

Field Personnel

Logged By: JAS
 Data Entry By: Same as above
 BAK LOC

Notes

THH? Lacustrine? Sand/gravel bed?

Sample Remarks:
 Internal Remarks: 10/31 1539

Client: CEL/Aeronic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 4/2/2017 11:31:17

Location ID: E15-00.72 - SLO4 Interval: 0.11 ft to 0.47 ft

Horizon: 1A Gap: 0 ft

Soil Color: 7.5YR 4/2 2nd Soil Color: 10YR 8/1

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Coarse sandy loam

USCS Texture: SM

Type

<input type="checkbox"/>	Granular
<input type="checkbox"/>	Subangular Blocky
<input checked="" type="checkbox"/>	Angular Blocky
<input type="checkbox"/>	Single Grain
<input type="checkbox"/>	Massive
<input type="checkbox"/>	Other: _____

Structure

Grade

<input checked="" type="checkbox"/>	Weak
<input type="checkbox"/>	Moderate
<input type="checkbox"/>	Strong

Plasticity

<input type="checkbox"/>	Non-plastic
<input type="checkbox"/>	Slightly Plastic
<input type="checkbox"/>	Moderately Plastic
<input checked="" type="checkbox"/>	Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other NON

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 7.5YR 5/8

USDA Texture: _____

Notes: Redox concretions

Tim? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK LOC

Sample Remarks

Internal Remarks

10/31 1540

found sporadically in

Client: CEC/Arconic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/13/17

Location ID: ED-00.72-SLO4 Interval: 0.47 ft to 1.0 ft

Horizon: 2A Gap: 0.3 ft

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Soil Color: G11 (Gley) 2nd Soil Color: 5YR 2.5/1

Color: 6/10Y

3rd soil color 10YR 5/2

1 horizon is mottled - all 3 colors approx equal %s

Texture

USDA Texture: Very coarse sandy clay

USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other NONE

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 7.5YR 5/8 USDA Texture

Notes: TIM? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK LOC

Sample Remarks

Internal Remarks: 10/31 1546

Minor color - potential redox iron concentration

Sediment Data Sheet

Project Name:
Project Number:
Field Location ID: ED-0082-5601
Core Type:
Field Remarks:
Northing: (ft)
Easting: (ft)

Cored By: BAA
Cored Date: 10/31/2017
Described By: [Signature]
Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
--------------	-------	----------	----------------------	----------------	-------------------------

0-0.5

16.04

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
--------------------	--------------------------------	------------

0.5

0.5

~~0.5~~ 100%

Reviewed By _____ Date _____

Client: CEC/Arcenic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 4/2/2017 11/3/17

Location ID: ED-00.82-S102 Interval: 0 ft to 0.22 ft

Horizon: 1A Gap: 0 ft

Soil Color: 10YR 3/2 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Texture

USDA Texture: LOAM

USCS Texture: SM

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other NOV

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % <5 %

Color: USDA Texture:

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK / LOC

Internal Remarks

Sample Remarks:

Internal Remarks: 10/31 16:04

Notes

Tim? Lacustrine? Sand/gravel bed?

Client: CEL/Arconic
 Site Name: Elliott Ditch
 Project Name: 172-363
 Task #: 0007
 Log Date: 11/3/17

Location ID: ED-00082-SL01 Interval: 0.22 ft to 0.5 ft

Horizon: 2A Gap: 0 ft

Soil Color: 10YR 5/4 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: sandy loam

USCS Texture: SM

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other: None

Very Fine Fine Medium Coarse Vary Coarse

Fine Gravel Medium Gravel Coarse Gravel Cobbles

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Till? Lacustrine? Sand/gravel bed?

Notes:

Field Personnel

Logged By: SAS

Data Entry By: Same as above BAK LSC

Sample Remarks

Internal Remarks

10/31 16:05

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: **ED - 00.87 - SLO 3**
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: **BAK**
 Cored Date: **10/31/2017**
 Described By:
 Described Date: **11/3**

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5					16011
0.5-1					16015

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5	0.45	90%
0.5	0.43	86%

Reviewed By _____ Date _____

Client: CEL/Arwinc
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 4/2/2012 11:31A

Location ID: ED-00.82-SLO3 Interval: 0 ft to 0.5 ft
 Horizon: 1A Gap: 0.65 ft

Soil Color: 2.5Y 3/3 2nd Soil Color:
 Color

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: loamy sand

USCS Texture: SM

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% Over-all 35-60% 0.25-0.5 60-90% >90%

Odor? Petrochemical Sulfur Other N/A

Shells? Plant Fragments?

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture

Field Personnel

Logged By: SAS

Data Entry By: Same as above BAK LDC

Sample Remarks

Internal Remarks: 10/31 1611

gravel concentrated at bottom all coarser gravel @ bottom of horizon dry

Notes

TI? Lacustrine? Sand/gravel bed?

Client: CEC / Arcenic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 002
 Log Date: 11/3/17

Location ID: ED-0082-SLO3 Interval: 0.5 ft to 1.0 ft

Horizon: 2A Gap: 0.07 ft

Soil Color: 10YR 3/1 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: loam

USCS Texture: ML

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other: None

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Notes: Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK / LOC / JAS

Sample Remarks

Some moisture (not wet)

Internal Remarks

10/31 1615

Sediment Data Sheet

Project Name:
Project Number:
Field Location ID: ED - 00.82 - SLO 4
Core Type:
Field Remarks:
Northing: (ft)
Easting: (ft)

Cored By: BAK
Cored Date: 10/31/2017
Described By: JAS
Described Date: 11/2

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5					16:34

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5	0.5	100%

Reviewed By _____ Date _____

Client: CEL / Arcenic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2017

Location ID: E15-06.82-SLO4 Interval: 0 ft to 0.13 ft

Horizon: 0 ft
 Gap: 0 ft

Soil Color: 5YR 2.5/2 2nd Soil Color:
 Color

Lab Data

Duplicate?
 Grab?
 Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: 100mm
 USCS Texture: 1A4

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other None

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture

Notes: Tin? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: SAS
 Data Entry By: Same as above BAK VCC

Sample Remarks:
 Internal Remarks: 10/31 HOS 1634 (PC)

Client: CE/Agronic Location ID: ED-00.82-404 Interval: 0.13 ft to 0.5 ft

Site Name: Elkton Ditch Horizon: A Gap: 0 ft
 Project Name: 172-367 Soil Color: 10YR 5/4 2nd Soil Color:
 Task #: 0002 Texture: Very fine sandy loam
 Log Date: 11/2/2017 USDA Texture: MH USCS Texture:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Structure

Type	Grade
<input type="checkbox"/> Granular	<input type="checkbox"/> Weak
<input type="checkbox"/> Subangular Blocky	<input checked="" type="checkbox"/> Moderate
<input checked="" type="checkbox"/> Angular Blocky	<input type="checkbox"/> Strong
<input type="checkbox"/> Single Grain	
<input type="checkbox"/> Massive	
<input type="checkbox"/> Other: <u> </u>	

Plasticity

<input type="checkbox"/> Non-plastic
<input type="checkbox"/> Slightly Plastic
<input type="checkbox"/> Moderately Plastic
<input checked="" type="checkbox"/> Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other None

Roots? Very Fine Fine Medium Coarse Very Coarse

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture

Field Personnel

Logged By: SAS

Data Entry By: Same as above BSAC LOC

Notes

Tim? Lacustrine? Sand/gravel bed?

Sample Remarks:

Internal Remarks: 10/31 +118
1635
(LOC)



Soil Log

Version 1.2, 1/20/16

Page _____ of _____

Client: CEC/Arconic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2017

Location ID: ED-00.08-SL01 Interval: 0.5 ft to 1.0 ft

Horizon: 2A₂ Gap: 0 ft

Soil Color: 2.5Y 3/2 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Coarse sandy loam

USCS Texture: MH

Structure

Granular	<input type="checkbox"/>
Subangular Blocky	<input checked="" type="checkbox"/>
Angular Blocky	<input type="checkbox"/>
Single Grain	<input type="checkbox"/>
Massive	<input type="checkbox"/>
Other:	<input type="checkbox"/>

Grade: Weak Moderate Strong

Color

Soil Color: 2.5Y 3/2

2nd Soil Color:

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? ≤15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other

Roots? Very Fine Fine Medium Coarse Very Coarse

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 2.5Y 6/6
2.5Y 6/6 (black)
2.5YR 4/8

USDA Texture:

Field Personnel

Logged By: SAS

Data Entry By: Same as above BAK

Internal Remarks

10/30 1116

Notes

Tim? Lacustrine? Sand/gravel bed?

Redox concentration
 few fine-medium
 → minor stains

Client: CEC/Arconic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2017

Location ID: ED-00.08-SLO1 Interval: 1.0 ft to 1.86 ft

Horizon: 3A Gap: 0.16 ft

Soil Color: 5YR 3/2 2nd Soil Color: 7.5YR 4/3

Lab Data

Duplicate?
 Grab?
 Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

USDA Texture: Silty loam
 USCS Texture: MH

Texture

Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other

Structure

Weak
 Moderate
 Strong

Grade

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few Common Many
 Rocks? <15% 15-35% 35-60% 60-90% >90%
 Odor? Petrochemical Sulfur Other None
 Shells? Plant Fragments?
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood % %
 Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
 Color: 2.5YR 4/8
 USDA Texture

Field Personnel

Logged By: JAS
 Data Entry By: Same as above LOC

Internal Remarks

10130
1.0-1.86 11:22

Sample Remarks

JAA - Redox concentration few, fine-medium

Notes

TM? Lacustrine? Sand/gravel bed?

Client: CEC / Arcovio
 Site Name: Elliott Ditch
 Project Name: 177 367
 Task #: 0002
 Log Date: 11/2/17

Location ID: GD-00-08-SLO1 Interval: 1.86 ft to 2.0 ft

Horizon: 4A Gap: 0.1 ft

Soil Color: 2.5Y 2.5/1 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Silty clay

USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Slight Sulfur Moderate Other None Strong

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture: N/A

Notes: Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above DOC

Sample Remarks

Internal Remarks

10/30/17 1134

BAK MWR

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: ED-01.03-SL01
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: BHK
 Cored Date: 11/1/2017
 Described By:
 Described Date: 11/3

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
<u>0-0.5</u>					<u>9:32</u>

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
<u>0.5</u>	0.5 <u>.47</u>	100% <u>94%</u>

Reviewed By _____ Date _____

Client: CEL / Arcotic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/3/17

Location ID: E17-01.03-SL01 Interval: 0 ft to 0.5 ft

Horizon: A Gap: 0.03 ft

Soil Color: 7.5YR 3/2 2nd Soil Color: 10YR 7/6
 Color: SPOTCHECK

Lab Data

Duplicate? FD
 Grab?
 Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 2
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Silty loam
 USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: _____
 Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many
 Rocks? <15% 15-35% 35-60% 60-90% >90%
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood %: 0 %
 Shells? Plant Fragments?
 Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
 Color: _____
 USDA Texture: _____

Field Personnel

Logged By: JAS
 Data Entry By: Same as above DAK/LOC

Notes

Notes: _____
 Tilt? Lacustrine? Sand/gravel bed?

Internal Remarks

Sample Remarks: _____
 Internal Remarks: 11/1 0932

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: ED-01.03-SL63
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: BAK
 Cored Date: 10/31/2017
 Described By:
 Described Date: 11/3

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5					17:05
0.5-1.0					17:13

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5	0.5	100%
0.5	0.38	76%

Reviewed By _____ Date _____

Client: CEL/Arcadis
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2017 11:31:17

Location ID: ED-01.03-SL03 Interval: 0 ft to 0.21 ft

Horizon: 0 Gap: 0 ft

Soil Color: 7.5YR 2.5/1 Color
 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Loam

USCS Texture: ML

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Rocks? <15% None 15-35% 35-60% 60-90% ≥90%

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color

USDA Texture

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK

Internal Remarks

Sample Remarks

Internal Remarks 10/31 1705

Notes

Till? Lacustrine? Sand/gravel bed?

Client: CEC / Arcenic Location ID: ED-01.03-SLO3 Interval: 0 ft to 1.0 ft

Site Name: Elliot Ditch Horizon: A Gap: 0.12 ft

Project Name: 172-367 Soil Color: 2.5Y 5/4 2nd Soil Color: 7.5YR 2.5/1

Task #: 0602 Texture: sandy loam USDA Texture: MH

Log Date: 11/3/17 Lab Data: loc # of Containers: 1

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: MH

USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color:

Field Personnel

Logged By: SAS

Data Entry By: Same as above BAK LOC JAS

Notes

Tim? Lacustrine? Sand/gravel bed?

Internal Remarks: 10/31 1713

Sample Remarks:

USDA Texture:

Sediment Data Sheet

Project Name:
Project Number:
Field Location ID: ED - 01.14 - SLO1
Core Type:
Field Remarks:
Northing: (ft)
Easting (ft):

Cored By: BAK
Cored Date: 11/1/17
Described By: JAS
Described Date: 11/3

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
--------------	-------	----------	----------------------	----------------	-------------------------

0-0.5
~~0-0.5~~

10:01

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
--------------------	--------------------------------	------------

0.5 - 0.5 100%

Reviewed By _____ Date _____

Client: GEL/ARONIC
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2017 11/3/17

Location ID: ED-01.14-SL01 Interval: 0 ft to 0.5 ft

Horizon: A Gap: 0 ft

Soil Color: 10YR 2/2 2nd Soil Color: 10YR 5/6

Lab Data

Duplicate? MS/MSD
 Grab? LDC
 Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 2 3 LDC
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Sandy loam
 USCS Texture: SM

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: _____
 Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many
 Rocks? <15% 15-35% 35-60% 60-90% >90%
 Petrochemical Sulfur Other NONE
 Odor? Slight Moderate Strong
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood % 0 %
 Shells? Plant Fragments?
 Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
 Color: _____
 USDA Texture: N/A

Field Personnel

Logged By: JAS
 Data Entry By: Same as above BAK/TAS/LDC

Sample Remarks

Internal Remarks: 11/1 1001

Notes

Tim? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: ED - 01.14 - 5103
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Corer By: BAK
 Cored Date: 11/1/17
 Described By:
 Described Date: 11/3

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
<u>0-0.5</u>					<u>10:22</u>
<u>0.5-1.0</u>					<u>10:29</u>

Core Interval (ft)	Measured Sediment in Core (ft)		% Recovery
<u>0.5</u>	<u>(0.55)</u>	<u>0.5</u>	<u>100% (110%)</u>
<u>0.5</u>		<u>0.45</u>	<u>90%</u>
<u>1.0</u>		<u>1.0</u>	<u>100%</u>

Reviewed By _____ Date _____

Client: CEL/Arctic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/27/2013 11/3/17

Location ID: FD-01.14-SL03 FD Interval: 0 ft to 1.0 ft

Horizon: A Gap: 0 ft

Color 7.5YR 2.5/1
 2nd Soil Color: []

Lab Data

Duplicate? - FD (0.5-1.0)
 Grab? - (0.5-1.0)
 Composite? - (0.5-1.0)

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1/3
LDC

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: 100M
 USCS Texture: M+1

Structure

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other: []

Grade: Weak
 Moderate
 Strong

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Rocks? Few
 Common
 Many

Rocks? <15%
 15-35%
 35-60%
 60-90%
 ≥90%

Petrochemical: Slight
 Moderate
 Strong

Sulfur: Other: NONE

Odor? TMI? Lacustrine? Sand/gravel bed?

Roots? Wood?

Wood % 0%

Shells? Plant Fragments?

Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color: 5YR 5/8
 USDA Texture: Redox concretions

Field Personnel

Logged By: JAS
 Data Entry By: Same as above
 LSAK LDC

Internal Remarks

11/1
0-0.5 1022
0.5-1.0 1029

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: ED-01.24-501
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: BAK MWS
 Cored Date: 11/11/17
 Described By:
 Described Date: 11/3

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
<u>0-0.5</u>					<u>11:26</u>
<u>0.5-1.0</u>					<u>11:36</u>
<u>1.0-1.5</u>					<u>11:44</u>

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
<u>0.5</u>	<u>0.5</u>	<u>100%</u>
<u>0.5</u>	<u>0.4</u>	<u>80%</u>
<u>0.5</u>	<u>0.39</u>	<u>78%</u>

Reviewed By _____ Date _____

Client: CEC / Arroyo
 Site Name: El Estero Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2017 11/3/17

Location ID: ED-01.24-SLO1 Interval: 0 ft to 0.87 ft

Horizon: A Gap: 0.21 ft

Soil Color: 7.5YR 3/2 Color:
 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: Sandy loam
 USCS Texture: SM

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other NONE

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 5YR 5/8 USDA Texture:

Field Personnel

Logged By: JAS
 Data Entry By: Same as above ISAK LDC

Internal Remarks

11/1 1126

Notes

Till? Lacustrine? Sand/gravel bed?

Redox concentrations

Client: CEC / Arcenic
 Site Name: Elliott Ditch
 Project Name: 172-367
 Task #: 0008
 Log Date: 11/13/17 LDC

Location ID: ED-01.24-S101 Interval: 0.27 ft to 1.0 ft

Horizon: B Gap: 0 ft

Color
 Soil Color: 10YR 6/14 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: silty loam

USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other NONE

Tim? Lacustrine? Sand/gravel bed?

Shells? Plant Fragments?

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK - LDC

Internal Remarks

Sample Remarks:

Internal Remarks: 11/1 1144

Sediment Data Sheet

Project Name:
Project Number:
Field Location ID: ED-01.24-SLG3
Core Type:
Field Remarks:
Northing (ft):
Easting (ft):

Cored By: BAK
Cored Date: 11/1/2017
Described By:
Described Date: 11/3

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5'					12:03

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5	0.5	100%

Reviewed By _____ Date _____

Client: CFC/Arconic
 Site Name: Elliot Ditch
 Project Name: 172-3067
 Task #: 0002
 Log Date: 4/2/2017 11:31:17

Location ID: ED-0134-SL03 Interval: 0 ft to 0.5 ft

Horizon: A Gap: 0 ft

Soil Color: 7.5YR 3/2 2nd Soil Color:
 Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: very fine sandy loam

USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% 200%

Odor? Petrochemical Sulfur Other None

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Color: USDA Texture:

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK LOC

Internal Remarks

Sample Remarks:

Internal Remarks: 11/1 1203

Till? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

replaces ED-01.39-

Project Name:
 Project Number:
 Field Location ID: ED-01.37 SD01
 Core Type: upland
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: LDC BAK
 Cored Date: 11/2
 Described By:
 Described Date: 11/3

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
--------------	-------	----------	----------------------	----------------	-------------------------

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery	
0-0.5	0.38	76%	0911
0.5-0.9	0.4	100%	0915

Reviewed By _____ Date _____



Soil Log

Location ID: ED-01.37-SL01 Interval: 0 ft to 0.9 ft

Client: CEC / Arcenic
 Site Name: Ellistt Ditch
 Project Name: 172 367
 Task #: 0002
 Log Date: 11/3/17

Horizon: A Gap: 6.12 ft

Soil Color: 2.5YR 2.5/1 Color
 2nd Soil Color:

Lab Data

Duplicate? FD
 Grab?
 Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 2

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: silty loam
 USCS Texture: MH

Structure

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other:

Grade: Weak
 Moderate
 Strong

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few
 Common
 Many

Rocks? <15%
 15-35%
 35-60%
 60-90%
 ≥80%

Odor? Petrochemical
 Sulfur
 Other: None

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color
 USDA Texture

Till? Lacustrine? Sand/gravel bed?

Notes:

Field Personnel

Logged By: JAS
 Data Entry By: Same as above
 JDC

Internal Remarks

11/2 0911

Sediment Data Sheet

replaces ED-01.39- (7-7)

Project Name:
 Project Number:
 Field Location ID:
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

ED-01.37-SLOZ
 terrace T-7

Cored By: LDC BAK
 Cored Date: 11/2
 Described By:
 Described Date: 11/3

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery	
0-0.5	0.48	96	0925
0.5-1.0	0.48	96	0926
1.0-1.5	0.41	82	0928
1.5-2.0	0.32	64	0930

Reviewed By _____ Date _____

Client: CEL / Arcenic
 Site Name: Ellick Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2017

Location ID: E15-01.37-SL02 Interval: 0 ft to 0.27 ft

Horizon: 0A Gap: 0.02 ft

Soil Color: 10YR 3/2 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Sandy loam

USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other: None

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK, LOC

Internal Remarks

Sample Remarks: replaces CD-01.39 T-7 - approx. mile marker

Internal Remarks: 11/2 0925

Notes

TH? Lacustrine? Sand/gravel bed?

Client: CEC / Arcenic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 0902
 Log Date: 11/2/2017

Location ID: ED-0137-SLD2 Interval: 0.27 ft to 0.97 ft

Horizon: 1A Gap: ft

Soil Color: 10YR 4/6 2nd Soil Color: 10YR 2/1

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: sandy clay loam

USCS Texture: ML

Structure

Type	Grade
<input type="checkbox"/> Granular	<input type="checkbox"/> Weak
<input type="checkbox"/> Subangular Blocky	<input checked="" type="checkbox"/> Moderate
<input checked="" type="checkbox"/> Angular Blocky	<input type="checkbox"/> Strong
<input type="checkbox"/> Single Grain	
<input type="checkbox"/> Massive	
<input type="checkbox"/> Other	

Plasticity

Non-plastic

Slightly Plastic

Moderately Plastic

Very Plastic

Other Characteristics

<input checked="" type="checkbox"/> Very Fine	<input type="checkbox"/> Wood
<input checked="" type="checkbox"/> Fine	<input type="checkbox"/> Black Wood
<input checked="" type="checkbox"/> Medium	<input type="checkbox"/> Burned Wood
<input type="checkbox"/> Coarse	<input type="checkbox"/> Sawdust
<input type="checkbox"/> Very Coarse	<input type="checkbox"/> Wood Chips
	<input type="checkbox"/> Wood Pulp
	<input type="checkbox"/> Charcoal

Wood % %

Shells? Plant Fragments?

Rocks? Few Common Many

<15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other N/A

Slight Moderate Strong

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 5YR 5/8 USDA Texture: Redox Concretions

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK JAC

Sample Remarks

11/2 0926

Internal Remarks

Notes

Till? Lacustrine? Sand/gravel bed?



Soil Log

Client: Cec Arconic
 Site Name: Elliott Ditch
 Project Name: 177367
 Task #: 002
 Log Date: 11/3/17

Location ID: ED-01.37-5L07 Interval: 0.92 ft to 1.07 ft
 Horizon: 2A Gap: ft
 Soil Color: 7.5YR 2.5/1 2nd Soil Color:
 Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers:

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture:

USCS Texture:

sandy clay loam

MH

Structure

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other:

Grade: Weak
 Moderate
 Strong

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Roots? Few None Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other N/A

Shells? Plant Fragments?

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: %

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Notes

TMI? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above LOC

Internal Remarks

Sample Remarks:

Internal Remarks: 11/2 0928



Client: CEC / Arconic
 Site Name: Elliott Ditch
 Project Name: 177 367
 Task #: 6002
 Log Date: 11/3/17

Location ID: ED-01.37-SL02 Interval: 1:07 ft to 2.0 ft

Horizon: 3A Gap: ft

Soil Color: 10YR 3/2 Color
 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: loamy sand
 USCS Texture: SM

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few None Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other N/A

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture None

Field Personnel

Logged By: JAS
 Data Entry By: Same as above VAC

Internal Remarks

Sample Remarks:

Internal Remarks: 11/2 0930

Notes

Till? Lacustrine? Sand/gravel bed?

Sediment Data Sheet

Project Name:
Project Number:
Field Location ID: E1-01.49-SL01
Core Type:
Field Remarks:
Northing (ft):
Easting (ft):

Cored By: BAK
Cored Date: 11/1/2017
Described By:
Described Date: 11/3

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
--------------	-------	----------	----------------------	----------------	-------------------------

0.5

13:46

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
--------------------	--------------------------------	------------

0.5

0.5

100%

Reviewed By _____ Date _____

Client: CEC/Arcenic
 Site Name: Elliot D. 165
 Project Name: 172-267
 Task #: 0082
 Log Date: 4/2/2017 11/3/17

Location ID: ED-0149-SL01 Interval: 0 ft to 0.5 ft

Horizon: A Gap: 0 ft

Soil Color: 10YR 4/3 2nd Soil Color:
 Color:

Lab Data (LDC)

Duplicate? FD
 Grab? (DC)
 Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 42

Priority: (LDC)
 Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: Sandy clay loam
 USCS Texture: MH

Structure

Type	Grade
<input type="checkbox"/> Granular	<input type="checkbox"/> Weak <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Subangular Blocky	<input type="checkbox"/> Moderate
<input type="checkbox"/> Angular Blocky	<input type="checkbox"/> Strong
<input type="checkbox"/> Single Grain	
<input type="checkbox"/> Massive	
<input type="checkbox"/> Other	

Plasticity

<input type="checkbox"/> Non-plastic
<input type="checkbox"/> Slightly Plastic
<input type="checkbox"/> Moderately Plastic
<input checked="" type="checkbox"/> Very Plastic

Other Characteristics

Roots? Few
 Common 0.06-0.5
 Many 0-0.06

Rocks? <15%
 15-35%
 35-60%
 60-90%
 >90%

Odor? Petrochemical
 Sulfur
 Other None

Shells? Plant Fragments?

Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color:
 USDA Texture:

Tim? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS
 Data Entry By: Same as above
 BAK LOE

Internal Remarks

11/1 1340

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID:
 Core Type:
 Field Remarks:
 Northing (ft):
 Easting (ft):

ED-01.49-SLO2

Cored By: BAK
 Cored Date: 11/1/2017
 Described By:
 Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5					13:50
0.5-1.0					13:55

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
--------------------	--------------------------------	------------

0.5	0.5	100%
0.5	0.34	68%

Reviewed By _____ Date _____

Client: CEC / Accionik
 Site Name: Fill of Ditch
 Project Name: 172-367
 Task #: 0002
 Log Date: 11/2/2017 113117
 LPC

Location ID: ED-01.49-SLO2 Interval: 0 ft to 1.0 ft

Horizon: A Gap: 0.16 ft
 (0.5-1.0)

Soil Color: 7.5YR 2.5/1 2nd Soil Color:
 Color

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: sandy loam

USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other None

Roots? Very Fine Fine Medium Coarse Very Coarse

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 10YR 6/4 USDA Texture: Sandy Silt

Notes: Lacustrine? Sand/gravel bed? TIM?

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK LOC

Sample Remarks

Internal Remarks

sublayer @ ~0.8' 11/1 0.0-0.5 1350
0.5-1.0 1355

Few Redox concretions - color: 5YR4

Sediment Data Sheet

Project Name:
 Project Number:
 Field Location ID: ED - 01.49 SLO4
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: BAK
 Cored Date: 11/1/17
 Described By:
 Described Date:

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
0-0.5					14:10
0.5-1.0					14:17
1.0-1.5					14:25
1.5-2.0					14:33

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5	0.5	100%
0.5	0.5	100%
0.5	0.37	72%
0.5	0.42	84%

Reviewed By _____ Date _____

Client: CEC / Arcenic
 Site Name: Elliot Pkwy
 Project Name: 172-267
 Task #: 0002
 Log Date: 4/2/2017 11:317

Location ID: ED-01.49-S104 Interval: 0 ft to 1.81 ft

Horizon: A1 Gap: 0.23 ft

Soil Color: 10YR 2/2 Color:
 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 13

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: silty loam

USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rods? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other NONE

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture: NONE

Notes: T#? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above BAK LOC JAS

Sample Remarks

1111	
0-0.5	1410
0.5-1.0	1417
1.0-1.81	1427

Client: CEL/Arctic
 Site Name: Elliot Ditch
 Project Name: 172-367
 Task #: 002
 Log Date: 11/2/2017 113117

Location ID: ED-0149-804 Interval: 1.81 ft to 2.0 ft

Horizon: A2 Gap: ft

Soil Color: 10YR 4/3 Color
 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: sandy loam

USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Slight Moderate Strong Other: NONE

Roots? Very Fine Fine Medium Coarse Very Coarse

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color USDA Texture

Notes: NONE

TH? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: JAS

Data Entry By: Same as above JAS LOC JAG

Sample Remarks

Internal Remarks

11/1 1-133

Soil
Sediment Data Sheet

(6)

Project Name: ELLIOTT DITCH
 Project Number: 172-367-0006
 Field Location ID: ED-00.00-SL01
 Core Type:
 Field Remarks:
 Northing (ft):
 Easting (ft):

Cored By: MWB / DMM
 Cored Date: 02/07/18 0925
 Described By: DMM
 Described Date: 02/09/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
--------------------	--------------------------------	------------

Hours
 0-4 41.25
 3.44 86%

Reviewed By _____ Date _____

Page _____ of _____

Soil Log
Version 1.2, 1/20/16

Location ID: ED-00.00-SL01 Interval: 0 ft to 0.91 ft

Client: CEC/ABONIC Horizon: 1A Gap: 0 ft

Site Name: ELLIOTT DITCH Soil Color: 10YR 5/3 2nd Soil Color: 10YR 2/1

Project Name: 172-307 Texture: SILTY LOAM Structure: MH

Task #: 0006 USDA Texture: SILTY LOAM USCS Texture: MH

Log Date: 02/09/13 Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water

of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel: Logged By: DM/M/MWB Date Entry By: Same as above

Other Characteristics: Roots? Few Common Many Rocks? <15% 15-35% 35-60% 60-90% >90% Odor? Petrochemical Sulfur Other NONE

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood % 0 % Shells? Plant Fragments? Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft Color: _____ USDA Texture: _____

Till? Lacustrine? Sand/gravel bed?

Notes: 02/09/13
0925

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page _____ of _____

Soil Log
Version 1.2, 1/20/16

Location ID: ED-00.00-S L01 Interval: 0-91 in to 2-21 in

Client: CEC/ABLONIC Project Name: ELLIOTT DITCH Task #: 0006 Log Date: 12/09/18

Horizon: 2A Gap: — n

Soil Color: 10YR 3/1 2nd Soil Color: 10YR 5/6

Texture: SILTY LOAM Structure: MH

USDA Texture: SILTY LOAM USCS Texture: MH

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 2 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel: Logged By: DMM / MWB Data Entry By: Same as above

Other Characteristics: Wood? Wood Brick Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood % 0 % Shells? Plant Fragments? Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft Color: 5Y 2.5/1 USDA Texture: LOAM

Notes: T/TP Lacustrine? Sand/gravel bed?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page _____ of _____

Soil Log
Version 1.2, 1/20/16

Location ID: ED-00.00-SLO1 Interval: 2.21 R to 3.12 R

Client: CEC/ARLONIC
 Site Name: ELLIOTT DITCH
 Project Name: 172-367
 Task #: 0006
 Log Date: 02/09/14

Horizon: BuB3 Gap: ⊕ ft

Color: 3A

Soil Color: 10YR 4/3 2nd Soil Color: 10YR 3/1

Texture
 USDA Texture: SANDY LOAM
 USCS Texture: ML

Structure
 Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other: _____
 Grade: Weak
 Moderate
 Strong

Lab Data
 Duplicate?
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 1
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Field Personnel
 Logged By: DNM / MWP
 Data Entry By: Same as above

Other Characteristics
 Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal
 Wood % 0 %
 Shells? Plant Fragments?
 Sublayers? ≤0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft
 Color: _____
 USDA Texture: _____

Rocks? Few
 Common
 Many
Rocks? <15%
 15-35%
 35-60%
 60-90%
 ≥90%
Odor? Petrochemical
 Sulfur
 Other N O WZ
Notes
 T1P? Lacustrine? Sand/gravel bed?

Plasticity
 Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Internal Remarks
02/07/13
0925

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Sediment Log
Version 1.2, 1/2016

Page _____ of _____

Location ID: ED-00-00-5L01 Interval: 3.12 ft to 3.44 ft

Client: C. ELLIOTT DITCH
 Site Name: ELLIOTT DITCH
 Project Name: 172-367
 Task #: 0006
 Log Date: 02/09/13

Layer: B Gap: — ft

Sediment Color: 10YR 4/6 2nd Sediment Color: _____

Texture
 USDA Texture: SANDY CLAY
 USCS Texture: CH

Structure
 Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: _____
 Grade: Weak Moderate Strong

Lab Data
 Duplicate? Grab? Composer?
 Matrix: Sediment Soil Air Water
 # of Containers: 1
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity
 Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel
 Logged By: DMW / MWB
 Data Entry By: _____ Same as above

Other Characteristics
 Roots? Few None Common Many
 Rocks? <15% 15-35% 35-60% 60-90% >90%
 Odor? Petrochemical Slight Sulfur Moderate Other Strong
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood % 0 % Shells? Plant Fragments?
 Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft Color: _____
 USA Texture: _____

Notes
 Till? Lacustrine? Sand/gravel bed?

Sample Remarks
 Internal Remarks: 02/07/13
0925

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil
Sediment Data Sheet

(5)

Project Name: ELLIOTT DITCH
 Project Number: 172-367.0006
 Field Location ID: ED-00.02-SL01
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: MWB/DMM
 Cored Date: 02/07/13 0938
 Described By: DMM
 Described Date: 02/09/13

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0-4'	4'	100%

Reviewed By _____ Date _____

Page 1 of 5

Soil Log Version 1.2, 1/20/16

Location ID: ED-00-02-SLO1 Interval: 0 ft to 0.63 ft

Client: CEC/ARLONIC Horizon: 1A Gap: 0 ft

Site Name: ELLIOTT DITCH Soil Color: 10YR 2/1 2nd Soil Color: -

Project Name: 172-367 Texture: SILTY LOAM

Task #: 0006 USCS Texture: MH

Log Date: 02/09/13

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: DMM/MAW

Data Entry By: Same as above

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Color? Petrochemical Sulfur Other

Other Characteristics

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Notes

Thin? Lacustrine? Sand/gravel bed?

Texture

USDA Texture: SILTY LOAM

USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massve Other: _____

Grade: Weak Moderate Strong

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 2 of 5

Sediment Log

Version 1.2, 1/20/18

Location ID: ED-00-02-SL01 Interval: 0.63 ft to 1.76 ft

Client: CEC/ARCONIC
 Site Name: ELLIOTT DITCH
 Project Name: 172-367
 Task #: 0006
 Log Date: 02/09/18

Layer: 2A Gap: 0 ft

Sediment Color: 5YR 4/6 2nd Sediment Color: —

Texture: LOAMY SAND Structure: —

USDA Texture: SM USCS Texture: SM

Lab Data: Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel: Logged By: DMW/MWB Data Entry By: Same as above

Other Characteristics: Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood % 0 %

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% 90-100%

Odor? Petrochemical Sulfur Other None

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Notes: Till? Lacustrine? Sand/gravel bed?

Sample Remarks: 02/09/18
0938

Internal Remarks: 02/09/18
0938

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

TETRA TECH
Sediment Log
Page 3 of 5

Version 1.2, 1/20/16
Location ID: EP-00.02-SL01
Interval: 1.76 ft to 2.18 ft

Client: CEC/ARLONIC

Site Name: ELLIOTT DITCH

Project Name: 172-367

Task #: 0006

Log Date: 02/01/18

Layer: 3A

Gap: [] ft

Sediment Color: 6YR 4/6

2nd Sediment Color: []

USDA Texture: SILTY CLAY

USCS Texture: CL

Structure Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other: []

Grade: Weak
Moderate
Strong

Lab Data

Duplicate?

Grab?

Composte?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Field Personnel

Logged By: DMW/MWB

Data Entry By: Same as above

Other Characteristics

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood %: [] %

Shells? Plant Fragments?

Sublayers? Color: []

Sublayers? <0.05 R
 0.05-0.1 R
 0.1-0.2 R
 0.2-0.5 R
 >0.5 R

Notes

Lacustrine? Sand/gravel bed?

Notes

0938
02/01/18

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Page A of 5

Soil Log
Version 1.2, 1/20/16

Client: TETRA TECH
 Site Name: CEC/KALWANIC
 Project Name: ELLIOTT DITCH
 Task #: 0006
 Log Date: 02/09/13

Location ID: ED-00-02-601 Interval: 2.18 ft to 3.43

Horizon: 4A Gap: 0 ft

Soil Color: 10YR 3/4 2nd Soil Color: -

Texture: LOAMY SAND Structure: -

USDA Texture: SM Grade: Weak

USCS Texture: SM Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: -

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water

of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: JM Data Entry By: JM

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% 90%

Other Characteristics: Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 % Shells? Plant Fragments?

Sublayers? ≤0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Odor? Petrochemical Sulfur Other NONE

Notes: Lacustrine? Sand/gravel bed?

Internal Remarks: 02/07/13
09B

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 5 of 5

Soil Log Version 1.2, 1/2016

Client: CEC/ARCONIC Location ID: ED-00-02-SL01 Interval: 3.43 ft to 4 ft

Site Name: ELLIOTT DITCH Horizon: B Gap: 0 ft

Project Name: 172-367 Soil Color: 10YR 2/1 2nd Soil Color:

Task #: 0006 Texture: LOAMY CLAY Structure:

Log Date: 02/09/13 USDA Texture: CL USCS Texture: CL Grade: Weak

Lab Data Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel Logged By: JMM / MWP Data Entry By: Same as above

Plasticity Non-Plastic Slightly Plastic Moderately Plastic Very Plastic

Roots? Few Common Many **Other Characteristics** Wood? Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood % 0 %

Rocks? <15% 15-35% 35-60% 60-90% >90% **Shells?** Plant Fragments?

Odor? Petrochemical Sulfur Other **Sublayers?** <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft **Color**

Notes Till? Lacustrine? Sand/gravel bed? USDA Texture

Sample Remarks **Internal Remarks**

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil Sediment Data Sheet

6

Project Name: ELLIOTT DITCH
 Project Number: 172-367-0006
 Field Location ID: ED-00.05 - SLO1
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: MWB/DMM
 Cored Date: 02/07/13 10.03
 Described By: DMM
 Described Date: 02/09/13

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0 - 4'	4'	100%

Reviewed By _____ Date _____

Page 1 of 4

Soil Log Version 1.2, 1/20/16

Location ID: ED-00.05-SL01 Interval: 0 ft to 0.67 ft

Client: CELTRONIC Site Name: ELLIOTT DITCH Project Name: 172-367 Task #: 0006 Log Date: 02/12/18

Horizon: 1A Gap: 0 ft

Soil Color: 5YR 2.5/1 2nd Soil Color: -

Texture: SILTY LOAM Structure: MIT

USDA Texture: SILTY LOAM USCS Texture: MIT

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel: Logged By: DMW / MWB Data Entry By: Same as above

Other Characteristics: Roots? Few Common Many Rocks? <15% 15-35% 35-60% 60-90% ≥90% Petrochemical Slight Moderate Strong Sulfur Other Odor? Slight Moderate Strong Shells? Plant Fragments? Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood % 0 % Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft Color - USDA Texture -

Notes: Tilt? Lacustrine? Sand/gravel bed? Sample Remarks: * slight odor Internal Remarks: 02/07/18
PO3

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 2 of 4

Sediment Log
Version 1.2, 1/20/16

Location ID: ED-00.05-SL01 Interval: 0.67 ft to 1.4 ft

Client: CEC/KAWONIC Layer: 2A Gap: ft

Site Name: ELLIOTT OITC4 Sediment Color: 10YR 4/4 2nd Sediment Color:

Project Name: 172-367 Texture: LOAM Structure:

Task #: 0006 USDA Texture: USCS Texture: MH

Log Date: 02/12/18

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: DMM / MWB

Date Entry By: Same as above

Sample Remarks

* Dark staining

* slight odor

Internal Remarks

02/07/18

1003

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% 90%

Odor? Petrochemical Sulfur Other

Plasticity

<input type="checkbox"/> Non-plastic
<input type="checkbox"/> Slightly Plastic
<input checked="" type="checkbox"/> Moderately Plastic
<input type="checkbox"/> Very Plastic

Other Characteristics

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? -0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 10YR 4/3 USDA Texture: LOAMY SAND

Notes

Till? Lacustrine? Sand/gravel bed?

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 3 of 4

Sediment Log Version 1.2, 1/20/16

Location ID: ED-00-05-SL01 Interval: 1.4 ft to 2.3

Client: CeC/ARONIC Site Name: ELLIOTT DITCH Project Name: 172-367 Task #: 0006 Log Date: 02/12/18

Layer: 3A Gap: 0 ft

Sediment Color: 5Y 3/1 2nd Sediment Color: -

Texture: SILTY LOAM Structure: Weak

USDA Texture: MH USCS Texture: MH

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Other Characteristics: Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood % 0 %

Rocks? Few Common Many Roots? <15% 15-35% 35-60% 60-90% 90% Odor? Petrochemical Sulfur Other Shells? Plant Fragments? Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft Color: - USDA Texture: -

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel: Logged By: DMW / MWP Data Entry By: Same as above

Sample Remarks: * slight odor Internal Remarks: 02/07/18
1003

Notes: Lacustrine? Sand/gravel bed? Till?

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 4 of 4

Sediment Log Version 1.2, 1/20/16

Location ID: ED-00-05-SL01 Interval: 2-3 ft to 4.0 ft

Client: TETRA TECH CEC/ARUNIC

Site Name: ELLIOTT DITCH

Project Name: 172-369

Task #: 0006

Log Date: 02/12/18

Layer: 4A Gap: 0 ft

Sediment Color: 10YR 4/4 2nd Sediment Color: -

Color

Texture: LOAMY SAND Structure: Weak

USDA Texture: SM USCS Texture: SM

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: DMM / MWB

Date Entry By: Same as above

Sample Remarks: 02/07/18

Internal Remarks: 1003

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% 90%

Odor? Petrochemical Slight Moderate Strong Other NOISE

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 10YR 5/6

USDA Texture: LOAMY SANDY

Notes: Tuff? Lacustrine? Sand/gravel bed?

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Sediment Data Sheet

Project Name: ELLIOTT DITCH
 Project Number: 172-367.0006
 Field Location ID: ED-00.03-SL03
 Core Type:
 Field Remarks:
 Northing (ft):
 Easting (ft):

Cored By: MWB / DMN
 Cored Date: 02/07/08 10 10
 Described By: DMN
 Described Date: 02/09/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
3'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0-4'	3.5'	89%
4-8'	4'	100%

Reviewed By _____ Date _____

Page 1 of 6

Sediment Log
Version 1.2 1/20/16

Location ID: ED-00.08-5L03 Interval: 0 ft to 1.25 ft

Client: CEC ARCONIC Layer: 1A Gap: 0-25 ft

Site Name: ELLIOTT DITCH Sediment Color: 10YR 5/6 Color: —

Project Name: 172-369 2nd Sediment Color: —

Task #: 0006

Log Date: 02/12/18

Lab Data

Duplicate? Grab? Composite?

Main: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: SILTY LOAM

USCS Texture: MH

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Structure: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel

Logged By: MWB/DWM

Data Entry By: Same as above

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-80% >80%

Odor? Petrochemical Sulfur Other

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: — USDA Texture: —

Notes

TIP? Lacustrine? Sand/gravel bed?

Internal Remarks: 02/07/18
1010

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 2 of 6

Sediment Log Version 1.2 1/20/16

Location ID: ED-00-08-SLOS Interval: 1.25 ft to 2.25 ft

Client: C E C / KR KONIC Layer: 2A n

Site Name: ELLIOTT DITCH Sediment Color: 10YR 3/1 Color

Project Name: R2-367 2nd Sediment Color: -

Task #: 0006 Gap: n

Log Date: 02/12/13

Lab Data

Duplicate? Grab? Composite?

Main: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: SILTY LOAM

USCS Texture: MH

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Structure: Weak Moderate Strong

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-80% ≥90%

Odor? Petrochemical Sulfur Other

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: - USDA Texture: -

Field Personnel

Logged By: DMM MWB

Data Entry By: Same as above

Notes

Till? Lacustrine? Sand/gravel bed?

Sample Remarks: 50% gravel

Internal Remarks: 02/07/13
1010

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Sediment Log Version 1.2, 1/20/16 Page 3 of 6

Location ID: ED-00-08-SL03 Interval: 325 ft to 275 ft

Client: CEC/ARLONIC Layer: 1B ft

Site Name: ELLIOTT DITCH Sediment Color: 2.5Y 5/3

Project Name: 172-367 2nd Sediment Color:

Task #: 0006 Gap: ft

Log Date: 02/02/18 Color:

Lab Data

Duplicate? Grab? Composite?

Meibx: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: SANDY CLAY

USCS Texture: MH

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Structure:

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel

Logged By: DMM / MWB

Data Entry By: Same as above

Other Characteristics

Roots? Few None Common Many

Rocks? <15% 15-35% 35-60% 60-90% 90-100%

Odor? Petrochemical Sulfur Other

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color:

USDA Texture:

Notes

TIP? Lacustrine? Sand/gravel bed?

Sample Remarks

*Stained

Internal Remarks

02/07/18
(010)

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 4 of 6

Sediment Log
Version 1.2, 1/20/16

Client: TETRA TECH
 Site Name: CEC/ARLONIC
 Project Name: ELLIOTT DITCH
 Task #: 172-367
 Log Date: 02/12/18

Location ID: ED-00.08-SL03 Interval: 2.75 ft to 5.6 ft
 Layer: 2B Gap: 0 ft

Sediment Color: 6YR 2/1 2nd Sediment Color: 10Y 5/4
 Color

Lab Data
 Duplicates? Grab? Composites?
 Matrix: Sediment Soil Air Water
 # of Containers: 3
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture
 USDA Texture: CLAY
 USCS Texture: CL

Structure
 Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other
 Grade: Weak Moderate Strong

Other Characteristics
 Roots? Few None Common Many
 Rocks? <15% 15-35% 35-60% 60-90% >90%
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood % 0 %
 Shells? Plant Fragments?
 Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
 Color —
 USDA Texture

Plasticity
 Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel
 Logged By: DMN / MWB
 Data Entry By: Same as above

Notes
 Tilt? Lacustrine? Sand/gravel bed?

Sample Remarks
*Staine d
* Strong petroche
micel odor

Internal Remarks
02/07/18
1010

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 5 of 6

Sediment Log
Version 1.2, 1/20/18

Client: CFC/ARLONIC
 Site Name: ELLIOTT DITCH
 Project Name: 172-367
 Task #: 0006
 Log Date: 02/12/18

Location ID: ED-00.03-SL03
 Interval: 56 ft to 7 ft

Layer: 3B
 Gap: 0.4 ft

Sediment Color: 10YR 4/4
 2nd Sediment Color: 10YR 3/4

Lab Data
 Duplicate?
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 2
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture
 USDA Texture: SILTY CLAY
 USCS Texture: CL

Structure
 Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other:
 Grade: Weak
 Moderate
 Strong

Other Characteristics
 Roots? Few Many
 Common
 Many
 Rocks? <15%
 15-35%
 35-60%
 60-90%
 >90%
 Odor? Petrochemical
 Sulfur
 Other
 Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal
 Wood % 0 %
 Shells? Plant Fragments?
 Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft
 Color: —
 USDA Texture: —

Field Personnel
 Logged By: DMW / MWB
 Data Entry By: Same as above

Notes
 Tilt? Lacustrine? Sand/gravel bed?
 Sample Remarks: *stained
 Internal Remarks: 02/07/19
1010

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 6 of 6

Sediment Log
Version 1.2, 1/20/16

Location ID: ED-00.08-SLO3 Interval: 7 ft to 8 ft

Client: CEC/ARLONIC Layer: 4B Gap: 0 ft

Site Name: ELLIOTT DITCH Sediment Color: 2-5Y 5/3 Color

Project Name: 172-367 2nd Sediment Color:

Task #: 0006 Texture: SANDY CLAY Structure:

Log Date: 02/12/13 USDA Texture: MH USCS Texture:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: DMW/MWB

Data Entry By: Same as above

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Notes

Till? Lacustrine? Sand/gravel bed?

Sample Remarks:

Internal Remarks: 02/07/13

1010

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil
Sediment Data Sheet

9

Project Name: ELLIOTT DITCH
 Project Number: 172-367
 Field Location ID: ED-00-08-SLOS
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: MWB/DMM
 Cored Date: 02/07/18 1026 - 1030
 Described By: DMM
 Described Date: 02/12/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
8'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0 - 4'	4'	100%
4 - 8'	4'	100%

Reviewed By _____ Date _____

Page 1 of 5

Soil Log
Version 1.2, 1/20/16

Location ID: ED-00.08-SLOS Interval: 0 ft to 0.67 ft

Client: CEC/ARLONIC Project Name: ELLIOTT DITCH Task #: 0006 Log Date: 02/12/18

Horizon: 1A Gap: 0 ft

Soil Color: 2.5Y 2.5/1A 2nd Soil Color: -

Texture: SILTY LOAM Structure: MH

USDA Texture: SILTY LOAM USCS Texture: MH

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment, Soil, Air, Water # of Containers: 1 Priority: Urgent (1), Standard (2), As Able (3), As Needed (4)

Plasticity: Non-plastic, Slightly Plastic, Moderately Plastic, Very Plastic

Field Personnel: Logged By: MWB/AMM Data Entry By: Same as above

Other Characteristics: Roots? Few, Common, Many; Rocks? <15%, 15-35%, 35-60%, 60-90%, >90%; Wood? Wood, Black Wood, Burned Wood, Sawdust, Wood Chips, Wood Pulp, Charcoal; Wood %: 0 %; Shells? Plant Fragments? Sublayers? <0.05 ft, 0.05-0.1 ft, 0.1-0.2 ft, 0.2-0.5 ft, >0.5 ft; Color: -; USDA Texture: -

Notes: * odor 02/07/18 1026

Tilt? Lacustrine? Sand/gravel bed?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 2 of 5

Soil Log
Version 1.2, 1/20/16

Client: CEC/MRONIC
 Site Name: ELLIOTT DITCH
 Project Name: 192-367
 Task #: 0006
 Log Date: 02/12/13

Location ID: ED-00-08-SLOS
 Interval: 0.67 ft to 1.25 ft

Horizon: 2A
 Gap: 0

Soil Color: 2.5Y 3/2
 2nd Soil Color: —

Lab Data
 Duplicate?
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: A
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture
 USDA Texture: LOAMY SILT
 USCS Texture: OL

Structure
 Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other: _____
 Grade: Weak
 Moderate
 Strong

Other Characteristics
 Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal
 Wood % 0%
 Shells? Plant Fragments?
 Sublayers?
 Color: —
 USDA Texture: _____

Roots? Few
 Common
 Many
Rocks? <15%
 15-35%
 35-60%
 60-90%
 >90%
Odor? Petrochemical
 Sulfur
 Other

Plasticity
 Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Field Personnel
 Logged By: MWB/DMM
 Data Entry By: Same as above

Notes
 Till? Lacustrine? Sand/gravel bed?
 Sample Remarks: *odor
 Internal Remarks: 02/07/13
6026

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil Log
Version 1.2, 1/20/16

Page 3 of 5

Client: CEC/ARCOWIC
 Site Name: ELLIOTT DITCH
 Project Name: 172-367
 Task #: 0006
 Log Date: 02/02/18

Location ID: ED-00-08-SLOS Interval: 1-25 ft to 2.1 ft
 Horizon: 3A Gap: 0 ft
 Color: _____
 2nd Soil Color: _____

Lab Data

Duplicate?
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 1
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: LOAMY SAND

USCS Texture: SM

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Field Personnel

Logged By: DMM/MWB

Data Entry By: Same as above

Internal Remarks

2/07/18
1026

Structure

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other: _____

Grade: Weak
 Moderate
 Strong

Other Characteristics

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood % _____ %
 Shells? Plant Fragments?

Sublayers?
 <0.05 ft _____
 0.05-0.1 ft _____
 0.1-0.2 ft _____
 0.2-0.5 ft _____
 >0.5 ft _____

Color _____
 USDA Texture _____

Notes

Till? Lacustrine? Sand/gravel bed?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 4 of 6

Soil Log Version 1.2, 1/2016

Location ID: ED-00.08-SLOS Interval: 2-1 ft to 3 ft

Client: CEC/ARCONIC Horizon: 1B Gap: 0 ft

Site Name: ELLIOTT DITCH Soil Color: 10YR 5/3 2nd Soil Color: 5YR 7/8

Project Name: 172-367 Texture: SILTY CLAY Structure: CL

Task #: 0006 USDA Texture: CL USCS Texture: CL

Log Date: 02/12/18

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: Diana / MWB Date Entry By: Same as above

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rocks? Few None Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 % Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color — USDA Texture —

Notes

Till? Lacustrine? Sand/gravel bed?

Sample Remarks: 02/07/18
1026

Internal Remarks: 02/07/18
1026

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 6 of 5

Sediment Log
Version 1.2, 1/23/16

Location ID: ED-00-08-SLOS Interval: 3 ft to 3.8 ft

Client: ETRA TECH CEC/ARLONIC
 Site Name: ELLIOTT DITCH
 Project Name: 192-369
 Task #: 0000
 Log Date: 02/12/18

Layer: 2B Gap: 0 ft

Sediment Color: 10YR 4/1 2nd Sediment Color: 10YR 5/6

Texture

USDA Texture: CLAY
USCS Texture: CL

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: _____

Grade: Weak Moderate Strong

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 5

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: DMM / MMB
Data Entry By: Same as above

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rocks? Few Common Many None

Rocks? <15% 15-35% 35-60% 60-90% 90%

Odor? Petrochemical Sulfur Other

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Sheets? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 10YR 4/1

USDA Texture: SANDY CLAY

Notes

Till? Lacustrine? Sand/gravel bed?

Sample Remarks: *Strong odor
Internal Remarks: 02/07/18

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

S.O.L
Sediment Data Sheet

④

Project Name: ELLIOTT DITCH
 Project Number: 172-367
 Field Location ID: EO-00.13-SLOA
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: MWS/DMM
 Cored Date: 02/07/18 1033
 Described By: DMM
 Described Date: 02/12/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0-4'	3.08	77%

Reviewed By _____ Date _____

Page 1 of 3

Sediment Log
Version 1.2, 1/20/16

Location ID: ED-00.13-SLO1 Interval: 0 ft to 0.07 ft

Client: CEC/ALCONIC Layer: 1A Gap: 0 ft

Site Name: ELLIOTT DITCH Sediment Color: 2.5Y 3/1 Color

Project Name: 172-367 2nd Sediment Color:

Task #: 0006 Texture: SILTY LOAM Structure:

Log Date: 02/17/18 USDA Texture: USCS Texture: MH Grade: Weak

Lab Data Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water

of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel Logged By: DMM/MWP Data Entry By: Same as above

Plasticity Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Roots? Few Common Many Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Rocks? <15% 15-35% 35-60% 60-80% ≥90% **Wood %** 0 % **Shells?** Plant Fragments?

Odor? Petrochemical Sulfur Other **Sublayers?** <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft **Color** **USDA Texture**

Notes Tilt? Lacustrine? Sand/gravel bed? 02/07/18 1033

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 2 of 3

Sediment Log

Version 1.2, 1/20/16

Location ID: ED-00.13-SL01 Interval: 0.69 ft to 2.75 ft

Client: CEC/ARCONIC Layer: 2A n

Site Name: ELLIOTT DITCH Sediment Color: 10YR 4/3 n

Project Name: 172-367 2nd Sediment Color: - n

Task #: 6006 Color: - n

Log Date: 02/12/19

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: SANDY LOAM

USCS Texture: SM

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: _____

Grade: Weak Moderate Strong

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% 90-100%

Other: Fine Gravel Medium Gravel Coarse Gravel Cobbles

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: _____ USDA Texture: _____

Field Personnel

Logged By: DMM / MWB

Data Entry By: Same as above

Sample Remarks: * Gravel

Internal Remarks: 02/07/19

1033

* stained

Notes: Tim? Lacustrine? Sand/gravel bed?

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 3 of 3

Sediment Log

Version 1.2, 1/20/16

Client: CEC/ARCONIC Location ID: ED-00-13-SL01 Interval: 2.75 ft to 3.08 ft

Site Name: ELLIOTT DITCH Layer: B Gap: 0.92 ft

Project Name: 172-367 Sediment Color: gray 2nd Sediment Color: gray

Task #: 0006 Sediment Color: gray

Log Date: 02/12/13 Sediment Color: gray

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 4

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: SILTY CLAY

USCS Texture: CL

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: _____

Structure: _____

Grade: Weak Moderate Strong

Field Personnel

Logged By: DWAM/MLWB

Data Entry By: Same as above

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rods? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% 90%

Odor? Petrochemical Sulfur Other

Notes: _____

TIN? Lacustrine? Sand/gravel bed?

Sample Remarks

*Stained

*Strong odor

Internal Remarks

02/07/13

1033

Wood?

Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Sheets? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: _____

USDA Texture: _____

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil
Sediment Data Sheet

(5)

Project Name: ELLIOTT DITCH
 Project Number: 172-307-0006
 Field Location ID: ED-00.17-SLO1
 Core Type:
 Field Remarks:
 Northing (ft):
 Easting (ft):

Cored By: MWB/DMM
 Cored Date: 02/07/13
 Described By: Pmm/MWB 1041
 Described Date: 02/12/13

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0-4'	4	100%

Reviewed By _____ Date _____

Page 1 of 2

Sediment Log
Version 1.2, 1/20/16

Location ID: ED - 00.17 - SLO1 Interval: 0 ft to 0.75 ft

Client: CEC/APLONIC Layer: 1A Gap: 0 ft

Site Name: ELLIOTT DITCH Sediment Color: 2.5Y 2.5/1 2nd Sediment Color: —

Project Name: 172-367 Texture: SILTY LOAM Structure: MH

Task #: 0006 USDA Texture: MH USCS Texture: MH

Log Date: 02/12/13

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: DMM / MWB

Data Entry By: Same as above

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Notes

Till? Lacustrine? Sand/gravel bed?

Sample Remarks:

Internal Remarks: 02/12/13
1041

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 2 of 2

Sediment Log
Version 1.2, 1/20/16

Location ID: ED - 00.17-SLO1 Interval: 0.75 ft to 4 ft

Client: CE/ARCONIC Layer: 2A Gap: 0 ft

Site Name: ELLIOTT DITCH Sediment Color: 1042 5/3

Project Name: 172-367 2nd Sediment Color: 2.54 3/1

Task #: 0006 Sediment Color: 2.54 3/1

Log Date: 02/12/18

Lab Data

Duplicate? Grab? Composite?

Meix: Sediment Soil Air Water

of Containers: 3

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: PMM / MWB

Data Entry By: Same as above

Texture

USDA Texture: SANDY LOAM

USCS Texture: SM

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: _____

Grade: Weak Moderate Strong

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other: None

Shells? Plant Fragments?

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: 2.54 5/2

USDA Texture: GRAVEL

Notes

Tilt? Lacustrine? Sand/gravel bed?

Sample Remarks: _____ Internal Remarks: 02/12/18
1041

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

SOIL
Sediment Data Sheet

②

Project Name: ELLIOTT DITCH
 Project Number: 172-367-0006
 Field Location ID: ED-00.55-SLO4
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: DMH/MWB
 Cored Date: 02/07/13 1130-1140
 Described By: DMH/MWB
 Described Date: 02/13/13

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
1'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0 - 0.5'	0.42	83%
0.5' - 1'	0.38	75%

Reviewed By _____ Date _____

Page 1 of 1

Sediment Log

Version 1.2, 1/20/16

Client: CEC/ARWNIC Location ID: EP-00-55-SLO1 Interval: 0 ft to 1 ft

Site Name: ELLIOTT DITCH Layer: A Gap: 0.2 ft

Project Name: 172-367 Sediment Color: 5Y 4/2 2nd Sediment Color: 2.5Y 4/5

Task #: 6006 Sediment Color: 5Y 4/2 2nd Sediment Color: 2.5Y 4/5

Log Date: 02/13/18

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: SILTY LOAM

USCS Texture: MH

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other: _____

Structure: _____

Grade: Weak Moderate Strong

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Sulfur Other DONE

Shells? Plant Fragments?

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: _____

USDA Texture: _____

Field Personnel

Logged By: DMM / MWB

Data Entry By: Same as above

Notes

Tilt? Lacustrine? Sand/gravel bed?

Sample Remarks: * 0.5 - 1, stained

Internal Remarks: 02/67/18
1130 - 1140

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

SOIL

Sediment Data Sheet

①

Project Name: ELLIOTT DITCH
 Project Number: 172-367-0006
 Field Location ID: ED-00.55-5402
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: MWB/DMM
 Cored Date: 02/07/13 1308 - 13.16
 Described By: DMM
 Described Date: 02/13/13

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0 - 0.5'	0.42	83%
0.5 - 1'	0.46	92%

Reviewed By _____ Date _____

Page 1 of 1

Sediment Log

Version 1.2, 1/2016

Client: CEC/ARLONIC Location ID: ED-0055-SL02 Interval: 0 ft to ft

Site Name: ELLIOTT DITCH Layer: A Gap: 0.12 ft

Project Name: 172-367 Sediment Color: 2.5Y 3/1 2nd Sediment Color: 2.5Y 2.5/1

Task #: 0006 Sediment Color: 2.5Y 3/1 2nd Sediment Color: 2.5Y 2.5/1

Log Date: 02/13/18 Color: 2.5Y 3/1

Lab Date

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: SILTY LOAM

USCS Texture: MH

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Structure:

Grade: Weak Moderate Strong

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% ≥90%

Odor? Petrochemical Slight Moderate Strong Other: NONE

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color:

USDA Texture:

Field Personnel

Logged By: DAM/MWB

Date Entry By: Same as above

Notes

Till? Lacustrine? Sand/gravel bed?

Sample Remarks

* Dark/ Stained

Internal Remarks

02/02/18
1308-1316

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil

Sediment Data Sheet

②

Project Name: ELLIOTT DITCH
 Project Number: 172-367.0006
 Field Location ID: ED-01-24-SLO4
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting (ft):

Cored By: MWB/DMM
 Cored Date: 02/07/13 1320 - 1330
 Described By: DMM/MWB
 Described Date: 02/13/13

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
1.5'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0 - 0.5'	0.42'	83%
0.5 - 1'	0.42'	83%
1' - 1.5'	0.46	92%

Reviewed By _____ Date _____

Page 1 of 2

Soil Log Version 1.2, 1/20/16

Client: CE/ARCONIC Location ID: ED-01-24-SLO4 Interval: 0 ft to 1 ft

Site Name: ELLIOTT DITCH Horizon: 1A Gap: 0-16 ft

Project Name: 172-367 Soil Color: 2.5Y 3/2 2nd Soil Color:

Task #: 0006 USDA Texture: SILTY LOAM Structure:

Log Date: 02/13/17 USCS Texture: MH Grade: Weak Moderate Strong

Lab Data

Duplicates? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 4 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel

Logged By: DAM MWB

Date Entry By: Same as above

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other PODE

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Texture

USDA Texture: SILTY LOAM

USCS Texture: MH

Notes

TIM? Lacustrine? Sand/gravel bed?

Internal Remarks: 02/07/18
1300-1330

Sample Remarks: A

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 2 of 2

Soil Log
Version 1.2, 1/20/16

Client: CEC/ARCONIC Location ID: ED-01-24-SL04 Interval: 1 ft to 1.5 ft

Site Name: ELLIOTT DITCH Horizon: 2A Gap: 0.04 ft

Project Name: 172-367 Soil Color: 2.5Y 4/3 2nd Soil Color:

Task #: 0006 Log Date: 02/13/18

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: SANDY EDAM

USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% 90-100%

Odor? Petrochemical Sulfur Other NOTE

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 % Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Field Personnel

Logged By: DMM/MW

Date Entry By: Same as above

Sample Remarks

* W/GRAVEL

Internal Remarks

02/07/18
1520-1330

Notes

Till? Lacustrine? Sand/gravel bed?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Sci
Sediment Data Sheet

3

Project Name: ELLIOTT DITCH
 Project Number: 172-367-0006
 Field Location ID: ED-01.24-SLO5
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: DMM/MWB
 Cored Date: 02/07/12
 Described By: ~~DMM~~ DMM/MWB 1305-1356
 Described Date: 02/13/12

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
1.5'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0 - 0.5	0.42'	83%
0.5 - 1'	0.31'	62%
1' - 1.5'	0.46'	92%

Reviewed By _____ Date _____

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Client: CEC/KEWONIC
Site Name: ELLIOT DITCH
Project Name: 172-367
Task #: 0006
Log Date: 02/13/19

Soil Log
Version 1.2, 1/20/16

Location ID: ED-01.24-SL05
Interval: 0 ft to 1.5 ft
Horizon: A
Gap: 0-31 ft

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 3

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: DMM/MWB
 Data Entry By: Same as above

USDA Texture: SILTY LOAM
USCS Texture: MH

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Texture: Soil Color: 2.5Y 3/2
 2nd Soil Color: —

Structure: Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% 90-100%

Other: Fine Gravel Medium Gravel Coarse Gravel Cobbles

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Notes: Tip? Lacustrine? Sand/gravel bed?

Internal Remarks: 02/02/18
1905-1356

Sample Remarks:

Sediment Data Sheet

(2)

Project Name: ELLIOTT DITCH
 Project Number: 172-367-0006
 Field Location ID: ED-01.24-SID6
 Core Type:
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: DMM/MWB
 Cored Date: 02/02/18 1410 - 1420
 Described By: DMM
 Described Date: 02/13/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
2					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0-0.5	0.42	83%
0.5-1	0.42	83%
1-1.5	0.5	100%
1.5-2	0.46	92%

Reviewed By _____ Date _____

Figure 3. Sample paper sediment logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Version 1.2 / 1/2016

Sediment Log

Client: CEC/ARCADIC

Site Name: ELLIOTT DITCH

Project Name: 172-369

Task #: 0006

Log Date: 02/13/18

Location ID: ED-01-24-SL06

Interval: 0 ft to 2 ft

Layer: A

Gap: 0.2 ft

Lab Data

Duplicate?

Grab?

Composite?

Matrix:

Sediment

Soil

Air

Water

of Containers: 2

Priority:

Urgent (1)

Standard (2)

As Able (3)

As Needed (4)

Texture

USDA Texture: SILTY LOAM

USCS Texture: MH

Field Personnel

Logged By: DMM / MWB

Date Entry By: Same as above

Sample Remarks: * plant fragments

Internal Remarks:

02/02/18

1416 - 1420

Texture

Sediment Color: 2.5Y 3/2

2nd Sediment Color: -

Structure

Type:

Granular

Sub-angular Blocky

Angular Blocky

Single Gran

Massive

Other

Grade:

Weak

Moderate

Strong

Other Characteristics

Rocks?

Few

Common

Many

Rocks?

<15%

15-35%

35-60%

60-90%

>90%

Petrochemical

Sulfur

Other DOP

Notes:

Tip?

Lacustrine?

Sand/gravel bed?

Wood?

Wood

Black Wood

Burned Wood

Sawdust

Wood Chips

Wood Pulp

Charcoal

Wood %: 0 %

Shells? Part / Fragments?

Subsiders?

<0.05 ft

0.05-0.1 ft

0.1-0.2 ft

0.2-0.5 ft

>0.5 ft

Color:

USDA Texture

Soil
Sediment Data Sheet


Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367-0006
 Field Location ID: ED-00.00-SLO3
 Core Type: Geo Probe Boring
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: G. Schwartz
 Cored Date: 6/14/12
 Described By: GS
 Described Date: 6/14/12

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.0' - 0.9'		100%
0.9 - 1.7'		100%
1.7 - 2.5'		100%
2.5 - 3.4'		100%
3.4 - 4.0		100%

Reviewed By _____ Date _____



Soil Log
Version 1.2, 1/20/16

Page 1 of 1

Location ID: ED - 00.00 - SLO3 Interval: 1.0 ft to 0.9 ft

Client: ARCADIS Site Name: Elliot Ditch Project Name: Archived Sample Task #: 172-367 Log Date: 6/14/16

Horizon: 1 Gap: ft

Soil Color: 2.5 YR 5/2 2nd Soil Color: Color:

Texture: silt loam Structure:

USDA Texture: ML USCS Texture:

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: GDS Data Entry By: Same as above

Structure: Scrambled Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Other Characteristics: Very Fine Fine Medium Coarse Very Coarse Fine Gravel Medium Gravel Coarse Gravel Cobbles Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Shells? Plant Fragments? Roots? Few Common Many <15% 15-35% 35-60% 60-90% >90% Pellet remains? Sulfur Other Tuff? Leached? Semi-gravel? USDA Texture:

Notes:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

2

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Client: Arizona Location ID: ED-00.00-SL-03 Interval: 0.9 ft to 1.7 ft

Site Name: Elliott Ditch Horizon: 1 Gap: in

Project Name: ADA Sample Soil Color: 10YR 3/2 2nd Soil Color:

Task #: 172-367 Texture: Silty clay loam Type: Granular Subangular Blocky Angular Blocky Silty Grain Massive Other Grade: Weak Moderate Strong

Log Date: 10/14/18 # of Containers: 2 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water

USDA Texture: MH USCS Texture: MH Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Roots? Few Common Many None Fine Gravel 15-35% 35-60% 60-80% 80-100%

Other Characteristics: Very Fine Fine Medium Coarse Very Coarse Fine Gravel Medium Gravel Coarse Gravel Cobbles Wood? Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 % Sheafs? Plant Fragments? Substrata? <0.05% 0.05-0.1% 0.1-0.2% 0.2-0.5% >0.5% Color: USDA Texture:

Odor? Petrol/chemical Slight Moderate Strong Other Notes: Lacustrine? Sand/gravel bed? T/P?

Field Personnel: Logged By: GDS Data Entry By: Same as above

Sample Remarks: Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00.00-SL03 Interval: 1.7 to 2.5

Client: Aronaic Site Name: Elliott Ditch
 Project Name: ADD Sampling Task #: 172-367
 Log Date: 6/14/16

Horizon: 1 Gap: Color:

Soil Color: 10YR 3/2 2nd Soil Color: 10YR 4/2

Texture

USDA Texture: Sandy Clay loam

USCS Texture: MH

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Structure

Type: Granular Subangular Blocky Angular Blocky Ring & Grain Massive Other:

Grade: Weak Moderate Strong

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other

Notes: Lacustrine? Semi-gravel bed?

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel

Logged By: GDS

Data Entry By: Same as above

Sample Remarks:

Internal Remarks:

TETRA TECH

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log Version 1.2, 1/20/16

Location ID: ED-00.00-SLO3 Interval: 2.5 ft to 3.9 ft

Client: ARONIC Site Name: Full# Data Project Name: ADA Samples Task #: 172-367 Log Date: 6/14/16

Horizon: 1 Gap:

Soil Color: 10YR 5/3 2nd Soil Color:

Color:

Texture

USDA Texture: Sandy Clay IJCS Texture: CL

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel

Logged By: ADS Data Entry By: Same as above

Other Characteristics

Rock? Few Common Many

Rocks? <15% 15-35% 35-60% 60-80% >80%

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: ∞ Shell? Shell Fragments?

Odor? Petrochemical Sulfur Other

Slight Moderate Strong

Substrate? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color:

USDA Texture:

Notes

Leachate? Sand/gravel bed?

TIFF?

Sample Remarks:

Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00000-SLO3 Interval: 3.4 ft to 4.0 ft

Client: Arctic Site Name: Elliott Ditch Project Name: Arctic Survey Task #: 172-367 Log Date: 6/14/18

Horizon: 1 Gap:

Soil Color: 10YR 3/2 2nd Soil Color: 10YR 3/4

Texture: Sand & clay loam Structure: Subangular Blocky Angular Blocky Single Grain Massive Other

USDA Texture: MH USCS Texture: MH Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: ADS Data Entry By: Same as above

Other Characteristics: Roots? Few Common Main Rocks? < 15% 15-35% 35-60% 60-80% > 80% Odor: Petrochemical Sulfid Moderate Other Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood %: 0 % Stripes? Plant Fragments? Sublayers? < 0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft > 0.5 ft Color: USCS Texture:

Notes: Lactometer? Sand/silt/clay (%)?

Sample Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil
Sediment Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367.0006
 Field Location ID: ED-00.00-SL04
 Core Type: GeoProbe Boring
 Field Remarks:
 Northing (ft):
 Easting (ft):

Cored By: GDS
 Cored Date: 6/14/18
 Described By: GDS
 Described Date: 6/14/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.0 - 3.6		
0.0' - 0.9'		90%
0.9 - 1.8		90%
1.8 - 2.7		90%
2.7 - 3.6		90%

Reviewed By _____ Date _____

80

Page 1 of 1

Soil Log

Version 1.2, 1/2016

Location ID: ED-00-00-SL04 Interval: 4.0 m to 6.9 m

Client: ARIZONA

Site Name: AT ELLIOTT DITCH

Project Name: ADD SAMPLING

Task #: 172-567

Log Date: 6/14/16

Horizon: 1 Gap: m

Soil Color: 2.5YR 4/2 2nd Soil Color: 2.5YR 5/3

Texture: Silty Clay loam Structure:

USDA Texture: USCS Texture: MH

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 2 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: GDS Data Entry By: Same as above

Other Characteristics: Rocks? Few Common Many Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Flab Charcoal Wood % % Shell? Plant Fragments? Color:

USDA Texture:

Notes: TIP? Lacustrine? Sand/gravel bed?

Internal Remarks:

Sample Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/2016

Location ID: ED-00-00-SLO4 Interval: 0.9 ft to 1.8 ft

Client: ARCADIS Site Name: Elliott Ditch Project Name: Arch. Sampling Task #: 172-367 Log Date: 6/14/16

Horizon: 1 Gap: ft

Soil Color: 2.5YR 4/2 2nd Soil Color:

Texture

USDA Texture: Silty Clay

USCS Texture: CL w/sand

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other

Wood? Wood Black Wood Burnt Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Field Personnel

Logged By: CDS

Data Entry By: Same as above

Internal Remarks

Sample Remarks:

Notes: Leach temp? Salt/gravel head?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log Version 1.2, 1/20/16

Location ID: ED-00.00-SL-4 Interval: 1.0 # to 2.7

Client: Arcon Site Name: Elliott Ditch
 Project Name: ADD. Sampling
 Task #: 172-367
 Log Date: 6/14/18

Horizon: 1 Gap:

Soil Color: 2.5YR 3/2 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: Silty clay

USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grath Massive Other

Grath: Weak Moderate Strong

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Fib Charcoal

Shale? Plant Fragments?

Subs?

Color:

USDA Texture:

Field Personnel

Logged By: GDS
 Data Entry By: Same as above

Sample Remarks:

Internal Remarks:

Notes: Lachryme? Sand/grain bed?

7M?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Client: ARCAMIC Location ID: ED-00-00-SLO4 Interval: 2.7 ft to 3.0 ft

Site Name: Elliott Ditch Horizon: 1 Gap:

Project Name: Arch. Sampling Soil Color: 2.5 YR 3/2 2nd Soil Color:

Task #: 172-367 Texture: Sandy clay Structure:

Log Date: 6/14/16 USDA Texture: CH ISCS Texture: CH

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: ADS Data Entry By: Same as above

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Feet? Few Common Many

Rocks? <15% 15-35% 35-60% 60-80% 80-90%

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Notes

Lacustrine? Sand/gravel bed?

Sample Remarks: Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

So. 1 Sediment Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367.0006
 Field Location ID: ED-00.17-SLO2
 Core Type: GeoProbe boring.
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: GDS
 Cored Date: 6/14/18
 Described By: GDS
 Described Date: 6/14/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.0 - 0.8'		95%
0.8 - 1.8'		95%
1.8 - 2.8'		95%
2.8 - 3.8'		95%

Reviewed By _____ Date _____

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00-17-SLOZ Interval: 0.0 ft to 0.0 ft

Client: ARCADIS Site Name: Elliot Ditch

Project Name: ADB Sampling Task #: 177-367

Log Date: 6/16/18

Horizon: 1 Gap: ft

Soil Color: 24R 3/2 2nd Soil Color:

Texture

USDA Texture: Silty Loam

USCS Texture: ML

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: GDJ

Data Entry By: Same as above

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Rock? Few Common Many

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

3 Sublayers? ft ft ft

Color:

USDA Texture:

Notes

Leucisane? Sand/gravel bed?

Internal Remarks

Sample Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00.17-SLOZ Interval: 0.8 ft to 1.8 ft

Client: Acorn Site Name: Elliott Ditch Project Name: Additional Sampling Task #: 172-367 Log Date: 6/16/19

Horizon: 1 Gap: ft

Soil Color: 10YR 4/2 2nd Soil Color:

Texture: Sandy loam ML

USDA Texture: USCS Texture:

Structure:

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: GD Data Entry By: Same as above

Other Characteristics: Rocks? Few Common Many Reces? 0-10% 15-30% 35-50% 60-80% >80% Odor? Foul/chemical Sulfur Other

Structure: Wood? Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood % Plant Fragments?

Sublayers? 0-0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft Color: USDA Texture:

Notes: Laminar? Sand/gravel bed?

Sample Remarks: Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-CO-17-SLOZ Interval: 1.8 ft to 2.8 ft

Client: ARCADIS Project Name: Elliott Ditch

Site Name: ADN. SAMPLING Task #: 172-3167

Log Date: 6/16/18

Horizon: 1 Gap: ft

Soil Color: 7.5YR 3/2 2nd Soil Color:

Texture: Silty loam Structure:

USDA Texture: MH JSCS Texture:

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water

of Containers: 3 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: GDS Data Entry By: Same as above

Other Characteristics: Many Fine Few Common Many Roots? <15% 15-35% 35-60% 61-90% >90% Woody Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Shells? Plant Fragments? Sand/gravel bed? Lucusins? Notes:

Odor? Petrochemical Sulfur Other Substrate? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Sample Remarks: Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00.17-SLOZ Interval: 2.8 in to 3.8 in

Client: Arcadis
 Site Name: Elliott Ditch
 Project Name: DD. Sampling
 Task #: 02-367 0090
 Log Date: 6/14/18

Horizon: 1 Gap:

Soil Color: 2.5YR 4/2 2nd Soil Color:

Texture
 USDA Texture: Sandy clay loam
 USCS Texture: MH

Structure
 Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other:
 Grade: Weak
 Moderate
 Strong

Lab Data
 Duplicate?
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 1
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Field Personnel
 Logged By: ADS
 Data Entry By: Same as above

Other Characteristics
 Roots? Few
 Common
 Many
 Rocks? ≤ 5%
 15-35%
 35-60%
 60-90%
 ≥ 90%
 Odors: Petrochemical
 Sulfur
 Other
 Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal
 Wood %: 0 %
 Shells? Plant Fragments?
 Substratum?
 Color:
 USDA Texture:

Notes
 TSP? Leachings? Sand/gravel bed?

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil Sediment Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367.0006
 Field Location ID: ED-00.19-SL01
 Core Type: Geoprobe boring
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: GDS
 Cored Date: 6/14/18
 Described By: GDS
 Described Date: 6/14/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.0' - 0.8'		100%
0.8 - 1.5'		100%
1.5 - 1.8'		100%
1.8 - 2.3'		100%
2.3 - 3.5'		100%
3.5 - 4.0		100%

Reviewed By _____ Date _____

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00-19-SLO1 Interval: 0-0 in to 1.0 ft

Client: ARCANE Project Name: Elliott Ditch
 Site Name: Additional Sampling
 Task #: 077-362
 Log Date: 6/14/18

Horizon: 1 Gap:

Soil Color: 2.5YR 3/2 2nd Soil Color: 10YR 5/3

Lab Data
 Duplicate? Grab? Composite?
 Matrix: Sediment Soil Air Water
 \$ of Containers: 1

Texture
 USDA Texture: Silty clay loam
 LISCS Texture: MH

Structure
 Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other
 Grade: Weak Moderate Strong

Plasticity
 Non-plastic
 Slightly Plastic
 Moderately Plastic
 Vary Plastic

Field Personnel
 Logged By: GDS
 Data Entry By: Same as above

Other Characteristics
 Roots? Few Continuous Many
 Rock? < 1.5% 1.5-5% 5-8% 8-10% 10-15%
 Wood? Wood Black Wood Blamed Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood %: 75 %
 Shells? Plant Fragments?
 Color? Petrochemical Slight Moderate Strong
 Sulphur Other

Notes
 Lacturine? Sand/gravel bound?

Internal Remarks
 Sample Remarks:
 Internal Remarks:

USDA Texture

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/18

Location ID: ED-M-19-SLO1 Interval: 0.6 ft to 1.5 ft

Horizon: 1 Gap: ft

Soil Color: 2.5YR 3/2 2nd Soil Color: 10YR 4/4

Texture: Sandy Clay Structure: CH

USDA Texture: USCS Texture:

Lab Data: Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: GDS Data Entry By: Same as above

Internal Remarks: Well graded

Other Characteristics: Rocks? Few Common Many

Rock? <15% 15-35% 35-60% 60-90% >90%

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics: Wood? Wood? Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 % Shell? Plant Fragments?

Substrates? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Notes:

USDA Texture:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-10.1A-SLO1 Interval: 1.5 ft to 1.8 ft

Client: ARCANE Site Name: Elliott Ditch Project Name: Additional Sampling Task #: 172-3107 Log Date: 6/14/18

Horizon: 1 Gap: ft

Soil Color: 2.5Yk 3/1 Color: N/A

Soil Color: 2.5Yk 3/1 2nd Soil Color: N/A

Texture

USDA Texture: Silty Clay loam

JSCS Texture: SH

Structure

Type: Granular Sub-angular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (3) As Able (3) As Needed (4)

Field Personnel

Logged By: GDJ Data Entry By: Same as above

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Roots? Very Fine Fine Medium Coarse Very Coarse

Rocks? Few Common Many

Rocky? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Mixed Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Notes

TRP? Lacustrine? Sand/gravel bed?

Internal Remarks

Sample Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-10,19-601 Interval: 1.8 ft to 2.3 ft

Client: Arconic Project Name: Elliott Ditch Task #: 172-367-0109 Log Date: 6/14/18

Horizon: 1 Gap: ft

Soil Color: 10YR 7/3 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite? Matrix: MSD

Sediment Soil Air Water

of Containers: 7 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Sandy Clay Loam

USCS Texture: ML

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Other Characteristics

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 % Shells? Plant Fragments?

Stubble? Stubble %: <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Field Personnel

Logged By: GDS Date Entry By: Same as above

Notes

Locust tree? Sand/gravel bed?

Sample Remarks

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-0019-SL01-2-2-3 Interval: 2.0 to 2.8 ft 2.3 to 3.5

Client: Arcene Elliott Ditch

Site Name: Arcene Elliott Ditch

Project Name: ADD: Sampling

Task #: 12-362

Log Date: 6/14/18

Horizon: 1 Gap:

Soil Color: 10 YR 7/3 2nd Soil Color:

Texture: Sandy loam Structure:

USDA Texture: HL Grade: Weak

USCS Texture: Structure:

USCS Texture: Structure:

Lab Data: Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: GDS

Data Entry By: Same as above

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-80% >80%

Color? Petrochemical Slight Moderate Strong

Other Characteristics: Wood Black Wood Burned Wood Sawdust Wood Chips Wood Strip Charcoal

Wood %:


Shells? Plant Fragments?

Substrate? 0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Notes: Laminar? Sand/gravel lens?

USDA Texture:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.



TETRA TECH
Version 1.2, 1/20/16

Page 1 of 1

Soil Log

Location ID: ED-0019-SLO1 Interval: 3.5 ft to 4.0

Client: Arsenic

Site Name: Elliott Ditch

Project Name: Arsenic Samples

Task #: 172-367

Log Date: 6/14/16

Horizon: 1 ft

Gap: ft

Soil Color: 10YR 4/2

2nd Soil Color:

Structure

Type	Grade
<input checked="" type="checkbox"/> Granular	<input checked="" type="checkbox"/> Weak
<input type="checkbox"/> Subangular Blocky	<input type="checkbox"/> Moderate
<input type="checkbox"/> Angular Blocky	<input type="checkbox"/> Strong
<input type="checkbox"/> Single Grain	
<input checked="" type="checkbox"/> Massive	
<input type="checkbox"/> Other	

Texture

USDA Texture: Sandy Clay loam

USCS Texture: MH

Other Characteristics

Rock? Few Common Mafic

Rock? <15% 15-35% 35-60% 60-80% >80%

Odor? Petrochemical Sulfur Other

Notes

Turbidity? Sand/gravel?

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel

Logged By: GDS

Data Entry By: Same as above

Internal Remarks

Sample Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil
Sediment Data Sheet

Project Name: Elliott Ditch Additional Sample
 Project Number: 172-367.0006
 Field Location ID: ED-00.21-SL01
 Core Type: Geoprobe Boring
 Field Remarks:
 Northing (N):
 Easting (E):

Cored By: GDS
 Cored Date: 6/14/18
 Described By: GDS
 Described Date: 6/14/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.0 - 3.8		75%
0.0 - 1.0		
1.0 - 2.0		
2.0 - 2.9		
2.9 - 3.8		

Reviewed By _____ Date _____

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00-21-SLO Interval: 0.0 to 1.0 ft

Client: ARCADIS Project Name: Elliott Ditch

Site Name: ED-00-21-SLO Task #: 172-367-0009

Log Date: 6/14/16

Horizon: 1 Gap: Color:

Soil Color: 10YR 3/2 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment
 Soil
 Air Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: Silty loam

USCS Texture: ML

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 F-fine
 Other

Grade: Weak
 Moderate
 Strong

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics

Rocks? Few
 Common
 Many

Rock %: <15%
 15-35%
 35-60%
 60-90%
 >90%

Occur? Petrochemical
 Gull
 Other

Sign? Slight
 Moderate
 Strong

Notes: Limestone? Sand/gravel bed?

Field Personnel

Logged By: ADG

Date Entry By: Same as above

Internal Remarks

Sample Remarks:

Structure

Wood? Wood
 Black Wood
 Burner/Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood %:

Similar? Plant Fragments?

Subsiding? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color:

USDA Texture:

USDA Texture

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

FD

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Client: ARCONE
 Site Name: Elliott Ditch
 Project Name: ADD Sampling
 Task #: 172-367 - 0009
 Log Date: 6/14/18

Location ID: ED-00.21-SLO1 Interval: 1.0 ft to 2.0 ft
 Horizon: 7 Gap: ft

Soil Color: 2.5Y 4/3 2nd Soil Color:

Texture
 USDA Texture: Sandy clay loam
 USCS Texture: MH

Structure
 Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:
 Grade: Weak Moderate Strong

Lab Data
 Duplicate? Grab? Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 2
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel
 Logged By: GT
 Date Entry By: Same as above

Plasticity
 Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Shales? Plant Fragments?
 Substratum? ft ft ft ft
 Color: Slight Moderate Strong
 Petrographic? Sulfur Other
 Notes: Lactucine? Sand/gravel bed?

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/23/16

Location ID: ED-00-11-SLO Interval: 7.0 ft to 2.9 ft

Client: Arizona

Site Name: Elliott Ditch

Project Name: Art Sampling

Task #: 172-367

Log Date: 4/11/16

Horizon: 1 Gap: in

Soil Color: 2.5YR 2.5/1 2nd Soil Color:

Texture: Silty loam Structure:

USDA Texture: ML

USDA Texture Legend: Granular Weak Moderate Strong

Subangular Blocky Angular Blocky Single Grain Massive Other

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water

of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: gds Date Entry By: Same as above

Other Characteristics: Very Fine Fine Medium Coarse Very Coarse

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Flard/Fragments? Substratum? Color:

Petrochemical: Slight Moderate Strong

Sulfur: Other:

Notes: Lacerate? Sand/gravel bed? TWP?

Internal Remarks:

Sample Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00-21-SLO1 Interval: 7A to 3B

Client: Arcenic Project Name: Elliott Ditch
 Site Name: Ad. Sample Task #: 172-367 Log Date: 6/14/18

Horizon: 1 Gap:

Soil Color: 2.5YR 2.5/1 2nd Soil Color:

Texture: clay Structure: CH

USDA Texture: USCS Texture:

Lab Data: Duplicate? Grab? Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 1 Priority: Urgent (1)
 Standard (2) As Able (3)
 As Needed (4)

Plasticity: Non-plastic Slightly Plastic
 Moderately Plastic Very Plastic

Field Personnel: Logged By: ADS Date Entry By: Same as above

Other Characteristics: Roots? Very Fine Fine Common Many
 Medium Coarse Very Coarse
 Rotten Fine Gravel Medium Gravel Coarse Gravel Cobbles
 Wood? Wood Bark Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood %: 0 Plant Fragments? Shell? Substratum? Color:
 <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft 0.5 ft

Notes: Limestone? Sand/gravel/bed?

Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil
Sediment Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367.0006
 Field Location ID: ED-00.23-SL01
 Core Type: GeoTube Boring
 Field Remarks:
 Northing (N):
 Easting (E):

Cored By: GDS
 Cored Date: 6/14/18
 Described By: GDS
 Described Date: 6/14/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.0 - 3.9		98%
0.0 - 0.7		
0.7 - 1.2		
1.2 - 2.0		
2.0 - 2.9		
2.9 - 3.9		

Reviewed By _____

Date _____

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00-23-SLO1 Interval: 0.0 ft to 0.7 ft

Client: ARCADIS Project Name: Elliott Ditch Task #: 172-367-0009 Log Date: 6/14/18

Site Name: Elliott Ditch

Project Name: Additional Sampling

Task #: 172-367-0009

Log Date: 6/14/18

Horizon: 1 Gap:

Soil Color: 7.5YR 3/2 2nd Soil Color:

Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Silty Clay loam

JSCS Texture: CH

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Plant Fragments?

Shells?

Sublayers?

Color:

JSDA Texture:

Field Personnel

Logged By: GOS

Date Entry By: Same as above

Notes

Tri? Lacustrine? Sand/gravel bed?

Sample Remarks

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log Version 1.2, 1/20/16

Client: Arson's Location ID: ED-00-23-3201 Interval: 0.7 ft to 1.2 ft

Site Name: Elliott Ditch 1 Horizon: 10YR 4/3 gap: 10YR 5/6 0.3 0.01418

Project Name: Additional Sampling Soil Color: 10YR 4/3 2nd Soil Color: 10YR 5/6

Task #: 178-367 area Texture: Silty clay Structure: CH

Log Date: 6/14/18 # of Containers: 2

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

Priority: Urgent (1) Standard (2) As Aft. (3) As Needed (4)

Plasticity

Non-plastic Slightly plastic Moderately plastic Very plastic

Field Personnel

Logged By: GDJ

Data Entry By: Same as above

Internal Remarks

USDA Texture

USCS Texture

Color

Soil Color: 10YR 4/3 2nd Soil Color: 10YR 5/6

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Other Characteristics

Peaks? Few Common Many

Other: Very Fine Fine Medium Coarse Very Coarse

Rock? 1-15% 15-35% 35-50% 50-60% 60-80% 80-90%

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shale? Plant Fragments?

Sublayers? 0-0.5 ft 0.5-1 ft 1-0.2 ft 0.2-0.5 ft 0.5 ft

Color: USDA Texture:

Notes

Lactation? Sand/gravel bed?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page _____ of _____

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00.23-S101 Interval: 1.2 ft to 2.0 ft

Client: Arconic Project Name: Bellco# Ditch Task #: 172-367 Log Date: 6/14/16

Horizon: 1 Gap:

Soil Color: 10YR 4/3 2nd Soil Color: 10YR 5/6

Texture
USDA Texture: Silty Clay
USCS Texture: CL

Structure
Type: Granular Subangular Blocky Angular Blocky Single Grain Masses Other _____
Grade: Weak Moderate Strong

Lab Data
Duplicate? Grab? Composite?
Matrix: Sediment Soil Air Water
of Containers: 1
Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel
Logged By: GDJ
Date Entry By: Same as above

Other Characteristics
Rocks? Few Common Many
Roots? <15% 15-35% 35-80% 80-90% >90%
Odor? Petrochemical Sulfur Other _____
Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic
Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pile Charcoal _____
Stalks? Plant Fragments?

Notes
Till? Lacustrine? Sand/gravel bed?

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00.23-SLO1 Interval: 2 to 29

Client: Arctic
 Site Name: Elliott Ditch
 Project Name: Additional Sampling
 Task #: 176-767-0209
 Log Date: 6/14/18

Horizon: 1 Gap:

Soil Factor: 10yr 2/2 Color: 7.5yr 5/6

2nd Soil Color:

Texture
 USDA Texture: Clay
 I/SCS Texture: CH

Structure
 Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Lab Data
 Duplicate? Grmb? Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel
 Logged By: GDJ
 Data Entry By: Same as above

Plasticity
 Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Other Characteristics
 Rocky? Few Common Many
 Rooks? <15% 15-35% 35-60% 60-90% >90%
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood %: 0 %
 Shields? Flint Fragments?
 Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
 Color:
 USDA Texture:

Notes
 TWP? Lacustrine? Sand/gravel bed?

Sample Remarks
rebox feature

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16 3.9

Location ID: ED-00-23-SL01 Interval: 2.9 ft to 4.0 ft

Client: ACCORIC

Site Name: Elliott Ditch

Project Name: Additional Sample

Task #: 172-362-0009

Log Date: 6/14/16

Horizon: 1 Gap: ft

Soil Color: 10YR 2/2 2nd Soil Color: 10YR 6/16

Texture: Clay Structure: CH

USDA Texture: USCS Texture:

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Lab Data: Duplicate? Grab? Compost? Matrix: Sediment Soil Air Water

of Containers: 2 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: CDS Date Entry By: Same as above

Other Characteristics: Rocks? Few Common Many Wood? Wood Blank Wood Engineered Wood Sawdust Wood Chips Wood Pulp Charcoal Wood %: 0 %

Roots? <15% 15-35% 35-60% 60-90% 90%+ Petrochemical Sulfur Other Shale? Plant Fragments? Sublym? Color: USDA Texture:

Notes: Lenses? Sand/gravel bed?

Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil Sediment Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367.0006
 Field Location ID: ED-00.29-SL01
 Core Type: Geo Probe Boring
 Field Remarks:
 Northing (ft):
 Easting (ft):

Cored By: GDS
 Cored Date: 6/14/18
 Described By: GDS
 Described Date: 6/14/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.0		93.6

- 0.0 - 0.7
- 0.7 - 1.7
- 1.7 - 2.7
- 2.7 - 3.7

Reviewed By _____ Date _____

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00-27-SLO1 Interval: 0.0 ft to 1.0 ft

Client: ARCIC Horizon: 1 Gap:

Site Name: Elliott Ditch Soil Color:

Project Name: Additional Sampling 2nd Soil Color:

Task #: 172-367 Color: 10YR 4/2

Log Date: 10/14/16

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Silty loam

USCS Texture: ML

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Structure: Weak Moderate Strong

Other Characteristics

Access? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp/Charcoal

Stems? Plant Fragments?

Substrata? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color:

USDA Texture:

Field Personnel

Logged By: GDS

Data Entry By: Same as above

Sample Remarks:

Internal Remarks:

Notes: Lamination? Sand/gravel head?

7#?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Client: Arceuth Location ID: ED-00.27-SL01 Interval: 1.0 m to 1.9 m

Site Name: Elliott Ditch Horizon: 1 Gap:

Project Name: ADD Sampling Soil Color: 2.5YR 3/1 2nd Soil Color:

Task #: 172-367 Color:

Log Date: 6/14/18

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

(USDA) Texture: Silty clay loam

USCS Texture: MH

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Structure: Weak Moderate Strong

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-80% >80%

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel: Logged By: GDS Data Entry By: Same as above

Internal Remarks: Lactucine? Saprophytic bed? Tip?

Notes:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log Version 1.2, 1/20/16

Location ID: ED-00.27-SL01 Interval: 1.9 # to 2.8 #

Client: Alfred Aronic Site Name: Elliott Ditch Project Name: Additional Sampling Task #: 172-367 Log Date: 6/14/16

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: GDS Data Entry By: Same as above

Texture

USDA Texture: Silty Loam USCS Texture: ML

Horizon: (Color: 10YR 3/1

2nd Soil Color:

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Masses Other

Grade: Weak Moderate Strong

Other Characteristics

Rocks? Few (Common Matrix) Very Fine Fine Medium Coarse Very Coarse

Rocks? <15% 15-35% 35-60% 60-80% >80%

Odor? Pseudochemical Sulfur Other

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Substrate? Color:

Notes: Leachate? Sand/gravel bed?

TM?

USDA Texture:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-0077-SL01 Interval: 2.8 ft to 3.7 ft

Client: Aracuc
 Site Name: Elliott Ditch
 Project Name: Additional Samples
 Task #: 172-367
 Log Date: 6/14/18

Horizon: 1 Gap: ft

Soil Color: 2.5YR3/1 2nd Soil Color:

Texture
 USDA Texture: Clay
 USCS Texture: CH

Structure
 Grade: Granular Subangular Blocky Angular Blocky Single Grain Massive Other
 Weak Moderate Strong

Lab Data
 Duplicate? Grab? Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 1
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity
 Non-Plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel
 Logged By: GDJ
 Data Entry By: Same as above

Other Characteristics
 Rocks? Few Common Many
 Petrochemicals: Slight Moderate Strong
 Odor: Slight Moderate Strong
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood % 0 %
 Scales? Plant Fragments? Cellulose? Cellulose % 0.05 %
 Substrates? 0.1-0.2 0.2-0.3 >0.5

Notes
 Lachryms? Sand/gravel bed?
 TM?

Internal Remarks

Sample Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil Sediment Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367.0006
 Field Location ID: ED-00.29-SL01
 Core Type: Geo Probe Boring
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: GDS
 Cored Date: 6/14/18
 Described By: GDS
 Described Date: 6/14/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.0		93.6

- 0.0 - 0.7
- 0.7 - 1.7
- 1.7 - 2.7
- 2.7 - 3.7

Reviewed By _____ Date _____

Page 1 of 1

Soil Log Version 1.2, 1/20/16

Location ID: ED-00-29-SLO1 Interval: 0.0 ft to 0.25 ft 0.7 6/14/16

Client: Argonne Project Name: Elliott Ditch Task #: 172-567 Log Date: 6/14/16

Site Name: Elliott Ditch

Project Name: Elliott Ditch

Task #: 172-567

Log Date: 6/14/16

Lab Data
 Duplicate? Grab? Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Horizons: 1 ft Gap: ft

Color
 Soil Color: 2.5Y 3/7 2nd Soil Color:

Texture
 USDA Texture: silty loam
 USCS Texture: ML

Structure
 Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other
 Grade: Weak Moderate Strong

Plasticity
 Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel
 Logged By: GDS
 Data Entry By: Same as above

Internal Remarks

Other Characteristics
 Rocks? New Common Many
 Very Fine Fine Medium Coarse Very Coarse
 Fine Sand Medium Gravel Coarse Gravel Cobbles
 Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood %: 0 % Plant Fragments?
 Shells? Substrump?
 Color: USDA Texture:

Notes
 Limestone? Sand/gravel bed?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

FD

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Client: ARCORNIC
 Site Name: Elliott Ditch
 Project Name: ARC SANDS
 Task #: 122-367
 Log Date: 6/14/16

Location ID: ED-0029-S101 Interval: 0.7 ft to 1.7 ft

Horizon: 1 Gap: ft

Color: 10YR 4/2
 2nd Soil Color:

Texture: silty clay loam MH
 USDA Texture:
 USCS Texture:

Structure:
 Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other
 Grade: Weak Moderate Strong

Lab Data: Duplicates? Grab? Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 2
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: GDS
 Data Entry By: Same as above

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics: Very Fine Fine Medium Coarse Very Coarse
 Fine-gravel Medium-gravel Coarse-gravel Cobble
 Root? Few Common Many
 Rock? <15% 15-35% 35-60% 60-80% >80%

Moist? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pile Charcoal
 Wood %: 0 %
 Shrink? Plant Fragments?
 Sublyers? <0.05 0.05-0.1 0.1-0.2 0.2-0.5 >0.5
 Color:
 USDA Texture:

Notes: Lachrym? Saturated? Log?
 7M?

Internal Remarks: Redox feature

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Field Duplicate

Page 1 of 1

Soil Log Version 1.2, 1/20/18

Client: ARCORUS Location ID: ED-00-29-S001 Interval: 1.7 m to 2.7 m

Site Name: Elliott Ditch Horizon: 1 Gap:

Project Name: ADL Sample Log Soil Color: 5YR3/1 2nd Soil Color:

Task #: 122-367-0001 Color:

Log Date: 6/14/18

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Silty loam

USGS Texture: ML

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massan's Other:

Grade: Weak Moderate Strong

Other Characteristics

Roots? Few Common Many

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Probes: <15% 15-35% 35-60% 60-90% >90%

Field Personnel: Logged By: ADS Data Entry By: Same as above

Wood? Wood? Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: %

Sheets? Paper Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color:

USDA Texture:

Notes

7/8? Laminar? Sand/gravel bed?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00029-SL01 Interval: 2.7 ft to 3.7 ft

Client: Prozac Site Name: Elliott Ditch Project Name: ADD - Sewage Task #: 172-367-2009 Log Date: 6/14/16

Horizon: 1 Gap:

Soil Color: 5Y2.5/1 2nd Soil Color:

Texture: Clay Structure: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

USDA Texture: Very Fine Fine Medium Coarse Very Coarse

USCS Texture: CH

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: GDS Data Entry By: Same as above

Other Characteristics: Root? Few Common Many Wood? Wood Black Wood Burned Wood Sphered Wood Chips Wood Pulp Charcoal Wood %: 0 % Shell? Shell Fragments? Color:

Rock? <15% 15-30% 35-50% 50-75% 75-90% S&P? Petrochemical Sulfur Other Slough Moderate Strong

Notes: Lacustrine? Sand/gravel bed? TMP USDA Texture:

Sample Remarks:

Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil Sediment Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367-0006
 Field Location ID: ED-00.31-SLO1
 Core Type: Geo Probe Boring
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: GDS
 Cored Date: 6/14/18
 Described By: GDS
 Described Date: 6/14/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.0 - 3.8		95%
0.0 - 1.0		
1.0 - 2.0		
2.0 - 2.8		
2.8 - 3.8		

Reviewed By _____

Date _____

Page 1 of 1

Soil Log

Version 1.2, 12/01/16

Client: ARCADIS
 Site Name: Elliott Ditch
 Project Name: Redwood Sampling
 Task #: 172-767
 Log Date: 6/14/16

Location ID: ED-00-31-SL01 Interval: 0.0 ft to 1.0 ft

Horizon: 1 Gap:

Soil Color: 10YR 3/3 2m Soil Color:

Texture

USDA Texture: Sandy clay loam

USCS Texture: CH

Structure

Type	Grade
<input checked="" type="checkbox"/> Granular	<input type="checkbox"/> Weak
<input type="checkbox"/> Subangular Blocky	<input type="checkbox"/> Moderate
<input type="checkbox"/> Angular Blocky	<input type="checkbox"/> Strong
<input type="checkbox"/> Single Grain	
<input type="checkbox"/> Masses	
<input type="checkbox"/> Other	

Other Characteristics

<input type="checkbox"/> Very Fine	<input type="checkbox"/> Wood?	<input type="checkbox"/> Wood %	<input type="checkbox"/> Plant Fragments?	<input type="checkbox"/> Color
<input type="checkbox"/> Fine	<input type="checkbox"/> Black Wood	<input type="checkbox"/> Black Wood	<input type="checkbox"/> Plant Fragments?	<input type="checkbox"/> USDA Texture
<input type="checkbox"/> Medium	<input type="checkbox"/> Bark Wood	<input type="checkbox"/> Bark Wood	<input type="checkbox"/> Plant Fragments?	<input type="checkbox"/> USDA Texture
<input type="checkbox"/> Coarse	<input type="checkbox"/> Sawdust	<input type="checkbox"/> Sawdust	<input type="checkbox"/> Plant Fragments?	<input type="checkbox"/> USDA Texture
<input type="checkbox"/> Very Coarse	<input type="checkbox"/> Wood Chips	<input type="checkbox"/> Wood Chips	<input type="checkbox"/> Plant Fragments?	<input type="checkbox"/> USDA Texture
	<input type="checkbox"/> Wood Pulp	<input type="checkbox"/> Wood Pulp	<input type="checkbox"/> Plant Fragments?	<input type="checkbox"/> USDA Texture
	<input type="checkbox"/> Charcoal	<input type="checkbox"/> Charcoal	<input type="checkbox"/> Plant Fragments?	<input type="checkbox"/> USDA Texture

Plasticity

<input type="checkbox"/> Non-plastic	<input type="checkbox"/> Shrinkage (%)
<input type="checkbox"/> Slightly Plastic	<input type="checkbox"/> Shrinkage (%)
<input type="checkbox"/> Moderately Plastic	<input type="checkbox"/> Shrinkage (%)
<input checked="" type="checkbox"/> Very Plastic	<input type="checkbox"/> Shrinkage (%)

Lab Data

Duplicate?
 Grab?
 Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Field Personnel

Logged By: LOS
 Data Entry By: Same as above

Internal Remarks

Sample Remarks:

Notes: Limestone? Sand grains bent?

Other Characteristics

<input type="checkbox"/> Rocks?	<input type="checkbox"/> Petrochemical?	<input type="checkbox"/> Sulf.	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> Few	<input type="checkbox"/> Slight	<input type="checkbox"/> Moderate	<input type="checkbox"/> Strong
<input checked="" type="checkbox"/> Common	<input type="checkbox"/> Slight	<input type="checkbox"/> Moderate	<input type="checkbox"/> Strong
<input type="checkbox"/> Many	<input type="checkbox"/> Slight	<input type="checkbox"/> Moderate	<input type="checkbox"/> Strong

Rocks: <15%
 14-35%
 35-60%
 60-90%
 >90%

Other: Petrochemical? Sulf. Other

Supplies? ≤ 0.5 ft
 0.5-1 ft
 1-2 ft
 2-5 ft
 > 5 ft

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log
Version 1.2, 1/20/16

Location ID: ED-0031-5L01 Interval: 1.0 ft to 2.0 ft

Client: ARCORE Site Name: ELLIOTT DITCH Project Name: ADDITIONAL SAMPLING Task #: 177-367 Log Date: 6/14/18

Horizon: 1 Gap:

Soil Color: 10YR 4/4 2nd Soil Color:

Texture: Sandy Clay loam Structure: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

USDA Texture: ML USCS Texture:

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 2 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: GDJ Data Entry By: Some as above

Other Characteristics: Roots? Few Common Many Very Fine Fine Medium Coarse Very Coarse Blue Gravel Fine Gravel Medium Gravel Coarse Gravel Cobbles Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Stable? Plant Fragments? Substrates? < 0.05 R 0.05-0.1 R 0.1-0.2 R 0.2-0.3 R > 0.3 R Color: USDA Texture:

Color: Petrochemical Slight Moderate Strong Sulfur Other:

Notes: Laciniform? Sand/gravel bed?

Sample Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/29/16

Location ID: ED-00.31-SL01 Interval: 2.0 ft to 2.8 ft
 Client: Arcowk Site Name: Elliott Ditch
 Project Name: Abandoned Sandpits Task #: 172-367
 Log Date: 6/14/12

Horizon: 1 Gap: ft
 Soil Color: 10YR 5/3 and Soil Color:

Lab Data

Duplicate?
 Grab?
 Composite?

Sediment
 Soil
 Air
 Water

of Containers: 1

Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: Sandy Clay loam

USCS Texture: MH

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Structure

Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other

Weak
 Moderate
 Strong

Other Characteristics

Very Fine
 Fine
 Medium
 Coarse
 Very Coarse

Fine Gravel
 Medium Gravel
 Coarse Gravel
 Cobbles

<15%
 15-35%
 35-60%
 60-90%
 >90%

Slight
 Moderate
 Strong

Petrochemical
 Sulfu.
 Other

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal.

Moisture % 0 % Plant Fragments?

Silters? Silters?

Silters? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Lactose? Semi-gravel bed?

Notes:

Internal Remarks:

Field Personnel: GOS

Logged By: GOS Data Entry By: Same as above

Sample Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 10/19/11

Client: ARCADIS
 Site Name: Elliott Ditch
 Project Name: 172 Additional Sample
 Task #: 172-367
 Log Date: 6/14/18

Location ID: ED-00-31-SL-01
 Interval: 2.8 m to 3.8 m
 Horizon: 1
 Gap: m

Soil Color: 10YR 4/2
 2nd Soil Color:

Texture

USDA Texture: silty clay

USCS Texture: CH

Plasticity

Non-plastic	<input type="checkbox"/>
Slightly Plastic	<input type="checkbox"/>
Moderately Plastic	<input type="checkbox"/>
Very Plastic	<input type="checkbox"/>

Structure

Type

Granular	<input type="checkbox"/>
Subangular Blocky	<input type="checkbox"/>
Angular Blocky	<input type="checkbox"/>
Single Grain	<input type="checkbox"/>
Massive	<input type="checkbox"/>
Other	<input type="checkbox"/>

Grade

Weak	<input type="checkbox"/>
Moderate	<input type="checkbox"/>
Strong	<input type="checkbox"/>

Lab Data

Duplicate?

Grab?

Composite?

Matrix

Sediment	<input type="checkbox"/>
Soil	<input checked="" type="checkbox"/>
Air	<input type="checkbox"/>
Water	<input type="checkbox"/>

of Containers: 1

Priority

Urgent (1)	<input type="checkbox"/>
Standard (2)	<input checked="" type="checkbox"/>
As Able (3)	<input type="checkbox"/>
As Needed (4)	<input type="checkbox"/>

Field Personnel

Logged By: GDS

Data Entry By: Same as above

Other Characteristics

Roots?

Few	<input checked="" type="checkbox"/>
Common	<input type="checkbox"/>
Many	<input type="checkbox"/>

Woody?

Wood	<input type="checkbox"/>
Black Wood	<input type="checkbox"/>
Burnt Wood	<input type="checkbox"/>
Sawdust	<input type="checkbox"/>
Wood Chips	<input type="checkbox"/>
Wood Pulp	<input type="checkbox"/>
Charcoal	<input type="checkbox"/>

Stumps? Plant Fragments?

Wood % %

Shells?

Gravel

Fine Gravel	<input checked="" type="checkbox"/>
Medium Gravel	<input type="checkbox"/>
Coarse Gravel	<input type="checkbox"/>
Cobbles	<input type="checkbox"/>

Woody?

Very Fine	<input type="checkbox"/>
Fine	<input type="checkbox"/>
Medium	<input type="checkbox"/>
Coarse	<input type="checkbox"/>
Very Coarse	<input type="checkbox"/>

Color

Slight	<input type="checkbox"/>
Moderate	<input type="checkbox"/>
Strong	<input type="checkbox"/>

Petrochemicals

Slight	<input type="checkbox"/>
Subtle	<input type="checkbox"/>
Other	<input type="checkbox"/>

Supplies?

0-0.5 ft	<input type="checkbox"/>
0.5-1 ft	<input type="checkbox"/>
1-2 ft	<input type="checkbox"/>
2-5 ft	<input type="checkbox"/>
>5 ft	<input type="checkbox"/>

USDA Texture

Notes

Leucostoma? Sandgrain bed?

Sample Remarks

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

S-1 Sediment Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367.0006
 Field Location ID: ED-00.33-SL01
 Core Type:
 Field Remarks:
 Northing (ft):
 Easting (ft):

Cored By: GDS
 Cored Date: 6/14/18
 Described By: GDS
 Described Date: 6/14/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.0 - 4.0		100 %
0.0 - 0.7		
0.7 - 1.6		
1.6 - 2.3		
2.3 - 3.1		
3.1 - 4.0		

Reviewed By _____ Date _____

Page ____ of ____

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00.33-SL01 Interval: 0.0 ft to 0.7 ft

Client: Arcevac Site Name: Elliott Ditch

Project Name: Additional Sampling Task #: 172-362 east

Log Date: 6/14/16

Horizon: 1 Gap: ft

Soil Color: 10YR 3/5 2nd Soil Color: N/A

Texture

USDA Texture: Silty clay loam

USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Other Characteristics

Rocks? Few Common Many

Ranker? <15% 15-35% 35-60% 60-90% >90%

Color? Petrological Sulfur Other

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Notes: Luster? Sandstone? Sandstone bed?

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: GDS

Date Entry By: Same as above


Internal Remarks

Sample Remarks

USDA Texture

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

ED-00.33-SL01



Soil Log Version 1.2/20/16

Page 1 of 1

Location ID: ED-00033-SL01

Interval: 0.7 m to 1.6 m

Client: Arcenic

Site Name: Elliott Ditch

Project Name: Additional Sample

Task #: 172-367

Log Date: _____

Horizon: 1

Gap:

Lab Data

Duplicate?

Grab?

Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: Sandy Clay

USCS Texture: CH

Type: granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other

Structure: Weak
 Moderate
 Strong

Color

Soil Color: 10YR 4/4

2nd Soil Color: _____

Other Characteristics

Roots? None
 Common
 Many

Rocks? <15%
 15-35%
 35-60%
 60-90%
 >90%

Plasticity: Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wool? Wool % 0 %

Shells? Shell Fragments?

Staleness? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color: _____

USDA Texture: _____

Field Personnel

Logged By: GD

Data Entry By: Same as above


Notes

TRP? Lacustrine? Same as gravel bed?

Sample Remarks

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.



Soil Log
Version 1.2, 1/20/16

Page of

Client: _____

Location ID: ED-00.33-SL01 Interval: 1.6 ft to 2.8 ft

Site Name: _____

Project Name: _____

Task #: _____

Log Date: _____

Horizon: 1 Gap: ft

Soil Color: 10YR 4/4

2nd Soil Color:

Color:

Lab Data

Duplicates?

Grab?

Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: Sandy Clayey

USCS Texture: CH

Notes: logged

Structure

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other

Grade: Weak
 Moderate
 Strong

Field Personnel

Logged By: LDJ

Data Entry By: Same as above

Internal Remarks

Sample Remarks:

Internal Remarks:

Other Characteristics

Rocks? New
 Common
 Many

Rock? <15%
 15-35%
 35-60%
 60-75%
 >80%

Odor? Petrochemical
 Sulfur
 Other

Plasticity: Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Wood? Wood
 Black Wood
 Burnt Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood %:

Shells? Plant Fragments?

Sublayers?

Color:

USDA Texture:

Notes: Laminar? Sandpapered bed?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Client: Arconic
 Site Name: Elliott Ditch
 Project Name: Additional Sampling
 Task #: 172-367
 Log Date: 6/14/16

Location ID: ED-00-83-SLO
 Interval: 3.1 ft to 4.8 ft

Horizon: 1 Gap:

Soil Color: 10YR 3/1 Color:

2nd Soil Color:

Lab Data

Duplicate?
 Grab?
 Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture

USDA Texture: Silty clay

USCS Texture: CH

Structure

Type:

<input checked="" type="checkbox"/>	Granular
<input type="checkbox"/>	Subangular blocky
<input type="checkbox"/>	Angular blocky
<input type="checkbox"/>	Single Grain
<input type="checkbox"/>	Massive
<input type="checkbox"/>	Other

Grade:

<input type="checkbox"/>	Weak
<input type="checkbox"/>	Moderate
<input type="checkbox"/>	Strong

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-80% >80%

Other? Petrological Slightly
 Sulfur Moderate
 Other Strong

Wood? Wood Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Substrata? <0.05 ft Color
 0.05 - 0.1 ft
 0.1 - 0.2 ft USDA Texture
 0.2 - 0.5 ft
 >0.5 ft

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log Version 1.2, 1/20/16

Client: Arctic

Site Name: Elliott Ditch

Project Name: Additional Sampling

Task #: _____

Log Date: _____

Location ID: ED-0033-SLO1

Interval: 2.3 ft to 3.1 ft

Horizon: 1

Gap:

Soil Color: 7.5YR 8/1

2nd Soil Color: 7.5YR 4/2

Texture

USDA Texture: Silty clay loam

USCS Texture: ML-GI micls

Structure

Type: _____

Grade: _____

Lab Data

Duplicate?

Gleb?

Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 2

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Plasticity

Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Field Personnel

Logged By: GDJ

Data Entry By: Same as above

Other Characteristics

Roots? New
 Common
 Many

Roots? <15%
 15-35%
 35-60%
 60-90%
 >90%

Odor? Petrochemical
 Sulfur
 Other

Wood?

Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Shrubs? Plant Fragments?

Sublayers?

Color: _____

USDA Texture: _____

Notes

Lacustrine? Sandy/gravel bed?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil Sediment Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367.0006
 Field Location ID: ED-00.36-SLO1
 Core Type: ~~Free Probe~~ boring as Auger
 Field Remarks:
 Northing (ft):
 Easting (ft):

Cored By: GDS
 Cored Date: 6/14/18
 Described By: GDS
 Described Date: 6/14/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'	0-1				
4	0-1				
	0-1				
	0-1				

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.0 - 0.1		100
0.0 - 0.4 as		
0.0 - 0.5		
1.0 - 1.8 as		
0.5 - 1.0		
1.0 - 0.8		
2.0 - 2.5		
2.5 - 3.0		
3.0 - 3.5		
3.5 - 4.0		

Reviewed By _____ Date _____

Page 1 of 1

Soil Log

Version 1.2, 1/2016

Client: ARCADIS Location ID: ED-06.36-SL01 Interval: 0.0' to 0.4'

Site Name: Elliott Ditch Horizon: 1 Gap:

Project Name: Archived Sampling Soil Color: 10YR 6/2 2nd Soil Color: 10YR 8/6

Task #: 172-367 Log Date: 6/14/18 Time: 1200 Date/Time: 6/14/18 1050

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Sandy Clay w/ sand

USCS Texture: CH

Other Characteristics:

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Other Characteristics

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color:

USDA Texture:

Notes

Thin? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: ADS

Data Entry By: Same as above

Sample Remarks

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Client: ARCADIC
 Site Name: Elliott Ditch
 Project Name: Additional Sampling
 Task #: 172-367
 Log Date: 6/14/16 1050

Location ID: ED-00.36-Soil
 Interval: 0.0' to 0.5'
 Horizon: 1 2.5 yr ω +
 Gap:

Soil Color: 2.5 YR 3/2
 2nd Soil Color:

Lab Data
 Duplicate?
 Grab?
 Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 2
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture
 USDA Texture: Silt loam
 USCS Texture: ML

Structure
 Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other
 Grade: Weak Moderate Strong

Other Characteristics
 Roots? Few Common Many
 Rocks? <15% 15-35% 35-60% 60-90% >90%
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood %: 0 %
 Shells? Plant Fragments?
 Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
 Color: USDA Texture:

Plasticity
 Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Field Personnel
 Logged By: LOS
 Data Entry By: Same as above

Notes
 Tip? Lacustrine? Sand/gravel bed?

Internal Remarks
 Sample Remarks:
 Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/11

Location ID: ED-00.36-SLO1 Interval: 0.5 ft to 1.0 ft

Client: ARCENIC Site Name: Elliott Ditch Project Name: Archaeological Sampling Task #: 172-367 Log Date: 6/14/16 1050

Horizon: 1 Gap: ft

Soil Color: 2.5YR 3/2 2nd Soil Color:

Texture
USDA Texture: Silt loam
USCS Texture: ML

Structure
Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other
Grade: Weak Moderate Strong

Lab Data
Duplicate? Grab? Composite?
Matrix: Sediment Soil Air Water
of Containers: 1
Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity
 Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel
Logged By: GDS
Data Entry By: Same as above

Other Characteristics
Rocks? Few Common Many
Rocks? <15% 15-35% 35-60% 60-90% >90%
Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
Wood %: %
Shells? Plant Fragments?
Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
Color:
USDA Texture:

Notes
Lacustrine? Sand/gravel bod?
Tip?

Internal Remarks
Sample Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log Version 1.2, 1/20/11

Client: Arizona Location ID: ED-00.36-SL01 Interval: 1.0 ft to 1.5 ft

Site Name: Elliott Ditch Horizon: 1 Gap:

Project Name: ADD. Insect Sampling Soil Color: 2.5 YR 9/2 2nd Soil Color:

Task #: 172-362 Color:

Log Date: 6/14/18 10:30

Lab Data

Duplicate? Grab? Composite?

Matrix: MS / MSD Sediment Soil Air Water

of Containers: 3

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Silty Clay Loam

USCS Texture: MH

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Structure: Weakly Moderate Strong

Other Characteristics

Rocks? Few Common Many

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Sheets? Plant Fragments?

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color:

USDA Texture:

Notes

TSP? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: GDS

Data Entry By: Same as above

Sample Remarks

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16 2.5' - 2.5'

Location ID: ED-00.36-SLO1 Interval: 10 to 20 ft

Client: Acrylic Project Name: Elliott Ditch Task #: 172-362 Log Date: 6/14/17 1050

Site Name: Additional Sample

Horizon: 1 Gap: ft

Soil Color: 10YR 3/2 2nd Soil Color: 10YR 4/4

Color:

Texture: Silty clay Structure:

USDA Texture: USCS Texture: MH

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: GD Data Entry By: Same as above

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics: Roots? Few Common Many Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood % % Shells? Plant Fragments? Sublayers? ≤0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft Color: USDA Texture:

Rocks? <15% 15-35% 35-60% 60-90% ≥90% Petrochemical Sulfur Other Tip? Lacustrine? Sand/gravel bed? Notes: Redox features

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/2016

Location ID: ED-00.36-S1-01 Interval: 2.5 ft. to 3.0 ft.

Client: ARCADIS Project Name: Elliott Ditch Task #: 172-362 Log Date: 1/14/16

Site Name: Elliott Ditch Project Name: Additional Sampling

Horizon: 1 Gap:

Soil Color: 10YR 3/2 2nd Soil Color:

Texture: silty clay Structure: CH

USDA Texture: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

USCS Texture: CH

Lab Data: Duplicate? Grab? Composite?

Matrix: Sediment Soil A/C Water

of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: GDI Data Entry By: Same as above

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other

Other Characteristics: Very Fine Fine Medium Coarse Very Coarse

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 % Shells? Plant Fragments?

Sublayers? <0.05 ft. 0.05-0.1 ft. 0.1-0.2 ft. 0.2-0.5 ft. >0.5 ft.

Notes: Lacustrine? Sand/gravel bed?

TRP?

Sample Remarks:

Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log Version 1.2, 1/20/16

Location ID: ED-00.36-S101 Interval: 3.0 ft as of 6/14/18

Client: ARC MAC Site Name: Elliott Ditch Project Name: Archaeological Sampling Task #: 172-367 Log Date: 6/14/18 - 1850 1105

Horizon: 1 Gap: ft

Soil Color: 10YR 5/3 2nd Soil Color: 10YR 4/4

Texture
USDA Texture: Silty Clay w/ gravel
USCS Texture: CH

Structure
Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other
Grade: Weak Moderate Strong

Lab Data
Duplicate? Grab? Composite?
Matrix: Sediment Soil Air Water
of Containers: 1
Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity
 Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel
Logged By: CS
Data Entry By: Same as above

Other Characteristics
Rocks? Few Common Many
Rocks? <15% 15-35% 35-60% 60-90% >90%
Odor? Petrochemical Sulfur Other
Till? Lacustrine? Sand/gravel bed?
Notes:

Wood
Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
Wood %: %
Shrubs? Plant Fragments?
Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
Color:
USDA Texture:

Sample Remarks
Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Client: ARCANE Location ID: ED-00-36-SLO1 Interval: 0.05-0.15 ft AS 6/14/18

Site Name: Elliott Ditch Horizon: 1 Gap: ft

Project Name: Archaeological Sampling Soil Color: 10YR 4/4 2nd Soil Color: 10YR 5/3

Task #: 172-367 Texture: Silty clay w/ gravel Structure:

Log Date: 6/14/18

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers:

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: GS

Data Entry By: Same as above

USDA Texture

Granular Subangular Blocky Angular Blocky Single Grain Massive Other

USGS Texture

Plasticity

<input type="checkbox"/>	Non-plastic
<input type="checkbox"/>	Slightly Plastic
<input type="checkbox"/>	Moderately Plastic
<input type="checkbox"/>	Very Plastic

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 16-35% 36-60% 60-80% >80%

Odor? Petrochemical Sulfur Other

Wood? Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 % Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Notes: Lacustrine? Sand/gravel bed? Tilt? USDA Texture

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil Sediment Data Sheet

Project Name: Elkhoff Ditch Additional Sampling
 Project Number: 172-367-0006
 Field Location ID: ED-00-41-SL01
 Core Type: Auger / SS-travel GeoProbe being
 Field Remarks:
 Northing (ft):
 Easting (ft):

Cored By: GDS
 Cored Date: 6/14/18
 Described By: GDS
 Described Date: 6/14/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0:0 - 4:0		100%

- 0.0 - 0.5
- 0.5 - 1.0
- 1.0 - 1.5
- 1.5 - 2.0
- 2.0 - 2.5
- 2.5 - 3.0
- 3.0 - 3.7
- 3.7 - 4.0

Reviewed By _____ Date _____

Page _____ of _____

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00.4-SL1 Interval: 0.0' ft. to 0.5' ft.

Client: ARCADIAN Project Name: ELLIOTT DITCH

Site Name: Additional SAP Task #: 172-367-0009

Log Date: 06/14/16

Horizon: 1 Gap: ft.

Soil Color: 10YR 2/2 2nd Soil Color:

Texture: Silt loam Structure:

USDA Texture: USCS Texture: ML

Plasticity: AF es & fuf

Lab Data: Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers:

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: AS

Logged By: AS Date Entry By: Some as above

Other Characteristics:

Rods? Few Common Many

Roots? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 25 %

Shells? Plant Fragments?

Sublayers? <0.05 ft. 0.05-0.1 ft. 0.1-0.2 ft. 0.2-0.5 ft. >0.5 ft.

Notes: T1? Lacustrine? Sand/gravel bed?

Internal Remarks:

Sample Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page ____ of ____

TETRA TECH **Soil Log** Version 1.2, 1/20/18

Client: ARCANE Location ID: ED-00-41-5L01 Interval: 0.5' to 1.0'

Site Name: Elliott Ditch Horizon: 1 Gap:

Project Name: Add. Inland Sampling Soil Color: 10YR 4/2 2nd Soil Color: 2.5Y 10/2

Task #: 17-562 0009 Log Date: 06/19/16

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: CS Data Entry By: Same as above

Texture

USDA Texture: loess-like clay loam USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-80% >80%

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Notes

Till? Lacustrine? Sand/gravel bed?

Sample Remarks

Redox soil

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log Version 1.2, 1/20/16

Location ID: ED-00.41-SL01 Interval: 1.0 ft to 1.5 ft

Client: Arcenic Site Name: Elliott Ditch Project Name: Additional Sampling Task #: 172-367-009 Log Date: 06/24/18

Horizon: 1 ft Gap: ft

Soil Color: 10YR 4/3 2nd Soil Color: 10YR 4/6

Texture: Sandy clay USCS Texture: SC

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics: Rocks? Few Common Many Very Fine Fine Medium Coarse Very Coarse Fine Gravel Medium Gravel Coarse Gravel Cobbles Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood % 0 % Plant Fragments? Shells? Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft Color: USDA Texture:

Field Personnel: Logged By: CS Date Entry By: Same as above

Notes: Lacustrine? Sand/gravel bed? Tuff?

Sample Remarks: Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00-H1-SLO1 Interval: 1.5' in to 2.0' in

Client: Arzenic Horizon: 1 Cap:

Site Name: Elliott Ditch Soil Color: 10YR 4/2 2nd Soil Color: 5YR 4/6

Project Name: Additional Sampling Texture: Sandy Clay Structure:

Task #: 172-367 cover USDA Texture: USCS Texture: OH Type: Granular Subangular Blocky Angular Blocky Single-Grain Massive Other

Log Date: 06/16/16 # of Containers: 2 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water

Field Personnel: CS Logged By: CS Data Entry By: Same as above

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics: Very Fine Fine Medium Coarse Very Coarse Fine Gravel Medium Gravel Coarse Gravel Cobbles Wood? Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood % 0 % Plant Fragments? Shells? Sublayers? ≤0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft Color USDA Texture

Color? Petrochemical Sulfur Other Notes: TIP? Lacustrine? Sand/gravel bed?

Sample Remarks: Reboxomorphic Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

TETRA TECH **ED-00.41-9 Soil Log** Version 1.2, 1/20/16

Location ID: ED-00.41-9-43 Interval: 2.0' to 2.5'

Client: Arcenic Project Name: Elliott Ditch Site Name: 136-362 Task #: 136-362 Log Date: 06/14/18

Horizon: 1 Gap:

Soil Color: 10YR 4/2 2nd Soil Color: 5YR 4/6

Texture: Sandy clay USDA Texture: CH USCS Texture: CH

Structure: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Lab Data: Duplicates? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel: Logged By: GS Data Entry By: Same as above

Rocks? Few Common Many Other Characteristics: Very Fine Fine Medium Coarse Very Coarse Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood %: 9 % Shell? Plant Fragments?

Rocks? <15% 15-35% 35-60% 60-80% >80%

Odor? Petrochemical Sulfur Other

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Notes: Tip? Lactinime? Sand/gravel bed?

Sample Remarks: Redox Internal Remarks:

USDA Texture:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Client: Arcenic
 Site Name: Elliott Ditch
 Project Name: Anthropogenic Sampling
 Task #: 172-767-0069
 Log Date: Nov 16

Location ID: ED-00-A1-801
 Interval: 2.5' to 3.0'
 Horizon: 1
 Gap:

Soil Color: 10YR 4/2
 2nd Soil Color:

Lab Data
 Duplicate?
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 A/J
 Water
 # of Containers: 1
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture
 USDA Texture: Silty clay
 USCS Texture: CH

Structure
 Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other
 Grade: Weak
 Moderate
 Strong

Other Characteristics
 Roots? Few
 Common
 Many
 Rocks? <15%
 15-35%
 35-60%
 60-90%
 >90%
 Wood? Wood
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal
 Wood %: %
 Sheels? Plant Fragments?
 Sublayers? <0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft
 Color:
 USDA Texture:

Plasticity
 Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Field Personnel
 Logged By: GS
 Data Entry By: Same as above

Notes
 TIP? Lacustrine? Sand/gravel bed?
 Petrochemical Sulfur Other
 Slight Moderate Strong

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/11

Location ID: ED-0041-SL01 Interval: 5.0 ft to 3.7 ft

Client: Abronic Project Name: Elliott Ditch Task #: 176-367 Log Date: 06/14/18

Horizon: 1 Gap: n

Soil Color: 10YR 3/2 2nd Soil Color:

Texture: clay silty clay Structure:

USDA Texture: USCS Texture: CH

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: AS Data Entry By: Same as above

Other Characteristics: Rocks? Few Common Many Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood % 0 %

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Notes: Lacustrine? Sand/gravel bed? Tilt? Plant Fragments? Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft Color: USDA Texture:

Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00-44-SLO1 Interval: 3.7 ft to 4.0 ft

Client: Arcenic Project Name: Elliott Ditch Task #: 172-367 Log Date: 6/14/16

Site Name: AD Summary

Horizon: 1 Gap: ft

Soil Color: 10YR 3/2 2nd Soil Color:

Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Silty Clay

USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Field Personnel

Logged By: GS

Data Entry By: Same as above

Notes

TIR? Lacustrine? Sand/gravel bed?

Sample Remarks

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil
Sediment Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367.0006
 Field Location ID: ED-00.44-SL01
 Core Type:
 Field Remarks:
 Northing (ft):
 Easting (ft):

Cored By: GDS
 Cored Date: 6/14/18
 Described By: GDS
 Described Date: 6/14/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
4'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.0 - 4.0		100 %

- 0.0' - 0.5'
- 0.5 - 1.0'
- 1.0 - 1.5'
- 1.5 - 1.8'
- 1.8 - 2.0'
- 2.0 - 2.5'
- 2.5 - 3.0'
- 3.0 - 3.5'
- 3.5 - 4.0'

Reviewed By _____ Date _____

Page 1 of 1

TETRA TECH

Client: ARCADIC

Site Name: Elliott Ditch

Project Name: Additional Sampling

Task #: 172-362

Log Date: 6/14/18

Soil Log Version 1.2, 1/20/16

Location ID: ED-00.44-SLO Interval: 0.0' n to 0.5'

Location ID: ED-0026-507

Horizon: 1 Gap: ft

Soil Color: 5/2 Color: 3/2

2nd Soil Color: 3/2

Texture: Gravel

USDA Texture: GW

USCS Texture: GW

Structure:

Grade: Strong

Lab Data

Duplicate?

Grab?

Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Other Characteristics

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood % 0 %

Shells? Flint Fragments?

Sublayers? <0.05 ft Color
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft USDA Texture

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Odor? Petrochemical Sulfur Other

Notes: TIP? Lacustrine? Sand/gravel bed?

Field Personnel

Logged By: AS

Date Entry By: Same as above

Sample Remarks:

Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log
Version 1.2.12/11/11

Client: **Arconic**
 Location ID: **ED-00.44-SL01**
 Interval: **0.5** ft to **1.0** ft

Site Name: **Elliott Ditch**
 Project Name: **172-367 Additional Sampling**
 Task #: **0809**
 Log Date: **6/14/16** 11:27

Horizon: **1**
 Gap: **0** ft

Soil Color: **10YR 6/2**
 2nd Soil Color: **10YR 5/2**
 Color: **10YR 6/2**

Lab Data
 Duplicate?
 Grab?
 Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: **1**
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture
 USDA Texture: **Grnd**
 USCS Texture: **GM**

Structure
 Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other
 Grade: Weak Moderate Strong

Other Characteristics
 Rocks? Few Common Many
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood %: **0** %
 Shells? Plant Fragments?
 Sublayers?
 Color:
 USDA Texture:

Plasticity
 Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Field Personnel
 Logged By: **GDS**
 Data Entry By: Same as above

Notes
 Lacustrine? Sand/gravel bed?
 TBP?

Internal Remarks
 Sample Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/2011

Client: ARCANE Location ID: ED-00.44-SLO Interval: 1.0 ft to 1.5 ft

Site Name: Elliott Ditch Horizon: 1 ft Gap: ft

Project Name: Additional Samples Soil Color: 10YR 6/2 2nd Soil Color: 10YR 5/2

Task #: 122-367 Color:

Log Date: 6/14/16 10Z7

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Gravel

USCS Texture: GM

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Structure:

Grade: Weak Moderate Strong

Other Characteristics

Roots? Very Fine Fine Medium Coarse Very Coarse

Rocks? Few Common Many

Odor? Petrochemical Sulfur Other

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.3 ft >0.5 ft

Color:

USDA Texture:

Field Personnel

Logged By: GDS

Data Entry By: Same as above

Notes

TIIP? Lacustrine? Sand/gravel bed?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00.44-SL01 Interval: 1.5 ft to 1.8 ft

Client: Arconic Project Name: Elliott Ditch Task #: 172-367 Log Date: 6/14/13 - 11/14

Site Name: Elliott Ditch

Project Name: Additional Sampling

Task #: 172-367

Log Date: 6/14/13 - 11/14

Horizon: 1 Gap:

Soil Color: 10YR 3/2 2nd Soil Color: 10YR 5/4

Texture: Silty clay Structure:

USDA Texture: USCS Texture: CH

Plasticity:

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 2 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: Data Entry By: Same as above

Other Characteristics: Rocks? Few Common Many Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood %: 0 % Plant Fragments? Shells? Sublayers? ≤0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.6 ft >0.5 ft Color: USDA Texture:

Notes: Tip? Lacustrine? Sand/gravel bed?

Sample Remarks: Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00.44 - SLO1 Interval: 1.8 ft to 2.0 ft

Client: ARCADIS Project Name: Elliott Ditch Task #: 197-367 Log Date: 6/14/16 - 1140

Site Name: Elliott Ditch Project Name: Additional Sampling Task #: 197-367 Log Date: 6/14/16 - 1140

Horizon: 1 Gap: n

Soil Color: 10YR 5/4 2nd Soil Color: 10YR 5/1

Texture: Sandy loam clay USCS Texture: CH

Structure:

USDA Texture: Plasticity:

USCS Texture: Plasticity:

Lab Data: Duplicates? Grab? Composite? Matrix: Sediment Soil Air Water % of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: AS Data Entry By: Same as above

Other Characteristics: Rocks? Few Common Many Wood? Wood Black Wood Blurred Wood Sawdust Wood Chips Wood Pulp Charcoal Wood %: 0 %

Stalks? Plant Fragments? Sublayers? ≤0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Odor? Petrochemical Sulfur Other Notes:

Tip? Lacustrine? Sand/gravel bed? USDA Texture:

Sample Remarks: Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00-44-Sk1 Interval: 2.0' to 2.5' ft

Client: Arcenic Site Name: Elliott Ditch Project Name: Additional Sampling Task #: 172-367 Log Date: 6/14/18-1143

Horizon: 1 Gap:

Soil Color: 10YR 5/4 2nd Soil Color: 10YR 3/1

Texture: Sandy loam clay Structure:

USDA Texture: USCS Texture: CH

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: GDS Data Entry By: Same as above

Other Characteristics: Roots? Very Fine Fine Medium Coarse Very Coarse Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood % %

Rocks? Few Common Many <15% 15-35% 35-60% 60-80% >80%

Odor? Petrochemical Sulfur Other Shell? Plant Fragments? Sublayers? ≤0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Notes: Tip? Lacustrine? Sand/gravel bed? USDA Texture:

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/2/16

Location ID: ED-00.44-SLO1 Interval: 2.5 ft to 3.0 ft

Client: ARRAZZ Site Name: Elliott Ditch

Project Name: Additional Sampling

Task #: 172-376 0009

Log Date: 6/14/16 - 1148

Horizon: 1 Gap:

Soil Color: 10YR 4/4 2nd Soil Color: 10YR 3/1

Color

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil A/E Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: GDS

Data Entry By: Same as above

Texture

USDA Texture: Silty clay w/ sand

USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-80% >80%

Odor? Petrochemical Sulfur Other

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Notes

Tip? Lacustrine? Sand/gravel bed?

USDA Texture: Color:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/11

Location ID: ED-0044-50.1 Interval: 3.0 ft to 3.5 ft

Client: ARCADIC Site Name: Elliott Ditch Project Name: Additional Sampling Task #: 172-367 Log Date: 6/14/18 151

Horizon: 1 Gap:

Soil Color: 10YR 4/1 2nd Soil Color: 10YR 5/3

Texture: Silty Clay w/ sand Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

USDA Texture: CH USCS Texture: CH

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: ADS Date Entry By: Same as above

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics: Rocks? Few Common Many <15% 15-35% 35-60% 60-80% >80%

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood %: % Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Notes: Tip? Lacustrine? Sand/gravel bed?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page _____ of _____

Soil Log

Version 1.2, 1/20/11

Location ID: ED-OC.44-SLO1 Interval: 3.5 ft to 4.0 ft

Client: ARONIC Project Name: ELLIOTT DITCH Task #: 172-367 Log Date: 6/14/16 1161

Site Name: ELLIOTT DITCH

Project Name: ADDITIONAL SAMPLER

Task #: 172-367

Log Date: 6/14/16 1161

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: _____

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: GDS

Data Entry By: Same as above

Soil Color

Soil Color: 10YR 5/2 2nd Soil Color: 10YR 3/2

Horizon: 1 Cap: _____

Texture

USDA Texture: Silty Clay

USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other _____

Grade: Weak Moderate Strong

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-80% >80%

Odor? Petrochemical Sulfur Other _____

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Sheets? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: _____

USDA Texture: _____

Notes

TriP? Lacustrine? Sand/gravel bed?

Sample Remarks

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil Sediment Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367.0006
 Field Location ID: ED-00.51-SLOG
 Core Type: Auger / hand trowel
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: GDS
 Cored Date: 6/14/18
 Described By: GDS
 Described Date: 6/14/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
2.0					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
1.0 - 2.0		100%

1.0 - 1.5
1.5 - 2.0

Reviewed By _____ Date _____

EQ

Soil Log Version 1.2, 1/22/16 Page 1 of 1

Client: Arcade
 Site Name: Elliott Ditch
 Project Name: Additional Sampling
 Task #: 172-367
 Log Date: 6/16/18

Location ID: ED-00.51-SL06 Interval: 1.0 # to 1.5
 Horizon: 1 Gap:

Soil Color: 2.5YR 3/1 2nd Soil Color:

Texture: Silty clay loam

USDA Texture: USCS Texture:

Lab Data: Duplicate? Grab? Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 2

Phony: Urgent (1) Standard (2) As Able (3) As Needed (4)

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Field Personnel: Logged By: ADS Data Entry By: Same as above

Other Characteristics: Rocks? Few Common Many
 Rocker? <15% 15-35% 35-50% 50-80% >80%
 Odder? Petrochemical Sulfur Other
 Wood? Very Fine Fine Medium Coarse Very Coarse
 Wood? Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Shavings? Plant Materials?
 Soil Layers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Structure: Very Angular Subangular Blocky Angular Blocky Single Grain Massive Other:
 Grade: Weak Moderate Strong

Notes: TWP? Lacustrine? Semi-gravel bed?

Sample Remarks: Site has signs of human impact (Camp)

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-00.51-SLO6 Interval: 1.5 # to 20.0

Client: ARCENIC Site Name: Elliott Ditch Project Name: Arch Sampling Task #: 172-367 Log Date: 6/16/16

Horizon: 1 Gap:

Soil Color: 10YR 5/3 and Soil Color: 10YR 3/2

Texture: Silty clay loam Structure: MA

USDA Texture: Silty clay loam USCS Texture: MH

Plasticity: Non-plastic, Slightly Plastic, Moderately Plastic, Very Plastic

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment, Soil, Air, Water

of Containers: 2 US 1/2 lb 6/16/16

Field Personnel: Logged By: GDS Data Entry By: Same as above

Other Characteristics: Fines? Very Fine, Fine, Medium, Coarse, Very Coarse. Flocks? <15%, 15-35%, 35-60%, 60-90%, >90%. Rhyolite? Andesite? Granite? Gneiss? Schist? Slate? Other?

Wood? Wood, Black Wood, Burned Wood, Sawdust, Wood Chips, Wood Pulp, Charcoal. Wood %: 0 %

Shells? Plant Fragments? Substrata? #0.075 # 0.05-0.1R, #0.075 # 0.1-0.2R, #0.075 # 0.2-0.5R, #0.075 # 0.5-#

Notes: Lithology?, Sanding/retail bag?, TYP, JSDA Texture

Internal Remarks: Location in
the anthropomorphic
impacted area
(Camp)

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil Sediment Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367.0006
 Field Location ID: ED-00.82-SL03
 Core Type: Auger / hand trowel
 Field Remarks:
 Northing: (ft)
 Easting: (ft)

Cored By: GDS
 Cored Date: 6/14/18
 Described By: GDS
 Described Date: 6/14/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
2.0					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
1.5 - 2.0		100%

Reviewed By _____

Date _____

Page _____ of _____

Soil Log Version 1.2, 1/20/16

Client: ATLANTEC Location ID: ED-08.82-SL03 Interval: 1.5 ft to 2.0 ft

Site Name: Elliott Ditch Horizon: 1 Gap:

Project Name: Additional Sampling Soil Color: 10YR 3/2 2nd Soil Color: N/A

Task #: 172-367 Log Date: 6/15/18

Lab Data

Duplicate? Grab? Composite?

Mixing: Sediment Soil Air Water

of Containers: 1 Priority: Urgent (1) Standard (2) As Ate (3) As Needed (4)

Texture

USDA Texture: Very Fine Sandy loam

USCS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Other Characteristics

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-80% >80%

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Other Characteristics: Wood Blasted Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Substrives? <4.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Field Personnel

Logged By: GD

Data Entry By: Same as above

Internal Remarks

Sample Remarks: Last recoverable depth. Revamp @ 2.0'

Notes: Lactating? Sand/gravel bed?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil Sediment Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367.0006
 Field Location ID: ED-01.14-SLO1
 Core Type: Auger (hand) trowel
 Field Remarks:
 Northing (ft):
 Easting (ft):

Cored By: GOS
 Cored Date: 6/15/18
 Described By: GOS
 Described Date: 6/15/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
2.0'					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.5 - 2.0		100%
0.5' - 1.0'		
1.0' - 1.5'		
1.5' - 2.0'		

Reviewed By _____ Date _____

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Client: Arizona
 Site Name: Elliott Ditch
 Project Name: Additional Sampling
 Task #: 102-367
 Log Date: 6/15/16

Location ID: ED-01-14-SLO1 Interval: 0.5 ft to 1.0 ft

Horizon: 1 Gap: ft

Soil Color: 10YR 3/4 ft
 grad Soil Color: ft

Texture
 USDA Texture: Silty clay loam
 USCS Texture: MH

Structure
 Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other
 Grade: Weak Moderate Strong

Lab Data
 Duplicate? Grab? Composite?
 Matrix: Sediment Soil Air Water
 # of Containers: 1
 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel
 Logged By:
 Data Entry By: Same as above

Other Characteristics
 Rocks? Few Common Many
 Rook? <15% 15-35% 35-60% 60-80% >80%
 Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal
 Wood %: 45 %
 Shell? Plant Fragments?
 Substrains? <4.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft
 Color: USDA Texture:

Notes
 RIP? Lacustrine? Sand/gravel bed?

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil Log Version 1.2, 1/20/16 Page ____ of ____

Client: Arctic Location ID: ED-01.14-SLO1 Interval: 1-0 ft to 1.5 ft

Site Name: Elliott Ditch Horizon: 1 Gap:

Project Name: Additional Sampling Soil Color: 10YR 3/3 2nd Soil Color: N/A

Task #: 12-3167 Texture: Silty clay loam Structure:

Log Date: 6/15/18 USDA Texture: JSCS Texture: MH Grade:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: ADS Date Entry By: Same as above

Plasticity

<input checked="" type="checkbox"/>	Few
<input type="checkbox"/>	Common
<input type="checkbox"/>	Many

Other Char Characteristics

Rocks? Very Fine Fine Medium Coarse Very Coarse

Rocks? <15% 15-35% 35-60% 60-90% >90%

Color? Petrochemical Sulfur Other

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Sheet? Plastic Fragments?

Sublayers? Substratum

Color: USCA Texture:

Notes

TIP? Lacustrine? Sandily over bed?

Sample Remarks

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2 (1/2010)

Location ID: ED-01.14-SL01-15-20 Interval: 1.5 ft to 2.0 ft

Client: Arconic Project Name: Ballast Ditch Task #: 172-367 Log Date: 6/15/16

Site Name: Ballast Ditch Project Name: Ballast Ditch Task #: 172-367 Log Date: 6/15/16

Horizon: 1 Gap: 2.1 ft

Soil Color: 2/3/10/6 2nd Soil Color:

Texture: Silty Clay loam Structure:

USDA Texture: USCS Texture: MH

Plasticity:

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 2

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: GS Data Entry By: Same as above

Other Characteristics: Rocks? Few Common Many Petrochemical: Slight Moderate Strong Odor: Notes:

USDA Texture:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

S₁₂₁ Sediment Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367-0009
 Field Location ID: ED-01.14-8604
 Core Type: Auger - 1 hand trowel
 Field Remarks:
 Northing (N):
 Easting (E):

Cored By: GDS
 Cored Date: 6/15/18
 Described By: GDS
 Described Date: 6/15/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
2.0					
1.8					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.0 - 1.8		90

0.0 - 0.5
 0.5 - 1.0
 1.0 - 1.5
~~1.5 - 2.0~~
 1.5 - 1.8

Reviewed By _____ Date _____

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Client: Arctic
 Site Name: Elliott Ditch
 Project Name: Additional Sampling
 Task #: 172-367-0007
 Log Date: 6/15/19

Location ID: ED-0114-SL04
 Interval: 0.0 ft to 0.5 ft
 Horizon: 1
 Gap:

Soil Color: 2.5YR 7/2
 2nd Soil Color:

Texture

USDA Texture: Fine Sandy loam

USCS Texture: SMCL

Plasticity: Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic

Structure

Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other

Grade: Weak
 Moderate
 Strong

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment
 Soil
 Air
 Water

of Containers: 1

Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Field Personnel

Logged By: CB

Date Entry By: Same as above

Other Characteristics

Roots? Few
 Common
 Many

Rocks? <15%
 15-35%
 35-60%
 60-80%
 >80%

Other? Petrochemical
 Sulfur
 Other

Wood? Whisp
 Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal

Spalls? Plain/Fragile/Asp

Sublayers? 0-0.05 ft
 0.05-0.1 ft
 0.1-0.2 ft
 0.2-0.5 ft
 >0.5 ft

Color:

JSDA Texture:

Notes

70%? Leaching? Same/Gravel Box?

Internal Remarks

large stones common

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Client: ARCONE
 Site Name: Elliott Ditch
 Project Name: Additional Samples
 Task #: 172-367
 Log Date: 6/15/16

Location ID: ED-0114-SLO4
 Interval: 0.5 ft to 1.0 ft
 Horizon: 1
 Gap:

Soil Color: 10YR 3/6
 2nd Soil Color:
 Color:

Lab Data
 Duplicate?
 Grab?
 Composite?
 Matrix: Sediment
 Soil
 Air
 Water
 # of Containers: 1
 Priority: Urgent (1)
 Standard (2)
 As Able (3)
 As Needed (4)

Texture
 USDA Texture: Fine Sandy loam
 USCS Texture: 4/ organics

Structure
 Type: Granular
 Subangular Blocky
 Angular Blocky
 Single Grain
 Massive
 Other:
 Grade: Weak
 Moderate
 Strong

Other Characteristics
 Roots? Few
 Common
 Many
 Rooters? <15%
 15-35%
 35-60%
 60-90%
 >90%
 Odor? Petrochemical
 Sulfur
 Other
 Plasticity: Non-plastic
 Slightly Plastic
 Moderately Plastic
 Very Plastic
 Field Personnel: Logged By: GDJ
 Data Entry By: Same as above

 Internal Remarks: organic material

Notes
 Luster? Sand/gravel bed?
 Shear? Fragments?
 Sublayers? Color:
 USDA Texture:
 Wood? Black Wood
 Burned Wood
 Sawdust
 Wood Chips
 Wood Pulp
 Charcoal
 Wood %: 25 %
 Shell? Shell fragments?
 Sublayers? Color:
 USDA Texture:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log Version 1.2, 1/20/16

Client: Arconic Location ID: ED-01.14-04 Interval: 1.0 ft to 1.5 ft

Site Name: Elliott Ditch Horizon: 1 Gap:

Project Name: Addressed Sampling Soil Color: 10YR 9/2 2nd Soil Color: 10YR 5/1

Task #: 172-267 Texture: Fine Sandy loam Structure: Granular Subangular Blocky Angular Blocky Single Grain Massed Other

Log Date: 6/15/16 USDA Texture: ML USCS Texture: ML Grade: Weak Moderate Strong

Lab Data: Duplicate? Grab? Composite? Matrix: Sediment Soil Air Water # of Containers: 2 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: AS Data Entry By: Same as above

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Rocks? Few Common Many <15% 15-35% 35-60% 60-90% >90%

Other Characteristics: Very Fine Fine Medium Coarse Very Coarse Fine Gravel Medium Gravel Coarse Gravel Cobbles Wood? Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood % 0 % Plant Fragments?

Odor? Petrochemical Slight Moderate Strong Sulfur Other

Shells? Plant Fragments? Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Notes: Lacustrine? Sandy/gravel bed?

TMP Internal Remarks:

Sample Remarks:

USDA Texture:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page _____ of _____

Soil Log

Version 1.2, 1/2018

Client: ARMAAC
 Site Name: Elliott Ditch
 Project Name: 172-367 Additional Sample
 Task #: 172-767
 Log Date: 6/15/16

Location ID: ED-01-14-SL04 Interval: 1.5' n to 1.8' n
 Date: 05/06/16
 Horizon: 1 Gap: _____ n

Soil Color: 10YR 4/2 2nd Soil Color: 10YR 5/4
 Color: _____

Texture

USDA Texture: Sandy Clay Loam

USCS Texture: CH

Type: Greenish Subangular Blocky Angular Blocky Single Grain Massive Other: _____

Grade: Weak Moderate Strong

Structure

Other Characteristics

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Woody? Wood % %

Shrubs? Plant Fragments?

Substrates? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: _____ USDA Texture: _____

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: _____

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: GOS

Data Entry By: Same as above

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-80% >80%

Color? Petrochemical Sulfid Other

Notes

Thin? Laminar? Sharp/Gravel/Bed?

Sample Remarks: 05-061516
1.5'-2.0' in H₂O tank

Internal Remarks: _____

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

~~Soil~~ Sediment Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367-0006
 Field Location ID: ED-01.14-SLOS
 Core Type: Auger / trowel
 Field Remarks:
 Northing (ft):
 Easting (ft):

Cored By: GDS
 Cored Date: 6/15/16
 Described By: CS
 Described Date: 6/15/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
2.0					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.0 - 2.0		100
0.0 - 0.5		
0.5 - 1.0		
1.0 - 1.5		
1.5 - 2.0		

Reviewed By _____ Date _____

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-01.14 - SLOS Interval: 0.0 ft to 0.5 ft

Client: Arce@v.vic Site Name: Elliott Ditch Project Name: ADD Sampling Task #: 172767-0009 Log Date: 6/15/18

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: GDJ Data Entry By: Same as above

Soil Color

Soil Color: 10YR 4/4 ? No. Soil Color:

Horizon: 1 Gap:

Texture

USDA Texture: Silty clay loam

USCS Texture: CL

Structure

Type	Grade
<input type="checkbox"/> Granular	<input type="checkbox"/> Weak
<input type="checkbox"/> Subangular Blocky	<input type="checkbox"/> Moderate
<input type="checkbox"/> Angular Blocky	<input type="checkbox"/> Strong
<input type="checkbox"/> Single Grain	
<input checked="" type="checkbox"/> Massive	
<input type="checkbox"/> Other	

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-90% >90%

Color? Petro-mechanical Sulfur Other

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Wood Black Wood Burned/Worn Sawdust Wood Chips Wood Rub Charcoal

Wood %: 0

Shells? Plant Fragments?

Sublayers?

Color:

USDA Texture:

Notes

Till? Lacustrine? Sand/gravel band?

Sample Remarks

organic

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-01.14-SLOS Interval: 0.5 ft to 1.0 ft

Client: ARCONIC

Site Name: Elliott Ditch

Project Name: ADD. Sampling

Task #: 172-367

Log Date: 6/15/18

Horizon: 10YR 4/4 NA
US Colors

Gap: ft

Color: 10YR 4/4

2nd Soil Color:

Soft Color: 10YR 4/4

Texture: s. Hy clay

USDA Texture:

USCS Texture: CH

Structure:

Grade:

Weak Moderate Strong

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Other Characteristics:

Rough? Very Fine Fine Medium Coarse Very Coarse

Rocks? <15% 15-35% 35-60% 60-90% >90%

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Wood Bark Wood Burned Wood Salvage Wood Chips Wood Pulp Charcoal

Wood %:

Shells? Plant Fragments?

Succumers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color:

USDA Texture:

Petrochemicals: Slight Moderate Strong

Sulfur Other

Notes: Lactams? Sand/gravel bed?

7/18?

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: GDS

Data Entry By: Same as above

Sample Remarks:

Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log

Version 1.2, 1/20/16

Location ID: ED-01.4-SLOS Interval: 1.0 # to 15

Client: ARCENIC

Site Name: Elliott Ditch

Project Name: ARCENIC

Task #: 172-342

Log Date: 6/15/16

Horizon: 1 Gap:

Soft Color: 10YR 5/4 2nd Soft Color:

Color:

Texture

USDA Texture: Silty clay loam

I/SOS Texture: MH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other:

Grade: Weak Moderate Strong

Other Characteristics

Rocks? Few Common Many

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Black Wood Bleached Wood Sawdust Wood Chips Wood Stubs Charcoal

Wood %: 0 %

Spalls? Plant Fragment?

Sublayers?

Color:

USDA Texture:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Afile (3) As Needed (4)

Field Personnel

Logged By: WDS

Data Entry By: Same as above

Internal Remarks

LACUS? Sand/Gravel?

Notes

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

TETRA TECH

Client: Arcane

Site Name: Elliott Ditch

Project Name: ADD. Sampling

Task #: 172-367-009

Log Date: 6/15/18

Version 1.2, 1/20/16

Interval: 1.5 ft to 2.0 ft

Page 1 of 1

Location ID: ED-014-SLOS

Horizon: 1 Gap: ft

Soil Color: 10YR 5/4 2nd Soil Color:

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Silty clay

USCS Texture: CH

Structure

Type: Granular Subangular Blocky Angular Blocky Single Grain Macromorphic Other

Grade: Weak Moderate Strong

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-80% >80%

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Wood Black Wood Rippled Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA texture:

Field Personnel

Logged By: GOS

Data Entry By: Same as above

Notes

Tip? Limestone? Sand/gravel bed?

Internal Remarks

Sample Remarks:

Internal Remarks:

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Soil ~~Sediment~~ Data Sheet

Project Name: Elliott Ditch Additional Sampling
 Project Number: 172-367.0006
 Field Location ID: ED-01.14-SLOG
 Core Type: Auger / trowel
 Field Remarks:
 Northing (N):
 Easting (E):

Cored By: GDS
 Cored Date: 6/15/18
 Described By: GDS
 Described Date: 6/15/18

Sample Depth	Layer	Priority	Physical Description	Sample Remarks	Internal Sample Remarks
1.5					

Core Interval (ft)	Measured Sediment in Core (ft)	% Recovery
0.0 - 1.5		100%

0.0 - 0.5
 0.5 - 1.0
 1.0 - 1.5

Reviewed By _____ Date _____

Page ____ of ____

Version 1.2, 1/20/16

TETRA TECH

Client: ARCADIS Location ID: ED-0114-06SE Interval: 0.0 ft to 0.5 ft

Site Name: Elliott Ditch Horizon: 1 Gap: 0.0-0.1 ft

Project Name: ED Addition Sampling Soil Color: 10YR 5/2 2nd Soil Color: 7.5YR

Task #: 172-367 Texture: Silty clay loam

Log Date: 6/13/18 USDA Texture: MH

Lab Data

Duplicates? Grib? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: Greg Schuch

Date Entry By: Same as above

Sample Remarks

Internal Remarks

Other Characteristics

Roots? Few Common Abundant

Rocks? <15% 15-35% 35-60% 60-90% >90%

Plasticity: Non-Plastic Slightly Plastic Moderately Plastic Very Plastic

Wood: Bark Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Plant Fragments? Shells? Soda? Gorker

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

USDA Texture:

Notes

Excavated? Sand/gravel bed?

Tip?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log Version 1.2, 1/20/16

Location ID: ED-01.14-02.06 Interval: 0.5' ft to 1.0 ft

Client: Arcenic Project Name: Elliott Ditch Task #: 172-367-0009 Log Date: 06/13/16

Horizon: 1 Color: 10YR 4/3 2nd Soil Color: 10YR 4/3

Soil Color: 10YR 4/3

Texture: Silty clay loam Structure: Weak

USDA Texture: Mt USCS Texture: Mt

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Lab Data: Duplicate? Grab? Composite? Matrix: Soil Air Water # of Containers: 1 Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel: Logged By: Greg Data Entry By: Same as above

Other Characteristics: Vety Fine Fine Medium Coarse Very Coarse Fine Gravel Medium Gravel Coarse Gravel Cobbles Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal Wood % 0 % Plant Fragments? Shells? Sublayers? 0-0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft Color: USDA Texture

Rocks? Few Common Many 15-35% 35-60% 60-80% >80% Odor? Petrochemical Sulfur Other Notes: Tip? Lacustrine? Sand/gravel bed?

Sample Remarks: Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log Version 1.2, 1/20/18

ED-01.14-8106
ED-00.1

Location ID: ED-01.14-8106 Interval: 1.0' to 1.5'

Client: ARCANE Horizon: 1

Site Name: Elliott Ditch Color: 10YR 3/1

Project Name: Additional Sampling 2nd Soil Color: 10YR 3/1

Task #: 172-367-007

Log Date: 06/21/18

Lab Data

Duplicate? Grab? Composite?

Matrix: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Texture

USDA Texture: Silty Clay loam

USCS Texture: MH

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Structure: Weakly Moderately Strong

Other Characteristics

Roots? Few Common Many

Rocks? <15% 15-35% 35-60% 60-80% >80%

Odor? Petrochemical Sulfur Other

Plasticity: Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Wood? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pulp Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? ≤0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color: USDA Texture:

Field Personnel

Logged By: Greg Schmitt

Data Entry By: Same as above

Internal Remarks

Notes: Lactin? Sand/gravel bed?

7/1?

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

Page 1 of 1

Soil Log Version 1.2 (2/16/2016)

Location ID: ED-01.14-SLO6-T Interval: 1.5' ft to 2.0' ft

Client: Arconic

Site Name: Elliott Ditch

Project Name: Additional Sampling

Task #: 172-067-0001

Log Date: 06/13/16

Horizon: 1 ft

Gap: ft

Soil Color: 10YR 3/2 2nd Soil Color: NA

Color

Texture: Silty Clay loam

USDA Texture:

USCS Texture: MH

Structure:

Type: Granular Subangular Blocky Angular Blocky Single Grain Massive Other

Grade: Weak Moderate Strong

Other Characteristics

Woods? Wood Black Wood Burned Wood Sawdust Wood Chips Wood Pub Charcoal

Wood %: 0 %

Shells? Plant Fragments?

Sublayers? <0.05 ft 0.05-0.1 ft 0.1-0.2 ft 0.2-0.5 ft >0.5 ft

Color:

USDA Texture:

Rocks? Few Common Many

Rocks? <15% 15-35% 35-60% 60-80% >80%

Odor? Petrochemical Sulfur Other

Notes

Thin? Lacustrine? Sand/gravel bed?

Plasticity

Non-plastic Slightly Plastic Moderately Plastic Very Plastic

Lab Data

Duplicate? Grab? Composite?

Main: Sediment Soil Air Water

of Containers: 1

Priority: Urgent (1) Standard (2) As Able (3) As Needed (4)

Field Personnel

Logged By: CS

Data Entry By: Same as above

Sample Remarks

Internal Remarks

Figure 3. Sample paper soil logging form. Paper forms will be used only if the electronic data logging system is not available.

APPENDIX V
LABORATORY ANALYTICAL REPORTS

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton

4101 Shuffel Street NW

North Canton, OH 44720

Tel: (330)497-9396

TestAmerica Job ID: 240-87591-1

Client Project/Site: Arconic, Inc. - Elliott Ditch

For:

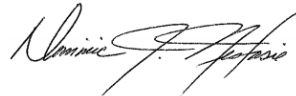
Civil & Environmental Consultants Inc

2704 Cherokee Farm Way

Suite 101

Knoxville, Tennessee 37920

Attn: Matt Bruck



Authorized for release by:

11/15/2017 2:36:59 PM

Dominic Nestasie, Manager of Project Management

(412)963-7058

dominic.nestasie@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

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

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Method Summary	9
Sample Summary	10
Detection Summary	13
Client Sample Results	28
Surrogate Summary	161
QC Sample Results	165
QC Association Summary	179
Lab Chronicle	190
Certification Summary	234
Chain of Custody	235

Definitions/Glossary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
X	Surrogate is outside control limits
F1	MS and/or MSD Recovery is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

Glossary

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

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Job ID: 240-87591-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-87591-1

Receipt:

The samples were received on 11/7/2017 at 5:00 PM; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 4 coolers at time of receipt were 0.4° C, 1.0° C, 1.4° C and 5.0° C.

PCB's:

The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: ED-00.82-SOL04-(0.13-0.5) (240-87591-48), ED-0060.SL01-(0-0.19') (240-87591-53), ED-00.47-SL04-(0-0.80') (240-87591-60), ED-00.47-SL03-(0-0.77') (240-87591-61), ED-00.47-SL03-(0-0.77')-FD (240-87591-62) and ED-00.47-SL01-(0-0.5') (240-87591-63).

The following sample was diluted due to abundance of target analytes: ED-00.51-SL03-(0-0.5') (240-87591-55). As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

The %RPD between the primary and confirmation column exceeded 40% for Aroclor 1248 for the following sample: ED-00.60-SL03-(0-0.89') (240-87591-51). Due to sample matrix, the lower value has been reported and qualified in accordance with the laboratory's SOP.

The %RPD between the primary and confirmation column exceeded 40% for 1254 for the following samples: ED-00.25-SL04-(0-0.5') (240-87591-73) and ED-00.25-SL04-(0.5-1.0') (240-87591-74). The lower value has been reported and qualified in accordance with the laboratory's SOP.

Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following samples contained an allowable number of surrogate compounds outside limits: ED-00.25-SL03-(0-0.5') (240-87591-77), ED-00.25-SL03-(0.5-1.0') (240-87591-78), ED-00.08-SL04-(0.67-0.86) (240-87591-88) and (MB 240-302635/19-A). These results have been reported and qualified.

The following samples were diluted due to the abundance of target analytes: ED-00.25-SL02-(0-0.5') (240-87591-79), ED-00.25-SL02-(0-0.5')-FD (240-87591-80), ED-00.25-SL02-(1.0-1.5') (240-87591-82), ED-00.08-SL03-(0-0.5') (240-87591-83), ED-00.08-SL03-(0.5-0.97') (240-87591-84), ED-00.08-SL03-(0.97-1.47') (240-87591-85), ED-00.08-SL03-(1.5-2.0') (240-87591-86), (240-87591-B-85-B MS) and (240-87591-B-85-C MSD)

The following samples were diluted to bring the concentration of target analytes within the calibration range: ED-00.25-SL02-(0-0.5') (240-87591-79), ED-00.25-SL02-(0-0.5')-FD (240-87591-80), ED-00.25-SL02-(1.0-1.5') (240-87591-82), ED-00.08-SL03-(0-0.5') (240-87591-83), ED-00.08-SL03-(0.5-0.97') (240-87591-84), ED-00.08-SL03-(0.97-1.47') (240-87591-85), ED-00.08-SL03-(1.5-2.0') (240-87591-86), (240-87591-B-85-B MS) and (240-87591-B-85-C MSD). Elevated reporting limits (RLs) are provided.

The following samples appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: ED-00.25-SL02-(0-0.5') (240-87591-79), ED-00.25-SL02-(0-0.5')-FD (240-87591-80), ED-00.25-SL02-(0.5-1.0') (240-87591-81), ED-00.25-SL02-(1.0-1.5') (240-87591-82), ED-00.08-SL03-(0-0.5') (240-87591-83), ED-00.08-SL03-(0.5-0.97') (240-87591-84), ED-00.08-SL03-(0.97-1.47') (240-87591-85) and ED-00.08-SL03-(1.5-2.0') (240-87591-86). The samples have been quantified and reported using the best overall Aroclor/standard pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with this result.

The matrix spike duplicate (MSD) recoveries for preparation batch 240-302635 and analytical batch 240-302905 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

The following samples appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: ED-00.82-SL01-(0-0.22') (240-87591-125) and ED-00.82-SL01-(0.22-0.5') (240-87591-126). The samples have been quantified and reported using the best overall Aroclor/standard

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Job ID: 240-87591-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with this result.

The Internal standard (ISTD) response for the following sample exceeded the control limit on Column CLP-2 0.53mm ID: (CCVIS 240-303214/28). As such, the sample results associated with this ISTD were reported from the other column, which met ISTD acceptance criteria.

The %RPD between the primary and confirmation column exceeded 40% for 1254 for the following samples: ED-00.60-SD02-(2.39-2.63') (240-87591-25), ED-00.72-SD03-(2.06-2.40') (240-87591-28) and ED-00.72-SD03-(2.40-3.50') (240-87591-29). The lower value has been reported and qualified in accordance with the laboratory's SOP.

The %RPD between the primary and confirmation column exceeded 40% for 1260 for the following sample: ED.01.03-SD02-(0-0.98) (240-87591-36). The lower value has been reported and qualified in accordance with the laboratory's SOP.

The Decachlorobiphenyl surrogate in the continuing calibration verification (CCV) failed criteria. The Aroclors in the CCVIS passed criteria and all the samples passed surrogate. After careful evaluation the data is reported.

ED-00.72-SD03-(3.84-4.05') (240-87591-31), ED-00.72-SD03-(4.05-4.30') (240-87591-32), ED-00.72-SD03-(2.40-3.50)-FD (240-87591-33), ED-00.82-SD02-(0.39-0.70') (240-87591-35) and ED-01.49-SD03-(0-0.70') (240-87591-46)

The following samples appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: ED-00.60-SD02-(0-1.76') (240-87591-22), ED-00.60-SD02-(1.76-2.22') (240-87591-23), ED-00.60-SD02-(2.22-2.39') (240-87591-24), ED-00.60-SD02-(2.39-2.63') (240-87591-25), ED-00.60-SD02-(2.63-3.30') (240-87591-26), ED-00.72-SD03-(0-2.06') (240-87591-27), ED-00.72-SD03-(2.06-2.40') (240-87591-28), ED-00.72-SD03-(2.40-3.50') (240-87591-29), ED-00.72-SD03-(3.50-3.84') (240-87591-30), ED-00.72-SD03-(3.84-4.05') (240-87591-31), ED-00.72-SD03-(4.05-4.30') (240-87591-32), ED-00.72-SD03-(2.40-3.50)-FD (240-87591-33), ED.01.03-SD02-(0-0.98) (240-87591-36), ED-01.03-SD02-(0.98-1.65') (240-87591-38), ED-01.03-SD02-(0.98-1.65')-FD (240-87591-39) and ED-01.03-SD02-(1.87-2.25') (240-87591-41). The samples have been quantified and reported using the best overall Aroclor/standard pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with this result.

The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: ED-00.60-SD02-(0-1.76') (240-87591-22), ED-00.60-SD02-(1.76-2.22') (240-87591-23), ED-00.60-SD02-(2.22-2.39') (240-87591-24), ED-00.60-SD02-(2.39-2.63') (240-87591-25), ED-00.60-SD02-(2.63-3.30') (240-87591-26), ED-00.72-SD03-(0-2.06') (240-87591-27), ED-00.72-SD03-(2.06-2.40') (240-87591-28), ED-00.72-SD03-(2.40-3.50') (240-87591-29), ED-00.72-SD03-(3.50-3.84') (240-87591-30), ED-00.72-SD03-(3.84-4.05') (240-87591-31), ED-00.72-SD03-(4.05-4.30') (240-87591-32), ED-00.72-SD03-(2.40-3.50)-FD (240-87591-33), ED-00.82-SD02-(0.39-0.70') (240-87591-35), ED.01.03-SD02-(0-0.98) (240-87591-36), ED-01.03-SD02-(0.98-1.65') (240-87591-38), ED-01.03-SD02-(0.98-1.65')-FD (240-87591-39), ED-01.03-SD02-(1.65-1.87') (240-87591-40), ED-01.03-SD02-(1.87-2.25') (240-87591-41) and ED-01.49-SD03-(0-0.70') (240-87591-46).

The following samples were diluted due to the abundance of target analytes: ED-00.60-SD02-(1.76-2.22') (240-87591-23), ED-00.60-SD02-(2.22-2.39') (240-87591-24), ED-00.60-SD02-(2.63-3.30') (240-87591-26), ED-00.72-SD03-(2.40-3.50') (240-87591-29), ED-00.72-SD03-(3.50-3.84') (240-87591-30), ED-00.72-SD03-(3.84-4.05') (240-87591-31), ED-00.72-SD03-(4.05-4.30') (240-87591-32), ED-00.72-SD03-(2.40-3.50)-FD (240-87591-33), ED-01.03-SD02-(0.98-1.65') (240-87591-38), ED-01.03-SD02-(0.98-1.65')-FD (240-87591-39), ED-01.03-SD02-(1.65-1.87') (240-87591-40) and ED-01.03-SD02-(1.87-2.25') (240-87591-41)

The following samples were diluted to bring the concentration of target analytes within the calibration range: ED-00.60-SD02-(1.76-2.22') (240-87591-23), ED-00.60-SD02-(2.22-2.39') (240-87591-24), ED-00.60-SD02-(2.63-3.30') (240-87591-26), ED-00.72-SD03-(2.40-3.50') (240-87591-29), ED-00.72-SD03-(3.50-3.84') (240-87591-30), ED-00.72-SD03-(3.84-4.05') (240-87591-31), ED-00.72-SD03-(4.05-4.30') (240-87591-32), ED-00.72-SD03-(2.40-3.50)-FD (240-87591-33), ED-01.03-SD02-(0.98-1.65') (240-87591-38), ED-01.03-SD02-(0.98-1.65')-FD (240-87591-39), ED-01.03-SD02-(1.65-1.87') (240-87591-40) and ED-01.03-SD02-(1.87-2.25') (240-87591-41). Elevated reporting limits (RLs) are provided.

The MS/MSD were reported at a different dilution than the parent sample. The MS/MSD was diluted to bring target analytes within range. ED-00.82-SD02-(0-0.39') (240-87591-34[MS]) and ED-00.82-SD02-(0-0.39') (240-87591-34[MSD])

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 240-303098 and analytical batch 240-303135 were

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Job ID: 240-87591-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

The %RPD between the primary and confirmation column exceeded 40% for 1248 for the following sample: ED-00.51-SD02-(0.68-1.65') (240-87591-20). The lower value has been reported and qualified in accordance with the laboratory's SOP.

The following samples appear to contain polychlorinated biphenyls (PCBs); however, the Aroclor patterns of the PCBs in the samples are altered and do not directly match the laboratory's individual Aroclor standards used for instrument calibration: ED-00.51-SD02-(1.65-1.75') (240-87591-21), ED-01.22-SD02-(0.17-0.29') (240-87591-44), ED-01.37-SD02-(0-0.9') (240-87591-45) and SOIL-SED DRUM (240-87591-131). These altered PCB patterns may be caused by weathering, other environmental processes, and/or contributions from the presence of multiple Aroclors resulting in overlapping PCB patterns. The samples have been quantified and reported using the best overall Aroclor/standard pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with the reported results.

The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: ED-00.51-SD02-(0.68-1.65') (240-87591-20), ED-00.51-SD02-(1.65-1.75') (240-87591-21), ED-00.82-SD02-(0-0.39') (240-87591-34), ED-00.82-SD02-(0-0.39') (240-87591-34[MS]), ED-00.82-SD02-(0-0.39') (240-87591-34[MSD]), ED-01.14-SD02-(0-1.05') (240-87591-42), ED-01.22-SD02-(0-0.17') (240-87591-43), ED-01.22-SD02-(0.17-0.29') (240-87591-44), ED-01.37-SD02-(0-0.9') (240-87591-45) and SOIL-SED DRUM (240-87591-131).

The Internal standard (ISTD) response for the following samples exceeded the control limit on Column CLP-1 0.53mm ID: ED-00.08-SD02-(0-0.45') (240-87591-1) and ED-00.08-SD02-(0.45-.75') (240-87591-2). As such, the sample results associated with this ISTD were reported from the other column, which met ISTD acceptance criteria.

The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: ED-00.08-SD02-(0.45-.75') (240-87591-2), ED-00.08-SD02-(0.75-1.4') (240-87591-3), ED-00.08-SD02-(0.75-1.4')-FD (240-87591-4), ED-00.08-SD02-(1.4-2.03') (240-87591-5), ED-00.25-SD01-(0.0-0.57') (240-87591-6), ED-00.25-SD01-(0.57-3.51') (240-87591-7), ED-00.25-SD01-(3.51-4.3') (240-87591-8), ED-00.25-SD01-(3.51-4.3')-DUP (240-87591-9), ED-00.39-SD02-(0-2.20') (240-87591-10), ED-00.39-SD02-(0-2.20') (240-87591-10[MS]), ED-00.39-SD02-(0-2.20') (240-87591-10[MSD]), ED-00.39-SD02-(2.20-2.41') (240-87591-11), ED-00.39-SD02-(2.41-3.54') (240-87591-12), ED-00.39-SD02-(3.54-4.30') (240-87591-13), ED-00.47-SD02-(0-0.33') (240-87591-14), ED-00.47-SD02-(33-1.46') (240-87591-15), ED-00.47-SD02-(1.46-1.96') (240-87591-16), ED-00.47-SD02-(1.96-3.13') (240-87591-17), ED-00.51-SD02-(0-0.36') (240-87591-18) and ED-00.51-SD02-(0.36-0.68') (240-87591-19).

The following samples were diluted due to the abundance of target analytes: ED-00.08-SD02-(1.4-2.03') (240-87591-5) and ED-00.25-SD01-(3.51-4.3')-DUP (240-87591-9)

The following samples appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: ED-00.08-SD02-(0-0.45') (240-87591-1), ED-00.08-SD02-(0.75-1.4') (240-87591-3), ED-00.08-SD02-(0.75-1.4')-FD (240-87591-4), ED-00.25-SD01-(0.0-0.57') (240-87591-6), ED-00.25-SD01-(3.51-4.3') (240-87591-8), ED-00.25-SD01-(3.51-4.3')-DUP (240-87591-9), ED-00.39-SD02-(2.20-2.41') (240-87591-11), ED-00.39-SD02-(2.41-3.54') (240-87591-12), ED-00.39-SD02-(3.54-4.30') (240-87591-13), ED-00.47-SD02-(0-0.33') (240-87591-14), ED-00.47-SD02-(33-1.46') (240-87591-15), ED-00.47-SD02-(1.46-1.96') (240-87591-16), ED-00.47-SD02-(1.96-3.13') (240-87591-17), ED-00.51-SD02-(0-0.36') (240-87591-18) and ED-00.51-SD02-(0.36-0.68') (240-87591-19). The samples have been quantified and reported using the best overall Aroclor/standard pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with this result.

Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: WATER DRUM (240-87591-130). These results have been reported and qualified.

The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: ED-0060.SL01-(0.19-1.0') (240-87591-54), ED-00.39-SL03-(0.98-1.17') (240-87591-69), ED-00.08-SL01-(0-0.5') (240-87591-91), ED-00.08-SL01-(0-0.5') (240-87591-91[MS]), ED-00.08-SL01-(0-0.5') (240-87591-91[MSD]), ED-00.08-SL01-(0.5-1.0') (240-87591-92), ED-00.08-SL01-(1.0-1.86') (240-87591-93), ED-01.37-SL03-(0-0.27') (240-87591-95) and ED-00.72-SL02-(0-0.5) (240-87591-103).

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Job ID: 240-87591-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

The following samples appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: ED-0060.SL01-(0.19-1.0') (240-87591-54), ED-00.39-SL03-(0.98-1.17') (240-87591-69), ED-00.39-SL01-(0.5-1.0') (240-87591-72), ED-00.08-SL01-(0-0.5') (240-87591-91), ED-01.37-SL03-(0-0.27') (240-87591-95), ED-01.37-SL03-(0.27-0.92') (240-87591-96), ED-01.37-SL03-(0.92-1.07') (240-87591-97), ED-01.37-SL03-(1.07-2.0') (240-87591-98) and ED-00.72-SL02-(0-0.5) (240-87591-103). The samples have been quantified and reported using the best overall Aroclor/standard pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with this result.

The %RPD between the primary and confirmation column exceeded 40% for 1260 for the following sample: ED-00.08-SL01-(0-0.5') (240-87591-91). The lower value has been reported and qualified in accordance with the laboratory's SOP.

The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: ED-00.72-SL02-(0.5-1.0') (240-87591-104), ED-01.14-SL03-(0-0.5') (240-87591-108), ED-01.49-SL02-(0.5-1.0') (240-87591-112), ED-01.03-SL03-(0-0.21') (240-87591-115) and ED-00.82-SL03-(0.5-1.0') (240-87591-118).

The following samples appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: ED-00.72-SL02-(0.5-1.0') (240-87591-104), ED-01.24-SL01-(0.87-1.0') (240-87591-107), ED-01.49-SL02-(0-0.5') (240-87591-111), ED-01.49-SL02-(0.5-1.0') (240-87591-112), ED-01.03-SL03-(0-0.21') (240-87591-115), ED-00.82-SL03-(0-0.5') (240-87591-117), ED-00.82-SL03-(0.5-1.0') (240-87591-118), ED-00.72-SL04-(0-0.11') (240-87591-119) and ED-00.72-SL04-(0.11-0.47') (240-87591-120). The samples have been quantified and reported using the best overall Aroclor/standard pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with this result.

Two surrogates are used for this analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following sample contained an allowable number of surrogate compounds outside limits: ED-00.82-SL03-(0.5-1.0') (240-87591-118). These results have been reported and qualified.

The following samples appear to contain polychlorinated biphenyls (PCBs); however, the Aroclor patterns of the PCBs in the samples are altered and do not directly match the laboratory's individual Aroclor standards used for instrument calibration: ED-00.39-SL03-(0-0.69')-FD (240-87591-67), ED-00.39-SL03-(0.69-0.98') (240-87591-68), ED-00.39-SL03-(1.17-1.5') (240-87591-70) and ED-00.39-SL01-(0-0.5') (240-87591-71). These altered PCB patterns may be caused by weathering, other environmental processes, and/or contributions from the presence of multiple Aroclors resulting in overlapping PCB patterns. The samples have been quantified and reported using the best overall Aroclor/standard pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with the reported results.

The %RPD between the primary and confirmation column exceeded 40% for the following samples: ED-00.39-SL03-(0-0.69')-FD (240-87591-67) and ED-00.39-SL01-(0-0.5') (240-87591-71). The lower value has been reported and qualified in accordance with the laboratory's SOP.

The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: ED-00.39-SL03-(0-0.69')-FD (240-87591-67).

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 240-303095 and analytical batch 240-303440 were outside control limits. Sample target interference are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: ED-00.60-SD02-(0-1.76') (240-87591-22[MS]), ED-00.60-SD02-(0-1.76') (240-87591-22[MSD]) and ED.01.03-SD02-(0-0.98)-FD (240-87591-37).

The following samples appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Job ID: 240-87591-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

match any of the laboratory's Aroclor standards used for instrument calibration: ED.01.03-SD02-(0-0.98)-FD (240-87591-37). The samples have been quantified and reported using the best overall Aroclor/standard pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with this result.

The following samples were diluted due to the abundance of target analytes: ED-00.60-SD02-(0-1.76') (240-87591-22[MS]), ED-00.60-SD02-(0-1.76') (240-87591-22[MSD]) and ED.01.03-SD02-(0-0.98)-FD (240-87591-37)

The following samples were diluted to bring the concentration of target analytes within the calibration range: ED-00.60-SD02-(0-1.76') (240-87591-22[MS]), ED-00.60-SD02-(0-1.76') (240-87591-22[MSD]) and ED.01.03-SD02-(0-0.98)-FD (240-87591-37). Elevated reporting limits (RLs) are provided.

The Internal standard (ISTD) response for the following samples exceeded the control limit on Column CLP-2 0.53mm ID: (CCV 240-303311/5) and (CCV 240-303311/3). As such, the sample results associated with this ISTD were reported from the other column, which met ISTD acceptance criteria.

The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: ED-01.14-SL01-(0-0.5') (240-87591-129), ED-01.14-SL01-(0-0.5') (240-87591-129[MS]) and ED-01.14-SL01-(0-0.5') (240-87591-129[MSD]).

The following sample appears to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: ED-01.14-SL01-(0-0.5') (240-87591-129). The samples have been quantified and reported using the best overall Aroclor/standard pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with this result.

The following samples were diluted due to the abundance of target analytes: ED-00.72-SL02-(1.0-1.5') (240-87591-105) and ED-01.24-SL01-(0-0.87') (240-87591-106)

The following sample were diluted to bring the concentration of target analytes within the calibration range: ED-00.72-SL02-(1.0-1.5') (240-87591-105) and ED-01.24-SL01-(0-0.87') (240-87591-106). Elevated reporting limits (RLs) are provided.

The following samples appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: ED-00.72-SL02-(1.0-1.5') (240-87591-105) and ED-01.24-SL01-(0-0.87') (240-87591-106). The samples have been quantified and reported using the best overall Aroclor/standard pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with this result.

The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: ED-00.72-SL02-(1.0-1.5') (240-87591-105).

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

General Chemistry:

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

Organic Prep :

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

Method Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN

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 CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Sample Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-87591-1	ED-00.08-SD02-(0-0.45')	Sediment	10/30/17 11:20	11/07/17 17:00
240-87591-2	ED-00.08-SD02-(0.45-.75')	Sediment	10/30/17 11:25	11/07/17 17:00
240-87591-3	ED-00.08-SD02-(0.75-1.4')	Sediment	10/30/17 11:30	11/07/17 17:00
240-87591-4	ED-00.08-SD02-(0.75-1.4')-FD	Sediment	10/30/17 11:30	11/07/17 17:00
240-87591-5	ED-00.08-SD02-(1.4-2.03')	Sediment	10/30/17 11:40	11/07/17 17:00
240-87591-6	ED-00.25-SD01-(0.0-57')	Sediment	11/01/17 11:46	11/07/17 17:00
240-87591-7	ED-00.25-SD01-(0.57-3.51')	Sediment	11/01/17 12:01	11/07/17 17:00
240-87591-8	ED-00.25-SD01-(3.51-4.3')	Sediment	11/01/17 12:19	11/07/17 17:00
240-87591-9	ED-00.25-SD01-(3.51-4.3')-DUP	Sediment	11/01/17 12:19	11/07/17 17:00
240-87591-10	ED-00.39-SD02-(0-2.20')	Sediment	11/01/17 13:35	11/07/17 17:00
240-87591-11	ED-00.39-SD02-(2.20-2.41')	Sediment	11/01/17 13:40	11/07/17 17:00
240-87591-12	ED-00.39-SD02-(2.41-3.54')	Sediment	11/01/17 13:45	11/07/17 17:00
240-87591-13	ED-00.39-SD02-(3.54-4.30')	Sediment	11/01/17 14:00	11/07/17 17:00
240-87591-14	ED-00.47-SD02-(0-0.33')	Sediment	10/30/17 14:10	11/07/17 17:00
240-87591-15	ED-00.47-SD02-(33-1.46')	Sediment	10/30/17 14:15	11/07/17 17:00
240-87591-16	ED-00.47-SD02-(1.46-1.96')	Sediment	10/30/17 14:20	11/07/17 17:00
240-87591-17	ED-00.47-SD02-(1.96-3.13')	Sediment	10/30/17 14:25	11/07/17 17:00
240-87591-18	ED-00.51-SD02-(0-0.36')	Sediment	11/01/17 14:40	11/07/17 17:00
240-87591-19	ED-00.51-SD02-(0.36-0.68')	Sediment	11/01/17 14:45	11/07/17 17:00
240-87591-20	ED-00.51-SD02-(0.68-1.65')	Sediment	11/01/17 14:50	11/07/17 17:00
240-87591-21	ED-00.51-SD02-(1.65-1.75')	Sediment	11/01/17 14:55	11/07/17 17:00
240-87591-22	ED-00.60-SD02-(0-1.76')	Sediment	10/31/17 11:40	11/07/17 17:00
240-87591-23	ED-00.60-SD02-(1.76-2.22')	Sediment	10/31/17 11:41	11/07/17 17:00
240-87591-24	ED-00.60-SD02-(2.22-2.39')	Sediment	10/31/17 11:42	11/07/17 17:00
240-87591-25	ED-00.60-SD02-(2.39-2.63')	Sediment	10/31/17 11:43	11/07/17 17:00
240-87591-26	ED-00.60-SD02-(2.63-3.30')	Sediment	10/31/17 11:44	11/07/17 17:00
240-87591-27	ED-00.72-SD03-(0-2.06')	Sediment	10/31/17 13:15	11/07/17 17:00
240-87591-28	ED-00.72-SD03-(2.06-2.40')	Sediment	10/31/17 13:25	11/07/17 17:00
240-87591-29	ED-00.72-SD03-(2.40-3.50')	Sediment	10/31/17 13:30	11/07/17 17:00
240-87591-30	ED-00.72-SD03-(3.50-3.84')	Sediment	10/31/17 13:35	11/07/17 17:00
240-87591-31	ED-00.72-SD03-(3.84-4.05')	Sediment	10/31/17 13:40	11/07/17 17:00
240-87591-32	ED-00.72-SD03-(4.05-4.30')	Sediment	10/31/17 13:45	11/07/17 17:00
240-87591-33	ED-00.72-SD03-(2.40-3.50)-FD	Sediment	10/31/17 13:30	11/07/17 17:00
240-87591-34	ED-00.82-SD02-(0-0.39')	Sediment	10/31/17 10:50	11/07/17 17:00
240-87591-35	ED-00.82-SD02-(0.39-0.70')	Sediment	10/31/17 10:55	11/07/17 17:00
240-87591-36	ED.01.03-SD02-(0-0.98)	Sediment	10/30/17 17:05	11/07/17 17:00
240-87591-37	ED.01.03-SD02-(0-0.98)-FD	Sediment	10/30/17 17:05	11/07/17 17:00
240-87591-38	ED-01.03-SD02-(0.98-1.65')	Sediment	10/30/17 17:10	11/07/17 17:00
240-87591-39	ED-01.03-SD02-(0.98-1.65')-FD	Sediment	10/30/17 17:10	11/07/17 17:00
240-87591-40	ED-01.03-SD02-(1.65-1.87')	Sediment	10/30/17 17:30	11/07/17 17:00
240-87591-41	ED-01.03-SD02-(1.87-2.25')	Sediment	10/30/17 17:35	11/07/17 17:00
240-87591-42	ED-01.14-SD02-(0-1.05')	Sediment	11/01/17 09:24	11/07/17 17:00
240-87591-43	ED-01.22-SD02-(0-0.17')	Sediment	11/01/17 10:50	11/07/17 17:00
240-87591-44	ED-01.22-SD02-(0.17-0.29')	Sediment	11/01/17 10:55	11/07/17 17:00
240-87591-45	ED-01.37-SD02-(0-0.9')	Sediment	11/02/17 09:50	11/07/17 17:00
240-87591-46	ED-01.49-SD03-(0-0.70')	Sediment	10/31/17 10:23	11/07/17 17:00
240-87591-47	ED-00.82-SOL04-(0-0.13')	Solid	10/31/17 16:34	11/07/17 17:00
240-87591-48	ED-00.82-SOL04-(0.13-0.5)	Solid	10/31/17 16:35	11/07/17 17:00
240-87591-49	ED-00.72-SL01-(0-0.50')	Solid	10/31/17 14:05	11/07/17 17:00
240-87591-50	ED-00.72-SL01-(0.50-1.0')	Solid	10/31/17 14:13	11/07/17 17:00
240-87591-51	ED-00.60-SL03-(0-0.89')	Solid	10/31/17 13:23	11/07/17 17:00
240-87591-52	ED-00.60-SL03-(0.89-1.0')	Solid	10/31/17 13:29	11/07/17 17:00
240-87591-53	ED-0060.SL01-(0-0.19')	Solid	10/31/17 13:41	11/07/17 17:00

TestAmerica Canton

Sample Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-87591-54	ED-0060.SL01-(0.19-1.0')	Solid	10/31/17 13:49	11/07/17 17:00
240-87591-55	ED-00.51-SL03-(0-0.5')	Solid	10/31/17 12:05	11/07/17 17:00
240-87591-56	ED-00.51-SL03-(0.5-1.0')	Solid	10/31/17 12:12	11/07/17 17:00
240-87591-57	ED-00.51-SL03-(0-0.5')-FD	Solid	10/31/17 12:05	11/07/17 17:00
240-87591-58	ED-00.51-SL01-(0-0.5')	Solid	10/31/17 11:35	11/07/17 17:00
240-87591-59	ED-00.51.SL01-(0.5-1.0')	Solid	10/31/17 11:41	11/07/17 17:00
240-87591-60	ED-00.47-SL04-(0-0.80')	Solid	10/31/17 10:46	11/07/17 17:00
240-87591-61	ED-00.47-SL03-(0-0.77')	Solid	10/31/17 10:23	11/07/17 17:00
240-87591-62	ED-00.47-SL03-(0-0.77')-FD	Solid	10/31/17 10:23	11/07/17 17:00
240-87591-63	ED-00.47-SL01-(0-0.5')	Solid	10/31/17 10:04	11/07/17 17:00
240-87591-64	ED-00.39-SL04-(0-0.50')	Solid	10/31/17 09:02	11/07/17 17:00
240-87591-65	ED-00.39-SL04-(0.50-1.0')	Solid	10/31/17 09:06	11/07/17 17:00
240-87591-66	ED-00.39-SL03-(0-0.69')	Solid	10/31/17 08:31	11/07/17 17:00
240-87591-67	ED-00.39-SL03-(0-0.69')-FD	Solid	10/31/17 08:31	11/07/17 17:00
240-87591-68	ED-00.39-SL03-(0.69-0.98')	Solid	10/31/17 08:37	11/07/17 17:00
240-87591-69	ED-00.39-SL03-(0.98-1.17')	Solid	10/31/17 08:40	11/07/17 17:00
240-87591-70	ED-00.39-SL03-(1.17-1.5')	Solid	10/31/17 08:44	11/07/17 17:00
240-87591-71	ED-00.39-SL01-(0-0.5')	Solid	10/31/17 08:11	11/07/17 17:00
240-87591-72	ED-00.39-SL01-(0.5-1.0')	Solid	10/31/17 08:17	11/07/17 17:00
240-87591-73	ED-00.25-SL04-(0-0.5')	Solid	10/30/17 14:54	11/07/17 17:00
240-87591-74	ED-00.25-SL04-(0.5-1.0')	Solid	10/30/17 15:01	11/07/17 17:00
240-87591-75	ED-00.25-SL04-(1.0-1.5')	Solid	10/30/17 15:20	11/07/17 17:00
240-87591-76	ED-00.25-SL04-(1.5-2.0')	Solid	10/30/17 15:27	11/07/17 17:00
240-87591-77	ED-00.25-SL03-(0.0.5')	Solid	10/30/17 16:30	11/07/17 17:00
240-87591-78	ED-00.25-SL03-(0.5-1.0')	Solid	10/30/17 16:51	11/07/17 17:00
240-87591-79	ED-00.25-SL02-(0-0.5')	Solid	10/30/17 16:01	11/07/17 17:00
240-87591-80	ED-00.25-SL02-(0-0.5')-FD	Solid	10/30/17 16:01	11/07/17 17:00
240-87591-81	ED-00.25-SL02-(0.5-1.0')	Solid	10/30/17 16:09	11/07/17 17:00
240-87591-82	ED-00.25-SL02-(1.0-1.5')	Solid	10/30/17 16:10	11/07/17 17:00
240-87591-83	ED-00.08-SL03-(0-0.5')	Solid	10/30/17 12:20	11/07/17 17:00
240-87591-84	ED-00.08-SL03-(0.5-0.97')	Solid	10/30/17 12:33	11/07/17 17:00
240-87591-85	ED-00.08-SL03-(0.97-1.47')	Solid	10/30/17 12:45	11/07/17 17:00
240-87591-86	ED-00.08-SL03-(1.5-2.0')	Solid	10/30/17 12:53	11/07/17 17:00
240-87591-87	ED-00.08-SL04-(0-0.67)	Solid	10/30/17 13:18	11/07/17 17:00
240-87591-88	ED-00.08-SL04-(0.67-0.86)	Solid	10/30/17 13:27	11/07/17 17:00
240-87591-89	ED-00.08-SL04-(0.86-1.36)	Solid	10/30/17 13:39	11/07/17 17:00
240-87591-90	ED-00.08-SL04-(1.5-2.0')	Solid	10/30/17 13:44	11/07/17 17:00
240-87591-91	ED-00.08-SL01-(0-0.5')	Solid	10/30/17 11:07	11/07/17 17:00
240-87591-92	ED-00.08-SL01-(0.5-1.0')	Solid	10/30/17 11:16	11/07/17 17:00
240-87591-93	ED-00.08-SL01-(1.0-1.86')	Solid	10/30/17 11:22	11/07/17 17:00
240-87591-94	ED-00.08-SL01-(1.86-2.0')	Solid	10/30/17 11:34	11/07/17 17:00
240-87591-95	ED-01.37-SL03-(0-0.27')	Solid	11/02/17 09:25	11/07/17 17:00
240-87591-96	ED-01.37-SL03-(0.27-0.92')	Solid	11/02/17 09:26	11/07/17 17:00
240-87591-97	ED-01.37-SL03-(0.92-1.07')	Solid	11/02/17 09:28	11/07/17 17:00
240-87591-98	ED-01.37-SL03-(1.07-2.0')	Solid	11/02/17 09:30	11/07/17 17:00
240-87591-99	ED-01.49-SL04-(0-0.5')	Solid	11/01/17 14:10	11/07/17 17:00
240-87591-100	ED-01.49-SL04-(0.5-1.0')	Solid	11/01/17 14:17	11/07/17 17:00
240-87591-101	ED-01.49-SL04-(1.0-1.81')	Solid	11/01/17 14:27	11/07/17 17:00
240-87591-102	ED-01.49-SL04-(1.81-2.0')	Solid	11/01/17 14:33	11/07/17 17:00
240-87591-103	ED-00.72-SL02-(0-0.5)	Solid	10/31/17 14:50	11/07/17 17:00
240-87591-104	ED-00.72-SL02-(0.5-1.0')	Solid	10/31/17 14:57	11/07/17 17:00
240-87591-105	ED-00.72-SL02-(1.0-1.5')	Solid	10/31/17 15:04	11/07/17 17:00
240-87591-106	ED-01.24-SL01-(0-0.87')	Solid	11/01/17 11:26	11/07/17 17:00

TestAmerica Canton

Sample Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-87591-107	ED-01.24-SL01-(0.87-1.0')	Solid	11/01/17 11:44	11/07/17 17:00
240-87591-108	ED-01.14-SL03-(0-0.5')	Solid	11/01/17 10:22	11/07/17 17:00
240-87591-109	ED-01.14-SL03-(0.5-1.0')	Solid	11/01/17 10:29	11/07/17 17:00
240-87591-110	ED-01.14-SL03-(0.5-1.0')-FD	Solid	11/01/17 10:29	11/07/17 17:00
240-87591-111	ED-01.49-SL02-(0-0.5')	Solid	11/01/17 13:50	11/07/17 17:00
240-87591-112	ED-01.49-SL02-(0.5-1.0')	Solid	11/01/17 13:55	11/07/17 17:00
240-87591-113	ED-01.37-SL01-(0-0.9')	Solid	11/02/17 09:11	11/07/17 17:00
240-87591-114	ED-01.37-SL01-(0-0.9')-FD	Solid	11/02/17 09:11	11/07/17 17:00
240-87591-115	ED-01.03-SL03-(0-0.21')	Solid	10/31/17 17:05	11/07/17 17:00
240-87591-116	ED-01.03-SL03-(0.21-1.0')	Solid	10/31/17 17:13	11/07/17 17:00
240-87591-117	ED-00.82-SL03-(0-0.5')	Solid	10/31/17 16:11	11/07/17 17:00
240-87591-118	ED-00.82-SL03-(0.5-1.0')	Solid	10/31/17 16:15	11/07/17 17:00
240-87591-119	ED-00.72-SL04-(0-0.11')	Solid	10/31/17 15:39	11/07/17 17:00
240-87591-120	ED-00.72-SL04-(0.11-0.47')	Solid	10/31/17 15:40	11/07/17 17:00
240-87591-121	ED-00.72-SL04-(0.47-1.0')	Solid	10/31/17 15:46	11/07/17 17:00
240-87591-122	ED-01.49-SL01-(0-0.5')	Solid	11/01/17 13:40	11/07/17 17:00
240-87591-123	ED-01.49-SL01-(0-0.5')-FD	Solid	11/01/17 13:40	11/07/17 17:00
240-87591-124	ED-01.24-SL03-(0-0.5')	Solid	11/01/17 12:03	11/07/17 17:00
240-87591-125	ED-00.82-SL01-(0-0.22')	Solid	10/31/17 16:04	11/07/17 17:00
240-87591-126	ED-00.82-SL01-(0.22-0.5')	Solid	10/31/17 16:05	11/07/17 17:00
240-87591-127	ED-01.03-SL01-(0-0.5')	Solid	11/01/17 09:32	11/07/17 17:00
240-87591-128	ED-01.03-SL01-(0-0.5')-FD	Solid	11/01/17 09:32	11/07/17 17:00
240-87591-129	ED-01.14-SL01-(0-0.5')	Solid	11/01/17 10:01	11/07/17 17:00
240-87591-130	WATER DRUM	Water	11/01/17 16:26	11/07/17 17:00
240-87591-131	SOIL-SED DRUM	Sediment	11/03/17 12:21	11/07/17 17:00
240-87591-132	EQUIP RINSATE	Water	11/02/17 16:58	11/07/17 17:00
240-87591-133	ED-00.72-SL01-(0-0.5')-FD	Solid	10/31/17 14:05	11/07/17 17:00

Detection Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SD02-(0-0.45')

Lab Sample ID: 240-87591-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	682		90.8	30.9	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	682		90.8	43.6	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.08-SD02-(0.45-.75')

Lab Sample ID: 240-87591-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	4310		458	156	ug/Kg	5	☒	8082A	Total/NA
Aroclor-1260	169	J	458	165	ug/Kg	5	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	4480		458	220	ug/Kg	5	☒	8082A	Total/NA

Client Sample ID: ED-00.08-SD02-(0.75-1.4')

Lab Sample ID: 240-87591-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1140		62.1	21.1	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	53.7	J	62.1	22.3	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1190		62.1	29.8	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.08-SD02-(0.75-1.4')-FD

Lab Sample ID: 240-87591-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1150		61.4	20.9	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	58.2	J	61.4	22.1	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1210		61.4	29.5	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.08-SD02-(1.4-2.03')

Lab Sample ID: 240-87591-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	7730		664	226	ug/Kg	10	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	7730		664	319	ug/Kg	10	☒	8082A	Total/NA

Client Sample ID: ED-00.25-SD01-(0.0-57')

Lab Sample ID: 240-87591-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	481		62.9	21.4	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	481		62.9	30.2	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.25-SD01-(0.57-3.51')

Lab Sample ID: 240-87591-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	296		59.3	20.2	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	296		59.3	28.5	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.25-SD01-(3.51-4.3')

Lab Sample ID: 240-87591-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	13500		627	251	ug/Kg	10	☒	8082A	Total/NA
Aroclor-1254	3370	p	627	175	ug/Kg	10	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	18600		627	301	ug/Kg	10	☒	8082A	Total/NA

Client Sample ID: ED-00.25-SD01-(3.51-4.3')-DUP

Lab Sample ID: 240-87591-9

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SD01-(3.51-4.3')-DUP (Continued)

Lab Sample ID: 240-87591-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	12300		623	249	ug/Kg	10	☼	8082A	Total/NA
Aroclor-1254	1330	p	623	175	ug/Kg	10	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	14500		623	299	ug/Kg	10	☼	8082A	Total/NA

Client Sample ID: ED-00.39-SD02-(0-2.20')

Lab Sample ID: 240-87591-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	914		63.8	21.7	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	914		63.8	30.6	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.39-SD02-(2.20-2.41')

Lab Sample ID: 240-87591-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	2770		296	101	ug/Kg	5	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	2770		296	142	ug/Kg	5	☼	8082A	Total/NA

Client Sample ID: ED-00.39-SD02-(2.41-3.54')

Lab Sample ID: 240-87591-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	2890		329	112	ug/Kg	5	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	2890		329	158	ug/Kg	5	☼	8082A	Total/NA

Client Sample ID: ED-00.39-SD02-(3.54-4.30')

Lab Sample ID: 240-87591-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	4640		372	126	ug/Kg	5	☼	8082A	Total/NA
Aroclor-1260	139	J	372	134	ug/Kg	5	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	4780		372	179	ug/Kg	5	☼	8082A	Total/NA

Client Sample ID: ED-00.47-SD02-(0-0.33')

Lab Sample ID: 240-87591-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1090		63.0	21.4	ug/Kg	1	☼	8082A	Total/NA
Aroclor-1260	48.6	J	63.0	22.7	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	1140		63.0	30.3	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.47-SD02-(33-1.46')

Lab Sample ID: 240-87591-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	2740		409	139	ug/Kg	5	☼	8082A	Total/NA
Aroclor-1260	149	J	409	147	ug/Kg	5	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	2890		409	196	ug/Kg	5	☼	8082A	Total/NA

Client Sample ID: ED-00.47-SD02-(1.46-1.96')

Lab Sample ID: 240-87591-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1380		66.6	22.6	ug/Kg	1	☼	8082A	Total/NA
Aroclor-1260	81.5		66.6	24.0	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	1460		66.6	32.0	ug/Kg	1	☼	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.47-SD02-(1.96-3.13')

Lab Sample ID: 240-87591-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	2480		322	109	ug/Kg	5	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	2480		322	154	ug/Kg	5	☒	8082A	Total/NA

Client Sample ID: ED-00.51-SD02-(0-0.36')

Lab Sample ID: 240-87591-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	616		63.1	21.4	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	27.8	J p	63.1	22.7	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	644		63.1	30.3	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.51-SD02-(0.36-0.68')

Lab Sample ID: 240-87591-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1310		80.2	27.3	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	42.6	J p	80.2	28.9	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1350		80.2	38.5	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.51-SD02-(0.68-1.65')

Lab Sample ID: 240-87591-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	552	p	115	39.0	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	552	p	115	55.0	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.51-SD02-(1.65-1.75')

Lab Sample ID: 240-87591-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	953		89.3	30.4	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	57.6	J	89.3	32.2	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1010		89.3	42.9	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.60-SD02-(0-1.76')

Lab Sample ID: 240-87591-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1030		58.1	19.8	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	25.4	J	58.1	20.9	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1060		58.1	27.9	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.60-SD02-(1.76-2.22')

Lab Sample ID: 240-87591-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	23800		3090	1050	ug/Kg	50	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	23800		3090	1480	ug/Kg	50	☒	8082A	Total/NA

Client Sample ID: ED-00.60-SD02-(2.22-2.39')

Lab Sample ID: 240-87591-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	8090		1270	507	ug/Kg	20	☒	8082A	Total/NA
Aroclor-1254	1190	J	1270	355	ug/Kg	20	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	9280		1270	608	ug/Kg	20	☒	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.60-SD02-(2.39-2.63')

Lab Sample ID: 240-87591-25

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	507		62.5	25.0	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1254	57.9	J p	62.5	17.5	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	565		62.5	30.0	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.60-SD02-(2.63-3.30')

Lab Sample ID: 240-87591-26

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	4420		586	234	ug/Kg	10	☒	8082A	Total/NA
Aroclor-1254	444	J	586	164	ug/Kg	10	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	4860		586	281	ug/Kg	10	☒	8082A	Total/NA

Client Sample ID: ED-00.72-SD03-(0-2.06')

Lab Sample ID: 240-87591-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	836		62.6	21.3	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	44.6	J	62.6	22.5	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	881		62.6	30.1	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.72-SD03-(2.06-2.40')

Lab Sample ID: 240-87591-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	1450		60.7	24.3	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1254	157	p	60.7	17.0	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1610		60.7	29.1	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.72-SD03-(2.40-3.50')

Lab Sample ID: 240-87591-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	12100		615	246	ug/Kg	10	☒	8082A	Total/NA
Aroclor-1254	1960	p	615	172	ug/Kg	10	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	14100		615	295	ug/Kg	10	☒	8082A	Total/NA

Client Sample ID: ED-00.72-SD03-(3.50-3.84')

Lab Sample ID: 240-87591-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	6570		616	246	ug/Kg	10	☒	8082A	Total/NA
Aroclor-1254	1010		616	173	ug/Kg	10	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	7580		616	296	ug/Kg	10	☒	8082A	Total/NA

Client Sample ID: ED-00.72-SD03-(3.84-4.05')

Lab Sample ID: 240-87591-31

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	6980		590	236	ug/Kg	10	☒	8082A	Total/NA
Aroclor-1254	1440		590	165	ug/Kg	10	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	8420		590	283	ug/Kg	10	☒	8082A	Total/NA

Client Sample ID: ED-00.72-SD03-(4.05-4.30')

Lab Sample ID: 240-87591-32

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	4540		561	224	ug/Kg	10	☒	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SD03-(4.05-4.30') (Continued)

Lab Sample ID: 240-87591-32

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1254	640		561	157	ug/Kg	10	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	5180		561	269	ug/Kg	10	☒	8082A	Total/NA

Client Sample ID: ED-00.72-SD03-(2.40-3.50)-FD

Lab Sample ID: 240-87591-33

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	11000		623	249	ug/Kg	10	☒	8082A	Total/NA
Aroclor-1254	1710		623	174	ug/Kg	10	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	12700		623	299	ug/Kg	10	☒	8082A	Total/NA

Client Sample ID: ED-00.82-SD02-(0-0.39')

Lab Sample ID: 240-87591-34

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	436		62.0	21.1	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	436		62.0	29.8	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.82-SD02-(0.39-0.70')

Lab Sample ID: 240-87591-35

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	336		61.6	20.9	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	336		61.6	29.5	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED.01.03-SD02-(0-0.98)

Lab Sample ID: 240-87591-36

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	1580		60.3	24.1	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	47.5	J p	60.3	21.7	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1630		60.3	28.9	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED.01.03-SD02-(0-0.98)-FD

Lab Sample ID: 240-87591-37

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1760		123	41.7	ug/Kg	2	☒	8082A	Total/NA
Aroclor-1260	52.7	J	123	44.1	ug/Kg	2	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1810		123	58.8	ug/Kg	2	☒	8082A	Total/NA

Client Sample ID: ED-01.03-SD02-(0.98-1.65')

Lab Sample ID: 240-87591-38

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	39900		3110	1240	ug/Kg	50	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	39900		3110	1490	ug/Kg	50	☒	8082A	Total/NA

Client Sample ID: ED-01.03-SD02-(0.98-1.65')-FD

Lab Sample ID: 240-87591-39

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	17100		3020	1210	ug/Kg	50	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	17100		3020	1450	ug/Kg	50	☒	8082A	Total/NA

Client Sample ID: ED-01.03-SD02-(1.65-1.87')

Lab Sample ID: 240-87591-40

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.03-SD02-(1.65-1.87') (Continued)

Lab Sample ID: 240-87591-40

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	16000		3050	1040	ug/Kg	50	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	16000		3050	1460	ug/Kg	50	☼	8082A	Total/NA

Client Sample ID: ED-01.03-SD02-(1.87-2.25')

Lab Sample ID: 240-87591-41

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1242	1790		348	139	ug/Kg	5	☼	8082A	Total/NA
Aroclor-1254	239	J	348	97.5	ug/Kg	5	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	2030		348	167	ug/Kg	5	☼	8082A	Total/NA

Client Sample ID: ED-01.14-SD02-(0-1.05')

Lab Sample ID: 240-87591-42

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	618		63.0	21.4	ug/Kg	1	☼	8082A	Total/NA
Aroclor-1260	35.8	J	63.0	22.7	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	654		63.0	30.3	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-01.22-SD02-(0-0.17')

Lab Sample ID: 240-87591-43

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	539		59.5	20.2	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	539		59.5	28.6	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-01.22-SD02-(0.17-0.29')

Lab Sample ID: 240-87591-44

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	279		62.7	21.3	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	279		62.7	30.1	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-01.37-SD02-(0-0.9')

Lab Sample ID: 240-87591-45

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1460		63.0	21.4	ug/Kg	1	☼	8082A	Total/NA
Aroclor-1260	45.1	J	63.0	22.7	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	1510		63.0	30.3	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-01.49-SD03-(0-0.70')

Lab Sample ID: 240-87591-46

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	420		58.8	20.0	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	420		58.8	28.2	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.82-SOL04-(0-0.13')

Lab Sample ID: 240-87591-47

No Detections.

Client Sample ID: ED-00.82-SOL04-(0.13-0.5)

Lab Sample ID: 240-87591-48

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SL01-(0-0.50')

Lab Sample ID: 240-87591-49

No Detections.

Client Sample ID: ED-00.72-SL01-(0.50-1.0')

Lab Sample ID: 240-87591-50

No Detections.

Client Sample ID: ED-00.60-SL03-(0-0.89')

Lab Sample ID: 240-87591-51

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	25.7	J p	61.3	20.8	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	50.9	J	61.3	29.4	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.60-SL03-(0.89-1.0')

Lab Sample ID: 240-87591-52

No Detections.

Client Sample ID: ED-0060.SL01-(0-0.19')

Lab Sample ID: 240-87591-53

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1254	213		62.3	17.5	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	213		62.3	29.9	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-0060.SL01-(0.19-1.0')

Lab Sample ID: 240-87591-54

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	187		56.5	19.2	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	187		56.5	27.1	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.51-SL03-(0-0.5')

Lab Sample ID: 240-87591-55

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	2680		296	101	ug/Kg	5	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	2680		296	142	ug/Kg	5	☼	8082A	Total/NA

Client Sample ID: ED-00.51-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-56

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	6440		567	193	ug/Kg	10	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	6440		567	272	ug/Kg	10	☼	8082A	Total/NA

Client Sample ID: ED-00.51-SL03-(0-0.5')-FD

Lab Sample ID: 240-87591-57

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	5520		576	196	ug/Kg	10	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	5520		576	277	ug/Kg	10	☼	8082A	Total/NA

Client Sample ID: ED-00.51-SL01-(0-0.5')

Lab Sample ID: 240-87591-58

No Detections.

Client Sample ID: ED-00.51.SL01-(0.5-1.0')

Lab Sample ID: 240-87591-59

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.47-SL04-(0-0.80')

Lab Sample ID: 240-87591-60

No Detections.

Client Sample ID: ED-00.47-SL03-(0-0.77')

Lab Sample ID: 240-87591-61

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	371		56.4	19.2	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	371		56.4	27.1	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.47-SL03-(0-0.77')-FD

Lab Sample ID: 240-87591-62

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	748		61.0	20.7	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	748		61.0	29.3	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.47-SL01-(0-0.5')

Lab Sample ID: 240-87591-63

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	200		56.4	19.2	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	200		56.4	27.1	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.39-SL04-(0-0.50')

Lab Sample ID: 240-87591-64

No Detections.

Client Sample ID: ED-00.39-SL04-(0.50-1.0')

Lab Sample ID: 240-87591-65

No Detections.

Client Sample ID: ED-00.39-SL03-(0-0.69')

Lab Sample ID: 240-87591-66

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	5000		309	105	ug/Kg	5	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	5000		309	148	ug/Kg	5	☼	8082A	Total/NA

Client Sample ID: ED-00.39-SL03-(0-0.69')-FD

Lab Sample ID: 240-87591-67

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	6090		610	207	ug/Kg	10	☼	8082A	Total/NA
Aroclor-1260	389	J p	610	220	ug/Kg	10	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	6840		610	293	ug/Kg	10	☼	8082A	Total/NA

Client Sample ID: ED-00.39-SL03-(0.69-0.98')

Lab Sample ID: 240-87591-68

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	579		55.9	19.0	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	579		55.9	26.8	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.39-SL03-(0.98-1.17')

Lab Sample ID: 240-87591-69

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	5020		626	213	ug/Kg	10	☼	8082A	Total/NA
Aroclor-1260	774		626	225	ug/Kg	10	☼	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SL03-(0.98-1.17') (Continued)

Lab Sample ID: 240-87591-69

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Polychlorinated biphenyls, Total	5790		626	301	ug/Kg	10	☼	8082A	Total/NA

Client Sample ID: ED-00.39-SL03-(1.17-1.5')

Lab Sample ID: 240-87591-70

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	114		58.8	20.0	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	114		58.8	28.2	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.39-SL01-(0-0.5')

Lab Sample ID: 240-87591-71

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	94.1	p	58.4	19.8	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	94.1	p	58.4	28.0	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.39-SL01-(0.5-1.0')

Lab Sample ID: 240-87591-72

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	126		59.7	20.3	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	126		59.7	28.7	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.25-SL04-(0-0.5')

Lab Sample ID: 240-87591-73

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1254	65.0	p	63.3	17.7	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	65.0	p	63.3	30.4	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.25-SL04-(0.5-1.0')

Lab Sample ID: 240-87591-74

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1254	43.5	J p	60.7	17.0	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	43.5	J p	60.7	29.1	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.25-SL04-(1.0-1.5')

Lab Sample ID: 240-87591-75

No Detections.

Client Sample ID: ED-00.25-SL04-(1.5-2.0')

Lab Sample ID: 240-87591-76

No Detections.

Client Sample ID: ED-00.25-SL03-(0.0.5')

Lab Sample ID: 240-87591-77

No Detections.

Client Sample ID: ED-00.25-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-78

No Detections.

Client Sample ID: ED-00.25-SL02-(0-0.5')

Lab Sample ID: 240-87591-79

-

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SL02-(0-0.5') (Continued)

Lab Sample ID: 240-87591-79

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	4140		312	106	ug/Kg	5	☼	8082A	Total/NA
Aroclor-1260	502		312	112	ug/Kg	5	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	4640		312	150	ug/Kg	5	☼	8082A	Total/NA

Client Sample ID: ED-00.25-SL02-(0-0.5')-FD

Lab Sample ID: 240-87591-80

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	4710		308	105	ug/Kg	5	☼	8082A	Total/NA
Aroclor-1260	541		308	111	ug/Kg	5	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	5250		308	148	ug/Kg	5	☼	8082A	Total/NA

Client Sample ID: ED-00.25-SL02-(0.5-1.0')

Lab Sample ID: 240-87591-81

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	687		56.2	19.1	ug/Kg	1	☼	8082A	Total/NA
Aroclor-1260	85.3		56.2	20.2	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	772		56.2	27.0	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.25-SL02-(1.0-1.5')

Lab Sample ID: 240-87591-82

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1600		121	41.2	ug/Kg	2	☼	8082A	Total/NA
Aroclor-1260	168		121	43.6	ug/Kg	2	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	1770		121	58.2	ug/Kg	2	☼	8082A	Total/NA

Client Sample ID: ED-00.08-SL03-(0-0.5')

Lab Sample ID: 240-87591-83

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	7150		596	203	ug/Kg	10	☼	8082A	Total/NA
Aroclor-1260	843		596	215	ug/Kg	10	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	7990		596	286	ug/Kg	10	☼	8082A	Total/NA

Client Sample ID: ED-00.08-SL03-(0.5-0.97')

Lab Sample ID: 240-87591-84

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1930		108	36.7	ug/Kg	2	☼	8082A	Total/NA
Aroclor-1260	129		108	38.9	ug/Kg	2	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	2060		108	51.9	ug/Kg	2	☼	8082A	Total/NA

Client Sample ID: ED-00.08-SL03-(0.97-1..47')

Lab Sample ID: 240-87591-85

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	66000		6030	2050	ug/Kg	100	☼	8082A	Total/NA
Aroclor-1260	2720	J F1	6030	2170	ug/Kg	100	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	68700		6030	2900	ug/Kg	100	☼	8082A	Total/NA

Client Sample ID: ED-00.08-SL03-(1.5-2.0')

Lab Sample ID: 240-87591-86

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	78300		6240	2120	ug/Kg	100	☼	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL03-(1.5-2.0') (Continued)

Lab Sample ID: 240-87591-86

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1260	4300	J	6240	2250	ug/Kg	100	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	82600		6240	3000	ug/Kg	100	☒	8082A	Total/NA

Client Sample ID: ED-00.08-SL04-(0-0.67)

Lab Sample ID: 240-87591-87

No Detections.

Client Sample ID: ED-00.08-SL04-(0.67-0.86)

Lab Sample ID: 240-87591-88

No Detections.

Client Sample ID: ED-00.08-SL04-(0.86-1.36)

Lab Sample ID: 240-87591-89

No Detections.

Client Sample ID: ED-00.08-SL04-(1.5-2.0')

Lab Sample ID: 240-87591-90

No Detections.

Client Sample ID: ED-00.08-SL01-(0-0.5')

Lab Sample ID: 240-87591-91

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	166		62.5	21.3	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	28.5	J p	62.5	22.5	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	211		62.5	30.0	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.08-SL01-(0.5-1.0')

Lab Sample ID: 240-87591-92

No Detections.

Client Sample ID: ED-00.08-SL01-(1.0-1.86')

Lab Sample ID: 240-87591-93

No Detections.

Client Sample ID: ED-00.08-SL01-(1.86-2.0')

Lab Sample ID: 240-87591-94

No Detections.

Client Sample ID: ED-01.37-SL03-(0-0.27')

Lab Sample ID: 240-87591-95

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	771		63.0	21.4	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	115		63.0	22.7	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	886		63.0	30.3	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.37-SL03-(0.27-0.92')

Lab Sample ID: 240-87591-96

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	159		55.2	18.8	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	159		55.2	26.5	ug/Kg	1	☒	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.37-SL03-(0.92-1.07')

Lab Sample ID: 240-87591-97

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	237		61.7	21.0	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	28.9	J	61.7	22.2	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	266		61.7	29.6	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.37-SL03-(1.07-2.0')

Lab Sample ID: 240-87591-98

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	189		57.4	19.5	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	189		57.4	27.6	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.49-SL04-(0-0.5')

Lab Sample ID: 240-87591-99

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1254	33.6	J	61.1	17.1	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	33.6	J	61.1	29.3	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.49-SL04-(0.5-1.0')

Lab Sample ID: 240-87591-100

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1254	19.6	J	56.7	15.9	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.49-SL04-(1.0-1.81')

Lab Sample ID: 240-87591-101

No Detections.

Client Sample ID: ED-01.49-SL04-(1.81-2.0')

Lab Sample ID: 240-87591-102

No Detections.

Client Sample ID: ED-00.72-SL02-(0-0.5')

Lab Sample ID: 240-87591-103

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1440		659	224	ug/Kg	10	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1440		659	317	ug/Kg	10	☒	8082A	Total/NA

Client Sample ID: ED-00.72-SL02-(0.5-1.0')

Lab Sample ID: 240-87591-104

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1810		67.6	23.0	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	122		67.6	24.3	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1930		67.6	32.5	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.72-SL02-(1.0-1.5')

Lab Sample ID: 240-87591-105

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	2290		134	45.5	ug/Kg	2	☒	8082A	Total/NA
Aroclor-1260	145		134	48.1	ug/Kg	2	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	2440		134	64.2	ug/Kg	2	☒	8082A	Total/NA

Client Sample ID: ED-01.24-SL01-(0-0.87')

Lab Sample ID: 240-87591-106

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.24-SL01-(0-0.87') (Continued)

Lab Sample ID: 240-87591-106

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	4240		576	196	ug/Kg	10	☼	8082A	Total/NA
Aroclor-1260	407	J	576	207	ug/Kg	10	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	4650		576	277	ug/Kg	10	☼	8082A	Total/NA

Client Sample ID: ED-01.24-SL01-(0.87-1.0')

Lab Sample ID: 240-87591-107

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	662		54.9	18.7	ug/Kg	1	☼	8082A	Total/NA
Aroclor-1260	52.8	J	54.9	19.8	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	715		54.9	26.3	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-01.14-SL03-(0-0.5')

Lab Sample ID: 240-87591-108

No Detections.

Client Sample ID: ED-01.14-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-109

No Detections.

Client Sample ID: ED-01.14-SL03-(0.5-1.0')-FD

Lab Sample ID: 240-87591-110

No Detections.

Client Sample ID: ED-01.49-SL02-(0-0.5')

Lab Sample ID: 240-87591-111

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	164		57.2	19.4	ug/Kg	1	☼	8082A	Total/NA
Aroclor-1260	23.1	J	57.2	20.6	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	187		57.2	27.4	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-01.49-SL02-(0.5-1.0')

Lab Sample ID: 240-87591-112

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	117		57.0	19.4	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	117		57.0	27.4	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-01.37-SL01-(0-0.9')

Lab Sample ID: 240-87591-113

No Detections.

Client Sample ID: ED-01.37-SL01-(0-0.9')-FD

Lab Sample ID: 240-87591-114

No Detections.

Client Sample ID: ED-01.03-SL03-(0-0.21')

Lab Sample ID: 240-87591-115

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	72.2		61.7	21.0	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	72.2		61.7	29.6	ug/Kg	1	☼	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.03-SL03-(0.21-1.0')

Lab Sample ID: 240-87591-116

No Detections.

Client Sample ID: ED-00.82-SL03-(0-0.5')

Lab Sample ID: 240-87591-117

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	70.4		56.1	19.1	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	70.4		56.1	26.9	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.82-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-118

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1120		78.7	26.8	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	84.8		78.7	28.3	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1200		78.7	37.8	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.72-SL04-(0-0.11')

Lab Sample ID: 240-87591-119

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	54.7	J	64.9	22.1	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	54.7	J	64.9	31.1	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.72-SL04-(0.11-0.47')

Lab Sample ID: 240-87591-120

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	24.5	J	55.9	19.0	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.72-SL04-(0.47-1.0')

Lab Sample ID: 240-87591-121

No Detections.

Client Sample ID: ED-01.49-SL01-(0-0.5')

Lab Sample ID: 240-87591-122

No Detections.

Client Sample ID: ED-01.49-SL01-(0-0.5')-FD

Lab Sample ID: 240-87591-123

No Detections.

Client Sample ID: ED-01.24-SL03-(0-0.5')

Lab Sample ID: 240-87591-124

No Detections.

Client Sample ID: ED-00.82-SL01-(0-0.22')

Lab Sample ID: 240-87591-125

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	339		59.5	20.2	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	58.2	J	59.5	21.4	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	397		59.5	28.6	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.82-SL01-(0.22-0.5')

Lab Sample ID: 240-87591-126

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	260		56.0	19.0	ug/Kg	1	☒	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.82-SL01-(0.22-0.5') (Continued)

Lab Sample ID: 240-87591-126

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1260	55.4	J	56.0	20.2	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	315		56.0	26.9	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-01.03-SL01-(0-0.5')

Lab Sample ID: 240-87591-127

No Detections.

Client Sample ID: ED-01.03-SL01-(0-0.5')-FD

Lab Sample ID: 240-87591-128

No Detections.

Client Sample ID: ED-01.14-SL01-(0-0.5')

Lab Sample ID: 240-87591-129

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	2150		285	97.1	ug/Kg	5	☼	8082A	Total/NA
Aroclor-1260	337		285	103	ug/Kg	5	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	2490		285	137	ug/Kg	5	☼	8082A	Total/NA

Client Sample ID: WATER DRUM

Lab Sample ID: 240-87591-130

No Detections.

Client Sample ID: SOIL-SED DRUM

Lab Sample ID: 240-87591-131

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1220		56.9	19.3	ug/Kg	1	☼	8082A	Total/NA
Aroclor-1260	87.6		56.9	20.5	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	1310		56.9	27.3	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: EQUIP RINSATE

Lab Sample ID: 240-87591-132

No Detections.

Client Sample ID: ED-00.72-SL01-(0-0.5')-FD

Lab Sample ID: 240-87591-133

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SD02-(0-0.45')

Lab Sample ID: 240-87591-1

Date Collected: 10/30/17 11:20

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 54.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	43.6	U	90.8	43.6	ug/Kg	☼	11/10/17 12:42	11/13/17 20:24	1
Aroclor-1221	41.8	U	90.8	41.8	ug/Kg	☼	11/10/17 12:42	11/13/17 20:24	1
Aroclor-1232	29.1	U	90.8	29.1	ug/Kg	☼	11/10/17 12:42	11/13/17 20:24	1
Aroclor-1242	36.3	U	90.8	36.3	ug/Kg	☼	11/10/17 12:42	11/13/17 20:24	1
Aroclor-1248	682		90.8	30.9	ug/Kg	☼	11/10/17 12:42	11/13/17 20:24	1
Aroclor-1254	25.4	U	90.8	25.4	ug/Kg	☼	11/10/17 12:42	11/13/17 20:24	1
Aroclor-1260	32.7	U	90.8	32.7	ug/Kg	☼	11/10/17 12:42	11/13/17 20:24	1
Aroclor-1262	14.5	U	90.8	14.5	ug/Kg	☼	11/10/17 12:42	11/13/17 20:24	1
Aroclor-1268	36.3	U	90.8	36.3	ug/Kg	☼	11/10/17 12:42	11/13/17 20:24	1
Polychlorinated biphenyls, Total	682		90.8	43.6	ug/Kg	☼	11/10/17 12:42	11/13/17 20:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	68		14 - 128	11/10/17 12:42	11/13/17 20:24	1
DCB Decachlorobiphenyl	80		10 - 132	11/10/17 12:42	11/13/17 20:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	54.2		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	45.8		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SD02-(0.45-.75')

Lab Sample ID: 240-87591-2

Date Collected: 10/30/17 11:25

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 54.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	220	U	458	220	ug/Kg	☼	11/10/17 12:42	11/13/17 20:42	5
Aroclor-1221	211	U	458	211	ug/Kg	☼	11/10/17 12:42	11/13/17 20:42	5
Aroclor-1232	147	U	458	147	ug/Kg	☼	11/10/17 12:42	11/13/17 20:42	5
Aroclor-1242	183	U	458	183	ug/Kg	☼	11/10/17 12:42	11/13/17 20:42	5
Aroclor-1248	4310		458	156	ug/Kg	☼	11/10/17 12:42	11/13/17 20:42	5
Aroclor-1254	128	U	458	128	ug/Kg	☼	11/10/17 12:42	11/13/17 20:42	5
Aroclor-1260	169	J	458	165	ug/Kg	☼	11/10/17 12:42	11/13/17 20:42	5
Aroclor-1262	73.3	U	458	73.3	ug/Kg	☼	11/10/17 12:42	11/13/17 20:42	5
Aroclor-1268	183	U	458	183	ug/Kg	☼	11/10/17 12:42	11/13/17 20:42	5
Polychlorinated biphenyls, Total	4480		458	220	ug/Kg	☼	11/10/17 12:42	11/13/17 20:42	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	87		14 - 128	11/10/17 12:42	11/13/17 20:42	5
DCB Decachlorobiphenyl	100		10 - 132	11/10/17 12:42	11/13/17 20:42	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	54.0		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	46.0		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SD02-(0.75-1.4')

Lab Sample ID: 240-87591-3

Date Collected: 10/30/17 11:30

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 80.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.8	U	62.1	29.8	ug/Kg	☼	11/10/17 12:42	11/13/17 21:00	1
Aroclor-1221	28.5	U	62.1	28.5	ug/Kg	☼	11/10/17 12:42	11/13/17 21:00	1
Aroclor-1232	19.9	U	62.1	19.9	ug/Kg	☼	11/10/17 12:42	11/13/17 21:00	1
Aroclor-1242	24.8	U	62.1	24.8	ug/Kg	☼	11/10/17 12:42	11/13/17 21:00	1
Aroclor-1248	1140		62.1	21.1	ug/Kg	☼	11/10/17 12:42	11/13/17 21:00	1
Aroclor-1254	17.4	U	62.1	17.4	ug/Kg	☼	11/10/17 12:42	11/13/17 21:00	1
Aroclor-1260	53.7	J	62.1	22.3	ug/Kg	☼	11/10/17 12:42	11/13/17 21:00	1
Aroclor-1262	9.93	U	62.1	9.93	ug/Kg	☼	11/10/17 12:42	11/13/17 21:00	1
Aroclor-1268	24.8	U	62.1	24.8	ug/Kg	☼	11/10/17 12:42	11/13/17 21:00	1
Polychlorinated biphenyls, Total	1190		62.1	29.8	ug/Kg	☼	11/10/17 12:42	11/13/17 21:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		14 - 128	11/10/17 12:42	11/13/17 21:00	1
DCB Decachlorobiphenyl	82		10 - 132	11/10/17 12:42	11/13/17 21:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.1		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	19.9		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SD02-(0.75-1.4')-FD

Lab Sample ID: 240-87591-4

Date Collected: 10/30/17 11:30

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 80.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.5	U	61.4	29.5	ug/Kg	☼	11/10/17 12:42	11/13/17 21:19	1
Aroclor-1221	28.3	U	61.4	28.3	ug/Kg	☼	11/10/17 12:42	11/13/17 21:19	1
Aroclor-1232	19.7	U	61.4	19.7	ug/Kg	☼	11/10/17 12:42	11/13/17 21:19	1
Aroclor-1242	24.6	U	61.4	24.6	ug/Kg	☼	11/10/17 12:42	11/13/17 21:19	1
Aroclor-1248	1150		61.4	20.9	ug/Kg	☼	11/10/17 12:42	11/13/17 21:19	1
Aroclor-1254	17.2	U	61.4	17.2	ug/Kg	☼	11/10/17 12:42	11/13/17 21:19	1
Aroclor-1260	58.2	J	61.4	22.1	ug/Kg	☼	11/10/17 12:42	11/13/17 21:19	1
Aroclor-1262	9.83	U	61.4	9.83	ug/Kg	☼	11/10/17 12:42	11/13/17 21:19	1
Aroclor-1268	24.6	U	61.4	24.6	ug/Kg	☼	11/10/17 12:42	11/13/17 21:19	1
Polychlorinated biphenyls, Total	1210		61.4	29.5	ug/Kg	☼	11/10/17 12:42	11/13/17 21:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	69		14 - 128	11/10/17 12:42	11/13/17 21:19	1
DCB Decachlorobiphenyl	81		10 - 132	11/10/17 12:42	11/13/17 21:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.0		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	20.0		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SD02-(1.4-2.03')

Lab Sample ID: 240-87591-5

Date Collected: 10/30/17 11:40

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 75.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	319	U	664	319	ug/Kg	☼	11/10/17 12:42	11/13/17 21:37	10
Aroclor-1221	305	U	664	305	ug/Kg	☼	11/10/17 12:42	11/13/17 21:37	10
Aroclor-1232	212	U	664	212	ug/Kg	☼	11/10/17 12:42	11/13/17 21:37	10
Aroclor-1242	266	U	664	266	ug/Kg	☼	11/10/17 12:42	11/13/17 21:37	10
Aroclor-1248	7730		664	226	ug/Kg	☼	11/10/17 12:42	11/13/17 21:37	10
Aroclor-1254	186	U	664	186	ug/Kg	☼	11/10/17 12:42	11/13/17 21:37	10
Aroclor-1260	239	U	664	239	ug/Kg	☼	11/10/17 12:42	11/13/17 21:37	10
Aroclor-1262	106	U	664	106	ug/Kg	☼	11/10/17 12:42	11/13/17 21:37	10
Aroclor-1268	266	U	664	266	ug/Kg	☼	11/10/17 12:42	11/13/17 21:37	10
Polychlorinated biphenyls, Total	7730		664	319	ug/Kg	☼	11/10/17 12:42	11/13/17 21:37	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	107		14 - 128	11/10/17 12:42	11/13/17 21:37	10
DCB Decachlorobiphenyl	151	X	10 - 132	11/10/17 12:42	11/13/17 21:37	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	75.4		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	24.6		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SD01-(0.0-57')

Lab Sample ID: 240-87591-6

Date Collected: 11/01/17 11:46

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 78.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.2	U	62.9	30.2	ug/Kg	☼	11/10/17 12:42	11/13/17 21:55	1
Aroclor-1221	28.9	U	62.9	28.9	ug/Kg	☼	11/10/17 12:42	11/13/17 21:55	1
Aroclor-1232	20.1	U	62.9	20.1	ug/Kg	☼	11/10/17 12:42	11/13/17 21:55	1
Aroclor-1242	25.2	U	62.9	25.2	ug/Kg	☼	11/10/17 12:42	11/13/17 21:55	1
Aroclor-1248	481		62.9	21.4	ug/Kg	☼	11/10/17 12:42	11/13/17 21:55	1
Aroclor-1254	17.6	U	62.9	17.6	ug/Kg	☼	11/10/17 12:42	11/13/17 21:55	1
Aroclor-1260	22.6	U	62.9	22.6	ug/Kg	☼	11/10/17 12:42	11/13/17 21:55	1
Aroclor-1262	10.1	U	62.9	10.1	ug/Kg	☼	11/10/17 12:42	11/13/17 21:55	1
Aroclor-1268	25.2	U	62.9	25.2	ug/Kg	☼	11/10/17 12:42	11/13/17 21:55	1
Polychlorinated biphenyls, Total	481		62.9	30.2	ug/Kg	☼	11/10/17 12:42	11/13/17 21:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	80		14 - 128	11/10/17 12:42	11/13/17 21:55	1
DCB Decachlorobiphenyl	99		10 - 132	11/10/17 12:42	11/13/17 21:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.0		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	22.0		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SD01-(0.57-3.51')

Lab Sample ID: 240-87591-7

Date Collected: 11/01/17 12:01

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 83.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.5	U	59.3	28.5	ug/Kg	☼	11/10/17 12:42	11/13/17 22:14	1
Aroclor-1221	27.3	U	59.3	27.3	ug/Kg	☼	11/10/17 12:42	11/13/17 22:14	1
Aroclor-1232	19.0	U	59.3	19.0	ug/Kg	☼	11/10/17 12:42	11/13/17 22:14	1
Aroclor-1242	23.7	U	59.3	23.7	ug/Kg	☼	11/10/17 12:42	11/13/17 22:14	1
Aroclor-1248	296		59.3	20.2	ug/Kg	☼	11/10/17 12:42	11/13/17 22:14	1
Aroclor-1254	16.6	U	59.3	16.6	ug/Kg	☼	11/10/17 12:42	11/13/17 22:14	1
Aroclor-1260	21.4	U	59.3	21.4	ug/Kg	☼	11/10/17 12:42	11/13/17 22:14	1
Aroclor-1262	9.49	U	59.3	9.49	ug/Kg	☼	11/10/17 12:42	11/13/17 22:14	1
Aroclor-1268	23.7	U	59.3	23.7	ug/Kg	☼	11/10/17 12:42	11/13/17 22:14	1
Polychlorinated biphenyls, Total	296		59.3	28.5	ug/Kg	☼	11/10/17 12:42	11/13/17 22:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	69		14 - 128	11/10/17 12:42	11/13/17 22:14	1
DCB Decachlorobiphenyl	79		10 - 132	11/10/17 12:42	11/13/17 22:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.5		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	16.5		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SD01-(3.51-4.3')

Lab Sample ID: 240-87591-8

Date Collected: 11/01/17 12:19

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 78.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	301	U	627	301	ug/Kg	☼	11/10/17 12:42	11/13/17 22:32	10
Aroclor-1221	288	U	627	288	ug/Kg	☼	11/10/17 12:42	11/13/17 22:32	10
Aroclor-1232	201	U	627	201	ug/Kg	☼	11/10/17 12:42	11/13/17 22:32	10
Aroclor-1242	13500		627	251	ug/Kg	☼	11/10/17 12:42	11/13/17 22:32	10
Aroclor-1248	213	U	627	213	ug/Kg	☼	11/10/17 12:42	11/13/17 22:32	10
Aroclor-1254	3370	p	627	175	ug/Kg	☼	11/10/17 12:42	11/13/17 22:32	10
Aroclor-1260	226	U	627	226	ug/Kg	☼	11/10/17 12:42	11/13/17 22:32	10
Aroclor-1262	100	U	627	100	ug/Kg	☼	11/10/17 12:42	11/13/17 22:32	10
Aroclor-1268	251	U	627	251	ug/Kg	☼	11/10/17 12:42	11/13/17 22:32	10
Polychlorinated biphenyls, Total	18600		627	301	ug/Kg	☼	11/10/17 12:42	11/13/17 22:32	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	166	X	14 - 128	11/10/17 12:42	11/13/17 22:32	10
Tetrachloro-m-xylene	82	p	14 - 128	11/10/17 12:42	11/13/17 22:32	10
DCB Decachlorobiphenyl	40	p	10 - 132	11/10/17 12:42	11/13/17 22:32	10
DCB Decachlorobiphenyl	107		10 - 132	11/10/17 12:42	11/13/17 22:32	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.4		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	21.6		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SD01-(3.51-4.3')-DUP

Lab Sample ID: 240-87591-9

Date Collected: 11/01/17 12:19

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 79.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	299	U	623	299	ug/Kg	☼	11/10/17 12:42	11/13/17 22:50	10
Aroclor-1221	287	U	623	287	ug/Kg	☼	11/10/17 12:42	11/13/17 22:50	10
Aroclor-1232	199	U	623	199	ug/Kg	☼	11/10/17 12:42	11/13/17 22:50	10
Aroclor-1242	12300		623	249	ug/Kg	☼	11/10/17 12:42	11/13/17 22:50	10
Aroclor-1248	212	U	623	212	ug/Kg	☼	11/10/17 12:42	11/13/17 22:50	10
Aroclor-1254	1330	p	623	175	ug/Kg	☼	11/10/17 12:42	11/13/17 22:50	10
Aroclor-1260	224	U	623	224	ug/Kg	☼	11/10/17 12:42	11/13/17 22:50	10
Aroclor-1262	99.7	U	623	99.7	ug/Kg	☼	11/10/17 12:42	11/13/17 22:50	10
Aroclor-1268	249	U	623	249	ug/Kg	☼	11/10/17 12:42	11/13/17 22:50	10
Polychlorinated biphenyls, Total	14500		623	299	ug/Kg	☼	11/10/17 12:42	11/13/17 22:50	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	203	X	14 - 128	11/10/17 12:42	11/13/17 22:50	10
Tetrachloro-m-xylene	106	p	14 - 128	11/10/17 12:42	11/13/17 22:50	10
DCB Decachlorobiphenyl	53	p	10 - 132	11/10/17 12:42	11/13/17 22:50	10
DCB Decachlorobiphenyl	148	X	10 - 132	11/10/17 12:42	11/13/17 22:50	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.7		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	20.3		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SD02-(0-2.20')

Lab Sample ID: 240-87591-10

Date Collected: 11/01/17 13:35

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 78.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.6	U	63.8	30.6	ug/Kg	☼	11/10/17 12:42	11/13/17 23:09	1
Aroclor-1221	29.3	U	63.8	29.3	ug/Kg	☼	11/10/17 12:42	11/13/17 23:09	1
Aroclor-1232	20.4	U	63.8	20.4	ug/Kg	☼	11/10/17 12:42	11/13/17 23:09	1
Aroclor-1242	25.5	U	63.8	25.5	ug/Kg	☼	11/10/17 12:42	11/13/17 23:09	1
Aroclor-1248	914		63.8	21.7	ug/Kg	☼	11/10/17 12:42	11/13/17 23:09	1
Aroclor-1254	17.9	U	63.8	17.9	ug/Kg	☼	11/10/17 12:42	11/13/17 23:09	1
Aroclor-1260	23.0	U	63.8	23.0	ug/Kg	☼	11/10/17 12:42	11/13/17 23:09	1
Aroclor-1262	10.2	U	63.8	10.2	ug/Kg	☼	11/10/17 12:42	11/13/17 23:09	1
Aroclor-1268	25.5	U	63.8	25.5	ug/Kg	☼	11/10/17 12:42	11/13/17 23:09	1
Polychlorinated biphenyls, Total	914		63.8	30.6	ug/Kg	☼	11/10/17 12:42	11/13/17 23:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	76		14 - 128	11/10/17 12:42	11/13/17 23:09	1
DCB Decachlorobiphenyl	92		10 - 132	11/10/17 12:42	11/13/17 23:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.2		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	21.8		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SD02-(2.20-2.41')

Lab Sample ID: 240-87591-11

Date Collected: 11/01/17 13:40

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 83.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	142	U	296	142	ug/Kg	☼	11/10/17 12:42	11/14/17 00:04	5
Aroclor-1221	136	U	296	136	ug/Kg	☼	11/10/17 12:42	11/14/17 00:04	5
Aroclor-1232	94.8	U	296	94.8	ug/Kg	☼	11/10/17 12:42	11/14/17 00:04	5
Aroclor-1242	119	U	296	119	ug/Kg	☼	11/10/17 12:42	11/14/17 00:04	5
Aroclor-1248	2770		296	101	ug/Kg	☼	11/10/17 12:42	11/14/17 00:04	5
Aroclor-1254	83.0	U	296	83.0	ug/Kg	☼	11/10/17 12:42	11/14/17 00:04	5
Aroclor-1260	107	U	296	107	ug/Kg	☼	11/10/17 12:42	11/14/17 00:04	5
Aroclor-1262	47.4	U	296	47.4	ug/Kg	☼	11/10/17 12:42	11/14/17 00:04	5
Aroclor-1268	119	U	296	119	ug/Kg	☼	11/10/17 12:42	11/14/17 00:04	5
Polychlorinated biphenyls, Total	2770		296	142	ug/Kg	☼	11/10/17 12:42	11/14/17 00:04	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	93		14 - 128	11/10/17 12:42	11/14/17 00:04	5
DCB Decachlorobiphenyl	128		10 - 132	11/10/17 12:42	11/14/17 00:04	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.1		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	16.9		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SD02-(2.41-3.54')

Lab Sample ID: 240-87591-12

Date Collected: 11/01/17 13:45

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 75.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	158	U	329	158	ug/Kg	☼	11/10/17 12:42	11/14/17 00:22	5
Aroclor-1221	151	U	329	151	ug/Kg	☼	11/10/17 12:42	11/14/17 00:22	5
Aroclor-1232	105	U	329	105	ug/Kg	☼	11/10/17 12:42	11/14/17 00:22	5
Aroclor-1242	132	U	329	132	ug/Kg	☼	11/10/17 12:42	11/14/17 00:22	5
Aroclor-1248	2890		329	112	ug/Kg	☼	11/10/17 12:42	11/14/17 00:22	5
Aroclor-1254	92.1	U	329	92.1	ug/Kg	☼	11/10/17 12:42	11/14/17 00:22	5
Aroclor-1260	118	U	329	118	ug/Kg	☼	11/10/17 12:42	11/14/17 00:22	5
Aroclor-1262	52.6	U	329	52.6	ug/Kg	☼	11/10/17 12:42	11/14/17 00:22	5
Aroclor-1268	132	U	329	132	ug/Kg	☼	11/10/17 12:42	11/14/17 00:22	5
Polychlorinated biphenyls, Total	2890		329	158	ug/Kg	☼	11/10/17 12:42	11/14/17 00:22	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	78		14 - 128	11/10/17 12:42	11/14/17 00:22	5
DCB Decachlorobiphenyl	100		10 - 132	11/10/17 12:42	11/14/17 00:22	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	75.0		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	25.0		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SD02-(3.54-4.30')

Lab Sample ID: 240-87591-13

Date Collected: 11/01/17 14:00

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 67.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	179	U	372	179	ug/Kg	☼	11/10/17 12:42	11/14/17 00:41	5
Aroclor-1221	171	U	372	171	ug/Kg	☼	11/10/17 12:42	11/14/17 00:41	5
Aroclor-1232	119	U	372	119	ug/Kg	☼	11/10/17 12:42	11/14/17 00:41	5
Aroclor-1242	149	U	372	149	ug/Kg	☼	11/10/17 12:42	11/14/17 00:41	5
Aroclor-1248	4640		372	126	ug/Kg	☼	11/10/17 12:42	11/14/17 00:41	5
Aroclor-1254	104	U	372	104	ug/Kg	☼	11/10/17 12:42	11/14/17 00:41	5
Aroclor-1260	139	J	372	134	ug/Kg	☼	11/10/17 12:42	11/14/17 00:41	5
Aroclor-1262	59.5	U	372	59.5	ug/Kg	☼	11/10/17 12:42	11/14/17 00:41	5
Aroclor-1268	149	U	372	149	ug/Kg	☼	11/10/17 12:42	11/14/17 00:41	5
Polychlorinated biphenyls, Total	4780		372	179	ug/Kg	☼	11/10/17 12:42	11/14/17 00:41	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	100		14 - 128	11/10/17 12:42	11/14/17 00:41	5
DCB Decachlorobiphenyl	113		10 - 132	11/10/17 12:42	11/14/17 00:41	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	67.8		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	32.2		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.47-SD02-(0-0.33')

Lab Sample ID: 240-87591-14

Date Collected: 10/30/17 14:10

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 77.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.3	U	63.0	30.3	ug/Kg	☼	11/10/17 12:42	11/14/17 00:59	1
Aroclor-1221	29.0	U	63.0	29.0	ug/Kg	☼	11/10/17 12:42	11/14/17 00:59	1
Aroclor-1232	20.2	U	63.0	20.2	ug/Kg	☼	11/10/17 12:42	11/14/17 00:59	1
Aroclor-1242	25.2	U	63.0	25.2	ug/Kg	☼	11/10/17 12:42	11/14/17 00:59	1
Aroclor-1248	1090		63.0	21.4	ug/Kg	☼	11/10/17 12:42	11/14/17 00:59	1
Aroclor-1254	17.7	U	63.0	17.7	ug/Kg	☼	11/10/17 12:42	11/14/17 00:59	1
Aroclor-1260	48.6	J	63.0	22.7	ug/Kg	☼	11/10/17 12:42	11/14/17 00:59	1
Aroclor-1262	10.1	U	63.0	10.1	ug/Kg	☼	11/10/17 12:42	11/14/17 00:59	1
Aroclor-1268	25.2	U	63.0	25.2	ug/Kg	☼	11/10/17 12:42	11/14/17 00:59	1
Polychlorinated biphenyls, Total	1140		63.0	30.3	ug/Kg	☼	11/10/17 12:42	11/14/17 00:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	68		14 - 128	11/10/17 12:42	11/14/17 00:59	1
DCB Decachlorobiphenyl	76		10 - 132	11/10/17 12:42	11/14/17 00:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	77.7		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	22.3		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.47-SD02-(33-1.46')

Lab Sample ID: 240-87591-15

Date Collected: 10/30/17 14:15

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 61.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	196	U	409	196	ug/Kg	☼	11/10/17 12:42	11/14/17 01:17	5
Aroclor-1221	188	U	409	188	ug/Kg	☼	11/10/17 12:42	11/14/17 01:17	5
Aroclor-1232	131	U	409	131	ug/Kg	☼	11/10/17 12:42	11/14/17 01:17	5
Aroclor-1242	163	U	409	163	ug/Kg	☼	11/10/17 12:42	11/14/17 01:17	5
Aroclor-1248	2740		409	139	ug/Kg	☼	11/10/17 12:42	11/14/17 01:17	5
Aroclor-1254	114	U	409	114	ug/Kg	☼	11/10/17 12:42	11/14/17 01:17	5
Aroclor-1260	149	J	409	147	ug/Kg	☼	11/10/17 12:42	11/14/17 01:17	5
Aroclor-1262	65.4	U	409	65.4	ug/Kg	☼	11/10/17 12:42	11/14/17 01:17	5
Aroclor-1268	163	U	409	163	ug/Kg	☼	11/10/17 12:42	11/14/17 01:17	5
Polychlorinated biphenyls, Total	2890		409	196	ug/Kg	☼	11/10/17 12:42	11/14/17 01:17	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		14 - 128	11/10/17 12:42	11/14/17 01:17	5
DCB Decachlorobiphenyl	87		10 - 132	11/10/17 12:42	11/14/17 01:17	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	61.2		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	38.8		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.47-SD02-(1.46-1.96')

Lab Sample ID: 240-87591-16

Date Collected: 10/30/17 14:20

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 75.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	32.0	U	66.6	32.0	ug/Kg	☼	11/10/17 12:42	11/14/17 02:31	1
Aroclor-1221	30.6	U	66.6	30.6	ug/Kg	☼	11/10/17 12:42	11/14/17 02:31	1
Aroclor-1232	21.3	U	66.6	21.3	ug/Kg	☼	11/10/17 12:42	11/14/17 02:31	1
Aroclor-1242	26.6	U	66.6	26.6	ug/Kg	☼	11/10/17 12:42	11/14/17 02:31	1
Aroclor-1248	1380		66.6	22.6	ug/Kg	☼	11/10/17 12:42	11/14/17 02:31	1
Aroclor-1254	18.6	U	66.6	18.6	ug/Kg	☼	11/10/17 12:42	11/14/17 02:31	1
Aroclor-1260	81.5		66.6	24.0	ug/Kg	☼	11/10/17 12:42	11/14/17 02:31	1
Aroclor-1262	10.7	U	66.6	10.7	ug/Kg	☼	11/10/17 12:42	11/14/17 02:31	1
Aroclor-1268	26.6	U	66.6	26.6	ug/Kg	☼	11/10/17 12:42	11/14/17 02:31	1
Polychlorinated biphenyls, Total	1460		66.6	32.0	ug/Kg	☼	11/10/17 12:42	11/14/17 02:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	64		14 - 128	11/10/17 12:42	11/14/17 02:31	1
DCB Decachlorobiphenyl	71		10 - 132	11/10/17 12:42	11/14/17 02:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	75.8		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	24.2		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.47-SD02-(1.96-3.13')

Lab Sample ID: 240-87591-17

Date Collected: 10/30/17 14:25

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 78.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	154	U	322	154	ug/Kg	☼	11/10/17 12:42	11/14/17 02:49	5
Aroclor-1221	148	U	322	148	ug/Kg	☼	11/10/17 12:42	11/14/17 02:49	5
Aroclor-1232	103	U	322	103	ug/Kg	☼	11/10/17 12:42	11/14/17 02:49	5
Aroclor-1242	129	U	322	129	ug/Kg	☼	11/10/17 12:42	11/14/17 02:49	5
Aroclor-1248	2480		322	109	ug/Kg	☼	11/10/17 12:42	11/14/17 02:49	5
Aroclor-1254	90.1	U	322	90.1	ug/Kg	☼	11/10/17 12:42	11/14/17 02:49	5
Aroclor-1260	116	U	322	116	ug/Kg	☼	11/10/17 12:42	11/14/17 02:49	5
Aroclor-1262	51.5	U	322	51.5	ug/Kg	☼	11/10/17 12:42	11/14/17 02:49	5
Aroclor-1268	129	U	322	129	ug/Kg	☼	11/10/17 12:42	11/14/17 02:49	5
Polychlorinated biphenyls, Total	2480		322	154	ug/Kg	☼	11/10/17 12:42	11/14/17 02:49	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	75		14 - 128	11/10/17 12:42	11/14/17 02:49	5
DCB Decachlorobiphenyl	89		10 - 132	11/10/17 12:42	11/14/17 02:49	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.4		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	21.6		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.51-SD02-(0-0.36')

Lab Sample ID: 240-87591-18

Date Collected: 11/01/17 14:40

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 78.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.3	U	63.1	30.3	ug/Kg	☼	11/10/17 12:42	11/14/17 03:07	1
Aroclor-1221	29.0	U	63.1	29.0	ug/Kg	☼	11/10/17 12:42	11/14/17 03:07	1
Aroclor-1232	20.2	U	63.1	20.2	ug/Kg	☼	11/10/17 12:42	11/14/17 03:07	1
Aroclor-1242	25.2	U	63.1	25.2	ug/Kg	☼	11/10/17 12:42	11/14/17 03:07	1
Aroclor-1248	616		63.1	21.4	ug/Kg	☼	11/10/17 12:42	11/14/17 03:07	1
Aroclor-1254	17.7	U	63.1	17.7	ug/Kg	☼	11/10/17 12:42	11/14/17 03:07	1
Aroclor-1260	27.8	J p	63.1	22.7	ug/Kg	☼	11/10/17 12:42	11/14/17 03:07	1
Aroclor-1262	10.1	U	63.1	10.1	ug/Kg	☼	11/10/17 12:42	11/14/17 03:07	1
Aroclor-1268	25.2	U	63.1	25.2	ug/Kg	☼	11/10/17 12:42	11/14/17 03:07	1
Polychlorinated biphenyls, Total	644		63.1	30.3	ug/Kg	☼	11/10/17 12:42	11/14/17 03:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	67		14 - 128	11/10/17 12:42	11/14/17 03:07	1
DCB Decachlorobiphenyl	79		10 - 132	11/10/17 12:42	11/14/17 03:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.0		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	22.0		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.51-SD02-(0.36-0.68')

Lab Sample ID: 240-87591-19

Date Collected: 11/01/17 14:45

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 62.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	38.5	U	80.2	38.5	ug/Kg	☼	11/10/17 12:42	11/14/17 03:26	1
Aroclor-1221	36.9	U	80.2	36.9	ug/Kg	☼	11/10/17 12:42	11/14/17 03:26	1
Aroclor-1232	25.7	U	80.2	25.7	ug/Kg	☼	11/10/17 12:42	11/14/17 03:26	1
Aroclor-1242	32.1	U	80.2	32.1	ug/Kg	☼	11/10/17 12:42	11/14/17 03:26	1
Aroclor-1248	1310		80.2	27.3	ug/Kg	☼	11/10/17 12:42	11/14/17 03:26	1
Aroclor-1254	22.5	U	80.2	22.5	ug/Kg	☼	11/10/17 12:42	11/14/17 03:26	1
Aroclor-1260	42.6	J p	80.2	28.9	ug/Kg	☼	11/10/17 12:42	11/14/17 03:26	1
Aroclor-1262	12.8	U	80.2	12.8	ug/Kg	☼	11/10/17 12:42	11/14/17 03:26	1
Aroclor-1268	32.1	U	80.2	32.1	ug/Kg	☼	11/10/17 12:42	11/14/17 03:26	1
Polychlorinated biphenyls, Total	1350		80.2	38.5	ug/Kg	☼	11/10/17 12:42	11/14/17 03:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	70		14 - 128	11/10/17 12:42	11/14/17 03:26	1
DCB Decachlorobiphenyl	121		10 - 132	11/10/17 12:42	11/14/17 03:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	62.7		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	37.3		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.51-SD02-(0.68-1.65')

Lab Sample ID: 240-87591-20

Date Collected: 11/01/17 14:50

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 44.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	55.0	U	115	55.0	ug/Kg	☼	11/11/17 10:25	11/13/17 12:08	1
Aroclor-1221	52.7	U	115	52.7	ug/Kg	☼	11/11/17 10:25	11/13/17 12:08	1
Aroclor-1232	36.7	U	115	36.7	ug/Kg	☼	11/11/17 10:25	11/13/17 12:08	1
Aroclor-1242	45.8	U	115	45.8	ug/Kg	☼	11/11/17 10:25	11/13/17 12:08	1
Aroclor-1248	552	p	115	39.0	ug/Kg	☼	11/11/17 10:25	11/13/17 12:08	1
Aroclor-1254	32.1	U	115	32.1	ug/Kg	☼	11/11/17 10:25	11/13/17 12:08	1
Aroclor-1260	41.2	U	115	41.2	ug/Kg	☼	11/11/17 10:25	11/13/17 12:08	1
Aroclor-1262	18.3	U	115	18.3	ug/Kg	☼	11/11/17 10:25	11/13/17 12:08	1
Aroclor-1268	45.8	U	115	45.8	ug/Kg	☼	11/11/17 10:25	11/13/17 12:08	1
Polychlorinated biphenyls, Total	552	p	115	55.0	ug/Kg	☼	11/11/17 10:25	11/13/17 12:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	48	p	14 - 128	11/11/17 10:25	11/13/17 12:08	1
DCB Decachlorobiphenyl	47	p	10 - 132	11/11/17 10:25	11/13/17 12:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	44.5		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	55.5		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.51-SD02-(1.65-1.75')

Lab Sample ID: 240-87591-21

Date Collected: 11/01/17 14:55

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 57.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	42.9	U	89.3	42.9	ug/Kg	☼	11/11/17 10:25	11/13/17 13:03	1
Aroclor-1221	41.1	U	89.3	41.1	ug/Kg	☼	11/11/17 10:25	11/13/17 13:03	1
Aroclor-1232	28.6	U	89.3	28.6	ug/Kg	☼	11/11/17 10:25	11/13/17 13:03	1
Aroclor-1242	35.7	U	89.3	35.7	ug/Kg	☼	11/11/17 10:25	11/13/17 13:03	1
Aroclor-1248	953		89.3	30.4	ug/Kg	☼	11/11/17 10:25	11/13/17 13:03	1
Aroclor-1254	25.0	U	89.3	25.0	ug/Kg	☼	11/11/17 10:25	11/13/17 13:03	1
Aroclor-1260	57.6	J	89.3	32.2	ug/Kg	☼	11/11/17 10:25	11/13/17 13:03	1
Aroclor-1262	14.3	U	89.3	14.3	ug/Kg	☼	11/11/17 10:25	11/13/17 13:03	1
Aroclor-1268	35.7	U	89.3	35.7	ug/Kg	☼	11/11/17 10:25	11/13/17 13:03	1
Polychlorinated biphenyls, Total	1010		89.3	42.9	ug/Kg	☼	11/11/17 10:25	11/13/17 13:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	61		14 - 128	11/11/17 10:25	11/13/17 13:03	1
DCB Decachlorobiphenyl	60	p	10 - 132	11/11/17 10:25	11/13/17 13:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	57.4		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	42.6		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.60-SD02-(0-1.76')

Lab Sample ID: 240-87591-22

Date Collected: 10/31/17 11:40

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 83.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.9	U	58.1	27.9	ug/Kg	☼	11/11/17 09:19	11/13/17 11:54	1
Aroclor-1221	26.7	U	58.1	26.7	ug/Kg	☼	11/11/17 09:19	11/13/17 11:54	1
Aroclor-1232	18.6	U	58.1	18.6	ug/Kg	☼	11/11/17 09:19	11/13/17 11:54	1
Aroclor-1242	23.3	U	58.1	23.3	ug/Kg	☼	11/11/17 09:19	11/13/17 11:54	1
Aroclor-1248	1030		58.1	19.8	ug/Kg	☼	11/11/17 09:19	11/13/17 11:54	1
Aroclor-1254	16.3	U	58.1	16.3	ug/Kg	☼	11/11/17 09:19	11/13/17 11:54	1
Aroclor-1260	25.4	J	58.1	20.9	ug/Kg	☼	11/11/17 09:19	11/13/17 11:54	1
Aroclor-1262	9.30	U	58.1	9.30	ug/Kg	☼	11/11/17 09:19	11/13/17 11:54	1
Aroclor-1268	23.3	U	58.1	23.3	ug/Kg	☼	11/11/17 09:19	11/13/17 11:54	1
Polychlorinated biphenyls, Total	1060		58.1	27.9	ug/Kg	☼	11/11/17 09:19	11/13/17 11:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		14 - 128	11/11/17 09:19	11/13/17 11:54	1
DCB Decachlorobiphenyl	91		10 - 132	11/11/17 09:19	11/13/17 11:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.7		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	16.3		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.60-SD02-(1.76-2.22')

Lab Sample ID: 240-87591-23

Date Collected: 10/31/17 11:41

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 78.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	1480	U	3090	1480	ug/Kg	☼	11/11/17 09:19	11/13/17 12:53	50
Aroclor-1221	1420	U	3090	1420	ug/Kg	☼	11/11/17 09:19	11/13/17 12:53	50
Aroclor-1232	990	U	3090	990	ug/Kg	☼	11/11/17 09:19	11/13/17 12:53	50
Aroclor-1242	1240	U	3090	1240	ug/Kg	☼	11/11/17 09:19	11/13/17 12:53	50
Aroclor-1248	23800		3090	1050	ug/Kg	☼	11/11/17 09:19	11/13/17 12:53	50
Aroclor-1254	866	U	3090	866	ug/Kg	☼	11/11/17 09:19	11/13/17 12:53	50
Aroclor-1260	1110	U	3090	1110	ug/Kg	☼	11/11/17 09:19	11/13/17 12:53	50
Aroclor-1262	495	U	3090	495	ug/Kg	☼	11/11/17 09:19	11/13/17 12:53	50
Aroclor-1268	1240	U	3090	1240	ug/Kg	☼	11/11/17 09:19	11/13/17 12:53	50
Polychlorinated biphenyls, Total	23800		3090	1480	ug/Kg	☼	11/11/17 09:19	11/13/17 12:53	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	145	X	14 - 128	11/11/17 09:19	11/13/17 12:53	50
DCB Decachlorobiphenyl	51	p	10 - 132	11/11/17 09:19	11/13/17 12:53	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.6		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	21.4		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.60-SD02-(2.22-2.39')

Lab Sample ID: 240-87591-24

Date Collected: 10/31/17 11:42

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 79.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	608	U	1270	608	ug/Kg	☼	11/11/17 09:19	11/13/17 13:12	20
Aroclor-1221	583	U	1270	583	ug/Kg	☼	11/11/17 09:19	11/13/17 13:12	20
Aroclor-1232	405	U	1270	405	ug/Kg	☼	11/11/17 09:19	11/13/17 13:12	20
Aroclor-1242	8090		1270	507	ug/Kg	☼	11/11/17 09:19	11/13/17 13:12	20
Aroclor-1248	431	U	1270	431	ug/Kg	☼	11/11/17 09:19	11/13/17 13:12	20
Aroclor-1254	1190	J	1270	355	ug/Kg	☼	11/11/17 09:19	11/13/17 13:12	20
Aroclor-1260	456	U	1270	456	ug/Kg	☼	11/11/17 09:19	11/13/17 13:12	20
Aroclor-1262	203	U	1270	203	ug/Kg	☼	11/11/17 09:19	11/13/17 13:12	20
Aroclor-1268	507	U	1270	507	ug/Kg	☼	11/11/17 09:19	11/13/17 13:12	20
Polychlorinated biphenyls, Total	9280		1270	608	ug/Kg	☼	11/11/17 09:19	11/13/17 13:12	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	98		14 - 128	11/11/17 09:19	11/13/17 13:12	20
DCB Decachlorobiphenyl	94		10 - 132	11/11/17 09:19	11/13/17 13:12	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.7		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	20.3		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.60-SD02-(2.39-2.63')

Lab Sample ID: 240-87591-25

Date Collected: 10/31/17 11:43

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 80.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.0	U	62.5	30.0	ug/Kg	☼	11/11/17 09:19	11/13/17 13:33	1
Aroclor-1221	28.7	U	62.5	28.7	ug/Kg	☼	11/11/17 09:19	11/13/17 13:33	1
Aroclor-1232	20.0	U	62.5	20.0	ug/Kg	☼	11/11/17 09:19	11/13/17 13:33	1
Aroclor-1242	507		62.5	25.0	ug/Kg	☼	11/11/17 09:19	11/13/17 13:33	1
Aroclor-1248	21.2	U	62.5	21.2	ug/Kg	☼	11/11/17 09:19	11/13/17 13:33	1
Aroclor-1254	57.9 J p		62.5	17.5	ug/Kg	☼	11/11/17 09:19	11/13/17 13:33	1
Aroclor-1260	22.5	U	62.5	22.5	ug/Kg	☼	11/11/17 09:19	11/13/17 13:33	1
Aroclor-1262	10.0	U	62.5	10.0	ug/Kg	☼	11/11/17 09:19	11/13/17 13:33	1
Aroclor-1268	25.0	U	62.5	25.0	ug/Kg	☼	11/11/17 09:19	11/13/17 13:33	1
Polychlorinated biphenyls, Total	565		62.5	30.0	ug/Kg	☼	11/11/17 09:19	11/13/17 13:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	85		14 - 128	11/11/17 09:19	11/13/17 13:33	1
DCB Decachlorobiphenyl	97		10 - 132	11/11/17 09:19	11/13/17 13:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.3		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	19.7		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.60-SD02-(2.63-3.30')

Lab Sample ID: 240-87591-26

Date Collected: 10/31/17 11:44

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 83.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	281	U	586	281	ug/Kg	☼	11/11/17 09:19	11/13/17 13:54	10
Aroclor-1221	270	U	586	270	ug/Kg	☼	11/11/17 09:19	11/13/17 13:54	10
Aroclor-1232	188	U	586	188	ug/Kg	☼	11/11/17 09:19	11/13/17 13:54	10
Aroclor-1242	4420		586	234	ug/Kg	☼	11/11/17 09:19	11/13/17 13:54	10
Aroclor-1248	199	U	586	199	ug/Kg	☼	11/11/17 09:19	11/13/17 13:54	10
Aroclor-1254	444	J	586	164	ug/Kg	☼	11/11/17 09:19	11/13/17 13:54	10
Aroclor-1260	211	U	586	211	ug/Kg	☼	11/11/17 09:19	11/13/17 13:54	10
Aroclor-1262	93.8	U	586	93.8	ug/Kg	☼	11/11/17 09:19	11/13/17 13:54	10
Aroclor-1268	234	U	586	234	ug/Kg	☼	11/11/17 09:19	11/13/17 13:54	10
Polychlorinated biphenyls, Total	4860		586	281	ug/Kg	☼	11/11/17 09:19	11/13/17 13:54	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	93		14 - 128	11/11/17 09:19	11/13/17 13:54	10
DCB Decachlorobiphenyl	191	X	10 - 132	11/11/17 09:19	11/13/17 13:54	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.2		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	16.8		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SD03-(0-2.06')

Lab Sample ID: 240-87591-27

Date Collected: 10/31/17 13:15

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 78.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.1	U	62.6	30.1	ug/Kg	☼	11/11/17 09:19	11/13/17 14:13	1
Aroclor-1221	28.8	U	62.6	28.8	ug/Kg	☼	11/11/17 09:19	11/13/17 14:13	1
Aroclor-1232	20.0	U	62.6	20.0	ug/Kg	☼	11/11/17 09:19	11/13/17 14:13	1
Aroclor-1242	25.1	U	62.6	25.1	ug/Kg	☼	11/11/17 09:19	11/13/17 14:13	1
Aroclor-1248	836		62.6	21.3	ug/Kg	☼	11/11/17 09:19	11/13/17 14:13	1
Aroclor-1254	17.5	U	62.6	17.5	ug/Kg	☼	11/11/17 09:19	11/13/17 14:13	1
Aroclor-1260	44.6	J	62.6	22.5	ug/Kg	☼	11/11/17 09:19	11/13/17 14:13	1
Aroclor-1262	10.0	U	62.6	10.0	ug/Kg	☼	11/11/17 09:19	11/13/17 14:13	1
Aroclor-1268	25.1	U	62.6	25.1	ug/Kg	☼	11/11/17 09:19	11/13/17 14:13	1
Polychlorinated biphenyls, Total	881		62.6	30.1	ug/Kg	☼	11/11/17 09:19	11/13/17 14:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		14 - 128	11/11/17 09:19	11/13/17 14:13	1
DCB Decachlorobiphenyl	88		10 - 132	11/11/17 09:19	11/13/17 14:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.0		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	22.0		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SD03-(2.06-2.40')

Lab Sample ID: 240-87591-28

Date Collected: 10/31/17 13:25

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 81.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.1	U	60.7	29.1	ug/Kg	☼	11/11/17 09:19	11/13/17 14:33	1
Aroclor-1221	27.9	U	60.7	27.9	ug/Kg	☼	11/11/17 09:19	11/13/17 14:33	1
Aroclor-1232	19.4	U	60.7	19.4	ug/Kg	☼	11/11/17 09:19	11/13/17 14:33	1
Aroclor-1242	1450		60.7	24.3	ug/Kg	☼	11/11/17 09:19	11/13/17 14:33	1
Aroclor-1248	20.6	U	60.7	20.6	ug/Kg	☼	11/11/17 09:19	11/13/17 14:33	1
Aroclor-1254	157 p		60.7	17.0	ug/Kg	☼	11/11/17 09:19	11/13/17 14:33	1
Aroclor-1260	21.8	U	60.7	21.8	ug/Kg	☼	11/11/17 09:19	11/13/17 14:33	1
Aroclor-1262	9.71	U	60.7	9.71	ug/Kg	☼	11/11/17 09:19	11/13/17 14:33	1
Aroclor-1268	24.3	U	60.7	24.3	ug/Kg	☼	11/11/17 09:19	11/13/17 14:33	1
Polychlorinated biphenyls, Total	1610		60.7	29.1	ug/Kg	☼	11/11/17 09:19	11/13/17 14:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	89		14 - 128	11/11/17 09:19	11/13/17 14:33	1
DCB Decachlorobiphenyl	84		10 - 132	11/11/17 09:19	11/13/17 14:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.9		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	18.1		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SD03-(2.40-3.50')

Lab Sample ID: 240-87591-29

Date Collected: 10/31/17 13:30

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 80.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	295	U	615	295	ug/Kg	☼	11/11/17 09:19	11/13/17 14:52	10
Aroclor-1221	283	U	615	283	ug/Kg	☼	11/11/17 09:19	11/13/17 14:52	10
Aroclor-1232	197	U	615	197	ug/Kg	☼	11/11/17 09:19	11/13/17 14:52	10
Aroclor-1242	12100		615	246	ug/Kg	☼	11/11/17 09:19	11/13/17 14:52	10
Aroclor-1248	209	U	615	209	ug/Kg	☼	11/11/17 09:19	11/13/17 14:52	10
Aroclor-1254	1960	p	615	172	ug/Kg	☼	11/11/17 09:19	11/13/17 14:52	10
Aroclor-1260	221	U	615	221	ug/Kg	☼	11/11/17 09:19	11/13/17 14:52	10
Aroclor-1262	98.4	U	615	98.4	ug/Kg	☼	11/11/17 09:19	11/13/17 14:52	10
Aroclor-1268	246	U	615	246	ug/Kg	☼	11/11/17 09:19	11/13/17 14:52	10
Polychlorinated biphenyls, Total	14100		615	295	ug/Kg	☼	11/11/17 09:19	11/13/17 14:52	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	218	X	14 - 128	11/11/17 09:19	11/13/17 14:52	10
DCB Decachlorobiphenyl	128		10 - 132	11/11/17 09:19	11/13/17 14:52	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.2		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	19.8		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SD03-(3.50-3.84')

Lab Sample ID: 240-87591-30

Date Collected: 10/31/17 13:35

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 79.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	296	U	616	296	ug/Kg	☼	11/11/17 09:19	11/13/17 15:13	10
Aroclor-1221	283	U	616	283	ug/Kg	☼	11/11/17 09:19	11/13/17 15:13	10
Aroclor-1232	197	U	616	197	ug/Kg	☼	11/11/17 09:19	11/13/17 15:13	10
Aroclor-1242	6570		616	246	ug/Kg	☼	11/11/17 09:19	11/13/17 15:13	10
Aroclor-1248	210	U	616	210	ug/Kg	☼	11/11/17 09:19	11/13/17 15:13	10
Aroclor-1254	1010		616	173	ug/Kg	☼	11/11/17 09:19	11/13/17 15:13	10
Aroclor-1260	222	U	616	222	ug/Kg	☼	11/11/17 09:19	11/13/17 15:13	10
Aroclor-1262	98.6	U	616	98.6	ug/Kg	☼	11/11/17 09:19	11/13/17 15:13	10
Aroclor-1268	246	U	616	246	ug/Kg	☼	11/11/17 09:19	11/13/17 15:13	10
Polychlorinated biphenyls, Total	7580		616	296	ug/Kg	☼	11/11/17 09:19	11/13/17 15:13	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	170	X	14 - 128	11/11/17 09:19	11/13/17 15:13	10
DCB Decachlorobiphenyl	114		10 - 132	11/11/17 09:19	11/13/17 15:13	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.7		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	20.3		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SD03-(3.84-4.05')

Lab Sample ID: 240-87591-31

Date Collected: 10/31/17 13:40

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 82.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	283	U	590	283	ug/Kg	☼	11/11/17 09:19	11/13/17 16:32	10
Aroclor-1221	271	U	590	271	ug/Kg	☼	11/11/17 09:19	11/13/17 16:32	10
Aroclor-1232	189	U	590	189	ug/Kg	☼	11/11/17 09:19	11/13/17 16:32	10
Aroclor-1242	6980		590	236	ug/Kg	☼	11/11/17 09:19	11/13/17 16:32	10
Aroclor-1248	200	U	590	200	ug/Kg	☼	11/11/17 09:19	11/13/17 16:32	10
Aroclor-1254	1440		590	165	ug/Kg	☼	11/11/17 09:19	11/13/17 16:32	10
Aroclor-1260	212	U	590	212	ug/Kg	☼	11/11/17 09:19	11/13/17 16:32	10
Aroclor-1262	94.3	U	590	94.3	ug/Kg	☼	11/11/17 09:19	11/13/17 16:32	10
Aroclor-1268	236	U	590	236	ug/Kg	☼	11/11/17 09:19	11/13/17 16:32	10
Polychlorinated biphenyls, Total	8420		590	283	ug/Kg	☼	11/11/17 09:19	11/13/17 16:32	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	219	X	14 - 128	11/11/17 09:19	11/13/17 16:32	10
DCB Decachlorobiphenyl	122		10 - 132	11/11/17 09:19	11/13/17 16:32	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.6		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	17.4		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SD03-(4.05-4.30')

Lab Sample ID: 240-87591-32

Date Collected: 10/31/17 13:45

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 86.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	269	U	561	269	ug/Kg	☼	11/11/17 09:19	11/13/17 16:52	10
Aroclor-1221	258	U	561	258	ug/Kg	☼	11/11/17 09:19	11/13/17 16:52	10
Aroclor-1232	180	U	561	180	ug/Kg	☼	11/11/17 09:19	11/13/17 16:52	10
Aroclor-1242	4540		561	224	ug/Kg	☼	11/11/17 09:19	11/13/17 16:52	10
Aroclor-1248	191	U	561	191	ug/Kg	☼	11/11/17 09:19	11/13/17 16:52	10
Aroclor-1254	640		561	157	ug/Kg	☼	11/11/17 09:19	11/13/17 16:52	10
Aroclor-1260	202	U	561	202	ug/Kg	☼	11/11/17 09:19	11/13/17 16:52	10
Aroclor-1262	89.8	U	561	89.8	ug/Kg	☼	11/11/17 09:19	11/13/17 16:52	10
Aroclor-1268	224	U	561	224	ug/Kg	☼	11/11/17 09:19	11/13/17 16:52	10
Polychlorinated biphenyls, Total	5180		561	269	ug/Kg	☼	11/11/17 09:19	11/13/17 16:52	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	171	X	14 - 128	11/11/17 09:19	11/13/17 16:52	10
DCB Decachlorobiphenyl	108		10 - 132	11/11/17 09:19	11/13/17 16:52	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.9		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	13.1		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SD03-(2.40-3.50)-FD

Lab Sample ID: 240-87591-33

Date Collected: 10/31/17 13:30

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 80.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	299	U	623	299	ug/Kg	☼	11/11/17 09:19	11/13/17 17:12	10
Aroclor-1221	287	U	623	287	ug/Kg	☼	11/11/17 09:19	11/13/17 17:12	10
Aroclor-1232	199	U	623	199	ug/Kg	☼	11/11/17 09:19	11/13/17 17:12	10
Aroclor-1242	11000		623	249	ug/Kg	☼	11/11/17 09:19	11/13/17 17:12	10
Aroclor-1248	212	U	623	212	ug/Kg	☼	11/11/17 09:19	11/13/17 17:12	10
Aroclor-1254	1710		623	174	ug/Kg	☼	11/11/17 09:19	11/13/17 17:12	10
Aroclor-1260	224	U	623	224	ug/Kg	☼	11/11/17 09:19	11/13/17 17:12	10
Aroclor-1262	99.7	U	623	99.7	ug/Kg	☼	11/11/17 09:19	11/13/17 17:12	10
Aroclor-1268	249	U	623	249	ug/Kg	☼	11/11/17 09:19	11/13/17 17:12	10
Polychlorinated biphenyls, Total	12700		623	299	ug/Kg	☼	11/11/17 09:19	11/13/17 17:12	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	217	X	14 - 128	11/11/17 09:19	11/13/17 17:12	10
DCB Decachlorobiphenyl	108		10 - 132	11/11/17 09:19	11/13/17 17:12	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.0		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	20.0		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.82-SD02-(0-0.39')

Lab Sample ID: 240-87591-34

Date Collected: 10/31/17 10:50

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 81.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.8	U F1	62.0	29.8	ug/Kg	☼	11/11/17 10:25	11/13/17 11:14	1
Aroclor-1221	28.5	U	62.0	28.5	ug/Kg	☼	11/11/17 10:25	11/13/17 11:14	1
Aroclor-1232	19.8	U	62.0	19.8	ug/Kg	☼	11/11/17 10:25	11/13/17 11:14	1
Aroclor-1242	24.8	U	62.0	24.8	ug/Kg	☼	11/11/17 10:25	11/13/17 11:14	1
Aroclor-1248	436		62.0	21.1	ug/Kg	☼	11/11/17 10:25	11/13/17 11:14	1
Aroclor-1254	17.4	U	62.0	17.4	ug/Kg	☼	11/11/17 10:25	11/13/17 11:14	1
Aroclor-1260	22.3	U	62.0	22.3	ug/Kg	☼	11/11/17 10:25	11/13/17 11:14	1
Aroclor-1262	9.92	U	62.0	9.92	ug/Kg	☼	11/11/17 10:25	11/13/17 11:14	1
Aroclor-1268	24.8	U	62.0	24.8	ug/Kg	☼	11/11/17 10:25	11/13/17 11:14	1
Polychlorinated biphenyls, Total	436		62.0	29.8	ug/Kg	☼	11/11/17 10:25	11/13/17 11:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		14 - 128	11/11/17 10:25	11/13/17 11:14	1
DCB Decachlorobiphenyl	72		10 - 132	11/11/17 10:25	11/13/17 11:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.7		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	18.3		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.82-SD02-(0.39-0.70')

Lab Sample ID: 240-87591-35

Date Collected: 10/31/17 10:55

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 79.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.5	U	61.6	29.5	ug/Kg	☼	11/11/17 09:19	11/13/17 17:32	1
Aroclor-1221	28.3	U	61.6	28.3	ug/Kg	☼	11/11/17 09:19	11/13/17 17:32	1
Aroclor-1232	19.7	U	61.6	19.7	ug/Kg	☼	11/11/17 09:19	11/13/17 17:32	1
Aroclor-1242	24.6	U	61.6	24.6	ug/Kg	☼	11/11/17 09:19	11/13/17 17:32	1
Aroclor-1248	336		61.6	20.9	ug/Kg	☼	11/11/17 09:19	11/13/17 17:32	1
Aroclor-1254	17.2	U	61.6	17.2	ug/Kg	☼	11/11/17 09:19	11/13/17 17:32	1
Aroclor-1260	22.2	U	61.6	22.2	ug/Kg	☼	11/11/17 09:19	11/13/17 17:32	1
Aroclor-1262	9.85	U	61.6	9.85	ug/Kg	☼	11/11/17 09:19	11/13/17 17:32	1
Aroclor-1268	24.6	U	61.6	24.6	ug/Kg	☼	11/11/17 09:19	11/13/17 17:32	1
Polychlorinated biphenyls, Total	336		61.6	29.5	ug/Kg	☼	11/11/17 09:19	11/13/17 17:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		14 - 128	11/11/17 09:19	11/13/17 17:32	1
DCB Decachlorobiphenyl	78		10 - 132	11/11/17 09:19	11/13/17 17:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.9		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	20.1		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED.01.03-SD02-(0-0.98)

Lab Sample ID: 240-87591-36

Date Collected: 10/30/17 17:05

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 81.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.9	U	60.3	28.9	ug/Kg	☼	11/11/17 09:19	11/13/17 09:54	1
Aroclor-1221	27.7	U	60.3	27.7	ug/Kg	☼	11/11/17 09:19	11/13/17 09:54	1
Aroclor-1232	19.3	U	60.3	19.3	ug/Kg	☼	11/11/17 09:19	11/13/17 09:54	1
Aroclor-1242	1580		60.3	24.1	ug/Kg	☼	11/11/17 09:19	11/13/17 09:54	1
Aroclor-1248	20.5	U	60.3	20.5	ug/Kg	☼	11/11/17 09:19	11/13/17 09:54	1
Aroclor-1254	16.9	U	60.3	16.9	ug/Kg	☼	11/11/17 09:19	11/13/17 09:54	1
Aroclor-1260	47.5	J p	60.3	21.7	ug/Kg	☼	11/11/17 09:19	11/13/17 09:54	1
Aroclor-1262	9.64	U	60.3	9.64	ug/Kg	☼	11/11/17 09:19	11/13/17 09:54	1
Aroclor-1268	24.1	U	60.3	24.1	ug/Kg	☼	11/11/17 09:19	11/13/17 09:54	1
Polychlorinated biphenyls, Total	1630		60.3	28.9	ug/Kg	☼	11/11/17 09:19	11/13/17 09:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		14 - 128	11/11/17 09:19	11/13/17 09:54	1
DCB Decachlorobiphenyl	69		10 - 132	11/11/17 09:19	11/13/17 09:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.5		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	18.5		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED.01.03-SD02-(0-0.98)-FD

Lab Sample ID: 240-87591-37

Date Collected: 10/30/17 17:05

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 81.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	58.8	U	123	58.8	ug/Kg	☼	11/11/17 09:19	11/14/17 22:54	2
Aroclor-1221	56.4	U	123	56.4	ug/Kg	☼	11/11/17 09:19	11/14/17 22:54	2
Aroclor-1232	39.2	U	123	39.2	ug/Kg	☼	11/11/17 09:19	11/14/17 22:54	2
Aroclor-1242	49.0	U	123	49.0	ug/Kg	☼	11/11/17 09:19	11/14/17 22:54	2
Aroclor-1248	1760		123	41.7	ug/Kg	☼	11/11/17 09:19	11/14/17 22:54	2
Aroclor-1254	34.3	U	123	34.3	ug/Kg	☼	11/11/17 09:19	11/14/17 22:54	2
Aroclor-1260	52.7	J	123	44.1	ug/Kg	☼	11/11/17 09:19	11/14/17 22:54	2
Aroclor-1262	19.6	U	123	19.6	ug/Kg	☼	11/11/17 09:19	11/14/17 22:54	2
Aroclor-1268	49.0	U	123	49.0	ug/Kg	☼	11/11/17 09:19	11/14/17 22:54	2
Polychlorinated biphenyls, Total	1810		123	58.8	ug/Kg	☼	11/11/17 09:19	11/14/17 22:54	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	87		14 - 128	11/11/17 09:19	11/14/17 22:54	2
DCB Decachlorobiphenyl	108		10 - 132	11/11/17 09:19	11/14/17 22:54	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.0		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	19.0		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.03-SD02.-(0.98-1.65')

Lab Sample ID: 240-87591-38

Date Collected: 10/30/17 17:10

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 79.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	1490	U	3110	1490	ug/Kg	☼	11/11/17 09:19	11/13/17 10:33	50
Aroclor-1221	1430	U	3110	1430	ug/Kg	☼	11/11/17 09:19	11/13/17 10:33	50
Aroclor-1232	995	U	3110	995	ug/Kg	☼	11/11/17 09:19	11/13/17 10:33	50
Aroclor-1242	39900		3110	1240	ug/Kg	☼	11/11/17 09:19	11/13/17 10:33	50
Aroclor-1248	1060	U	3110	1060	ug/Kg	☼	11/11/17 09:19	11/13/17 10:33	50
Aroclor-1254	870	U	3110	870	ug/Kg	☼	11/11/17 09:19	11/13/17 10:33	50
Aroclor-1260	1120	U	3110	1120	ug/Kg	☼	11/11/17 09:19	11/13/17 10:33	50
Aroclor-1262	497	U	3110	497	ug/Kg	☼	11/11/17 09:19	11/13/17 10:33	50
Aroclor-1268	1240	U	3110	1240	ug/Kg	☼	11/11/17 09:19	11/13/17 10:33	50
Polychlorinated biphenyls, Total	39900		3110	1490	ug/Kg	☼	11/11/17 09:19	11/13/17 10:33	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	578	X	14 - 128	11/11/17 09:19	11/13/17 10:33	50
DCB Decachlorobiphenyl	0	X	10 - 132	11/11/17 09:19	11/13/17 10:33	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.8		0.1	0.1	%			11/08/17 07:28	1
Percent Moisture	20.2		0.1	0.1	%			11/08/17 07:28	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.03-SD02-(0.98-1.65')-FD

Lab Sample ID: 240-87591-39

Date Collected: 10/30/17 17:10

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 80.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	1450	U	3020	1450	ug/Kg	☼	11/11/17 09:19	11/13/17 10:53	50
Aroclor-1221	1390	U	3020	1390	ug/Kg	☼	11/11/17 09:19	11/13/17 10:53	50
Aroclor-1232	966	U	3020	966	ug/Kg	☼	11/11/17 09:19	11/13/17 10:53	50
Aroclor-1242	17100		3020	1210	ug/Kg	☼	11/11/17 09:19	11/13/17 10:53	50
Aroclor-1248	1030	U	3020	1030	ug/Kg	☼	11/11/17 09:19	11/13/17 10:53	50
Aroclor-1254	845	U	3020	845	ug/Kg	☼	11/11/17 09:19	11/13/17 10:53	50
Aroclor-1260	1090	U	3020	1090	ug/Kg	☼	11/11/17 09:19	11/13/17 10:53	50
Aroclor-1262	483	U	3020	483	ug/Kg	☼	11/11/17 09:19	11/13/17 10:53	50
Aroclor-1268	1210	U	3020	1210	ug/Kg	☼	11/11/17 09:19	11/13/17 10:53	50
Polychlorinated biphenyls, Total	17100		3020	1450	ug/Kg	☼	11/11/17 09:19	11/13/17 10:53	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	250	X	14 - 128	11/11/17 09:19	11/13/17 10:53	50
DCB Decachlorobiphenyl	110		10 - 132	11/11/17 09:19	11/13/17 10:53	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.9		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	19.1		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.03-SD02-(1.65-1.87')

Lab Sample ID: 240-87591-40

Date Collected: 10/30/17 17:30

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 80.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	1460	U	3050	1460	ug/Kg	☼	11/11/17 09:19	11/13/17 11:13	50
Aroclor-1221	1400	U	3050	1400	ug/Kg	☼	11/11/17 09:19	11/13/17 11:13	50
Aroclor-1232	977	U	3050	977	ug/Kg	☼	11/11/17 09:19	11/13/17 11:13	50
Aroclor-1242	1220	U	3050	1220	ug/Kg	☼	11/11/17 09:19	11/13/17 11:13	50
Aroclor-1248	16000		3050	1040	ug/Kg	☼	11/11/17 09:19	11/13/17 11:13	50
Aroclor-1254	855	U	3050	855	ug/Kg	☼	11/11/17 09:19	11/13/17 11:13	50
Aroclor-1260	1100	U	3050	1100	ug/Kg	☼	11/11/17 09:19	11/13/17 11:13	50
Aroclor-1262	488	U	3050	488	ug/Kg	☼	11/11/17 09:19	11/13/17 11:13	50
Aroclor-1268	1220	U	3050	1220	ug/Kg	☼	11/11/17 09:19	11/13/17 11:13	50
Polychlorinated biphenyls, Total	16000		3050	1460	ug/Kg	☼	11/11/17 09:19	11/13/17 11:13	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	186	X	14 - 128	11/11/17 09:19	11/13/17 11:13	50
DCB Decachlorobiphenyl	91	p	10 - 132	11/11/17 09:19	11/13/17 11:13	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.0		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	20.0		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.03-SD02-(1.87-2.25')

Lab Sample ID: 240-87591-41

Date Collected: 10/30/17 17:35

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 69.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	167	U	348	167	ug/Kg	☼	11/11/17 09:19	11/13/17 11:33	5
Aroclor-1221	160	U	348	160	ug/Kg	☼	11/11/17 09:19	11/13/17 11:33	5
Aroclor-1232	111	U	348	111	ug/Kg	☼	11/11/17 09:19	11/13/17 11:33	5
Aroclor-1242	1790		348	139	ug/Kg	☼	11/11/17 09:19	11/13/17 11:33	5
Aroclor-1248	118	U	348	118	ug/Kg	☼	11/11/17 09:19	11/13/17 11:33	5
Aroclor-1254	239	J	348	97.5	ug/Kg	☼	11/11/17 09:19	11/13/17 11:33	5
Aroclor-1260	125	U	348	125	ug/Kg	☼	11/11/17 09:19	11/13/17 11:33	5
Aroclor-1262	55.7	U	348	55.7	ug/Kg	☼	11/11/17 09:19	11/13/17 11:33	5
Aroclor-1268	139	U	348	139	ug/Kg	☼	11/11/17 09:19	11/13/17 11:33	5
Polychlorinated biphenyls, Total	2030		348	167	ug/Kg	☼	11/11/17 09:19	11/13/17 11:33	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	97		14 - 128	11/11/17 09:19	11/13/17 11:33	5
DCB Decachlorobiphenyl	102		10 - 132	11/11/17 09:19	11/13/17 11:33	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	69.9		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	30.1		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.14-SD02-(0-1.05')

Lab Sample ID: 240-87591-42

Date Collected: 11/01/17 09:24

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 83.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.3	U	63.0	30.3	ug/Kg	☼	11/11/17 10:25	11/13/17 13:22	1
Aroclor-1221	29.0	U	63.0	29.0	ug/Kg	☼	11/11/17 10:25	11/13/17 13:22	1
Aroclor-1232	20.2	U	63.0	20.2	ug/Kg	☼	11/11/17 10:25	11/13/17 13:22	1
Aroclor-1242	25.2	U	63.0	25.2	ug/Kg	☼	11/11/17 10:25	11/13/17 13:22	1
Aroclor-1248	618		63.0	21.4	ug/Kg	☼	11/11/17 10:25	11/13/17 13:22	1
Aroclor-1254	17.7	U	63.0	17.7	ug/Kg	☼	11/11/17 10:25	11/13/17 13:22	1
Aroclor-1260	35.8	J	63.0	22.7	ug/Kg	☼	11/11/17 10:25	11/13/17 13:22	1
Aroclor-1262	10.1	U	63.0	10.1	ug/Kg	☼	11/11/17 10:25	11/13/17 13:22	1
Aroclor-1268	25.2	U	63.0	25.2	ug/Kg	☼	11/11/17 10:25	11/13/17 13:22	1
Polychlorinated biphenyls, Total	654		63.0	30.3	ug/Kg	☼	11/11/17 10:25	11/13/17 13:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		14 - 128	11/11/17 10:25	11/13/17 13:22	1
DCB Decachlorobiphenyl	73		10 - 132	11/11/17 10:25	11/13/17 13:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.0		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	17.0		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.22-SD02-(0-0.17')

Lab Sample ID: 240-87591-43

Date Collected: 11/01/17 10:50

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 82.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.6	U	59.5	28.6	ug/Kg	☼	11/11/17 10:25	11/13/17 13:40	1
Aroclor-1221	27.4	U	59.5	27.4	ug/Kg	☼	11/11/17 10:25	11/13/17 13:40	1
Aroclor-1232	19.0	U	59.5	19.0	ug/Kg	☼	11/11/17 10:25	11/13/17 13:40	1
Aroclor-1242	23.8	U	59.5	23.8	ug/Kg	☼	11/11/17 10:25	11/13/17 13:40	1
Aroclor-1248	539		59.5	20.2	ug/Kg	☼	11/11/17 10:25	11/13/17 13:40	1
Aroclor-1254	16.7	U	59.5	16.7	ug/Kg	☼	11/11/17 10:25	11/13/17 13:40	1
Aroclor-1260	21.4	U	59.5	21.4	ug/Kg	☼	11/11/17 10:25	11/13/17 13:40	1
Aroclor-1262	9.52	U	59.5	9.52	ug/Kg	☼	11/11/17 10:25	11/13/17 13:40	1
Aroclor-1268	23.8	U	59.5	23.8	ug/Kg	☼	11/11/17 10:25	11/13/17 13:40	1
Polychlorinated biphenyls, Total	539		59.5	28.6	ug/Kg	☼	11/11/17 10:25	11/13/17 13:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	75		14 - 128	11/11/17 10:25	11/13/17 13:40	1
DCB Decachlorobiphenyl	72	p	10 - 132	11/11/17 10:25	11/13/17 13:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.9		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	17.1		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.22-SD02-(0.17-0.29')

Lab Sample ID: 240-87591-44

Date Collected: 11/01/17 10:55

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 80.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.1	U	62.7	30.1	ug/Kg	☼	11/11/17 10:25	11/13/17 14:54	1
Aroclor-1221	28.8	U	62.7	28.8	ug/Kg	☼	11/11/17 10:25	11/13/17 14:54	1
Aroclor-1232	20.1	U	62.7	20.1	ug/Kg	☼	11/11/17 10:25	11/13/17 14:54	1
Aroclor-1242	25.1	U	62.7	25.1	ug/Kg	☼	11/11/17 10:25	11/13/17 14:54	1
Aroclor-1248	279		62.7	21.3	ug/Kg	☼	11/11/17 10:25	11/13/17 14:54	1
Aroclor-1254	17.6	U	62.7	17.6	ug/Kg	☼	11/11/17 10:25	11/13/17 14:54	1
Aroclor-1260	22.6	U	62.7	22.6	ug/Kg	☼	11/11/17 10:25	11/13/17 14:54	1
Aroclor-1262	10.0	U	62.7	10.0	ug/Kg	☼	11/11/17 10:25	11/13/17 14:54	1
Aroclor-1268	25.1	U	62.7	25.1	ug/Kg	☼	11/11/17 10:25	11/13/17 14:54	1
Polychlorinated biphenyls, Total	279		62.7	30.1	ug/Kg	☼	11/11/17 10:25	11/13/17 14:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	76		14 - 128	11/11/17 10:25	11/13/17 14:54	1
DCB Decachlorobiphenyl	77		10 - 132	11/11/17 10:25	11/13/17 14:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.7		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	19.3		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.37-SD02-(0-0.9')

Lab Sample ID: 240-87591-45

Date Collected: 11/02/17 09:50

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 81.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.3	U	63.0	30.3	ug/Kg	☼	11/11/17 10:25	11/13/17 15:12	1
Aroclor-1221	29.0	U	63.0	29.0	ug/Kg	☼	11/11/17 10:25	11/13/17 15:12	1
Aroclor-1232	20.2	U	63.0	20.2	ug/Kg	☼	11/11/17 10:25	11/13/17 15:12	1
Aroclor-1242	25.2	U	63.0	25.2	ug/Kg	☼	11/11/17 10:25	11/13/17 15:12	1
Aroclor-1248	1460		63.0	21.4	ug/Kg	☼	11/11/17 10:25	11/13/17 15:12	1
Aroclor-1254	17.6	U	63.0	17.6	ug/Kg	☼	11/11/17 10:25	11/13/17 15:12	1
Aroclor-1260	45.1	J	63.0	22.7	ug/Kg	☼	11/11/17 10:25	11/13/17 15:12	1
Aroclor-1262	10.1	U	63.0	10.1	ug/Kg	☼	11/11/17 10:25	11/13/17 15:12	1
Aroclor-1268	25.2	U	63.0	25.2	ug/Kg	☼	11/11/17 10:25	11/13/17 15:12	1
Polychlorinated biphenyls, Total	1510		63.0	30.3	ug/Kg	☼	11/11/17 10:25	11/13/17 15:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	81		14 - 128	11/11/17 10:25	11/13/17 15:12	1
DCB Decachlorobiphenyl	79		10 - 132	11/11/17 10:25	11/13/17 15:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.5		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	18.5		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.49-SD03-(0-0.70')

Lab Sample ID: 240-87591-46

Date Collected: 10/31/17 10:23

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 83.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.2	U	58.8	28.2	ug/Kg	☼	11/11/17 09:19	11/13/17 17:52	1
Aroclor-1221	27.0	U	58.8	27.0	ug/Kg	☼	11/11/17 09:19	11/13/17 17:52	1
Aroclor-1232	18.8	U	58.8	18.8	ug/Kg	☼	11/11/17 09:19	11/13/17 17:52	1
Aroclor-1242	23.5	U	58.8	23.5	ug/Kg	☼	11/11/17 09:19	11/13/17 17:52	1
Aroclor-1248	420		58.8	20.0	ug/Kg	☼	11/11/17 09:19	11/13/17 17:52	1
Aroclor-1254	16.5	U	58.8	16.5	ug/Kg	☼	11/11/17 09:19	11/13/17 17:52	1
Aroclor-1260	21.2	U	58.8	21.2	ug/Kg	☼	11/11/17 09:19	11/13/17 17:52	1
Aroclor-1262	9.40	U	58.8	9.40	ug/Kg	☼	11/11/17 09:19	11/13/17 17:52	1
Aroclor-1268	23.5	U	58.8	23.5	ug/Kg	☼	11/11/17 09:19	11/13/17 17:52	1
Polychlorinated biphenyls, Total	420		58.8	28.2	ug/Kg	☼	11/11/17 09:19	11/13/17 17:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	70		14 - 128	11/11/17 09:19	11/13/17 17:52	1
DCB Decachlorobiphenyl	91		10 - 132	11/11/17 09:19	11/13/17 17:52	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.5		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	16.5		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.82-SOL04-(0-0.13')

Lab Sample ID: 240-87591-47

Date Collected: 10/31/17 16:34

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.8	U	59.9	28.8	ug/Kg	☼	11/09/17 10:58	11/11/17 09:12	1
Aroclor-1221	27.6	U	59.9	27.6	ug/Kg	☼	11/09/17 10:58	11/11/17 09:12	1
Aroclor-1232	19.2	U	59.9	19.2	ug/Kg	☼	11/09/17 10:58	11/11/17 09:12	1
Aroclor-1242	24.0	U	59.9	24.0	ug/Kg	☼	11/09/17 10:58	11/11/17 09:12	1
Aroclor-1248	20.4	U	59.9	20.4	ug/Kg	☼	11/09/17 10:58	11/11/17 09:12	1
Aroclor-1254	16.8	U	59.9	16.8	ug/Kg	☼	11/09/17 10:58	11/11/17 09:12	1
Aroclor-1260	21.6	U	59.9	21.6	ug/Kg	☼	11/09/17 10:58	11/11/17 09:12	1
Aroclor-1262	9.58	U	59.9	9.58	ug/Kg	☼	11/09/17 10:58	11/11/17 09:12	1
Aroclor-1268	24.0	U	59.9	24.0	ug/Kg	☼	11/09/17 10:58	11/11/17 09:12	1
Polychlorinated biphenyls, Total	28.8	U	59.9	28.8	ug/Kg	☼	11/09/17 10:58	11/11/17 09:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	84		14 - 128	11/09/17 10:58	11/11/17 09:12	1
DCB Decachlorobiphenyl	99		10 - 132	11/09/17 10:58	11/11/17 09:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.5		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	19.5		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.82-SOL04-(0.13-0.5)

Lab Sample ID: 240-87591-48

Date Collected: 10/31/17 16:35

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 91.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	25.1	U	52.2	25.1	ug/Kg	☼	11/09/17 10:58	11/11/17 09:32	1
Aroclor-1221	24.0	U	52.2	24.0	ug/Kg	☼	11/09/17 10:58	11/11/17 09:32	1
Aroclor-1232	16.7	U	52.2	16.7	ug/Kg	☼	11/09/17 10:58	11/11/17 09:32	1
Aroclor-1242	20.9	U	52.2	20.9	ug/Kg	☼	11/09/17 10:58	11/11/17 09:32	1
Aroclor-1248	17.8	U	52.2	17.8	ug/Kg	☼	11/09/17 10:58	11/11/17 09:32	1
Aroclor-1254	14.6	U	52.2	14.6	ug/Kg	☼	11/09/17 10:58	11/11/17 09:32	1
Aroclor-1260	18.8	U	52.2	18.8	ug/Kg	☼	11/09/17 10:58	11/11/17 09:32	1
Aroclor-1262	8.36	U	52.2	8.36	ug/Kg	☼	11/09/17 10:58	11/11/17 09:32	1
Aroclor-1268	20.9	U	52.2	20.9	ug/Kg	☼	11/09/17 10:58	11/11/17 09:32	1
Polychlorinated biphenyls, Total	25.1	U	52.2	25.1	ug/Kg	☼	11/09/17 10:58	11/11/17 09:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	69		14 - 128	11/09/17 10:58	11/11/17 09:32	1
DCB Decachlorobiphenyl	87		10 - 132	11/09/17 10:58	11/11/17 09:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91.2		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	8.8		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SL01-(0-0.50')

Lab Sample ID: 240-87591-49

Date Collected: 10/31/17 14:05

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 78.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.9	U	64.4	30.9	ug/Kg	☼	11/09/17 10:58	11/11/17 09:51	1
Aroclor-1221	29.6	U	64.4	29.6	ug/Kg	☼	11/09/17 10:58	11/11/17 09:51	1
Aroclor-1232	20.6	U	64.4	20.6	ug/Kg	☼	11/09/17 10:58	11/11/17 09:51	1
Aroclor-1242	25.7	U	64.4	25.7	ug/Kg	☼	11/09/17 10:58	11/11/17 09:51	1
Aroclor-1248	21.9	U	64.4	21.9	ug/Kg	☼	11/09/17 10:58	11/11/17 09:51	1
Aroclor-1254	18.0	U	64.4	18.0	ug/Kg	☼	11/09/17 10:58	11/11/17 09:51	1
Aroclor-1260	23.2	U	64.4	23.2	ug/Kg	☼	11/09/17 10:58	11/11/17 09:51	1
Aroclor-1262	10.3	U	64.4	10.3	ug/Kg	☼	11/09/17 10:58	11/11/17 09:51	1
Aroclor-1268	25.7	U	64.4	25.7	ug/Kg	☼	11/09/17 10:58	11/11/17 09:51	1
Polychlorinated biphenyls, Total	30.9	U	64.4	30.9	ug/Kg	☼	11/09/17 10:58	11/11/17 09:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	75		14 - 128	11/09/17 10:58	11/11/17 09:51	1
DCB Decachlorobiphenyl	95		10 - 132	11/09/17 10:58	11/11/17 09:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.4		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	21.6		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SL01-(0.50-1.0')

Lab Sample ID: 240-87591-50

Date Collected: 10/31/17 14:13

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 76.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	32.0	U	66.7	32.0	ug/Kg	☼	11/09/17 10:58	11/11/17 10:11	1
Aroclor-1221	30.7	U	66.7	30.7	ug/Kg	☼	11/09/17 10:58	11/11/17 10:11	1
Aroclor-1232	21.4	U	66.7	21.4	ug/Kg	☼	11/09/17 10:58	11/11/17 10:11	1
Aroclor-1242	26.7	U	66.7	26.7	ug/Kg	☼	11/09/17 10:58	11/11/17 10:11	1
Aroclor-1248	22.7	U	66.7	22.7	ug/Kg	☼	11/09/17 10:58	11/11/17 10:11	1
Aroclor-1254	18.7	U	66.7	18.7	ug/Kg	☼	11/09/17 10:58	11/11/17 10:11	1
Aroclor-1260	24.0	U	66.7	24.0	ug/Kg	☼	11/09/17 10:58	11/11/17 10:11	1
Aroclor-1262	10.7	U	66.7	10.7	ug/Kg	☼	11/09/17 10:58	11/11/17 10:11	1
Aroclor-1268	26.7	U	66.7	26.7	ug/Kg	☼	11/09/17 10:58	11/11/17 10:11	1
Polychlorinated biphenyls, Total	32.0	U	66.7	32.0	ug/Kg	☼	11/09/17 10:58	11/11/17 10:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	74		14 - 128	11/09/17 10:58	11/11/17 10:11	1
DCB Decachlorobiphenyl	87		10 - 132	11/09/17 10:58	11/11/17 10:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	76.8		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	23.2		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.60-SL03-(0-0.89')

Lab Sample ID: 240-87591-51

Date Collected: 10/31/17 13:23

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.4	U	61.3	29.4	ug/Kg	☼	11/09/17 10:58	11/11/17 16:04	1
Aroclor-1221	28.2	U	61.3	28.2	ug/Kg	☼	11/09/17 10:58	11/11/17 16:04	1
Aroclor-1232	19.6	U	61.3	19.6	ug/Kg	☼	11/09/17 10:58	11/11/17 16:04	1
Aroclor-1242	24.5	U	61.3	24.5	ug/Kg	☼	11/09/17 10:58	11/11/17 16:04	1
Aroclor-1248	25.7	J p	61.3	20.8	ug/Kg	☼	11/09/17 10:58	11/11/17 16:04	1
Aroclor-1254	17.2	U	61.3	17.2	ug/Kg	☼	11/09/17 10:58	11/11/17 16:04	1
Aroclor-1260	22.1	U	61.3	22.1	ug/Kg	☼	11/09/17 10:58	11/11/17 16:04	1
Aroclor-1262	9.80	U	61.3	9.80	ug/Kg	☼	11/09/17 10:58	11/11/17 16:04	1
Aroclor-1268	24.5	U	61.3	24.5	ug/Kg	☼	11/09/17 10:58	11/11/17 16:04	1
Polychlorinated biphenyls, Total	50.9	J	61.3	29.4	ug/Kg	☼	11/09/17 10:58	11/11/17 16:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	85		14 - 128	11/09/17 10:58	11/11/17 16:04	1
Tetrachloro-m-xylene	86		14 - 128	11/09/17 10:58	11/11/17 16:04	1
DCB Decachlorobiphenyl	95		10 - 132	11/09/17 10:58	11/11/17 16:04	1
DCB Decachlorobiphenyl	85		10 - 132	11/09/17 10:58	11/11/17 16:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.3		0.1	0.1	%			11/08/17 08:01	1
Percent Moisture	19.7		0.1	0.1	%			11/08/17 08:01	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.60-SL03-(0.89-1.0')

Lab Sample ID: 240-87591-52

Date Collected: 10/31/17 13:29

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.1	U	58.6	28.1	ug/Kg	☼	11/09/17 10:58	11/11/17 10:30	1
Aroclor-1221	27.0	U	58.6	27.0	ug/Kg	☼	11/09/17 10:58	11/11/17 10:30	1
Aroclor-1232	18.8	U	58.6	18.8	ug/Kg	☼	11/09/17 10:58	11/11/17 10:30	1
Aroclor-1242	23.5	U	58.6	23.5	ug/Kg	☼	11/09/17 10:58	11/11/17 10:30	1
Aroclor-1248	19.9	U	58.6	19.9	ug/Kg	☼	11/09/17 10:58	11/11/17 10:30	1
Aroclor-1254	16.4	U	58.6	16.4	ug/Kg	☼	11/09/17 10:58	11/11/17 10:30	1
Aroclor-1260	21.1	U	58.6	21.1	ug/Kg	☼	11/09/17 10:58	11/11/17 10:30	1
Aroclor-1262	9.38	U	58.6	9.38	ug/Kg	☼	11/09/17 10:58	11/11/17 10:30	1
Aroclor-1268	23.5	U	58.6	23.5	ug/Kg	☼	11/09/17 10:58	11/11/17 10:30	1
Polychlorinated biphenyls, Total	28.1	U	58.6	28.1	ug/Kg	☼	11/09/17 10:58	11/11/17 10:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	77		14 - 128	11/09/17 10:58	11/11/17 10:30	1
DCB Decachlorobiphenyl	89		10 - 132	11/09/17 10:58	11/11/17 10:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.4		0.1	0.1	%			11/08/17 08:01	1
Percent Moisture	15.6		0.1	0.1	%			11/08/17 08:01	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-0060.SL01-(0-0.19')

Lab Sample ID: 240-87591-53

Date Collected: 10/31/17 13:41

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 81.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.9	U	62.3	29.9	ug/Kg	☼	11/09/17 10:58	11/11/17 10:50	1
Aroclor-1221	28.7	U	62.3	28.7	ug/Kg	☼	11/09/17 10:58	11/11/17 10:50	1
Aroclor-1232	19.9	U	62.3	19.9	ug/Kg	☼	11/09/17 10:58	11/11/17 10:50	1
Aroclor-1242	24.9	U	62.3	24.9	ug/Kg	☼	11/09/17 10:58	11/11/17 10:50	1
Aroclor-1248	21.2	U	62.3	21.2	ug/Kg	☼	11/09/17 10:58	11/11/17 10:50	1
Aroclor-1254	213		62.3	17.5	ug/Kg	☼	11/09/17 10:58	11/11/17 10:50	1
Aroclor-1260	22.4	U	62.3	22.4	ug/Kg	☼	11/09/17 10:58	11/11/17 10:50	1
Aroclor-1262	9.97	U	62.3	9.97	ug/Kg	☼	11/09/17 10:58	11/11/17 10:50	1
Aroclor-1268	24.9	U	62.3	24.9	ug/Kg	☼	11/09/17 10:58	11/11/17 10:50	1
Polychlorinated biphenyls, Total	213		62.3	29.9	ug/Kg	☼	11/09/17 10:58	11/11/17 10:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	79		14 - 128	11/09/17 10:58	11/11/17 10:50	1
DCB Decachlorobiphenyl	113		10 - 132	11/09/17 10:58	11/11/17 10:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.4		0.1	0.1	%			11/08/17 08:01	1
Percent Moisture	18.6		0.1	0.1	%			11/08/17 08:01	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-0060.SL01-(0.19-1.0')

Lab Sample ID: 240-87591-54

Date Collected: 10/31/17 13:49

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 89.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.1	U	56.5	27.1	ug/Kg	☼	11/10/17 10:03	11/14/17 07:42	1
Aroclor-1221	26.0	U	56.5	26.0	ug/Kg	☼	11/10/17 10:03	11/14/17 07:42	1
Aroclor-1232	18.1	U	56.5	18.1	ug/Kg	☼	11/10/17 10:03	11/14/17 07:42	1
Aroclor-1242	22.6	U	56.5	22.6	ug/Kg	☼	11/10/17 10:03	11/14/17 07:42	1
Aroclor-1248	187		56.5	19.2	ug/Kg	☼	11/10/17 10:03	11/14/17 07:42	1
Aroclor-1254	15.8	U	56.5	15.8	ug/Kg	☼	11/10/17 10:03	11/14/17 07:42	1
Aroclor-1260	20.4	U	56.5	20.4	ug/Kg	☼	11/10/17 10:03	11/14/17 07:42	1
Aroclor-1262	9.05	U	56.5	9.05	ug/Kg	☼	11/10/17 10:03	11/14/17 07:42	1
Aroclor-1268	22.6	U	56.5	22.6	ug/Kg	☼	11/10/17 10:03	11/14/17 07:42	1
Polychlorinated biphenyls, Total	187		56.5	27.1	ug/Kg	☼	11/10/17 10:03	11/14/17 07:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		14 - 128	11/10/17 10:03	11/14/17 07:42	1
DCB Decachlorobiphenyl	88		10 - 132	11/10/17 10:03	11/14/17 07:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.0		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	11.0		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.51-SL03-(0-0.5')

Lab Sample ID: 240-87591-55

Date Collected: 10/31/17 12:05

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 85.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	142	U	296	142	ug/Kg	☼	11/09/17 10:58	11/11/17 11:10	5
Aroclor-1221	136	U	296	136	ug/Kg	☼	11/09/17 10:58	11/11/17 11:10	5
Aroclor-1232	94.9	U	296	94.9	ug/Kg	☼	11/09/17 10:58	11/11/17 11:10	5
Aroclor-1242	119	U	296	119	ug/Kg	☼	11/09/17 10:58	11/11/17 11:10	5
Aroclor-1248	2680		296	101	ug/Kg	☼	11/09/17 10:58	11/11/17 11:10	5
Aroclor-1254	83.0	U	296	83.0	ug/Kg	☼	11/09/17 10:58	11/11/17 11:10	5
Aroclor-1260	107	U	296	107	ug/Kg	☼	11/09/17 10:58	11/11/17 11:10	5
Aroclor-1262	47.4	U	296	47.4	ug/Kg	☼	11/09/17 10:58	11/11/17 11:10	5
Aroclor-1268	119	U	296	119	ug/Kg	☼	11/09/17 10:58	11/11/17 11:10	5
Polychlorinated biphenyls, Total	2680		296	142	ug/Kg	☼	11/09/17 10:58	11/11/17 11:10	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	77		14 - 128	11/09/17 10:58	11/11/17 11:10	5
DCB Decachlorobiphenyl	0	X	10 - 132	11/09/17 10:58	11/11/17 11:10	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.2		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	14.8		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.51-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-56

Date Collected: 10/31/17 12:12

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	272	U	567	272	ug/Kg	☼	11/09/17 10:58	11/11/17 11:30	10
Aroclor-1221	261	U	567	261	ug/Kg	☼	11/09/17 10:58	11/11/17 11:30	10
Aroclor-1232	181	U	567	181	ug/Kg	☼	11/09/17 10:58	11/11/17 11:30	10
Aroclor-1242	227	U	567	227	ug/Kg	☼	11/09/17 10:58	11/11/17 11:30	10
Aroclor-1248	6440		567	193	ug/Kg	☼	11/09/17 10:58	11/11/17 11:30	10
Aroclor-1254	159	U	567	159	ug/Kg	☼	11/09/17 10:58	11/11/17 11:30	10
Aroclor-1260	204	U	567	204	ug/Kg	☼	11/09/17 10:58	11/11/17 11:30	10
Aroclor-1262	90.7	U	567	90.7	ug/Kg	☼	11/09/17 10:58	11/11/17 11:30	10
Aroclor-1268	227	U	567	227	ug/Kg	☼	11/09/17 10:58	11/11/17 11:30	10
Polychlorinated biphenyls, Total	6440		567	272	ug/Kg	☼	11/09/17 10:58	11/11/17 11:30	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	78		14 - 128	11/09/17 10:58	11/11/17 11:30	10
DCB Decachlorobiphenyl	38		10 - 132	11/09/17 10:58	11/11/17 11:30	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.4		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	15.6		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.51-SL03-(0-0.5')-FD

Lab Sample ID: 240-87591-57

Date Collected: 10/31/17 12:05

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 85.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	277	U	576	277	ug/Kg	☼	11/09/17 10:58	11/11/17 11:49	10
Aroclor-1221	265	U	576	265	ug/Kg	☼	11/09/17 10:58	11/11/17 11:49	10
Aroclor-1232	184	U	576	184	ug/Kg	☼	11/09/17 10:58	11/11/17 11:49	10
Aroclor-1242	231	U	576	231	ug/Kg	☼	11/09/17 10:58	11/11/17 11:49	10
Aroclor-1248	5520		576	196	ug/Kg	☼	11/09/17 10:58	11/11/17 11:49	10
Aroclor-1254	161	U	576	161	ug/Kg	☼	11/09/17 10:58	11/11/17 11:49	10
Aroclor-1260	208	U	576	208	ug/Kg	☼	11/09/17 10:58	11/11/17 11:49	10
Aroclor-1262	92.2	U	576	92.2	ug/Kg	☼	11/09/17 10:58	11/11/17 11:49	10
Aroclor-1268	231	U	576	231	ug/Kg	☼	11/09/17 10:58	11/11/17 11:49	10
Polychlorinated biphenyls, Total	5520		576	277	ug/Kg	☼	11/09/17 10:58	11/11/17 11:49	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	76		14 - 128	11/09/17 10:58	11/11/17 11:49	10
DCB Decachlorobiphenyl	115		10 - 132	11/09/17 10:58	11/11/17 11:49	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.0		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	15.0		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.51-SL01-(0-0.5')

Lab Sample ID: 240-87591-58

Date Collected: 10/31/17 11:35

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 90.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26.9	U	56.0	26.9	ug/Kg	☼	11/09/17 10:58	11/11/17 12:09	1
Aroclor-1221	25.8	U	56.0	25.8	ug/Kg	☼	11/09/17 10:58	11/11/17 12:09	1
Aroclor-1232	17.9	U	56.0	17.9	ug/Kg	☼	11/09/17 10:58	11/11/17 12:09	1
Aroclor-1242	22.4	U	56.0	22.4	ug/Kg	☼	11/09/17 10:58	11/11/17 12:09	1
Aroclor-1248	19.0	U	56.0	19.0	ug/Kg	☼	11/09/17 10:58	11/11/17 12:09	1
Aroclor-1254	15.7	U	56.0	15.7	ug/Kg	☼	11/09/17 10:58	11/11/17 12:09	1
Aroclor-1260	20.2	U	56.0	20.2	ug/Kg	☼	11/09/17 10:58	11/11/17 12:09	1
Aroclor-1262	8.96	U	56.0	8.96	ug/Kg	☼	11/09/17 10:58	11/11/17 12:09	1
Aroclor-1268	22.4	U	56.0	22.4	ug/Kg	☼	11/09/17 10:58	11/11/17 12:09	1
Polychlorinated biphenyls, Total	26.9	U	56.0	26.9	ug/Kg	☼	11/09/17 10:58	11/11/17 12:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	77		14 - 128	11/09/17 10:58	11/11/17 12:09	1
DCB Decachlorobiphenyl	95		10 - 132	11/09/17 10:58	11/11/17 12:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.6		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	9.4		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.51.SL01-(0.5-1.0')

Lab Sample ID: 240-87591-59

Date Collected: 10/31/17 11:41

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 79.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.3	U	63.1	30.3	ug/Kg	☼	11/09/17 10:58	11/11/17 12:29	1
Aroclor-1221	29.0	U	63.1	29.0	ug/Kg	☼	11/09/17 10:58	11/11/17 12:29	1
Aroclor-1232	20.2	U	63.1	20.2	ug/Kg	☼	11/09/17 10:58	11/11/17 12:29	1
Aroclor-1242	25.2	U	63.1	25.2	ug/Kg	☼	11/09/17 10:58	11/11/17 12:29	1
Aroclor-1248	21.5	U	63.1	21.5	ug/Kg	☼	11/09/17 10:58	11/11/17 12:29	1
Aroclor-1254	17.7	U	63.1	17.7	ug/Kg	☼	11/09/17 10:58	11/11/17 12:29	1
Aroclor-1260	22.7	U	63.1	22.7	ug/Kg	☼	11/09/17 10:58	11/11/17 12:29	1
Aroclor-1262	10.1	U	63.1	10.1	ug/Kg	☼	11/09/17 10:58	11/11/17 12:29	1
Aroclor-1268	25.2	U	63.1	25.2	ug/Kg	☼	11/09/17 10:58	11/11/17 12:29	1
Polychlorinated biphenyls, Total	30.3	U	63.1	30.3	ug/Kg	☼	11/09/17 10:58	11/11/17 12:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	79		14 - 128	11/09/17 10:58	11/11/17 12:29	1
DCB Decachlorobiphenyl	93		10 - 132	11/09/17 10:58	11/11/17 12:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.7		0.1	0.1	%			11/08/17 07:58	1
Percent Moisture	20.3		0.1	0.1	%			11/08/17 07:58	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.47-SL04-(0-0.80')

Lab Sample ID: 240-87591-60

Date Collected: 10/31/17 10:46

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 78.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.3	U	61.1	29.3	ug/Kg	☼	11/09/17 10:58	11/11/17 12:48	1
Aroclor-1221	28.1	U	61.1	28.1	ug/Kg	☼	11/09/17 10:58	11/11/17 12:48	1
Aroclor-1232	19.6	U	61.1	19.6	ug/Kg	☼	11/09/17 10:58	11/11/17 12:48	1
Aroclor-1242	24.4	U	61.1	24.4	ug/Kg	☼	11/09/17 10:58	11/11/17 12:48	1
Aroclor-1248	20.8	U	61.1	20.8	ug/Kg	☼	11/09/17 10:58	11/11/17 12:48	1
Aroclor-1254	17.1	U	61.1	17.1	ug/Kg	☼	11/09/17 10:58	11/11/17 12:48	1
Aroclor-1260	22.0	U	61.1	22.0	ug/Kg	☼	11/09/17 10:58	11/11/17 12:48	1
Aroclor-1262	9.78	U	61.1	9.78	ug/Kg	☼	11/09/17 10:58	11/11/17 12:48	1
Aroclor-1268	24.4	U	61.1	24.4	ug/Kg	☼	11/09/17 10:58	11/11/17 12:48	1
Polychlorinated biphenyls, Total	29.3	U	61.1	29.3	ug/Kg	☼	11/09/17 10:58	11/11/17 12:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	68		14 - 128	11/09/17 10:58	11/11/17 12:48	1
DCB Decachlorobiphenyl	84		10 - 132	11/09/17 10:58	11/11/17 12:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.4		0.1	0.1	%			11/08/17 08:01	1
Percent Moisture	21.6		0.1	0.1	%			11/08/17 08:01	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.47-SL03-(0-0.77')

Lab Sample ID: 240-87591-61

Date Collected: 10/31/17 10:23

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.1	U	56.4	27.1	ug/Kg	☼	11/09/17 10:58	11/11/17 13:08	1
Aroclor-1221	26.0	U	56.4	26.0	ug/Kg	☼	11/09/17 10:58	11/11/17 13:08	1
Aroclor-1232	18.1	U	56.4	18.1	ug/Kg	☼	11/09/17 10:58	11/11/17 13:08	1
Aroclor-1242	22.6	U	56.4	22.6	ug/Kg	☼	11/09/17 10:58	11/11/17 13:08	1
Aroclor-1248	371		56.4	19.2	ug/Kg	☼	11/09/17 10:58	11/11/17 13:08	1
Aroclor-1254	15.8	U	56.4	15.8	ug/Kg	☼	11/09/17 10:58	11/11/17 13:08	1
Aroclor-1260	20.3	U	56.4	20.3	ug/Kg	☼	11/09/17 10:58	11/11/17 13:08	1
Aroclor-1262	9.03	U	56.4	9.03	ug/Kg	☼	11/09/17 10:58	11/11/17 13:08	1
Aroclor-1268	22.6	U	56.4	22.6	ug/Kg	☼	11/09/17 10:58	11/11/17 13:08	1
Polychlorinated biphenyls, Total	371		56.4	27.1	ug/Kg	☼	11/09/17 10:58	11/11/17 13:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		14 - 128	11/09/17 10:58	11/11/17 13:08	1
DCB Decachlorobiphenyl	84		10 - 132	11/09/17 10:58	11/11/17 13:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.7		0.1	0.1	%			11/08/17 08:01	1
Percent Moisture	15.3		0.1	0.1	%			11/08/17 08:01	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.47-SL03-(0-0.77')-FD

Lab Sample ID: 240-87591-62

Date Collected: 10/31/17 10:23

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 83.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.3	U	61.0	29.3	ug/Kg	☼	11/09/17 10:58	11/11/17 13:27	1
Aroclor-1221	28.1	U	61.0	28.1	ug/Kg	☼	11/09/17 10:58	11/11/17 13:27	1
Aroclor-1232	19.5	U	61.0	19.5	ug/Kg	☼	11/09/17 10:58	11/11/17 13:27	1
Aroclor-1242	24.4	U	61.0	24.4	ug/Kg	☼	11/09/17 10:58	11/11/17 13:27	1
Aroclor-1248	748		61.0	20.7	ug/Kg	☼	11/09/17 10:58	11/11/17 13:27	1
Aroclor-1254	17.1	U	61.0	17.1	ug/Kg	☼	11/09/17 10:58	11/11/17 13:27	1
Aroclor-1260	22.0	U	61.0	22.0	ug/Kg	☼	11/09/17 10:58	11/11/17 13:27	1
Aroclor-1262	9.76	U	61.0	9.76	ug/Kg	☼	11/09/17 10:58	11/11/17 13:27	1
Aroclor-1268	24.4	U	61.0	24.4	ug/Kg	☼	11/09/17 10:58	11/11/17 13:27	1
Polychlorinated biphenyls, Total	748		61.0	29.3	ug/Kg	☼	11/09/17 10:58	11/11/17 13:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	69		14 - 128	11/09/17 10:58	11/11/17 13:27	1
DCB Decachlorobiphenyl	81		10 - 132	11/09/17 10:58	11/11/17 13:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.6		0.1	0.1	%			11/08/17 08:01	1
Percent Moisture	16.4		0.1	0.1	%			11/08/17 08:01	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.47-SL01-(0-0.5')

Lab Sample ID: 240-87591-63

Date Collected: 10/31/17 10:04

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.1	U	56.4	27.1	ug/Kg	☼	11/09/17 10:58	11/11/17 13:47	1
Aroclor-1221	25.9	U	56.4	25.9	ug/Kg	☼	11/09/17 10:58	11/11/17 13:47	1
Aroclor-1232	18.0	U	56.4	18.0	ug/Kg	☼	11/09/17 10:58	11/11/17 13:47	1
Aroclor-1242	22.6	U	56.4	22.6	ug/Kg	☼	11/09/17 10:58	11/11/17 13:47	1
Aroclor-1248	200		56.4	19.2	ug/Kg	☼	11/09/17 10:58	11/11/17 13:47	1
Aroclor-1254	15.8	U	56.4	15.8	ug/Kg	☼	11/09/17 10:58	11/11/17 13:47	1
Aroclor-1260	20.3	U	56.4	20.3	ug/Kg	☼	11/09/17 10:58	11/11/17 13:47	1
Aroclor-1262	9.02	U	56.4	9.02	ug/Kg	☼	11/09/17 10:58	11/11/17 13:47	1
Aroclor-1268	22.6	U	56.4	22.6	ug/Kg	☼	11/09/17 10:58	11/11/17 13:47	1
Polychlorinated biphenyls, Total	200		56.4	27.1	ug/Kg	☼	11/09/17 10:58	11/11/17 13:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	69		14 - 128	11/09/17 10:58	11/11/17 13:47	1
DCB Decachlorobiphenyl	88		10 - 132	11/09/17 10:58	11/11/17 13:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.9		0.1	0.1	%			11/08/17 08:01	1
Percent Moisture	15.1		0.1	0.1	%			11/08/17 08:01	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SL04-(0-0.50')

Lab Sample ID: 240-87591-64

Date Collected: 10/31/17 09:02

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 79.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.4	U	63.3	30.4	ug/Kg	☼	11/09/17 10:58	11/11/17 14:07	1
Aroclor-1221	29.1	U	63.3	29.1	ug/Kg	☼	11/09/17 10:58	11/11/17 14:07	1
Aroclor-1232	20.3	U	63.3	20.3	ug/Kg	☼	11/09/17 10:58	11/11/17 14:07	1
Aroclor-1242	25.3	U	63.3	25.3	ug/Kg	☼	11/09/17 10:58	11/11/17 14:07	1
Aroclor-1248	21.5	U	63.3	21.5	ug/Kg	☼	11/09/17 10:58	11/11/17 14:07	1
Aroclor-1254	17.7	U	63.3	17.7	ug/Kg	☼	11/09/17 10:58	11/11/17 14:07	1
Aroclor-1260	22.8	U	63.3	22.8	ug/Kg	☼	11/09/17 10:58	11/11/17 14:07	1
Aroclor-1262	10.1	U	63.3	10.1	ug/Kg	☼	11/09/17 10:58	11/11/17 14:07	1
Aroclor-1268	25.3	U	63.3	25.3	ug/Kg	☼	11/09/17 10:58	11/11/17 14:07	1
Polychlorinated biphenyls, Total	30.4	U	63.3	30.4	ug/Kg	☼	11/09/17 10:58	11/11/17 14:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	75		14 - 128	11/09/17 10:58	11/11/17 14:07	1
DCB Decachlorobiphenyl	12	p	10 - 132	11/09/17 10:58	11/11/17 14:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.2		0.1	0.1	%			11/08/17 08:01	1
Percent Moisture	20.8		0.1	0.1	%			11/08/17 08:01	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SL04-(0.50-1.0')

Lab Sample ID: 240-87591-65

Date Collected: 10/31/17 09:06

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.6	U	61.8	29.6	ug/Kg	☼	11/09/17 10:58	11/11/17 14:26	1
Aroclor-1221	28.4	U	61.8	28.4	ug/Kg	☼	11/09/17 10:58	11/11/17 14:26	1
Aroclor-1232	19.8	U	61.8	19.8	ug/Kg	☼	11/09/17 10:58	11/11/17 14:26	1
Aroclor-1242	24.7	U	61.8	24.7	ug/Kg	☼	11/09/17 10:58	11/11/17 14:26	1
Aroclor-1248	21.0	U	61.8	21.0	ug/Kg	☼	11/09/17 10:58	11/11/17 14:26	1
Aroclor-1254	17.3	U	61.8	17.3	ug/Kg	☼	11/09/17 10:58	11/11/17 14:26	1
Aroclor-1260	22.2	U	61.8	22.2	ug/Kg	☼	11/09/17 10:58	11/11/17 14:26	1
Aroclor-1262	9.88	U	61.8	9.88	ug/Kg	☼	11/09/17 10:58	11/11/17 14:26	1
Aroclor-1268	24.7	U	61.8	24.7	ug/Kg	☼	11/09/17 10:58	11/11/17 14:26	1
Polychlorinated biphenyls, Total	29.6	U	61.8	29.6	ug/Kg	☼	11/09/17 10:58	11/11/17 14:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	75		14 - 128	11/09/17 10:58	11/11/17 14:26	1
DCB Decachlorobiphenyl	87		10 - 132	11/09/17 10:58	11/11/17 14:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.2		0.1	0.1	%			11/08/17 08:01	1
Percent Moisture	19.8		0.1	0.1	%			11/08/17 08:01	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SL03-(0-0.69')

Lab Sample ID: 240-87591-66

Date Collected: 10/31/17 08:31

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 81.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	148	U	309	148	ug/Kg	☼	11/09/17 10:58	11/11/17 14:46	5
Aroclor-1221	142	U	309	142	ug/Kg	☼	11/09/17 10:58	11/11/17 14:46	5
Aroclor-1232	98.8	U	309	98.8	ug/Kg	☼	11/09/17 10:58	11/11/17 14:46	5
Aroclor-1242	123	U	309	123	ug/Kg	☼	11/09/17 10:58	11/11/17 14:46	5
Aroclor-1248	5000		309	105	ug/Kg	☼	11/09/17 10:58	11/11/17 14:46	5
Aroclor-1254	86.4	U	309	86.4	ug/Kg	☼	11/09/17 10:58	11/11/17 14:46	5
Aroclor-1260	111	U	309	111	ug/Kg	☼	11/09/17 10:58	11/11/17 14:46	5
Aroclor-1262	49.4	U	309	49.4	ug/Kg	☼	11/09/17 10:58	11/11/17 14:46	5
Aroclor-1268	123	U	309	123	ug/Kg	☼	11/09/17 10:58	11/11/17 14:46	5
Polychlorinated biphenyls, Total	5000		309	148	ug/Kg	☼	11/09/17 10:58	11/11/17 14:46	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	82		14 - 128	11/09/17 10:58	11/11/17 14:46	5
DCB Decachlorobiphenyl	94	p	10 - 132	11/09/17 10:58	11/11/17 14:46	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.0		0.1	0.1	%			11/08/17 08:01	1
Percent Moisture	19.0		0.1	0.1	%			11/08/17 08:01	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SL03-(0-0.69')-FD

Lab Sample ID: 240-87591-67

Date Collected: 10/31/17 08:31

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	293	U	610	293	ug/Kg	☼	11/09/17 14:18	11/10/17 16:43	10
Aroclor-1221	281	U	610	281	ug/Kg	☼	11/09/17 14:18	11/10/17 16:43	10
Aroclor-1232	195	U	610	195	ug/Kg	☼	11/09/17 14:18	11/10/17 16:43	10
Aroclor-1242	244	U	610	244	ug/Kg	☼	11/09/17 14:18	11/10/17 16:43	10
Aroclor-1248	6090		610	207	ug/Kg	☼	11/09/17 14:18	11/10/17 16:43	10
Aroclor-1254	171	U	610	171	ug/Kg	☼	11/09/17 14:18	11/10/17 16:43	10
Aroclor-1260	389 J p		610	220	ug/Kg	☼	11/09/17 14:18	11/10/17 16:43	10
Aroclor-1262	97.6	U	610	97.6	ug/Kg	☼	11/09/17 14:18	11/10/17 16:43	10
Aroclor-1268	244	U	610	244	ug/Kg	☼	11/09/17 14:18	11/10/17 16:43	10
Polychlorinated biphenyls, Total	6840		610	293	ug/Kg	☼	11/09/17 14:18	11/10/17 16:43	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	100		14 - 128	11/09/17 14:18	11/10/17 16:43	10
Tetrachloro-m-xylene	112		14 - 128	11/09/17 14:18	11/10/17 16:43	10
DCB Decachlorobiphenyl	119		10 - 132	11/09/17 14:18	11/10/17 16:43	10
DCB Decachlorobiphenyl	105		10 - 132	11/09/17 14:18	11/10/17 16:43	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.1		0.1	0.1	%			11/08/17 08:01	1
Percent Moisture	19.9		0.1	0.1	%			11/08/17 08:01	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SL03-(0.69-0.98')

Lab Sample ID: 240-87591-68

Date Collected: 10/31/17 08:37

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 87.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26.8	U	55.9	26.8	ug/Kg	☼	11/09/17 14:18	11/10/17 16:26	1
Aroclor-1221	25.7	U	55.9	25.7	ug/Kg	☼	11/09/17 14:18	11/10/17 16:26	1
Aroclor-1232	17.9	U	55.9	17.9	ug/Kg	☼	11/09/17 14:18	11/10/17 16:26	1
Aroclor-1242	22.4	U	55.9	22.4	ug/Kg	☼	11/09/17 14:18	11/10/17 16:26	1
Aroclor-1248	579		55.9	19.0	ug/Kg	☼	11/09/17 14:18	11/10/17 16:26	1
Aroclor-1254	15.7	U	55.9	15.7	ug/Kg	☼	11/09/17 14:18	11/10/17 16:26	1
Aroclor-1260	20.1	U	55.9	20.1	ug/Kg	☼	11/09/17 14:18	11/10/17 16:26	1
Aroclor-1262	8.95	U	55.9	8.95	ug/Kg	☼	11/09/17 14:18	11/10/17 16:26	1
Aroclor-1268	22.4	U	55.9	22.4	ug/Kg	☼	11/09/17 14:18	11/10/17 16:26	1
Polychlorinated biphenyls, Total	579		55.9	26.8	ug/Kg	☼	11/09/17 14:18	11/10/17 16:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	80		14 - 128	11/09/17 14:18	11/10/17 16:26	1
DCB Decachlorobiphenyl	86		10 - 132	11/09/17 14:18	11/10/17 16:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.3		0.1	0.1	%			11/08/17 08:01	1
Percent Moisture	12.7		0.1	0.1	%			11/08/17 08:01	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SL03-(0.98-1.17')

Lab Sample ID: 240-87591-69

Date Collected: 10/31/17 08:40

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 77.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	301	U	626	301	ug/Kg	☼	11/10/17 10:03	11/14/17 08:02	10
Aroclor-1221	288	U	626	288	ug/Kg	☼	11/10/17 10:03	11/14/17 08:02	10
Aroclor-1232	200	U	626	200	ug/Kg	☼	11/10/17 10:03	11/14/17 08:02	10
Aroclor-1242	250	U	626	250	ug/Kg	☼	11/10/17 10:03	11/14/17 08:02	10
Aroclor-1248	5020		626	213	ug/Kg	☼	11/10/17 10:03	11/14/17 08:02	10
Aroclor-1254	175	U	626	175	ug/Kg	☼	11/10/17 10:03	11/14/17 08:02	10
Aroclor-1260	774		626	225	ug/Kg	☼	11/10/17 10:03	11/14/17 08:02	10
Aroclor-1262	100	U	626	100	ug/Kg	☼	11/10/17 10:03	11/14/17 08:02	10
Aroclor-1268	250	U	626	250	ug/Kg	☼	11/10/17 10:03	11/14/17 08:02	10
Polychlorinated biphenyls, Total	5790		626	301	ug/Kg	☼	11/10/17 10:03	11/14/17 08:02	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	68		14 - 128	11/10/17 10:03	11/14/17 08:02	10
DCB Decachlorobiphenyl	96		10 - 132	11/10/17 10:03	11/14/17 08:02	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	77.3		0.1	0.1	%			11/08/17 08:01	1
Percent Moisture	22.7		0.1	0.1	%			11/08/17 08:01	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SL03-(1.17-1.5')

Lab Sample ID: 240-87591-70

Date Collected: 10/31/17 08:44

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.2	U	58.8	28.2	ug/Kg	☼	11/09/17 14:55	11/10/17 17:54	1
Aroclor-1221	27.1	U	58.8	27.1	ug/Kg	☼	11/09/17 14:55	11/10/17 17:54	1
Aroclor-1232	18.8	U	58.8	18.8	ug/Kg	☼	11/09/17 14:55	11/10/17 17:54	1
Aroclor-1242	23.5	U	58.8	23.5	ug/Kg	☼	11/09/17 14:55	11/10/17 17:54	1
Aroclor-1248	114		58.8	20.0	ug/Kg	☼	11/09/17 14:55	11/10/17 17:54	1
Aroclor-1254	16.5	U	58.8	16.5	ug/Kg	☼	11/09/17 14:55	11/10/17 17:54	1
Aroclor-1260	21.2	U	58.8	21.2	ug/Kg	☼	11/09/17 14:55	11/10/17 17:54	1
Aroclor-1262	9.42	U	58.8	9.42	ug/Kg	☼	11/09/17 14:55	11/10/17 17:54	1
Aroclor-1268	23.5	U	58.8	23.5	ug/Kg	☼	11/09/17 14:55	11/10/17 17:54	1
Polychlorinated biphenyls, Total	114		58.8	28.2	ug/Kg	☼	11/09/17 14:55	11/10/17 17:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	82		14 - 128	11/09/17 14:55	11/10/17 17:54	1
DCB Decachlorobiphenyl	84		10 - 132	11/09/17 14:55	11/10/17 17:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.7		0.1	0.1	%			11/08/17 08:01	1
Percent Moisture	12.3		0.1	0.1	%			11/08/17 08:01	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SL01-(0-0.5')

Lab Sample ID: 240-87591-71

Date Collected: 10/31/17 08:11

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 83.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.0	U	58.4	28.0	ug/Kg	☼	11/09/17 14:18	11/10/17 17:01	1
Aroclor-1221	26.8	U	58.4	26.8	ug/Kg	☼	11/09/17 14:18	11/10/17 17:01	1
Aroclor-1232	18.7	U	58.4	18.7	ug/Kg	☼	11/09/17 14:18	11/10/17 17:01	1
Aroclor-1242	23.3	U	58.4	23.3	ug/Kg	☼	11/09/17 14:18	11/10/17 17:01	1
Aroclor-1248	94.1	p	58.4	19.8	ug/Kg	☼	11/09/17 14:18	11/10/17 17:01	1
Aroclor-1254	16.3	U	58.4	16.3	ug/Kg	☼	11/09/17 14:18	11/10/17 17:01	1
Aroclor-1260	21.0	U	58.4	21.0	ug/Kg	☼	11/09/17 14:18	11/10/17 17:01	1
Aroclor-1262	9.34	U	58.4	9.34	ug/Kg	☼	11/09/17 14:18	11/10/17 17:01	1
Aroclor-1268	23.3	U	58.4	23.3	ug/Kg	☼	11/09/17 14:18	11/10/17 17:01	1
Polychlorinated biphenyls, Total	94.1	p	58.4	28.0	ug/Kg	☼	11/09/17 14:18	11/10/17 17:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	77		14 - 128	11/09/17 14:18	11/10/17 17:01	1
DCB Decachlorobiphenyl	81		10 - 132	11/09/17 14:18	11/10/17 17:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.9		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	16.1		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SL01-(0.5-1.0')

Lab Sample ID: 240-87591-72

Date Collected: 10/31/17 08:17

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 87.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.7	U	59.7	28.7	ug/Kg	☼	11/10/17 10:03	11/14/17 08:22	1
Aroclor-1221	27.5	U	59.7	27.5	ug/Kg	☼	11/10/17 10:03	11/14/17 08:22	1
Aroclor-1232	19.1	U	59.7	19.1	ug/Kg	☼	11/10/17 10:03	11/14/17 08:22	1
Aroclor-1242	23.9	U	59.7	23.9	ug/Kg	☼	11/10/17 10:03	11/14/17 08:22	1
Aroclor-1248	126		59.7	20.3	ug/Kg	☼	11/10/17 10:03	11/14/17 08:22	1
Aroclor-1254	16.7	U	59.7	16.7	ug/Kg	☼	11/10/17 10:03	11/14/17 08:22	1
Aroclor-1260	21.5	U	59.7	21.5	ug/Kg	☼	11/10/17 10:03	11/14/17 08:22	1
Aroclor-1262	9.55	U	59.7	9.55	ug/Kg	☼	11/10/17 10:03	11/14/17 08:22	1
Aroclor-1268	23.9	U	59.7	23.9	ug/Kg	☼	11/10/17 10:03	11/14/17 08:22	1
Polychlorinated biphenyls, Total	126		59.7	28.7	ug/Kg	☼	11/10/17 10:03	11/14/17 08:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	81		14 - 128	11/10/17 10:03	11/14/17 08:22	1
DCB Decachlorobiphenyl	90		10 - 132	11/10/17 10:03	11/14/17 08:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.1		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	12.9		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SL04-(0-0.5')

Lab Sample ID: 240-87591-73

Date Collected: 10/30/17 14:54

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 78.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.4	U	63.3	30.4	ug/Kg	☼	11/08/17 13:17	11/10/17 07:58	1
Aroclor-1221	29.1	U	63.3	29.1	ug/Kg	☼	11/08/17 13:17	11/10/17 07:58	1
Aroclor-1232	20.2	U	63.3	20.2	ug/Kg	☼	11/08/17 13:17	11/10/17 07:58	1
Aroclor-1242	25.3	U	63.3	25.3	ug/Kg	☼	11/08/17 13:17	11/10/17 07:58	1
Aroclor-1248	21.5	U	63.3	21.5	ug/Kg	☼	11/08/17 13:17	11/10/17 07:58	1
Aroclor-1254	65.0	p	63.3	17.7	ug/Kg	☼	11/08/17 13:17	11/10/17 07:58	1
Aroclor-1260	22.8	U	63.3	22.8	ug/Kg	☼	11/08/17 13:17	11/10/17 07:58	1
Aroclor-1262	10.1	U	63.3	10.1	ug/Kg	☼	11/08/17 13:17	11/10/17 07:58	1
Aroclor-1268	25.3	U	63.3	25.3	ug/Kg	☼	11/08/17 13:17	11/10/17 07:58	1
Polychlorinated biphenyls, Total	65.0	p	63.3	30.4	ug/Kg	☼	11/08/17 13:17	11/10/17 07:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	83		14 - 128	11/08/17 13:17	11/10/17 07:58	1
DCB Decachlorobiphenyl	107		10 - 132	11/08/17 13:17	11/10/17 07:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.2		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	21.8		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SL04-(0.5-1.0')

Lab Sample ID: 240-87591-74

Date Collected: 10/30/17 15:01

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.1	U	60.7	29.1	ug/Kg	☼	11/08/17 13:17	11/10/17 08:19	1
Aroclor-1221	27.9	U	60.7	27.9	ug/Kg	☼	11/08/17 13:17	11/10/17 08:19	1
Aroclor-1232	19.4	U	60.7	19.4	ug/Kg	☼	11/08/17 13:17	11/10/17 08:19	1
Aroclor-1242	24.3	U	60.7	24.3	ug/Kg	☼	11/08/17 13:17	11/10/17 08:19	1
Aroclor-1248	20.6	U	60.7	20.6	ug/Kg	☼	11/08/17 13:17	11/10/17 08:19	1
Aroclor-1254	43.5	J p	60.7	17.0	ug/Kg	☼	11/08/17 13:17	11/10/17 08:19	1
Aroclor-1260	21.9	U	60.7	21.9	ug/Kg	☼	11/08/17 13:17	11/10/17 08:19	1
Aroclor-1262	9.71	U	60.7	9.71	ug/Kg	☼	11/08/17 13:17	11/10/17 08:19	1
Aroclor-1268	24.3	U	60.7	24.3	ug/Kg	☼	11/08/17 13:17	11/10/17 08:19	1
Polychlorinated biphenyls, Total	43.5	J p	60.7	29.1	ug/Kg	☼	11/08/17 13:17	11/10/17 08:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	88		14 - 128	11/08/17 13:17	11/10/17 08:19	1
DCB Decachlorobiphenyl	129		10 - 132	11/08/17 13:17	11/10/17 08:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.7		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	19.3		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SL04-(1.0-1.5")

Lab Sample ID: 240-87591-75

Date Collected: 10/30/17 15:20

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 82.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.1	U	60.7	29.1	ug/Kg	☼	11/08/17 13:17	11/10/17 08:38	1
Aroclor-1221	27.9	U	60.7	27.9	ug/Kg	☼	11/08/17 13:17	11/10/17 08:38	1
Aroclor-1232	19.4	U	60.7	19.4	ug/Kg	☼	11/08/17 13:17	11/10/17 08:38	1
Aroclor-1242	24.3	U	60.7	24.3	ug/Kg	☼	11/08/17 13:17	11/10/17 08:38	1
Aroclor-1248	20.6	U	60.7	20.6	ug/Kg	☼	11/08/17 13:17	11/10/17 08:38	1
Aroclor-1254	17.0	U	60.7	17.0	ug/Kg	☼	11/08/17 13:17	11/10/17 08:38	1
Aroclor-1260	21.9	U	60.7	21.9	ug/Kg	☼	11/08/17 13:17	11/10/17 08:38	1
Aroclor-1262	9.72	U	60.7	9.72	ug/Kg	☼	11/08/17 13:17	11/10/17 08:38	1
Aroclor-1268	24.3	U	60.7	24.3	ug/Kg	☼	11/08/17 13:17	11/10/17 08:38	1
Polychlorinated biphenyls, Total	29.1	U	60.7	29.1	ug/Kg	☼	11/08/17 13:17	11/10/17 08:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	88		14 - 128	11/08/17 13:17	11/10/17 08:38	1
DCB Decachlorobiphenyl	103		10 - 132	11/08/17 13:17	11/10/17 08:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.5		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	17.5		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SL04-(1.5-2.0')

Lab Sample ID: 240-87591-76

Date Collected: 10/30/17 15:27

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 85.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.4	U	59.1	28.4	ug/Kg	☼	11/08/17 13:17	11/10/17 08:58	1
Aroclor-1221	27.2	U	59.1	27.2	ug/Kg	☼	11/08/17 13:17	11/10/17 08:58	1
Aroclor-1232	18.9	U	59.1	18.9	ug/Kg	☼	11/08/17 13:17	11/10/17 08:58	1
Aroclor-1242	23.6	U	59.1	23.6	ug/Kg	☼	11/08/17 13:17	11/10/17 08:58	1
Aroclor-1248	20.1	U	59.1	20.1	ug/Kg	☼	11/08/17 13:17	11/10/17 08:58	1
Aroclor-1254	16.5	U	59.1	16.5	ug/Kg	☼	11/08/17 13:17	11/10/17 08:58	1
Aroclor-1260	21.3	U	59.1	21.3	ug/Kg	☼	11/08/17 13:17	11/10/17 08:58	1
Aroclor-1262	9.45	U	59.1	9.45	ug/Kg	☼	11/08/17 13:17	11/10/17 08:58	1
Aroclor-1268	23.6	U	59.1	23.6	ug/Kg	☼	11/08/17 13:17	11/10/17 08:58	1
Polychlorinated biphenyls, Total	28.4	U	59.1	28.4	ug/Kg	☼	11/08/17 13:17	11/10/17 08:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	89		14 - 128	11/08/17 13:17	11/10/17 08:58	1
DCB Decachlorobiphenyl	124		10 - 132	11/08/17 13:17	11/10/17 08:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.0		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	15.0		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SL03-(0.0.5')

Lab Sample ID: 240-87591-77

Date Collected: 10/30/17 16:30

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 75.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	31.2	U	65.0	31.2	ug/Kg	☼	11/08/17 13:17	11/10/17 09:18	1
Aroclor-1221	29.9	U	65.0	29.9	ug/Kg	☼	11/08/17 13:17	11/10/17 09:18	1
Aroclor-1232	20.8	U	65.0	20.8	ug/Kg	☼	11/08/17 13:17	11/10/17 09:18	1
Aroclor-1242	26.0	U	65.0	26.0	ug/Kg	☼	11/08/17 13:17	11/10/17 09:18	1
Aroclor-1248	22.1	U	65.0	22.1	ug/Kg	☼	11/08/17 13:17	11/10/17 09:18	1
Aroclor-1254	18.2	U	65.0	18.2	ug/Kg	☼	11/08/17 13:17	11/10/17 09:18	1
Aroclor-1260	23.4	U	65.0	23.4	ug/Kg	☼	11/08/17 13:17	11/10/17 09:18	1
Aroclor-1262	10.4	U	65.0	10.4	ug/Kg	☼	11/08/17 13:17	11/10/17 09:18	1
Aroclor-1268	26.0	U	65.0	26.0	ug/Kg	☼	11/08/17 13:17	11/10/17 09:18	1
Polychlorinated biphenyls, Total	31.2	U	65.0	31.2	ug/Kg	☼	11/08/17 13:17	11/10/17 09:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	98		14 - 128	11/08/17 13:17	11/10/17 09:18	1
DCB Decachlorobiphenyl	147	X	10 - 132	11/08/17 13:17	11/10/17 09:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	75.2		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	24.8		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-78

Date Collected: 10/30/17 16:51

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 79.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.8	U	62.2	29.8	ug/Kg	☼	11/08/17 13:17	11/10/17 09:38	1
Aroclor-1221	28.6	U	62.2	28.6	ug/Kg	☼	11/08/17 13:17	11/10/17 09:38	1
Aroclor-1232	19.9	U	62.2	19.9	ug/Kg	☼	11/08/17 13:17	11/10/17 09:38	1
Aroclor-1242	24.9	U	62.2	24.9	ug/Kg	☼	11/08/17 13:17	11/10/17 09:38	1
Aroclor-1248	21.1	U	62.2	21.1	ug/Kg	☼	11/08/17 13:17	11/10/17 09:38	1
Aroclor-1254	17.4	U	62.2	17.4	ug/Kg	☼	11/08/17 13:17	11/10/17 09:38	1
Aroclor-1260	22.4	U	62.2	22.4	ug/Kg	☼	11/08/17 13:17	11/10/17 09:38	1
Aroclor-1262	9.95	U	62.2	9.95	ug/Kg	☼	11/08/17 13:17	11/10/17 09:38	1
Aroclor-1268	24.9	U	62.2	24.9	ug/Kg	☼	11/08/17 13:17	11/10/17 09:38	1
Polychlorinated biphenyls, Total	29.8	U	62.2	29.8	ug/Kg	☼	11/08/17 13:17	11/10/17 09:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	90		14 - 128	11/08/17 13:17	11/10/17 09:38	1
DCB Decachlorobiphenyl	204	X	10 - 132	11/08/17 13:17	11/10/17 09:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.2		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	20.8		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SL02-(0-0.5')

Lab Sample ID: 240-87591-79

Date Collected: 10/30/17 16:01

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 78.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	150	U	312	150	ug/Kg	☼	11/08/17 13:17	11/10/17 09:57	5
Aroclor-1221	143	U	312	143	ug/Kg	☼	11/08/17 13:17	11/10/17 09:57	5
Aroclor-1232	99.8	U	312	99.8	ug/Kg	☼	11/08/17 13:17	11/10/17 09:57	5
Aroclor-1242	125	U	312	125	ug/Kg	☼	11/08/17 13:17	11/10/17 09:57	5
Aroclor-1248	4140		312	106	ug/Kg	☼	11/08/17 13:17	11/10/17 09:57	5
Aroclor-1254	87.3	U	312	87.3	ug/Kg	☼	11/08/17 13:17	11/10/17 09:57	5
Aroclor-1260	502		312	112	ug/Kg	☼	11/08/17 13:17	11/10/17 09:57	5
Aroclor-1262	49.9	U	312	49.9	ug/Kg	☼	11/08/17 13:17	11/10/17 09:57	5
Aroclor-1268	125	U	312	125	ug/Kg	☼	11/08/17 13:17	11/10/17 09:57	5
Polychlorinated biphenyls, Total	4640		312	150	ug/Kg	☼	11/08/17 13:17	11/10/17 09:57	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	87		14 - 128	11/08/17 13:17	11/10/17 09:57	5
DCB Decachlorobiphenyl	269	X	10 - 132	11/08/17 13:17	11/10/17 09:57	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.7		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	21.3		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SL02-(0-0.5')-FD

Lab Sample ID: 240-87591-80

Date Collected: 10/30/17 16:01

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 81.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	148	U	308	148	ug/Kg	☼	11/08/17 13:17	11/10/17 10:17	5
Aroclor-1221	141	U	308	141	ug/Kg	☼	11/08/17 13:17	11/10/17 10:17	5
Aroclor-1232	98.4	U	308	98.4	ug/Kg	☼	11/08/17 13:17	11/10/17 10:17	5
Aroclor-1242	123	U	308	123	ug/Kg	☼	11/08/17 13:17	11/10/17 10:17	5
Aroclor-1248	4710		308	105	ug/Kg	☼	11/08/17 13:17	11/10/17 10:17	5
Aroclor-1254	86.1	U	308	86.1	ug/Kg	☼	11/08/17 13:17	11/10/17 10:17	5
Aroclor-1260	541		308	111	ug/Kg	☼	11/08/17 13:17	11/10/17 10:17	5
Aroclor-1262	49.2	U	308	49.2	ug/Kg	☼	11/08/17 13:17	11/10/17 10:17	5
Aroclor-1268	123	U	308	123	ug/Kg	☼	11/08/17 13:17	11/10/17 10:17	5
Polychlorinated biphenyls, Total	5250		308	148	ug/Kg	☼	11/08/17 13:17	11/10/17 10:17	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	95		14 - 128	11/08/17 13:17	11/10/17 10:17	5
DCB Decachlorobiphenyl	160	X	10 - 132	11/08/17 13:17	11/10/17 10:17	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.0		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	19.0		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SL02-(0.5-1.0')

Lab Sample ID: 240-87591-81

Date Collected: 10/30/17 16:09

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 88.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.0	U	56.2	27.0	ug/Kg	☼	11/08/17 13:17	11/10/17 10:37	1
Aroclor-1221	25.9	U	56.2	25.9	ug/Kg	☼	11/08/17 13:17	11/10/17 10:37	1
Aroclor-1232	18.0	U	56.2	18.0	ug/Kg	☼	11/08/17 13:17	11/10/17 10:37	1
Aroclor-1242	22.5	U	56.2	22.5	ug/Kg	☼	11/08/17 13:17	11/10/17 10:37	1
Aroclor-1248	687		56.2	19.1	ug/Kg	☼	11/08/17 13:17	11/10/17 10:37	1
Aroclor-1254	15.7	U	56.2	15.7	ug/Kg	☼	11/08/17 13:17	11/10/17 10:37	1
Aroclor-1260	85.3		56.2	20.2	ug/Kg	☼	11/08/17 13:17	11/10/17 10:37	1
Aroclor-1262	9.00	U	56.2	9.00	ug/Kg	☼	11/08/17 13:17	11/10/17 10:37	1
Aroclor-1268	22.5	U	56.2	22.5	ug/Kg	☼	11/08/17 13:17	11/10/17 10:37	1
Polychlorinated biphenyls, Total	772		56.2	27.0	ug/Kg	☼	11/08/17 13:17	11/10/17 10:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	86		14 - 128	11/08/17 13:17	11/10/17 10:37	1
DCB Decachlorobiphenyl	106		10 - 132	11/08/17 13:17	11/10/17 10:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.3		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	11.7		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SL02-(1.0-1.5')

Lab Sample ID: 240-87591-82

Date Collected: 10/30/17 16:10

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 83.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	58.2	U	121	58.2	ug/Kg	☼	11/08/17 13:17	11/10/17 14:56	2
Aroclor-1221	55.8	U	121	55.8	ug/Kg	☼	11/08/17 13:17	11/10/17 14:56	2
Aroclor-1232	38.8	U	121	38.8	ug/Kg	☼	11/08/17 13:17	11/10/17 14:56	2
Aroclor-1242	48.5	U	121	48.5	ug/Kg	☼	11/08/17 13:17	11/10/17 14:56	2
Aroclor-1248	1600		121	41.2	ug/Kg	☼	11/08/17 13:17	11/10/17 14:56	2
Aroclor-1254	33.9	U	121	33.9	ug/Kg	☼	11/08/17 13:17	11/10/17 14:56	2
Aroclor-1260	168		121	43.6	ug/Kg	☼	11/08/17 13:17	11/10/17 14:56	2
Aroclor-1262	19.4	U	121	19.4	ug/Kg	☼	11/08/17 13:17	11/10/17 14:56	2
Aroclor-1268	48.5	U	121	48.5	ug/Kg	☼	11/08/17 13:17	11/10/17 14:56	2
Polychlorinated biphenyls, Total	1770		121	58.2	ug/Kg	☼	11/08/17 13:17	11/10/17 14:56	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	79		14 - 128	11/08/17 13:17	11/10/17 14:56	2
DCB Decachlorobiphenyl	105		10 - 132	11/08/17 13:17	11/10/17 14:56	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.0		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	17.0		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL03-(0-0.5')

Lab Sample ID: 240-87591-83

Date Collected: 10/30/17 12:20

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 81.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	286	U	596	286	ug/Kg	☼	11/08/17 13:17	11/10/17 15:16	10
Aroclor-1221	274	U	596	274	ug/Kg	☼	11/08/17 13:17	11/10/17 15:16	10
Aroclor-1232	191	U	596	191	ug/Kg	☼	11/08/17 13:17	11/10/17 15:16	10
Aroclor-1242	238	U	596	238	ug/Kg	☼	11/08/17 13:17	11/10/17 15:16	10
Aroclor-1248	7150		596	203	ug/Kg	☼	11/08/17 13:17	11/10/17 15:16	10
Aroclor-1254	167	U	596	167	ug/Kg	☼	11/08/17 13:17	11/10/17 15:16	10
Aroclor-1260	843		596	215	ug/Kg	☼	11/08/17 13:17	11/10/17 15:16	10
Aroclor-1262	95.4	U	596	95.4	ug/Kg	☼	11/08/17 13:17	11/10/17 15:16	10
Aroclor-1268	238	U	596	238	ug/Kg	☼	11/08/17 13:17	11/10/17 15:16	10
Polychlorinated biphenyls, Total	7990		596	286	ug/Kg	☼	11/08/17 13:17	11/10/17 15:16	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	85		14 - 128	11/08/17 13:17	11/10/17 15:16	10
DCB Decachlorobiphenyl	169	X	10 - 132	11/08/17 13:17	11/10/17 15:16	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.0		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	19.0		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL03-(0.5-0.97')

Lab Sample ID: 240-87591-84

Date Collected: 10/30/17 12:33

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 91.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	51.9	U	108	51.9	ug/Kg	☼	11/08/17 13:17	11/10/17 11:37	2
Aroclor-1221	49.7	U	108	49.7	ug/Kg	☼	11/08/17 13:17	11/10/17 11:37	2
Aroclor-1232	34.6	U	108	34.6	ug/Kg	☼	11/08/17 13:17	11/10/17 11:37	2
Aroclor-1242	43.2	U	108	43.2	ug/Kg	☼	11/08/17 13:17	11/10/17 11:37	2
Aroclor-1248	1930		108	36.7	ug/Kg	☼	11/08/17 13:17	11/10/17 11:37	2
Aroclor-1254	30.3	U	108	30.3	ug/Kg	☼	11/08/17 13:17	11/10/17 11:37	2
Aroclor-1260	129		108	38.9	ug/Kg	☼	11/08/17 13:17	11/10/17 11:37	2
Aroclor-1262	17.3	U	108	17.3	ug/Kg	☼	11/08/17 13:17	11/10/17 11:37	2
Aroclor-1268	43.2	U	108	43.2	ug/Kg	☼	11/08/17 13:17	11/10/17 11:37	2
Polychlorinated biphenyls, Total	2060		108	51.9	ug/Kg	☼	11/08/17 13:17	11/10/17 11:37	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	83		14 - 128	11/08/17 13:17	11/10/17 11:37	2
DCB Decachlorobiphenyl	131		10 - 132	11/08/17 13:17	11/10/17 11:37	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91.9		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	8.1		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL03-(0.97-1..47')

Lab Sample ID: 240-87591-85

Date Collected: 10/30/17 12:45

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 83.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	2900	U	6030	2900	ug/Kg	☼	11/08/17 13:17	11/10/17 11:56	100
Aroclor-1221	2770	U	6030	2770	ug/Kg	☼	11/08/17 13:17	11/10/17 11:56	100
Aroclor-1232	1930	U	6030	1930	ug/Kg	☼	11/08/17 13:17	11/10/17 11:56	100
Aroclor-1242	2410	U	6030	2410	ug/Kg	☼	11/08/17 13:17	11/10/17 11:56	100
Aroclor-1248	66000		6030	2050	ug/Kg	☼	11/08/17 13:17	11/10/17 11:56	100
Aroclor-1254	1690	U	6030	1690	ug/Kg	☼	11/08/17 13:17	11/10/17 11:56	100
Aroclor-1260	2720	J F1	6030	2170	ug/Kg	☼	11/08/17 13:17	11/10/17 11:56	100
Aroclor-1262	965	U	6030	965	ug/Kg	☼	11/08/17 13:17	11/10/17 11:56	100
Aroclor-1268	2410	U	6030	2410	ug/Kg	☼	11/08/17 13:17	11/10/17 11:56	100
Polychlorinated biphenyls, Total	68700		6030	2900	ug/Kg	☼	11/08/17 13:17	11/10/17 11:56	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	94		14 - 128	11/08/17 13:17	11/10/17 11:56	100
DCB Decachlorobiphenyl	178	X	10 - 132	11/08/17 13:17	11/10/17 11:56	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.6		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	16.4		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL03-(1.5-2.0')

Lab Sample ID: 240-87591-86

Date Collected: 10/30/17 12:53

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	3000	U	6240	3000	ug/Kg	☼	11/08/17 13:17	11/10/17 12:57	100
Aroclor-1221	2870	U	6240	2870	ug/Kg	☼	11/08/17 13:17	11/10/17 12:57	100
Aroclor-1232	2000	U	6240	2000	ug/Kg	☼	11/08/17 13:17	11/10/17 12:57	100
Aroclor-1242	2500	U	6240	2500	ug/Kg	☼	11/08/17 13:17	11/10/17 12:57	100
Aroclor-1248	78300		6240	2120	ug/Kg	☼	11/08/17 13:17	11/10/17 12:57	100
Aroclor-1254	1750	U	6240	1750	ug/Kg	☼	11/08/17 13:17	11/10/17 12:57	100
Aroclor-1260	4300	J	6240	2250	ug/Kg	☼	11/08/17 13:17	11/10/17 12:57	100
Aroclor-1262	999	U	6240	999	ug/Kg	☼	11/08/17 13:17	11/10/17 12:57	100
Aroclor-1268	2500	U	6240	2500	ug/Kg	☼	11/08/17 13:17	11/10/17 12:57	100
Polychlorinated biphenyls, Total	82600		6240	3000	ug/Kg	☼	11/08/17 13:17	11/10/17 12:57	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	98		14 - 128	11/08/17 13:17	11/10/17 12:57	100
DCB Decachlorobiphenyl	110		10 - 132	11/08/17 13:17	11/10/17 12:57	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.4		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	19.6		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL04-(0-0.67)

Lab Sample ID: 240-87591-87

Date Collected: 10/30/17 13:18

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 83.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.9	U	60.1	28.9	ug/Kg	☼	11/08/17 13:17	11/10/17 13:17	1
Aroclor-1221	27.6	U	60.1	27.6	ug/Kg	☼	11/08/17 13:17	11/10/17 13:17	1
Aroclor-1232	19.2	U	60.1	19.2	ug/Kg	☼	11/08/17 13:17	11/10/17 13:17	1
Aroclor-1242	24.0	U	60.1	24.0	ug/Kg	☼	11/08/17 13:17	11/10/17 13:17	1
Aroclor-1248	20.4	U	60.1	20.4	ug/Kg	☼	11/08/17 13:17	11/10/17 13:17	1
Aroclor-1254	16.8	U	60.1	16.8	ug/Kg	☼	11/08/17 13:17	11/10/17 13:17	1
Aroclor-1260	21.6	U	60.1	21.6	ug/Kg	☼	11/08/17 13:17	11/10/17 13:17	1
Aroclor-1262	9.62	U	60.1	9.62	ug/Kg	☼	11/08/17 13:17	11/10/17 13:17	1
Aroclor-1268	24.0	U	60.1	24.0	ug/Kg	☼	11/08/17 13:17	11/10/17 13:17	1
Polychlorinated biphenyls, Total	28.9	U	60.1	28.9	ug/Kg	☼	11/08/17 13:17	11/10/17 13:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	91		14 - 128	11/08/17 13:17	11/10/17 13:17	1
DCB Decachlorobiphenyl	112		10 - 132	11/08/17 13:17	11/10/17 13:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.3		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	16.7		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL04-(0.67-0.86)

Lab Sample ID: 240-87591-88

Date Collected: 10/30/17 13:27

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 82.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.8	U	60.0	28.8	ug/Kg	☼	11/08/17 13:17	11/10/17 13:36	1
Aroclor-1221	27.6	U	60.0	27.6	ug/Kg	☼	11/08/17 13:17	11/10/17 13:36	1
Aroclor-1232	19.2	U	60.0	19.2	ug/Kg	☼	11/08/17 13:17	11/10/17 13:36	1
Aroclor-1242	24.0	U	60.0	24.0	ug/Kg	☼	11/08/17 13:17	11/10/17 13:36	1
Aroclor-1248	20.4	U	60.0	20.4	ug/Kg	☼	11/08/17 13:17	11/10/17 13:36	1
Aroclor-1254	16.8	U	60.0	16.8	ug/Kg	☼	11/08/17 13:17	11/10/17 13:36	1
Aroclor-1260	21.6	U	60.0	21.6	ug/Kg	☼	11/08/17 13:17	11/10/17 13:36	1
Aroclor-1262	9.60	U	60.0	9.60	ug/Kg	☼	11/08/17 13:17	11/10/17 13:36	1
Aroclor-1268	24.0	U	60.0	24.0	ug/Kg	☼	11/08/17 13:17	11/10/17 13:36	1
Polychlorinated biphenyls, Total	28.8	U	60.0	28.8	ug/Kg	☼	11/08/17 13:17	11/10/17 13:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	83		14 - 128	11/08/17 13:17	11/10/17 13:36	1
DCB Decachlorobiphenyl	161	X	10 - 132	11/08/17 13:17	11/10/17 13:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.2		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	17.8		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL04-(0.86-1.36)

Lab Sample ID: 240-87591-89

Date Collected: 10/30/17 13:39

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.6	U	61.7	29.6	ug/Kg	☼	11/10/17 10:03	11/14/17 08:42	1
Aroclor-1221	28.4	U	61.7	28.4	ug/Kg	☼	11/10/17 10:03	11/14/17 08:42	1
Aroclor-1232	19.8	U	61.7	19.8	ug/Kg	☼	11/10/17 10:03	11/14/17 08:42	1
Aroclor-1242	24.7	U	61.7	24.7	ug/Kg	☼	11/10/17 10:03	11/14/17 08:42	1
Aroclor-1248	21.0	U	61.7	21.0	ug/Kg	☼	11/10/17 10:03	11/14/17 08:42	1
Aroclor-1254	17.3	U	61.7	17.3	ug/Kg	☼	11/10/17 10:03	11/14/17 08:42	1
Aroclor-1260	22.2	U	61.7	22.2	ug/Kg	☼	11/10/17 10:03	11/14/17 08:42	1
Aroclor-1262	9.88	U	61.7	9.88	ug/Kg	☼	11/10/17 10:03	11/14/17 08:42	1
Aroclor-1268	24.7	U	61.7	24.7	ug/Kg	☼	11/10/17 10:03	11/14/17 08:42	1
Polychlorinated biphenyls, Total	29.6	U	61.7	29.6	ug/Kg	☼	11/10/17 10:03	11/14/17 08:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		14 - 128	11/10/17 10:03	11/14/17 08:42	1
DCB Decachlorobiphenyl	93		10 - 132	11/10/17 10:03	11/14/17 08:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.5		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	19.5		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL04-(1.5-2.0')

Lab Sample ID: 240-87591-90

Date Collected: 10/30/17 13:44

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.3	U	61.1	29.3	ug/Kg	☼	11/10/17 10:03	11/14/17 09:01	1
Aroclor-1221	28.1	U	61.1	28.1	ug/Kg	☼	11/10/17 10:03	11/14/17 09:01	1
Aroclor-1232	19.6	U	61.1	19.6	ug/Kg	☼	11/10/17 10:03	11/14/17 09:01	1
Aroclor-1242	24.5	U	61.1	24.5	ug/Kg	☼	11/10/17 10:03	11/14/17 09:01	1
Aroclor-1248	20.8	U	61.1	20.8	ug/Kg	☼	11/10/17 10:03	11/14/17 09:01	1
Aroclor-1254	17.1	U	61.1	17.1	ug/Kg	☼	11/10/17 10:03	11/14/17 09:01	1
Aroclor-1260	22.0	U	61.1	22.0	ug/Kg	☼	11/10/17 10:03	11/14/17 09:01	1
Aroclor-1262	9.78	U	61.1	9.78	ug/Kg	☼	11/10/17 10:03	11/14/17 09:01	1
Aroclor-1268	24.5	U	61.1	24.5	ug/Kg	☼	11/10/17 10:03	11/14/17 09:01	1
Polychlorinated biphenyls, Total	29.3	U	61.1	29.3	ug/Kg	☼	11/10/17 10:03	11/14/17 09:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	72		14 - 128	11/10/17 10:03	11/14/17 09:01	1
DCB Decachlorobiphenyl	86		10 - 132	11/10/17 10:03	11/14/17 09:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.4		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	19.6		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL01-(0-0.5')

Lab Sample ID: 240-87591-91

Date Collected: 10/30/17 11:07

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 78.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.0	U	62.5	30.0	ug/Kg	☼	11/10/17 10:03	11/14/17 14:59	1
Aroclor-1221	28.8	U	62.5	28.8	ug/Kg	☼	11/10/17 10:03	11/14/17 14:59	1
Aroclor-1232	20.0	U	62.5	20.0	ug/Kg	☼	11/10/17 10:03	11/14/17 14:59	1
Aroclor-1242	25.0	U	62.5	25.0	ug/Kg	☼	11/10/17 10:03	11/14/17 14:59	1
Aroclor-1248	166		62.5	21.3	ug/Kg	☼	11/10/17 10:03	11/14/17 14:59	1
Aroclor-1254	17.5	U	62.5	17.5	ug/Kg	☼	11/10/17 10:03	11/14/17 14:59	1
Aroclor-1260	28.5	J p	62.5	22.5	ug/Kg	☼	11/10/17 10:03	11/14/17 14:59	1
Aroclor-1262	10.0	U	62.5	10.0	ug/Kg	☼	11/10/17 10:03	11/14/17 14:59	1
Aroclor-1268	25.0	U	62.5	25.0	ug/Kg	☼	11/10/17 10:03	11/14/17 14:59	1
Polychlorinated biphenyls, Total	211		62.5	30.0	ug/Kg	☼	11/10/17 10:03	11/14/17 14:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	68		14 - 128	11/10/17 10:03	11/14/17 14:59	1
Tetrachloro-m-xylene	66		14 - 128	11/10/17 10:03	11/14/17 14:59	1
DCB Decachlorobiphenyl	95		10 - 132	11/10/17 10:03	11/14/17 14:59	1
DCB Decachlorobiphenyl	91		10 - 132	11/10/17 10:03	11/14/17 14:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.8		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	21.2		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL01-(0.5-1.0')

Lab Sample ID: 240-87591-92

Date Collected: 10/30/17 11:16

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 89.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26.2	U	54.6	26.2	ug/Kg	☼	11/10/17 10:03	11/14/17 09:21	1
Aroclor-1221	25.1	U	54.6	25.1	ug/Kg	☼	11/10/17 10:03	11/14/17 09:21	1
Aroclor-1232	17.5	U	54.6	17.5	ug/Kg	☼	11/10/17 10:03	11/14/17 09:21	1
Aroclor-1242	21.8	U	54.6	21.8	ug/Kg	☼	11/10/17 10:03	11/14/17 09:21	1
Aroclor-1248	18.6	U	54.6	18.6	ug/Kg	☼	11/10/17 10:03	11/14/17 09:21	1
Aroclor-1254	15.3	U	54.6	15.3	ug/Kg	☼	11/10/17 10:03	11/14/17 09:21	1
Aroclor-1260	19.6	U	54.6	19.6	ug/Kg	☼	11/10/17 10:03	11/14/17 09:21	1
Aroclor-1262	8.73	U	54.6	8.73	ug/Kg	☼	11/10/17 10:03	11/14/17 09:21	1
Aroclor-1268	21.8	U	54.6	21.8	ug/Kg	☼	11/10/17 10:03	11/14/17 09:21	1
Polychlorinated biphenyls, Total	26.2	U	54.6	26.2	ug/Kg	☼	11/10/17 10:03	11/14/17 09:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	62		14 - 128	11/10/17 10:03	11/14/17 09:21	1
DCB Decachlorobiphenyl	83		10 - 132	11/10/17 10:03	11/14/17 09:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.6		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	10.4		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL01-(1.0-1.86')

Lab Sample ID: 240-87591-93

Date Collected: 10/30/17 11:22

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 79.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.6	U	63.7	30.6	ug/Kg	☼	11/10/17 10:03	11/14/17 09:41	1
Aroclor-1221	29.3	U	63.7	29.3	ug/Kg	☼	11/10/17 10:03	11/14/17 09:41	1
Aroclor-1232	20.4	U	63.7	20.4	ug/Kg	☼	11/10/17 10:03	11/14/17 09:41	1
Aroclor-1242	25.5	U	63.7	25.5	ug/Kg	☼	11/10/17 10:03	11/14/17 09:41	1
Aroclor-1248	21.6	U	63.7	21.6	ug/Kg	☼	11/10/17 10:03	11/14/17 09:41	1
Aroclor-1254	17.8	U	63.7	17.8	ug/Kg	☼	11/10/17 10:03	11/14/17 09:41	1
Aroclor-1260	22.9	U	63.7	22.9	ug/Kg	☼	11/10/17 10:03	11/14/17 09:41	1
Aroclor-1262	10.2	U	63.7	10.2	ug/Kg	☼	11/10/17 10:03	11/14/17 09:41	1
Aroclor-1268	25.5	U	63.7	25.5	ug/Kg	☼	11/10/17 10:03	11/14/17 09:41	1
Polychlorinated biphenyls, Total	30.6	U	63.7	30.6	ug/Kg	☼	11/10/17 10:03	11/14/17 09:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	78		14 - 128	11/10/17 10:03	11/14/17 09:41	1
DCB Decachlorobiphenyl	97		10 - 132	11/10/17 10:03	11/14/17 09:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.1		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	20.9		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL01-(1.86-2.0')

Lab Sample ID: 240-87591-94

Date Collected: 10/30/17 11:34

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 78.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.6	U	61.8	29.6	ug/Kg	☼	11/10/17 10:03	11/14/17 10:02	1
Aroclor-1221	28.4	U	61.8	28.4	ug/Kg	☼	11/10/17 10:03	11/14/17 10:02	1
Aroclor-1232	19.8	U	61.8	19.8	ug/Kg	☼	11/10/17 10:03	11/14/17 10:02	1
Aroclor-1242	24.7	U	61.8	24.7	ug/Kg	☼	11/10/17 10:03	11/14/17 10:02	1
Aroclor-1248	21.0	U	61.8	21.0	ug/Kg	☼	11/10/17 10:03	11/14/17 10:02	1
Aroclor-1254	17.3	U	61.8	17.3	ug/Kg	☼	11/10/17 10:03	11/14/17 10:02	1
Aroclor-1260	22.2	U	61.8	22.2	ug/Kg	☼	11/10/17 10:03	11/14/17 10:02	1
Aroclor-1262	9.88	U	61.8	9.88	ug/Kg	☼	11/10/17 10:03	11/14/17 10:02	1
Aroclor-1268	24.7	U	61.8	24.7	ug/Kg	☼	11/10/17 10:03	11/14/17 10:02	1
Polychlorinated biphenyls, Total	29.6	U	61.8	29.6	ug/Kg	☼	11/10/17 10:03	11/14/17 10:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	70		14 - 128	11/10/17 10:03	11/14/17 10:02	1
DCB Decachlorobiphenyl	82		10 - 132	11/10/17 10:03	11/14/17 10:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.7		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	21.3		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.37-SL03-(0-0.27')

Lab Sample ID: 240-87591-95

Date Collected: 11/02/17 09:25

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 79.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.3	U	63.0	30.3	ug/Kg	☼	11/10/17 10:03	11/14/17 10:22	1
Aroclor-1221	29.0	U	63.0	29.0	ug/Kg	☼	11/10/17 10:03	11/14/17 10:22	1
Aroclor-1232	20.2	U	63.0	20.2	ug/Kg	☼	11/10/17 10:03	11/14/17 10:22	1
Aroclor-1242	25.2	U	63.0	25.2	ug/Kg	☼	11/10/17 10:03	11/14/17 10:22	1
Aroclor-1248	771		63.0	21.4	ug/Kg	☼	11/10/17 10:03	11/14/17 10:22	1
Aroclor-1254	17.6	U	63.0	17.6	ug/Kg	☼	11/10/17 10:03	11/14/17 10:22	1
Aroclor-1260	115		63.0	22.7	ug/Kg	☼	11/10/17 10:03	11/14/17 10:22	1
Aroclor-1262	10.1	U	63.0	10.1	ug/Kg	☼	11/10/17 10:03	11/14/17 10:22	1
Aroclor-1268	25.2	U	63.0	25.2	ug/Kg	☼	11/10/17 10:03	11/14/17 10:22	1
Polychlorinated biphenyls, Total	886		63.0	30.3	ug/Kg	☼	11/10/17 10:03	11/14/17 10:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	72		14 - 128	11/10/17 10:03	11/14/17 10:22	1
DCB Decachlorobiphenyl	91		10 - 132	11/10/17 10:03	11/14/17 10:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.6		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	20.4		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.37-SL03-(0.27-0.92')

Lab Sample ID: 240-87591-96

Date Collected: 11/02/17 09:26

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 89.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26.5	U	55.2	26.5	ug/Kg	☼	11/10/17 10:03	11/14/17 10:41	1
Aroclor-1221	25.4	U	55.2	25.4	ug/Kg	☼	11/10/17 10:03	11/14/17 10:41	1
Aroclor-1232	17.7	U	55.2	17.7	ug/Kg	☼	11/10/17 10:03	11/14/17 10:41	1
Aroclor-1242	22.1	U	55.2	22.1	ug/Kg	☼	11/10/17 10:03	11/14/17 10:41	1
Aroclor-1248	159		55.2	18.8	ug/Kg	☼	11/10/17 10:03	11/14/17 10:41	1
Aroclor-1254	15.5	U	55.2	15.5	ug/Kg	☼	11/10/17 10:03	11/14/17 10:41	1
Aroclor-1260	19.9	U	55.2	19.9	ug/Kg	☼	11/10/17 10:03	11/14/17 10:41	1
Aroclor-1262	8.83	U	55.2	8.83	ug/Kg	☼	11/10/17 10:03	11/14/17 10:41	1
Aroclor-1268	22.1	U	55.2	22.1	ug/Kg	☼	11/10/17 10:03	11/14/17 10:41	1
Polychlorinated biphenyls, Total	159		55.2	26.5	ug/Kg	☼	11/10/17 10:03	11/14/17 10:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		14 - 128	11/10/17 10:03	11/14/17 10:41	1
DCB Decachlorobiphenyl	91		10 - 132	11/10/17 10:03	11/14/17 10:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.8		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	10.2		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.37-SL03-(0.92-1.07')

Lab Sample ID: 240-87591-97

Date Collected: 11/02/17 09:28

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 82.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.6	U	61.7	29.6	ug/Kg	☼	11/10/17 10:03	11/14/17 11:01	1
Aroclor-1221	28.4	U	61.7	28.4	ug/Kg	☼	11/10/17 10:03	11/14/17 11:01	1
Aroclor-1232	19.8	U	61.7	19.8	ug/Kg	☼	11/10/17 10:03	11/14/17 11:01	1
Aroclor-1242	24.7	U	61.7	24.7	ug/Kg	☼	11/10/17 10:03	11/14/17 11:01	1
Aroclor-1248	237		61.7	21.0	ug/Kg	☼	11/10/17 10:03	11/14/17 11:01	1
Aroclor-1254	17.3	U	61.7	17.3	ug/Kg	☼	11/10/17 10:03	11/14/17 11:01	1
Aroclor-1260	28.9	J	61.7	22.2	ug/Kg	☼	11/10/17 10:03	11/14/17 11:01	1
Aroclor-1262	9.88	U	61.7	9.88	ug/Kg	☼	11/10/17 10:03	11/14/17 11:01	1
Aroclor-1268	24.7	U	61.7	24.7	ug/Kg	☼	11/10/17 10:03	11/14/17 11:01	1
Polychlorinated biphenyls, Total	266		61.7	29.6	ug/Kg	☼	11/10/17 10:03	11/14/17 11:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	64		14 - 128	11/10/17 10:03	11/14/17 11:01	1
DCB Decachlorobiphenyl	82		10 - 132	11/10/17 10:03	11/14/17 11:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.6		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	17.4		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.37-SL03-(1.07-2.0')

Lab Sample ID: 240-87591-98

Date Collected: 11/02/17 09:30

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 88.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.6	U	57.4	27.6	ug/Kg	☼	11/10/17 10:03	11/14/17 11:20	1
Aroclor-1221	26.4	U	57.4	26.4	ug/Kg	☼	11/10/17 10:03	11/14/17 11:20	1
Aroclor-1232	18.4	U	57.4	18.4	ug/Kg	☼	11/10/17 10:03	11/14/17 11:20	1
Aroclor-1242	23.0	U	57.4	23.0	ug/Kg	☼	11/10/17 10:03	11/14/17 11:20	1
Aroclor-1248	189		57.4	19.5	ug/Kg	☼	11/10/17 10:03	11/14/17 11:20	1
Aroclor-1254	16.1	U	57.4	16.1	ug/Kg	☼	11/10/17 10:03	11/14/17 11:20	1
Aroclor-1260	20.7	U	57.4	20.7	ug/Kg	☼	11/10/17 10:03	11/14/17 11:20	1
Aroclor-1262	9.19	U	57.4	9.19	ug/Kg	☼	11/10/17 10:03	11/14/17 11:20	1
Aroclor-1268	23.0	U	57.4	23.0	ug/Kg	☼	11/10/17 10:03	11/14/17 11:20	1
Polychlorinated biphenyls, Total	189		57.4	27.6	ug/Kg	☼	11/10/17 10:03	11/14/17 11:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		14 - 128	11/10/17 10:03	11/14/17 11:20	1
DCB Decachlorobiphenyl	94		10 - 132	11/10/17 10:03	11/14/17 11:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.9		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	11.1		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.49-SL04-(0-0.5')

Lab Sample ID: 240-87591-99

Date Collected: 11/01/17 14:10

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 82.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.3	U	61.1	29.3	ug/Kg	☼	11/10/17 10:03	11/14/17 11:40	1
Aroclor-1221	28.1	U	61.1	28.1	ug/Kg	☼	11/10/17 10:03	11/14/17 11:40	1
Aroclor-1232	19.5	U	61.1	19.5	ug/Kg	☼	11/10/17 10:03	11/14/17 11:40	1
Aroclor-1242	24.4	U	61.1	24.4	ug/Kg	☼	11/10/17 10:03	11/14/17 11:40	1
Aroclor-1248	20.8	U	61.1	20.8	ug/Kg	☼	11/10/17 10:03	11/14/17 11:40	1
Aroclor-1254	33.6	J	61.1	17.1	ug/Kg	☼	11/10/17 10:03	11/14/17 11:40	1
Aroclor-1260	22.0	U	61.1	22.0	ug/Kg	☼	11/10/17 10:03	11/14/17 11:40	1
Aroclor-1262	9.77	U	61.1	9.77	ug/Kg	☼	11/10/17 10:03	11/14/17 11:40	1
Aroclor-1268	24.4	U	61.1	24.4	ug/Kg	☼	11/10/17 10:03	11/14/17 11:40	1
Polychlorinated biphenyls, Total	33.6	J	61.1	29.3	ug/Kg	☼	11/10/17 10:03	11/14/17 11:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	67		14 - 128	11/10/17 10:03	11/14/17 11:40	1
DCB Decachlorobiphenyl	79		10 - 132	11/10/17 10:03	11/14/17 11:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.0		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	18.0		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.49-SL04-(0.5-1.0')

Lab Sample ID: 240-87591-100

Date Collected: 11/01/17 14:17

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.2	U	56.7	27.2	ug/Kg	☼	11/10/17 10:03	11/14/17 12:00	1
Aroclor-1221	26.1	U	56.7	26.1	ug/Kg	☼	11/10/17 10:03	11/14/17 12:00	1
Aroclor-1232	18.1	U	56.7	18.1	ug/Kg	☼	11/10/17 10:03	11/14/17 12:00	1
Aroclor-1242	22.7	U	56.7	22.7	ug/Kg	☼	11/10/17 10:03	11/14/17 12:00	1
Aroclor-1248	19.3	U	56.7	19.3	ug/Kg	☼	11/10/17 10:03	11/14/17 12:00	1
Aroclor-1254	19.6	J	56.7	15.9	ug/Kg	☼	11/10/17 10:03	11/14/17 12:00	1
Aroclor-1260	20.4	U	56.7	20.4	ug/Kg	☼	11/10/17 10:03	11/14/17 12:00	1
Aroclor-1262	9.07	U	56.7	9.07	ug/Kg	☼	11/10/17 10:03	11/14/17 12:00	1
Aroclor-1268	22.7	U	56.7	22.7	ug/Kg	☼	11/10/17 10:03	11/14/17 12:00	1
Polychlorinated biphenyls, Total	27.2	U	56.7	27.2	ug/Kg	☼	11/10/17 10:03	11/14/17 12:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	72		14 - 128	11/10/17 10:03	11/14/17 12:00	1
DCB Decachlorobiphenyl	85	p	10 - 132	11/10/17 10:03	11/14/17 12:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.8		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	15.2		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.49-SL04-(1.0-1.81')

Lab Sample ID: 240-87591-101

Date Collected: 11/01/17 14:27

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 85.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.6	U	57.6	27.6	ug/Kg	☼	11/10/17 10:03	11/14/17 12:20	1
Aroclor-1221	26.5	U	57.6	26.5	ug/Kg	☼	11/10/17 10:03	11/14/17 12:20	1
Aroclor-1232	18.4	U	57.6	18.4	ug/Kg	☼	11/10/17 10:03	11/14/17 12:20	1
Aroclor-1242	23.0	U	57.6	23.0	ug/Kg	☼	11/10/17 10:03	11/14/17 12:20	1
Aroclor-1248	19.6	U	57.6	19.6	ug/Kg	☼	11/10/17 10:03	11/14/17 12:20	1
Aroclor-1254	16.1	U	57.6	16.1	ug/Kg	☼	11/10/17 10:03	11/14/17 12:20	1
Aroclor-1260	20.7	U	57.6	20.7	ug/Kg	☼	11/10/17 10:03	11/14/17 12:20	1
Aroclor-1262	9.22	U	57.6	9.22	ug/Kg	☼	11/10/17 10:03	11/14/17 12:20	1
Aroclor-1268	23.0	U	57.6	23.0	ug/Kg	☼	11/10/17 10:03	11/14/17 12:20	1
Polychlorinated biphenyls, Total	27.6	U	57.6	27.6	ug/Kg	☼	11/10/17 10:03	11/14/17 12:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	67		14 - 128	11/10/17 10:03	11/14/17 12:20	1
DCB Decachlorobiphenyl	85	p	10 - 132	11/10/17 10:03	11/14/17 12:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.0		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	15.0		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.49-SL04-(1.81-2.0')

Lab Sample ID: 240-87591-102

Date Collected: 11/01/17 14:33

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 87.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.6	U	57.6	27.6	ug/Kg	☼	11/10/17 10:03	11/14/17 12:39	1
Aroclor-1221	26.5	U	57.6	26.5	ug/Kg	☼	11/10/17 10:03	11/14/17 12:39	1
Aroclor-1232	18.4	U	57.6	18.4	ug/Kg	☼	11/10/17 10:03	11/14/17 12:39	1
Aroclor-1242	23.0	U	57.6	23.0	ug/Kg	☼	11/10/17 10:03	11/14/17 12:39	1
Aroclor-1248	19.6	U	57.6	19.6	ug/Kg	☼	11/10/17 10:03	11/14/17 12:39	1
Aroclor-1254	16.1	U	57.6	16.1	ug/Kg	☼	11/10/17 10:03	11/14/17 12:39	1
Aroclor-1260	20.7	U	57.6	20.7	ug/Kg	☼	11/10/17 10:03	11/14/17 12:39	1
Aroclor-1262	9.21	U	57.6	9.21	ug/Kg	☼	11/10/17 10:03	11/14/17 12:39	1
Aroclor-1268	23.0	U	57.6	23.0	ug/Kg	☼	11/10/17 10:03	11/14/17 12:39	1
Polychlorinated biphenyls, Total	27.6	U	57.6	27.6	ug/Kg	☼	11/10/17 10:03	11/14/17 12:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	69		14 - 128	11/10/17 10:03	11/14/17 12:39	1
DCB Decachlorobiphenyl	88		10 - 132	11/10/17 10:03	11/14/17 12:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.0		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	13.0		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SL02-(0-0.5)

Lab Sample ID: 240-87591-103

Date Collected: 10/31/17 14:50

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 77.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	317	U	659	317	ug/Kg	☼	11/10/17 10:03	11/14/17 12:58	10
Aroclor-1221	303	U	659	303	ug/Kg	☼	11/10/17 10:03	11/14/17 12:58	10
Aroclor-1232	211	U	659	211	ug/Kg	☼	11/10/17 10:03	11/14/17 12:58	10
Aroclor-1242	264	U	659	264	ug/Kg	☼	11/10/17 10:03	11/14/17 12:58	10
Aroclor-1248	1440		659	224	ug/Kg	☼	11/10/17 10:03	11/14/17 12:58	10
Aroclor-1254	185	U	659	185	ug/Kg	☼	11/10/17 10:03	11/14/17 12:58	10
Aroclor-1260	237	U	659	237	ug/Kg	☼	11/10/17 10:03	11/14/17 12:58	10
Aroclor-1262	106	U	659	106	ug/Kg	☼	11/10/17 10:03	11/14/17 12:58	10
Aroclor-1268	264	U	659	264	ug/Kg	☼	11/10/17 10:03	11/14/17 12:58	10
Polychlorinated biphenyls, Total	1440		659	317	ug/Kg	☼	11/10/17 10:03	11/14/17 12:58	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	67		14 - 128	11/10/17 10:03	11/14/17 12:58	10
DCB Decachlorobiphenyl	128	p	10 - 132	11/10/17 10:03	11/14/17 12:58	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	77.0		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	23.0		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SL02-(0.5-1.0')

Lab Sample ID: 240-87591-104

Date Collected: 10/31/17 14:57

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 72.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	32.5	U	67.6	32.5	ug/Kg	☼	11/10/17 08:32	11/14/17 11:37	1
Aroclor-1221	31.1	U	67.6	31.1	ug/Kg	☼	11/10/17 08:32	11/14/17 11:37	1
Aroclor-1232	21.6	U	67.6	21.6	ug/Kg	☼	11/10/17 08:32	11/14/17 11:37	1
Aroclor-1242	27.0	U	67.6	27.0	ug/Kg	☼	11/10/17 08:32	11/14/17 11:37	1
Aroclor-1248	1810		67.6	23.0	ug/Kg	☼	11/10/17 08:32	11/14/17 11:37	1
Aroclor-1254	18.9	U	67.6	18.9	ug/Kg	☼	11/10/17 08:32	11/14/17 11:37	1
Aroclor-1260	122		67.6	24.3	ug/Kg	☼	11/10/17 08:32	11/14/17 11:37	1
Aroclor-1262	10.8	U	67.6	10.8	ug/Kg	☼	11/10/17 08:32	11/14/17 11:37	1
Aroclor-1268	27.0	U	67.6	27.0	ug/Kg	☼	11/10/17 08:32	11/14/17 11:37	1
Polychlorinated biphenyls, Total	1930		67.6	32.5	ug/Kg	☼	11/10/17 08:32	11/14/17 11:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		14 - 128	11/10/17 08:32	11/14/17 11:37	1
DCB Decachlorobiphenyl	94		10 - 132	11/10/17 08:32	11/14/17 11:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	72.5		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	27.5		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SL02-(1.0-1.5')

Lab Sample ID: 240-87591-105

Date Collected: 10/31/17 15:04

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 75.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	64.2	U	134	64.2	ug/Kg	☼	11/10/17 08:32	11/15/17 07:49	2
Aroclor-1221	61.5	U	134	61.5	ug/Kg	☼	11/10/17 08:32	11/15/17 07:49	2
Aroclor-1232	42.8	U	134	42.8	ug/Kg	☼	11/10/17 08:32	11/15/17 07:49	2
Aroclor-1242	53.5	U	134	53.5	ug/Kg	☼	11/10/17 08:32	11/15/17 07:49	2
Aroclor-1248	2290		134	45.5	ug/Kg	☼	11/10/17 08:32	11/15/17 07:49	2
Aroclor-1254	37.4	U	134	37.4	ug/Kg	☼	11/10/17 08:32	11/15/17 07:49	2
Aroclor-1260	145		134	48.1	ug/Kg	☼	11/10/17 08:32	11/15/17 07:49	2
Aroclor-1262	21.4	U	134	21.4	ug/Kg	☼	11/10/17 08:32	11/15/17 07:49	2
Aroclor-1268	53.5	U	134	53.5	ug/Kg	☼	11/10/17 08:32	11/15/17 07:49	2
Polychlorinated biphenyls, Total	2440		134	64.2	ug/Kg	☼	11/10/17 08:32	11/15/17 07:49	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	72		14 - 128	11/10/17 08:32	11/15/17 07:49	2
DCB Decachlorobiphenyl	102		10 - 132	11/10/17 08:32	11/15/17 07:49	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	75.5		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	24.5		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.24-SL01-(0-0.87')

Lab Sample ID: 240-87591-106

Date Collected: 11/01/17 11:26

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 87.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	277	U	576	277	ug/Kg	☼	11/10/17 08:32	11/15/17 08:08	10
Aroclor-1221	265	U	576	265	ug/Kg	☼	11/10/17 08:32	11/15/17 08:08	10
Aroclor-1232	184	U	576	184	ug/Kg	☼	11/10/17 08:32	11/15/17 08:08	10
Aroclor-1242	231	U	576	231	ug/Kg	☼	11/10/17 08:32	11/15/17 08:08	10
Aroclor-1248	4240		576	196	ug/Kg	☼	11/10/17 08:32	11/15/17 08:08	10
Aroclor-1254	161	U	576	161	ug/Kg	☼	11/10/17 08:32	11/15/17 08:08	10
Aroclor-1260	407	J	576	207	ug/Kg	☼	11/10/17 08:32	11/15/17 08:08	10
Aroclor-1262	92.2	U	576	92.2	ug/Kg	☼	11/10/17 08:32	11/15/17 08:08	10
Aroclor-1268	231	U	576	231	ug/Kg	☼	11/10/17 08:32	11/15/17 08:08	10
Polychlorinated biphenyls, Total	4650		576	277	ug/Kg	☼	11/10/17 08:32	11/15/17 08:08	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		14 - 128	11/10/17 08:32	11/15/17 08:08	10
DCB Decachlorobiphenyl	108	p	10 - 132	11/10/17 08:32	11/15/17 08:08	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.4		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	12.6		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.24-SL01-(0.87-1.0')

Lab Sample ID: 240-87591-107

Date Collected: 11/01/17 11:44

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 91.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26.3	U	54.9	26.3	ug/Kg	☼	11/10/17 08:32	11/14/17 12:32	1
Aroclor-1221	25.2	U	54.9	25.2	ug/Kg	☼	11/10/17 08:32	11/14/17 12:32	1
Aroclor-1232	17.6	U	54.9	17.6	ug/Kg	☼	11/10/17 08:32	11/14/17 12:32	1
Aroclor-1242	22.0	U	54.9	22.0	ug/Kg	☼	11/10/17 08:32	11/14/17 12:32	1
Aroclor-1248	662		54.9	18.7	ug/Kg	☼	11/10/17 08:32	11/14/17 12:32	1
Aroclor-1254	15.4	U	54.9	15.4	ug/Kg	☼	11/10/17 08:32	11/14/17 12:32	1
Aroclor-1260	52.8	J	54.9	19.8	ug/Kg	☼	11/10/17 08:32	11/14/17 12:32	1
Aroclor-1262	8.78	U	54.9	8.78	ug/Kg	☼	11/10/17 08:32	11/14/17 12:32	1
Aroclor-1268	22.0	U	54.9	22.0	ug/Kg	☼	11/10/17 08:32	11/14/17 12:32	1
Polychlorinated biphenyls, Total	715		54.9	26.3	ug/Kg	☼	11/10/17 08:32	11/14/17 12:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	75		14 - 128	11/10/17 08:32	11/14/17 12:32	1
DCB Decachlorobiphenyl	77		10 - 132	11/10/17 08:32	11/14/17 12:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91.3		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	8.7		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.14-SL03-(0-0.5')

Lab Sample ID: 240-87591-108

Date Collected: 11/01/17 10:22

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 79.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	30.4	U	63.3	30.4	ug/Kg	☼	11/10/17 08:32	11/14/17 12:51	1
Aroclor-1221	29.1	U	63.3	29.1	ug/Kg	☼	11/10/17 08:32	11/14/17 12:51	1
Aroclor-1232	20.3	U	63.3	20.3	ug/Kg	☼	11/10/17 08:32	11/14/17 12:51	1
Aroclor-1242	25.3	U	63.3	25.3	ug/Kg	☼	11/10/17 08:32	11/14/17 12:51	1
Aroclor-1248	21.5	U	63.3	21.5	ug/Kg	☼	11/10/17 08:32	11/14/17 12:51	1
Aroclor-1254	17.7	U	63.3	17.7	ug/Kg	☼	11/10/17 08:32	11/14/17 12:51	1
Aroclor-1260	22.8	U	63.3	22.8	ug/Kg	☼	11/10/17 08:32	11/14/17 12:51	1
Aroclor-1262	10.1	U	63.3	10.1	ug/Kg	☼	11/10/17 08:32	11/14/17 12:51	1
Aroclor-1268	25.3	U	63.3	25.3	ug/Kg	☼	11/10/17 08:32	11/14/17 12:51	1
Polychlorinated biphenyls, Total	30.4	U	63.3	30.4	ug/Kg	☼	11/10/17 08:32	11/14/17 12:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	71		14 - 128	11/10/17 08:32	11/14/17 12:51	1
DCB Decachlorobiphenyl	81		10 - 132	11/10/17 08:32	11/14/17 12:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.8		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	20.2		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.14-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-109

Date Collected: 11/01/17 10:29

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 85.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.5	U	57.3	27.5	ug/Kg	☼	11/10/17 08:32	11/14/17 13:09	1
Aroclor-1221	26.3	U	57.3	26.3	ug/Kg	☼	11/10/17 08:32	11/14/17 13:09	1
Aroclor-1232	18.3	U	57.3	18.3	ug/Kg	☼	11/10/17 08:32	11/14/17 13:09	1
Aroclor-1242	22.9	U	57.3	22.9	ug/Kg	☼	11/10/17 08:32	11/14/17 13:09	1
Aroclor-1248	19.5	U	57.3	19.5	ug/Kg	☼	11/10/17 08:32	11/14/17 13:09	1
Aroclor-1254	16.0	U	57.3	16.0	ug/Kg	☼	11/10/17 08:32	11/14/17 13:09	1
Aroclor-1260	20.6	U	57.3	20.6	ug/Kg	☼	11/10/17 08:32	11/14/17 13:09	1
Aroclor-1262	9.16	U	57.3	9.16	ug/Kg	☼	11/10/17 08:32	11/14/17 13:09	1
Aroclor-1268	22.9	U	57.3	22.9	ug/Kg	☼	11/10/17 08:32	11/14/17 13:09	1
Polychlorinated biphenyls, Total	27.5	U	57.3	27.5	ug/Kg	☼	11/10/17 08:32	11/14/17 13:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	80		14 - 128	11/10/17 08:32	11/14/17 13:09	1
DCB Decachlorobiphenyl	99		10 - 132	11/10/17 08:32	11/14/17 13:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.1		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	14.9		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.14-SL03-(0.5-1.0')-FD

Lab Sample ID: 240-87591-110

Date Collected: 11/01/17 10:29

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.9	U	60.2	28.9	ug/Kg	☼	11/10/17 08:32	11/14/17 13:27	1
Aroclor-1221	27.7	U	60.2	27.7	ug/Kg	☼	11/10/17 08:32	11/14/17 13:27	1
Aroclor-1232	19.3	U	60.2	19.3	ug/Kg	☼	11/10/17 08:32	11/14/17 13:27	1
Aroclor-1242	24.1	U	60.2	24.1	ug/Kg	☼	11/10/17 08:32	11/14/17 13:27	1
Aroclor-1248	20.5	U	60.2	20.5	ug/Kg	☼	11/10/17 08:32	11/14/17 13:27	1
Aroclor-1254	16.9	U	60.2	16.9	ug/Kg	☼	11/10/17 08:32	11/14/17 13:27	1
Aroclor-1260	21.7	U	60.2	21.7	ug/Kg	☼	11/10/17 08:32	11/14/17 13:27	1
Aroclor-1262	9.63	U	60.2	9.63	ug/Kg	☼	11/10/17 08:32	11/14/17 13:27	1
Aroclor-1268	24.1	U	60.2	24.1	ug/Kg	☼	11/10/17 08:32	11/14/17 13:27	1
Polychlorinated biphenyls, Total	28.9	U	60.2	28.9	ug/Kg	☼	11/10/17 08:32	11/14/17 13:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	82		14 - 128	11/10/17 08:32	11/14/17 13:27	1
DCB Decachlorobiphenyl	101		10 - 132	11/10/17 08:32	11/14/17 13:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.4		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	15.6		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.49-SL02-(0-0.5')

Lab Sample ID: 240-87591-111

Date Collected: 11/01/17 13:50

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.4	U	57.2	27.4	ug/Kg	☼	11/10/17 08:32	11/14/17 13:46	1
Aroclor-1221	26.3	U	57.2	26.3	ug/Kg	☼	11/10/17 08:32	11/14/17 13:46	1
Aroclor-1232	18.3	U	57.2	18.3	ug/Kg	☼	11/10/17 08:32	11/14/17 13:46	1
Aroclor-1242	22.9	U	57.2	22.9	ug/Kg	☼	11/10/17 08:32	11/14/17 13:46	1
Aroclor-1248	164		57.2	19.4	ug/Kg	☼	11/10/17 08:32	11/14/17 13:46	1
Aroclor-1254	16.0	U	57.2	16.0	ug/Kg	☼	11/10/17 08:32	11/14/17 13:46	1
Aroclor-1260	23.1	J	57.2	20.6	ug/Kg	☼	11/10/17 08:32	11/14/17 13:46	1
Aroclor-1262	9.14	U	57.2	9.14	ug/Kg	☼	11/10/17 08:32	11/14/17 13:46	1
Aroclor-1268	22.9	U	57.2	22.9	ug/Kg	☼	11/10/17 08:32	11/14/17 13:46	1
Polychlorinated biphenyls, Total	187		57.2	27.4	ug/Kg	☼	11/10/17 08:32	11/14/17 13:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		14 - 128	11/10/17 08:32	11/14/17 13:46	1
DCB Decachlorobiphenyl	85		10 - 132	11/10/17 08:32	11/14/17 13:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.9		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	15.1		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.49-SL02-(0.5-1.0')

Lab Sample ID: 240-87591-112

Date Collected: 11/01/17 13:55

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 87.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.4	U	57.0	27.4	ug/Kg	☼	11/10/17 08:32	11/14/17 14:04	1
Aroclor-1221	26.2	U	57.0	26.2	ug/Kg	☼	11/10/17 08:32	11/14/17 14:04	1
Aroclor-1232	18.2	U	57.0	18.2	ug/Kg	☼	11/10/17 08:32	11/14/17 14:04	1
Aroclor-1242	22.8	U	57.0	22.8	ug/Kg	☼	11/10/17 08:32	11/14/17 14:04	1
Aroclor-1248	117		57.0	19.4	ug/Kg	☼	11/10/17 08:32	11/14/17 14:04	1
Aroclor-1254	16.0	U	57.0	16.0	ug/Kg	☼	11/10/17 08:32	11/14/17 14:04	1
Aroclor-1260	20.5	U	57.0	20.5	ug/Kg	☼	11/10/17 08:32	11/14/17 14:04	1
Aroclor-1262	9.12	U	57.0	9.12	ug/Kg	☼	11/10/17 08:32	11/14/17 14:04	1
Aroclor-1268	22.8	U	57.0	22.8	ug/Kg	☼	11/10/17 08:32	11/14/17 14:04	1
Polychlorinated biphenyls, Total	117		57.0	27.4	ug/Kg	☼	11/10/17 08:32	11/14/17 14:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	72		14 - 128	11/10/17 08:32	11/14/17 14:04	1
DCB Decachlorobiphenyl	87		10 - 132	11/10/17 08:32	11/14/17 14:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.9		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	12.1		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.37-SL01-(0-0.9')

Lab Sample ID: 240-87591-113

Date Collected: 11/02/17 09:11

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 82.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.5	U	59.3	28.5	ug/Kg	☼	11/10/17 08:32	11/14/17 14:23	1
Aroclor-1221	27.3	U	59.3	27.3	ug/Kg	☼	11/10/17 08:32	11/14/17 14:23	1
Aroclor-1232	19.0	U	59.3	19.0	ug/Kg	☼	11/10/17 08:32	11/14/17 14:23	1
Aroclor-1242	23.7	U	59.3	23.7	ug/Kg	☼	11/10/17 08:32	11/14/17 14:23	1
Aroclor-1248	20.2	U	59.3	20.2	ug/Kg	☼	11/10/17 08:32	11/14/17 14:23	1
Aroclor-1254	16.6	U	59.3	16.6	ug/Kg	☼	11/10/17 08:32	11/14/17 14:23	1
Aroclor-1260	21.4	U	59.3	21.4	ug/Kg	☼	11/10/17 08:32	11/14/17 14:23	1
Aroclor-1262	9.50	U	59.3	9.50	ug/Kg	☼	11/10/17 08:32	11/14/17 14:23	1
Aroclor-1268	23.7	U	59.3	23.7	ug/Kg	☼	11/10/17 08:32	11/14/17 14:23	1
Polychlorinated biphenyls, Total	28.5	U	59.3	28.5	ug/Kg	☼	11/10/17 08:32	11/14/17 14:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	86		14 - 128	11/10/17 08:32	11/14/17 14:23	1
DCB Decachlorobiphenyl	91		10 - 132	11/10/17 08:32	11/14/17 14:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.4		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	17.6		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.37-SL01-(0-0.9')-FD

Lab Sample ID: 240-87591-114

Date Collected: 11/02/17 09:11

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 82.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.0	U	60.5	29.0	ug/Kg	☼	11/10/17 08:32	11/14/17 14:41	1
Aroclor-1221	27.8	U	60.5	27.8	ug/Kg	☼	11/10/17 08:32	11/14/17 14:41	1
Aroclor-1232	19.4	U	60.5	19.4	ug/Kg	☼	11/10/17 08:32	11/14/17 14:41	1
Aroclor-1242	24.2	U	60.5	24.2	ug/Kg	☼	11/10/17 08:32	11/14/17 14:41	1
Aroclor-1248	20.6	U	60.5	20.6	ug/Kg	☼	11/10/17 08:32	11/14/17 14:41	1
Aroclor-1254	16.9	U	60.5	16.9	ug/Kg	☼	11/10/17 08:32	11/14/17 14:41	1
Aroclor-1260	21.8	U	60.5	21.8	ug/Kg	☼	11/10/17 08:32	11/14/17 14:41	1
Aroclor-1262	9.68	U	60.5	9.68	ug/Kg	☼	11/10/17 08:32	11/14/17 14:41	1
Aroclor-1268	24.2	U	60.5	24.2	ug/Kg	☼	11/10/17 08:32	11/14/17 14:41	1
Polychlorinated biphenyls, Total	29.0	U	60.5	29.0	ug/Kg	☼	11/10/17 08:32	11/14/17 14:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	76		14 - 128	11/10/17 08:32	11/14/17 14:41	1
DCB Decachlorobiphenyl	86		10 - 132	11/10/17 08:32	11/14/17 14:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.2		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	17.8		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.03-SL03-(0-0.21')

Lab Sample ID: 240-87591-115

Date Collected: 10/31/17 17:05

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.6	U	61.7	29.6	ug/Kg	☼	11/10/17 08:32	11/14/17 14:59	1
Aroclor-1221	28.4	U	61.7	28.4	ug/Kg	☼	11/10/17 08:32	11/14/17 14:59	1
Aroclor-1232	19.7	U	61.7	19.7	ug/Kg	☼	11/10/17 08:32	11/14/17 14:59	1
Aroclor-1242	24.7	U	61.7	24.7	ug/Kg	☼	11/10/17 08:32	11/14/17 14:59	1
Aroclor-1248	72.2		61.7	21.0	ug/Kg	☼	11/10/17 08:32	11/14/17 14:59	1
Aroclor-1254	17.3	U	61.7	17.3	ug/Kg	☼	11/10/17 08:32	11/14/17 14:59	1
Aroclor-1260	22.2	U	61.7	22.2	ug/Kg	☼	11/10/17 08:32	11/14/17 14:59	1
Aroclor-1262	9.87	U	61.7	9.87	ug/Kg	☼	11/10/17 08:32	11/14/17 14:59	1
Aroclor-1268	24.7	U	61.7	24.7	ug/Kg	☼	11/10/17 08:32	11/14/17 14:59	1
Polychlorinated biphenyls, Total	72.2		61.7	29.6	ug/Kg	☼	11/10/17 08:32	11/14/17 14:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	76		14 - 128	11/10/17 08:32	11/14/17 14:59	1
DCB Decachlorobiphenyl	82		10 - 132	11/10/17 08:32	11/14/17 14:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.0		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	20.0		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.03-SL03-(0.21-1.0')

Lab Sample ID: 240-87591-116

Date Collected: 10/31/17 17:13

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 90.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.4	U	57.2	27.4	ug/Kg	☼	11/10/17 08:32	11/14/17 15:18	1
Aroclor-1221	26.3	U	57.2	26.3	ug/Kg	☼	11/10/17 08:32	11/14/17 15:18	1
Aroclor-1232	18.3	U	57.2	18.3	ug/Kg	☼	11/10/17 08:32	11/14/17 15:18	1
Aroclor-1242	22.9	U	57.2	22.9	ug/Kg	☼	11/10/17 08:32	11/14/17 15:18	1
Aroclor-1248	19.4	U	57.2	19.4	ug/Kg	☼	11/10/17 08:32	11/14/17 15:18	1
Aroclor-1254	16.0	U	57.2	16.0	ug/Kg	☼	11/10/17 08:32	11/14/17 15:18	1
Aroclor-1260	20.6	U	57.2	20.6	ug/Kg	☼	11/10/17 08:32	11/14/17 15:18	1
Aroclor-1262	9.15	U	57.2	9.15	ug/Kg	☼	11/10/17 08:32	11/14/17 15:18	1
Aroclor-1268	22.9	U	57.2	22.9	ug/Kg	☼	11/10/17 08:32	11/14/17 15:18	1
Polychlorinated biphenyls, Total	27.4	U	57.2	27.4	ug/Kg	☼	11/10/17 08:32	11/14/17 15:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	74		14 - 128	11/10/17 08:32	11/14/17 15:18	1
DCB Decachlorobiphenyl	84		10 - 132	11/10/17 08:32	11/14/17 15:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.6		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	9.4		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.82-SL03-(0-0.5')

Lab Sample ID: 240-87591-117

Date Collected: 10/31/17 16:11

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 90.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26.9	U	56.1	26.9	ug/Kg	☼	11/10/17 08:32	11/14/17 15:36	1
Aroclor-1221	25.8	U	56.1	25.8	ug/Kg	☼	11/10/17 08:32	11/14/17 15:36	1
Aroclor-1232	17.9	U	56.1	17.9	ug/Kg	☼	11/10/17 08:32	11/14/17 15:36	1
Aroclor-1242	22.4	U	56.1	22.4	ug/Kg	☼	11/10/17 08:32	11/14/17 15:36	1
Aroclor-1248	70.4		56.1	19.1	ug/Kg	☼	11/10/17 08:32	11/14/17 15:36	1
Aroclor-1254	15.7	U	56.1	15.7	ug/Kg	☼	11/10/17 08:32	11/14/17 15:36	1
Aroclor-1260	20.2	U	56.1	20.2	ug/Kg	☼	11/10/17 08:32	11/14/17 15:36	1
Aroclor-1262	8.97	U	56.1	8.97	ug/Kg	☼	11/10/17 08:32	11/14/17 15:36	1
Aroclor-1268	22.4	U	56.1	22.4	ug/Kg	☼	11/10/17 08:32	11/14/17 15:36	1
Polychlorinated biphenyls, Total	70.4		56.1	26.9	ug/Kg	☼	11/10/17 08:32	11/14/17 15:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	80		14 - 128	11/10/17 08:32	11/14/17 15:36	1
DCB Decachlorobiphenyl	84		10 - 132	11/10/17 08:32	11/14/17 15:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.1		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	9.9		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.82-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-118

Date Collected: 10/31/17 16:15

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 64.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	37.8	U	78.7	37.8	ug/Kg	☼	11/10/17 08:32	11/14/17 15:54	1
Aroclor-1221	36.2	U	78.7	36.2	ug/Kg	☼	11/10/17 08:32	11/14/17 15:54	1
Aroclor-1232	25.2	U	78.7	25.2	ug/Kg	☼	11/10/17 08:32	11/14/17 15:54	1
Aroclor-1242	31.5	U	78.7	31.5	ug/Kg	☼	11/10/17 08:32	11/14/17 15:54	1
Aroclor-1248	1120		78.7	26.8	ug/Kg	☼	11/10/17 08:32	11/14/17 15:54	1
Aroclor-1254	22.0	U	78.7	22.0	ug/Kg	☼	11/10/17 08:32	11/14/17 15:54	1
Aroclor-1260	84.8		78.7	28.3	ug/Kg	☼	11/10/17 08:32	11/14/17 15:54	1
Aroclor-1262	12.6	U	78.7	12.6	ug/Kg	☼	11/10/17 08:32	11/14/17 15:54	1
Aroclor-1268	31.5	U	78.7	31.5	ug/Kg	☼	11/10/17 08:32	11/14/17 15:54	1
Polychlorinated biphenyls, Total	1200		78.7	37.8	ug/Kg	☼	11/10/17 08:32	11/14/17 15:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	76		14 - 128	11/10/17 08:32	11/14/17 15:54	1
DCB Decachlorobiphenyl	384	X	10 - 132	11/10/17 08:32	11/14/17 15:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	64.0		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	36.0		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SL04-(0-0.11')

Lab Sample ID: 240-87591-119

Date Collected: 10/31/17 15:39

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 78.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	31.1	U	64.9	31.1	ug/Kg	☼	11/10/17 08:32	11/14/17 16:13	1
Aroclor-1221	29.8	U	64.9	29.8	ug/Kg	☼	11/10/17 08:32	11/14/17 16:13	1
Aroclor-1232	20.8	U	64.9	20.8	ug/Kg	☼	11/10/17 08:32	11/14/17 16:13	1
Aroclor-1242	26.0	U	64.9	26.0	ug/Kg	☼	11/10/17 08:32	11/14/17 16:13	1
Aroclor-1248	54.7	J	64.9	22.1	ug/Kg	☼	11/10/17 08:32	11/14/17 16:13	1
Aroclor-1254	18.2	U	64.9	18.2	ug/Kg	☼	11/10/17 08:32	11/14/17 16:13	1
Aroclor-1260	23.4	U	64.9	23.4	ug/Kg	☼	11/10/17 08:32	11/14/17 16:13	1
Aroclor-1262	10.4	U	64.9	10.4	ug/Kg	☼	11/10/17 08:32	11/14/17 16:13	1
Aroclor-1268	26.0	U	64.9	26.0	ug/Kg	☼	11/10/17 08:32	11/14/17 16:13	1
Polychlorinated biphenyls, Total	54.7	J	64.9	31.1	ug/Kg	☼	11/10/17 08:32	11/14/17 16:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	83		14 - 128	11/10/17 08:32	11/14/17 16:13	1
DCB Decachlorobiphenyl	99		10 - 132	11/10/17 08:32	11/14/17 16:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.1		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	21.9		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SL04-(0.11-0.47')

Lab Sample ID: 240-87591-120

Date Collected: 10/31/17 15:40

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 85.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26.8	U	55.9	26.8	ug/Kg	☼	11/10/17 08:32	11/14/17 16:31	1
Aroclor-1221	25.7	U	55.9	25.7	ug/Kg	☼	11/10/17 08:32	11/14/17 16:31	1
Aroclor-1232	17.9	U	55.9	17.9	ug/Kg	☼	11/10/17 08:32	11/14/17 16:31	1
Aroclor-1242	22.4	U	55.9	22.4	ug/Kg	☼	11/10/17 08:32	11/14/17 16:31	1
Aroclor-1248	24.5	J	55.9	19.0	ug/Kg	☼	11/10/17 08:32	11/14/17 16:31	1
Aroclor-1254	15.6	U	55.9	15.6	ug/Kg	☼	11/10/17 08:32	11/14/17 16:31	1
Aroclor-1260	20.1	U	55.9	20.1	ug/Kg	☼	11/10/17 08:32	11/14/17 16:31	1
Aroclor-1262	8.94	U	55.9	8.94	ug/Kg	☼	11/10/17 08:32	11/14/17 16:31	1
Aroclor-1268	22.4	U	55.9	22.4	ug/Kg	☼	11/10/17 08:32	11/14/17 16:31	1
Polychlorinated biphenyls, Total	26.8	U	55.9	26.8	ug/Kg	☼	11/10/17 08:32	11/14/17 16:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		14 - 128	11/10/17 08:32	11/14/17 16:31	1
DCB Decachlorobiphenyl	91		10 - 132	11/10/17 08:32	11/14/17 16:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.5		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	14.5		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SL04-(0.47-1.0')

Lab Sample ID: 240-87591-121

Date Collected: 10/31/17 15:46

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.4	U	59.2	28.4	ug/Kg	☼	11/10/17 08:32	11/14/17 16:49	1
Aroclor-1221	27.2	U	59.2	27.2	ug/Kg	☼	11/10/17 08:32	11/14/17 16:49	1
Aroclor-1232	18.9	U	59.2	18.9	ug/Kg	☼	11/10/17 08:32	11/14/17 16:49	1
Aroclor-1242	23.7	U	59.2	23.7	ug/Kg	☼	11/10/17 08:32	11/14/17 16:49	1
Aroclor-1248	20.1	U	59.2	20.1	ug/Kg	☼	11/10/17 08:32	11/14/17 16:49	1
Aroclor-1254	16.6	U	59.2	16.6	ug/Kg	☼	11/10/17 08:32	11/14/17 16:49	1
Aroclor-1260	21.3	U	59.2	21.3	ug/Kg	☼	11/10/17 08:32	11/14/17 16:49	1
Aroclor-1262	9.47	U	59.2	9.47	ug/Kg	☼	11/10/17 08:32	11/14/17 16:49	1
Aroclor-1268	23.7	U	59.2	23.7	ug/Kg	☼	11/10/17 08:32	11/14/17 16:49	1
Polychlorinated biphenyls, Total	28.4	U	59.2	28.4	ug/Kg	☼	11/10/17 08:32	11/14/17 16:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	74		14 - 128	11/10/17 08:32	11/14/17 16:49	1
DCB Decachlorobiphenyl	87		10 - 132	11/10/17 08:32	11/14/17 16:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.9		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	15.1		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.49-SL01-(0-0.5')

Lab Sample ID: 240-87591-122

Date Collected: 11/01/17 13:40

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 86.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.3	U	56.9	27.3	ug/Kg	☼	11/10/17 08:32	11/14/17 18:03	1
Aroclor-1221	26.2	U	56.9	26.2	ug/Kg	☼	11/10/17 08:32	11/14/17 18:03	1
Aroclor-1232	18.2	U	56.9	18.2	ug/Kg	☼	11/10/17 08:32	11/14/17 18:03	1
Aroclor-1242	22.8	U	56.9	22.8	ug/Kg	☼	11/10/17 08:32	11/14/17 18:03	1
Aroclor-1248	19.3	U	56.9	19.3	ug/Kg	☼	11/10/17 08:32	11/14/17 18:03	1
Aroclor-1254	15.9	U	56.9	15.9	ug/Kg	☼	11/10/17 08:32	11/14/17 18:03	1
Aroclor-1260	20.5	U	56.9	20.5	ug/Kg	☼	11/10/17 08:32	11/14/17 18:03	1
Aroclor-1262	9.10	U	56.9	9.10	ug/Kg	☼	11/10/17 08:32	11/14/17 18:03	1
Aroclor-1268	22.8	U	56.9	22.8	ug/Kg	☼	11/10/17 08:32	11/14/17 18:03	1
Polychlorinated biphenyls, Total	27.3	U	56.9	27.3	ug/Kg	☼	11/10/17 08:32	11/14/17 18:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	79		14 - 128	11/10/17 08:32	11/14/17 18:03	1
DCB Decachlorobiphenyl	90		10 - 132	11/10/17 08:32	11/14/17 18:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.0		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	14.0		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.49-SL01-(0-0.5')-FD

Lab Sample ID: 240-87591-123

Date Collected: 11/01/17 13:40

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 85.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.9	U	58.1	27.9	ug/Kg	☼	11/10/17 08:32	11/14/17 18:21	1
Aroclor-1221	26.7	U	58.1	26.7	ug/Kg	☼	11/10/17 08:32	11/14/17 18:21	1
Aroclor-1232	18.6	U	58.1	18.6	ug/Kg	☼	11/10/17 08:32	11/14/17 18:21	1
Aroclor-1242	23.2	U	58.1	23.2	ug/Kg	☼	11/10/17 08:32	11/14/17 18:21	1
Aroclor-1248	19.8	U	58.1	19.8	ug/Kg	☼	11/10/17 08:32	11/14/17 18:21	1
Aroclor-1254	16.3	U	58.1	16.3	ug/Kg	☼	11/10/17 08:32	11/14/17 18:21	1
Aroclor-1260	20.9	U	58.1	20.9	ug/Kg	☼	11/10/17 08:32	11/14/17 18:21	1
Aroclor-1262	9.30	U	58.1	9.30	ug/Kg	☼	11/10/17 08:32	11/14/17 18:21	1
Aroclor-1268	23.2	U	58.1	23.2	ug/Kg	☼	11/10/17 08:32	11/14/17 18:21	1
Polychlorinated biphenyls, Total	27.9	U	58.1	27.9	ug/Kg	☼	11/10/17 08:32	11/14/17 18:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	78		14 - 128	11/10/17 08:32	11/14/17 18:21	1
DCB Decachlorobiphenyl	88		10 - 132	11/10/17 08:32	11/14/17 18:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.0		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	15.0		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.24-SL03-(0-0.5')

Lab Sample ID: 240-87591-124

Date Collected: 11/01/17 12:03

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.5	U	59.4	28.5	ug/Kg	☼	11/10/17 09:13	11/13/17 18:12	1
Aroclor-1221	27.3	U	59.4	27.3	ug/Kg	☼	11/10/17 09:13	11/13/17 18:12	1
Aroclor-1232	19.0	U	59.4	19.0	ug/Kg	☼	11/10/17 09:13	11/13/17 18:12	1
Aroclor-1242	23.8	U	59.4	23.8	ug/Kg	☼	11/10/17 09:13	11/13/17 18:12	1
Aroclor-1248	20.2	U	59.4	20.2	ug/Kg	☼	11/10/17 09:13	11/13/17 18:12	1
Aroclor-1254	16.6	U	59.4	16.6	ug/Kg	☼	11/10/17 09:13	11/13/17 18:12	1
Aroclor-1260	21.4	U	59.4	21.4	ug/Kg	☼	11/10/17 09:13	11/13/17 18:12	1
Aroclor-1262	9.50	U	59.4	9.50	ug/Kg	☼	11/10/17 09:13	11/13/17 18:12	1
Aroclor-1268	23.8	U	59.4	23.8	ug/Kg	☼	11/10/17 09:13	11/13/17 18:12	1
Polychlorinated biphenyls, Total	28.5	U	59.4	28.5	ug/Kg	☼	11/10/17 09:13	11/13/17 18:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	81		14 - 128	11/10/17 09:13	11/13/17 18:12	1
DCB Decachlorobiphenyl	108		10 - 132	11/10/17 09:13	11/13/17 18:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.3		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	15.7		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.82-SL01-(0-0.22')

Lab Sample ID: 240-87591-125

Date Collected: 10/31/17 16:04

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.6	U	59.5	28.6	ug/Kg	☼	11/10/17 09:13	11/13/17 18:29	1
Aroclor-1221	27.4	U	59.5	27.4	ug/Kg	☼	11/10/17 09:13	11/13/17 18:29	1
Aroclor-1232	19.1	U	59.5	19.1	ug/Kg	☼	11/10/17 09:13	11/13/17 18:29	1
Aroclor-1242	23.8	U	59.5	23.8	ug/Kg	☼	11/10/17 09:13	11/13/17 18:29	1
Aroclor-1248	339		59.5	20.2	ug/Kg	☼	11/10/17 09:13	11/13/17 18:29	1
Aroclor-1254	16.7	U	59.5	16.7	ug/Kg	☼	11/10/17 09:13	11/13/17 18:29	1
Aroclor-1260	58.2	J	59.5	21.4	ug/Kg	☼	11/10/17 09:13	11/13/17 18:29	1
Aroclor-1262	9.53	U	59.5	9.53	ug/Kg	☼	11/10/17 09:13	11/13/17 18:29	1
Aroclor-1268	23.8	U	59.5	23.8	ug/Kg	☼	11/10/17 09:13	11/13/17 18:29	1
Polychlorinated biphenyls, Total	397		59.5	28.6	ug/Kg	☼	11/10/17 09:13	11/13/17 18:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	88		14 - 128	11/10/17 09:13	11/13/17 18:29	1
DCB Decachlorobiphenyl	87		10 - 132	11/10/17 09:13	11/13/17 18:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.1		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	15.9		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.82-SL01-(0.22-0.5')

Lab Sample ID: 240-87591-126

Date Collected: 10/31/17 16:05

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 92.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26.9	U	56.0	26.9	ug/Kg	☼	11/10/17 09:13	11/13/17 19:40	1
Aroclor-1221	25.8	U	56.0	25.8	ug/Kg	☼	11/10/17 09:13	11/13/17 19:40	1
Aroclor-1232	17.9	U	56.0	17.9	ug/Kg	☼	11/10/17 09:13	11/13/17 19:40	1
Aroclor-1242	22.4	U	56.0	22.4	ug/Kg	☼	11/10/17 09:13	11/13/17 19:40	1
Aroclor-1248	260		56.0	19.0	ug/Kg	☼	11/10/17 09:13	11/13/17 19:40	1
Aroclor-1254	15.7	U	56.0	15.7	ug/Kg	☼	11/10/17 09:13	11/13/17 19:40	1
Aroclor-1260	55.4	J	56.0	20.2	ug/Kg	☼	11/10/17 09:13	11/13/17 19:40	1
Aroclor-1262	8.96	U	56.0	8.96	ug/Kg	☼	11/10/17 09:13	11/13/17 19:40	1
Aroclor-1268	22.4	U	56.0	22.4	ug/Kg	☼	11/10/17 09:13	11/13/17 19:40	1
Polychlorinated biphenyls, Total	315		56.0	26.9	ug/Kg	☼	11/10/17 09:13	11/13/17 19:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	93		14 - 128	11/10/17 09:13	11/13/17 19:40	1
DCB Decachlorobiphenyl	113		10 - 132	11/10/17 09:13	11/13/17 19:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	92.1		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	7.9		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.03-SL01-(0-0.5')

Lab Sample ID: 240-87591-127

Date Collected: 11/01/17 09:32

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.0	U	60.4	29.0	ug/Kg	☼	11/10/17 09:13	11/13/17 19:58	1
Aroclor-1221	27.8	U	60.4	27.8	ug/Kg	☼	11/10/17 09:13	11/13/17 19:58	1
Aroclor-1232	19.3	U	60.4	19.3	ug/Kg	☼	11/10/17 09:13	11/13/17 19:58	1
Aroclor-1242	24.2	U	60.4	24.2	ug/Kg	☼	11/10/17 09:13	11/13/17 19:58	1
Aroclor-1248	20.5	U	60.4	20.5	ug/Kg	☼	11/10/17 09:13	11/13/17 19:58	1
Aroclor-1254	16.9	U	60.4	16.9	ug/Kg	☼	11/10/17 09:13	11/13/17 19:58	1
Aroclor-1260	21.8	U	60.4	21.8	ug/Kg	☼	11/10/17 09:13	11/13/17 19:58	1
Aroclor-1262	9.67	U	60.4	9.67	ug/Kg	☼	11/10/17 09:13	11/13/17 19:58	1
Aroclor-1268	24.2	U	60.4	24.2	ug/Kg	☼	11/10/17 09:13	11/13/17 19:58	1
Polychlorinated biphenyls, Total	29.0	U	60.4	29.0	ug/Kg	☼	11/10/17 09:13	11/13/17 19:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	98		14 - 128	11/10/17 09:13	11/13/17 19:58	1
DCB Decachlorobiphenyl	109		10 - 132	11/10/17 09:13	11/13/17 19:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.1		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	15.9		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.03-SL01-(0-0.5')-FD

Lab Sample ID: 240-87591-128

Date Collected: 11/01/17 09:32

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.3	U	59.0	28.3	ug/Kg	☼	11/10/17 10:03	11/14/17 13:18	1
Aroclor-1221	27.1	U	59.0	27.1	ug/Kg	☼	11/10/17 10:03	11/14/17 13:18	1
Aroclor-1232	18.9	U	59.0	18.9	ug/Kg	☼	11/10/17 10:03	11/14/17 13:18	1
Aroclor-1242	23.6	U	59.0	23.6	ug/Kg	☼	11/10/17 10:03	11/14/17 13:18	1
Aroclor-1248	20.0	U	59.0	20.0	ug/Kg	☼	11/10/17 10:03	11/14/17 13:18	1
Aroclor-1254	16.5	U	59.0	16.5	ug/Kg	☼	11/10/17 10:03	11/14/17 13:18	1
Aroclor-1260	21.2	U	59.0	21.2	ug/Kg	☼	11/10/17 10:03	11/14/17 13:18	1
Aroclor-1262	9.43	U	59.0	9.43	ug/Kg	☼	11/10/17 10:03	11/14/17 13:18	1
Aroclor-1268	23.6	U	59.0	23.6	ug/Kg	☼	11/10/17 10:03	11/14/17 13:18	1
Polychlorinated biphenyls, Total	28.3	U	59.0	28.3	ug/Kg	☼	11/10/17 10:03	11/14/17 13:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	71		14 - 128	11/10/17 10:03	11/14/17 13:18	1
DCB Decachlorobiphenyl	95		10 - 132	11/10/17 10:03	11/14/17 13:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.6		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	15.4		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.14-SL01-(0-0.5')

Lab Sample ID: 240-87591-129

Date Collected: 11/01/17 10:01

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 87.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	137	U	285	137	ug/Kg	☼	11/10/17 09:13	11/14/17 16:12	5
Aroclor-1221	131	U	285	131	ug/Kg	☼	11/10/17 09:13	11/14/17 16:12	5
Aroclor-1232	91.4	U	285	91.4	ug/Kg	☼	11/10/17 09:13	11/14/17 16:12	5
Aroclor-1242	114	U	285	114	ug/Kg	☼	11/10/17 09:13	11/14/17 16:12	5
Aroclor-1248	2150		285	97.1	ug/Kg	☼	11/10/17 09:13	11/14/17 16:12	5
Aroclor-1254	79.9	U	285	79.9	ug/Kg	☼	11/10/17 09:13	11/14/17 16:12	5
Aroclor-1260	337		285	103	ug/Kg	☼	11/10/17 09:13	11/14/17 16:12	5
Aroclor-1262	45.7	U	285	45.7	ug/Kg	☼	11/10/17 09:13	11/14/17 16:12	5
Aroclor-1268	114	U	285	114	ug/Kg	☼	11/10/17 09:13	11/14/17 16:12	5
Polychlorinated biphenyls, Total	2490		285	137	ug/Kg	☼	11/10/17 09:13	11/14/17 16:12	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	75		14 - 128	11/10/17 09:13	11/14/17 16:12	5
DCB Decachlorobiphenyl	99		10 - 132	11/10/17 09:13	11/14/17 16:12	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.6		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	12.4		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: WATER DRUM

Lab Sample ID: 240-87591-130

Date Collected: 11/01/17 16:26

Matrix: Water

Date Received: 11/07/17 17:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.192	U	0.385	0.192	ug/L		11/08/17 13:53	11/09/17 21:37	1
Aroclor-1221	0.346	U	0.385	0.346	ug/L		11/08/17 13:53	11/09/17 21:37	1
Aroclor-1232	0.260	U	0.385	0.260	ug/L		11/08/17 13:53	11/09/17 21:37	1
Aroclor-1242	0.240	U	0.385	0.240	ug/L		11/08/17 13:53	11/09/17 21:37	1
Aroclor-1248	0.192	U	0.385	0.192	ug/L		11/08/17 13:53	11/09/17 21:37	1
Aroclor-1254	0.125	U	0.385	0.125	ug/L		11/08/17 13:53	11/09/17 21:37	1
Aroclor-1260	0.154	U	0.385	0.154	ug/L		11/08/17 13:53	11/09/17 21:37	1
Aroclor-1262	0.212	U	0.385	0.212	ug/L		11/08/17 13:53	11/09/17 21:37	1
Aroclor-1268	0.346	U	0.385	0.346	ug/L		11/08/17 13:53	11/09/17 21:37	1
Polychlorinated biphenyls, Total	0.346	U	0.385	0.346	ug/L		11/08/17 13:53	11/09/17 21:37	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	54		32 - 120				11/08/17 13:53	11/09/17 21:37	1
DCB Decachlorobiphenyl	15	X	16 - 120				11/08/17 13:53	11/09/17 21:37	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: SOIL-SED DRUM

Lab Sample ID: 240-87591-131

Date Collected: 11/03/17 12:21

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 88.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.3	U	56.9	27.3	ug/Kg	☼	11/11/17 10:25	11/13/17 15:30	1
Aroclor-1221	26.2	U	56.9	26.2	ug/Kg	☼	11/11/17 10:25	11/13/17 15:30	1
Aroclor-1232	18.2	U	56.9	18.2	ug/Kg	☼	11/11/17 10:25	11/13/17 15:30	1
Aroclor-1242	22.7	U	56.9	22.7	ug/Kg	☼	11/11/17 10:25	11/13/17 15:30	1
Aroclor-1248	1220		56.9	19.3	ug/Kg	☼	11/11/17 10:25	11/13/17 15:30	1
Aroclor-1254	15.9	U	56.9	15.9	ug/Kg	☼	11/11/17 10:25	11/13/17 15:30	1
Aroclor-1260	87.6		56.9	20.5	ug/Kg	☼	11/11/17 10:25	11/13/17 15:30	1
Aroclor-1262	9.10	U	56.9	9.10	ug/Kg	☼	11/11/17 10:25	11/13/17 15:30	1
Aroclor-1268	22.7	U	56.9	22.7	ug/Kg	☼	11/11/17 10:25	11/13/17 15:30	1
Polychlorinated biphenyls, Total	1310		56.9	27.3	ug/Kg	☼	11/11/17 10:25	11/13/17 15:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	80		14 - 128	11/11/17 10:25	11/13/17 15:30	1
DCB Decachlorobiphenyl	85		10 - 132	11/11/17 10:25	11/13/17 15:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.7		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	11.3		0.1	0.1	%			11/09/17 07:46	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: EQUIP RINSATE

Lab Sample ID: 240-87591-132

Date Collected: 11/02/17 16:58

Matrix: Water

Date Received: 11/07/17 17:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	0.179	U	0.357	0.179	ug/L		11/08/17 13:53	11/09/17 21:55	1
Aroclor-1221	0.321	U	0.357	0.321	ug/L		11/08/17 13:53	11/09/17 21:55	1
Aroclor-1232	0.241	U	0.357	0.241	ug/L		11/08/17 13:53	11/09/17 21:55	1
Aroclor-1242	0.223	U	0.357	0.223	ug/L		11/08/17 13:53	11/09/17 21:55	1
Aroclor-1248	0.179	U	0.357	0.179	ug/L		11/08/17 13:53	11/09/17 21:55	1
Aroclor-1254	0.116	U	0.357	0.116	ug/L		11/08/17 13:53	11/09/17 21:55	1
Aroclor-1260	0.143	U	0.357	0.143	ug/L		11/08/17 13:53	11/09/17 21:55	1
Aroclor-1262	0.196	U	0.357	0.196	ug/L		11/08/17 13:53	11/09/17 21:55	1
Aroclor-1268	0.321	U	0.357	0.321	ug/L		11/08/17 13:53	11/09/17 21:55	1
Polychlorinated biphenyls, Total	0.321	U	0.357	0.321	ug/L		11/08/17 13:53	11/09/17 21:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		32 - 120	11/08/17 13:53	11/09/17 21:55	1
DCB Decachlorobiphenyl	81		16 - 120	11/08/17 13:53	11/09/17 21:55	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00-72-SL01-(0-0.5')-FD

Lab Sample ID: 240-87591-133

Date Collected: 10/31/17 14:05

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 77.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	31.4	U	65.3	31.4	ug/Kg	☼	11/10/17 10:03	11/14/17 14:39	1
Aroclor-1221	30.0	U	65.3	30.0	ug/Kg	☼	11/10/17 10:03	11/14/17 14:39	1
Aroclor-1232	20.9	U	65.3	20.9	ug/Kg	☼	11/10/17 10:03	11/14/17 14:39	1
Aroclor-1242	26.1	U	65.3	26.1	ug/Kg	☼	11/10/17 10:03	11/14/17 14:39	1
Aroclor-1248	22.2	U	65.3	22.2	ug/Kg	☼	11/10/17 10:03	11/14/17 14:39	1
Aroclor-1254	18.3	U	65.3	18.3	ug/Kg	☼	11/10/17 10:03	11/14/17 14:39	1
Aroclor-1260	23.5	U	65.3	23.5	ug/Kg	☼	11/10/17 10:03	11/14/17 14:39	1
Aroclor-1262	10.5	U	65.3	10.5	ug/Kg	☼	11/10/17 10:03	11/14/17 14:39	1
Aroclor-1268	26.1	U	65.3	26.1	ug/Kg	☼	11/10/17 10:03	11/14/17 14:39	1
Polychlorinated biphenyls, Total	31.4	U	65.3	31.4	ug/Kg	☼	11/10/17 10:03	11/14/17 14:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	75		14 - 128	11/10/17 10:03	11/14/17 14:39	1
DCB Decachlorobiphenyl	91		10 - 132	11/10/17 10:03	11/14/17 14:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	77.2		0.1	0.1	%			11/09/17 07:46	1
Percent Moisture	22.8		0.1	0.1	%			11/09/17 07:46	1

Surrogate Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

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

Matrix: Sediment

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (14-128)	TCX2 (14-128)	DCB1 (10-132)	DCB2 (10-132)
240-87591-1	ED-00.08-SD02-(0-0.45')		68		80
240-87591-2	ED-00.08-SD02-(0.45-.75')		87		100
240-87591-3	ED-00.08-SD02-(0.75-1.4')		73		82
240-87591-4	ED-00.08-SD02-(0.75-1.4')-FD		69		81
240-87591-5	ED-00.08-SD02-(1.4-2.03')		107		151 X
240-87591-6	ED-00.25-SD01-(0.0-57')		80		99
240-87591-7	ED-00.25-SD01-(0.57-3.51')		69		79
240-87591-8	ED-00.25-SD01-(3.51-4.3')	166 X	82 p	40 p	107
240-87591-9	ED-00.25-SD01-(3.51-4.3')-DUP	203 X	106 p	53 p	148 X
240-87591-10	ED-00.39-SD02-(0-2.20')		76		92
240-87591-10 MS	ED-00.39-SD02-(0-2.20')		76		87
240-87591-10 MSD	ED-00.39-SD02-(0-2.20')		76		81
240-87591-11	ED-00.39-SD02-(2.20-2.41')		93		128
240-87591-12	ED-00.39-SD02-(2.41-3.54')		78		100
240-87591-13	ED-00.39-SD02-(3.54-4.30')		100		113
240-87591-14	ED-00.47-SD02-(0-0.33')		68		76
240-87591-15	ED-00.47-SD02-(33-1.46')		73		87
240-87591-16	ED-00.47-SD02-(1.46-1.96')		64		71
240-87591-17	ED-00.47-SD02-(1.96-3.13')		75		89
240-87591-18	ED-00.51-SD02-(0-0.36')		67		79
240-87591-19	ED-00.51-SD02-(0.36-0.68')		70		121
240-87591-20	ED-00.51-SD02-(0.68-1.65')	48 p		47 p	
240-87591-21	ED-00.51-SD02-(1.65-1.75')	61		60 p	
240-87591-22	ED-00.60-SD02-(0-1.76')	73		91	
240-87591-22 MS	ED-00.60-SD02-(0-1.76')	89		95	
240-87591-22 MSD	ED-00.60-SD02-(0-1.76')	97		86	
240-87591-23	ED-00.60-SD02-(1.76-2.22')	145 X		51 p	
240-87591-24	ED-00.60-SD02-(2.22-2.39')	98		94	
240-87591-25	ED-00.60-SD02-(2.39-2.63')	85		97	
240-87591-26	ED-00.60-SD02-(2.63-3.30')	93		191 X	
240-87591-27	ED-00.72-SD03-(0-2.06')	73		88	
240-87591-28	ED-00.72-SD03-(2.06-2.40')	89		84	
240-87591-29	ED-00.72-SD03-(2.40-3.50')	218 X		128	
240-87591-30	ED-00.72-SD03-(3.50-3.84')	170 X		114	
240-87591-31	ED-00.72-SD03-(3.84-4.05')	219 X		122	
240-87591-32	ED-00.72-SD03-(4.05-4.30')	171 X		108	
240-87591-33	ED-00.72-SD03-(2.40-3.50)-FD	217 X		108	
240-87591-34	ED-00.82-SD02-(0-0.39')	74		72	
240-87591-34 MS	ED-00.82-SD02-(0-0.39')	83		82	
240-87591-34 MSD	ED-00.82-SD02-(0-0.39')	94		78	
240-87591-35	ED-00.82-SD02-(0.39-0.70')	74		78	
240-87591-36	ED.01.03-SD02-(0-0.98)	74		69	
240-87591-37	ED.01.03-SD02-(0-0.98)-FD	87		108	
240-87591-38	ED-01.03-SD02-(0.98-1.65')	578 X		0 X	
240-87591-39	ED-01.03-SD02-(0.98-1.65')-FD	250 X		110	
240-87591-40	ED-01.03-SD02-(1.65-1.87')	186 X		91 p	
240-87591-41	ED-01.03-SD02-(1.87-2.25')	97		102	
240-87591-42	ED-01.14-SD02-(0-1.05')	73		73	
240-87591-43	ED-01.22-SD02-(0-0.17')	75		72 p	

TestAmerica Canton

Surrogate Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

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

Matrix: Sediment

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (14-128)	TCX2 (14-128)	DCB1 (10-132)	DCB2 (10-132)
240-87591-44	ED-01.22-SD02-(0.17-0.29')	76		77	
240-87591-45	ED-01.37-SD02-(0-0.9')	81		79	
240-87591-46	ED-01.49-SD03-(0-0.70')	70		91	
240-87591-131	SOIL-SED DRUM	80		85	
LCS 240-303031/24-A	Lab Control Sample		74		80
LCS 240-303095/24-A	Lab Control Sample	94		121	
LCS 240-303098/24-A	Lab Control Sample	98		98	
MB 240-303031/23-A	Method Blank		72		76
MB 240-303095/23-A	Method Blank	82		104	
MB 240-303098/23-A	Method Blank	95		103	

Surrogate Legend

TCX = Tetrachloro-m-xylene
 DCB = DCB Decachlorobiphenyl

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (14-128)	TCX2 (14-128)	DCB1 (10-132)	DCB2 (10-132)
240-87591-47	ED-00.82-SOL04-(0-0.13')		84		99
240-87591-48	ED-00.82-SOL04-(0.13-0.5)		69		87
240-87591-49	ED-00.72-SL01-(0-0.50')		75		95
240-87591-50	ED-00.72-SL01-(0.50-1.0')		74		87
240-87591-51	ED-00.60-SL03-(0-0.89')	85	86	95	85
240-87591-51 MS	ED-00.60-SL03-(0-0.89')		82		79
240-87591-51 MSD	ED-00.60-SL03-(0-0.89')		81		82
240-87591-52	ED-00.60-SL03-(0.89-1.0')		77		89
240-87591-53	ED-0060.SL01-(0-0.19')		79		113
240-87591-54	ED-0060.SL01-(0.19-1.0')		73		88
240-87591-55	ED-00.51-SL03-(0-0.5')		77		0 X
240-87591-56	ED-00.51-SL03-(0.5-1.0')		78		38
240-87591-57	ED-00.51-SL03-(0-0.5')-FD		76		115
240-87591-58	ED-00.51-SL01-(0-0.5')		77		95
240-87591-59	ED-00.51.SL01-(0.5-1.0')		79		93
240-87591-60	ED-00.47-SL04-(0-0.80')		68		84
240-87591-61	ED-00.47-SL03-(0-0.77')		73		84
240-87591-62	ED-00.47-SL03-(0-0.77')-FD		69		81
240-87591-63	ED-00.47-SL01-(0-0.5')		69		88
240-87591-64	ED-00.39-SL04-(0-0.50')		75		12 p
240-87591-65	ED-00.39-SL04-(0.50-1.0')		75		87
240-87591-66	ED-00.39-SL03-(0-0.69')		82		94 p
240-87591-67	ED-00.39-SL03-(0-0.69')-FD	100	112	119	105
240-87591-68	ED-00.39-SL03-(0.69-0.98')	80		86	
240-87591-69	ED-00.39-SL03-(0.98-1.17')		68		96
240-87591-70	ED-00.39-SL03-(1.17-1.5')	82		84	
240-87591-71	ED-00.39-SL01-(0-0.5')	77		81	
240-87591-71 MS	ED-00.39-SL01-(0-0.5')	91		91	

TestAmerica Canton

Surrogate Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (14-128)	TCX2 (14-128)	DCB1 (10-132)	DCB2 (10-132)
240-87591-71 MSD	ED-00.39-SL01-(0-0.5')	84		92	
240-87591-72	ED-00.39-SL01-(0.5-1.0')		81		90
240-87591-73	ED-00.25-SL04-(0-0.5')	83		107	
240-87591-74	ED-00.25-SL04-(0.5-1.0')	88		129	
240-87591-75	ED-00.25-SL04-(1.0-1.5")	88		103	
240-87591-76	ED-00.25-SL04-(1.5-2.0')	89		124	
240-87591-77	ED-00.25-SL03-(0.0.5')	98		147 X	
240-87591-78	ED-00.25-SL03-(0.5-1.0')	90		204 X	
240-87591-79	ED-00.25-SL02-(0-0.5')	87		269 X	
240-87591-80	ED-00.25-SL02-(0-0.5')-FD	95		160 X	
240-87591-81	ED-00.25-SL02-(0.5-1.0')	86		106	
240-87591-82	ED-00.25-SL02-(1.0-1.5')	79		105	
240-87591-83	ED-00.08-SL03-(0-0.5')	85		169 X	
240-87591-84	ED-00.08-SL03-(0.5-0.97')	83		131	
240-87591-85	ED-00.08-SL03-(0.97-1..47')	94		178 X	
240-87591-85 MS	ED-00.08-SL03-(0.97-1..47')	112		109 p	
240-87591-85 MSD	ED-00.08-SL03-(0.97-1..47')	107		108	
240-87591-86	ED-00.08-SL03-(1.5-2.0')	98		110	
240-87591-87	ED-00.08-SL04-(0-0.67)	91		112	
240-87591-88	ED-00.08-SL04-(0.67-0.86)	83		161 X	
240-87591-89	ED-00.08-SL04-(0.86-1.36)		74		93
240-87591-90	ED-00.08-SL04-(1.5-2.0')		72		86
240-87591-91	ED-00.08-SL01-(0-0.5')	68	66	95	91
240-87591-91 MS	ED-00.08-SL01-(0-0.5')		66		84
240-87591-91 MSD	ED-00.08-SL01-(0-0.5')		68		93
240-87591-92	ED-00.08-SL01-(0.5-1.0')		62		83
240-87591-93	ED-00.08-SL01-(1.0-1.86')		78		97
240-87591-94	ED-00.08-SL01-(1.86-2.0')		70		82
240-87591-95	ED-01.37-SL03-(0-0.27')		72		91
240-87591-96	ED-01.37-SL03-(0.27-0.92')		74		91
240-87591-97	ED-01.37-SL03-(0.92-1.07')		64		82
240-87591-98	ED-01.37-SL03-(1.07-2.0')		73		94
240-87591-99	ED-01.49-SL04-(0-0.5')		67		79
240-87591-100	ED-01.49-SL04-(0.5-1.0')		72		85 p
240-87591-101	ED-01.49-SL04-(1.0-1.81')		67		85 p
240-87591-102	ED-01.49-SL04-(1.81-2.0')		69		88
240-87591-103	ED-00.72-SL02-(0-0.5)		67		128 p
240-87591-104	ED-00.72-SL02-(0.5-1.0')		71		94
240-87591-105	ED-00.72-SL02-(1.0-1.5')		72		102
240-87591-106	ED-01.24-SL01-(0-0.87')		71		108 p
240-87591-107	ED-01.24-SL01-(0.87-1.0')		75		77
240-87591-108	ED-01.14-SL03-(0-0.5')		71		81
240-87591-109	ED-01.14-SL03-(0.5-1.0')		80		99
240-87591-110	ED-01.14-SL03-(0.5-1.0')-FD		82		101
240-87591-111	ED-01.49-SL02-(0-0.5')		73		85
240-87591-112	ED-01.49-SL02-(0.5-1.0')		72		87
240-87591-113	ED-01.37-SL01-(0-0.9')		86		91
240-87591-114	ED-01.37-SL01-(0-0.9')-FD		76		86
240-87591-115	ED-01.03-SL03-(0-0.21')		76		82

TestAmerica Canton

Surrogate Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (14-128)	TCX2 (14-128)	DCB1 (10-132)	DCB2 (10-132)
240-87591-116	ED-01.03-SL03-(0.21-1.0')		74		84
240-87591-117	ED-00.82-SL03-(0-0.5')		80		84
240-87591-118	ED-00.82-SL03-(0.5-1.0')		76		384 X
240-87591-119	ED-00.72-SL04-(0-0.11')		83		99
240-87591-120	ED-00.72-SL04-(0.11-0.47')		71		91
240-87591-121	ED-00.72-SL04-(0.47-1.0')		74		87
240-87591-122	ED-01.49-SL01-(0-0.5')		79		90
240-87591-123	ED-01.49-SL01-(0-0.5')-FD		78		88
240-87591-123 MS	ED-01.49-SL01-(0-0.5')-FD		88		95
240-87591-123 MSD	ED-01.49-SL01-(0-0.5')-FD		78		86
240-87591-124	ED-01.24-SL03-(0-0.5')	81		108	
240-87591-125	ED-00.82-SL01-(0-0.22')	88		87	
240-87591-126	ED-00.82-SL01-(0.22-0.5')	93		113	
240-87591-127	ED-01.03-SL01-(0-0.5')	98		109	
240-87591-128	ED-01.03-SL01-(0-0.5')-FD		71		95
240-87591-129	ED-01.14-SL01-(0-0.5')	75		99	
240-87591-129 MS	ED-01.14-SL01-(0-0.5')	80		100	
240-87591-129 MSD	ED-01.14-SL01-(0-0.5')	80		98	
240-87591-133	ED-00.72-SL01-(0-0.5')-FD		75		91
LCS 240-302635/20-A	Lab Control Sample	91		118	
LCS 240-302802/24-A	Lab Control Sample		86		87
LCS 240-302857/8-A	Lab Control Sample	75		90	
LCS 240-302955/24-A	Lab Control Sample		80		92
LCS 240-302976/24-A	Lab Control Sample	82		94	
LCS 240-302991/24-A	Lab Control Sample		66		83
MB 240-302635/19-A	Method Blank	83		134 X	
MB 240-302802/23-A	Method Blank		84		83
MB 240-302857/7-A	Method Blank	76		81	
MB 240-302955/23-A	Method Blank		67		79
MB 240-302976/23-A	Method Blank	86		96	
MB 240-302991/23-A	Method Blank		71		87

Surrogate Legend

TCX = Tetrachloro-m-xylene
 DCB = DCB Decachlorobiphenyl

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		TCX2 (32-120)	DCB2 (16-120)
240-87591-130	WATER DRUM	54	15 X
240-87591-132	EQUIP RINSATE	73	81
LCS 240-302648/4-A	Lab Control Sample	77	76
MB 240-302648/3-A	Method Blank	77	76

Surrogate Legend

TCX = Tetrachloro-m-xylene
 DCB = DCB Decachlorobiphenyl

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

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

Lab Sample ID: MB 240-302635/19-A

Matrix: Solid

Analysis Batch: 302905

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 302635

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	24.0	U	50.0	24.0	ug/Kg		11/08/17 13:17	11/10/17 13:56	1
Aroclor-1221	23.0	U	50.0	23.0	ug/Kg		11/08/17 13:17	11/10/17 13:56	1
Aroclor-1232	16.0	U	50.0	16.0	ug/Kg		11/08/17 13:17	11/10/17 13:56	1
Aroclor-1242	20.0	U	50.0	20.0	ug/Kg		11/08/17 13:17	11/10/17 13:56	1
Aroclor-1248	17.0	U	50.0	17.0	ug/Kg		11/08/17 13:17	11/10/17 13:56	1
Aroclor-1254	14.0	U	50.0	14.0	ug/Kg		11/08/17 13:17	11/10/17 13:56	1
Aroclor-1260	18.0	U	50.0	18.0	ug/Kg		11/08/17 13:17	11/10/17 13:56	1
Aroclor-1262	8.00	U	50.0	8.00	ug/Kg		11/08/17 13:17	11/10/17 13:56	1
Aroclor-1268	20.0	U	50.0	20.0	ug/Kg		11/08/17 13:17	11/10/17 13:56	1
Polychlorinated biphenyls, Total	24.0	U	50.0	24.0	ug/Kg		11/08/17 13:17	11/10/17 13:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	83		14 - 128	11/08/17 13:17	11/10/17 13:56	1
DCB Decachlorobiphenyl	134	X	10 - 132	11/08/17 13:17	11/10/17 13:56	1

Lab Sample ID: LCS 240-302635/20-A

Matrix: Solid

Analysis Batch: 302905

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 302635

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	1000	715.3		ug/Kg		72	47 - 120
Aroclor-1260	1000	883.1		ug/Kg		88	46 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	91		14 - 128
DCB Decachlorobiphenyl	118		10 - 132

Lab Sample ID: 240-87591-85 MS

Matrix: Solid

Analysis Batch: 302905

Client Sample ID: ED-00.08-SL03-(0.97-1..47')

Prep Type: Total/NA

Prep Batch: 302635

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	2900	U	1200	18500		ug/Kg	☼	NC	31 - 120
Aroclor-1260	3090	J F1 F2	1200	3394	J p	ug/Kg	☼	25	21 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	112		14 - 128
DCB Decachlorobiphenyl	109	p	10 - 132

Lab Sample ID: 240-87591-85 MSD

Matrix: Solid

Analysis Batch: 302905

Client Sample ID: ED-00.08-SL03-(0.97-1..47')

Prep Type: Total/NA

Prep Batch: 302635

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aroclor-1016	2900	U	1190	14700		ug/Kg	☼	NC	31 - 120	23	30
Aroclor-1260	2720	J F1	1190	4805	J F1	ug/Kg	☼	175	21 - 122	12	30

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

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

Lab Sample ID: 240-87591-85 MSD
Matrix: Solid
Analysis Batch: 302905

Client Sample ID: ED-00.08-SL03-(0.97-1..47')
Prep Type: Total/NA
Prep Batch: 302635

Surrogate	MSD		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	107		14 - 128
DCB Decachlorobiphenyl	108		10 - 132

Lab Sample ID: MB 240-302648/3-A
Matrix: Water
Analysis Batch: 302884

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 302648

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor-1016	0.200	U	0.400	0.200	ug/L		11/08/17 13:53	11/09/17 22:13	1
Aroclor-1221	0.360	U	0.400	0.360	ug/L		11/08/17 13:53	11/09/17 22:13	1
Aroclor-1232	0.270	U	0.400	0.270	ug/L		11/08/17 13:53	11/09/17 22:13	1
Aroclor-1242	0.250	U	0.400	0.250	ug/L		11/08/17 13:53	11/09/17 22:13	1
Aroclor-1248	0.200	U	0.400	0.200	ug/L		11/08/17 13:53	11/09/17 22:13	1
Aroclor-1254	0.130	U	0.400	0.130	ug/L		11/08/17 13:53	11/09/17 22:13	1
Aroclor-1260	0.160	U	0.400	0.160	ug/L		11/08/17 13:53	11/09/17 22:13	1
Aroclor-1262	0.220	U	0.400	0.220	ug/L		11/08/17 13:53	11/09/17 22:13	1
Aroclor-1268	0.360	U	0.400	0.360	ug/L		11/08/17 13:53	11/09/17 22:13	1
Polychlorinated biphenyls, Total	0.360	U	0.400	0.360	ug/L		11/08/17 13:53	11/09/17 22:13	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	77		32 - 120	11/08/17 13:53	11/09/17 22:13	1
DCB Decachlorobiphenyl	76		16 - 120	11/08/17 13:53	11/09/17 22:13	1

Lab Sample ID: LCS 240-302648/4-A
Matrix: Water
Analysis Batch: 302884

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 302648

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	10.0	6.227		ug/L		62	38 - 120
Aroclor-1260	10.0	6.091		ug/L		61	42 - 120

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	77		32 - 120
DCB Decachlorobiphenyl	76		16 - 120

Lab Sample ID: MB 240-302802/23-A
Matrix: Solid
Analysis Batch: 303080

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 302802

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor-1016	24.0	U	50.0	24.0	ug/Kg		11/09/17 10:58	11/11/17 15:05	1
Aroclor-1221	23.0	U	50.0	23.0	ug/Kg		11/09/17 10:58	11/11/17 15:05	1
Aroclor-1232	16.0	U	50.0	16.0	ug/Kg		11/09/17 10:58	11/11/17 15:05	1
Aroclor-1242	20.0	U	50.0	20.0	ug/Kg		11/09/17 10:58	11/11/17 15:05	1
Aroclor-1248	17.0	U	50.0	17.0	ug/Kg		11/09/17 10:58	11/11/17 15:05	1
Aroclor-1254	14.0	U	50.0	14.0	ug/Kg		11/09/17 10:58	11/11/17 15:05	1
Aroclor-1260	18.0	U	50.0	18.0	ug/Kg		11/09/17 10:58	11/11/17 15:05	1

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

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

Lab Sample ID: MB 240-302802/23-A
Matrix: Solid
Analysis Batch: 303080

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 302802

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1262	8.00	U	50.0	8.00	ug/Kg		11/09/17 10:58	11/11/17 15:05	1
Aroclor-1268	20.0	U	50.0	20.0	ug/Kg		11/09/17 10:58	11/11/17 15:05	1
Polychlorinated biphenyls, Total	24.0	U	50.0	24.0	ug/Kg		11/09/17 10:58	11/11/17 15:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	84		14 - 128	11/09/17 10:58	11/11/17 15:05	1
DCB Decachlorobiphenyl	83		10 - 132	11/09/17 10:58	11/11/17 15:05	1

Lab Sample ID: LCS 240-302802/24-A
Matrix: Solid
Analysis Batch: 303080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 302802

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	1000	704.4		ug/Kg		70	47 - 120
Aroclor-1260	1000	752.3		ug/Kg		75	46 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	86		14 - 128
DCB Decachlorobiphenyl	87		10 - 132

Lab Sample ID: 240-87591-51 MS
Matrix: Solid
Analysis Batch: 303080

Client Sample ID: ED-00.60-SL03-(0-0.89)
Prep Type: Total/NA
Prep Batch: 302802

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1016	29.4	U	1240	825.1		ug/Kg	☼	67	31 - 120
Aroclor-1260	22.1	U	1240	849.1		ug/Kg	☼	69	21 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	82		14 - 128
DCB Decachlorobiphenyl	79		10 - 132

Lab Sample ID: 240-87591-51 MSD
Matrix: Solid
Analysis Batch: 303080

Client Sample ID: ED-00.60-SL03-(0-0.89)
Prep Type: Total/NA
Prep Batch: 302802

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aroclor-1016	29.4	U	1230	779.2		ug/Kg	☼	63	31 - 120	6	30
Aroclor-1260	22.1	U	1230	847.3		ug/Kg	☼	69	21 - 122	0	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	81		14 - 128
DCB Decachlorobiphenyl	82		10 - 132

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

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

Lab Sample ID: MB 240-302857/7-A

Matrix: Solid

Analysis Batch: 303043

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 302857

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	24.0	U	50.0	24.0	ug/Kg		11/09/17 14:18	11/10/17 18:12	1
Aroclor-1221	23.0	U	50.0	23.0	ug/Kg		11/09/17 14:18	11/10/17 18:12	1
Aroclor-1232	16.0	U	50.0	16.0	ug/Kg		11/09/17 14:18	11/10/17 18:12	1
Aroclor-1242	20.0	U	50.0	20.0	ug/Kg		11/09/17 14:18	11/10/17 18:12	1
Aroclor-1248	17.0	U	50.0	17.0	ug/Kg		11/09/17 14:18	11/10/17 18:12	1
Aroclor-1254	14.0	U	50.0	14.0	ug/Kg		11/09/17 14:18	11/10/17 18:12	1
Aroclor-1260	18.0	U	50.0	18.0	ug/Kg		11/09/17 14:18	11/10/17 18:12	1
Aroclor-1262	8.00	U	50.0	8.00	ug/Kg		11/09/17 14:18	11/10/17 18:12	1
Aroclor-1268	20.0	U	50.0	20.0	ug/Kg		11/09/17 14:18	11/10/17 18:12	1
Polychlorinated biphenyls, Total	24.0	U	50.0	24.0	ug/Kg		11/09/17 14:18	11/10/17 18:12	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	76		14 - 128	11/09/17 14:18	11/10/17 18:12	1
DCB Decachlorobiphenyl	81		10 - 132	11/09/17 14:18	11/10/17 18:12	1

Lab Sample ID: LCS 240-302857/8-A

Matrix: Solid

Analysis Batch: 303043

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 302857

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	1000	613.7		ug/Kg		61	47 - 120
Aroclor-1260	1000	728.7		ug/Kg		73	46 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	75		14 - 128
DCB Decachlorobiphenyl	90		10 - 132

Lab Sample ID: 240-87591-71 MS

Matrix: Solid

Analysis Batch: 303043

Client Sample ID: ED-00.39-SL01-(0-0.5')

Prep Type: Total/NA

Prep Batch: 302857

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	28.0	U	1150	753.7		ug/Kg	☼	65	31 - 120
Aroclor-1260	21.0	U	1150	851.4		ug/Kg	☼	74	21 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	91		14 - 128
DCB Decachlorobiphenyl	91		10 - 132

Lab Sample ID: 240-87591-71 MSD

Matrix: Solid

Analysis Batch: 303043

Client Sample ID: ED-00.39-SL01-(0-0.5')

Prep Type: Total/NA

Prep Batch: 302857

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aroclor-1016	28.0	U	1150	735.1		ug/Kg	☼	64	31 - 120	3	30
Aroclor-1260	21.0	U	1150	850.9		ug/Kg	☼	74	21 - 122	0	30

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

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

Lab Sample ID: 240-87591-71 MSD
Matrix: Solid
Analysis Batch: 303043

Client Sample ID: ED-00.39-SL01-(0-0.5')
Prep Type: Total/NA
Prep Batch: 302857

Surrogate	MSD		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	84		14 - 128
DCB Decachlorobiphenyl	92		10 - 132

Lab Sample ID: MB 240-302955/23-A
Matrix: Solid
Analysis Batch: 303313

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 302955

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor-1016	24.0	U	50.0	24.0	ug/Kg		11/10/17 08:32	11/14/17 17:08	1
Aroclor-1221	23.0	U	50.0	23.0	ug/Kg		11/10/17 08:32	11/14/17 17:08	1
Aroclor-1232	16.0	U	50.0	16.0	ug/Kg		11/10/17 08:32	11/14/17 17:08	1
Aroclor-1242	20.0	U	50.0	20.0	ug/Kg		11/10/17 08:32	11/14/17 17:08	1
Aroclor-1248	17.0	U	50.0	17.0	ug/Kg		11/10/17 08:32	11/14/17 17:08	1
Aroclor-1254	14.0	U	50.0	14.0	ug/Kg		11/10/17 08:32	11/14/17 17:08	1
Aroclor-1260	18.0	U	50.0	18.0	ug/Kg		11/10/17 08:32	11/14/17 17:08	1
Aroclor-1262	8.00	U	50.0	8.00	ug/Kg		11/10/17 08:32	11/14/17 17:08	1
Aroclor-1268	20.0	U	50.0	20.0	ug/Kg		11/10/17 08:32	11/14/17 17:08	1
Polychlorinated biphenyls, Total	24.0	U	50.0	24.0	ug/Kg		11/10/17 08:32	11/14/17 17:08	1

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	67		14 - 128	11/10/17 08:32	11/14/17 17:08	1
DCB Decachlorobiphenyl	79		10 - 132	11/10/17 08:32	11/14/17 17:08	1

Lab Sample ID: LCS 240-302955/24-A
Matrix: Solid
Analysis Batch: 303313

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 302955

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	1000	651.8		ug/Kg		65	47 - 120
Aroclor-1260	1000	698.5		ug/Kg		70	46 - 120

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	80		14 - 128
DCB Decachlorobiphenyl	92		10 - 132

Lab Sample ID: 240-87591-123 MS
Matrix: Solid
Analysis Batch: 303313

Client Sample ID: ED-01.49-SL01-(0-0.5')-FD
Prep Type: Total/NA
Prep Batch: 302955

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	27.9	U	1180	810.4		ug/Kg	☼	69	31 - 120
Aroclor-1260	20.9	U	1180	857.5		ug/Kg	☼	73	21 - 122

Surrogate	MS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	88		14 - 128
DCB Decachlorobiphenyl	95		10 - 132

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

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

Lab Sample ID: 240-87591-123 MSD

Matrix: Solid
Analysis Batch: 303313

Client Sample ID: ED-01.49-SL01-(0-0.5')-FD

Prep Type: Total/NA
Prep Batch: 302955

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Aroclor-1016	27.9	U	1180	763.5		ug/Kg	☼	65	31 - 120	6	30
Aroclor-1260	20.9	U	1180	784.3		ug/Kg	☼	67	21 - 122	9	30
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
Tetrachloro-m-xylene	78		14 - 128								
DCB Decachlorobiphenyl	86		10 - 132								

Lab Sample ID: MB 240-302976/23-A

Matrix: Solid
Analysis Batch: 303214

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 302976

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Aroclor-1016	24.0	U	50.0	24.0	ug/Kg		11/10/17 09:13	11/13/17 18:47		1
Aroclor-1221	23.0	U	50.0	23.0	ug/Kg		11/10/17 09:13	11/13/17 18:47		1
Aroclor-1232	16.0	U	50.0	16.0	ug/Kg		11/10/17 09:13	11/13/17 18:47		1
Aroclor-1242	20.0	U	50.0	20.0	ug/Kg		11/10/17 09:13	11/13/17 18:47		1
Aroclor-1248	17.0	U	50.0	17.0	ug/Kg		11/10/17 09:13	11/13/17 18:47		1
Aroclor-1254	14.0	U	50.0	14.0	ug/Kg		11/10/17 09:13	11/13/17 18:47		1
Aroclor-1260	18.0	U	50.0	18.0	ug/Kg		11/10/17 09:13	11/13/17 18:47		1
Aroclor-1262	8.00	U	50.0	8.00	ug/Kg		11/10/17 09:13	11/13/17 18:47		1
Aroclor-1268	20.0	U	50.0	20.0	ug/Kg		11/10/17 09:13	11/13/17 18:47		1
Polychlorinated biphenyls, Total	24.0	U	50.0	24.0	ug/Kg		11/10/17 09:13	11/13/17 18:47		1
MB MB										
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil	Fac			
Tetrachloro-m-xylene	86		14 - 128	11/10/17 09:13	11/13/17 18:47		1			
DCB Decachlorobiphenyl	96		10 - 132	11/10/17 09:13	11/13/17 18:47		1			

Lab Sample ID: LCS 240-302976/24-A

Matrix: Solid
Analysis Batch: 303214

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
Prep Batch: 302976

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
		Added	Result				
Aroclor-1016	1000	634.3		ug/Kg		63	47 - 120
Aroclor-1260	1000	763.9		ug/Kg		76	46 - 120
LCS LCS							
Surrogate	%Recovery	Qualifier	Limits				
Tetrachloro-m-xylene	82		14 - 128				
DCB Decachlorobiphenyl	94		10 - 132				

Lab Sample ID: 240-87591-129 MS

Matrix: Solid
Analysis Batch: 303311

Client Sample ID: ED-01.14-SL01-(0-0.5')

Prep Type: Total/NA
Prep Batch: 302976

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier		Result	Qualifier				
Aroclor-1016	137	U	1130	1160		ug/Kg	☼	103	31 - 120
Aroclor-1260	337		1130	1202		ug/Kg	☼	76	21 - 122

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

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

Lab Sample ID: 240-87591-129 MS
Matrix: Solid
Analysis Batch: 303311

Client Sample ID: ED-01.14-SL01-(0-0.5')
Prep Type: Total/NA
Prep Batch: 302976

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	80		14 - 128
DCB Decachlorobiphenyl	100		10 - 132

Lab Sample ID: 240-87591-129 MSD
Matrix: Solid
Analysis Batch: 303311

Client Sample ID: ED-01.14-SL01-(0-0.5')
Prep Type: Total/NA
Prep Batch: 302976

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
				Result	Qualifier						
Aroclor-1016	137	U	1130	1242		ug/Kg	☼	110	31 - 120	7	30
Aroclor-1260	309		1130	1190		ug/Kg	☼	78	21 - 122	4	30

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	80		14 - 128
DCB Decachlorobiphenyl	98		10 - 132

Lab Sample ID: MB 240-302991/23-A
Matrix: Solid
Analysis Batch: 303305

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 302991

Analyte	MB MB		RL	MDL	Unit	D	Prepared		Analyzed		Dil Fac
	Result	Qualifier					Time	Time	Time	Time	
Aroclor-1016	24.0	U	50.0	24.0	ug/Kg		11/10/17 10:03	11/14/17 13:39	11/14/17 13:39	1	
Aroclor-1221	23.0	U	50.0	23.0	ug/Kg		11/10/17 10:03	11/14/17 13:39	11/14/17 13:39	1	
Aroclor-1232	16.0	U	50.0	16.0	ug/Kg		11/10/17 10:03	11/14/17 13:39	11/14/17 13:39	1	
Aroclor-1242	20.0	U	50.0	20.0	ug/Kg		11/10/17 10:03	11/14/17 13:39	11/14/17 13:39	1	
Aroclor-1248	17.0	U	50.0	17.0	ug/Kg		11/10/17 10:03	11/14/17 13:39	11/14/17 13:39	1	
Aroclor-1254	14.0	U	50.0	14.0	ug/Kg		11/10/17 10:03	11/14/17 13:39	11/14/17 13:39	1	
Aroclor-1260	18.0	U	50.0	18.0	ug/Kg		11/10/17 10:03	11/14/17 13:39	11/14/17 13:39	1	
Aroclor-1262	8.00	U	50.0	8.00	ug/Kg		11/10/17 10:03	11/14/17 13:39	11/14/17 13:39	1	
Aroclor-1268	20.0	U	50.0	20.0	ug/Kg		11/10/17 10:03	11/14/17 13:39	11/14/17 13:39	1	
Polychlorinated biphenyls, Total	24.0	U	50.0	24.0	ug/Kg		11/10/17 10:03	11/14/17 13:39	11/14/17 13:39	1	

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	71		14 - 128	11/10/17 10:03	11/14/17 13:39	1
DCB Decachlorobiphenyl	87		10 - 132	11/10/17 10:03	11/14/17 13:39	1

Lab Sample ID: LCS 240-302991/24-A
Matrix: Solid
Analysis Batch: 303305

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 302991

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Aroclor-1016	1000	575.0		ug/Kg		57	47 - 120
Aroclor-1260	1000	674.1		ug/Kg		67	46 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	66		14 - 128
DCB Decachlorobiphenyl	83		10 - 132

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

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

Lab Sample ID: 240-87591-91 MS

Matrix: Solid
Analysis Batch: 303305

Client Sample ID: ED-00.08-SL01-(0-0.5')

Prep Type: Total/NA
Prep Batch: 302991

Analyte	Sample	Sample	Spike	MS MS		Unit	D	%Rec	Limits
	Result	Qualifier		Result	Qualifier				
Aroclor-1016	30.0	U	1260	684.4		ug/Kg	☼	54	31 - 120
Aroclor-1260	28.5	J p	1260	893.0		ug/Kg	☼	69	21 - 122
MS MS									
Surrogate	%Recovery	Qualifier	Limits						
Tetrachloro-m-xylene	66		14 - 128						
DCB Decachlorobiphenyl	84		10 - 132						

Lab Sample ID: 240-87591-91 MSD

Matrix: Solid
Analysis Batch: 303305

Client Sample ID: ED-00.08-SL01-(0-0.5')

Prep Type: Total/NA
Prep Batch: 302991

Analyte	Sample	Sample	Spike	MSD MSD		Unit	D	%Rec	Limits	RPD	RPD Limit
	Result	Qualifier		Result	Qualifier						
Aroclor-1016	30.0	U	1260	717.7		ug/Kg	☼	57	31 - 120	5	30
Aroclor-1260	28.5	J p	1260	965.0		ug/Kg	☼	74	21 - 122	8	30
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
Tetrachloro-m-xylene	68		14 - 128								
DCB Decachlorobiphenyl	93		10 - 132								

Lab Sample ID: MB 240-303031/23-A

Matrix: Sediment
Analysis Batch: 303227

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 303031

Analyte	MB MB		RL	MDL	Unit	D	Prepared		Analyzed		Dil Fac
	Result	Qualifier					Prepared	Analyzed			
Aroclor-1016	24.0	U	50.0	24.0	ug/Kg		11/10/17 12:42	11/14/17 01:36			1
Aroclor-1221	23.0	U	50.0	23.0	ug/Kg		11/10/17 12:42	11/14/17 01:36			1
Aroclor-1232	16.0	U	50.0	16.0	ug/Kg		11/10/17 12:42	11/14/17 01:36			1
Aroclor-1242	20.0	U	50.0	20.0	ug/Kg		11/10/17 12:42	11/14/17 01:36			1
Aroclor-1248	17.0	U	50.0	17.0	ug/Kg		11/10/17 12:42	11/14/17 01:36			1
Aroclor-1254	14.0	U	50.0	14.0	ug/Kg		11/10/17 12:42	11/14/17 01:36			1
Aroclor-1260	18.0	U	50.0	18.0	ug/Kg		11/10/17 12:42	11/14/17 01:36			1
Aroclor-1262	8.00	U	50.0	8.00	ug/Kg		11/10/17 12:42	11/14/17 01:36			1
Aroclor-1268	20.0	U	50.0	20.0	ug/Kg		11/10/17 12:42	11/14/17 01:36			1
Polychlorinated biphenyls, Total	24.0	U	50.0	24.0	ug/Kg		11/10/17 12:42	11/14/17 01:36			1
MB MB											
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac					
Tetrachloro-m-xylene	72		14 - 128	11/10/17 12:42	11/14/17 01:36	1					
DCB Decachlorobiphenyl	76		10 - 132	11/10/17 12:42	11/14/17 01:36	1					

Lab Sample ID: LCS 240-303031/24-A

Matrix: Sediment
Analysis Batch: 303227

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
Prep Batch: 303031

Analyte	Spike	LCS LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Aroclor-1016	1000	582.6		ug/Kg		58	47 - 120
Aroclor-1260	1000	625.9		ug/Kg		63	46 - 120

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

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

Lab Sample ID: LCS 240-303031/24-A
Matrix: Sediment
Analysis Batch: 303227

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 303031

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	74		14 - 128
DCB Decachlorobiphenyl	80		10 - 132

Lab Sample ID: 240-87591-10 MS
Matrix: Sediment
Analysis Batch: 303227

Client Sample ID: ED-00.39-SD02-(0-2.20')
Prep Type: Total/NA
Prep Batch: 303031

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier		Result	Qualifier				
Aroclor-1016	30.6	U	1260	1127		ug/Kg	☼	90	31 - 120
Aroclor-1260	35.1	J	1260	817.9		ug/Kg	☼	62	21 - 122

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	76		14 - 128
DCB Decachlorobiphenyl	87		10 - 132

Lab Sample ID: 240-87591-10 MSD
Matrix: Sediment
Analysis Batch: 303227

Client Sample ID: ED-00.39-SD02-(0-2.20')
Prep Type: Total/NA
Prep Batch: 303031

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Aroclor-1016	30.6	U	1290	1199		ug/Kg	☼	93	31 - 120	6	30
Aroclor-1260	23.0	U	1290	845.5		ug/Kg	☼	66	21 - 122	2	30

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	76		14 - 128
DCB Decachlorobiphenyl	81		10 - 132

Lab Sample ID: MB 240-303095/23-A
Matrix: Sediment
Analysis Batch: 303127

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 303095

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor-1016	24.0	U	50.0	24.0	ug/Kg		11/11/17 09:19	11/13/17 15:32	1
Aroclor-1221	23.0	U	50.0	23.0	ug/Kg		11/11/17 09:19	11/13/17 15:32	1
Aroclor-1232	16.0	U	50.0	16.0	ug/Kg		11/11/17 09:19	11/13/17 15:32	1
Aroclor-1242	20.0	U	50.0	20.0	ug/Kg		11/11/17 09:19	11/13/17 15:32	1
Aroclor-1248	17.0	U	50.0	17.0	ug/Kg		11/11/17 09:19	11/13/17 15:32	1
Aroclor-1254	14.0	U	50.0	14.0	ug/Kg		11/11/17 09:19	11/13/17 15:32	1
Aroclor-1260	18.0	U	50.0	18.0	ug/Kg		11/11/17 09:19	11/13/17 15:32	1
Aroclor-1262	8.00	U	50.0	8.00	ug/Kg		11/11/17 09:19	11/13/17 15:32	1
Aroclor-1268	20.0	U	50.0	20.0	ug/Kg		11/11/17 09:19	11/13/17 15:32	1
Polychlorinated biphenyls, Total	24.0	U	50.0	24.0	ug/Kg		11/11/17 09:19	11/13/17 15:32	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	82		14 - 128	11/11/17 09:19	11/13/17 15:32	1
DCB Decachlorobiphenyl	104		10 - 132	11/11/17 09:19	11/13/17 15:32	1

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

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

Lab Sample ID: LCS 240-303095/24-A
Matrix: Sediment
Analysis Batch: 303127

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 303095

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	1000	733.4		ug/Kg		73	47 - 120
Aroclor-1260	1000	811.1		ug/Kg		81	46 - 120
		LCS %Recovery	LCS Qualifier	Limits			
Tetrachloro-m-xylene		94		14 - 128			
DCB Decachlorobiphenyl		121		10 - 132			

Lab Sample ID: 240-87591-22 MS
Matrix: Sediment
Analysis Batch: 303440

Client Sample ID: ED-00.60-SD02-(0-1.76')
Prep Type: Total/NA
Prep Batch: 303095

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	27.9	U	1200	1839	F1	ug/Kg	☼	153	31 - 120
Aroclor-1260	31.6	J	1200	848.2		ug/Kg	☼	68	21 - 122
		MS %Recovery	MS Qualifier	Limits					
Tetrachloro-m-xylene		89		14 - 128					
DCB Decachlorobiphenyl		95		10 - 132					

Lab Sample ID: 240-87591-22 MSD
Matrix: Sediment
Analysis Batch: 303440

Client Sample ID: ED-00.60-SD02-(0-1.76')
Prep Type: Total/NA
Prep Batch: 303095

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Aroclor-1016	27.9	U	1190	1624	F1	ug/Kg	☼	136	31 - 120	12	30
Aroclor-1260	31.6	J	1190	832.2		ug/Kg	☼	67	21 - 122	2	30
		MSD %Recovery	MSD Qualifier	Limits							
Tetrachloro-m-xylene		97		14 - 128							
DCB Decachlorobiphenyl		86		10 - 132							

Lab Sample ID: MB 240-303098/23-A
Matrix: Sediment
Analysis Batch: 303135

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 303098

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	24.0	U	50.0	24.0	ug/Kg		11/11/17 10:25	11/13/17 08:47	1
Aroclor-1221	23.0	U	50.0	23.0	ug/Kg		11/11/17 10:25	11/13/17 08:47	1
Aroclor-1232	16.0	U	50.0	16.0	ug/Kg		11/11/17 10:25	11/13/17 08:47	1
Aroclor-1242	20.0	U	50.0	20.0	ug/Kg		11/11/17 10:25	11/13/17 08:47	1
Aroclor-1248	17.0	U	50.0	17.0	ug/Kg		11/11/17 10:25	11/13/17 08:47	1
Aroclor-1254	14.0	U	50.0	14.0	ug/Kg		11/11/17 10:25	11/13/17 08:47	1
Aroclor-1260	18.0	U	50.0	18.0	ug/Kg		11/11/17 10:25	11/13/17 08:47	1
Aroclor-1262	8.00	U	50.0	8.00	ug/Kg		11/11/17 10:25	11/13/17 08:47	1
Aroclor-1268	20.0	U	50.0	20.0	ug/Kg		11/11/17 10:25	11/13/17 08:47	1
Polychlorinated biphenyls, Total	24.0	U	50.0	24.0	ug/Kg		11/11/17 10:25	11/13/17 08:47	1

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

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

Lab Sample ID: MB 240-303098/23-A
 Matrix: Sediment
 Analysis Batch: 303135

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 303098

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	95		14 - 128	11/11/17 10:25	11/13/17 08:47	1
DCB Decachlorobiphenyl	103		10 - 132	11/11/17 10:25	11/13/17 08:47	1

Lab Sample ID: LCS 240-303098/24-A
 Matrix: Sediment
 Analysis Batch: 303135

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 303098

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	1000	742.3		ug/Kg		74	47 - 120
Aroclor-1260	1000	814.1		ug/Kg		81	46 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	98		14 - 128
DCB Decachlorobiphenyl	98		10 - 132

Lab Sample ID: 240-87591-34 MS
 Matrix: Sediment
 Analysis Batch: 303135

Client Sample ID: ED-00.82-SD02-(0-0.39')
 Prep Type: Total/NA
 Prep Batch: 303098

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	29.8	U F1	1240	2109	F1	ug/Kg	☼	171	31 - 120
Aroclor-1260	22.3	U	1240	1033		ug/Kg	☼	84	21 - 122

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	83		14 - 128
DCB Decachlorobiphenyl	82		10 - 132

Lab Sample ID: 240-87591-34 MSD
 Matrix: Sediment
 Analysis Batch: 303135

Client Sample ID: ED-00.82-SD02-(0-0.39')
 Prep Type: Total/NA
 Prep Batch: 303098

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	
										RPD	Limit
Aroclor-1016	29.8	U F1	1240	1768	F1	ug/Kg	☼	143	31 - 120	18	30
Aroclor-1260	22.3	U	1240	890.9		ug/Kg	☼	72	21 - 122	15	30

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	94		14 - 128
DCB Decachlorobiphenyl	78		10 - 132

Method: Moisture - Percent Moisture

Lab Sample ID: 240-87591-5 DU
 Matrix: Sediment
 Analysis Batch: 302543

Client Sample ID: ED-00.08-SD02-(1.4-2.03')
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	
							RPD	Limit
Percent Solids	75.4		78.0		%		3	20

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Method: Moisture - Percent Moisture (Continued)

Lab Sample ID: 240-87591-5 DU
Matrix: Sediment
Analysis Batch: 302543

Client Sample ID: ED-00.08-SD02-(1.4-2.03')
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	24.6		22.0		%		11	20

Lab Sample ID: 240-87591-10 DU
Matrix: Sediment
Analysis Batch: 302543

Client Sample ID: ED-00.39-SD02-(0-2.20')
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	78.2		78.9		%		0.9	20
Percent Moisture	21.8		21.1		%		3	20

Lab Sample ID: 240-87591-22 DU
Matrix: Sediment
Analysis Batch: 302543

Client Sample ID: ED-00.60-SD02-(0-1.76')
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	83.7		83.7		%		0.07	20
Percent Moisture	16.3		16.3		%		0.4	20

Lab Sample ID: 240-87591-34 DU
Matrix: Sediment
Analysis Batch: 302543

Client Sample ID: ED-00.82-SD02-(0-0.39')
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	81.7		81.5		%		0.3	20
Percent Moisture	18.3		18.5		%		1	20

Lab Sample ID: 240-87591-39 DU
Matrix: Sediment
Analysis Batch: 302543

Client Sample ID: ED-01.03-SD02-(0.98-1.65')-FD
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	80.9		81.9		%		1	20
Percent Moisture	19.1		18.1		%		6	20

Lab Sample ID: 240-87591-48 DU
Matrix: Solid
Analysis Batch: 302543

Client Sample ID: ED-00.82-SOL04-(0.13-0.5)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	91.2		90.8		%		0.4	20
Percent Moisture	8.8		9.2		%		4	20

Lab Sample ID: 240-87591-51 DU
Matrix: Solid
Analysis Batch: 302543

Client Sample ID: ED-00.60-SL03-(0-0.89')
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	80.3		81.3		%		1	20
Percent Moisture	19.7		18.7		%		5	20

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Method: Moisture - Percent Moisture (Continued)

Lab Sample ID: 240-87591-65 DU

Matrix: Solid
Analysis Batch: 302543

Client Sample ID: ED-00.39-SL04-(0.50-1.0')

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU	DU	Unit	D	RPD	RPD Limit
			Result	Qualifier				
Percent Solids	80.2		79.4		%		0.9	20
Percent Moisture	19.8		20.6		%		4	20

Lab Sample ID: 240-87591-71 DU

Matrix: Solid
Analysis Batch: 302739

Client Sample ID: ED-00.39-SL01-(0-0.5')

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU	DU	Unit	D	RPD	RPD Limit
			Result	Qualifier				
Percent Solids	83.9		77.3		%		8	20
Percent Moisture	16.1		22.7	F3	%		34	20

Lab Sample ID: 240-87591-80 DU

Matrix: Solid
Analysis Batch: 302739

Client Sample ID: ED-00.25-SL02-(0-0.5')-FD

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU	DU	Unit	D	RPD	RPD Limit
			Result	Qualifier				
Percent Solids	81.0		81.5		%		0.6	20
Percent Moisture	19.0		18.5		%		3	20

Lab Sample ID: 240-87591-89 DU

Matrix: Solid
Analysis Batch: 302739

Client Sample ID: ED-00.08-SL04-(0.86-1.36)

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU	DU	Unit	D	RPD	RPD Limit
			Result	Qualifier				
Percent Solids	80.5		81.2		%		0.9	20
Percent Moisture	19.5		18.8		%		4	20

Lab Sample ID: 240-87591-91 DU

Matrix: Solid
Analysis Batch: 302739

Client Sample ID: ED-00.08-SL01-(0-0.5')

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU	DU	Unit	D	RPD	RPD Limit
			Result	Qualifier				
Percent Solids	78.8		75.9		%		4	20
Percent Moisture	21.2		24.1		%		13	20

Lab Sample ID: 240-87591-108 DU

Matrix: Solid
Analysis Batch: 302739

Client Sample ID: ED-01.14-SL03-(0-0.5')

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU	DU	Unit	D	RPD	RPD Limit
			Result	Qualifier				
Percent Solids	79.8		78.2		%		2	20
Percent Moisture	20.2		21.8		%		8	20

Lab Sample ID: 240-87591-116 DU

Matrix: Solid
Analysis Batch: 302739

Client Sample ID: ED-01.03-SL03-(0.21-1.0')

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU	DU	Unit	D	RPD	RPD Limit
			Result	Qualifier				
Percent Solids	90.6		90.7		%		0.2	20

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Method: Moisture - Percent Moisture (Continued)

Lab Sample ID: 240-87591-116 DU
 Matrix: Solid
 Analysis Batch: 302739

Client Sample ID: ED-01.03-SL03-(0.21-1.0')
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	9.4		9.3		%		1	20

Lab Sample ID: 240-87591-129 DU
 Matrix: Solid
 Analysis Batch: 302739

Client Sample ID: ED-01.14-SL01-(0-0.5')
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	87.6		85.9		%		2	20
Percent Moisture	12.4		14.1		%		13	20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

GC Semi VOA

Prep Batch: 302635

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-73	ED-00.25-SL04-(0-0.5')	Total/NA	Solid	3540C	
240-87591-74	ED-00.25-SL04-(0.5-1.0')	Total/NA	Solid	3540C	
240-87591-75	ED-00.25-SL04-(1.0-1.5')	Total/NA	Solid	3540C	
240-87591-76	ED-00.25-SL04-(1.5-2.0')	Total/NA	Solid	3540C	
240-87591-77	ED-00.25-SL03-(0.0-0.5')	Total/NA	Solid	3540C	
240-87591-78	ED-00.25-SL03-(0.5-1.0')	Total/NA	Solid	3540C	
240-87591-79	ED-00.25-SL02-(0-0.5')	Total/NA	Solid	3540C	
240-87591-80	ED-00.25-SL02-(0-0.5')-FD	Total/NA	Solid	3540C	
240-87591-81	ED-00.25-SL02-(0.5-1.0')	Total/NA	Solid	3540C	
240-87591-82	ED-00.25-SL02-(1.0-1.5')	Total/NA	Solid	3540C	
240-87591-83	ED-00.08-SL03-(0-0.5')	Total/NA	Solid	3540C	
240-87591-84	ED-00.08-SL03-(0.5-0.97')	Total/NA	Solid	3540C	
240-87591-85	ED-00.08-SL03-(0.97-1..47')	Total/NA	Solid	3540C	
240-87591-86	ED-00.08-SL03-(1.5-2.0')	Total/NA	Solid	3540C	
240-87591-87	ED-00.08-SL04-(0-0.67)	Total/NA	Solid	3540C	
240-87591-88	ED-00.08-SL04-(0.67-0.86)	Total/NA	Solid	3540C	
MB 240-302635/19-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-302635/20-A	Lab Control Sample	Total/NA	Solid	3540C	
240-87591-85 MS	ED-00.08-SL03-(0.97-1..47')	Total/NA	Solid	3540C	
240-87591-85 MSD	ED-00.08-SL03-(0.97-1..47')	Total/NA	Solid	3540C	

Prep Batch: 302648

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-130	WATER DRUM	Total/NA	Water	3510C	
240-87591-132	EQUIP RINSATE	Total/NA	Water	3510C	
MB 240-302648/3-A	Method Blank	Total/NA	Water	3510C	
LCS 240-302648/4-A	Lab Control Sample	Total/NA	Water	3510C	

Prep Batch: 302802

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-47	ED-00.82-SOL04-(0-0.13')	Total/NA	Solid	3540C	
240-87591-48	ED-00.82-SOL04-(0.13-0.5)	Total/NA	Solid	3540C	
240-87591-49	ED-00.72-SL01-(0-0.50')	Total/NA	Solid	3540C	
240-87591-50	ED-00.72-SL01-(0.50-1.0')	Total/NA	Solid	3540C	
240-87591-51	ED-00.60-SL03-(0-0.89')	Total/NA	Solid	3540C	
240-87591-52	ED-00.60-SL03-(0.89-1.0')	Total/NA	Solid	3540C	
240-87591-53	ED-0060.SL01-(0-0.19')	Total/NA	Solid	3540C	
240-87591-55	ED-00.51-SL03-(0-0.5')	Total/NA	Solid	3540C	
240-87591-56	ED-00.51-SL03-(0.5-1.0')	Total/NA	Solid	3540C	
240-87591-57	ED-00.51-SL03-(0-0.5')-FD	Total/NA	Solid	3540C	
240-87591-58	ED-00.51-SL01-(0-0.5')	Total/NA	Solid	3540C	
240-87591-59	ED-00.51.SL01-(0.5-1.0')	Total/NA	Solid	3540C	
240-87591-60	ED-00.47-SL04-(0-0.80')	Total/NA	Solid	3540C	
240-87591-61	ED-00.47-SL03-(0-0.77')	Total/NA	Solid	3540C	
240-87591-62	ED-00.47-SL03-(0-0.77')-FD	Total/NA	Solid	3540C	
240-87591-63	ED-00.47-SL01-(0-0.5')	Total/NA	Solid	3540C	
240-87591-64	ED-00.39-SL04-(0-0.50')	Total/NA	Solid	3540C	
240-87591-65	ED-00.39-SL04-(0.50-1.0')	Total/NA	Solid	3540C	
240-87591-66	ED-00.39-SL03-(0-0.69')	Total/NA	Solid	3540C	
MB 240-302802/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-302802/24-A	Lab Control Sample	Total/NA	Solid	3540C	

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

GC Semi VOA (Continued)

Prep Batch: 302802 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-51 MS	ED-00.60-SL03-(0-0.89')	Total/NA	Solid	3540C	
240-87591-51 MSD	ED-00.60-SL03-(0-0.89')	Total/NA	Solid	3540C	

Prep Batch: 302857

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-67	ED-00.39-SL03-(0-0.69')-FD	Total/NA	Solid	3540C	
240-87591-68	ED-00.39-SL03-(0.69-0.98')	Total/NA	Solid	3540C	
240-87591-70	ED-00.39-SL03-(1.17-1.5')	Total/NA	Solid	3540C	
240-87591-71	ED-00.39-SL01-(0-0.5')	Total/NA	Solid	3540C	
MB 240-302857/7-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-302857/8-A	Lab Control Sample	Total/NA	Solid	3540C	
240-87591-71 MS	ED-00.39-SL01-(0-0.5')	Total/NA	Solid	3540C	
240-87591-71 MSD	ED-00.39-SL01-(0-0.5')	Total/NA	Solid	3540C	

Analysis Batch: 302884

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-130	WATER DRUM	Total/NA	Water	8082A	302648
240-87591-132	EQUIP RINSATE	Total/NA	Water	8082A	302648
MB 240-302648/3-A	Method Blank	Total/NA	Water	8082A	302648
LCS 240-302648/4-A	Lab Control Sample	Total/NA	Water	8082A	302648

Analysis Batch: 302905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-73	ED-00.25-SL04-(0-0.5')	Total/NA	Solid	8082A	302635
240-87591-74	ED-00.25-SL04-(0.5-1.0')	Total/NA	Solid	8082A	302635
240-87591-75	ED-00.25-SL04-(1.0-1.5')	Total/NA	Solid	8082A	302635
240-87591-76	ED-00.25-SL04-(1.5-2.0')	Total/NA	Solid	8082A	302635
240-87591-77	ED-00.25-SL03-(0.0-0.5')	Total/NA	Solid	8082A	302635
240-87591-78	ED-00.25-SL03-(0.5-1.0')	Total/NA	Solid	8082A	302635
240-87591-79	ED-00.25-SL02-(0-0.5')	Total/NA	Solid	8082A	302635
240-87591-80	ED-00.25-SL02-(0-0.5')-FD	Total/NA	Solid	8082A	302635
240-87591-81	ED-00.25-SL02-(0.5-1.0')	Total/NA	Solid	8082A	302635
240-87591-82	ED-00.25-SL02-(1.0-1.5')	Total/NA	Solid	8082A	302635
240-87591-83	ED-00.08-SL03-(0-0.5')	Total/NA	Solid	8082A	302635
240-87591-84	ED-00.08-SL03-(0.5-0.97')	Total/NA	Solid	8082A	302635
240-87591-85	ED-00.08-SL03-(0.97-1..47')	Total/NA	Solid	8082A	302635
240-87591-86	ED-00.08-SL03-(1.5-2.0')	Total/NA	Solid	8082A	302635
240-87591-87	ED-00.08-SL04-(0-0.67)	Total/NA	Solid	8082A	302635
240-87591-88	ED-00.08-SL04-(0.67-0.86)	Total/NA	Solid	8082A	302635
MB 240-302635/19-A	Method Blank	Total/NA	Solid	8082A	302635
LCS 240-302635/20-A	Lab Control Sample	Total/NA	Solid	8082A	302635
240-87591-85 MS	ED-00.08-SL03-(0.97-1..47')	Total/NA	Solid	8082A	302635
240-87591-85 MSD	ED-00.08-SL03-(0.97-1..47')	Total/NA	Solid	8082A	302635

Prep Batch: 302955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-104	ED-00.72-SL02-(0.5-1.0')	Total/NA	Solid	3540C	
240-87591-105	ED-00.72-SL02-(1.0-1.5')	Total/NA	Solid	3540C	
240-87591-106	ED-01.24-SL01-(0-0.87')	Total/NA	Solid	3540C	
240-87591-107	ED-01.24-SL01-(0.87-1.0')	Total/NA	Solid	3540C	
240-87591-108	ED-01.14-SL03-(0-0.5')	Total/NA	Solid	3540C	

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

GC Semi VOA (Continued)

Prep Batch: 302955 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-109	ED-01.14-SL03-(0.5-1.0')	Total/NA	Solid	3540C	
240-87591-110	ED-01.14-SL03-(0.5-1.0')-FD	Total/NA	Solid	3540C	
240-87591-111	ED-01.49-SL02-(0-0.5')	Total/NA	Solid	3540C	
240-87591-112	ED-01.49-SL02-(0.5-1.0')	Total/NA	Solid	3540C	
240-87591-113	ED-01.37-SL01-(0-0.9')	Total/NA	Solid	3540C	
240-87591-114	ED-01.37-SL01-(0-0.9')-FD	Total/NA	Solid	3540C	
240-87591-115	ED-01.03-SL03-(0-0.21')	Total/NA	Solid	3540C	
240-87591-116	ED-01.03-SL03-(0.21-1.0')	Total/NA	Solid	3540C	
240-87591-117	ED-00.82-SL03-(0-0.5')	Total/NA	Solid	3540C	
240-87591-118	ED-00.82-SL03-(0.5-1.0')	Total/NA	Solid	3540C	
240-87591-119	ED-00.72-SL04-(0-0.11')	Total/NA	Solid	3540C	
240-87591-120	ED-00.72-SL04-(0.11-0.47')	Total/NA	Solid	3540C	
240-87591-121	ED-00.72-SL04-(0.47-1.0')	Total/NA	Solid	3540C	
240-87591-122	ED-01.49-SL01-(0-0.5')	Total/NA	Solid	3540C	
240-87591-123	ED-01.49-SL01-(0-0.5')-FD	Total/NA	Solid	3540C	
MB 240-302955/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-302955/24-A	Lab Control Sample	Total/NA	Solid	3540C	
240-87591-123 MS	ED-01.49-SL01-(0-0.5')-FD	Total/NA	Solid	3540C	
240-87591-123 MSD	ED-01.49-SL01-(0-0.5')-FD	Total/NA	Solid	3540C	

Prep Batch: 302976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-124	ED-01.24-SL03-(0-0.5')	Total/NA	Solid	3540C	
240-87591-125	ED-00.82-SL01-(0-0.22')	Total/NA	Solid	3540C	
240-87591-126	ED-00.82-SL01-(0.22-0.5')	Total/NA	Solid	3540C	
240-87591-127	ED-01.03-SL01-(0-0.5')	Total/NA	Solid	3540C	
240-87591-129	ED-01.14-SL01-(0-0.5')	Total/NA	Solid	3540C	
MB 240-302976/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-302976/24-A	Lab Control Sample	Total/NA	Solid	3540C	
240-87591-129 MS	ED-01.14-SL01-(0-0.5')	Total/NA	Solid	3540C	
240-87591-129 MSD	ED-01.14-SL01-(0-0.5')	Total/NA	Solid	3540C	

Prep Batch: 302991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-54	ED-0060.SL01-(0.19-1.0')	Total/NA	Solid	3540C	
240-87591-69	ED-00.39-SL03-(0.98-1.17')	Total/NA	Solid	3540C	
240-87591-72	ED-00.39-SL01-(0.5-1.0')	Total/NA	Solid	3540C	
240-87591-89	ED-00.08-SL04-(0.86-1.36)	Total/NA	Solid	3540C	
240-87591-90	ED-00.08-SL04-(1.5-2.0')	Total/NA	Solid	3540C	
240-87591-91	ED-00.08-SL01-(0-0.5')	Total/NA	Solid	3540C	
240-87591-92	ED-00.08-SL01-(0.5-1.0')	Total/NA	Solid	3540C	
240-87591-93	ED-00.08-SL01-(1.0-1.86')	Total/NA	Solid	3540C	
240-87591-94	ED-00.08-SL01-(1.86-2.0')	Total/NA	Solid	3540C	
240-87591-95	ED-01.37-SL03-(0-0.27')	Total/NA	Solid	3540C	
240-87591-96	ED-01.37-SL03-(0.27-0.92')	Total/NA	Solid	3540C	
240-87591-97	ED-01.37-SL03-(0.92-1.07')	Total/NA	Solid	3540C	
240-87591-98	ED-01.37-SL03-(1.07-2.0')	Total/NA	Solid	3540C	
240-87591-99	ED-01.49-SL04-(0-0.5')	Total/NA	Solid	3540C	
240-87591-100	ED-01.49-SL04-(0.5-1.0')	Total/NA	Solid	3540C	
240-87591-101	ED-01.49-SL04-(1.0-1.81')	Total/NA	Solid	3540C	
240-87591-102	ED-01.49-SL04-(1.81-2.0')	Total/NA	Solid	3540C	

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

GC Semi VOA (Continued)

Prep Batch: 302991 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-103	ED-00.72-SL02-(0-0.5)	Total/NA	Solid	3540C	
240-87591-128	ED-01.03-SL01-(0-0.5')-FD	Total/NA	Solid	3540C	
240-87591-133	ED-00.72-SL01-(0-0.5')-FD	Total/NA	Solid	3540C	
MB 240-302991/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-302991/24-A	Lab Control Sample	Total/NA	Solid	3540C	
240-87591-91 MS	ED-00.08-SL01-(0-0.5')	Total/NA	Solid	3540C	
240-87591-91 MSD	ED-00.08-SL01-(0-0.5')	Total/NA	Solid	3540C	

Prep Batch: 303031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-1	ED-00.08-SD02-(0-0.45')	Total/NA	Sediment	3540C	
240-87591-2	ED-00.08-SD02-(0.45-.75')	Total/NA	Sediment	3540C	
240-87591-3	ED-00.08-SD02-(0.75-1.4')	Total/NA	Sediment	3540C	
240-87591-4	ED-00.08-SD02-(0.75-1.4')-FD	Total/NA	Sediment	3540C	
240-87591-5	ED-00.08-SD02-(1.4-2.03')	Total/NA	Sediment	3540C	
240-87591-6	ED-00.25-SD01-(0.0-57')	Total/NA	Sediment	3540C	
240-87591-7	ED-00.25-SD01-(0.57-3.51')	Total/NA	Sediment	3540C	
240-87591-8	ED-00.25-SD01-(3.51-4.3')	Total/NA	Sediment	3540C	
240-87591-9	ED-00.25-SD01-(3.51-4.3')-DUP	Total/NA	Sediment	3540C	
240-87591-10	ED-00.39-SD02-(0-2.20')	Total/NA	Sediment	3540C	
240-87591-11	ED-00.39-SD02-(2.20-2.41')	Total/NA	Sediment	3540C	
240-87591-12	ED-00.39-SD02-(2.41-3.54')	Total/NA	Sediment	3540C	
240-87591-13	ED-00.39-SD02-(3.54-4.30')	Total/NA	Sediment	3540C	
240-87591-14	ED-00.47-SD02-(0-0.33')	Total/NA	Sediment	3540C	
240-87591-15	ED-00.47-SD02-(33-1.46')	Total/NA	Sediment	3540C	
240-87591-16	ED-00.47-SD02-(1.46-1.96')	Total/NA	Sediment	3540C	
240-87591-17	ED-00.47-SD02-(1.96-3.13')	Total/NA	Sediment	3540C	
240-87591-18	ED-00.51-SD02-(0-0.36')	Total/NA	Sediment	3540C	
240-87591-19	ED-00.51-SD02-(0.36-0.68')	Total/NA	Sediment	3540C	
MB 240-303031/23-A	Method Blank	Total/NA	Sediment	3540C	
LCS 240-303031/24-A	Lab Control Sample	Total/NA	Sediment	3540C	
240-87591-10 MS	ED-00.39-SD02-(0-2.20')	Total/NA	Sediment	3540C	
240-87591-10 MSD	ED-00.39-SD02-(0-2.20')	Total/NA	Sediment	3540C	

Analysis Batch: 303043

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-67	ED-00.39-SL03-(0-0.69')-FD	Total/NA	Solid	8082A	302857
240-87591-68	ED-00.39-SL03-(0.69-0.98')	Total/NA	Solid	8082A	302857
240-87591-70	ED-00.39-SL03-(1.17-1.5')	Total/NA	Solid	8082A	302857
240-87591-71	ED-00.39-SL01-(0-0.5')	Total/NA	Solid	8082A	302857
MB 240-302857/7-A	Method Blank	Total/NA	Solid	8082A	302857
LCS 240-302857/8-A	Lab Control Sample	Total/NA	Solid	8082A	302857
240-87591-71 MS	ED-00.39-SL01-(0-0.5')	Total/NA	Solid	8082A	302857
240-87591-71 MSD	ED-00.39-SL01-(0-0.5')	Total/NA	Solid	8082A	302857

Analysis Batch: 303080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-47	ED-00.82-SOL04-(0-0.13')	Total/NA	Solid	8082A	302802
240-87591-48	ED-00.82-SOL04-(0.13-0.5)	Total/NA	Solid	8082A	302802
240-87591-49	ED-00.72-SL01-(0-0.50')	Total/NA	Solid	8082A	302802
240-87591-50	ED-00.72-SL01-(0.50-1.0')	Total/NA	Solid	8082A	302802

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

GC Semi VOA (Continued)

Analysis Batch: 303080 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-51	ED-00.60-SL03-(0-0.89')	Total/NA	Solid	8082A	302802
240-87591-52	ED-00.60-SL03-(0.89-1.0')	Total/NA	Solid	8082A	302802
240-87591-53	ED-0060.SL01-(0-0.19')	Total/NA	Solid	8082A	302802
240-87591-55	ED-00.51-SL03-(0-0.5')	Total/NA	Solid	8082A	302802
240-87591-56	ED-00.51-SL03-(0.5-1.0')	Total/NA	Solid	8082A	302802
240-87591-57	ED-00.51-SL03-(0-0.5')-FD	Total/NA	Solid	8082A	302802
240-87591-58	ED-00.51-SL01-(0-0.5')	Total/NA	Solid	8082A	302802
240-87591-59	ED-00.51.SL01-(0.5-1.0')	Total/NA	Solid	8082A	302802
240-87591-60	ED-00.47-SL04-(0-0.80')	Total/NA	Solid	8082A	302802
240-87591-61	ED-00.47-SL03-(0-0.77')	Total/NA	Solid	8082A	302802
240-87591-62	ED-00.47-SL03-(0-0.77')-FD	Total/NA	Solid	8082A	302802
240-87591-63	ED-00.47-SL01-(0-0.5')	Total/NA	Solid	8082A	302802
240-87591-64	ED-00.39-SL04-(0-0.50')	Total/NA	Solid	8082A	302802
240-87591-65	ED-00.39-SL04-(0.50-1.0')	Total/NA	Solid	8082A	302802
240-87591-66	ED-00.39-SL03-(0-0.69')	Total/NA	Solid	8082A	302802
MB 240-302802/23-A	Method Blank	Total/NA	Solid	8082A	302802
LCS 240-302802/24-A	Lab Control Sample	Total/NA	Solid	8082A	302802
240-87591-51 MS	ED-00.60-SL03-(0-0.89')	Total/NA	Solid	8082A	302802
240-87591-51 MSD	ED-00.60-SL03-(0-0.89')	Total/NA	Solid	8082A	302802

Prep Batch: 303095

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-22	ED-00.60-SD02-(0-1.76')	Total/NA	Sediment	3540C	
240-87591-23	ED-00.60-SD02-(1.76-2.22')	Total/NA	Sediment	3540C	
240-87591-24	ED-00.60-SD02-(2.22-2.39')	Total/NA	Sediment	3540C	
240-87591-25	ED-00.60-SD02-(2.39-2.63')	Total/NA	Sediment	3540C	
240-87591-26	ED-00.60-SD02-(2.63-3.30')	Total/NA	Sediment	3540C	
240-87591-27	ED-00.72-SD03-(0-2.06')	Total/NA	Sediment	3540C	
240-87591-28	ED-00.72-SD03-(2.06-2.40')	Total/NA	Sediment	3540C	
240-87591-29	ED-00.72-SD03-(2.40-3.50')	Total/NA	Sediment	3540C	
240-87591-30	ED-00.72-SD03-(3.50-3.84')	Total/NA	Sediment	3540C	
240-87591-31	ED-00.72-SD03-(3.84-4.05')	Total/NA	Sediment	3540C	
240-87591-32	ED-00.72-SD03-(4.05-4.30')	Total/NA	Sediment	3540C	
240-87591-33	ED-00.72-SD03-(2.40-3.50)-FD	Total/NA	Sediment	3540C	
240-87591-35	ED-00.82-SD02-(0.39-0.70')	Total/NA	Sediment	3540C	
240-87591-36	ED.01.03-SD02-(0-0.98)	Total/NA	Sediment	3540C	
240-87591-37	ED.01.03-SD02-(0-0.98)-FD	Total/NA	Sediment	3540C	
240-87591-38	ED-01.03-SD02-(0.98-1.65')	Total/NA	Sediment	3540C	
240-87591-39	ED-01.03-SD02-(0.98-1.65')-FD	Total/NA	Sediment	3540C	
240-87591-40	ED-01.03-SD02-(1.65-1.87')	Total/NA	Sediment	3540C	
240-87591-41	ED-01.03-SD02-(1.87-2.25')	Total/NA	Sediment	3540C	
240-87591-46	ED-01.49-SD03-(0-0.70')	Total/NA	Sediment	3540C	
MB 240-303095/23-A	Method Blank	Total/NA	Sediment	3540C	
LCS 240-303095/24-A	Lab Control Sample	Total/NA	Sediment	3540C	
240-87591-22 MS	ED-00.60-SD02-(0-1.76')	Total/NA	Sediment	3540C	
240-87591-22 MSD	ED-00.60-SD02-(0-1.76')	Total/NA	Sediment	3540C	

Prep Batch: 303098

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-20	ED-00.51-SD02-(0.68-1.65')	Total/NA	Sediment	3540C	
240-87591-21	ED-00.51-SD02-(1.65-1.75')	Total/NA	Sediment	3540C	

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

GC Semi VOA (Continued)

Prep Batch: 303098 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-34	ED-00.82-SD02-(0-0.39')	Total/NA	Sediment	3540C	
240-87591-42	ED-01.14-SD02-(0-1.05')	Total/NA	Sediment	3540C	
240-87591-43	ED-01.22-SD02-(0-0.17')	Total/NA	Sediment	3540C	
240-87591-44	ED-01.22-SD02-(0.17-0.29')	Total/NA	Sediment	3540C	
240-87591-45	ED-01.37-SD02-(0-0.9')	Total/NA	Sediment	3540C	
240-87591-131	SOIL-SED DRUM	Total/NA	Sediment	3540C	
MB 240-303098/23-A	Method Blank	Total/NA	Sediment	3540C	
LCS 240-303098/24-A	Lab Control Sample	Total/NA	Sediment	3540C	
240-87591-34 MS	ED-00.82-SD02-(0-0.39')	Total/NA	Sediment	3540C	
240-87591-34 MSD	ED-00.82-SD02-(0-0.39')	Total/NA	Sediment	3540C	

Analysis Batch: 303127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-22	ED-00.60-SD02-(0-1.76')	Total/NA	Sediment	8082A	303095
240-87591-23	ED-00.60-SD02-(1.76-2.22')	Total/NA	Sediment	8082A	303095
240-87591-24	ED-00.60-SD02-(2.22-2.39')	Total/NA	Sediment	8082A	303095
240-87591-25	ED-00.60-SD02-(2.39-2.63')	Total/NA	Sediment	8082A	303095
240-87591-26	ED-00.60-SD02-(2.63-3.30')	Total/NA	Sediment	8082A	303095
240-87591-27	ED-00.72-SD03-(0-2.06')	Total/NA	Sediment	8082A	303095
240-87591-28	ED-00.72-SD03-(2.06-2.40')	Total/NA	Sediment	8082A	303095
240-87591-29	ED-00.72-SD03-(2.40-3.50')	Total/NA	Sediment	8082A	303095
240-87591-30	ED-00.72-SD03-(3.50-3.84')	Total/NA	Sediment	8082A	303095
240-87591-31	ED-00.72-SD03-(3.84-4.05')	Total/NA	Sediment	8082A	303095
240-87591-32	ED-00.72-SD03-(4.05-4.30')	Total/NA	Sediment	8082A	303095
240-87591-33	ED-00.72-SD03-(2.40-3.50)-FD	Total/NA	Sediment	8082A	303095
240-87591-35	ED-00.82-SD02-(0.39-0.70')	Total/NA	Sediment	8082A	303095
240-87591-36	ED-01.03-SD02-(0-0.98)	Total/NA	Sediment	8082A	303095
240-87591-38	ED-01.03-SD02-(0.98-1.65')	Total/NA	Sediment	8082A	303095
240-87591-39	ED-01.03-SD02-(0.98-1.65)-FD	Total/NA	Sediment	8082A	303095
240-87591-40	ED-01.03-SD02-(1.65-1.87')	Total/NA	Sediment	8082A	303095
240-87591-41	ED-01.03-SD02-(1.87-2.25')	Total/NA	Sediment	8082A	303095
240-87591-46	ED-01.49-SD03-(0-0.70')	Total/NA	Sediment	8082A	303095
MB 240-303095/23-A	Method Blank	Total/NA	Sediment	8082A	303095
LCS 240-303095/24-A	Lab Control Sample	Total/NA	Sediment	8082A	303095

Analysis Batch: 303135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-20	ED-00.51-SD02-(0.68-1.65')	Total/NA	Sediment	8082A	303098
240-87591-21	ED-00.51-SD02-(1.65-1.75')	Total/NA	Sediment	8082A	303098
240-87591-34	ED-00.82-SD02-(0-0.39')	Total/NA	Sediment	8082A	303098
240-87591-42	ED-01.14-SD02-(0-1.05')	Total/NA	Sediment	8082A	303098
240-87591-43	ED-01.22-SD02-(0-0.17')	Total/NA	Sediment	8082A	303098
240-87591-44	ED-01.22-SD02-(0.17-0.29')	Total/NA	Sediment	8082A	303098
240-87591-45	ED-01.37-SD02-(0-0.9')	Total/NA	Sediment	8082A	303098
240-87591-131	SOIL-SED DRUM	Total/NA	Sediment	8082A	303098
MB 240-303098/23-A	Method Blank	Total/NA	Sediment	8082A	303098
LCS 240-303098/24-A	Lab Control Sample	Total/NA	Sediment	8082A	303098
240-87591-34 MS	ED-00.82-SD02-(0-0.39')	Total/NA	Sediment	8082A	303098
240-87591-34 MSD	ED-00.82-SD02-(0-0.39')	Total/NA	Sediment	8082A	303098

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

GC Semi VOA (Continued)

Analysis Batch: 303214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-124	ED-01.24-SL03-(0-0.5')	Total/NA	Solid	8082A	302976
240-87591-125	ED-00.82-SL01-(0-0.22')	Total/NA	Solid	8082A	302976
240-87591-126	ED-00.82-SL01-(0.22-0.5')	Total/NA	Solid	8082A	302976
240-87591-127	ED-01.03-SL01-(0-0.5')	Total/NA	Solid	8082A	302976
MB 240-302976/23-A	Method Blank	Total/NA	Solid	8082A	302976
LCS 240-302976/24-A	Lab Control Sample	Total/NA	Solid	8082A	302976

Analysis Batch: 303227

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-1	ED-00.08-SD02-(0-0.45')	Total/NA	Sediment	8082A	303031
240-87591-2	ED-00.08-SD02-(0.45-0.75')	Total/NA	Sediment	8082A	303031
240-87591-3	ED-00.08-SD02-(0.75-1.4')	Total/NA	Sediment	8082A	303031
240-87591-4	ED-00.08-SD02-(0.75-1.4')-FD	Total/NA	Sediment	8082A	303031
240-87591-5	ED-00.08-SD02-(1.4-2.03')	Total/NA	Sediment	8082A	303031
240-87591-6	ED-00.25-SD01-(0.0-57')	Total/NA	Sediment	8082A	303031
240-87591-7	ED-00.25-SD01-(0.57-3.51')	Total/NA	Sediment	8082A	303031
240-87591-8	ED-00.25-SD01-(3.51-4.3')	Total/NA	Sediment	8082A	303031
240-87591-9	ED-00.25-SD01-(3.51-4.3')-DUP	Total/NA	Sediment	8082A	303031
240-87591-10	ED-00.39-SD02-(0-2.20')	Total/NA	Sediment	8082A	303031
240-87591-11	ED-00.39-SD02-(2.20-2.41')	Total/NA	Sediment	8082A	303031
240-87591-12	ED-00.39-SD02-(2.41-3.54')	Total/NA	Sediment	8082A	303031
240-87591-13	ED-00.39-SD02-(3.54-4.30')	Total/NA	Sediment	8082A	303031
240-87591-14	ED-00.47-SD02-(0-0.33')	Total/NA	Sediment	8082A	303031
240-87591-15	ED-00.47-SD02-(33-1.46')	Total/NA	Sediment	8082A	303031
240-87591-16	ED-00.47-SD02-(1.46-1.96')	Total/NA	Sediment	8082A	303031
240-87591-17	ED-00.47-SD02-(1.96-3.13')	Total/NA	Sediment	8082A	303031
240-87591-18	ED-00.51-SD02-(0-0.36')	Total/NA	Sediment	8082A	303031
240-87591-19	ED-00.51-SD02-(0.36-0.68')	Total/NA	Sediment	8082A	303031
MB 240-303031/23-A	Method Blank	Total/NA	Sediment	8082A	303031
LCS 240-303031/24-A	Lab Control Sample	Total/NA	Sediment	8082A	303031
240-87591-10 MS	ED-00.39-SD02-(0-2.20')	Total/NA	Sediment	8082A	303031
240-87591-10 MSD	ED-00.39-SD02-(0-2.20')	Total/NA	Sediment	8082A	303031

Analysis Batch: 303305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-54	ED-0060.SL01-(0.19-1.0')	Total/NA	Solid	8082A	302991
240-87591-69	ED-00.39-SL03-(0.98-1.17')	Total/NA	Solid	8082A	302991
240-87591-72	ED-00.39-SL01-(0.5-1.0')	Total/NA	Solid	8082A	302991
240-87591-89	ED-00.08-SL04-(0.86-1.36)	Total/NA	Solid	8082A	302991
240-87591-90	ED-00.08-SL04-(1.5-2.0')	Total/NA	Solid	8082A	302991
240-87591-91	ED-00.08-SL01-(0-0.5')	Total/NA	Solid	8082A	302991
240-87591-92	ED-00.08-SL01-(0.5-1.0')	Total/NA	Solid	8082A	302991
240-87591-93	ED-00.08-SL01-(1.0-1.86')	Total/NA	Solid	8082A	302991
240-87591-94	ED-00.08-SL01-(1.86-2.0')	Total/NA	Solid	8082A	302991
240-87591-95	ED-01.37-SL03-(0-0.27')	Total/NA	Solid	8082A	302991
240-87591-96	ED-01.37-SL03-(0.27-0.92')	Total/NA	Solid	8082A	302991
240-87591-97	ED-01.37-SL03-(0.92-1.07')	Total/NA	Solid	8082A	302991
240-87591-98	ED-01.37-SL03-(1.07-2.0')	Total/NA	Solid	8082A	302991
240-87591-99	ED-01.49-SL04-(0-0.5')	Total/NA	Solid	8082A	302991
240-87591-100	ED-01.49-SL04-(0.5-1.0')	Total/NA	Solid	8082A	302991
240-87591-101	ED-01.49-SL04-(1.0-1.81')	Total/NA	Solid	8082A	302991

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

GC Semi VOA (Continued)

Analysis Batch: 303305 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-102	ED-01.49-SL04-(1.81-2.0')	Total/NA	Solid	8082A	302991
240-87591-103	ED-00.72-SL02-(0-0.5')	Total/NA	Solid	8082A	302991
240-87591-128	ED-01.03-SL01-(0-0.5')-FD	Total/NA	Solid	8082A	302991
240-87591-133	ED-00.72-SL01-(0-0.5')-FD	Total/NA	Solid	8082A	302991
MB 240-302991/23-A	Method Blank	Total/NA	Solid	8082A	302991
LCS 240-302991/24-A	Lab Control Sample	Total/NA	Solid	8082A	302991
240-87591-91 MS	ED-00.08-SL01-(0-0.5')	Total/NA	Solid	8082A	302991
240-87591-91 MSD	ED-00.08-SL01-(0-0.5')	Total/NA	Solid	8082A	302991

Analysis Batch: 303311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-129	ED-01.14-SL01-(0-0.5')	Total/NA	Solid	8082A	302976
240-87591-129 MS	ED-01.14-SL01-(0-0.5')	Total/NA	Solid	8082A	302976
240-87591-129 MSD	ED-01.14-SL01-(0-0.5')	Total/NA	Solid	8082A	302976

Analysis Batch: 303313

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-104	ED-00.72-SL02-(0.5-1.0')	Total/NA	Solid	8082A	302955
240-87591-107	ED-01.24-SL01-(0.87-1.0')	Total/NA	Solid	8082A	302955
240-87591-108	ED-01.14-SL03-(0-0.5')	Total/NA	Solid	8082A	302955
240-87591-109	ED-01.14-SL03-(0.5-1.0')	Total/NA	Solid	8082A	302955
240-87591-110	ED-01.14-SL03-(0.5-1.0')-FD	Total/NA	Solid	8082A	302955
240-87591-111	ED-01.49-SL02-(0-0.5')	Total/NA	Solid	8082A	302955
240-87591-112	ED-01.49-SL02-(0.5-1.0')	Total/NA	Solid	8082A	302955
240-87591-113	ED-01.37-SL01-(0-0.9')	Total/NA	Solid	8082A	302955
240-87591-114	ED-01.37-SL01-(0-0.9')-FD	Total/NA	Solid	8082A	302955
240-87591-115	ED-01.03-SL03-(0-0.21')	Total/NA	Solid	8082A	302955
240-87591-116	ED-01.03-SL03-(0.21-1.0')	Total/NA	Solid	8082A	302955
240-87591-117	ED-00.82-SL03-(0-0.5')	Total/NA	Solid	8082A	302955
240-87591-118	ED-00.82-SL03-(0.5-1.0')	Total/NA	Solid	8082A	302955
240-87591-119	ED-00.72-SL04-(0-0.11')	Total/NA	Solid	8082A	302955
240-87591-120	ED-00.72-SL04-(0.11-0.47')	Total/NA	Solid	8082A	302955
240-87591-121	ED-00.72-SL04-(0.47-1.0')	Total/NA	Solid	8082A	302955
240-87591-122	ED-01.49-SL01-(0-0.5')	Total/NA	Solid	8082A	302955
240-87591-123	ED-01.49-SL01-(0-0.5')-FD	Total/NA	Solid	8082A	302955
MB 240-302955/23-A	Method Blank	Total/NA	Solid	8082A	302955
LCS 240-302955/24-A	Lab Control Sample	Total/NA	Solid	8082A	302955
240-87591-123 MS	ED-01.49-SL01-(0-0.5')-FD	Total/NA	Solid	8082A	302955
240-87591-123 MSD	ED-01.49-SL01-(0-0.5')-FD	Total/NA	Solid	8082A	302955

Analysis Batch: 303440

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-37	ED.01.03-SD02-(0-0.98)-FD	Total/NA	Sediment	8082A	303095
240-87591-22 MS	ED-00.60-SD02-(0-1.76')	Total/NA	Sediment	8082A	303095
240-87591-22 MSD	ED-00.60-SD02-(0-1.76')	Total/NA	Sediment	8082A	303095

Analysis Batch: 303503

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-105	ED-00.72-SL02-(1.0-1.5')	Total/NA	Solid	8082A	302955
240-87591-106	ED-01.24-SL01-(0-0.87')	Total/NA	Solid	8082A	302955

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

General Chemistry

Analysis Batch: 302543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-1	ED-00.08-SD02-(0-0.45')	Total/NA	Sediment	Moisture	
240-87591-2	ED-00.08-SD02-(0.45-.75')	Total/NA	Sediment	Moisture	
240-87591-3	ED-00.08-SD02-(0.75-1.4')	Total/NA	Sediment	Moisture	
240-87591-4	ED-00.08-SD02-(0.75-1.4')-FD	Total/NA	Sediment	Moisture	
240-87591-5	ED-00.08-SD02-(1.4-2.03')	Total/NA	Sediment	Moisture	
240-87591-6	ED-00.25-SD01-(0.0-57')	Total/NA	Sediment	Moisture	
240-87591-7	ED-00.25-SD01-(0.57-3.51')	Total/NA	Sediment	Moisture	
240-87591-8	ED-00.25-SD01-(3.51-4.3')	Total/NA	Sediment	Moisture	
240-87591-9	ED-00.25-SD01-(3.51-4.3')-DUP	Total/NA	Sediment	Moisture	
240-87591-10	ED-00.39-SD02-(0-2.20')	Total/NA	Sediment	Moisture	
240-87591-11	ED-00.39-SD02-(2.20-2.41')	Total/NA	Sediment	Moisture	
240-87591-12	ED-00.39-SD02-(2.41-3.54')	Total/NA	Sediment	Moisture	
240-87591-13	ED-00.39-SD02-(3.54-4.30')	Total/NA	Sediment	Moisture	
240-87591-14	ED-00.47-SD02-(0-0.33')	Total/NA	Sediment	Moisture	
240-87591-15	ED-00.47-SD02-(33-1.46')	Total/NA	Sediment	Moisture	
240-87591-16	ED-00.47-SD02-(1.46-1.96')	Total/NA	Sediment	Moisture	
240-87591-17	ED-00.47-SD02-(1.96-3.13')	Total/NA	Sediment	Moisture	
240-87591-18	ED-00.51-SD02-(0-0.36')	Total/NA	Sediment	Moisture	
240-87591-19	ED-00.51-SD02-(0.36-0.68')	Total/NA	Sediment	Moisture	
240-87591-20	ED-00.51-SD02-(0.68-1.65')	Total/NA	Sediment	Moisture	
240-87591-21	ED-00.51-SD02-(1.65-1.75')	Total/NA	Sediment	Moisture	
240-87591-22	ED-00.60-SD02-(0-1.76')	Total/NA	Sediment	Moisture	
240-87591-23	ED-00.60-SD02-(1.76-2.22')	Total/NA	Sediment	Moisture	
240-87591-24	ED-00.60-SD02-(2.22-2.39')	Total/NA	Sediment	Moisture	
240-87591-25	ED-00.60-SD02-(2.39-2.63')	Total/NA	Sediment	Moisture	
240-87591-26	ED-00.60-SD02-(2.63-3.30')	Total/NA	Sediment	Moisture	
240-87591-27	ED-00.72-SD03-(0-2.06')	Total/NA	Sediment	Moisture	
240-87591-28	ED-00.72-SD03-(2.06-2.40')	Total/NA	Sediment	Moisture	
240-87591-29	ED-00.72-SD03-(2.40-3.50')	Total/NA	Sediment	Moisture	
240-87591-30	ED-00.72-SD03-(3.50-3.84')	Total/NA	Sediment	Moisture	
240-87591-31	ED-00.72-SD03-(3.84-4.05')	Total/NA	Sediment	Moisture	
240-87591-32	ED-00.72-SD03-(4.05-4.30')	Total/NA	Sediment	Moisture	
240-87591-33	ED-00.72-SD03-(2.40-3.50)-FD	Total/NA	Sediment	Moisture	
240-87591-34	ED-00.82-SD02-(0-0.39')	Total/NA	Sediment	Moisture	
240-87591-35	ED-00.82-SD02-(0.39-0.70')	Total/NA	Sediment	Moisture	
240-87591-36	ED.01.03-SD02-(0-0.98)	Total/NA	Sediment	Moisture	
240-87591-37	ED.01.03-SD02-(0-0.98)-FD	Total/NA	Sediment	Moisture	
240-87591-38	ED-01.03-SD02-(0.98-1.65')	Total/NA	Sediment	Moisture	
240-87591-39	ED-01.03-SD02-(0.98-1.65')-FD	Total/NA	Sediment	Moisture	
240-87591-40	ED-01.03-SD02-(1.65-1.87')	Total/NA	Sediment	Moisture	
240-87591-41	ED-01.03-SD02-(1.87-2.25')	Total/NA	Sediment	Moisture	
240-87591-42	ED-01.14-SD02-(0-1.05')	Total/NA	Sediment	Moisture	
240-87591-43	ED-01.22-SD02-(0-0.17')	Total/NA	Sediment	Moisture	
240-87591-44	ED-01.22-SD02-(0.17-0.29')	Total/NA	Sediment	Moisture	
240-87591-45	ED-01.37-SD02-(0-0.9')	Total/NA	Sediment	Moisture	
240-87591-46	ED-01.49-SD03-(0-0.70')	Total/NA	Sediment	Moisture	
240-87591-47	ED-00.82-SOL04-(0-0.13')	Total/NA	Solid	Moisture	
240-87591-48	ED-00.82-SOL04-(0.13-0.5)	Total/NA	Solid	Moisture	
240-87591-49	ED-00.72-SL01-(0-0.50')	Total/NA	Solid	Moisture	
240-87591-50	ED-00.72-SL01-(0.50-1.0')	Total/NA	Solid	Moisture	
240-87591-51	ED-00.60-SL03-(0-0.89')	Total/NA	Solid	Moisture	

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

General Chemistry (Continued)

Analysis Batch: 302543 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-52	ED-00.60-SL03-(0.89-1.0')	Total/NA	Solid	Moisture	
240-87591-53	ED-0060.SL01-(0-0.19')	Total/NA	Solid	Moisture	
240-87591-54	ED-0060.SL01-(0.19-1.0')	Total/NA	Solid	Moisture	
240-87591-55	ED-00.51-SL03-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-56	ED-00.51-SL03-(0.5-1.0')	Total/NA	Solid	Moisture	
240-87591-57	ED-00.51-SL03-(0-0.5')-FD	Total/NA	Solid	Moisture	
240-87591-58	ED-00.51-SL01-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-59	ED-00.51.SL01-(0.5-1.0')	Total/NA	Solid	Moisture	
240-87591-60	ED-00.47-SL04-(0-0.80')	Total/NA	Solid	Moisture	
240-87591-61	ED-00.47-SL03-(0-0.77')	Total/NA	Solid	Moisture	
240-87591-62	ED-00.47-SL03-(0-0.77')-FD	Total/NA	Solid	Moisture	
240-87591-63	ED-00.47-SL01-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-64	ED-00.39-SL04-(0-0.50')	Total/NA	Solid	Moisture	
240-87591-65	ED-00.39-SL04-(0.50-1.0')	Total/NA	Solid	Moisture	
240-87591-66	ED-00.39-SL03-(0-0.69')	Total/NA	Solid	Moisture	
240-87591-67	ED-00.39-SL03-(0-0.69')-FD	Total/NA	Solid	Moisture	
240-87591-68	ED-00.39-SL03-(0.69-0.98')	Total/NA	Solid	Moisture	
240-87591-69	ED-00.39-SL03-(0.98-1.17')	Total/NA	Solid	Moisture	
240-87591-70	ED-00.39-SL03-(1.17-1.5')	Total/NA	Solid	Moisture	
240-87591-5 DU	ED-00.08-SD02-(1.4-2.03')	Total/NA	Sediment	Moisture	
240-87591-10 DU	ED-00.39-SD02-(0-2.20')	Total/NA	Sediment	Moisture	
240-87591-22 DU	ED-00.60-SD02-(0-1.76')	Total/NA	Sediment	Moisture	
240-87591-34 DU	ED-00.82-SD02-(0-0.39')	Total/NA	Sediment	Moisture	
240-87591-39 DU	ED-01.03-SD02-(0.98-1.65')-FD	Total/NA	Sediment	Moisture	
240-87591-48 DU	ED-00.82-SL04-(0.13-0.5)	Total/NA	Solid	Moisture	
240-87591-51 DU	ED-00.60-SL03-(0-0.89')	Total/NA	Solid	Moisture	
240-87591-65 DU	ED-00.39-SL04-(0.50-1.0')	Total/NA	Solid	Moisture	

Analysis Batch: 302739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-71	ED-00.39-SL01-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-72	ED-00.39-SL01-(0.5-1.0')	Total/NA	Solid	Moisture	
240-87591-73	ED-00.25-SL04-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-74	ED-00.25-SL04-(0.5-1.0')	Total/NA	Solid	Moisture	
240-87591-75	ED-00.25-SL04-(1.0-1.5')	Total/NA	Solid	Moisture	
240-87591-76	ED-00.25-SL04-(1.5-2.0')	Total/NA	Solid	Moisture	
240-87591-77	ED-00.25-SL03-(0.0.5')	Total/NA	Solid	Moisture	
240-87591-78	ED-00.25-SL03-(0.5-1.0')	Total/NA	Solid	Moisture	
240-87591-79	ED-00.25-SL02-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-80	ED-00.25-SL02-(0-0.5')-FD	Total/NA	Solid	Moisture	
240-87591-81	ED-00.25-SL02-(0.5-1.0')	Total/NA	Solid	Moisture	
240-87591-82	ED-00.25-SL02-(1.0-1.5')	Total/NA	Solid	Moisture	
240-87591-83	ED-00.08-SL03-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-84	ED-00.08-SL03-(0.5-0.97')	Total/NA	Solid	Moisture	
240-87591-85	ED-00.08-SL03-(0.97-1.47')	Total/NA	Solid	Moisture	
240-87591-86	ED-00.08-SL03-(1.5-2.0')	Total/NA	Solid	Moisture	
240-87591-87	ED-00.08-SL04-(0-0.67)	Total/NA	Solid	Moisture	
240-87591-88	ED-00.08-SL04-(0.67-0.86)	Total/NA	Solid	Moisture	
240-87591-89	ED-00.08-SL04-(0.86-1.36)	Total/NA	Solid	Moisture	
240-87591-90	ED-00.08-SL04-(1.5-2.0')	Total/NA	Solid	Moisture	
240-87591-91	ED-00.08-SL01-(0-0.5')	Total/NA	Solid	Moisture	

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

General Chemistry (Continued)

Analysis Batch: 302739 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-87591-92	ED-00.08-SL01-(0.5-1.0')	Total/NA	Solid	Moisture	
240-87591-93	ED-00.08-SL01-(1.0-1.86')	Total/NA	Solid	Moisture	
240-87591-94	ED-00.08-SL01-(1.86-2.0')	Total/NA	Solid	Moisture	
240-87591-95	ED-01.37-SL03-(0-0.27')	Total/NA	Solid	Moisture	
240-87591-96	ED-01.37-SL03-(0.27-0.92')	Total/NA	Solid	Moisture	
240-87591-97	ED-01.37-SL03-(0.92-1.07')	Total/NA	Solid	Moisture	
240-87591-98	ED-01.37-SL03-(1.07-2.0')	Total/NA	Solid	Moisture	
240-87591-99	ED-01.49-SL04-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-100	ED-01.49-SL04-(0.5-1.0')	Total/NA	Solid	Moisture	
240-87591-101	ED-01.49-SL04-(1.0-1.81')	Total/NA	Solid	Moisture	
240-87591-102	ED-01.49-SL04-(1.81-2.0')	Total/NA	Solid	Moisture	
240-87591-103	ED-00.72-SL02-(0-0.5)	Total/NA	Solid	Moisture	
240-87591-104	ED-00.72-SL02-(0.5-1.0')	Total/NA	Solid	Moisture	
240-87591-105	ED-00.72-SL02-(1.0-1.5')	Total/NA	Solid	Moisture	
240-87591-106	ED-01.24-SL01-(0-0.87')	Total/NA	Solid	Moisture	
240-87591-107	ED-01.24-SL01-(0.87-1.0')	Total/NA	Solid	Moisture	
240-87591-108	ED-01.14-SL03-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-109	ED-01.14-SL03-(0.5-1.0')	Total/NA	Solid	Moisture	
240-87591-110	ED-01.14-SL03-(0.5-1.0')-FD	Total/NA	Solid	Moisture	
240-87591-111	ED-01.49-SL02-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-112	ED-01.49-SL02-(0.5-1.0')	Total/NA	Solid	Moisture	
240-87591-113	ED-01.37-SL01-(0-0.9')	Total/NA	Solid	Moisture	
240-87591-114	ED-01.37-SL01-(0-0.9')-FD	Total/NA	Solid	Moisture	
240-87591-115	ED-01.03-SL03-(0-0.21')	Total/NA	Solid	Moisture	
240-87591-116	ED-01.03-SL03-(0.21-1.0')	Total/NA	Solid	Moisture	
240-87591-117	ED-00.82-SL03-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-118	ED-00.82-SL03-(0.5-1.0')	Total/NA	Solid	Moisture	
240-87591-119	ED-00.72-SL04-(0-0.11')	Total/NA	Solid	Moisture	
240-87591-120	ED-00.72-SL04-(0.11-0.47')	Total/NA	Solid	Moisture	
240-87591-121	ED-00.72-SL04-(0.47-1.0')	Total/NA	Solid	Moisture	
240-87591-122	ED-01.49-SL01-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-123	ED-01.49-SL01-(0-0.5')-FD	Total/NA	Solid	Moisture	
240-87591-124	ED-01.24-SL03-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-125	ED-00.82-SL01-(0-0.22')	Total/NA	Solid	Moisture	
240-87591-126	ED-00.82-SL01-(0.22-0.5')	Total/NA	Solid	Moisture	
240-87591-127	ED-01.03-SL01-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-128	ED-01.03-SL01-(0-0.5')-FD	Total/NA	Solid	Moisture	
240-87591-129	ED-01.14-SL01-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-131	SOIL-SED DRUM	Total/NA	Sediment	Moisture	
240-87591-133	ED-00.72-SL01-(0-0.5')-FD	Total/NA	Solid	Moisture	
240-87591-71 DU	ED-00.39-SL01-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-80 DU	ED-00.25-SL02-(0-0.5')-FD	Total/NA	Solid	Moisture	
240-87591-89 DU	ED-00.08-SL04-(0.86-1.36)	Total/NA	Solid	Moisture	
240-87591-91 DU	ED-00.08-SL01-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-108 DU	ED-01.14-SL03-(0-0.5')	Total/NA	Solid	Moisture	
240-87591-116 DU	ED-01.03-SL03-(0.21-1.0')	Total/NA	Solid	Moisture	
240-87591-129 DU	ED-01.14-SL01-(0-0.5')	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SD02-(0-0.45')

Date Collected: 10/30/17 11:20

Date Received: 11/07/17 17:00

Lab Sample ID: 240-87591-1

Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.08-SD02-(0-0.45')

Date Collected: 10/30/17 11:20

Date Received: 11/07/17 17:00

Lab Sample ID: 240-87591-1

Matrix: Sediment

Percent Solids: 54.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303227	11/13/17 20:24	KMG	TAL CAN

Client Sample ID: ED-00.08-SD02-(0.45-.75')

Date Collected: 10/30/17 11:25

Date Received: 11/07/17 17:00

Lab Sample ID: 240-87591-2

Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.08-SD02-(0.45-.75')

Date Collected: 10/30/17 11:25

Date Received: 11/07/17 17:00

Lab Sample ID: 240-87591-2

Matrix: Sediment

Percent Solids: 54.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		5	303227	11/13/17 20:42	KMG	TAL CAN

Client Sample ID: ED-00.08-SD02-(0.75-1.4')

Date Collected: 10/30/17 11:30

Date Received: 11/07/17 17:00

Lab Sample ID: 240-87591-3

Matrix: Sediment

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.08-SD02-(0.75-1.4')

Date Collected: 10/30/17 11:30

Date Received: 11/07/17 17:00

Lab Sample ID: 240-87591-3

Matrix: Sediment

Percent Solids: 80.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303227	11/13/17 21:00	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SD02-(0.75-1.4')-FD

Lab Sample ID: 240-87591-4

Date Collected: 10/30/17 11:30

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.08-SD02-(0.75-1.4')-FD

Lab Sample ID: 240-87591-4

Date Collected: 10/30/17 11:30

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 80.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303227	11/13/17 21:19	KMG	TAL CAN

Client Sample ID: ED-00.08-SD02-(1.4-2.03')

Lab Sample ID: 240-87591-5

Date Collected: 10/30/17 11:40

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.08-SD02-(1.4-2.03')

Lab Sample ID: 240-87591-5

Date Collected: 10/30/17 11:40

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 75.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		10	303227	11/13/17 21:37	KMG	TAL CAN

Client Sample ID: ED-00.25-SD01-(0.0-57')

Lab Sample ID: 240-87591-6

Date Collected: 11/01/17 11:46

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.25-SD01-(0.0-57')

Lab Sample ID: 240-87591-6

Date Collected: 11/01/17 11:46

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 78.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303227	11/13/17 21:55	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SD01-(0.57-3.51')

Lab Sample ID: 240-87591-7

Date Collected: 11/01/17 12:01

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.25-SD01-(0.57-3.51')

Lab Sample ID: 240-87591-7

Date Collected: 11/01/17 12:01

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 83.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303227	11/13/17 22:14	KMG	TAL CAN

Client Sample ID: ED-00.25-SD01-(3.51-4.3')

Lab Sample ID: 240-87591-8

Date Collected: 11/01/17 12:19

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.25-SD01-(3.51-4.3')

Lab Sample ID: 240-87591-8

Date Collected: 11/01/17 12:19

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 78.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		10	303227	11/13/17 22:32	KMG	TAL CAN

Client Sample ID: ED-00.25-SD01-(3.51-4.3')-DUP

Lab Sample ID: 240-87591-9

Date Collected: 11/01/17 12:19

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.25-SD01-(3.51-4.3')-DUP

Lab Sample ID: 240-87591-9

Date Collected: 11/01/17 12:19

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 79.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		10	303227	11/13/17 22:50	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SD02-(0-2.20')

Lab Sample ID: 240-87591-10

Date Collected: 11/01/17 13:35

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.39-SD02-(0-2.20')

Lab Sample ID: 240-87591-10

Date Collected: 11/01/17 13:35

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 78.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303227	11/13/17 23:09	KMG	TAL CAN

Client Sample ID: ED-00.39-SD02-(2.20-2.41')

Lab Sample ID: 240-87591-11

Date Collected: 11/01/17 13:40

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.39-SD02-(2.20-2.41')

Lab Sample ID: 240-87591-11

Date Collected: 11/01/17 13:40

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 83.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		5	303227	11/14/17 00:04	KMG	TAL CAN

Client Sample ID: ED-00.39-SD02-(2.41-3.54')

Lab Sample ID: 240-87591-12

Date Collected: 11/01/17 13:45

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.39-SD02-(2.41-3.54')

Lab Sample ID: 240-87591-12

Date Collected: 11/01/17 13:45

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 75.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		5	303227	11/14/17 00:22	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SD02-(3.54-4.30')

Lab Sample ID: 240-87591-13

Date Collected: 11/01/17 14:00

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.39-SD02-(3.54-4.30')

Lab Sample ID: 240-87591-13

Date Collected: 11/01/17 14:00

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 67.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		5	303227	11/14/17 00:41	KMG	TAL CAN

Client Sample ID: ED-00.47-SD02-(0-0.33')

Lab Sample ID: 240-87591-14

Date Collected: 10/30/17 14:10

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.47-SD02-(0-0.33')

Lab Sample ID: 240-87591-14

Date Collected: 10/30/17 14:10

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 77.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303227	11/14/17 00:59	KMG	TAL CAN

Client Sample ID: ED-00.47-SD02-(33-1.46')

Lab Sample ID: 240-87591-15

Date Collected: 10/30/17 14:15

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.47-SD02-(33-1.46')

Lab Sample ID: 240-87591-15

Date Collected: 10/30/17 14:15

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 61.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		5	303227	11/14/17 01:17	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.47-SD02-(1.46-1.96')

Lab Sample ID: 240-87591-16

Date Collected: 10/30/17 14:20

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.47-SD02-(1.46-1.96')

Lab Sample ID: 240-87591-16

Date Collected: 10/30/17 14:20

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 75.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303227	11/14/17 02:31	KMG	TAL CAN

Client Sample ID: ED-00.47-SD02-(1.96-3.13')

Lab Sample ID: 240-87591-17

Date Collected: 10/30/17 14:25

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.47-SD02-(1.96-3.13')

Lab Sample ID: 240-87591-17

Date Collected: 10/30/17 14:25

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 78.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		5	303227	11/14/17 02:49	KMG	TAL CAN

Client Sample ID: ED-00.51-SD02-(0-0.36')

Lab Sample ID: 240-87591-18

Date Collected: 11/01/17 14:40

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.51-SD02-(0-0.36')

Lab Sample ID: 240-87591-18

Date Collected: 11/01/17 14:40

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 78.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303227	11/14/17 03:07	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.51-SD02-(0.36-0.68')

Lab Sample ID: 240-87591-19

Date Collected: 11/01/17 14:45

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.51-SD02-(0.36-0.68')

Lab Sample ID: 240-87591-19

Date Collected: 11/01/17 14:45

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 62.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303031	11/10/17 12:42	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303227	11/14/17 03:26	KMG	TAL CAN

Client Sample ID: ED-00.51-SD02-(0.68-1.65')

Lab Sample ID: 240-87591-20

Date Collected: 11/01/17 14:50

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.51-SD02-(0.68-1.65')

Lab Sample ID: 240-87591-20

Date Collected: 11/01/17 14:50

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 44.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303098	11/11/17 10:25	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303135	11/13/17 12:08	LSH	TAL CAN

Client Sample ID: ED-00.51-SD02-(1.65-1.75')

Lab Sample ID: 240-87591-21

Date Collected: 11/01/17 14:55

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.51-SD02-(1.65-1.75')

Lab Sample ID: 240-87591-21

Date Collected: 11/01/17 14:55

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 57.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303098	11/11/17 10:25	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303135	11/13/17 13:03	LSH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.60-SD02-(0-1.76')

Lab Sample ID: 240-87591-22

Date Collected: 10/31/17 11:40

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.60-SD02-(0-1.76')

Lab Sample ID: 240-87591-22

Date Collected: 10/31/17 11:40

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 83.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303127	11/13/17 11:54	CSC	TAL CAN

Client Sample ID: ED-00.60-SD02-(1.76-2.22')

Lab Sample ID: 240-87591-23

Date Collected: 10/31/17 11:41

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.60-SD02-(1.76-2.22')

Lab Sample ID: 240-87591-23

Date Collected: 10/31/17 11:41

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 78.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		50	303127	11/13/17 12:53	CSC	TAL CAN

Client Sample ID: ED-00.60-SD02-(2.22-2.39')

Lab Sample ID: 240-87591-24

Date Collected: 10/31/17 11:42

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.60-SD02-(2.22-2.39')

Lab Sample ID: 240-87591-24

Date Collected: 10/31/17 11:42

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 79.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		20	303127	11/13/17 13:12	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.60-SD02-(2.39-2.63')

Lab Sample ID: 240-87591-25

Date Collected: 10/31/17 11:43

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.60-SD02-(2.39-2.63')

Lab Sample ID: 240-87591-25

Date Collected: 10/31/17 11:43

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 80.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303127	11/13/17 13:33	CSC	TAL CAN

Client Sample ID: ED-00.60-SD02-(2.63-3.30')

Lab Sample ID: 240-87591-26

Date Collected: 10/31/17 11:44

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.60-SD02-(2.63-3.30')

Lab Sample ID: 240-87591-26

Date Collected: 10/31/17 11:44

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 83.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		10	303127	11/13/17 13:54	CSC	TAL CAN

Client Sample ID: ED-00.72-SD03-(0-2.06')

Lab Sample ID: 240-87591-27

Date Collected: 10/31/17 13:15

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.72-SD03-(0-2.06')

Lab Sample ID: 240-87591-27

Date Collected: 10/31/17 13:15

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 78.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303127	11/13/17 14:13	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SD03-(2.06-2.40')

Lab Sample ID: 240-87591-28

Date Collected: 10/31/17 13:25

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.72-SD03-(2.06-2.40')

Lab Sample ID: 240-87591-28

Date Collected: 10/31/17 13:25

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 81.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303127	11/13/17 14:33	CSC	TAL CAN

Client Sample ID: ED-00.72-SD03-(2.40-3.50')

Lab Sample ID: 240-87591-29

Date Collected: 10/31/17 13:30

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.72-SD03-(2.40-3.50')

Lab Sample ID: 240-87591-29

Date Collected: 10/31/17 13:30

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 80.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		10	303127	11/13/17 14:52	CSC	TAL CAN

Client Sample ID: ED-00.72-SD03-(3.50-3.84')

Lab Sample ID: 240-87591-30

Date Collected: 10/31/17 13:35

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.72-SD03-(3.50-3.84')

Lab Sample ID: 240-87591-30

Date Collected: 10/31/17 13:35

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 79.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		10	303127	11/13/17 15:13	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SD03-(3.84-4.05')

Lab Sample ID: 240-87591-31

Date Collected: 10/31/17 13:40

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.72-SD03-(3.84-4.05')

Lab Sample ID: 240-87591-31

Date Collected: 10/31/17 13:40

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 82.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		10	303127	11/13/17 16:32	CSC	TAL CAN

Client Sample ID: ED-00.72-SD03-(4.05-4.30')

Lab Sample ID: 240-87591-32

Date Collected: 10/31/17 13:45

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.72-SD03-(4.05-4.30')

Lab Sample ID: 240-87591-32

Date Collected: 10/31/17 13:45

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 86.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		10	303127	11/13/17 16:52	CSC	TAL CAN

Client Sample ID: ED-00.72-SD03-(2.40-3.50)-FD

Lab Sample ID: 240-87591-33

Date Collected: 10/31/17 13:30

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.72-SD03-(2.40-3.50)-FD

Lab Sample ID: 240-87591-33

Date Collected: 10/31/17 13:30

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 80.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		10	303127	11/13/17 17:12	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.82-SD02-(0-0.39')

Lab Sample ID: 240-87591-34

Date Collected: 10/31/17 10:50

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.82-SD02-(0-0.39')

Lab Sample ID: 240-87591-34

Date Collected: 10/31/17 10:50

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 81.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303098	11/11/17 10:25	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303135	11/13/17 11:14	LSH	TAL CAN

Client Sample ID: ED-00.82-SD02-(0.39-0.70')

Lab Sample ID: 240-87591-35

Date Collected: 10/31/17 10:55

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-00.82-SD02-(0.39-0.70')

Lab Sample ID: 240-87591-35

Date Collected: 10/31/17 10:55

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 79.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303127	11/13/17 17:32	CSC	TAL CAN

Client Sample ID: ED.01.03-SD02-(0-0.98)

Lab Sample ID: 240-87591-36

Date Collected: 10/30/17 17:05

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED.01.03-SD02-(0-0.98)

Lab Sample ID: 240-87591-36

Date Collected: 10/30/17 17:05

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 81.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303127	11/13/17 09:54	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED.01.03-SD02-(0-0.98)-FD

Lab Sample ID: 240-87591-37

Date Collected: 10/30/17 17:05

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED.01.03-SD02-(0-0.98)-FD

Lab Sample ID: 240-87591-37

Date Collected: 10/30/17 17:05

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 81.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		2	303440	11/14/17 22:54	CSC	TAL CAN

Client Sample ID: ED-01.03-SD02.-(0.98-1.65')

Lab Sample ID: 240-87591-38

Date Collected: 10/30/17 17:10

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:28	MBR	TAL CAN

Client Sample ID: ED-01.03-SD02.-(0.98-1.65')

Lab Sample ID: 240-87591-38

Date Collected: 10/30/17 17:10

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 79.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		50	303127	11/13/17 10:33	CSC	TAL CAN

Client Sample ID: ED-01.03-SD02-(0.98-1.65')-FD

Lab Sample ID: 240-87591-39

Date Collected: 10/30/17 17:10

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-01.03-SD02-(0.98-1.65')-FD

Lab Sample ID: 240-87591-39

Date Collected: 10/30/17 17:10

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 80.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		50	303127	11/13/17 10:53	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.03-SD02-(1.65-1.87')

Lab Sample ID: 240-87591-40

Date Collected: 10/30/17 17:30

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-01.03-SD02-(1.65-1.87')

Lab Sample ID: 240-87591-40

Date Collected: 10/30/17 17:30

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 80.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		50	303127	11/13/17 11:13	CSC	TAL CAN

Client Sample ID: ED-01.03-SD02-(1.87-2.25')

Lab Sample ID: 240-87591-41

Date Collected: 10/30/17 17:35

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-01.03-SD02-(1.87-2.25')

Lab Sample ID: 240-87591-41

Date Collected: 10/30/17 17:35

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 69.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		5	303127	11/13/17 11:33	CSC	TAL CAN

Client Sample ID: ED-01.14-SD02-(0-1.05')

Lab Sample ID: 240-87591-42

Date Collected: 11/01/17 09:24

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-01.14-SD02-(0-1.05')

Lab Sample ID: 240-87591-42

Date Collected: 11/01/17 09:24

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 83.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303098	11/11/17 10:25	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303135	11/13/17 13:22	LSH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.22-SD02-(0-0.17')

Lab Sample ID: 240-87591-43

Date Collected: 11/01/17 10:50

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-01.22-SD02-(0-0.17')

Lab Sample ID: 240-87591-43

Date Collected: 11/01/17 10:50

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 82.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303098	11/11/17 10:25	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303135	11/13/17 13:40	LSH	TAL CAN

Client Sample ID: ED-01.22-SD02-(0.17-0.29')

Lab Sample ID: 240-87591-44

Date Collected: 11/01/17 10:55

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-01.22-SD02-(0.17-0.29')

Lab Sample ID: 240-87591-44

Date Collected: 11/01/17 10:55

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 80.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303098	11/11/17 10:25	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303135	11/13/17 14:54	LSH	TAL CAN

Client Sample ID: ED-01.37-SD02-(0-0.9')

Lab Sample ID: 240-87591-45

Date Collected: 11/02/17 09:50

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-01.37-SD02-(0-0.9')

Lab Sample ID: 240-87591-45

Date Collected: 11/02/17 09:50

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 81.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303098	11/11/17 10:25	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303135	11/13/17 15:12	LSH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.49-SD03-(0-0.70')

Lab Sample ID: 240-87591-46

Date Collected: 10/31/17 10:23

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-01.49-SD03-(0-0.70')

Lab Sample ID: 240-87591-46

Date Collected: 10/31/17 10:23

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 83.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303095	11/11/17 09:19	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303127	11/13/17 17:52	CSC	TAL CAN

Client Sample ID: ED-00.82-SOL04-(0-0.13')

Lab Sample ID: 240-87591-47

Date Collected: 10/31/17 16:34

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-00.82-SOL04-(0-0.13')

Lab Sample ID: 240-87591-47

Date Collected: 10/31/17 16:34

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		1	303080	11/11/17 09:12	SEM	TAL CAN

Client Sample ID: ED-00.82-SOL04-(0.13-0.5)

Lab Sample ID: 240-87591-48

Date Collected: 10/31/17 16:35

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-00.82-SOL04-(0.13-0.5)

Lab Sample ID: 240-87591-48

Date Collected: 10/31/17 16:35

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 91.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		1	303080	11/11/17 09:32	SEM	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SL01-(0-0.50')

Lab Sample ID: 240-87591-49

Date Collected: 10/31/17 14:05

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-00.72-SL01-(0-0.50')

Lab Sample ID: 240-87591-49

Date Collected: 10/31/17 14:05

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 78.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		1	303080	11/11/17 09:51	SEM	TAL CAN

Client Sample ID: ED-00.72-SL01-(0.50-1.0')

Lab Sample ID: 240-87591-50

Date Collected: 10/31/17 14:13

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-00.72-SL01-(0.50-1.0')

Lab Sample ID: 240-87591-50

Date Collected: 10/31/17 14:13

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 76.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		1	303080	11/11/17 10:11	SEM	TAL CAN

Client Sample ID: ED-00.60-SL03-(0-0.89')

Lab Sample ID: 240-87591-51

Date Collected: 10/31/17 13:23

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 08:01	MBR	TAL CAN

Client Sample ID: ED-00.60-SL03-(0-0.89')

Lab Sample ID: 240-87591-51

Date Collected: 10/31/17 13:23

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		1	303080	11/11/17 16:04	SEM	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.60-SL03-(0.89-1.0')

Lab Sample ID: 240-87591-52

Date Collected: 10/31/17 13:29

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 08:01	MBR	TAL CAN

Client Sample ID: ED-00.60-SL03-(0.89-1.0')

Lab Sample ID: 240-87591-52

Date Collected: 10/31/17 13:29

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		1	303080	11/11/17 10:30	SEM	TAL CAN

Client Sample ID: ED-0060.SL01-(0-0.19')

Lab Sample ID: 240-87591-53

Date Collected: 10/31/17 13:41

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 08:01	MBR	TAL CAN

Client Sample ID: ED-0060.SL01-(0-0.19')

Lab Sample ID: 240-87591-53

Date Collected: 10/31/17 13:41

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 81.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		1	303080	11/11/17 10:50	SEM	TAL CAN

Client Sample ID: ED-0060.SL01-(0.19-1.0')

Lab Sample ID: 240-87591-54

Date Collected: 10/31/17 13:49

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-0060.SL01-(0.19-1.0')

Lab Sample ID: 240-87591-54

Date Collected: 10/31/17 13:49

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 89.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 07:42	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.51-SL03-(0-0.5')

Lab Sample ID: 240-87591-55

Date Collected: 10/31/17 12:05

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-00.51-SL03-(0-0.5')

Lab Sample ID: 240-87591-55

Date Collected: 10/31/17 12:05

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 85.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		5	303080	11/11/17 11:10	SEM	TAL CAN

Client Sample ID: ED-00.51-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-56

Date Collected: 10/31/17 12:12

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-00.51-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-56

Date Collected: 10/31/17 12:12

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		10	303080	11/11/17 11:30	SEM	TAL CAN

Client Sample ID: ED-00.51-SL03-(0-0.5')-FD

Lab Sample ID: 240-87591-57

Date Collected: 10/31/17 12:05

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-00.51-SL03-(0-0.5')-FD

Lab Sample ID: 240-87591-57

Date Collected: 10/31/17 12:05

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 85.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		10	303080	11/11/17 11:49	SEM	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.51-SL01-(0-0.5')

Lab Sample ID: 240-87591-58

Date Collected: 10/31/17 11:35

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-00.51-SL01-(0-0.5')

Lab Sample ID: 240-87591-58

Date Collected: 10/31/17 11:35

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 90.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		1	303080	11/11/17 12:09	SEM	TAL CAN

Client Sample ID: ED-00.51.SL01-(0.5-1.0')

Lab Sample ID: 240-87591-59

Date Collected: 10/31/17 11:41

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 07:58	MBR	TAL CAN

Client Sample ID: ED-00.51.SL01-(0.5-1.0')

Lab Sample ID: 240-87591-59

Date Collected: 10/31/17 11:41

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 79.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		1	303080	11/11/17 12:29	SEM	TAL CAN

Client Sample ID: ED-00.47-SL04-(0-0.80')

Lab Sample ID: 240-87591-60

Date Collected: 10/31/17 10:46

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 08:01	MBR	TAL CAN

Client Sample ID: ED-00.47-SL04-(0-0.80')

Lab Sample ID: 240-87591-60

Date Collected: 10/31/17 10:46

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 78.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		1	303080	11/11/17 12:48	SEM	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.47-SL03-(0-0.77')

Lab Sample ID: 240-87591-61

Date Collected: 10/31/17 10:23

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 08:01	MBR	TAL CAN

Client Sample ID: ED-00.47-SL03-(0-0.77')

Lab Sample ID: 240-87591-61

Date Collected: 10/31/17 10:23

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		1	303080	11/11/17 13:08	SEM	TAL CAN

Client Sample ID: ED-00.47-SL03-(0-0.77')-FD

Lab Sample ID: 240-87591-62

Date Collected: 10/31/17 10:23

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 08:01	MBR	TAL CAN

Client Sample ID: ED-00.47-SL03-(0-0.77')-FD

Lab Sample ID: 240-87591-62

Date Collected: 10/31/17 10:23

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 83.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		1	303080	11/11/17 13:27	SEM	TAL CAN

Client Sample ID: ED-00.47-SL01-(0-0.5')

Lab Sample ID: 240-87591-63

Date Collected: 10/31/17 10:04

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 08:01	MBR	TAL CAN

Client Sample ID: ED-00.47-SL01-(0-0.5')

Lab Sample ID: 240-87591-63

Date Collected: 10/31/17 10:04

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		1	303080	11/11/17 13:47	SEM	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SL04-(0-0.50')

Lab Sample ID: 240-87591-64

Date Collected: 10/31/17 09:02

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 08:01	MBR	TAL CAN

Client Sample ID: ED-00.39-SL04-(0-0.50')

Lab Sample ID: 240-87591-64

Date Collected: 10/31/17 09:02

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 79.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		1	303080	11/11/17 14:07	SEM	TAL CAN

Client Sample ID: ED-00.39-SL04-(0.50-1.0')

Lab Sample ID: 240-87591-65

Date Collected: 10/31/17 09:06

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 08:01	MBR	TAL CAN

Client Sample ID: ED-00.39-SL04-(0.50-1.0')

Lab Sample ID: 240-87591-65

Date Collected: 10/31/17 09:06

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		1	303080	11/11/17 14:26	SEM	TAL CAN

Client Sample ID: ED-00.39-SL03-(0-0.69')

Lab Sample ID: 240-87591-66

Date Collected: 10/31/17 08:31

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 08:01	MBR	TAL CAN

Client Sample ID: ED-00.39-SL03-(0-0.69')

Lab Sample ID: 240-87591-66

Date Collected: 10/31/17 08:31

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 81.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302802	11/09/17 10:58	DVT	TAL CAN
Total/NA	Analysis	8082A		5	303080	11/11/17 14:46	SEM	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SL03-(0-0.69')-FD

Lab Sample ID: 240-87591-67

Date Collected: 10/31/17 08:31

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 08:01	MBR	TAL CAN

Client Sample ID: ED-00.39-SL03-(0-0.69')-FD

Lab Sample ID: 240-87591-67

Date Collected: 10/31/17 08:31

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302857	11/09/17 14:18	AMT	TAL CAN
Total/NA	Analysis	8082A		10	303043	11/10/17 16:43	LSH	TAL CAN

Client Sample ID: ED-00.39-SL03-(0.69-0.98')

Lab Sample ID: 240-87591-68

Date Collected: 10/31/17 08:37

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 08:01	MBR	TAL CAN

Client Sample ID: ED-00.39-SL03-(0.69-0.98')

Lab Sample ID: 240-87591-68

Date Collected: 10/31/17 08:37

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 87.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302857	11/09/17 14:18	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303043	11/10/17 16:26	LSH	TAL CAN

Client Sample ID: ED-00.39-SL03-(0.98-1.17')

Lab Sample ID: 240-87591-69

Date Collected: 10/31/17 08:40

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 08:01	MBR	TAL CAN

Client Sample ID: ED-00.39-SL03-(0.98-1.17')

Lab Sample ID: 240-87591-69

Date Collected: 10/31/17 08:40

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 77.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		10	303305	11/14/17 08:02	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.39-SL03-(1.17-1.5')

Lab Sample ID: 240-87591-70

Date Collected: 10/31/17 08:44

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302543	11/08/17 08:01	MBR	TAL CAN

Client Sample ID: ED-00.39-SL03-(1.17-1.5')

Lab Sample ID: 240-87591-70

Date Collected: 10/31/17 08:44

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302857	11/09/17 14:55	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303043	11/10/17 17:54	LSH	TAL CAN

Client Sample ID: ED-00.39-SL01-(0-0.5')

Lab Sample ID: 240-87591-71

Date Collected: 10/31/17 08:11

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.39-SL01-(0-0.5')

Lab Sample ID: 240-87591-71

Date Collected: 10/31/17 08:11

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 83.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302857	11/09/17 14:18	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303043	11/10/17 17:01	LSH	TAL CAN

Client Sample ID: ED-00.39-SL01-(0.5-1.0')

Lab Sample ID: 240-87591-72

Date Collected: 10/31/17 08:17

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.39-SL01-(0.5-1.0')

Lab Sample ID: 240-87591-72

Date Collected: 10/31/17 08:17

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 87.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 08:22	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SL04-(0-0.5')

Lab Sample ID: 240-87591-73

Date Collected: 10/30/17 14:54

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.25-SL04-(0-0.5')

Lab Sample ID: 240-87591-73

Date Collected: 10/30/17 14:54

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 78.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		1	302905	11/10/17 07:58	CSC	TAL CAN

Client Sample ID: ED-00.25-SL04-(0.5-1.0')

Lab Sample ID: 240-87591-74

Date Collected: 10/30/17 15:01

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.25-SL04-(0.5-1.0')

Lab Sample ID: 240-87591-74

Date Collected: 10/30/17 15:01

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		1	302905	11/10/17 08:19	CSC	TAL CAN

Client Sample ID: ED-00.25-SL04-(1.0-1.5")

Lab Sample ID: 240-87591-75

Date Collected: 10/30/17 15:20

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.25-SL04-(1.0-1.5")

Lab Sample ID: 240-87591-75

Date Collected: 10/30/17 15:20

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 82.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		1	302905	11/10/17 08:38	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SL04-(1.5-2.0')

Lab Sample ID: 240-87591-76

Date Collected: 10/30/17 15:27

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.25-SL04-(1.5-2.0')

Lab Sample ID: 240-87591-76

Date Collected: 10/30/17 15:27

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 85.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		1	302905	11/10/17 08:58	CSC	TAL CAN

Client Sample ID: ED-00.25-SL03-(0.0.5')

Lab Sample ID: 240-87591-77

Date Collected: 10/30/17 16:30

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.25-SL03-(0.0.5')

Lab Sample ID: 240-87591-77

Date Collected: 10/30/17 16:30

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 75.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		1	302905	11/10/17 09:18	CSC	TAL CAN

Client Sample ID: ED-00.25-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-78

Date Collected: 10/30/17 16:51

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.25-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-78

Date Collected: 10/30/17 16:51

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 79.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		1	302905	11/10/17 09:38	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SL02-(0-0.5')

Lab Sample ID: 240-87591-79

Date Collected: 10/30/17 16:01

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.25-SL02-(0-0.5')

Lab Sample ID: 240-87591-79

Date Collected: 10/30/17 16:01

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 78.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		5	302905	11/10/17 09:57	CSC	TAL CAN

Client Sample ID: ED-00.25-SL02-(0-0.5')-FD

Lab Sample ID: 240-87591-80

Date Collected: 10/30/17 16:01

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.25-SL02-(0-0.5')-FD

Lab Sample ID: 240-87591-80

Date Collected: 10/30/17 16:01

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 81.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		5	302905	11/10/17 10:17	CSC	TAL CAN

Client Sample ID: ED-00.25-SL02-(0.5-1.0')

Lab Sample ID: 240-87591-81

Date Collected: 10/30/17 16:09

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.25-SL02-(0.5-1.0')

Lab Sample ID: 240-87591-81

Date Collected: 10/30/17 16:09

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 88.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		1	302905	11/10/17 10:37	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.25-SL02-(1.0-1.5')

Lab Sample ID: 240-87591-82

Date Collected: 10/30/17 16:10

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.25-SL02-(1.0-1.5')

Lab Sample ID: 240-87591-82

Date Collected: 10/30/17 16:10

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 83.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		2	302905	11/10/17 14:56	CSC	TAL CAN

Client Sample ID: ED-00.08-SL03-(0-0.5')

Lab Sample ID: 240-87591-83

Date Collected: 10/30/17 12:20

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.08-SL03-(0-0.5')

Lab Sample ID: 240-87591-83

Date Collected: 10/30/17 12:20

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 81.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		10	302905	11/10/17 15:16	CSC	TAL CAN

Client Sample ID: ED-00.08-SL03-(0.5-0.97')

Lab Sample ID: 240-87591-84

Date Collected: 10/30/17 12:33

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.08-SL03-(0.5-0.97')

Lab Sample ID: 240-87591-84

Date Collected: 10/30/17 12:33

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 91.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		2	302905	11/10/17 11:37	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL03-(0.97-1..47')

Lab Sample ID: 240-87591-85

Date Collected: 10/30/17 12:45

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.08-SL03-(0.97-1..47')

Lab Sample ID: 240-87591-85

Date Collected: 10/30/17 12:45

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 83.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		100	302905	11/10/17 11:56	CSC	TAL CAN

Client Sample ID: ED-00.08-SL03-(1.5-2.0')

Lab Sample ID: 240-87591-86

Date Collected: 10/30/17 12:53

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.08-SL03-(1.5-2.0')

Lab Sample ID: 240-87591-86

Date Collected: 10/30/17 12:53

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		100	302905	11/10/17 12:57	CSC	TAL CAN

Client Sample ID: ED-00.08-SL04-(0-0.67)

Lab Sample ID: 240-87591-87

Date Collected: 10/30/17 13:18

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.08-SL04-(0-0.67)

Lab Sample ID: 240-87591-87

Date Collected: 10/30/17 13:18

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 83.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		1	302905	11/10/17 13:17	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL04-(0.67-0.86)

Lab Sample ID: 240-87591-88

Date Collected: 10/30/17 13:27

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.08-SL04-(0.67-0.86)

Lab Sample ID: 240-87591-88

Date Collected: 10/30/17 13:27

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 82.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302635	11/08/17 13:17	JMT	TAL CAN
Total/NA	Analysis	8082A		1	302905	11/10/17 13:36	CSC	TAL CAN

Client Sample ID: ED-00.08-SL04-(0.86-1.36)

Lab Sample ID: 240-87591-89

Date Collected: 10/30/17 13:39

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.08-SL04-(0.86-1.36)

Lab Sample ID: 240-87591-89

Date Collected: 10/30/17 13:39

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 08:42	CSC	TAL CAN

Client Sample ID: ED-00.08-SL04-(1.5-2.0')

Lab Sample ID: 240-87591-90

Date Collected: 10/30/17 13:44

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.08-SL04-(1.5-2.0')

Lab Sample ID: 240-87591-90

Date Collected: 10/30/17 13:44

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 09:01	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL01-(0-0.5')

Lab Sample ID: 240-87591-91

Date Collected: 10/30/17 11:07

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.08-SL01-(0-0.5')

Lab Sample ID: 240-87591-91

Date Collected: 10/30/17 11:07

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 78.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 14:59	CSC	TAL CAN

Client Sample ID: ED-00.08-SL01-(0.5-1.0')

Lab Sample ID: 240-87591-92

Date Collected: 10/30/17 11:16

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.08-SL01-(0.5-1.0')

Lab Sample ID: 240-87591-92

Date Collected: 10/30/17 11:16

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 89.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 09:21	CSC	TAL CAN

Client Sample ID: ED-00.08-SL01-(1.0-1.86')

Lab Sample ID: 240-87591-93

Date Collected: 10/30/17 11:22

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.08-SL01-(1.0-1.86')

Lab Sample ID: 240-87591-93

Date Collected: 10/30/17 11:22

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 09:41	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.08-SL01-(1.86-2.0')

Lab Sample ID: 240-87591-94

Date Collected: 10/30/17 11:34

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.08-SL01-(1.86-2.0')

Lab Sample ID: 240-87591-94

Date Collected: 10/30/17 11:34

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 78.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 10:02	CSC	TAL CAN

Client Sample ID: ED-01.37-SL03-(0-0.27')

Lab Sample ID: 240-87591-95

Date Collected: 11/02/17 09:25

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.37-SL03-(0-0.27')

Lab Sample ID: 240-87591-95

Date Collected: 11/02/17 09:25

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 79.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 10:22	CSC	TAL CAN

Client Sample ID: ED-01.37-SL03-(0.27-0.92')

Lab Sample ID: 240-87591-96

Date Collected: 11/02/17 09:26

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.37-SL03-(0.27-0.92')

Lab Sample ID: 240-87591-96

Date Collected: 11/02/17 09:26

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 89.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 10:41	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.37-SL03-(0.92-1.07')

Lab Sample ID: 240-87591-97

Date Collected: 11/02/17 09:28

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.37-SL03-(0.92-1.07')

Lab Sample ID: 240-87591-97

Date Collected: 11/02/17 09:28

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 82.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 11:01	CSC	TAL CAN

Client Sample ID: ED-01.37-SL03-(1.07-2.0')

Lab Sample ID: 240-87591-98

Date Collected: 11/02/17 09:30

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.37-SL03-(1.07-2.0')

Lab Sample ID: 240-87591-98

Date Collected: 11/02/17 09:30

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 88.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 11:20	CSC	TAL CAN

Client Sample ID: ED-01.49-SL04-(0-0.5')

Lab Sample ID: 240-87591-99

Date Collected: 11/01/17 14:10

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.49-SL04-(0-0.5')

Lab Sample ID: 240-87591-99

Date Collected: 11/01/17 14:10

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 82.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 11:40	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.49-SL04-(0.5-1.0')

Lab Sample ID: 240-87591-100

Date Collected: 11/01/17 14:17

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.49-SL04-(0.5-1.0')

Lab Sample ID: 240-87591-100

Date Collected: 11/01/17 14:17

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 12:00	CSC	TAL CAN

Client Sample ID: ED-01.49-SL04-(1.0-1.81')

Lab Sample ID: 240-87591-101

Date Collected: 11/01/17 14:27

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.49-SL04-(1.0-1.81')

Lab Sample ID: 240-87591-101

Date Collected: 11/01/17 14:27

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 85.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 12:20	CSC	TAL CAN

Client Sample ID: ED-01.49-SL04-(1.81-2.0')

Lab Sample ID: 240-87591-102

Date Collected: 11/01/17 14:33

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.49-SL04-(1.81-2.0')

Lab Sample ID: 240-87591-102

Date Collected: 11/01/17 14:33

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 87.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 12:39	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SL02-(0-0.5)

Lab Sample ID: 240-87591-103

Date Collected: 10/31/17 14:50

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.72-SL02-(0-0.5)

Lab Sample ID: 240-87591-103

Date Collected: 10/31/17 14:50

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 77.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		10	303305	11/14/17 12:58	CSC	TAL CAN

Client Sample ID: ED-00.72-SL02-(0.5-1.0')

Lab Sample ID: 240-87591-104

Date Collected: 10/31/17 14:57

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.72-SL02-(0.5-1.0')

Lab Sample ID: 240-87591-104

Date Collected: 10/31/17 14:57

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 72.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 11:37	CSC	TAL CAN

Client Sample ID: ED-00.72-SL02-(1.0-1.5')

Lab Sample ID: 240-87591-105

Date Collected: 10/31/17 15:04

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.72-SL02-(1.0-1.5')

Lab Sample ID: 240-87591-105

Date Collected: 10/31/17 15:04

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 75.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		2	303503	11/15/17 07:49	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.24-SL01-(0-0.87')

Lab Sample ID: 240-87591-106

Date Collected: 11/01/17 11:26

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.24-SL01-(0-0.87')

Lab Sample ID: 240-87591-106

Date Collected: 11/01/17 11:26

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 87.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		10	303503	11/15/17 08:08	CSC	TAL CAN

Client Sample ID: ED-01.24-SL01-(0.87-1.0')

Lab Sample ID: 240-87591-107

Date Collected: 11/01/17 11:44

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.24-SL01-(0.87-1.0')

Lab Sample ID: 240-87591-107

Date Collected: 11/01/17 11:44

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 91.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 12:32	CSC	TAL CAN

Client Sample ID: ED-01.14-SL03-(0-0.5')

Lab Sample ID: 240-87591-108

Date Collected: 11/01/17 10:22

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.14-SL03-(0-0.5')

Lab Sample ID: 240-87591-108

Date Collected: 11/01/17 10:22

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 79.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 12:51	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.14-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-109

Date Collected: 11/01/17 10:29

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.14-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-109

Date Collected: 11/01/17 10:29

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 85.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 13:09	CSC	TAL CAN

Client Sample ID: ED-01.14-SL03-(0.5-1.0')-FD

Lab Sample ID: 240-87591-110

Date Collected: 11/01/17 10:29

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.14-SL03-(0.5-1.0')-FD

Lab Sample ID: 240-87591-110

Date Collected: 11/01/17 10:29

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 13:27	CSC	TAL CAN

Client Sample ID: ED-01.49-SL02-(0-0.5')

Lab Sample ID: 240-87591-111

Date Collected: 11/01/17 13:50

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.49-SL02-(0-0.5')

Lab Sample ID: 240-87591-111

Date Collected: 11/01/17 13:50

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 13:46	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.49-SL02-(0.5-1.0')

Lab Sample ID: 240-87591-112

Date Collected: 11/01/17 13:55

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.49-SL02-(0.5-1.0')

Lab Sample ID: 240-87591-112

Date Collected: 11/01/17 13:55

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 87.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 14:04	CSC	TAL CAN

Client Sample ID: ED-01.37-SL01-(0-0.9')

Lab Sample ID: 240-87591-113

Date Collected: 11/02/17 09:11

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.37-SL01-(0-0.9')

Lab Sample ID: 240-87591-113

Date Collected: 11/02/17 09:11

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 82.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 14:23	CSC	TAL CAN

Client Sample ID: ED-01.37-SL01-(0-0.9')-FD

Lab Sample ID: 240-87591-114

Date Collected: 11/02/17 09:11

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.37-SL01-(0-0.9')-FD

Lab Sample ID: 240-87591-114

Date Collected: 11/02/17 09:11

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 82.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 14:41	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.03-SL03-(0-0.21')

Lab Sample ID: 240-87591-115

Date Collected: 10/31/17 17:05

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.03-SL03-(0-0.21')

Lab Sample ID: 240-87591-115

Date Collected: 10/31/17 17:05

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 80.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 14:59	CSC	TAL CAN

Client Sample ID: ED-01.03-SL03-(0.21-1.0')

Lab Sample ID: 240-87591-116

Date Collected: 10/31/17 17:13

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.03-SL03-(0.21-1.0')

Lab Sample ID: 240-87591-116

Date Collected: 10/31/17 17:13

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 90.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 15:18	CSC	TAL CAN

Client Sample ID: ED-00.82-SL03-(0-0.5')

Lab Sample ID: 240-87591-117

Date Collected: 10/31/17 16:11

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.82-SL03-(0-0.5')

Lab Sample ID: 240-87591-117

Date Collected: 10/31/17 16:11

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 90.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 15:36	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.82-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-118

Date Collected: 10/31/17 16:15

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.82-SL03-(0.5-1.0')

Lab Sample ID: 240-87591-118

Date Collected: 10/31/17 16:15

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 64.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 15:54	CSC	TAL CAN

Client Sample ID: ED-00.72-SL04-(0-0.11')

Lab Sample ID: 240-87591-119

Date Collected: 10/31/17 15:39

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.72-SL04-(0-0.11')

Lab Sample ID: 240-87591-119

Date Collected: 10/31/17 15:39

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 78.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 16:13	CSC	TAL CAN

Client Sample ID: ED-00.72-SL04-(0.11-0.47')

Lab Sample ID: 240-87591-120

Date Collected: 10/31/17 15:40

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.72-SL04-(0.11-0.47')

Lab Sample ID: 240-87591-120

Date Collected: 10/31/17 15:40

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 85.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 16:31	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-00.72-SL04-(0.47-1.0')

Lab Sample ID: 240-87591-121

Date Collected: 10/31/17 15:46

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.72-SL04-(0.47-1.0')

Lab Sample ID: 240-87591-121

Date Collected: 10/31/17 15:46

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 16:49	CSC	TAL CAN

Client Sample ID: ED-01.49-SL01-(0-0.5')

Lab Sample ID: 240-87591-122

Date Collected: 11/01/17 13:40

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.49-SL01-(0-0.5')

Lab Sample ID: 240-87591-122

Date Collected: 11/01/17 13:40

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 86.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 18:03	CSC	TAL CAN

Client Sample ID: ED-01.49-SL01-(0-0.5')-FD

Lab Sample ID: 240-87591-123

Date Collected: 11/01/17 13:40

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.49-SL01-(0-0.5')-FD

Lab Sample ID: 240-87591-123

Date Collected: 11/01/17 13:40

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 85.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302955	11/10/17 08:32	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303313	11/14/17 18:21	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.24-SL03-(0-0.5')

Lab Sample ID: 240-87591-124

Date Collected: 11/01/17 12:03

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.24-SL03-(0-0.5')

Lab Sample ID: 240-87591-124

Date Collected: 11/01/17 12:03

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302976	11/10/17 09:13	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303214	11/13/17 18:12	CSC	TAL CAN

Client Sample ID: ED-00.82-SL01-(0-0.22')

Lab Sample ID: 240-87591-125

Date Collected: 10/31/17 16:04

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.82-SL01-(0-0.22')

Lab Sample ID: 240-87591-125

Date Collected: 10/31/17 16:04

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302976	11/10/17 09:13	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303214	11/13/17 18:29	CSC	TAL CAN

Client Sample ID: ED-00.82-SL01-(0.22-0.5')

Lab Sample ID: 240-87591-126

Date Collected: 10/31/17 16:05

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00.82-SL01-(0.22-0.5')

Lab Sample ID: 240-87591-126

Date Collected: 10/31/17 16:05

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 92.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302976	11/10/17 09:13	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303214	11/13/17 19:40	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: ED-01.03-SL01-(0-0.5')

Lab Sample ID: 240-87591-127

Date Collected: 11/01/17 09:32

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.03-SL01-(0-0.5')

Lab Sample ID: 240-87591-127

Date Collected: 11/01/17 09:32

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302976	11/10/17 09:13	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303214	11/13/17 19:58	CSC	TAL CAN

Client Sample ID: ED-01.03-SL01-(0-0.5')-FD

Lab Sample ID: 240-87591-128

Date Collected: 11/01/17 09:32

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.03-SL01-(0-0.5')-FD

Lab Sample ID: 240-87591-128

Date Collected: 11/01/17 09:32

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 84.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 13:18	CSC	TAL CAN

Client Sample ID: ED-01.14-SL01-(0-0.5')

Lab Sample ID: 240-87591-129

Date Collected: 11/01/17 10:01

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-01.14-SL01-(0-0.5')

Lab Sample ID: 240-87591-129

Date Collected: 11/01/17 10:01

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 87.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302976	11/10/17 09:13	JMT	TAL CAN
Total/NA	Analysis	8082A		5	303311	11/14/17 16:12	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Client Sample ID: WATER DRUM

Lab Sample ID: 240-87591-130

Date Collected: 11/01/17 16:26

Matrix: Water

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			302648	11/08/17 13:53	DVT	TAL CAN
Total/NA	Analysis	8082A		1	302884	11/09/17 21:37	LSH	TAL CAN

Client Sample ID: SOIL-SED DRUM

Lab Sample ID: 240-87591-131

Date Collected: 11/03/17 12:21

Matrix: Sediment

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: SOIL-SED DRUM

Lab Sample ID: 240-87591-131

Date Collected: 11/03/17 12:21

Matrix: Sediment

Date Received: 11/07/17 17:00

Percent Solids: 88.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			303098	11/11/17 10:25	AMT	TAL CAN
Total/NA	Analysis	8082A		1	303135	11/13/17 15:30	LSH	TAL CAN

Client Sample ID: EQUIP RINSATE

Lab Sample ID: 240-87591-132

Date Collected: 11/02/17 16:58

Matrix: Water

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			302648	11/08/17 13:53	DVT	TAL CAN
Total/NA	Analysis	8082A		1	302884	11/09/17 21:55	LSH	TAL CAN

Client Sample ID: ED-00-72-SL01-(0-0.5')-FD

Lab Sample ID: 240-87591-133

Date Collected: 10/31/17 14:05

Matrix: Solid

Date Received: 11/07/17 17:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	302739	11/09/17 07:46	MBR	TAL CAN

Client Sample ID: ED-00-72-SL01-(0-0.5')-FD

Lab Sample ID: 240-87591-133

Date Collected: 10/31/17 14:05

Matrix: Solid

Date Received: 11/07/17 17:00

Percent Solids: 77.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			302991	11/10/17 10:03	JMT	TAL CAN
Total/NA	Analysis	8082A		1	303305	11/14/17 14:39	CSC	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TestAmerica Canton

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-87591-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-18
Connecticut	State Program	1	PH-0590	12-31-17 *
Florida	NELAP	4	E87225	06-30-18
Illinois	NELAP	5	200004	07-31-18
Kansas	NELAP	7	E-10336	01-31-18 *
Kentucky (UST)	State Program	4	58	02-23-18
Kentucky (WW)	State Program	4	98016	12-31-17 *
Minnesota	NELAP	5	039-999-348	12-31-17 *
Minnesota (Petrofund)	State Program	1	3506	07-31-18
Nevada	State Program	9	OH-000482008A	07-31-18
New Jersey	NELAP	2	OH001	06-30-18
New York	NELAP	2	10975	03-31-18
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-18
Pennsylvania	NELAP	3	68-00340	08-31-18
Texas	NELAP	6	T104704517-17-9	08-31-18
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-18
Washington	State Program	10	C971	01-12-18 *
West Virginia DEP	State Program	3	210	12-31-17 *

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

Chain of Custody Record

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 487-9396 Fax (330) 497-0772

Client Information		Sampler: Laura Campbell		Lab PM: Nestase, Dominic J	
Client Contact: Jacqueline Lakeberg		Phone: 412-584-7176		E-Mail: dominic.nestase@testamerica.com	
Company: Civil & Environmental Consultants Inc		Due Date Requested:		Carrier Tracking No: 4	
Address: 5988 Montclair Blvd		City: Cincinnati		State: OH	
Zip: 45150		Phone: 513-208-1966 (Tel)		E-mail: lakeberg@cecinc.com	
Project Name: Arconic, Inc. - Elliott Dile		Project #: 24019083		SSOW#:	
Site:		TAI Requester (days):		Standard:	
PO #:		WO #:		Sample Date	
172-367		172-367		Sample Time	
Sample Date		Sample Time		Sample Type (C-Comp, G-grab)	
11/1/17		1335		C S	
11/1/17		1340		G S	
11/1/17		1345		G S	
11/1/17		1400		G S	
10/30/17		1410		G S	
10/30/17		1415		G S	
10/30/17		1420		G S	
10/30/17		1425		G S	
11/1/17		1440		G S	
11/1/17		1445		G S	
11/1/17		1450		G S	
Sample Identification		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
ED-00-39-SD02-(0-2.20)-MSD		X		X	
ED-00-39-SD02-(2.20-2.41)		X		X	
ED-00-39-SD02-(2.41-3.54)		X		X	
ED-00-39-SD02-(3.54-4.30)		X		X	
ED-00-47-SD02-(0-0.33)		X		X	
ED-00-47-SD02-(0.33-1.46)		X		X	
ED-00-47-SD02-(1.46-1.96)		X		X	
ED-00-47-SD02-(1.96-3.13)		X		X	
ED-00-51-SD02-(0-0.36)		X		X	
ED-00-51-SD02-(0.36-0.68)		X		X	
ED-00-51-SD02-(0.68-1.65)		X		X	
Possible Hazard Identification		Field Filled Sample (Yes or No)		8082A - (MOD) PCBs 7 Analytes	
<input type="checkbox"/> Non-Hazard		X		X	
<input type="checkbox"/> Flammable		X		X	
<input type="checkbox"/> Skin Irritant		X		X	
<input type="checkbox"/> Poison B		X		X	
<input type="checkbox"/> Unknown		X		X	
<input type="checkbox"/> Radioactive		X		X	
Deliverable Requested I, II, III, IV, Other (specify)		Special Instructions/ICC Requirements:		Special Instructions/Note:	
Empty Kit Reinquished by:		Date:		Total Number of Containers:	
Retrieved by: <i>[Signature]</i>		11/6/17 0815		1	
Retrieved by: <i>[Signature]</i>		11-6-17 1440		1	
Retrieved by: <i>[Signature]</i>		11-7-17 1000		1	
Custody Seal No.:		Date/Time		Date/Time	
A Yes Δ No		11-6-17 1440		11-6-17 1400	
		11-7-17 1000		11-7-17 1000	
		Company: <i>[Signature]</i>		Company: <i>[Signature]</i>	
		Company: <i>[Signature]</i>		Company: <i>[Signature]</i>	
		Company: <i>[Signature]</i>		Company: <i>[Signature]</i>	
		Company: <i>[Signature]</i>		Company: <i>[Signature]</i>	



TestAmerica Canton
 4101 Shuffel Street NW
 North Canton, OH 44720
 Phone (330) 487-9396 Fax (330) 497-0772

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Client Contact: Jacqueline Lakeberg		Sample: Laura Campbell		Lab P/W: Neustasie, Dominic J		Carrier (Tracking No.): 4		COC No.	
Company: Civil & Environmental Consultants Inc		Phone: 412-584-7176		E-Mail: dominic.neustasie@testamericainc.com		Page: 3 of 14		Job #		Preservation Codes:	
Address: 5988 Montclair Blvd		City: Cincinnati		State: OH		Zip: 45150		Due Date Requested:		M - Hexane N - Nona O - AdAcO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Phone: 513-209-1966 (Tel)		Fax: 513-209-1966 (Tel)		Email: jlakeberg@cecinc.com		Project #: 24019083		Analysis Requested		Special Instructions/Note:	
Project Name: Arconic, Inc. - Elliott Ditch		Site: SSOW#		Standard		Field Filled Sample (Yes or No)		902A - (MOD) PCBs 7 Analytes		Total Number of Containers	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=oil, G=grab, A=air)		Preservation Code	
ED-00 51-SD02-(1.65-1.75)		11/1/17		1455		G		S		X	
ED-00 60-SD02-(0.1.76)		10/31/17		1140		C		S		X	
ED-00 60-SD02-(0.1.76)-MS		10/31/17		1140		C		S		X	
ED-00 60-SD02-(0.1.76)-MSD		10/31/17		1140		C		S		X	
ED-00 60-SD02-(1.76-2.22)		10/31/17		1141		G		S		X	
ED-00 60-SD02-(2.22-2.39)		10/31/17		1142		G		S		X	
ED-00 60-SD02-(2.39-2.63)		10/31/17		1143		G		S		X	
ED-00 60-SD02-(2.63-3.30)		10/31/17		1144		G		S		X	
ED-00 72-SD03-(0.2.06)		10/31/17		1315		G		S		X	
ED-00 72-SD03-(2.06-2.40)		10/31/17		1325		G		S		X	
ED-00 72-SD03-(2.40-3.50)		10/31/17		1330		C		S		X	
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Skin Sensitizer <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Radiological		Date: 11/6/17 0815		Company: Quick		Date/Time: 11-6-17 14:00		Company: Quick	
Deliverable Requested: <input type="checkbox"/> I, II, III, IV, Other (specify)		Empty Kit Requisitioned By: Cheryl Kenny		Date: 11-6-17 14:40		Company: Quick		Date/Time: 11-6-17 17:00		Company: Quick	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Requisitioned by: Cheryl Kenny		Date: 11-7-17 1000		Company: Quick		Date/Time: 11-7-17 1000		Company: Quick	



TestAmerica Canton
 4101 Shuffel Street NW
 North Canton, OH 44720
 Phone (330) 497-9396 Fax (330) 497-0772

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information Company: Jacqueline Lakeberg Client Contact: Laura Campbell Address: 5988 Montclair Blvd, Cincinnati, OH, 45150 Phone: 513-209-1968 (Tel) Email: lakebergj@arconic.com Project Name: Arconic, Inc. - Elliott Ditch Site:		Lab PM: Nestasie, Dominic J. E-Mail: dominic.nestasie@testamerica.com	
Due Date Requested: TAT Requested (days): Standard: PO #: WO #: 172-367 Project #: 24019083 SSOWN#		Carmer / Recking No(s): Page 5 of 14 Job #	
Analysis Requested Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> 8082A - (MOD) PCBs 7 Analytes <input checked="" type="checkbox"/> Total Number of Containers:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Ammonia H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - Ash/Ag2 P - Na2SO4 Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Diodicahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Sample Identification ED-01 03-SD02-(0.98-1.65)-FD ED-01 03-SD02-(1.65-1.87) ED-01 03-SD02-(1.87-2.25) ED-01 14-SD02-(0-1.05) ED-01 22-SD02-(0-0.17) ED-01 22-SD02-(0.17-0.29) ED-01 37-SD02-(0-0.9) ED-01 49-SD03-(0-0.70)		Sample Date: 10/30/17, 10/30/17, 10/30/17, 11/1/17, 11/1/17, 11/1/17, 11/2/17, 10/31/17 Sample Time: 1710, 1730, 1735, 0924, 1050, 1055, 0950, 1023 Sample Type (C=comp, G=grab): C, G, G, G, G, G, G, G Matrix (Monomer, Inorganic, Organic, Acid): S, S, S, S, S, S, S, S Preservation Code:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/ICC Requirements:	
Empty Kit Relinquished by: Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		Date: 11/6/17 08:15, 11-6-17 14:00, 11-6-17 14:40 Date/Time: 11-6-17 14:00, 11-7-17 10:00 Date/Time: 11-7-17 10:00 Company: Quick, Quick, T-A	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:	



Chain of Custody Record

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Client Information Client Contact: Jacqueline Lakeberg Company: Civil & Environmental Consultants Inc Address: 5988 Montclair Blvd City: Cincinnati State: OH Zip: 45150 Phone: 513-209-1966 (Tel) Email: lakeberg@cecinc.com Project Name: Arconic, Inc. - Elliott Dlc Site:		Lab PM: Nestasie, Dominic J E-Mail: dominic.nestasie@testamericainc.com Carrier Tracking Notes: 4				
Due Date Requested: TAT Requested (days): PO #: WO #: Picked #: SSO#/#:		Preservation Codes: M - Hexane N - None O - ANACD2 P - Na2CO3 Q - Na2SO4 R - Na2SO3 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - pH 4.5 X - EDTA Y - EDA Z - other (specify) Other:				
Analysis Requested 602A - (MOD) PCBs 7 Atrochors Perform MS/MSD (Yes or No)		Total Number of containers				
Field Filtered Sample (Yes or No)		Special Instructions/Note:				
Sample Identification ED-00 82-SL04-(0-0.13') ED-00 82-SL04-(0.13-0.5) ED-00 72-SL01-(0-0.50') ED-00 72-SL01-(0.50-1.0') ED-00 60-SL03-(0-0.89') ED-00 60-SL03-(0.0.89')-MS ED-00 60-SL03-(0.0.89')-MSD ED-00 60-SL03-(0.89-1.0') ED-00 60-SL01-(0-0.19') ED-00 60-SL01-(0.19-1.0') ED-00 51-SL03-(0-0.5')	Sample Date 10/31/17 10/31/17 10/31/17 10/31/17 10/31/17 10/31/17 10/31/17 10/31/17 10/31/17 10/31/17 10/31/17	Sample Time 1634 1635 1405 1413 1323 1323 1323 1329 1341 1349 1205	Sample Type (C-Comp, G-grab) G G G G C C C G G G C	Matrix (W-water, B-blood, O-oil, S-solvent, A-ambient, A-Air) S S S S S S S S S S S	Preservation Code: X X X X X X X X X X X	Special Instructions/Note: Soil Sample Soil Sample Soil Sample Soil Sample Soil Sample Soil Sample Soil Sample Soil Sample Soil Sample Soil Sample Soil Sample
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements				
Empty Kit Reinquished by: [Signature] Date: 11/6/17 0815 Company: [Signature]		Method of Shipment: [Signature] Date/Time: 11-6-17 14:00 Company: [Signature]				
Reinquished by: [Signature] Date/Time: 11-6-17 14:00 Company: [Signature]		Date/Time: 11-6-17 14:00 Company: [Signature]				
Reinquished by: [Signature] Date/Time: 11-7-17 1000 Company: [Signature]		Date/Time: 11-7-17 1000 Company: [Signature]				
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.: TA				

Chain of Custody Record

TestAmerica Canton
4101 Shurfel Street NW
North Canton, OH 44720
Phone (330) 497-9398 Fax (330) 497-0772

Client Information		Client Contact Jacqueline Lakeberg		Company Civil & Environmental Consultants Inc		Address 5988 Montclair Blvd Cincinnati State Zp OH 45150		Phone 513-209-1966 (Tel)		Email jlakeberg@cecinc.com		Project Name Arconic, Inc. - Elliott DfC		Site	
Sampler Laura Campbell		Phone		Lab PM Nestase, Dominic J		E-Mail dominic.nestase@testamerica.com		Carrier Tracking Notes 4		COC No		Page 7 of 14		Job #	
Analysis Requested															
Due Date Requested		TAT Requested (days)		Standard		Field Filtered Sample (Yes or No)		8082A - (MOD) PCBs 7 Analytes		Total Number of Containers		Special Instructions/Note:			
Sample ID	Sample Date	Sample Time	Sample Type (C-Comp, G-grab)	Matrix (Water, Solid, Dissolved, etc.)	Preservation Code	Perform MS/MSD (Yes or No)	8082A - (MOD) PCBs 7 Analytes	Field Filtered Sample (Yes or No)	8082A - (MOD) PCBs 7 Analytes	Total Number of Containers	Special Instructions/Note:				
ED-00 51-SL03-(0.5-1.0)	10/31/17	1212	G	S	S	X	X	X	X	1	Soil Sample				
ED-00 51-SL03-(0.0.5)-FD	10/31/17	1205	C	S	S	X	X	X	X	1	Soil Sample				
ED-00 51-SL01-(0.0.5)	10/31/17	1135	G	S	S	X	X	X	X	1	Soil Sample				
ED-00 51-SL01-(0.5-1.0)	10/31/17	1141	G	S	S	X	X	X	X	1	Soil Sample				
ED-00 47-SL04-(0.0.80)	10/31/17	1046	G	S	S	X	X	X	X	1	Soil Sample				
ED-00 47-SL03-(0.0.77)	10/31/17	1023	C	S	S	X	X	X	X	1	Soil Sample				
ED-00 47-SL03-(0.0.77)-FD	10/31/17	1023	C	S	S	X	X	X	X	1	Soil Sample				
ED-00 47-SL01-(0.0.5)	10/31/17	1004	G	S	S	X	X	X	X	1	Soil Sample				
ED-00 39-SL04-(0.0.50)	10/31/17	0902	G	S	S	X	X	X	X	1	Soil Sample				
ED-00 39-SL04-(0.50-1.0)	10/31/17	0906	G	S	S	X	X	X	X	1	Soil Sample				
ED-00 39-SL03-(0.0.69)	10/31/17	0931	C	S	S	X	X	X	X	1	Soil Sample				
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Radiological															
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months															
Deliverable Requested: I, II, III, IV, Other (specify)															
Relinquished by		Date/Time		Company		Date/Time		Company		Date/Time		Company		Date/Time	
Relinquished by		Date/Time		Company		Date/Time		Company		Date/Time		Company		Date/Time	
Relinquished by		Date/Time		Company		Date/Time		Company		Date/Time		Company		Date/Time	
Custody Seals Intact:		Custody Seal No.:		Date/Time		Company		Date/Time		Company		Date/Time		Company	
Δ Yes Δ No				11/6/17 0815		Quick		11-6-17 14:40		11-6-17 14:00		11-7-17 1000		Quick TA	



Chain of Custody Record

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Client Information		Company: Civil & Environmental Consultants Inc		Lab PM: Nestase, Dominic J		COC No: _____	
Client Contact: Jacqueline Lakeberg		Address: 5968 Montclair Blvd		E-Mail: dominic.nestase@testamericainc.com		Page 8 of 14	
Company: Cincinnati, OH 45150		City: Cincinnati		Phone: 513-209-1966 (Tel)		Job #: _____	
State: OH		State Zip: 45150		TAT Requested (days): _____		Preservation Codes: A-HCL B-NaOH C-Zn Acetate D-Nitric Acid E-NaHSO4 F-MeOH G-Anchor H-Ascorbic Acid I-Ice J-DI Water K-EDTA L-EDA Other: _____	
Project Name: Arcortic, Inc - Elliott Ditch		Project #: 24019083		Standard: _____		Special Instructions/Note: _____	
Site: _____		SSOW#: _____		Due Date Requested: _____		Total Number of Containers: _____	
PO #: _____		WO #: 172-367		Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/>		Perform HSM/MSD (Yes or No) <input checked="" type="checkbox"/>	
Email: lakeberg@cecinc.com		Project #: 24019083		Sample Date		Sample Time	
Sample Identification		Sample Type (C-Comp, G-grab)		Matrix (Water, Solid, Overstall, BTX/Toluene, Aro)		Preservation Code	
ED-00-39-SL03-(0-0.69)-FD		C		S		S	
ED-00-39-SL03-(0.69-0.98)		G		S		S	
ED-00-39-SL03-(0.98-1.17)		G		S		S	
ED-00-39-SL03-(1.17-1.5)		G		S		S	
ED-00-39-SL01-(0-0.5)		C		S		S	
ED-00-39-SL01-(0-0.5)-MS		C		S		S	
ED-00-39-SL01-(0-0.5)-MSD		C		S		S	
ED-00-39-SL01-(0.5-1.0)		G		S		S	
ED-00-25-SL04-(0-0.5)		G		S		S	
ED-00-25-SL04-(0.5-1.0)		G		S		S	
ED-00-25-SL04-(1.0-1.5)		G		S		S	
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify) _____		Empty Kit Relinquished by _____		Special Instructions/QC Requirements: _____		Method of Shipment: _____	
Requisitioned by: Jacqueline Lakeberg		Date: 11/6/17 0815		Company: Quick		Daily Time: 11-6-17 14:00	
Requisitioned by: Gay Z Kenny		Date: 11-6-17 1440		Company: Quick		Date/Time: 11/17/17 0000	
Requisitioned by: _____		Date/Time: _____		Company: _____		Date/Time: 11-9-17 1000	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No: _____		Company: TA		Company: _____	



Chain of Custody Record

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Client Information
Company: Jacqueline Lakeberg
Address: 5988 Montclair Blvd, Cincinnati, OH 45150
Phone: 513-209-1966 (Tel)
Email: lakeberg@ceconline.com
Project Name: Arconic, Inc. - Elliott Ditch
Site: SSOW#

Lab PM: Nestasio, Dominic J
E-Mail: dominic.nestasio@testamericainc.com

Carrier Tracking No.: 4

Page 9 of 14

Sample Identification	Sample Date	Sample Time (C=Comp, G=grab)	Sample Type (W=Water, S=Soil, G=Grab)	Matrix (W=Water, S=Soil, G=Grab)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	802A - (MOD) PCBs 7 Aroclors	Analysis Requested		Special Instructions/Note:
								Due Date Requested	TAT Requested (days)	
ED-00 25-SL04-(1.5-2.0')	10/30/17	1527	G	S	X	X				1 Soil Sample
ED-00 25-SL03-(0-0.5')	10/30/17	1630	G	S	X	X				1 Soil Sample
ED-00 25-SL03-(0.5-1.0')	10/30/17	1651	G	S	X	X				1 Soil Sample
ED-00 25-SL02-(0-0.5')	10/30/17	1601	C	S	X	X				1 Soil Sample
ED-00 25-SL02-(0.0.5')FD	10/30/17	1601	C	S	X	X				1 Soil Sample
ED-00 25-SL02-(0.5-1.0')	10/30/17	1609	G	S	X	X				1 Soil Sample
ED-00 25-SL02-(1.0-1.5')	10/30/17	1610	G	S	X	X				1 Soil Sample
ED-00 08-SL03-(0-0.5')	10/30/17	1220	G	S	X	X				1 Soil Sample
ED-00 08-SL03-(0.5-0.97')	10/30/17	1233	G	S	X	X				1 Soil Sample
ED-00 08-SL03-(0.97-1.47')	10/30/17	1245	G	S	X	X				1 Soil Sample
ED-00 08-SL03-(1.5-2.0')	10/30/17	1253	G	S	X	X				1 Soil Sample
ED-00 08-SL04-(0-0.67')	10/30/17	1318	G	S	X	X				1 Soil Sample

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

Deliverable Requested: I, II, III, IV, Other (specify):

Empty Kit Reinsubmitted by: *[Signature]* Date: 11/6/17 08:15
 Relinquished by: *[Signature]* Date/Time: 11-6-17 14:40
 Relinquished by: *[Signature]* Date/Time: 11-7-17 10:00
 Relinquished by: *[Signature]* Date/Time: 11-7-17 10:00

Company: *[Signature]* Company: *[Signature]* Company: *[Signature]*

Special Instructions/QC Requirements: Return To Client Disposal By Lab Archive For _____ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Date/Time: 11-6-17 14:00 Company: *[Signature]*
 Date/Time: 11-6-17 17:00 Company: *[Signature]*
 Date/Time: 11-7-17 10:00 Company: TA

Custody Seal No.: Yes No



Chain of Custody Record

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Client Information Company: Jacqueline Lakeberg Client Contact: Laura Campbell Phone: _____ E-Mail: dominic.nestase@testamericacalinc.com		Lab PM: Nestase, Dominic J E-Mail: _____		Carrier Tracking No(s): 4		COC No: _____ Page: 10 of 14 Job #: _____		
Due Date Requested: _____ FAT Requested (days): _____ PO #: _____ WD #: 172-367 Project #: 24019083 SSON#: _____		Standard: _____ City: Cincinnati State, Zip: OH, 45150 Phone: 513-209-1966 (Tel) Email: lakeberg@calinc.com Project Name: Arconic, Inc. - Elliott Dltc Site: _____		Analysis Requested Total Number of Containers: _____ Perform MS/MSD (Yes or No): _____ 9082A - (MDD) PCBs 7 Analytes: _____		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchler H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: _____ M - Hexane N - None O - AsAcO2 P - Na2OAS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pr-4S Z - other (specify)		
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Overstabil, BT-Tissue, Ase)	Preservation Code	Field Filtered Sample (Yes or No)	9082A - (MDD) PCBs 7 Analytes	Special Instructions/Note
ED-00-08-SL04-(0.67-0.86')	10/30/17	1327	G	S	X	X	1	Soil Sample
ED-00-08-SL04-(0.86-1.36')	10/30/17	1339	G	S	X	X	1	Soil Sample
ED-00-08-SL04-(1.5-2.0')	10/30/17	1344	G	S	X	X	1	Soil Sample
ED-00-08-SL01-(0-0.5')	10/30/17	1107	C	S	X	X	1	Soil Sample
ED-00-08-SL01-(0-0.5')-MS	10/30/17	1107	C	S	X	X	1	Soil Sample
ED-00-08-SL01-(0-0.5')-MSD	10/30/17	1107	C	S	X	X	1	Soil Sample
ED-00-08-SL01-(0.5-1.0')	10/30/17	1116	G	S	X	X	1	Soil Sample
ED-00-08-SL01-(1.0-1.86')	10/30/17	1122	G	S	X	X	1	Soil Sample
ED-00-08-SL01-(1.86-2.0')	10/30/17	1134	G	S	X	X	1	Soil Sample
ED-01-37-SL02-(0-0.27')	11/21/17	0925	G	S	X	X	1	Soil Sample
ED-01-37-SL02-(0.27-0.92')	11/21/17	0926	G	S	X	X	1	Soil Sample
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Radiological								Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months
Relinquished by: <i>[Signature]</i> Date/Time: 11/16/17 08:15 Company: SIBO		Relinquished by: <i>[Signature]</i> Date/Time: 11-6-17 14:40 Company: Quick		Relinquished by: <i>[Signature]</i> Date/Time: 11-21-17 10:00 Company: TA		Relinquished by: <i>[Signature]</i> Date/Time: 11-21-17 14:00 Company: Quick		
Empty Kit Relinquished by: <i>[Signature]</i> Date/Time: _____ Company: _____		Empty Kit Relinquished by: <i>[Signature]</i> Date/Time: _____ Company: _____		Empty Kit Relinquished by: <i>[Signature]</i> Date/Time: _____ Company: _____		Empty Kit Relinquished by: <i>[Signature]</i> Date/Time: _____ Company: _____		
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: _____		Method of Shipment: _____		Special Instructions/OC Requirements: _____		



Chain of Custody Record

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Client Information		Client Contact Jacqueline Lakeberg		Company Civil & Environmental Consultants Inc	Address 5988 Montclair Blvd Cincinnati OH, 45150 Phone 513-209-1986 (Tel) Email lakeberg@cecinc.com	Project Name Arconic, Inc. - Elliott Dtic	Size	Due Date Requested	TAT Requested (days)	Standard	PO #	WO # 172-367	Project # 24019083	SSOW #	Sampler Laura Campbell	Phone	LAB PM Nestase, Dominic J	E-Mail dominic.nestase@testamericainc.com	Carrier Tracking Note 4	COC No	Page 11 of 14	Job #
Sample Identification		Sample Date	Sample Time	Sample Type (C-Comp, G-grab)	Matrix (Water, Solid, On-surface, etc.)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6052A - (MOD) PCBs 7 Analytes	Total Number of Containers	Special Instructions/Note:											
ED-01-37-SL02-(0.92-1.07')	11/2/17	0928	G	S			X	X		1	Soil Sample											
ED-01-37-SL02-(1.07-2.0')	11/2/17	0930	G	S			X	X		1	Soil Sample											
ED-01-49-SL04-(0-0.5')	11/1/17	1410	G	S			X	X		1	Soil Sample											
ED-01-49-SL04-(0.5-1.0')	11/1/17	1417	G	S			X	X		1	Soil Sample											
ED-01-49-SL04-(1.0-1.81')	11/1/17	1427	G	S			X	X		1	Soil Sample											
ED-01-49-SL04-(1.81-2.0')	11/1/17	1433	G	S			X	X		1	Soil Sample											
ED-00-72-SL02-(0-0.5')	10/31/17	1450	G	S			X	X		1	Soil Sample											
ED-00-72-SL02-(0.5-1.0')	10/31/17	1457	G	S			X	X		1	Soil Sample											
ED-00-72-SL02-(1.0-1.5')	10/31/17	1504	G	S			X	X		1	Soil Sample											
ED-01-24-SL01-(0-0.87')	11/1/17	1126	G	S			X	X		1	Soil Sample											
ED-01-24-SL01-(0.87-1.0')	11/1/17	1144	G	S			X	X		1	Soil Sample											
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																
Empty Kit Relinquished by		Date	Time	Company	Method of Shipment																	
Relinquished by		Date/Time	Time	Company																		
Relinquished by		Date/Time	Time	Company																		
Relinquished by		Date/Time	Time	Company																		
Custody Seals Intact:		Custody Seal No.:																				
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Δ Yes <input type="checkbox"/> Δ No																						



Chain of Custody Record

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Client Information		Client Contact Jacqueline Lakeberg		Company Civil & Environmental Consultants Inc		Address 5986 Montclair Blvd Cincinnati OH, 45150 Phone 513-209-1666 (Tel)		E-Mail jlakeberg@cecinc.com		Project Name Aroclor, Inc. - Elliott Ditch		Site	
Sample Information		Sample Laura Campbell		Lab PM Nestase, Dominic J		Due Date Requested		TAT Requested (days)		Standard		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 - Hezane N - None O - AsHClO2 P - Na2OAS Q - Na2S2O3 R - Na2S2O8 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (Water, Solid, Overstabil, etc.)		Field Filtered Sample (Yes or No)		Perform MSMSD (Yes or No)	
ED-01 14-SL03-(0-0.5)		11/1/17		1022		G		S		X		X	
ED-01 14-SL03-(0.5-1.0)		11/1/17		1029		C		S		X		X	
ED-01 14-SL03-(0.5-1.0)-FD		11/1/17		1029		C		S		X		X	
ED-01 49-SL02-(0-0.5)		11/1/17		1350		G		S		X		X	
ED-01 49-SL02-(0.5-1.0)		11/1/17		1355		G		S		X		X	
ED-01 37-SL01-(0-0.9)		11/2/17		0911		C		S		X		X	
ED-01 37-SL01-(0-0.9)-FD		11/2/17		0911		C		S		X		X	
ED-01 03-SL03-(0-0.21)		10/31/17		1705		G		S		X		X	
ED-01 03-SL03-(0.21-1.0)		10/31/17		1713		G		S		X		X	
ED-00 82-SL03-(0-0.5)		10/31/17		1611		G		S		X		X	
ED-00 82-SL03-(0.5-1.0)		10/31/17		1615		G		S		X		X	
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard		<input type="checkbox"/> Flammable		<input type="checkbox"/> Skin Irritant		<input type="checkbox"/> Poison B		<input type="checkbox"/> Unknown		<input checked="" type="checkbox"/> Radiological	
Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished By <i>Laura Campbell</i>		Date 11/6/17 0815		Company Company		Date/Time 11-6-17 14:40		Company Company		Date/Time 11-7-17 1000	
Relinquished by <i>Christy Kenny</i>		Date/Time 11-6-17 14:40		Company Company		Date/Time 11-7-17 1000		Company Company		Date/Time 11-7-17 1000		Company Company	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Special Instructions/OC Requirements		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client <input type="checkbox"/>		Disposal By Lab <input type="checkbox"/>		Archive For _____ Months	



TestAmerica Canton Sample Receipt Form/Narrative

Login #: 87591

Canton Facility

Client CIVIL → ENV. CONUSE Site Name _____

Cooler unpacked by:

Cooler Received on 11-7-17 Opened on 11-7-17

POP

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

- 1. Cooler temperature upon receipt
IR GUN# IR-8 (CF +0 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN #36 (CF +0.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN # 627 (CF -1.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

- 2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
-Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
-Were tamper/custody seals intact and uncompromised? Yes No NA

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No

7. Did all bottles arrive in good condition (Unbroken)? Yes No

8. Could all bottle labels be reconciled with the COC? Yes No

9. Were correct bottle(s) used for the test(s) indicated? Yes No

10. Sufficient quantity received to perform indicated analyses? Yes No

11. Are these work share samples? Yes No

If yes, Questions 11-15 have been checked at the originating laboratory.

11. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC697954

12. Were VOAs on the COC? Yes No

13. Were air bubbles >6 mm in any VOA vials? Yes No NA Larger than this.

14. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No

15. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

Tests that are not checked for pH by Receiving: VOAs Oil and Grease TOC

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

RECEIVED SAMPLE ED-00.72-SLOT-(0-0.5) FD NOT ON COC. WILL LOG LAST 10/31/17 @ 1405

17. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

18. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

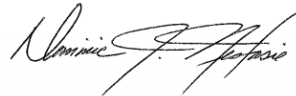
TestAmerica Job ID: 240-91496-1

Client Project/Site: Arconic, Inc. - Elliott Ditch

For:

Civil & Environmental Consultants Inc
2704 Cherokee Farm Way
Suite 101
Knoxville, Tennessee 37920

Attn: Matt Bruck



Authorized for release by:
2/26/2018 1:26:26 PM

Dominic Nestasie, Manager of Project Management
(412)963-7058
dominic.nestasie@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

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

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Method Summary	6
Sample Summary	7
Detection Summary	8
Client Sample Results	13
Surrogate Summary	51
QC Sample Results	53
QC Association Summary	58
Lab Chronicle	62
Certification Summary	75
Chain of Custody	76

Definitions/Glossary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
X	Surrogate is outside control limits
F2	MS/MSD RPD exceeds control limits

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

Glossary

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

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Job ID: 240-91496-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-91496-1

Receipt:

The samples were received on 2/14/2018 at 9:40 AM; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at time of receipt were 2.1° C and 3.1° C.

Exceptional:

All samples with a depth of greater than 3 foot, were placed on hold per the client request.

PCB's:

Two surrogates are used for PCB analysis. The laboratory's SOP allows one of these surrogates to be outside acceptance criteria without performing re-extraction/re-analysis. The following LCS (LCS 240-314904/24-A) contained an allowable number of surrogate compounds outside limits. These results have been reported and qualified.

Surrogate recoveries for the following sample ED-00.02-SL01-(2.18-3.43') (240-91496-8) and ED-00.13-SL01-(1.6-2.75') (240-91496-33) was outside the upper control limit. This sample did not contain any target analytes at the reporting limit; therefore, re-extraction and/or re-analysis was not performed.

The following samples ED-00.00-SL01-(0-0.91') (240-91496-1), ED-00.00-SL01-(2.21-3.12') (240-91496-3), (LCS 240-314904/24-A) and (MB 240-314904/23-A), ED-00.05-SL01-(1.4-2.3') (240-91496-12), ED-00.05-SL01-(2.3-3.3') (240-91496-13), ED-00.08-SL03-(2.25-2.75') (240-91496-15), ED-00.08-SL05-(0-0.67') (240-91496-22) and ED-00.08-SL05-(0.67-1.25') (240-91496-23) required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur.

The following samples ED-00.02-SL01-(0.63-1.76') (240-91496-6), ED-00.02-SL01-(2.18-3.43') (240-91496-8) ED-00.05-SL01-(1.4-2.3') (240-91496-12), ED-00.08-SL05-(0-0.67') (240-91496-22), ED-00.08-SL05-(0.67-1.25') (240-91496-23) ED-00.05-SL01-(1.4-2.3') (240-91496-12), ED-00.08-SL05-(0-0.67') (240-91496-22) and ED-00.08-SL05-(0.67-1.25') (240-91496-23). appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration. The samples have been quantified and reported using the best overall Aroclor/standard pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with this result.

The following samples ED-00.13-SL01-(0-0.67') (240-91496-31), ED-00.13-SL01-(0.67-1.67') (240-91496-32), ED-00.13-SL01-(1.6-2.75') (240-91496-33), ED-00.17-SL01-(0-0.75') (240-91496-35), ED-00.17-SL01-(0-0.75')-DUP (240-91496-36), ED-00.17-SL01-(1.75-2.75') (240-91496-38), ED-00.17-SL01-(0.75-1.75') (240-91496-37), ED-00.55-SL01-(0.5-0.88') (240-91496-41), ED-00.55-SL02-(0-0.42') (240-91496-42), ED-00.55-SL02-(0.5-0.96') (240-91496-43), ED-01.24-SL04-(0-0.84') (240-91496-44), ED-01.24-SL04-(1-1.46') (240-91496-45), ED-01.24-SL05-(0-0.42') (240-91496-46), ED-01.24-SL05-(0-0.42')-DUP (240-91496-47), ED-01.24-SL05-(0.5-1.46') (240-91496-48), ED-01.24-SL06-(0.0-0.84') (240-91496-49), ED-01.24-SL06-(1-1.96') (240-91496-50), (240-91496-B-50-B MS) and (240-91496-B-50-C MSD). required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur.

The following samples ED-00.13-SL01-(0-0.67') (240-91496-31), ED-00.13-SL01-(0.67-1.67') (240-91496-32), ED-00.17-SL01-(0-0.75') (240-91496-35), ED-00.17-SL01-(0-0.75')-DUP (240-91496-36), ED-00.17-SL01-(1.75-2.75') (240-91496-38) ED-00.17-SL01-(0.75-1.75') (240-91496-37), ED-01.24-SL05-(0-0.42') (240-91496-46), ED-01.24-SL05-(0-0.42')-DUP (240-91496-47), ED-01.24-SL05-(0.5-1.46') (240-91496-48), ED-01.24-SL06-(0.0-0.84') (240-91496-49) and ED-01.24-SL06-(1-1.96') (240-91496-50) appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration. The samples have been quantified and reported using the best overall Aroclor/standard pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with this result.

The matrix spike / matrix spike duplicate (MS/MSD) precision for preparation batch 240-314925 and analytical batch 240-315208 was outside control limits. Sample matrix interference is suspected.

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Job ID: 240-91496-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

The Decachlorobiphenyl surrogate in the continuing calibration verification (CCV) failed criteria. The Aroclors in the CCV's passed criteria and all the samples passed surrogate. After careful evaluation the data is reported. ED-00.13-SL01-(0-0.67') (240-91496-31), ED-00.55-SL02-(0.5-0.96') (240-91496-43), ED-01.24-SL04-(0-0.84') (240-91496-44), ED-01.24-SL04-(1-1.46') (240-91496-45), ED-01.24-SL05-(0-0.42') (240-91496-46), ED-01.24-SL05-(0-0.42')-DUP (240-91496-47), ED-01.24-SL05-(0.5-1.46') (240-91496-48), ED-01.24-SL06-(0.0-0.84') (240-91496-49), ED-01.24-SL06-(1-1.96') (240-91496-50), (240-91496-B-50-B MS) and (240-91496-B-50-C MSD)

The following samples ED-00.00-SL01-(0.91-2.21') (240-91496-2[MS]) and ED-00.00-SL01-(0.91-2.21') (240-91496-2[MSD]) were diluted due to the abundance of target analytes. Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

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

General Chemistry:

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

Organic Prep:

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

Method Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN

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 CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Sample Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-91496-1	ED-00.00-SL01-(0-0.91')	Solid	02/07/18 09:16	02/14/18 09:40
240-91496-2	ED-00.00-SL01-(0.91-2.21')	Solid	02/07/18 09:16	02/14/18 09:40
240-91496-3	ED-00.00-SL01-(2.21-3.12')	Solid	02/07/18 09:16	02/14/18 09:40
240-91496-5	ED-00.02-SL01-(0-0.63')	Solid	02/07/18 09:38	02/14/18 09:40
240-91496-6	ED-00.02-SL01-(0.63-1.76')	Solid	02/07/18 09:38	02/14/18 09:40
240-91496-7	ED-00.02-SL01-(1.76-2.18')	Solid	02/07/18 09:38	02/14/18 09:40
240-91496-8	ED-00.02-SL01-(2.18-3.43')	Solid	02/07/18 09:38	02/14/18 09:40
240-91496-10	ED-00.05-SL01-(0-0.67')	Solid	02/07/18 10:03	02/14/18 09:40
240-91496-11	ED-00.05-SL01-(0.67-1.2')	Solid	02/07/18 10:03	02/14/18 09:40
240-91496-12	ED-00.05-SL01-(1.4-2.3')	Solid	02/07/18 10:03	02/14/18 09:40
240-91496-13	ED-00.05-SL01-(2.3-3.3')	Solid	02/07/18 10:03	02/14/18 09:40
240-91496-15	ED-00.08-SL03-(2.25-2.75')	Solid	02/07/18 10:11	02/14/18 09:40
240-91496-16	ED-00.08-SL03-(2.75-3.5')	Solid	02/07/18 10:11	02/14/18 09:40
240-91496-22	ED-00.08-SL05-(0-0.67')	Solid	02/07/18 10:26	02/14/18 09:40
240-91496-23	ED-00.08-SL05-(0.67-1.25')	Solid	02/07/18 10:26	02/14/18 09:40
240-91496-24	ED-00.08-SL05-(1.25-2.1')	Solid	02/07/18 10:26	02/14/18 09:40
240-91496-25	ED-00.08-SL05-(2.1-3')	Solid	02/07/18 10:26	02/14/18 09:40
240-91496-31	ED-00.13-SL01-(0-0.67')	Solid	02/07/18 10:33	02/14/18 09:40
240-91496-32	ED-00.13-SL01-(0.67-1.67')	Solid	02/07/18 10:33	02/14/18 09:40
240-91496-33	ED-00.13-SL01-(1.6-2.75')	Solid	02/07/18 10:33	02/14/18 09:40
240-91496-34	ED-00.13-SL01-(2.75-3.08')	Solid	02/07/18 10:33	02/14/18 09:40
240-91496-35	ED-00.17-SL01-(0-0.75')	Solid	02/07/18 10:41	02/14/18 09:40
240-91496-36	ED-00.17-SL01-(0-0.75')-DUP	Solid	02/07/18 10:41	02/14/18 09:40
240-91496-37	ED-00.17-SL01-(0.75-1.75')	Solid	02/07/18 10:41	02/14/18 09:40
240-91496-38	ED-00.17-SL01-(1.75-2.75')	Solid	02/07/18 10:41	02/14/18 09:40
240-91496-39	ED-00.17-SL01-(2.75-3.75')	Solid	02/07/18 10:41	02/14/18 09:40
240-91496-40	ED-00.55-SL01-(0-0.42')	Solid	02/07/18 11:30	02/14/18 09:40
240-91496-41	ED-00.55-SL01-(0.5-0.88')	Solid	02/07/18 11:40	02/14/18 09:40
240-91496-42	ED-00.55-SL02-(0-0.42')	Solid	02/07/18 13:08	02/14/18 09:40
240-91496-43	ED-00.55-SL02-(0.5-0.96')	Solid	02/07/18 13:16	02/14/18 09:40
240-91496-44	ED-01.24-SL04-(0-0.84')	Solid	02/07/18 13:20	02/14/18 09:40
240-91496-45	ED-01.24-SL04-(1-1.46')	Solid	02/07/18 13:30	02/14/18 09:40
240-91496-46	ED-01.24-SL05-(0-0.42')	Solid	02/07/18 13:50	02/14/18 09:40
240-91496-47	ED-01.24-SL05-(0-0.42')-DUP	Solid	02/07/18 13:50	02/14/18 09:40
240-91496-48	ED-01.24-SL05-(0.5-1.46')	Solid	02/07/18 13:56	02/14/18 09:40
240-91496-49	ED-01.24-SL06-(0.0-0.84')	Solid	02/07/18 14:10	02/14/18 09:40
240-91496-50	ED-01.24-SL06-(1-1.96')	Solid	02/07/18 14:18	02/14/18 09:40
240-91496-51	ED-00.8-SL03-(1.25-2.25')	Solid	02/07/18 10:11	02/14/18 09:40

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.00-SL01-(0-0.91')

Lab Sample ID: 240-91496-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	83.3		60.4	29.0	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	83.3		60.4	37.4	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.00-SL01-(0.91-2.21')

Lab Sample ID: 240-91496-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	3120		300	144	ug/Kg	5	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	3120		300	186	ug/Kg	5	☒	8082A	Total/NA

Client Sample ID: ED-00.00-SL01-(2.21-3.12')

Lab Sample ID: 240-91496-3

No Detections.

Client Sample ID: ED-00.02-SL01-(0-0.63')

Lab Sample ID: 240-91496-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1020		58.4	28.0	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1020		58.4	36.2	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.02-SL01-(0.63-1.76')

Lab Sample ID: 240-91496-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	70.8		54.4	26.1	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	70.8		54.4	33.8	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.02-SL01-(1.76-2.18')

Lab Sample ID: 240-91496-7

No Detections.

Client Sample ID: ED-00.02-SL01-(2.18-3.43')

Lab Sample ID: 240-91496-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	44.0	J	55.5	26.6	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	44.0	J	55.5	34.4	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.05-SL01-(0-0.67')

Lab Sample ID: 240-91496-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	3190		322	155	ug/Kg	5	☒	8082A	Total/NA
Aroclor-1260	361		322	142	ug/Kg	5	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	3550		322	200	ug/Kg	5	☒	8082A	Total/NA

Client Sample ID: ED-00.05-SL01-(0.67-1.2')

Lab Sample ID: 240-91496-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	30.8	J	58.6	28.1	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.05-SL01-(1.4-2.3')

Lab Sample ID: 240-91496-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	54.5	J p	58.4	28.1	ug/Kg	1	☒	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.05-SL01-(1.4-2.3') (Continued)

Lab Sample ID: 240-91496-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Polychlorinated biphenyls, Total	54.5	J	58.4	36.2	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.05-SL01-(2.3-3.3')

Lab Sample ID: 240-91496-13

No Detections.

Client Sample ID: ED-00.08-SL03-(2.25-2.75')

Lab Sample ID: 240-91496-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	49.4	J	54.4	26.1	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	49.4	J	54.4	33.7	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.08-SL03-(2.75-3.5')

Lab Sample ID: 240-91496-16

No Detections.

Client Sample ID: ED-00.08-SL05-(0-0.67')

Lab Sample ID: 240-91496-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	17000		1210	579	ug/Kg	20	☒	8082A	Total/NA
Aroclor-1260	1230		1210	531	ug/Kg	20	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	18200		1210	748	ug/Kg	20	☒	8082A	Total/NA

Client Sample ID: ED-00.08-SL05-(0.67-1.25')

Lab Sample ID: 240-91496-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	5490		587	282	ug/Kg	10	☒	8082A	Total/NA
Aroclor-1260	263	J	587	258	ug/Kg	10	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	5750		587	364	ug/Kg	10	☒	8082A	Total/NA

Client Sample ID: ED-00.08-SL05-(1.25-2.1')

Lab Sample ID: 240-91496-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	39.4	J	55.5	26.6	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	39.4	J	55.5	34.4	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.08-SL05-(2.1-3')

Lab Sample ID: 240-91496-25

No Detections.

Client Sample ID: ED-00.13-SL01-(0-0.67')

Lab Sample ID: 240-91496-31

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	5560		291	140	ug/Kg	5	☒	8082A	Total/NA
Aroclor-1260	352		291	128	ug/Kg	5	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	5910		291	181	ug/Kg	5	☒	8082A	Total/NA

Client Sample ID: ED-00.13-SL01-(0.67-1.67')

Lab Sample ID: 240-91496-32

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	300		58.4	28.1	ug/Kg	1	☒	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.13-SL01-(0.67-1.67') (Continued)

Lab Sample ID: 240-91496-32

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Polychlorinated biphenyls, Total	300		58.4	36.2	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.13-SL01-(1.6-2.75')

Lab Sample ID: 240-91496-33

No Detections.

Client Sample ID: ED-00.13-SL01-(2.75-3.08')

Lab Sample ID: 240-91496-34

No Detections.

Client Sample ID: ED-00.17-SL01-(0-0.75')

Lab Sample ID: 240-91496-35

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	2940		314	151	ug/Kg	5	☒	8082A	Total/NA
Aroclor-1260	427		314	138	ug/Kg	5	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	3370		314	194	ug/Kg	5	☒	8082A	Total/NA

Client Sample ID: ED-00.17-SL01-(0-0.75')-DUP

Lab Sample ID: 240-91496-36

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	2640		310	149	ug/Kg	5	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	2640		310	192	ug/Kg	5	☒	8082A	Total/NA

Client Sample ID: ED-00.17-SL01-(0.75-1.75')

Lab Sample ID: 240-91496-37

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	13500		562	270	ug/Kg	10	☒	8082A	Total/NA
Aroclor-1260	965		562	247	ug/Kg	10	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	14500		562	348	ug/Kg	10	☒	8082A	Total/NA

Client Sample ID: ED-00.17-SL01-(1.75-2.75')

Lab Sample ID: 240-91496-38

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	51600		2950	1420	ug/Kg	50	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	51600		2950	1830	ug/Kg	50	☒	8082A	Total/NA

Client Sample ID: ED-00.17-SL01-(2.75-3.75')

Lab Sample ID: 240-91496-39

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	34.8	J	56.1	26.9	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	34.8	J	56.1	34.8	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.55-SL01-(0-0.42')

Lab Sample ID: 240-91496-40

No Detections.

Client Sample ID: ED-00.55-SL01-(0.5-0.88')

Lab Sample ID: 240-91496-41

No Detections.

Client Sample ID: ED-00.55-SL02-(0-0.42')

Lab Sample ID: 240-91496-42

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.55-SL02-(0-0.42') (Continued)

Lab Sample ID: 240-91496-42

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1254	30.7	J	65.7	30.2	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.55-SL02-(0.5-0.96')

Lab Sample ID: 240-91496-43

No Detections.

Client Sample ID: ED-01.24-SL04-(0-0.84')

Lab Sample ID: 240-91496-44

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	31.0	J	54.8	26.3	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.24-SL04-(1-1.46')

Lab Sample ID: 240-91496-45

No Detections.

Client Sample ID: ED-01.24-SL05-(0-0.42')

Lab Sample ID: 240-91496-46

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	803		67.0	32.2	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	182		67.0	29.5	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	985		67.0	41.6	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.24-SL05-(0-0.42')-DUP

Lab Sample ID: 240-91496-47

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	899		61.3	29.4	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	194		61.3	27.0	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1090		61.3	38.0	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.24-SL05-(0.5-1.46')

Lab Sample ID: 240-91496-48

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	1100		64.5	31.0	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	205		64.5	28.4	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1310		64.5	40.0	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.24-SL06-(0.0-0.84')

Lab Sample ID: 240-91496-49

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	127	p	64.5	30.9	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	29.9	J	64.5	28.4	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	157		64.5	40.0	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.24-SL06-(1-1.96')

Lab Sample ID: 240-91496-50

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	135		61.5	29.5	ug/Kg	1	☒	8082A	Total/NA
Aroclor-1260	29.6	J F2	61.5	27.1	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	165		61.5	38.1	ug/Kg	1	☒	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.8-SL03-(1.25-2.25')

Lab Sample ID: 240-91496-51

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aroclor-1248	4890		287	138	ug/Kg	5	☼	8082A	Total/NA
Aroclor-1260	273	J	287	126	ug/Kg	5	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	5160		287	178	ug/Kg	5	☼	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton



Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.00-SL01-(0-0.91')

Lab Sample ID: 240-91496-1

Date Collected: 02/07/18 09:16

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 85.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26.6	U	60.4	26.6	ug/Kg	☼	02/15/18 09:44	02/18/18 16:59	1
Aroclor-1221	29.0	U	60.4	29.0	ug/Kg	☼	02/15/18 09:44	02/18/18 16:59	1
Aroclor-1232	27.8	U	60.4	27.8	ug/Kg	☼	02/15/18 09:44	02/18/18 16:59	1
Aroclor-1242	22.9	U	60.4	22.9	ug/Kg	☼	02/15/18 09:44	02/18/18 16:59	1
Aroclor-1248	83.3		60.4	29.0	ug/Kg	☼	02/15/18 09:44	02/18/18 16:59	1
Aroclor-1254	27.8	U	60.4	27.8	ug/Kg	☼	02/15/18 09:44	02/18/18 16:59	1
Aroclor-1260	26.6	U	60.4	26.6	ug/Kg	☼	02/15/18 09:44	02/18/18 16:59	1
Aroclor-1262	37.4	U	60.4	37.4	ug/Kg	☼	02/15/18 09:44	02/18/18 16:59	1
Aroclor-1268	27.8	U	60.4	27.8	ug/Kg	☼	02/15/18 09:44	02/18/18 16:59	1
Polychlorinated biphenyls, Total	83.3		60.4	37.4	ug/Kg	☼	02/15/18 09:44	02/18/18 16:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	82		10 - 132	02/15/18 09:44	02/18/18 16:59	1
<i>Tetrachloro-m-xylene</i>	84		14 - 128	02/15/18 09:44	02/18/18 16:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.8		0.1	0.1	%			02/15/18 11:31	1
Percent Moisture	14.2		0.1	0.1	%			02/15/18 11:31	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.00-SL01-(0.91-2.21')

Lab Sample ID: 240-91496-2

Date Collected: 02/07/18 09:16

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 83.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	132	U F1	300	132	ug/Kg	☼	02/15/18 09:44	02/16/18 12:58	5
Aroclor-1221	144	U	300	144	ug/Kg	☼	02/15/18 09:44	02/16/18 12:58	5
Aroclor-1232	138	U	300	138	ug/Kg	☼	02/15/18 09:44	02/16/18 12:58	5
Aroclor-1242	114	U	300	114	ug/Kg	☼	02/15/18 09:44	02/16/18 12:58	5
Aroclor-1248	3120		300	144	ug/Kg	☼	02/15/18 09:44	02/16/18 12:58	5
Aroclor-1254	138	U	300	138	ug/Kg	☼	02/15/18 09:44	02/16/18 12:58	5
Aroclor-1260	132	U	300	132	ug/Kg	☼	02/15/18 09:44	02/16/18 12:58	5
Aroclor-1262	186	U	300	186	ug/Kg	☼	02/15/18 09:44	02/16/18 12:58	5
Aroclor-1268	138	U	300	138	ug/Kg	☼	02/15/18 09:44	02/16/18 12:58	5
Polychlorinated biphenyls, Total	3120		300	186	ug/Kg	☼	02/15/18 09:44	02/16/18 12:58	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	97		10 - 132	02/15/18 09:44	02/16/18 12:58	5
Tetrachloro-m-xylene	79		14 - 128	02/15/18 09:44	02/16/18 12:58	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.6		0.1	0.1	%			02/15/18 11:31	1
Percent Moisture	16.4		0.1	0.1	%			02/15/18 11:31	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.00-SL01-(2.21-3.12')

Lab Sample ID: 240-91496-3

Date Collected: 02/07/18 09:16

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 89.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	24.2	U	55.0	24.2	ug/Kg	☼	02/15/18 09:44	02/18/18 17:17	1
Aroclor-1221	26.4	U	55.0	26.4	ug/Kg	☼	02/15/18 09:44	02/18/18 17:17	1
Aroclor-1232	25.3	U	55.0	25.3	ug/Kg	☼	02/15/18 09:44	02/18/18 17:17	1
Aroclor-1242	20.9	U	55.0	20.9	ug/Kg	☼	02/15/18 09:44	02/18/18 17:17	1
Aroclor-1248	26.4	U	55.0	26.4	ug/Kg	☼	02/15/18 09:44	02/18/18 17:17	1
Aroclor-1254	25.3	U	55.0	25.3	ug/Kg	☼	02/15/18 09:44	02/18/18 17:17	1
Aroclor-1260	24.2	U	55.0	24.2	ug/Kg	☼	02/15/18 09:44	02/18/18 17:17	1
Aroclor-1262	34.1	U	55.0	34.1	ug/Kg	☼	02/15/18 09:44	02/18/18 17:17	1
Aroclor-1268	25.3	U	55.0	25.3	ug/Kg	☼	02/15/18 09:44	02/18/18 17:17	1
Polychlorinated biphenyls, Total	34.1	U	55.0	34.1	ug/Kg	☼	02/15/18 09:44	02/18/18 17:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	89		10 - 132	02/15/18 09:44	02/18/18 17:17	1
Tetrachloro-m-xylene	73		14 - 128	02/15/18 09:44	02/18/18 17:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.5		0.1	0.1	%			02/15/18 11:31	1
Percent Moisture	10.5		0.1	0.1	%			02/15/18 11:31	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.02-SL01-(0-0.63')

Lab Sample ID: 240-91496-5

Date Collected: 02/07/18 09:38

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 84.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	25.7	U	58.4	25.7	ug/Kg	☼	02/15/18 09:44	02/18/18 17:54	1
Aroclor-1221	28.0	U	58.4	28.0	ug/Kg	☼	02/15/18 09:44	02/18/18 17:54	1
Aroclor-1232	26.9	U	58.4	26.9	ug/Kg	☼	02/15/18 09:44	02/18/18 17:54	1
Aroclor-1242	22.2	U	58.4	22.2	ug/Kg	☼	02/15/18 09:44	02/18/18 17:54	1
Aroclor-1248	1020		58.4	28.0	ug/Kg	☼	02/15/18 09:44	02/18/18 17:54	1
Aroclor-1254	26.9	U	58.4	26.9	ug/Kg	☼	02/15/18 09:44	02/18/18 17:54	1
Aroclor-1260	25.7	U	58.4	25.7	ug/Kg	☼	02/15/18 09:44	02/18/18 17:54	1
Aroclor-1262	36.2	U	58.4	36.2	ug/Kg	☼	02/15/18 09:44	02/18/18 17:54	1
Aroclor-1268	26.9	U	58.4	26.9	ug/Kg	☼	02/15/18 09:44	02/18/18 17:54	1
Polychlorinated biphenyls, Total	1020		58.4	36.2	ug/Kg	☼	02/15/18 09:44	02/18/18 17:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	132	p	10 - 132	02/15/18 09:44	02/18/18 17:54	1
Tetrachloro-m-xylene	123		14 - 128	02/15/18 09:44	02/18/18 17:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.5		0.1	0.1	%			02/15/18 11:31	1
Percent Moisture	15.5		0.1	0.1	%			02/15/18 11:31	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.02-SL01-(0.63-1.76')

Lab Sample ID: 240-91496-6

Date Collected: 02/07/18 09:38

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 89.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	24.0	U	54.4	24.0	ug/Kg	☼	02/15/18 09:44	02/18/18 18:12	1
Aroclor-1221	26.1	U	54.4	26.1	ug/Kg	☼	02/15/18 09:44	02/18/18 18:12	1
Aroclor-1232	25.0	U	54.4	25.0	ug/Kg	☼	02/15/18 09:44	02/18/18 18:12	1
Aroclor-1242	20.7	U	54.4	20.7	ug/Kg	☼	02/15/18 09:44	02/18/18 18:12	1
Aroclor-1248	70.8		54.4	26.1	ug/Kg	☼	02/15/18 09:44	02/18/18 18:12	1
Aroclor-1254	25.0	U	54.4	25.0	ug/Kg	☼	02/15/18 09:44	02/18/18 18:12	1
Aroclor-1260	24.0	U	54.4	24.0	ug/Kg	☼	02/15/18 09:44	02/18/18 18:12	1
Aroclor-1262	33.8	U	54.4	33.8	ug/Kg	☼	02/15/18 09:44	02/18/18 18:12	1
Aroclor-1268	25.0	U	54.4	25.0	ug/Kg	☼	02/15/18 09:44	02/18/18 18:12	1
Polychlorinated biphenyls, Total	70.8		54.4	33.8	ug/Kg	☼	02/15/18 09:44	02/18/18 18:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	101		10 - 132	02/15/18 09:44	02/18/18 18:12	1
Tetrachloro-m-xylene	90		14 - 128	02/15/18 09:44	02/18/18 18:12	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.1		0.1	0.1	%			02/15/18 11:31	1
Percent Moisture	10.9		0.1	0.1	%			02/15/18 11:31	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.02-SL01-(1.76-2.18')

Lab Sample ID: 240-91496-7

Date Collected: 02/07/18 09:38

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 90.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	24.7	U	56.1	24.7	ug/Kg	☼	02/15/18 09:44	02/18/18 18:31	1
Aroclor-1221	26.9	U	56.1	26.9	ug/Kg	☼	02/15/18 09:44	02/18/18 18:31	1
Aroclor-1232	25.8	U	56.1	25.8	ug/Kg	☼	02/15/18 09:44	02/18/18 18:31	1
Aroclor-1242	21.3	U	56.1	21.3	ug/Kg	☼	02/15/18 09:44	02/18/18 18:31	1
Aroclor-1248	26.9	U	56.1	26.9	ug/Kg	☼	02/15/18 09:44	02/18/18 18:31	1
Aroclor-1254	25.8	U	56.1	25.8	ug/Kg	☼	02/15/18 09:44	02/18/18 18:31	1
Aroclor-1260	24.7	U	56.1	24.7	ug/Kg	☼	02/15/18 09:44	02/18/18 18:31	1
Aroclor-1262	34.8	U	56.1	34.8	ug/Kg	☼	02/15/18 09:44	02/18/18 18:31	1
Aroclor-1268	25.8	U	56.1	25.8	ug/Kg	☼	02/15/18 09:44	02/18/18 18:31	1
Polychlorinated biphenyls, Total	34.8	U	56.1	34.8	ug/Kg	☼	02/15/18 09:44	02/18/18 18:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	93		10 - 132	02/15/18 09:44	02/18/18 18:31	1
Tetrachloro-m-xylene	81		14 - 128	02/15/18 09:44	02/18/18 18:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.2		0.1	0.1	%			02/15/18 11:31	1
Percent Moisture	9.8		0.1	0.1	%			02/15/18 11:31	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.02-SL01-(2.18-3.43')

Lab Sample ID: 240-91496-8

Date Collected: 02/07/18 09:38

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 89.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	24.4	U	55.5	24.4	ug/Kg	☼	02/15/18 09:44	02/18/18 18:49	1
Aroclor-1221	26.6	U	55.5	26.6	ug/Kg	☼	02/15/18 09:44	02/18/18 18:49	1
Aroclor-1232	25.5	U	55.5	25.5	ug/Kg	☼	02/15/18 09:44	02/18/18 18:49	1
Aroclor-1242	21.1	U	55.5	21.1	ug/Kg	☼	02/15/18 09:44	02/18/18 18:49	1
Aroclor-1248	44.0	J	55.5	26.6	ug/Kg	☼	02/15/18 09:44	02/18/18 18:49	1
Aroclor-1254	25.5	U	55.5	25.5	ug/Kg	☼	02/15/18 09:44	02/18/18 18:49	1
Aroclor-1260	24.4	U	55.5	24.4	ug/Kg	☼	02/15/18 09:44	02/18/18 18:49	1
Aroclor-1262	34.4	U	55.5	34.4	ug/Kg	☼	02/15/18 09:44	02/18/18 18:49	1
Aroclor-1268	25.5	U	55.5	25.5	ug/Kg	☼	02/15/18 09:44	02/18/18 18:49	1
Polychlorinated biphenyls, Total	44.0	J	55.5	34.4	ug/Kg	☼	02/15/18 09:44	02/18/18 18:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	170	X	10 - 132	02/15/18 09:44	02/18/18 18:49	1
Tetrachloro-m-xylene	148	X	14 - 128	02/15/18 09:44	02/18/18 18:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.3		0.1	0.1	%			02/15/18 11:31	1
Percent Moisture	10.7		0.1	0.1	%			02/15/18 11:31	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.05-SL01-(0-0.67')

Lab Sample ID: 240-91496-10

Date Collected: 02/07/18 10:03

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 79.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	142	U	322	142	ug/Kg	☼	02/15/18 09:44	02/18/18 19:26	5
Aroclor-1221	155	U	322	155	ug/Kg	☼	02/15/18 09:44	02/18/18 19:26	5
Aroclor-1232	148	U	322	148	ug/Kg	☼	02/15/18 09:44	02/18/18 19:26	5
Aroclor-1242	123	U	322	123	ug/Kg	☼	02/15/18 09:44	02/18/18 19:26	5
Aroclor-1248	3190		322	155	ug/Kg	☼	02/15/18 09:44	02/18/18 19:26	5
Aroclor-1254	148	U	322	148	ug/Kg	☼	02/15/18 09:44	02/18/18 19:26	5
Aroclor-1260	361		322	142	ug/Kg	☼	02/15/18 09:44	02/18/18 19:26	5
Aroclor-1262	200	U	322	200	ug/Kg	☼	02/15/18 09:44	02/18/18 19:26	5
Aroclor-1268	148	U	322	148	ug/Kg	☼	02/15/18 09:44	02/18/18 19:26	5
Polychlorinated biphenyls, Total	3550		322	200	ug/Kg	☼	02/15/18 09:44	02/18/18 19:26	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	123	p	10 - 132	02/15/18 09:44	02/18/18 19:26	5
Tetrachloro-m-xylene	114		14 - 128	02/15/18 09:44	02/18/18 19:26	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.1		0.1	0.1	%			02/15/18 11:31	1
Percent Moisture	20.9		0.1	0.1	%			02/15/18 11:31	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.05-SL01-(0.67-1.2')

Lab Sample ID: 240-91496-11

Date Collected: 02/07/18 10:03

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 85.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	25.8	U	58.6	25.8	ug/Kg	☼	02/15/18 10:32	02/18/18 21:32	1
Aroclor-1221	28.1	U	58.6	28.1	ug/Kg	☼	02/15/18 10:32	02/18/18 21:32	1
Aroclor-1232	27.0	U	58.6	27.0	ug/Kg	☼	02/15/18 10:32	02/18/18 21:32	1
Aroclor-1242	22.3	U	58.6	22.3	ug/Kg	☼	02/15/18 10:32	02/18/18 21:32	1
Aroclor-1248	30.8	J	58.6	28.1	ug/Kg	☼	02/15/18 10:32	02/18/18 21:32	1
Aroclor-1254	27.0	U	58.6	27.0	ug/Kg	☼	02/15/18 10:32	02/18/18 21:32	1
Aroclor-1260	25.8	U	58.6	25.8	ug/Kg	☼	02/15/18 10:32	02/18/18 21:32	1
Aroclor-1262	36.3	U	58.6	36.3	ug/Kg	☼	02/15/18 10:32	02/18/18 21:32	1
Aroclor-1268	27.0	U	58.6	27.0	ug/Kg	☼	02/15/18 10:32	02/18/18 21:32	1
Polychlorinated biphenyls, Total	36.3	U	58.6	36.3	ug/Kg	☼	02/15/18 10:32	02/18/18 21:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	100		10 - 132	02/15/18 10:32	02/18/18 21:32	1
Tetrachloro-m-xylene	91		14 - 128	02/15/18 10:32	02/18/18 21:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.7		0.1	0.1	%			02/15/18 11:31	1
Percent Moisture	14.3		0.1	0.1	%			02/15/18 11:31	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.05-SL01-(1.4-2.3')

Lab Sample ID: 240-91496-12

Date Collected: 02/07/18 10:03

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 86.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	25.7	U	58.4	25.7	ug/Kg	☼	02/15/18 10:32	02/18/18 15:15	1
Aroclor-1221	28.1	U	58.4	28.1	ug/Kg	☼	02/15/18 10:32	02/18/18 15:15	1
Aroclor-1232	26.9	U	58.4	26.9	ug/Kg	☼	02/15/18 10:32	02/18/18 15:15	1
Aroclor-1242	22.2	U	58.4	22.2	ug/Kg	☼	02/15/18 10:32	02/18/18 15:15	1
Aroclor-1248	54.5	J p	58.4	28.1	ug/Kg	☼	02/15/18 10:32	02/18/18 15:15	1
Aroclor-1254	26.9	U	58.4	26.9	ug/Kg	☼	02/15/18 10:32	02/18/18 15:15	1
Aroclor-1260	25.7	U	58.4	25.7	ug/Kg	☼	02/15/18 10:32	02/18/18 15:15	1
Aroclor-1262	36.2	U	58.4	36.2	ug/Kg	☼	02/15/18 10:32	02/18/18 15:15	1
Aroclor-1268	26.9	U	58.4	26.9	ug/Kg	☼	02/15/18 10:32	02/18/18 15:15	1
Polychlorinated biphenyls, Total	54.5	J	58.4	36.2	ug/Kg	☼	02/15/18 10:32	02/18/18 15:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	67		10 - 132	02/15/18 10:32	02/18/18 15:15	1
Tetrachloro-m-xylene	62		14 - 128	02/15/18 10:32	02/18/18 15:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.4		0.1	0.1	%			02/15/18 11:31	1
Percent Moisture	13.6		0.1	0.1	%			02/15/18 11:31	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.05-SL01-(2.3-3.3')

Lab Sample ID: 240-91496-13

Date Collected: 02/07/18 10:03

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 89.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	23.6	U	53.7	23.6	ug/Kg	☼	02/15/18 10:32	02/18/18 15:32	1
Aroclor-1221	25.8	U	53.7	25.8	ug/Kg	☼	02/15/18 10:32	02/18/18 15:32	1
Aroclor-1232	24.7	U	53.7	24.7	ug/Kg	☼	02/15/18 10:32	02/18/18 15:32	1
Aroclor-1242	20.4	U	53.7	20.4	ug/Kg	☼	02/15/18 10:32	02/18/18 15:32	1
Aroclor-1248	25.8	U	53.7	25.8	ug/Kg	☼	02/15/18 10:32	02/18/18 15:32	1
Aroclor-1254	24.7	U	53.7	24.7	ug/Kg	☼	02/15/18 10:32	02/18/18 15:32	1
Aroclor-1260	23.6	U	53.7	23.6	ug/Kg	☼	02/15/18 10:32	02/18/18 15:32	1
Aroclor-1262	33.3	U	53.7	33.3	ug/Kg	☼	02/15/18 10:32	02/18/18 15:32	1
Aroclor-1268	24.7	U	53.7	24.7	ug/Kg	☼	02/15/18 10:32	02/18/18 15:32	1
Polychlorinated biphenyls, Total	33.3	U	53.7	33.3	ug/Kg	☼	02/15/18 10:32	02/18/18 15:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	76		10 - 132	02/15/18 10:32	02/18/18 15:32	1
Tetrachloro-m-xylene	77		14 - 128	02/15/18 10:32	02/18/18 15:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.8		0.1	0.1	%			02/15/18 11:31	1
Percent Moisture	10.2		0.1	0.1	%			02/15/18 11:31	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.08-SL03-(2.25-2.75')

Lab Sample ID: 240-91496-15

Date Collected: 02/07/18 10:11

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 92.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	23.9	U	54.4	23.9	ug/Kg	☼	02/15/18 10:32	02/18/18 16:06	1
Aroclor-1221	26.1	U	54.4	26.1	ug/Kg	☼	02/15/18 10:32	02/18/18 16:06	1
Aroclor-1232	25.0	U	54.4	25.0	ug/Kg	☼	02/15/18 10:32	02/18/18 16:06	1
Aroclor-1242	20.7	U	54.4	20.7	ug/Kg	☼	02/15/18 10:32	02/18/18 16:06	1
Aroclor-1248	49.4	J	54.4	26.1	ug/Kg	☼	02/15/18 10:32	02/18/18 16:06	1
Aroclor-1254	25.0	U	54.4	25.0	ug/Kg	☼	02/15/18 10:32	02/18/18 16:06	1
Aroclor-1260	23.9	U	54.4	23.9	ug/Kg	☼	02/15/18 10:32	02/18/18 16:06	1
Aroclor-1262	33.7	U	54.4	33.7	ug/Kg	☼	02/15/18 10:32	02/18/18 16:06	1
Aroclor-1268	25.0	U	54.4	25.0	ug/Kg	☼	02/15/18 10:32	02/18/18 16:06	1
Polychlorinated biphenyls, Total	49.4	J	54.4	33.7	ug/Kg	☼	02/15/18 10:32	02/18/18 16:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	77		10 - 132	02/15/18 10:32	02/18/18 16:06	1
Tetrachloro-m-xylene	72		14 - 128	02/15/18 10:32	02/18/18 16:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	92.0		0.1	0.1	%			02/15/18 11:31	1
Percent Moisture	8.0		0.1	0.1	%			02/15/18 11:31	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.08-SL03-(2.75-3.5')

Lab Sample ID: 240-91496-16

Date Collected: 02/07/18 10:11

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 82.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26.6	U	60.5	26.6	ug/Kg	☼	02/15/18 10:32	02/18/18 16:23	1
Aroclor-1221	29.0	U	60.5	29.0	ug/Kg	☼	02/15/18 10:32	02/18/18 16:23	1
Aroclor-1232	27.8	U	60.5	27.8	ug/Kg	☼	02/15/18 10:32	02/18/18 16:23	1
Aroclor-1242	23.0	U	60.5	23.0	ug/Kg	☼	02/15/18 10:32	02/18/18 16:23	1
Aroclor-1248	29.0	U	60.5	29.0	ug/Kg	☼	02/15/18 10:32	02/18/18 16:23	1
Aroclor-1254	27.8	U	60.5	27.8	ug/Kg	☼	02/15/18 10:32	02/18/18 16:23	1
Aroclor-1260	26.6	U	60.5	26.6	ug/Kg	☼	02/15/18 10:32	02/18/18 16:23	1
Aroclor-1262	37.5	U	60.5	37.5	ug/Kg	☼	02/15/18 10:32	02/18/18 16:23	1
Aroclor-1268	27.8	U	60.5	27.8	ug/Kg	☼	02/15/18 10:32	02/18/18 16:23	1
Polychlorinated biphenyls, Total	37.5	U	60.5	37.5	ug/Kg	☼	02/15/18 10:32	02/18/18 16:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	84		10 - 132	02/15/18 10:32	02/18/18 16:23	1
Tetrachloro-m-xylene	84		14 - 128	02/15/18 10:32	02/18/18 16:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.4		0.1	0.1	%			02/15/18 11:31	1
Percent Moisture	17.6		0.1	0.1	%			02/15/18 11:31	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.08-SL05-(0-0.67')

Lab Sample ID: 240-91496-22

Date Collected: 02/07/18 10:26

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 80.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	531	U	1210	531	ug/Kg	☼	02/15/18 10:32	02/18/18 18:06	20
Aroclor-1221	579	U	1210	579	ug/Kg	☼	02/15/18 10:32	02/18/18 18:06	20
Aroclor-1232	555	U	1210	555	ug/Kg	☼	02/15/18 10:32	02/18/18 18:06	20
Aroclor-1242	459	U	1210	459	ug/Kg	☼	02/15/18 10:32	02/18/18 18:06	20
Aroclor-1248	17000		1210	579	ug/Kg	☼	02/15/18 10:32	02/18/18 18:06	20
Aroclor-1254	555	U	1210	555	ug/Kg	☼	02/15/18 10:32	02/18/18 18:06	20
Aroclor-1260	1230		1210	531	ug/Kg	☼	02/15/18 10:32	02/18/18 18:06	20
Aroclor-1262	748	U	1210	748	ug/Kg	☼	02/15/18 10:32	02/18/18 18:06	20
Aroclor-1268	555	U	1210	555	ug/Kg	☼	02/15/18 10:32	02/18/18 18:06	20
Polychlorinated biphenyls, Total	18200		1210	748	ug/Kg	☼	02/15/18 10:32	02/18/18 18:06	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	92		10 - 132	02/15/18 10:32	02/18/18 18:06	20
Tetrachloro-m-xylene	112		14 - 128	02/15/18 10:32	02/18/18 18:06	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.4		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	19.6		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.08-SL05-(0.67-1.25')

Lab Sample ID: 240-91496-23

Date Collected: 02/07/18 10:26

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 87.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	258	U	587	258	ug/Kg	☼	02/15/18 10:32	02/18/18 18:23	10
Aroclor-1221	282	U	587	282	ug/Kg	☼	02/15/18 10:32	02/18/18 18:23	10
Aroclor-1232	270	U	587	270	ug/Kg	☼	02/15/18 10:32	02/18/18 18:23	10
Aroclor-1242	223	U	587	223	ug/Kg	☼	02/15/18 10:32	02/18/18 18:23	10
Aroclor-1248	5490		587	282	ug/Kg	☼	02/15/18 10:32	02/18/18 18:23	10
Aroclor-1254	270	U	587	270	ug/Kg	☼	02/15/18 10:32	02/18/18 18:23	10
Aroclor-1260	263	J	587	258	ug/Kg	☼	02/15/18 10:32	02/18/18 18:23	10
Aroclor-1262	364	U	587	364	ug/Kg	☼	02/15/18 10:32	02/18/18 18:23	10
Aroclor-1268	270	U	587	270	ug/Kg	☼	02/15/18 10:32	02/18/18 18:23	10
Polychlorinated biphenyls, Total	5750		587	364	ug/Kg	☼	02/15/18 10:32	02/18/18 18:23	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	95		10 - 132	02/15/18 10:32	02/18/18 18:23	10
<i>Tetrachloro-m-xylene</i>	105		14 - 128	02/15/18 10:32	02/18/18 18:23	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.6		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	12.4		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.08-SL05-(1.25-2.1')

Lab Sample ID: 240-91496-24

Date Collected: 02/07/18 10:26

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 89.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	24.4	U	55.5	24.4	ug/Kg	☼	02/15/18 10:32	02/18/18 18:40	1
Aroclor-1221	26.6	U	55.5	26.6	ug/Kg	☼	02/15/18 10:32	02/18/18 18:40	1
Aroclor-1232	25.5	U	55.5	25.5	ug/Kg	☼	02/15/18 10:32	02/18/18 18:40	1
Aroclor-1242	21.1	U	55.5	21.1	ug/Kg	☼	02/15/18 10:32	02/18/18 18:40	1
Aroclor-1248	39.4	J	55.5	26.6	ug/Kg	☼	02/15/18 10:32	02/18/18 18:40	1
Aroclor-1254	25.5	U	55.5	25.5	ug/Kg	☼	02/15/18 10:32	02/18/18 18:40	1
Aroclor-1260	24.4	U	55.5	24.4	ug/Kg	☼	02/15/18 10:32	02/18/18 18:40	1
Aroclor-1262	34.4	U	55.5	34.4	ug/Kg	☼	02/15/18 10:32	02/18/18 18:40	1
Aroclor-1268	25.5	U	55.5	25.5	ug/Kg	☼	02/15/18 10:32	02/18/18 18:40	1
Polychlorinated biphenyls, Total	39.4	J	55.5	34.4	ug/Kg	☼	02/15/18 10:32	02/18/18 18:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	82		10 - 132	02/15/18 10:32	02/18/18 18:40	1
Tetrachloro-m-xylene	75		14 - 128	02/15/18 10:32	02/18/18 18:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.5		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	10.5		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.08-SL05-(2.1-3')

Lab Sample ID: 240-91496-25

Date Collected: 02/07/18 10:26

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 88.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	25.9	U	58.8	25.9	ug/Kg	☼	02/15/18 10:32	02/18/18 18:57	1
Aroclor-1221	28.2	U	58.8	28.2	ug/Kg	☼	02/15/18 10:32	02/18/18 18:57	1
Aroclor-1232	27.0	U	58.8	27.0	ug/Kg	☼	02/15/18 10:32	02/18/18 18:57	1
Aroclor-1242	22.3	U	58.8	22.3	ug/Kg	☼	02/15/18 10:32	02/18/18 18:57	1
Aroclor-1248	28.2	U	58.8	28.2	ug/Kg	☼	02/15/18 10:32	02/18/18 18:57	1
Aroclor-1254	27.0	U	58.8	27.0	ug/Kg	☼	02/15/18 10:32	02/18/18 18:57	1
Aroclor-1260	25.9	U	58.8	25.9	ug/Kg	☼	02/15/18 10:32	02/18/18 18:57	1
Aroclor-1262	36.4	U	58.8	36.4	ug/Kg	☼	02/15/18 10:32	02/18/18 18:57	1
Aroclor-1268	27.0	U	58.8	27.0	ug/Kg	☼	02/15/18 10:32	02/18/18 18:57	1
Polychlorinated biphenyls, Total	36.4	U	58.8	36.4	ug/Kg	☼	02/15/18 10:32	02/18/18 18:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	79		10 - 132	02/15/18 10:32	02/18/18 18:57	1
Tetrachloro-m-xylene	69		14 - 128	02/15/18 10:32	02/18/18 18:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.4		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	11.6		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.13-SL01-(0-0.67')

Lab Sample ID: 240-91496-31

Date Collected: 02/07/18 10:33

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 82.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	128	U	291	128	ug/Kg	☼	02/15/18 11:13	02/19/18 22:10	5
Aroclor-1221	140	U	291	140	ug/Kg	☼	02/15/18 11:13	02/19/18 22:10	5
Aroclor-1232	134	U	291	134	ug/Kg	☼	02/15/18 11:13	02/19/18 22:10	5
Aroclor-1242	111	U	291	111	ug/Kg	☼	02/15/18 11:13	02/19/18 22:10	5
Aroclor-1248	5560		291	140	ug/Kg	☼	02/15/18 11:13	02/19/18 22:10	5
Aroclor-1254	134	U	291	134	ug/Kg	☼	02/15/18 11:13	02/19/18 22:10	5
Aroclor-1260	352		291	128	ug/Kg	☼	02/15/18 11:13	02/19/18 22:10	5
Aroclor-1262	181	U	291	181	ug/Kg	☼	02/15/18 11:13	02/19/18 22:10	5
Aroclor-1268	134	U	291	134	ug/Kg	☼	02/15/18 11:13	02/19/18 22:10	5
Polychlorinated biphenyls, Total	5910		291	181	ug/Kg	☼	02/15/18 11:13	02/19/18 22:10	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	59		10 - 132	02/15/18 11:13	02/19/18 22:10	5
<i>Tetrachloro-m-xylene</i>	76		14 - 128	02/15/18 11:13	02/19/18 22:10	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.1		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	17.9		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.13-SL01-(0.67-1.67')

Lab Sample ID: 240-91496-32

Date Collected: 02/07/18 10:33

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 89.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	25.7	U	58.4	25.7	ug/Kg	☼	02/15/18 11:13	02/19/18 14:50	1
Aroclor-1221	28.1	U	58.4	28.1	ug/Kg	☼	02/15/18 11:13	02/19/18 14:50	1
Aroclor-1232	26.9	U	58.4	26.9	ug/Kg	☼	02/15/18 11:13	02/19/18 14:50	1
Aroclor-1242	22.2	U	58.4	22.2	ug/Kg	☼	02/15/18 11:13	02/19/18 14:50	1
Aroclor-1248	300		58.4	28.1	ug/Kg	☼	02/15/18 11:13	02/19/18 14:50	1
Aroclor-1254	26.9	U	58.4	26.9	ug/Kg	☼	02/15/18 11:13	02/19/18 14:50	1
Aroclor-1260	25.7	U	58.4	25.7	ug/Kg	☼	02/15/18 11:13	02/19/18 14:50	1
Aroclor-1262	36.2	U	58.4	36.2	ug/Kg	☼	02/15/18 11:13	02/19/18 14:50	1
Aroclor-1268	26.9	U	58.4	26.9	ug/Kg	☼	02/15/18 11:13	02/19/18 14:50	1
Polychlorinated biphenyls, Total	300		58.4	36.2	ug/Kg	☼	02/15/18 11:13	02/19/18 14:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	70		10 - 132	02/15/18 11:13	02/19/18 14:50	1
Tetrachloro-m-xylene	65		14 - 128	02/15/18 11:13	02/19/18 14:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.2		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	10.8		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.13-SL01-(1.6-2.75')

Lab Sample ID: 240-91496-33

Date Collected: 02/07/18 10:33

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 87.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	25.4	U	57.8	25.4	ug/Kg	☼	02/15/18 11:13	02/19/18 15:08	1
Aroclor-1221	27.7	U	57.8	27.7	ug/Kg	☼	02/15/18 11:13	02/19/18 15:08	1
Aroclor-1232	26.6	U	57.8	26.6	ug/Kg	☼	02/15/18 11:13	02/19/18 15:08	1
Aroclor-1242	22.0	U	57.8	22.0	ug/Kg	☼	02/15/18 11:13	02/19/18 15:08	1
Aroclor-1248	27.7	U	57.8	27.7	ug/Kg	☼	02/15/18 11:13	02/19/18 15:08	1
Aroclor-1254	26.6	U	57.8	26.6	ug/Kg	☼	02/15/18 11:13	02/19/18 15:08	1
Aroclor-1260	25.4	U	57.8	25.4	ug/Kg	☼	02/15/18 11:13	02/19/18 15:08	1
Aroclor-1262	35.8	U	57.8	35.8	ug/Kg	☼	02/15/18 11:13	02/19/18 15:08	1
Aroclor-1268	26.6	U	57.8	26.6	ug/Kg	☼	02/15/18 11:13	02/19/18 15:08	1
Polychlorinated biphenyls, Total	35.8	U	57.8	35.8	ug/Kg	☼	02/15/18 11:13	02/19/18 15:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	144	X	10 - 132	02/15/18 11:13	02/19/18 15:08	1
Tetrachloro-m-xylene	135	X	14 - 128	02/15/18 11:13	02/19/18 15:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.4		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	12.6		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.13-SL01-(2.75-3.08')

Lab Sample ID: 240-91496-34

Date Collected: 02/07/18 10:33

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 80.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.8	U	63.2	27.8	ug/Kg	☼	02/15/18 11:13	02/19/18 15:27	1
Aroclor-1221	30.3	U	63.2	30.3	ug/Kg	☼	02/15/18 11:13	02/19/18 15:27	1
Aroclor-1232	29.1	U	63.2	29.1	ug/Kg	☼	02/15/18 11:13	02/19/18 15:27	1
Aroclor-1242	24.0	U	63.2	24.0	ug/Kg	☼	02/15/18 11:13	02/19/18 15:27	1
Aroclor-1248	30.3	U	63.2	30.3	ug/Kg	☼	02/15/18 11:13	02/19/18 15:27	1
Aroclor-1254	29.1	U	63.2	29.1	ug/Kg	☼	02/15/18 11:13	02/19/18 15:27	1
Aroclor-1260	27.8	U	63.2	27.8	ug/Kg	☼	02/15/18 11:13	02/19/18 15:27	1
Aroclor-1262	39.2	U	63.2	39.2	ug/Kg	☼	02/15/18 11:13	02/19/18 15:27	1
Aroclor-1268	29.1	U	63.2	29.1	ug/Kg	☼	02/15/18 11:13	02/19/18 15:27	1
Polychlorinated biphenyls, Total	39.2	U	63.2	39.2	ug/Kg	☼	02/15/18 11:13	02/19/18 15:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	58	p	10 - 132	02/15/18 11:13	02/19/18 15:27	1
Tetrachloro-m-xylene	54		14 - 128	02/15/18 11:13	02/19/18 15:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.2		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	19.8		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.17-SL01-(0-0.75')

Lab Sample ID: 240-91496-35

Date Collected: 02/07/18 10:41

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 80.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	138	U	314	138	ug/Kg	☼	02/15/18 11:13	02/19/18 15:45	5
Aroclor-1221	151	U	314	151	ug/Kg	☼	02/15/18 11:13	02/19/18 15:45	5
Aroclor-1232	144	U	314	144	ug/Kg	☼	02/15/18 11:13	02/19/18 15:45	5
Aroclor-1242	119	U	314	119	ug/Kg	☼	02/15/18 11:13	02/19/18 15:45	5
Aroclor-1248	2940		314	151	ug/Kg	☼	02/15/18 11:13	02/19/18 15:45	5
Aroclor-1254	144	U	314	144	ug/Kg	☼	02/15/18 11:13	02/19/18 15:45	5
Aroclor-1260	427		314	138	ug/Kg	☼	02/15/18 11:13	02/19/18 15:45	5
Aroclor-1262	194	U	314	194	ug/Kg	☼	02/15/18 11:13	02/19/18 15:45	5
Aroclor-1268	144	U	314	144	ug/Kg	☼	02/15/18 11:13	02/19/18 15:45	5
Polychlorinated biphenyls, Total	3370		314	194	ug/Kg	☼	02/15/18 11:13	02/19/18 15:45	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	95		10 - 132	02/15/18 11:13	02/19/18 15:45	5
Tetrachloro-m-xylene	89		14 - 128	02/15/18 11:13	02/19/18 15:45	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.9		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	19.1		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.17-SL01-(0-0.75')-DUP

Lab Sample ID: 240-91496-36

Date Collected: 02/07/18 10:41

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 83.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	136	U	310	136	ug/Kg	☼	02/15/18 11:13	02/20/18 18:57	5
Aroclor-1221	149	U	310	149	ug/Kg	☼	02/15/18 11:13	02/20/18 18:57	5
Aroclor-1232	143	U	310	143	ug/Kg	☼	02/15/18 11:13	02/20/18 18:57	5
Aroclor-1242	118	U	310	118	ug/Kg	☼	02/15/18 11:13	02/20/18 18:57	5
Aroclor-1248	2640		310	149	ug/Kg	☼	02/15/18 11:13	02/20/18 18:57	5
Aroclor-1254	143	U	310	143	ug/Kg	☼	02/15/18 11:13	02/20/18 18:57	5
Aroclor-1260	136	U	310	136	ug/Kg	☼	02/15/18 11:13	02/20/18 18:57	5
Aroclor-1262	192	U	310	192	ug/Kg	☼	02/15/18 11:13	02/20/18 18:57	5
Aroclor-1268	143	U	310	143	ug/Kg	☼	02/15/18 11:13	02/20/18 18:57	5
Polychlorinated biphenyls, Total	2640		310	192	ug/Kg	☼	02/15/18 11:13	02/20/18 18:57	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	108		10 - 132	02/15/18 11:13	02/20/18 18:57	5
Tetrachloro-m-xylene	105		14 - 128	02/15/18 11:13	02/20/18 18:57	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.3		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	16.7		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.17-SL01-(0.75-1.75')

Lab Sample ID: 240-91496-37

Date Collected: 02/07/18 10:41

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 89.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	247	U	562	247	ug/Kg	☼	02/15/18 11:13	02/19/18 16:22	10
Aroclor-1221	270	U	562	270	ug/Kg	☼	02/15/18 11:13	02/19/18 16:22	10
Aroclor-1232	258	U	562	258	ug/Kg	☼	02/15/18 11:13	02/19/18 16:22	10
Aroclor-1242	213	U	562	213	ug/Kg	☼	02/15/18 11:13	02/19/18 16:22	10
Aroclor-1248	13500		562	270	ug/Kg	☼	02/15/18 11:13	02/19/18 16:22	10
Aroclor-1254	258	U	562	258	ug/Kg	☼	02/15/18 11:13	02/19/18 16:22	10
Aroclor-1260	965		562	247	ug/Kg	☼	02/15/18 11:13	02/19/18 16:22	10
Aroclor-1262	348	U	562	348	ug/Kg	☼	02/15/18 11:13	02/19/18 16:22	10
Aroclor-1268	258	U	562	258	ug/Kg	☼	02/15/18 11:13	02/19/18 16:22	10
Polychlorinated biphenyls, Total	14500		562	348	ug/Kg	☼	02/15/18 11:13	02/19/18 16:22	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	80	p	10 - 132	02/15/18 11:13	02/19/18 16:22	10
Tetrachloro-m-xylene	90		14 - 128	02/15/18 11:13	02/19/18 16:22	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.1		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	10.9		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.17-SL01-(1.75-2.75')

Lab Sample ID: 240-91496-38

Date Collected: 02/07/18 10:41

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 85.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	1300	U	2950	1300	ug/Kg	☼	02/15/18 11:13	02/20/18 19:13	50
Aroclor-1221	1420	U	2950	1420	ug/Kg	☼	02/15/18 11:13	02/20/18 19:13	50
Aroclor-1232	1360	U	2950	1360	ug/Kg	☼	02/15/18 11:13	02/20/18 19:13	50
Aroclor-1242	1120	U	2950	1120	ug/Kg	☼	02/15/18 11:13	02/20/18 19:13	50
Aroclor-1248	51600		2950	1420	ug/Kg	☼	02/15/18 11:13	02/20/18 19:13	50
Aroclor-1254	1360	U	2950	1360	ug/Kg	☼	02/15/18 11:13	02/20/18 19:13	50
Aroclor-1260	1300	U	2950	1300	ug/Kg	☼	02/15/18 11:13	02/20/18 19:13	50
Aroclor-1262	1830	U	2950	1830	ug/Kg	☼	02/15/18 11:13	02/20/18 19:13	50
Aroclor-1268	1360	U	2950	1360	ug/Kg	☼	02/15/18 11:13	02/20/18 19:13	50
Polychlorinated biphenyls, Total	51600		2950	1830	ug/Kg	☼	02/15/18 11:13	02/20/18 19:13	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	121		10 - 132	02/15/18 11:13	02/20/18 19:13	50
Tetrachloro-m-xylene	121		14 - 128	02/15/18 11:13	02/20/18 19:13	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.0		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	15.0		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.17-SL01-(2.75-3.75')

Lab Sample ID: 240-91496-39

Date Collected: 02/07/18 10:41

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 90.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	24.7	U	56.1	24.7	ug/Kg	☼	02/15/18 11:13	02/19/18 16:58	1
Aroclor-1221	26.9	U	56.1	26.9	ug/Kg	☼	02/15/18 11:13	02/19/18 16:58	1
Aroclor-1232	25.8	U	56.1	25.8	ug/Kg	☼	02/15/18 11:13	02/19/18 16:58	1
Aroclor-1242	21.3	U	56.1	21.3	ug/Kg	☼	02/15/18 11:13	02/19/18 16:58	1
Aroclor-1248	34.8	J	56.1	26.9	ug/Kg	☼	02/15/18 11:13	02/19/18 16:58	1
Aroclor-1254	25.8	U	56.1	25.8	ug/Kg	☼	02/15/18 11:13	02/19/18 16:58	1
Aroclor-1260	24.7	U	56.1	24.7	ug/Kg	☼	02/15/18 11:13	02/19/18 16:58	1
Aroclor-1262	34.8	U	56.1	34.8	ug/Kg	☼	02/15/18 11:13	02/19/18 16:58	1
Aroclor-1268	25.8	U	56.1	25.8	ug/Kg	☼	02/15/18 11:13	02/19/18 16:58	1
Polychlorinated biphenyls, Total	34.8	J	56.1	34.8	ug/Kg	☼	02/15/18 11:13	02/19/18 16:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	75		10 - 132	02/15/18 11:13	02/19/18 16:58	1
Tetrachloro-m-xylene	67		14 - 128	02/15/18 11:13	02/19/18 16:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	90.6		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	9.4		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.55-SL01-(0-0.42')

Lab Sample ID: 240-91496-40

Date Collected: 02/07/18 11:30

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 88.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	24.9	U	56.5	24.9	ug/Kg	☼	02/15/18 11:13	02/19/18 17:17	1
Aroclor-1221	27.1	U	56.5	27.1	ug/Kg	☼	02/15/18 11:13	02/19/18 17:17	1
Aroclor-1232	26.0	U	56.5	26.0	ug/Kg	☼	02/15/18 11:13	02/19/18 17:17	1
Aroclor-1242	21.5	U	56.5	21.5	ug/Kg	☼	02/15/18 11:13	02/19/18 17:17	1
Aroclor-1248	27.1	U	56.5	27.1	ug/Kg	☼	02/15/18 11:13	02/19/18 17:17	1
Aroclor-1254	26.0	U	56.5	26.0	ug/Kg	☼	02/15/18 11:13	02/19/18 17:17	1
Aroclor-1260	24.9	U	56.5	24.9	ug/Kg	☼	02/15/18 11:13	02/19/18 17:17	1
Aroclor-1262	35.0	U	56.5	35.0	ug/Kg	☼	02/15/18 11:13	02/19/18 17:17	1
Aroclor-1268	26.0	U	56.5	26.0	ug/Kg	☼	02/15/18 11:13	02/19/18 17:17	1
Polychlorinated biphenyls, Total	35.0	U	56.5	35.0	ug/Kg	☼	02/15/18 11:13	02/19/18 17:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	85		10 - 132	02/15/18 11:13	02/19/18 17:17	1
Tetrachloro-m-xylene	80		14 - 128	02/15/18 11:13	02/19/18 17:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.1		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	11.9		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.55-SL01-(0.5-0.88')

Lab Sample ID: 240-91496-41

Date Collected: 02/07/18 11:40

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 87.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	26.1	U	59.3	26.1	ug/Kg	☼	02/15/18 11:13	02/19/18 17:35	1
Aroclor-1221	28.4	U	59.3	28.4	ug/Kg	☼	02/15/18 11:13	02/19/18 17:35	1
Aroclor-1232	27.3	U	59.3	27.3	ug/Kg	☼	02/15/18 11:13	02/19/18 17:35	1
Aroclor-1242	22.5	U	59.3	22.5	ug/Kg	☼	02/15/18 11:13	02/19/18 17:35	1
Aroclor-1248	28.4	U	59.3	28.4	ug/Kg	☼	02/15/18 11:13	02/19/18 17:35	1
Aroclor-1254	27.3	U	59.3	27.3	ug/Kg	☼	02/15/18 11:13	02/19/18 17:35	1
Aroclor-1260	26.1	U	59.3	26.1	ug/Kg	☼	02/15/18 11:13	02/19/18 17:35	1
Aroclor-1262	36.7	U	59.3	36.7	ug/Kg	☼	02/15/18 11:13	02/19/18 17:35	1
Aroclor-1268	27.3	U	59.3	27.3	ug/Kg	☼	02/15/18 11:13	02/19/18 17:35	1
Polychlorinated biphenyls, Total	36.7	U	59.3	36.7	ug/Kg	☼	02/15/18 11:13	02/19/18 17:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	74	p	10 - 132	02/15/18 11:13	02/19/18 17:35	1
Tetrachloro-m-xylene	82		14 - 128	02/15/18 11:13	02/19/18 17:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.6		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	12.4		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.55-SL02-(0-0.42')

Lab Sample ID: 240-91496-42

Date Collected: 02/07/18 13:08

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 77.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.9	U	65.7	28.9	ug/Kg	☼	02/15/18 11:13	02/19/18 17:53	1
Aroclor-1221	31.5	U	65.7	31.5	ug/Kg	☼	02/15/18 11:13	02/19/18 17:53	1
Aroclor-1232	30.2	U	65.7	30.2	ug/Kg	☼	02/15/18 11:13	02/19/18 17:53	1
Aroclor-1242	25.0	U	65.7	25.0	ug/Kg	☼	02/15/18 11:13	02/19/18 17:53	1
Aroclor-1248	31.5	U	65.7	31.5	ug/Kg	☼	02/15/18 11:13	02/19/18 17:53	1
Aroclor-1254	30.7	J	65.7	30.2	ug/Kg	☼	02/15/18 11:13	02/19/18 17:53	1
Aroclor-1260	28.9	U	65.7	28.9	ug/Kg	☼	02/15/18 11:13	02/19/18 17:53	1
Aroclor-1262	40.7	U	65.7	40.7	ug/Kg	☼	02/15/18 11:13	02/19/18 17:53	1
Aroclor-1268	30.2	U	65.7	30.2	ug/Kg	☼	02/15/18 11:13	02/19/18 17:53	1
Polychlorinated biphenyls, Total	40.7	U	65.7	40.7	ug/Kg	☼	02/15/18 11:13	02/19/18 17:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	93	p	10 - 132	02/15/18 11:13	02/19/18 17:53	1
Tetrachloro-m-xylene	89		14 - 128	02/15/18 11:13	02/19/18 17:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	77.7		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	22.3		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.55-SL02-(0.5-0.96')

Lab Sample ID: 240-91496-43

Date Collected: 02/07/18 13:16

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 78.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.3	U	64.2	28.3	ug/Kg	☼	02/15/18 11:13	02/19/18 19:07	1
Aroclor-1221	30.8	U	64.2	30.8	ug/Kg	☼	02/15/18 11:13	02/19/18 19:07	1
Aroclor-1232	29.5	U	64.2	29.5	ug/Kg	☼	02/15/18 11:13	02/19/18 19:07	1
Aroclor-1242	24.4	U	64.2	24.4	ug/Kg	☼	02/15/18 11:13	02/19/18 19:07	1
Aroclor-1248	30.8	U	64.2	30.8	ug/Kg	☼	02/15/18 11:13	02/19/18 19:07	1
Aroclor-1254	29.5	U	64.2	29.5	ug/Kg	☼	02/15/18 11:13	02/19/18 19:07	1
Aroclor-1260	28.3	U	64.2	28.3	ug/Kg	☼	02/15/18 11:13	02/19/18 19:07	1
Aroclor-1262	39.8	U	64.2	39.8	ug/Kg	☼	02/15/18 11:13	02/19/18 19:07	1
Aroclor-1268	29.5	U	64.2	29.5	ug/Kg	☼	02/15/18 11:13	02/19/18 19:07	1
Polychlorinated biphenyls, Total	39.8	U	64.2	39.8	ug/Kg	☼	02/15/18 11:13	02/19/18 19:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	87		10 - 132	02/15/18 11:13	02/19/18 19:07	1
Tetrachloro-m-xylene	85		14 - 128	02/15/18 11:13	02/19/18 19:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.9		0.1	0.1	%			02/15/18 11:45	1
Percent Moisture	21.1		0.1	0.1	%			02/15/18 11:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-01.24-SL04-(0-0.84')

Lab Sample ID: 240-91496-44

Date Collected: 02/07/18 13:20

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 91.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	24.1	U	54.8	24.1	ug/Kg	☼	02/15/18 11:13	02/19/18 19:25	1
Aroclor-1221	26.3	U	54.8	26.3	ug/Kg	☼	02/15/18 11:13	02/19/18 19:25	1
Aroclor-1232	25.2	U	54.8	25.2	ug/Kg	☼	02/15/18 11:13	02/19/18 19:25	1
Aroclor-1242	20.8	U	54.8	20.8	ug/Kg	☼	02/15/18 11:13	02/19/18 19:25	1
Aroclor-1248	31.0	J	54.8	26.3	ug/Kg	☼	02/15/18 11:13	02/19/18 19:25	1
Aroclor-1254	25.2	U	54.8	25.2	ug/Kg	☼	02/15/18 11:13	02/19/18 19:25	1
Aroclor-1260	24.1	U	54.8	24.1	ug/Kg	☼	02/15/18 11:13	02/19/18 19:25	1
Aroclor-1262	34.0	U	54.8	34.0	ug/Kg	☼	02/15/18 11:13	02/19/18 19:25	1
Aroclor-1268	25.2	U	54.8	25.2	ug/Kg	☼	02/15/18 11:13	02/19/18 19:25	1
Polychlorinated biphenyls, Total	34.0	U	54.8	34.0	ug/Kg	☼	02/15/18 11:13	02/19/18 19:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	89		10 - 132	02/15/18 11:13	02/19/18 19:25	1
Tetrachloro-m-xylene	87		14 - 128	02/15/18 11:13	02/19/18 19:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	91.0		0.1	0.1	%			02/15/18 11:54	1
Percent Moisture	9.0		0.1	0.1	%			02/15/18 11:54	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-01.24-SL04-(1-1.46')

Lab Sample ID: 240-91496-45

Date Collected: 02/07/18 13:30

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 85.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	25.8	U	58.6	25.8	ug/Kg	☼	02/15/18 11:13	02/19/18 19:44	1
Aroclor-1221	28.1	U	58.6	28.1	ug/Kg	☼	02/15/18 11:13	02/19/18 19:44	1
Aroclor-1232	27.0	U	58.6	27.0	ug/Kg	☼	02/15/18 11:13	02/19/18 19:44	1
Aroclor-1242	22.3	U	58.6	22.3	ug/Kg	☼	02/15/18 11:13	02/19/18 19:44	1
Aroclor-1248	28.1	U	58.6	28.1	ug/Kg	☼	02/15/18 11:13	02/19/18 19:44	1
Aroclor-1254	27.0	U	58.6	27.0	ug/Kg	☼	02/15/18 11:13	02/19/18 19:44	1
Aroclor-1260	25.8	U	58.6	25.8	ug/Kg	☼	02/15/18 11:13	02/19/18 19:44	1
Aroclor-1262	36.4	U	58.6	36.4	ug/Kg	☼	02/15/18 11:13	02/19/18 19:44	1
Aroclor-1268	27.0	U	58.6	27.0	ug/Kg	☼	02/15/18 11:13	02/19/18 19:44	1
Polychlorinated biphenyls, Total	36.4	U	58.6	36.4	ug/Kg	☼	02/15/18 11:13	02/19/18 19:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	79		10 - 132	02/15/18 11:13	02/19/18 19:44	1
Tetrachloro-m-xylene	80		14 - 128	02/15/18 11:13	02/19/18 19:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.4		0.1	0.1	%			02/15/18 11:54	1
Percent Moisture	14.6		0.1	0.1	%			02/15/18 11:54	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-01.24-SL05-(0-0.42')

Lab Sample ID: 240-91496-46

Date Collected: 02/07/18 13:50

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 75.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	29.5	U	67.0	29.5	ug/Kg	☼	02/15/18 11:13	02/19/18 20:02	1
Aroclor-1221	32.2	U	67.0	32.2	ug/Kg	☼	02/15/18 11:13	02/19/18 20:02	1
Aroclor-1232	30.8	U	67.0	30.8	ug/Kg	☼	02/15/18 11:13	02/19/18 20:02	1
Aroclor-1242	25.5	U	67.0	25.5	ug/Kg	☼	02/15/18 11:13	02/19/18 20:02	1
Aroclor-1248	803		67.0	32.2	ug/Kg	☼	02/15/18 11:13	02/19/18 20:02	1
Aroclor-1254	30.8	U	67.0	30.8	ug/Kg	☼	02/15/18 11:13	02/19/18 20:02	1
Aroclor-1260	182		67.0	29.5	ug/Kg	☼	02/15/18 11:13	02/19/18 20:02	1
Aroclor-1262	41.6	U	67.0	41.6	ug/Kg	☼	02/15/18 11:13	02/19/18 20:02	1
Aroclor-1268	30.8	U	67.0	30.8	ug/Kg	☼	02/15/18 11:13	02/19/18 20:02	1
Polychlorinated biphenyls, Total	985		67.0	41.6	ug/Kg	☼	02/15/18 11:13	02/19/18 20:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	72		10 - 132	02/15/18 11:13	02/19/18 20:02	1
Tetrachloro-m-xylene	68		14 - 128	02/15/18 11:13	02/19/18 20:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	75.4		0.1	0.1	%			02/15/18 11:54	1
Percent Moisture	24.6		0.1	0.1	%			02/15/18 11:54	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-01.24-SL05-(0-0.42')-DUP

Lab Sample ID: 240-91496-47

Date Collected: 02/07/18 13:50

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 77.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.0	U	61.3	27.0	ug/Kg	☼	02/15/18 11:13	02/19/18 20:20	1
Aroclor-1221	29.4	U	61.3	29.4	ug/Kg	☼	02/15/18 11:13	02/19/18 20:20	1
Aroclor-1232	28.2	U	61.3	28.2	ug/Kg	☼	02/15/18 11:13	02/19/18 20:20	1
Aroclor-1242	23.3	U	61.3	23.3	ug/Kg	☼	02/15/18 11:13	02/19/18 20:20	1
Aroclor-1248	899		61.3	29.4	ug/Kg	☼	02/15/18 11:13	02/19/18 20:20	1
Aroclor-1254	28.2	U	61.3	28.2	ug/Kg	☼	02/15/18 11:13	02/19/18 20:20	1
Aroclor-1260	194		61.3	27.0	ug/Kg	☼	02/15/18 11:13	02/19/18 20:20	1
Aroclor-1262	38.0	U	61.3	38.0	ug/Kg	☼	02/15/18 11:13	02/19/18 20:20	1
Aroclor-1268	28.2	U	61.3	28.2	ug/Kg	☼	02/15/18 11:13	02/19/18 20:20	1
Polychlorinated biphenyls, Total	1090		61.3	38.0	ug/Kg	☼	02/15/18 11:13	02/19/18 20:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	77	p	10 - 132	02/15/18 11:13	02/19/18 20:20	1
Tetrachloro-m-xylene	80		14 - 128	02/15/18 11:13	02/19/18 20:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	77.9		0.1	0.1	%			02/15/18 11:54	1
Percent Moisture	22.1		0.1	0.1	%			02/15/18 11:54	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-01.24-SL05-(0.5-1.46')

Lab Sample ID: 240-91496-48

Date Collected: 02/07/18 13:56

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 79.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.4	U	64.5	28.4	ug/Kg	☼	02/15/18 11:13	02/19/18 20:39	1
Aroclor-1221	31.0	U	64.5	31.0	ug/Kg	☼	02/15/18 11:13	02/19/18 20:39	1
Aroclor-1232	29.7	U	64.5	29.7	ug/Kg	☼	02/15/18 11:13	02/19/18 20:39	1
Aroclor-1242	24.5	U	64.5	24.5	ug/Kg	☼	02/15/18 11:13	02/19/18 20:39	1
Aroclor-1248	1100		64.5	31.0	ug/Kg	☼	02/15/18 11:13	02/19/18 20:39	1
Aroclor-1254	29.7	U	64.5	29.7	ug/Kg	☼	02/15/18 11:13	02/19/18 20:39	1
Aroclor-1260	205		64.5	28.4	ug/Kg	☼	02/15/18 11:13	02/19/18 20:39	1
Aroclor-1262	40.0	U	64.5	40.0	ug/Kg	☼	02/15/18 11:13	02/19/18 20:39	1
Aroclor-1268	29.7	U	64.5	29.7	ug/Kg	☼	02/15/18 11:13	02/19/18 20:39	1
Polychlorinated biphenyls, Total	1310		64.5	40.0	ug/Kg	☼	02/15/18 11:13	02/19/18 20:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	80		10 - 132	02/15/18 11:13	02/19/18 20:39	1
<i>Tetrachloro-m-xylene</i>	82		14 - 128	02/15/18 11:13	02/19/18 20:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.9		0.1	0.1	%			02/15/18 11:54	1
Percent Moisture	20.1		0.1	0.1	%			02/15/18 11:54	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-01.24-SL06-(0.0-0.84')

Lab Sample ID: 240-91496-49

Date Collected: 02/07/18 14:10

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 79.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	28.4	U	64.5	28.4	ug/Kg	☼	02/15/18 11:13	02/19/18 20:57	1
Aroclor-1221	30.9	U	64.5	30.9	ug/Kg	☼	02/15/18 11:13	02/19/18 20:57	1
Aroclor-1232	29.7	U	64.5	29.7	ug/Kg	☼	02/15/18 11:13	02/19/18 20:57	1
Aroclor-1242	24.5	U	64.5	24.5	ug/Kg	☼	02/15/18 11:13	02/19/18 20:57	1
Aroclor-1248	127	p	64.5	30.9	ug/Kg	☼	02/15/18 11:13	02/19/18 20:57	1
Aroclor-1254	29.7	U	64.5	29.7	ug/Kg	☼	02/15/18 11:13	02/19/18 20:57	1
Aroclor-1260	29.9	J	64.5	28.4	ug/Kg	☼	02/15/18 11:13	02/19/18 20:57	1
Aroclor-1262	40.0	U	64.5	40.0	ug/Kg	☼	02/15/18 11:13	02/19/18 20:57	1
Aroclor-1268	29.7	U	64.5	29.7	ug/Kg	☼	02/15/18 11:13	02/19/18 20:57	1
Polychlorinated biphenyls, Total	157		64.5	40.0	ug/Kg	☼	02/15/18 11:13	02/19/18 20:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>DCB Decachlorobiphenyl</i>	85	p	10 - 132	02/15/18 11:13	02/19/18 20:57	1
<i>Tetrachloro-m-xylene</i>	79		14 - 128	02/15/18 11:13	02/19/18 20:57	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.1		0.1	0.1	%			02/15/18 11:54	1
Percent Moisture	20.9		0.1	0.1	%			02/15/18 11:54	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-01.24-SL06-(1-1.96')

Lab Sample ID: 240-91496-50

Date Collected: 02/07/18 14:18

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 82.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	27.1	U F2	61.5	27.1	ug/Kg	☼	02/15/18 11:13	02/19/18 21:15	1
Aroclor-1221	29.5	U	61.5	29.5	ug/Kg	☼	02/15/18 11:13	02/19/18 21:15	1
Aroclor-1232	28.3	U	61.5	28.3	ug/Kg	☼	02/15/18 11:13	02/19/18 21:15	1
Aroclor-1242	23.4	U	61.5	23.4	ug/Kg	☼	02/15/18 11:13	02/19/18 21:15	1
Aroclor-1248	135		61.5	29.5	ug/Kg	☼	02/15/18 11:13	02/19/18 21:15	1
Aroclor-1254	28.3	U	61.5	28.3	ug/Kg	☼	02/15/18 11:13	02/19/18 21:15	1
Aroclor-1260	29.6	J F2	61.5	27.1	ug/Kg	☼	02/15/18 11:13	02/19/18 21:15	1
Aroclor-1262	38.1	U	61.5	38.1	ug/Kg	☼	02/15/18 11:13	02/19/18 21:15	1
Aroclor-1268	28.3	U	61.5	28.3	ug/Kg	☼	02/15/18 11:13	02/19/18 21:15	1
Polychlorinated biphenyls, Total	165		61.5	38.1	ug/Kg	☼	02/15/18 11:13	02/19/18 21:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	94		10 - 132	02/15/18 11:13	02/19/18 21:15	1
Tetrachloro-m-xylene	86		14 - 128	02/15/18 11:13	02/19/18 21:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.0		0.1	0.1	%			02/15/18 11:54	1
Percent Moisture	18.0		0.1	0.1	%			02/15/18 11:54	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.8-SL03-(1.25-2.25')

Lab Sample ID: 240-91496-51

Date Collected: 02/07/18 10:11

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 85.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	126	U	287	126	ug/Kg	☼	02/15/18 09:44	02/18/18 15:46	5
Aroclor-1221	138	U	287	138	ug/Kg	☼	02/15/18 09:44	02/18/18 15:46	5
Aroclor-1232	132	U	287	132	ug/Kg	☼	02/15/18 09:44	02/18/18 15:46	5
Aroclor-1242	109	U	287	109	ug/Kg	☼	02/15/18 09:44	02/18/18 15:46	5
Aroclor-1248	4890		287	138	ug/Kg	☼	02/15/18 09:44	02/18/18 15:46	5
Aroclor-1254	132	U	287	132	ug/Kg	☼	02/15/18 09:44	02/18/18 15:46	5
Aroclor-1260	273	J	287	126	ug/Kg	☼	02/15/18 09:44	02/18/18 15:46	5
Aroclor-1262	178	U	287	178	ug/Kg	☼	02/15/18 09:44	02/18/18 15:46	5
Aroclor-1268	132	U	287	132	ug/Kg	☼	02/15/18 09:44	02/18/18 15:46	5
Polychlorinated biphenyls, Total	5160		287	178	ug/Kg	☼	02/15/18 09:44	02/18/18 15:46	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	83	p	10 - 132	02/15/18 09:44	02/18/18 15:46	5
Tetrachloro-m-xylene	96		14 - 128	02/15/18 09:44	02/18/18 15:46	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.6		0.1	0.1	%			02/15/18 11:54	1
Percent Moisture	14.4		0.1	0.1	%			02/15/18 11:54	1

Surrogate Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCBP1 (10-132)	TCX1 (14-128)
240-91496-1	ED-00.00-SL01-(0-0.91')	82	84
240-91496-3	ED-00.00-SL01-(2.21-3.12')	89	73
240-91496-5	ED-00.02-SL01-(0-0.63')	132 p	123
240-91496-6	ED-00.02-SL01-(0.63-1.76')	101	90
240-91496-7	ED-00.02-SL01-(1.76-2.18')	93	81
240-91496-8	ED-00.02-SL01-(2.18-3.43')	170 X	148 X
240-91496-10	ED-00.05-SL01-(0-0.67')	123 p	114
240-91496-11	ED-00.05-SL01-(0.67-1.2')	100	91
240-91496-11 MS	ED-00.05-SL01-(0.67-1.2')	85	81
240-91496-11 MSD	ED-00.05-SL01-(0.67-1.2')	83	77
240-91496-12	ED-00.05-SL01-(1.4-2.3')	67	62
240-91496-13	ED-00.05-SL01-(2.3-3.3')	76	77
240-91496-15	ED-00.08-SL03-(2.25-2.75')	77	72
240-91496-16	ED-00.08-SL03-(2.75-3.5')	84	84
240-91496-22	ED-00.08-SL05-(0-0.67')	92	112
240-91496-23	ED-00.08-SL05-(0.67-1.25')	95	105
240-91496-24	ED-00.08-SL05-(1.25-2.1')	82	75
240-91496-25	ED-00.08-SL05-(2.1-3')	79	69
240-91496-31	ED-00.13-SL01-(0-0.67')	59	76
240-91496-32	ED-00.13-SL01-(0.67-1.67')	70	65
240-91496-33	ED-00.13-SL01-(1.6-2.75')	144 X	135 X
240-91496-34	ED-00.13-SL01-(2.75-3.08')	58 p	54
240-91496-35	ED-00.17-SL01-(0-0.75')	95	89
240-91496-36	ED-00.17-SL01-(0-0.75')-DUP	108	105
240-91496-37	ED-00.17-SL01-(0.75-1.75')	80 p	90
240-91496-38	ED-00.17-SL01-(1.75-2.75')	121	121
240-91496-39	ED-00.17-SL01-(2.75-3.75')	75	67
240-91496-40	ED-00.55-SL01-(0-0.42')	85	80
240-91496-41	ED-00.55-SL01-(0.5-0.88')	74 p	82
240-91496-42	ED-00.55-SL02-(0-0.42')	93 p	89
240-91496-43	ED-00.55-SL02-(0.5-0.96')	87	85
240-91496-44	ED-01.24-SL04-(0-0.84')	89	87
240-91496-45	ED-01.24-SL04-(1-1.46')	79	80
240-91496-46	ED-01.24-SL05-(0-0.42')	72	68
240-91496-47	ED-01.24-SL05-(0-0.42')-DUP	77 p	80
240-91496-48	ED-01.24-SL05-(0.5-1.46')	80	82
240-91496-49	ED-01.24-SL06-(0.0-0.84')	85 p	79
240-91496-50	ED-01.24-SL06-(1-1.96')	94	86
240-91496-50 MS	ED-01.24-SL06-(1-1.96')	70 p	80
240-91496-50 MSD	ED-01.24-SL06-(1-1.96')	112	118
240-91496-51	ED-00.8-SL03-(1.25-2.25')	83 p	96
LCS 240-314904/24-A	Lab Control Sample	110	99
LCS 240-314916/24-A	Lab Control Sample	103	91
LCS 240-314925/24-A	Lab Control Sample	64 p	61
MB 240-314904/23-A	Method Blank	91	81
MB 240-314916/23-A	Method Blank	93	88
MB 240-314925/23-A	Method Blank	77	72

Surrogate Legend

Surrogate Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	DCBP2	TCX2
		(10-132)	(14-128)
240-91496-2	ED-00.00-SL01-(0.91-2.21')	97	79
240-91496-2 MS	ED-00.00-SL01-(0.91-2.21')	92	73
240-91496-2 MSD	ED-00.00-SL01-(0.91-2.21')	239 X	92
LCS 240-314904/24-A	Lab Control Sample	134 X	122
MB 240-314904/23-A	Method Blank	114	103

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
TCX = Tetrachloro-m-xylene

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

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

Lab Sample ID: MB 240-314904/23-A
Matrix: Solid
Analysis Batch: 315017

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 314904

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	22.0	U	50.0	22.0	ug/Kg		02/15/18 09:44	02/16/18 11:45	1
Aroclor-1221	24.0	U	50.0	24.0	ug/Kg		02/15/18 09:44	02/16/18 11:45	1
Aroclor-1232	23.0	U	50.0	23.0	ug/Kg		02/15/18 09:44	02/16/18 11:45	1
Aroclor-1242	19.0	U	50.0	19.0	ug/Kg		02/15/18 09:44	02/16/18 11:45	1
Aroclor-1248	24.0	U	50.0	24.0	ug/Kg		02/15/18 09:44	02/16/18 11:45	1
Aroclor-1254	23.0	U	50.0	23.0	ug/Kg		02/15/18 09:44	02/16/18 11:45	1
Aroclor-1260	22.0	U	50.0	22.0	ug/Kg		02/15/18 09:44	02/16/18 11:45	1
Aroclor-1262	31.0	U	50.0	31.0	ug/Kg		02/15/18 09:44	02/16/18 11:45	1
Aroclor-1268	23.0	U	50.0	23.0	ug/Kg		02/15/18 09:44	02/16/18 11:45	1
Polychlorinated biphenyls, Total	31.0	U	50.0	31.0	ug/Kg		02/15/18 09:44	02/16/18 11:45	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	114		10 - 132	02/15/18 09:44	02/16/18 11:45	1
Tetrachloro-m-xylene	103		14 - 128	02/15/18 09:44	02/16/18 11:45	1

Lab Sample ID: MB 240-314904/23-A
Matrix: Solid
Analysis Batch: 315196

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 314904

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor-1016	22.0	U	50.0	22.0	ug/Kg		02/15/18 09:44	02/18/18 19:44	1
Aroclor-1221	24.0	U	50.0	24.0	ug/Kg		02/15/18 09:44	02/18/18 19:44	1
Aroclor-1232	23.0	U	50.0	23.0	ug/Kg		02/15/18 09:44	02/18/18 19:44	1
Aroclor-1242	19.0	U	50.0	19.0	ug/Kg		02/15/18 09:44	02/18/18 19:44	1
Aroclor-1248	24.0	U	50.0	24.0	ug/Kg		02/15/18 09:44	02/18/18 19:44	1
Aroclor-1254	23.0	U	50.0	23.0	ug/Kg		02/15/18 09:44	02/18/18 19:44	1
Aroclor-1260	22.0	U	50.0	22.0	ug/Kg		02/15/18 09:44	02/18/18 19:44	1
Aroclor-1262	31.0	U	50.0	31.0	ug/Kg		02/15/18 09:44	02/18/18 19:44	1
Aroclor-1268	23.0	U	50.0	23.0	ug/Kg		02/15/18 09:44	02/18/18 19:44	1
Polychlorinated biphenyls, Total	31.0	U	50.0	31.0	ug/Kg		02/15/18 09:44	02/18/18 19:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	91		10 - 132	02/15/18 09:44	02/18/18 19:44	1
Tetrachloro-m-xylene	81		14 - 128	02/15/18 09:44	02/18/18 19:44	1

Lab Sample ID: LCS 240-314904/24-A
Matrix: Solid
Analysis Batch: 315017

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 314904

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Rec. Limits
Aroclor-1016	1000	1088		ug/Kg		109	47 - 120
Aroclor-1260	1000	1152		ug/Kg		115	46 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl	134	X	10 - 132
Tetrachloro-m-xylene	122		14 - 128

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

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

Lab Sample ID: LCS 240-314904/24-A

Matrix: Solid
Analysis Batch: 315196

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
Prep Batch: 314904

Analyte	Spike Added	LCS		Unit	D	%Rec	Limits
		Result	Qualifier				
Aroclor-1016	1000	878.4		ug/Kg		88	47 - 120
Aroclor-1260	1000	1092		ug/Kg		109	46 - 120
Surrogate							
		LCS %Recovery	LCS Qualifier				Limits
DCB Decachlorobiphenyl		110					10 - 132
Tetrachloro-m-xylene		99					14 - 128

Lab Sample ID: 240-91496-2 MS

Matrix: Solid
Analysis Batch: 315017

Client Sample ID: ED-00.00-SL01-(0.91-2.21')

Prep Type: Total/NA
Prep Batch: 314904

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	Limits
				Result	Qualifier				
Aroclor-1016	132	U F1	1140	2233	F1	ug/Kg	☼	195	31 - 120
Aroclor-1260	132	U	1140	970.4		ug/Kg	☼	85	21 - 122
Surrogate									
		MS %Recovery	MS Qualifier						Limits
DCB Decachlorobiphenyl		92							10 - 132
Tetrachloro-m-xylene		73							14 - 128

Lab Sample ID: 240-91496-2 MSD

Matrix: Solid
Analysis Batch: 315017

Client Sample ID: ED-00.00-SL01-(0.91-2.21')

Prep Type: Total/NA
Prep Batch: 314904

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	Limits	RPD	Limit
				Result	Qualifier						
Aroclor-1016	132	U F1	1140	2737	F1	ug/Kg	☼	240	31 - 120	20	30
Aroclor-1260	132	U	1140	1088		ug/Kg	☼	95	21 - 122	11	30
Surrogate											
		MSD %Recovery	MSD Qualifier								
DCB Decachlorobiphenyl		239	X						10 - 132		
Tetrachloro-m-xylene		92							14 - 128		

Lab Sample ID: MB 240-314916/23-A

Matrix: Solid
Analysis Batch: 315194

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 314916

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor-1016	22.0	U	50.0	22.0	ug/Kg		02/15/18 10:32	02/18/18 20:06	1
Aroclor-1221	24.0	U	50.0	24.0	ug/Kg		02/15/18 10:32	02/18/18 20:06	1
Aroclor-1232	23.0	U	50.0	23.0	ug/Kg		02/15/18 10:32	02/18/18 20:06	1
Aroclor-1242	19.0	U	50.0	19.0	ug/Kg		02/15/18 10:32	02/18/18 20:06	1
Aroclor-1248	24.0	U	50.0	24.0	ug/Kg		02/15/18 10:32	02/18/18 20:06	1
Aroclor-1254	23.0	U	50.0	23.0	ug/Kg		02/15/18 10:32	02/18/18 20:06	1
Aroclor-1260	22.0	U	50.0	22.0	ug/Kg		02/15/18 10:32	02/18/18 20:06	1
Aroclor-1262	31.0	U	50.0	31.0	ug/Kg		02/15/18 10:32	02/18/18 20:06	1
Aroclor-1268	23.0	U	50.0	23.0	ug/Kg		02/15/18 10:32	02/18/18 20:06	1
Polychlorinated biphenyls, Total	31.0	U	50.0	31.0	ug/Kg		02/15/18 10:32	02/18/18 20:06	1

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

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

Lab Sample ID: MB 240-314916/23-A
Matrix: Solid
Analysis Batch: 315194

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 314916

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl	93		10 - 132	02/15/18 10:32	02/18/18 20:06	1
Tetrachloro-m-xylene	88		14 - 128	02/15/18 10:32	02/18/18 20:06	1

Lab Sample ID: LCS 240-314916/24-A
Matrix: Solid
Analysis Batch: 315194

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 314916

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	1000	873.2		ug/Kg		87	47 - 120
Aroclor-1260	1000	1040		ug/Kg		104	46 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	103		10 - 132
Tetrachloro-m-xylene	91		14 - 128

Lab Sample ID: 240-91496-11 MS
Matrix: Solid
Analysis Batch: 315194

Client Sample ID: ED-00.05-SL01-(0.67-1.2')
Prep Type: Total/NA
Prep Batch: 314916

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aroclor-1016	25.8	U	1190	882.5		ug/Kg	☼	74	31 - 120
Aroclor-1260	25.8	U	1190	1041		ug/Kg	☼	88	21 - 122

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	85		10 - 132
Tetrachloro-m-xylene	81		14 - 128

Lab Sample ID: 240-91496-11 MSD
Matrix: Solid
Analysis Batch: 315194

Client Sample ID: ED-00.05-SL01-(0.67-1.2')
Prep Type: Total/NA
Prep Batch: 314916

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aroclor-1016	25.8	U	1170	861.0		ug/Kg	☼	74	31 - 120	2	30
Aroclor-1260	25.8	U	1170	988.6		ug/Kg	☼	85	21 - 122	6	30

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	83		10 - 132
Tetrachloro-m-xylene	77		14 - 128

Lab Sample ID: MB 240-314925/23-A
Matrix: Solid
Analysis Batch: 315208

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 314925

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor-1016	22.0	U	50.0	22.0	ug/Kg		02/15/18 11:13	02/19/18 18:12	1
Aroclor-1221	24.0	U	50.0	24.0	ug/Kg		02/15/18 11:13	02/19/18 18:12	1
Aroclor-1232	23.0	U	50.0	23.0	ug/Kg		02/15/18 11:13	02/19/18 18:12	1

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

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

Lab Sample ID: MB 240-314925/23-A
Matrix: Solid
Analysis Batch: 315208

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 314925

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aroclor-1242	19.0	U	50.0	19.0	ug/Kg		02/15/18 11:13	02/19/18 18:12	1
Aroclor-1248	24.0	U	50.0	24.0	ug/Kg		02/15/18 11:13	02/19/18 18:12	1
Aroclor-1254	23.0	U	50.0	23.0	ug/Kg		02/15/18 11:13	02/19/18 18:12	1
Aroclor-1260	22.0	U	50.0	22.0	ug/Kg		02/15/18 11:13	02/19/18 18:12	1
Aroclor-1262	31.0	U	50.0	31.0	ug/Kg		02/15/18 11:13	02/19/18 18:12	1
Aroclor-1268	23.0	U	50.0	23.0	ug/Kg		02/15/18 11:13	02/19/18 18:12	1
Polychlorinated biphenyls, Total	31.0	U	50.0	31.0	ug/Kg		02/15/18 11:13	02/19/18 18:12	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
DCB Decachlorobiphenyl	77		10 - 132	02/15/18 11:13	02/19/18 18:12	1
Tetrachloro-m-xylene	72		14 - 128	02/15/18 11:13	02/19/18 18:12	1

Lab Sample ID: LCS 240-314925/24-A
Matrix: Solid
Analysis Batch: 315208

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 314925

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1260	1000	592.4		ug/Kg		59	46 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	64	p	10 - 132
Tetrachloro-m-xylene	61		14 - 128

Lab Sample ID: 240-91496-50 MS
Matrix: Solid
Analysis Batch: 315208

Client Sample ID: ED-01.24-SL06-(1-1.96')
Prep Type: Total/NA
Prep Batch: 314925

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Aroclor-1260	27.1	U F2	1260	905.4		ug/Kg	☼	72	21 - 122

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	70	p	10 - 132
Tetrachloro-m-xylene	80		14 - 128

Lab Sample ID: 240-91496-50 MSD
Matrix: Solid
Analysis Batch: 315208

Client Sample ID: ED-01.24-SL06-(1-1.96')
Prep Type: Total/NA
Prep Batch: 314925

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
										RPD	Limit
Aroclor-1016	27.1	U F2	1240	1412	F2	ug/Kg	☼	113	31 - 120	44	30
Aroclor-1260	27.1	U F2	1240	1497	F2	ug/Kg	☼	120	21 - 122	49	30

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	112		10 - 132
Tetrachloro-m-xylene	118		14 - 128

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Method: Moisture - Percent Moisture

Lab Sample ID: 240-91496-2 DU

Matrix: Solid

Analysis Batch: 314935

Client Sample ID: ED-00.00-SL01-(0.91-2.21')

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU	DU	Unit	D	RPD	Limit
			Result	Qualifier				
Percent Solids	83.6		83.8		%		0.2	20
Percent Moisture	16.4		16.2		%		1	20

Lab Sample ID: 240-91496-11 DU

Matrix: Solid

Analysis Batch: 314935

Client Sample ID: ED-00.05-SL01-(0.67-1.2')

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU	DU	Unit	D	RPD	Limit
			Result	Qualifier				
Percent Solids	85.7		86.4		%		0.8	20
Percent Moisture	14.3		13.6		%		5	20

Lab Sample ID: 240-91496-35 DU

Matrix: Solid

Analysis Batch: 314935

Client Sample ID: ED-00.17-SL01-(0-0.75')

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU	DU	Unit	D	RPD	Limit
			Result	Qualifier				
Percent Solids	80.9		80.1		%		1	20
Percent Moisture	19.1		19.9		%		4	20

Lab Sample ID: 240-91496-44 DU

Matrix: Solid

Analysis Batch: 314935

Client Sample ID: ED-01.24-SL04-(0-0.84')

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU	DU	Unit	D	RPD	Limit
			Result	Qualifier				
Percent Solids	91.0		87.2		%		4	20
Percent Moisture	9.0		12.8	F3	%		35	20

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

GC Semi VOA

Prep Batch: 314904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91496-1	ED-00.00-SL01-(0-0.91')	Total/NA	Solid	3540C	
240-91496-2	ED-00.00-SL01-(0.91-2.21')	Total/NA	Solid	3540C	
240-91496-3	ED-00.00-SL01-(2.21-3.12')	Total/NA	Solid	3540C	
240-91496-5	ED-00.02-SL01-(0-0.63')	Total/NA	Solid	3540C	
240-91496-6	ED-00.02-SL01-(0.63-1.76')	Total/NA	Solid	3540C	
240-91496-7	ED-00.02-SL01-(1.76-2.18')	Total/NA	Solid	3540C	
240-91496-8	ED-00.02-SL01-(2.18-3.43')	Total/NA	Solid	3540C	
240-91496-10	ED-00.05-SL01-(0-0.67')	Total/NA	Solid	3540C	
240-91496-51	ED-00.8-SL03-(1.25-2.25')	Total/NA	Solid	3540C	
MB 240-314904/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-314904/24-A	Lab Control Sample	Total/NA	Solid	3540C	
240-91496-2 MS	ED-00.00-SL01-(0.91-2.21')	Total/NA	Solid	3540C	
240-91496-2 MSD	ED-00.00-SL01-(0.91-2.21')	Total/NA	Solid	3540C	

Prep Batch: 314916

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91496-11	ED-00.05-SL01-(0.67-1.2')	Total/NA	Solid	3540C	
240-91496-12	ED-00.05-SL01-(1.4-2.3')	Total/NA	Solid	3540C	
240-91496-13	ED-00.05-SL01-(2.3-3.3')	Total/NA	Solid	3540C	
240-91496-15	ED-00.08-SL03-(2.25-2.75')	Total/NA	Solid	3540C	
240-91496-16	ED-00.08-SL03-(2.75-3.5')	Total/NA	Solid	3540C	
240-91496-22	ED-00.08-SL05-(0-0.67')	Total/NA	Solid	3540C	
240-91496-23	ED-00.08-SL05-(0.67-1.25')	Total/NA	Solid	3540C	
240-91496-24	ED-00.08-SL05-(1.25-2.1')	Total/NA	Solid	3540C	
240-91496-25	ED-00.08-SL05-(2.1-3')	Total/NA	Solid	3540C	
MB 240-314916/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-314916/24-A	Lab Control Sample	Total/NA	Solid	3540C	
240-91496-11 MS	ED-00.05-SL01-(0.67-1.2')	Total/NA	Solid	3540C	
240-91496-11 MSD	ED-00.05-SL01-(0.67-1.2')	Total/NA	Solid	3540C	

Prep Batch: 314925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91496-31	ED-00.13-SL01-(0-0.67')	Total/NA	Solid	3540C	
240-91496-32	ED-00.13-SL01-(0.67-1.67')	Total/NA	Solid	3540C	
240-91496-33	ED-00.13-SL01-(1.6-2.75')	Total/NA	Solid	3540C	
240-91496-34	ED-00.13-SL01-(2.75-3.08')	Total/NA	Solid	3540C	
240-91496-35	ED-00.17-SL01-(0-0.75')	Total/NA	Solid	3540C	
240-91496-36	ED-00.17-SL01-(0-0.75')-DUP	Total/NA	Solid	3540C	
240-91496-37	ED-00.17-SL01-(0.75-1.75')	Total/NA	Solid	3540C	
240-91496-38	ED-00.17-SL01-(1.75-2.75')	Total/NA	Solid	3540C	
240-91496-39	ED-00.17-SL01-(2.75-3.75')	Total/NA	Solid	3540C	
240-91496-40	ED-00.55-SL01-(0-0.42')	Total/NA	Solid	3540C	
240-91496-41	ED-00.55-SL01-(0.5-0.88')	Total/NA	Solid	3540C	
240-91496-42	ED-00.55-SL02-(0-0.42')	Total/NA	Solid	3540C	
240-91496-43	ED-00.55-SL02-(0.5-0.96')	Total/NA	Solid	3540C	
240-91496-44	ED-01.24-SL04-(0-0.84')	Total/NA	Solid	3540C	
240-91496-45	ED-01.24-SL04-(1-1.46')	Total/NA	Solid	3540C	
240-91496-46	ED-01.24-SL05-(0-0.42')	Total/NA	Solid	3540C	
240-91496-47	ED-01.24-SL05-(0-0.42')-DUP	Total/NA	Solid	3540C	
240-91496-48	ED-01.24-SL05-(0.5-1.46')	Total/NA	Solid	3540C	
240-91496-49	ED-01.24-SL06-(0.0-0.84')	Total/NA	Solid	3540C	

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

GC Semi VOA (Continued)

Prep Batch: 314925 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91496-50	ED-01.24-SL06-(1-1.96')	Total/NA	Solid	3540C	
MB 240-314925/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-314925/24-A	Lab Control Sample	Total/NA	Solid	3540C	
240-91496-50 MS	ED-01.24-SL06-(1-1.96')	Total/NA	Solid	3540C	
240-91496-50 MSD	ED-01.24-SL06-(1-1.96')	Total/NA	Solid	3540C	

Analysis Batch: 315017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91496-2	ED-00.00-SL01-(0.91-2.21')	Total/NA	Solid	8082A	314904
MB 240-314904/23-A	Method Blank	Total/NA	Solid	8082A	314904
LCS 240-314904/24-A	Lab Control Sample	Total/NA	Solid	8082A	314904
240-91496-2 MS	ED-00.00-SL01-(0.91-2.21')	Total/NA	Solid	8082A	314904
240-91496-2 MSD	ED-00.00-SL01-(0.91-2.21')	Total/NA	Solid	8082A	314904

Analysis Batch: 315194

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91496-11	ED-00.05-SL01-(0.67-1.2')	Total/NA	Solid	8082A	314916
240-91496-12	ED-00.05-SL01-(1.4-2.3')	Total/NA	Solid	8082A	314916
240-91496-13	ED-00.05-SL01-(2.3-3.3')	Total/NA	Solid	8082A	314916
240-91496-15	ED-00.08-SL03-(2.25-2.75')	Total/NA	Solid	8082A	314916
240-91496-16	ED-00.08-SL03-(2.75-3.5')	Total/NA	Solid	8082A	314916
240-91496-22	ED-00.08-SL05-(0-0.67')	Total/NA	Solid	8082A	314916
240-91496-23	ED-00.08-SL05-(0.67-1.25')	Total/NA	Solid	8082A	314916
240-91496-24	ED-00.08-SL05-(1.25-2.1')	Total/NA	Solid	8082A	314916
240-91496-25	ED-00.08-SL05-(2.1-3')	Total/NA	Solid	8082A	314916
MB 240-314916/23-A	Method Blank	Total/NA	Solid	8082A	314916
LCS 240-314916/24-A	Lab Control Sample	Total/NA	Solid	8082A	314916
240-91496-11 MS	ED-00.05-SL01-(0.67-1.2')	Total/NA	Solid	8082A	314916
240-91496-11 MSD	ED-00.05-SL01-(0.67-1.2')	Total/NA	Solid	8082A	314916

Analysis Batch: 315196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91496-1	ED-00.00-SL01-(0-0.91')	Total/NA	Solid	8082A	314904
240-91496-3	ED-00.00-SL01-(2.21-3.12')	Total/NA	Solid	8082A	314904
240-91496-5	ED-00.02-SL01-(0-0.63')	Total/NA	Solid	8082A	314904
240-91496-6	ED-00.02-SL01-(0.63-1.76')	Total/NA	Solid	8082A	314904
240-91496-7	ED-00.02-SL01-(1.76-2.18')	Total/NA	Solid	8082A	314904
240-91496-8	ED-00.02-SL01-(2.18-3.43')	Total/NA	Solid	8082A	314904
240-91496-10	ED-00.05-SL01-(0-0.67')	Total/NA	Solid	8082A	314904
240-91496-51	ED-00.8-SL03-(1.25-2.25')	Total/NA	Solid	8082A	314904
MB 240-314904/23-A	Method Blank	Total/NA	Solid	8082A	314904
LCS 240-314904/24-A	Lab Control Sample	Total/NA	Solid	8082A	314904

Analysis Batch: 315208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91496-31	ED-00.13-SL01-(0-0.67')	Total/NA	Solid	8082A	314925
240-91496-32	ED-00.13-SL01-(0.67-1.67')	Total/NA	Solid	8082A	314925
240-91496-33	ED-00.13-SL01-(1.6-2.75')	Total/NA	Solid	8082A	314925
240-91496-34	ED-00.13-SL01-(2.75-3.08')	Total/NA	Solid	8082A	314925
240-91496-35	ED-00.17-SL01-(0-0.75')	Total/NA	Solid	8082A	314925
240-91496-37	ED-00.17-SL01-(0.75-1.75')	Total/NA	Solid	8082A	314925

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

GC Semi VOA (Continued)

Analysis Batch: 315208 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91496-39	ED-00.17-SL01-(2.75-3.75')	Total/NA	Solid	8082A	314925
240-91496-40	ED-00.55-SL01-(0-0.42')	Total/NA	Solid	8082A	314925
240-91496-41	ED-00.55-SL01-(0.5-0.88')	Total/NA	Solid	8082A	314925
240-91496-42	ED-00.55-SL02-(0-0.42')	Total/NA	Solid	8082A	314925
240-91496-43	ED-00.55-SL02-(0.5-0.96')	Total/NA	Solid	8082A	314925
240-91496-44	ED-01.24-SL04-(0-0.84')	Total/NA	Solid	8082A	314925
240-91496-45	ED-01.24-SL04-(1-1.46')	Total/NA	Solid	8082A	314925
240-91496-46	ED-01.24-SL05-(0-0.42')	Total/NA	Solid	8082A	314925
240-91496-47	ED-01.24-SL05-(0-0.42')-DUP	Total/NA	Solid	8082A	314925
240-91496-48	ED-01.24-SL05-(0.5-1.46')	Total/NA	Solid	8082A	314925
240-91496-49	ED-01.24-SL06-(0.0-0.84')	Total/NA	Solid	8082A	314925
240-91496-50	ED-01.24-SL06-(1-1.96')	Total/NA	Solid	8082A	314925
MB 240-314925/23-A	Method Blank	Total/NA	Solid	8082A	314925
LCS 240-314925/24-A	Lab Control Sample	Total/NA	Solid	8082A	314925
240-91496-50 MS	ED-01.24-SL06-(1-1.96')	Total/NA	Solid	8082A	314925
240-91496-50 MSD	ED-01.24-SL06-(1-1.96')	Total/NA	Solid	8082A	314925

Analysis Batch: 315475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91496-36	ED-00.17-SL01-(0-0.75')-DUP	Total/NA	Solid	8082A	314925
240-91496-38	ED-00.17-SL01-(1.75-2.75')	Total/NA	Solid	8082A	314925

General Chemistry

Analysis Batch: 314935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91496-1	ED-00.00-SL01-(0-0.91')	Total/NA	Solid	Moisture	
240-91496-2	ED-00.00-SL01-(0.91-2.21')	Total/NA	Solid	Moisture	
240-91496-3	ED-00.00-SL01-(2.21-3.12')	Total/NA	Solid	Moisture	
240-91496-5	ED-00.02-SL01-(0-0.63')	Total/NA	Solid	Moisture	
240-91496-6	ED-00.02-SL01-(0.63-1.76')	Total/NA	Solid	Moisture	
240-91496-7	ED-00.02-SL01-(1.76-2.18')	Total/NA	Solid	Moisture	
240-91496-8	ED-00.02-SL01-(2.18-3.43')	Total/NA	Solid	Moisture	
240-91496-10	ED-00.05-SL01-(0-0.67')	Total/NA	Solid	Moisture	
240-91496-11	ED-00.05-SL01-(0.67-1.2')	Total/NA	Solid	Moisture	
240-91496-12	ED-00.05-SL01-(1.4-2.3')	Total/NA	Solid	Moisture	
240-91496-13	ED-00.05-SL01-(2.3-3.3')	Total/NA	Solid	Moisture	
240-91496-15	ED-00.08-SL03-(2.25-2.75')	Total/NA	Solid	Moisture	
240-91496-16	ED-00.08-SL03-(2.75-3.5')	Total/NA	Solid	Moisture	
240-91496-22	ED-00.08-SL05-(0-0.67')	Total/NA	Solid	Moisture	
240-91496-23	ED-00.08-SL05-(0.67-1.25')	Total/NA	Solid	Moisture	
240-91496-24	ED-00.08-SL05-(1.25-2.1')	Total/NA	Solid	Moisture	
240-91496-25	ED-00.08-SL05-(2.1-3')	Total/NA	Solid	Moisture	
240-91496-31	ED-00.13-SL01-(0-0.67')	Total/NA	Solid	Moisture	
240-91496-32	ED-00.13-SL01-(0.67-1.67')	Total/NA	Solid	Moisture	
240-91496-33	ED-00.13-SL01-(1.6-2.75')	Total/NA	Solid	Moisture	
240-91496-34	ED-00.13-SL01-(2.75-3.08')	Total/NA	Solid	Moisture	
240-91496-35	ED-00.17-SL01-(0-0.75')	Total/NA	Solid	Moisture	
240-91496-36	ED-00.17-SL01-(0-0.75')-DUP	Total/NA	Solid	Moisture	
240-91496-37	ED-00.17-SL01-(0.75-1.75')	Total/NA	Solid	Moisture	

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

General Chemistry (Continued)

Analysis Batch: 314935 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91496-38	ED-00.17-SL01-(1.75-2.75')	Total/NA	Solid	Moisture	
240-91496-39	ED-00.17-SL01-(2.75-3.75')	Total/NA	Solid	Moisture	
240-91496-40	ED-00.55-SL01-(0-0.42')	Total/NA	Solid	Moisture	
240-91496-41	ED-00.55-SL01-(0.5-0.88')	Total/NA	Solid	Moisture	
240-91496-42	ED-00.55-SL02-(0-0.42')	Total/NA	Solid	Moisture	
240-91496-43	ED-00.55-SL02-(0.5-0.96')	Total/NA	Solid	Moisture	
240-91496-44	ED-01.24-SL04-(0-0.84')	Total/NA	Solid	Moisture	
240-91496-45	ED-01.24-SL04-(1-1.46')	Total/NA	Solid	Moisture	
240-91496-46	ED-01.24-SL05-(0-0.42')	Total/NA	Solid	Moisture	
240-91496-47	ED-01.24-SL05-(0-0.42')-DUP	Total/NA	Solid	Moisture	
240-91496-48	ED-01.24-SL05-(0.5-1.46')	Total/NA	Solid	Moisture	
240-91496-49	ED-01.24-SL06-(0.0-0.84')	Total/NA	Solid	Moisture	
240-91496-50	ED-01.24-SL06-(1-1.96')	Total/NA	Solid	Moisture	
240-91496-51	ED-00.8-SL03-(1.25-2.25')	Total/NA	Solid	Moisture	
240-91496-2 DU	ED-00.00-SL01-(0.91-2.21')	Total/NA	Solid	Moisture	
240-91496-11 DU	ED-00.05-SL01-(0.67-1.2')	Total/NA	Solid	Moisture	
240-91496-35 DU	ED-00.17-SL01-(0-0.75')	Total/NA	Solid	Moisture	
240-91496-44 DU	ED-01.24-SL04-(0-0.84')	Total/NA	Solid	Moisture	



Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.00-SL01-(0-0.91')

Lab Sample ID: 240-91496-1

Date Collected: 02/07/18 09:16

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:31	JWW	TAL CAN

Client Sample ID: ED-00.00-SL01-(0-0.91')

Lab Sample ID: 240-91496-1

Date Collected: 02/07/18 09:16

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 85.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314904	02/15/18 09:44	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315196	02/18/18 16:59	KMG	TAL CAN

Client Sample ID: ED-00.00-SL01-(0.91-2.21')

Lab Sample ID: 240-91496-2

Date Collected: 02/07/18 09:16

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:31	JWW	TAL CAN

Client Sample ID: ED-00.00-SL01-(0.91-2.21')

Lab Sample ID: 240-91496-2

Date Collected: 02/07/18 09:16

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 83.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314904	02/15/18 09:44	AMT	TAL CAN
Total/NA	Analysis	8082A		5	315017	02/16/18 12:58	LSH	TAL CAN

Client Sample ID: ED-00.00-SL01-(2.21-3.12')

Lab Sample ID: 240-91496-3

Date Collected: 02/07/18 09:16

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:31	JWW	TAL CAN

Client Sample ID: ED-00.00-SL01-(2.21-3.12')

Lab Sample ID: 240-91496-3

Date Collected: 02/07/18 09:16

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 89.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314904	02/15/18 09:44	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315196	02/18/18 17:17	KMG	TAL CAN

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.02-SL01-(0-0.63')

Lab Sample ID: 240-91496-5

Date Collected: 02/07/18 09:38

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:31	JWW	TAL CAN

Client Sample ID: ED-00.02-SL01-(0-0.63')

Lab Sample ID: 240-91496-5

Date Collected: 02/07/18 09:38

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 84.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314904	02/15/18 09:44	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315196	02/18/18 17:54	KMG	TAL CAN

Client Sample ID: ED-00.02-SL01-(0.63-1.76')

Lab Sample ID: 240-91496-6

Date Collected: 02/07/18 09:38

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:31	JWW	TAL CAN

Client Sample ID: ED-00.02-SL01-(0.63-1.76')

Lab Sample ID: 240-91496-6

Date Collected: 02/07/18 09:38

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 89.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314904	02/15/18 09:44	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315196	02/18/18 18:12	KMG	TAL CAN

Client Sample ID: ED-00.02-SL01-(1.76-2.18')

Lab Sample ID: 240-91496-7

Date Collected: 02/07/18 09:38

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:31	JWW	TAL CAN

Client Sample ID: ED-00.02-SL01-(1.76-2.18')

Lab Sample ID: 240-91496-7

Date Collected: 02/07/18 09:38

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 90.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314904	02/15/18 09:44	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315196	02/18/18 18:31	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.02-SL01-(2.18-3.43')

Lab Sample ID: 240-91496-8

Date Collected: 02/07/18 09:38

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:31	JWW	TAL CAN

Client Sample ID: ED-00.02-SL01-(2.18-3.43')

Lab Sample ID: 240-91496-8

Date Collected: 02/07/18 09:38

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 89.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314904	02/15/18 09:44	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315196	02/18/18 18:49	KMG	TAL CAN

Client Sample ID: ED-00.05-SL01-(0-0.67')

Lab Sample ID: 240-91496-10

Date Collected: 02/07/18 10:03

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:31	JWW	TAL CAN

Client Sample ID: ED-00.05-SL01-(0-0.67')

Lab Sample ID: 240-91496-10

Date Collected: 02/07/18 10:03

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314904	02/15/18 09:44	AMT	TAL CAN
Total/NA	Analysis	8082A		5	315196	02/18/18 19:26	KMG	TAL CAN

Client Sample ID: ED-00.05-SL01-(0.67-1.2')

Lab Sample ID: 240-91496-11

Date Collected: 02/07/18 10:03

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:31	JWW	TAL CAN

Client Sample ID: ED-00.05-SL01-(0.67-1.2')

Lab Sample ID: 240-91496-11

Date Collected: 02/07/18 10:03

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 85.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314916	02/15/18 10:32	DVT	TAL CAN
Total/NA	Analysis	8082A		1	315194	02/18/18 21:32	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.05-SL01-(1.4-2.3')

Lab Sample ID: 240-91496-12

Date Collected: 02/07/18 10:03

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:31	JWW	TAL CAN

Client Sample ID: ED-00.05-SL01-(1.4-2.3')

Lab Sample ID: 240-91496-12

Date Collected: 02/07/18 10:03

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 86.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314916	02/15/18 10:32	DVT	TAL CAN
Total/NA	Analysis	8082A		1	315194	02/18/18 15:15	KMG	TAL CAN

Client Sample ID: ED-00.05-SL01-(2.3-3.3')

Lab Sample ID: 240-91496-13

Date Collected: 02/07/18 10:03

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:31	JWW	TAL CAN

Client Sample ID: ED-00.05-SL01-(2.3-3.3')

Lab Sample ID: 240-91496-13

Date Collected: 02/07/18 10:03

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 89.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314916	02/15/18 10:32	DVT	TAL CAN
Total/NA	Analysis	8082A		1	315194	02/18/18 15:32	KMG	TAL CAN

Client Sample ID: ED-00.08-SL03-(2.25-2.75')

Lab Sample ID: 240-91496-15

Date Collected: 02/07/18 10:11

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:31	JWW	TAL CAN

Client Sample ID: ED-00.08-SL03-(2.25-2.75')

Lab Sample ID: 240-91496-15

Date Collected: 02/07/18 10:11

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 92.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314916	02/15/18 10:32	DVT	TAL CAN
Total/NA	Analysis	8082A		1	315194	02/18/18 16:06	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.08-SL03-(2.75-3.5')

Lab Sample ID: 240-91496-16

Date Collected: 02/07/18 10:11

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:31	JWW	TAL CAN

Client Sample ID: ED-00.08-SL03-(2.75-3.5')

Lab Sample ID: 240-91496-16

Date Collected: 02/07/18 10:11

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 82.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314916	02/15/18 10:32	DVT	TAL CAN
Total/NA	Analysis	8082A		1	315194	02/18/18 16:23	KMG	TAL CAN

Client Sample ID: ED-00.08-SL05-(0-0.67')

Lab Sample ID: 240-91496-22

Date Collected: 02/07/18 10:26

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.08-SL05-(0-0.67')

Lab Sample ID: 240-91496-22

Date Collected: 02/07/18 10:26

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 80.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314916	02/15/18 10:32	DVT	TAL CAN
Total/NA	Analysis	8082A		20	315194	02/18/18 18:06	KMG	TAL CAN

Client Sample ID: ED-00.08-SL05-(0.67-1.25')

Lab Sample ID: 240-91496-23

Date Collected: 02/07/18 10:26

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.08-SL05-(0.67-1.25')

Lab Sample ID: 240-91496-23

Date Collected: 02/07/18 10:26

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 87.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314916	02/15/18 10:32	DVT	TAL CAN
Total/NA	Analysis	8082A		10	315194	02/18/18 18:23	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.08-SL05-(1.25-2.1')

Lab Sample ID: 240-91496-24

Date Collected: 02/07/18 10:26

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.08-SL05-(1.25-2.1')

Lab Sample ID: 240-91496-24

Date Collected: 02/07/18 10:26

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 89.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314916	02/15/18 10:32	DVT	TAL CAN
Total/NA	Analysis	8082A		1	315194	02/18/18 18:40	KMG	TAL CAN

Client Sample ID: ED-00.08-SL05-(2.1-3')

Lab Sample ID: 240-91496-25

Date Collected: 02/07/18 10:26

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.08-SL05-(2.1-3')

Lab Sample ID: 240-91496-25

Date Collected: 02/07/18 10:26

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 88.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314916	02/15/18 10:32	DVT	TAL CAN
Total/NA	Analysis	8082A		1	315194	02/18/18 18:57	KMG	TAL CAN

Client Sample ID: ED-00.13-SL01-(0-0.67')

Lab Sample ID: 240-91496-31

Date Collected: 02/07/18 10:33

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.13-SL01-(0-0.67')

Lab Sample ID: 240-91496-31

Date Collected: 02/07/18 10:33

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 82.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		5	315208	02/19/18 22:10	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.13-SL01-(0.67-1.67')

Lab Sample ID: 240-91496-32

Date Collected: 02/07/18 10:33

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.13-SL01-(0.67-1.67')

Lab Sample ID: 240-91496-32

Date Collected: 02/07/18 10:33

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 89.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315208	02/19/18 14:50	KMG	TAL CAN

Client Sample ID: ED-00.13-SL01-(1.6-2.75')

Lab Sample ID: 240-91496-33

Date Collected: 02/07/18 10:33

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.13-SL01-(1.6-2.75')

Lab Sample ID: 240-91496-33

Date Collected: 02/07/18 10:33

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 87.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315208	02/19/18 15:08	KMG	TAL CAN

Client Sample ID: ED-00.13-SL01-(2.75-3.08')

Lab Sample ID: 240-91496-34

Date Collected: 02/07/18 10:33

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.13-SL01-(2.75-3.08')

Lab Sample ID: 240-91496-34

Date Collected: 02/07/18 10:33

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 80.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315208	02/19/18 15:27	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.17-SL01-(0-0.75')

Lab Sample ID: 240-91496-35

Date Collected: 02/07/18 10:41

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.17-SL01-(0-0.75')

Lab Sample ID: 240-91496-35

Date Collected: 02/07/18 10:41

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 80.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		5	315208	02/19/18 15:45	KMG	TAL CAN

Client Sample ID: ED-00.17-SL01-(0-0.75')-DUP

Lab Sample ID: 240-91496-36

Date Collected: 02/07/18 10:41

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.17-SL01-(0-0.75')-DUP

Lab Sample ID: 240-91496-36

Date Collected: 02/07/18 10:41

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 83.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		5	315475	02/20/18 18:57	KMG	TAL CAN

Client Sample ID: ED-00.17-SL01-(0.75-1.75')

Lab Sample ID: 240-91496-37

Date Collected: 02/07/18 10:41

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.17-SL01-(0.75-1.75')

Lab Sample ID: 240-91496-37

Date Collected: 02/07/18 10:41

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 89.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		10	315208	02/19/18 16:22	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.17-SL01-(1.75-2.75')

Lab Sample ID: 240-91496-38

Date Collected: 02/07/18 10:41

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.17-SL01-(1.75-2.75')

Lab Sample ID: 240-91496-38

Date Collected: 02/07/18 10:41

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 85.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		50	315475	02/20/18 19:13	KMG	TAL CAN

Client Sample ID: ED-00.17-SL01-(2.75-3.75')

Lab Sample ID: 240-91496-39

Date Collected: 02/07/18 10:41

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.17-SL01-(2.75-3.75')

Lab Sample ID: 240-91496-39

Date Collected: 02/07/18 10:41

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 90.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315208	02/19/18 16:58	KMG	TAL CAN

Client Sample ID: ED-00.55-SL01-(0-0.42')

Lab Sample ID: 240-91496-40

Date Collected: 02/07/18 11:30

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.55-SL01-(0-0.42')

Lab Sample ID: 240-91496-40

Date Collected: 02/07/18 11:30

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 88.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315208	02/19/18 17:17	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-00.55-SL01-(0.5-0.88')

Lab Sample ID: 240-91496-41

Date Collected: 02/07/18 11:40

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.55-SL01-(0.5-0.88')

Lab Sample ID: 240-91496-41

Date Collected: 02/07/18 11:40

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 87.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315208	02/19/18 17:35	KMG	TAL CAN

Client Sample ID: ED-00.55-SL02-(0-0.42')

Lab Sample ID: 240-91496-42

Date Collected: 02/07/18 13:08

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.55-SL02-(0-0.42')

Lab Sample ID: 240-91496-42

Date Collected: 02/07/18 13:08

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 77.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315208	02/19/18 17:53	KMG	TAL CAN

Client Sample ID: ED-00.55-SL02-(0.5-0.96')

Lab Sample ID: 240-91496-43

Date Collected: 02/07/18 13:16

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:45	JWW	TAL CAN

Client Sample ID: ED-00.55-SL02-(0.5-0.96')

Lab Sample ID: 240-91496-43

Date Collected: 02/07/18 13:16

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 78.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315208	02/19/18 19:07	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-01.24-SL04-(0-0.84')

Lab Sample ID: 240-91496-44

Date Collected: 02/07/18 13:20

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:54	JWW	TAL CAN

Client Sample ID: ED-01.24-SL04-(0-0.84')

Lab Sample ID: 240-91496-44

Date Collected: 02/07/18 13:20

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 91.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315208	02/19/18 19:25	KMG	TAL CAN

Client Sample ID: ED-01.24-SL04-(1-1.46')

Lab Sample ID: 240-91496-45

Date Collected: 02/07/18 13:30

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:54	JWW	TAL CAN

Client Sample ID: ED-01.24-SL04-(1-1.46')

Lab Sample ID: 240-91496-45

Date Collected: 02/07/18 13:30

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 85.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315208	02/19/18 19:44	KMG	TAL CAN

Client Sample ID: ED-01.24-SL05-(0-0.42')

Lab Sample ID: 240-91496-46

Date Collected: 02/07/18 13:50

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:54	JWW	TAL CAN

Client Sample ID: ED-01.24-SL05-(0-0.42')

Lab Sample ID: 240-91496-46

Date Collected: 02/07/18 13:50

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 75.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315208	02/19/18 20:02	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-01.24-SL05-(0-0.42')-DUP

Lab Sample ID: 240-91496-47

Date Collected: 02/07/18 13:50

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:54	JWW	TAL CAN

Client Sample ID: ED-01.24-SL05-(0-0.42')-DUP

Lab Sample ID: 240-91496-47

Date Collected: 02/07/18 13:50

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 77.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315208	02/19/18 20:20	KMG	TAL CAN

Client Sample ID: ED-01.24-SL05-(0.5-1.46')

Lab Sample ID: 240-91496-48

Date Collected: 02/07/18 13:56

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:54	JWW	TAL CAN

Client Sample ID: ED-01.24-SL05-(0.5-1.46')

Lab Sample ID: 240-91496-48

Date Collected: 02/07/18 13:56

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 79.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315208	02/19/18 20:39	KMG	TAL CAN

Client Sample ID: ED-01.24-SL06-(0.0-0.84')

Lab Sample ID: 240-91496-49

Date Collected: 02/07/18 14:10

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:54	JWW	TAL CAN

Client Sample ID: ED-01.24-SL06-(0.0-0.84')

Lab Sample ID: 240-91496-49

Date Collected: 02/07/18 14:10

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315208	02/19/18 20:57	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Client Sample ID: ED-01.24-SL06-(1-1.96')

Lab Sample ID: 240-91496-50

Date Collected: 02/07/18 14:18

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:54	JWW	TAL CAN

Client Sample ID: ED-01.24-SL06-(1-1.96')

Lab Sample ID: 240-91496-50

Date Collected: 02/07/18 14:18

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 82.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314925	02/15/18 11:13	AMT	TAL CAN
Total/NA	Analysis	8082A		1	315208	02/19/18 21:15	KMG	TAL CAN

Client Sample ID: ED-00.8-SL03-(1.25-2.25')

Lab Sample ID: 240-91496-51

Date Collected: 02/07/18 10:11

Matrix: Solid

Date Received: 02/14/18 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	314935	02/15/18 11:54	JWW	TAL CAN

Client Sample ID: ED-00.8-SL03-(1.25-2.25')

Lab Sample ID: 240-91496-51

Date Collected: 02/07/18 10:11

Matrix: Solid

Date Received: 02/14/18 09:40

Percent Solids: 85.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			314904	02/15/18 09:44	AMT	TAL CAN
Total/NA	Analysis	8082A		5	315196	02/18/18 15:46	KMG	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91496-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-18 *
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-18
Illinois	NELAP	5	200004	07-31-18
Kansas	NELAP	7	E-10336	01-31-18 *
Kentucky (UST)	State Program	4	58	02-23-18 *
Kentucky (WW)	State Program	4	98016	12-31-18
Minnesota	NELAP	5	039-999-348	12-31-18
Minnesota (Petrofund)	State Program	1	3506	07-31-18
Nevada	State Program	9	OH-000482008A	07-31-18
New Jersey	NELAP	2	OH001	06-30-18
New York	NELAP	2	10975	03-31-18 *
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-18 *
Pennsylvania	NELAP	3	68-00340	08-31-18
Texas	NELAP	6	T104704517-17-9	08-31-18
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-18
Washington	State Program	10	C971	01-12-19
West Virginia DEP	State Program	3	210	12-31-18

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

TestAmerica Canton

Chain of Custody Record

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Client Information		Sampler: Matt Brazzile/ Duncan Muchoki		Lab PM: Nestasia, Dominic J	
Client Contact: Matt Brazzile		Phone: 865-977-9997		E-Mail: dominic.nestasia@testamericainc.com	
Company: Civil & Environmental Consultants Inc		Address: 2704 Cherokee Farms Way, Suite 101		City: Knoxville	
State: TN		Zip: 37920		Phone: 865-399-1782	
Email: mbrazzile@cecinc.com		Project #: 172-367.0006		Project Name: Arcenic, Inc. - Elliott Ditch	
Site: Elliott Ditch		SSOWF:		Carrier Tracking Note:	
Due Date Requested:		TAI Requested (days):		Standard	
Sample Date		Sample Time		Sample Type (G=Comp, G=grab)	
Sample Identification		Sample Matrix		Matrix (Water, Solid, Dioxin, PCBs, Aroclor)	
ED-00-05-SL01-(1.4 - 2.3)		2/7/18 10:03		G S	
ED-00-05-SL01-(2.3 - 3.3)		2/7/18 10:03		G S	
ED-00-05-SL01-(3.3 - 4.0)		2/7/18 10:03		G S	
ED-00-08-SL03-(2.25 - 2.75)		2/7/18 10:11		G S	
ED-00-08-SL03-(2.75 - 3.5)		2/7/18 10:11		G S	
ED-00-08-SL03-(4 - 5)		2/7/18 10:14		G S	
ED-00-08-SL03-(5 - 5.6)		2/7/18 10:14		G S	
ED-00-08-SL03-(5.6 - 6.6)		2/7/18 10:14		G S	
ED-00-08-SL03-(6.6 - 7)		2/7/18 10:14		G S	
ED-00-08-SL03-(7 - 8)		2/7/18 10:14		G S	
ED-00-08-SL05-(0 - 0.67)		2/7/18 10:26		G S	
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)	
Empty Kit Relinquished by:		Date:		Method of Shipment:	
Relinquished by: DUNCAN MUCHOKI		Date/Time: 02/19/18 3:30P		Company: Company	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Special Instructions/Note:	



TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information
 Sampler: Matt Brazzile/ Duncan Muchoki
 Lab PM: Nestasie, Dominic J
 Phone: 865-977-9997
 E-Mail: dominic.nestasio@testamericainc.com
 Company: Civil & Environmental Consultants Inc
 Address: 2704 Cherokee Farms Way, Suite 101
 City: Knoxville
 State, Zip: TN, 37920
 Phone: 865-369-1782
 Email: mbrazzile@cecinc.com
 Project Name: Arconic, Inc. - Elliott Ditch
 Site: Elliott Ditch

Due Date Requested: TAT Requested (days): Standard
 PO #: WO #: 172-367 0006
 Project #: 172-367 0006
 SSGWF

Sample Identification	Sample Date	Sample Time	Sample Type (G=Comp, G=grab)	Matrix (Water, Solid, Overhead, BT=Trace, AA=M)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8082A-(MOD) PCBs Aroclors	Analysis Requested	Carrier Tracking No(s)	Lab PM:	Lab PM:	Lab PM:
ED-00.13-SL01(-2.75 - 3.08')	2/7/18	10:33	G	S	S	X	X	X			Nestasie, Dominic J	Nestasie, Dominic J	Nestasie, Dominic J
ED-00.17-SL01(-0 - 0.75')	2/7/18	10:41	G	S	S	X	X	X			Nestasie, Dominic J	Nestasie, Dominic J	Nestasie, Dominic J
ED-00.17-SL01(-0 - 0.75') - DUP	2/7/18	10:41	G	S	S	X	X	X			Nestasie, Dominic J	Nestasie, Dominic J	Nestasie, Dominic J
ED-00.17-SL01(-0.75 - 1.75')	2/7/18	10:41	G	S	S	X	X	X			Nestasie, Dominic J	Nestasie, Dominic J	Nestasie, Dominic J
ED-00.17-SL01(-1.75 - 2.75')	2/7/18	10:41	G	S	S	X	X	X			Nestasie, Dominic J	Nestasie, Dominic J	Nestasie, Dominic J
ED-00.17-SL01(-2.75 - 3.75')	2/7/18	10:41	G	S	S	X	X	X			Nestasie, Dominic J	Nestasie, Dominic J	Nestasie, Dominic J
ED-00.55-SL01(-0 - 0.42')	2/7/18	11:30	G	S	S	X	X	X			Nestasie, Dominic J	Nestasie, Dominic J	Nestasie, Dominic J
ED-00.55-SL01(-0.5 - 0.88')	2/7/18	11:40	G	S	S	X	X	X			Nestasie, Dominic J	Nestasie, Dominic J	Nestasie, Dominic J
ED-00.55-SL02(-0 - 0.42')	2/7/18	13:08	G	S	S	X	X	X			Nestasie, Dominic J	Nestasie, Dominic J	Nestasie, Dominic J
ED-00.55-SL02(-0.5 - 0.96')	2/7/18	13:16	G	S	S	X	X	X			Nestasie, Dominic J	Nestasie, Dominic J	Nestasie, Dominic J
ED-01.24-SL04(-0 - 0.84')	2/7/18	13:20	G	S	S	X	X	X			Nestasie, Dominic J	Nestasie, Dominic J	Nestasie, Dominic J

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/OC Requirements:

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: Duncan Muchoki Date: 02/13/18 Time: 3:39P Company: CEC
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____
 Custody Seals Intact: _____ Custody Seal No.: _____
 Δ Yes Δ No



TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 91496

Client CIVIL ENVIRON. CONSULT. Site Name _____
 Cooler Received on 2-14-18 Opened on 2-14-18

Cooler unpacked by:
POP

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box _____ Client Cooler _____ Box _____ Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-8 (CF -0.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #36 (CF +0.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN # 627 (CF -1.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples?
 If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC730269
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
16. Was a LL Hg or Me Hg trip blank present? Yes No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____
 Concerning _____

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

RECEIVED SAMPLE ED-008-SL03-1.25-2.25-2-07-18 @ 1011
NOT ON COC, WILL LOG LAST

17. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

18. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

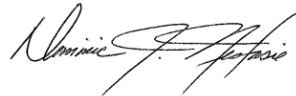
TestAmerica Job ID: 240-91127-1

Client Project/Site: Arconic, Inc. - Elliott Ditch

For:

Civil & Environmental Consultants Inc
2704 Cherokee Farm Way
Suite 101
Knoxville, Tennessee 37920

Attn: Matt Bruck



Authorized for release by:
2/13/2018 4:17:03 PM

Dominic Nestasie, Manager of Project Management
(412)963-7058
dominic.nestasie@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

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

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Method Summary	5
Sample Summary	6
Detection Summary	7
Client Sample Results	8
Surrogate Summary	10
QC Sample Results	11
QC Association Summary	12
Lab Chronicle	13
Certification Summary	14
Chain of Custody	15

Definitions/Glossary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91127-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.

Glossary

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

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91127-1

Job ID: 240-91127-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-91127-1

Receipt:

The samples were received on 2/3/2018 at 9:30 AM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at time of receipt was 1.7° C.

PCB's:

The following samples ED-00.54-SD03-(0-0.45') (240-91127-1) and ED-00.54-SD03-(0.45-0.9') (240-91127-2) required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur:

The following samples ED-00.54-SD03-(0-0.45') (240-91127-1) and ED-00.54-SD03-(0.45-0.9') (240-91127-2) appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration. The samples have been quantified and reported using the best overall Aroclor/standard pattern match. Due to the reasons stated above there is increased quantitative uncertainty associated with this result.

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

General Chemistry:

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

Method Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91127-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN

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 CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Sample Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91127-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-91127-1	ED-00.54-SD03-(0-0.45')	Solid	01/31/18 09:37	02/03/18 09:30
240-91127-2	ED-00.54-SD03-(0.45-0.9')	Solid	01/31/18 09:37	02/03/18 09:30

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91127-1

Client Sample ID: ED-00.54-SD03-(0-0.45')

Lab Sample ID: 240-91127-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1242	552		57.5	21.8	ug/Kg	1	☼	8082A	Total/NA
PCB-1254	112	p	57.5	26.4	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	664		57.5	35.6	ug/Kg	1	☼	8082A	Total/NA

Client Sample ID: ED-00.54-SD03-(0.45-0.9')

Lab Sample ID: 240-91127-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1242	293		59.3	22.5	ug/Kg	1	☼	8082A	Total/NA
PCB-1254	104	p	59.3	27.3	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	397		59.3	36.7	ug/Kg	1	☼	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91127-1

Client Sample ID: ED-00.54-SD03-(0-0.45')

Lab Sample ID: 240-91127-1

Date Collected: 01/31/18 09:37

Matrix: Solid

Date Received: 02/03/18 09:30

Percent Solids: 85.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	25.3	U	57.5	25.3	ug/Kg	☼	02/05/18 10:08	02/06/18 16:28	1
PCB-1221	27.6	U	57.5	27.6	ug/Kg	☼	02/05/18 10:08	02/06/18 16:28	1
PCB-1232	26.4	U	57.5	26.4	ug/Kg	☼	02/05/18 10:08	02/06/18 16:28	1
PCB-1242	552		57.5	21.8	ug/Kg	☼	02/05/18 10:08	02/06/18 16:28	1
PCB-1248	27.6	U	57.5	27.6	ug/Kg	☼	02/05/18 10:08	02/06/18 16:28	1
PCB-1254	112 p		57.5	26.4	ug/Kg	☼	02/05/18 10:08	02/06/18 16:28	1
PCB-1260	25.3	U	57.5	25.3	ug/Kg	☼	02/05/18 10:08	02/06/18 16:28	1
Polychlorinated biphenyls, Total	664		57.5	35.6	ug/Kg	☼	02/05/18 10:08	02/06/18 16:28	1
Aroclor-1262	35.6	U	57.5	35.6	ug/Kg	☼	02/05/18 10:08	02/06/18 16:28	1
Aroclor-1268	26.4	U	57.5	26.4	ug/Kg	☼	02/05/18 10:08	02/06/18 16:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	79		14 - 128	02/05/18 10:08	02/06/18 16:28	1
DCB Decachlorobiphenyl	62	p	10 - 132	02/05/18 10:08	02/06/18 16:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.1		0.1	0.1	%			02/05/18 09:37	1
Percent Moisture	14.9		0.1	0.1	%			02/05/18 09:37	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91127-1

Client Sample ID: ED-00.54-SD03-(0.45-0.9')

Lab Sample ID: 240-91127-2

Date Collected: 01/31/18 09:37

Matrix: Solid

Date Received: 02/03/18 09:30

Percent Solids: 85.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	26.1	U	59.3	26.1	ug/Kg	☼	02/05/18 10:08	02/06/18 17:37	1
PCB-1221	28.4	U	59.3	28.4	ug/Kg	☼	02/05/18 10:08	02/06/18 17:37	1
PCB-1232	27.3	U	59.3	27.3	ug/Kg	☼	02/05/18 10:08	02/06/18 17:37	1
PCB-1242	293		59.3	22.5	ug/Kg	☼	02/05/18 10:08	02/06/18 17:37	1
PCB-1248	28.4	U	59.3	28.4	ug/Kg	☼	02/05/18 10:08	02/06/18 17:37	1
PCB-1254	104	p	59.3	27.3	ug/Kg	☼	02/05/18 10:08	02/06/18 17:37	1
PCB-1260	26.1	U	59.3	26.1	ug/Kg	☼	02/05/18 10:08	02/06/18 17:37	1
Polychlorinated biphenyls, Total	397		59.3	36.7	ug/Kg	☼	02/05/18 10:08	02/06/18 17:37	1
Aroclor-1262	36.7	U	59.3	36.7	ug/Kg	☼	02/05/18 10:08	02/06/18 17:37	1
Aroclor-1268	27.3	U	59.3	27.3	ug/Kg	☼	02/05/18 10:08	02/06/18 17:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro- <i>m</i> -xylene	69		14 - 128	02/05/18 10:08	02/06/18 17:37	1
DCB Decachlorobiphenyl	62	<i>p</i>	10 - 132	02/05/18 10:08	02/06/18 17:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.1		0.1	0.1	%			02/05/18 09:37	1
Percent Moisture	14.9		0.1	0.1	%			02/05/18 09:37	1

Surrogate Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91127-1

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

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	TCX1	DCBP1
		(14-128)	(10-132)
240-91127-1	ED-00.54-SD03-(0-0.45')	79	62 p
240-91127-2	ED-00.54-SD03-(0.45-0.9')	69	62 p
LCS 240-313483/22-A	Lab Control Sample	74	74
MB 240-313483/21-A	Method Blank	62	82

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCBP = DCB Decachlorobiphenyl

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91127-1

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

Lab Sample ID: MB 240-313483/21-A
Matrix: Solid
Analysis Batch: 313594

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 313483

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	22.0	U	50.0	22.0	ug/Kg		02/05/18 10:08	02/06/18 11:42	1
PCB-1221	24.0	U	50.0	24.0	ug/Kg		02/05/18 10:08	02/06/18 11:42	1
PCB-1232	23.0	U	50.0	23.0	ug/Kg		02/05/18 10:08	02/06/18 11:42	1
PCB-1242	19.0	U	50.0	19.0	ug/Kg		02/05/18 10:08	02/06/18 11:42	1
PCB-1248	24.0	U	50.0	24.0	ug/Kg		02/05/18 10:08	02/06/18 11:42	1
PCB-1254	23.0	U	50.0	23.0	ug/Kg		02/05/18 10:08	02/06/18 11:42	1
PCB-1260	22.0	U	50.0	22.0	ug/Kg		02/05/18 10:08	02/06/18 11:42	1
Polychlorinated biphenyls, Total	31.0	U	50.0	31.0	ug/Kg		02/05/18 10:08	02/06/18 11:42	1
Aroclor-1262	31.0	U	50.0	31.0	ug/Kg		02/05/18 10:08	02/06/18 11:42	1
Aroclor-1268	23.0	U	50.0	23.0	ug/Kg		02/05/18 10:08	02/06/18 11:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	62		14 - 128	02/05/18 10:08	02/06/18 11:42	1
DCB Decachlorobiphenyl	82		10 - 132	02/05/18 10:08	02/06/18 11:42	1

Lab Sample ID: LCS 240-313483/22-A
Matrix: Solid
Analysis Batch: 313594

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 313483

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	1000	627.8		ug/Kg		63	47 - 120
PCB-1260	1000	682.3		ug/Kg		68	46 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	74		14 - 128
DCB Decachlorobiphenyl	74		10 - 132

Method: Moisture - Percent Moisture

Lab Sample ID: 240-91127-2 DU
Matrix: Solid
Analysis Batch: 313473

Client Sample ID: ED-00.54-SD03-(0.45-0.9')
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	85.1		85.1		%		0	20
Percent Moisture	14.9		14.9		%		0.2	20

QC Association Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91127-1

GC Semi VOA

Prep Batch: 313483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91127-1	ED-00.54-SD03-(0-0.45')	Total/NA	Solid	3540C	
240-91127-2	ED-00.54-SD03-(0.45-0.9')	Total/NA	Solid	3540C	
MB 240-313483/21-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-313483/22-A	Lab Control Sample	Total/NA	Solid	3540C	

Analysis Batch: 313594

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91127-1	ED-00.54-SD03-(0-0.45')	Total/NA	Solid	8082A	313483
240-91127-2	ED-00.54-SD03-(0.45-0.9')	Total/NA	Solid	8082A	313483
MB 240-313483/21-A	Method Blank	Total/NA	Solid	8082A	313483
LCS 240-313483/22-A	Lab Control Sample	Total/NA	Solid	8082A	313483

General Chemistry

Analysis Batch: 313473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-91127-1	ED-00.54-SD03-(0-0.45')	Total/NA	Solid	Moisture	
240-91127-2	ED-00.54-SD03-(0.45-0.9')	Total/NA	Solid	Moisture	
240-91127-2 DU	ED-00.54-SD03-(0.45-0.9')	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91127-1

Client Sample ID: ED-00.54-SD03-(0-0.45')

Lab Sample ID: 240-91127-1

Date Collected: 01/31/18 09:37

Matrix: Solid

Date Received: 02/03/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	313473	02/05/18 09:37	TPH	TAL CAN

Client Sample ID: ED-00.54-SD03-(0-0.45')

Lab Sample ID: 240-91127-1

Date Collected: 01/31/18 09:37

Matrix: Solid

Date Received: 02/03/18 09:30

Percent Solids: 85.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			313483	02/05/18 10:08	AMT	TAL CAN
Total/NA	Analysis	8082A		1	313594	02/06/18 16:28	KMG	TAL CAN

Client Sample ID: ED-00.54-SD03-(0.45-0.9')

Lab Sample ID: 240-91127-2

Date Collected: 01/31/18 09:37

Matrix: Solid

Date Received: 02/03/18 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	313473	02/05/18 09:37	TPH	TAL CAN

Client Sample ID: ED-00.54-SD03-(0.45-0.9')

Lab Sample ID: 240-91127-2

Date Collected: 01/31/18 09:37

Matrix: Solid

Date Received: 02/03/18 09:30

Percent Solids: 85.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			313483	02/05/18 10:08	AMT	TAL CAN
Total/NA	Analysis	8082A		1	313594	02/06/18 17:37	KMG	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-91127-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-18 *
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-18
Illinois	NELAP	5	200004	07-31-18
Kansas	NELAP	7	E-10336	01-31-18 *
Kentucky (UST)	State Program	4	58	02-23-18 *
Kentucky (WW)	State Program	4	98016	12-31-18
Minnesota	NELAP	5	039-999-348	12-31-18
Minnesota (Petrofund)	State Program	1	3506	07-31-18
Nevada	State Program	9	OH-000482008A	07-31-18
New Jersey	NELAP	2	OH001	06-30-18
New York	NELAP	2	10975	03-31-18 *
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-18 *
Pennsylvania	NELAP	3	68-00340	08-31-18
Texas	NELAP	6	T104704517-17-9	08-31-18
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-18
Washington	State Program	10	C971	01-12-19
West Virginia DEP	State Program	3	210	12-31-18

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

2.0/K1.7


TestAmerica Canton
 4101 Shuffel Street NW
 North Canton, OH 44720
 Phone (330) 497-93396 Fax (330) 497-0772

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Lab PM: Nestlasie, Dominic J		Carrier Tracking No(s)	
Company: Civil & Environmental Consultants Inc		E-Mail: dominic.nestlasie@testamericanc.com		COC No:	
Address: 2704 Cherokee Farms Way, Suite 101		Phone: 865-977-9997		Page: 1 of 1	
City: Knoxville		State, Zip: TN, 37920		Job #:	
Phone: 865-399-1782		PO #:		Analysis Requested	
Email: mbrazill@cecinc.com		WO #:		Preservation Codes:	
Project Name: Arconic, Inc. - Elliott Ditch		Project #: 172-367,0006		A - HCL	
Site: Elliott Ditch		SSON#: 172-367,0006		B - NaOH	
				C - Zn Acetate	
				D - Nitric Acid	
				E - NaHSO4	
				F - MeOH	
				G - Amchlor	
				H - Acetic Acid	
				I - Ice	
				J - DI Water	
				K - EDTA	
				L - EDA	
				M - Hexane	
				N - None	
				O - AsNaO2	
				P - Na2OAS	
				Q - Na2SO3	
				R - Na2S2O3	
				S - H2SO4	
				T - TSP Dodecahydrate	
				U - Acetone	
				V - MCAA	
				W - pH 4.5	
				Z - other (specify)	
				Other:	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Inorganic based, Organic based, or Traceable)	Preservation Code	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8082A-(MOD) PCBs Andors	Total Number of Containers	Special Instructions/Note:
ED-00 54-SD03-(0 - 0.45')	1/31/18	09:37	G	S	S	X	X		1	
ED-00 54-SD03-(0.45 -0.9')	1/31/18	09:37	G	S	S	X	X		1	



240-91127 Chain of Custody

<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Empty Kit Relinquished by: _____ Date: _____ Relinquished by: DUNCAN MUCHOKI Date/Time: 02/02/18 3:00 pm Company: CEC Relinquished by: _____ Date/Time: _____ Company: _____ Relinquished by: _____ Date/Time: _____ Company: _____		Method of Shipment: _____ Date/Time: 2/3/18 9:30 Company: JAC	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.: _____			



TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 91127


Client CEC Site Name _____
 Cooler Received on 2/3/18 Opened on 2/3/18
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Cooler unpacked by:
DSO

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-8 (CF -0.3 °C) Observed Cooler Temp. 20 °C Corrected Cooler Temp. 1.7 °C
 IR GUN #36 (CF +0.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN # 627 (CF -1.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No NA
 -Were tamper/custody seals intact and uncompromised? Yes No NA
 3. Shippers' packing slip attached to the cooler(s)? Yes No
 4. Did custody papers accompany the sample(s)? Yes No
 5. Were the custody papers relinquished & signed in the appropriate place? Yes No
 6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
 7. Did all bottles arrive in good condition (Unbroken)? Yes No
 8. Could all bottle labels be reconciled with the COC? Yes No
 9. Were correct bottle(s) used for the test(s) indicated? Yes No
 10. Sufficient quantity received to perform indicated analyses? Yes No
 11. Are these work share samples?
 If yes, Questions 12-16 have been checked at the originating laboratory.
 12. Were all preserved sample(s) at the correct pH upon receipt? Yes No N/A pH Strip Lot# HC730269
 13. Were VOAs on the COC? Yes No N/A
 14. Were air bubbles >6 mm in any VOA vials? Yes No N/A  Larger than this.
 15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No N/A
 16. Was a LL Hg or Me Hg trip blank present? Yes No

Tests that are not checked for pH by Receiving:
 VOAs
 Oil and Grease
 TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____
 Concerning _____

16. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

17. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

18. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Tel: (330)497-9396

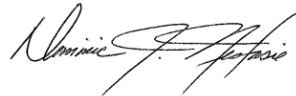
TestAmerica Job ID: 240-97885-1

Client Project/Site: Arconic, Inc. - Elliott Ditch

For:

Civil & Environmental Consultants Inc
2704 Cherokee Farm Way
Suite 101
Knoxville, Tennessee 37920

Attn: Matt Bruck



Authorized for release by:
7/12/2018 10:07:33 AM

Dominic Nestasie, Manager of Project Management
(412)963-7058
dominic.nestasie@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

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

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

1
2
3
4
5
6
7
8
9
10
11
12
13
14



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Method Summary	7
Sample Summary	8
Detection Summary	10
Client Sample Results	18
Surrogate Summary	84
QC Sample Results	86
QC Association Summary	93
Lab Chronicle	99
Certification Summary	121
Chain of Custody	122

Definitions/Glossary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Qualifiers

GC Semi VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F2	MS/MSD RPD exceeds control limits
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
X	Surrogate is outside control limits

General Chemistry

Qualifier	Qualifier Description
F3	Duplicate RPD exceeds the control limit

Glossary

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

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Job ID: 240-97885-1

Laboratory: TestAmerica Canton

Narrative

Job Narrative 240-97885-1

Receipt:

The samples were received on 6/27/2018 at 9:50 AM; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 2 coolers at time of receipt were 11.2° C and 13.4° C.

PCB's:

The following samples (240-97589-C-42-B MS) and (240-97589-C-42-C MSD), were diluted due to the nature of the sample matrix. Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

The following samples ED-00.19-SL01-0.0-0.8 (240-97885-36), (240-97589-C-42-B MS) and (240-97589-C-42-C MSD) were diluted due to abundance of target analytes. As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

The following samples ED-00.19-SL01-0.0-0.8 (240-97885-36), ED-00.21-SL01-0.0-1.0 (240-97885-41), (LCS 240-334947/24-A) and (MB 240-334947/23-A) required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur.

The following samples ED-00.51-SL06-1.0-2.0 (240-97885-2), ED-01.14-SL01-0.5-1.0 (240-97885-4), ED-01.14-SL01-1.0-1.5 (240-97885-5), ED-00.31-SL01-0.0-1.0 (240-97885-89), ED-00.23-SL01-0.0-0.7 (240-97885-99) and ED-00.29-SL01-0.0-0.7 (240-97885-103) were diluted due to abundance of target analytes. As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

The following samples ED-00.51-SL06-1.0-2.0 (240-97885-2), ED-01.14-SL01-0.5-1.0 (240-97885-4), ED-01.14-SL01-1.0-1.5 (240-97885-5), ED-00.31-SL01-0.0-1.0 (240-97885-89), ED-00.23-SL01-0.0-0.7 (240-97885-99) and ED-00.29-SL01-0.0-0.7 (240-97885-103) were diluted to bring the concentration of target analytes within the calibration range: Elevated reporting limits (RLs) are provided.

The following samples ED-00.51-SL06-1.0-2.0 (240-97885-2), ED-01.14-SL01-0.5-1.0 (240-97885-4), ED-01.14-SL01-1.0-1.5 (240-97885-5), ED-01.14-SL05-0.0-0.5 (240-97885-8), ED-01.14-SL05-0.5-1.0 (240-97885-9), ED-01.14-SL06-0.0-0.5 (240-97885-85), ED-01.14-SL06-0.5-1.0 (240-97885-86), ED-01.14-SL06-1.0-1.5 (240-97885-87), ED-00.31-SL01-0.0-1.0 (240-97885-89), ED-00.31-SL01-1.0-2.0 (240-97885-90), ED-00.33-SL01-0.0-0.7 (240-97885-94), ED-00.33-SL01-0.7-1.6 (240-97885-95), ED-00.23-SL01-0.0-0.7 (240-97885-99), ED-00.29-SL01-0.7-1.7 (240-97885-104) and ED-00.29-SL01-1.7-2.7-FD (240-97885-105) appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration: The samples have been quantified and reported using the best overall Aroclor/standard pattern match.

The following samples ED-00.51-SL06-1.0-2.0 (240-97885-2), ED-01.14-SL01-0.5-1.0 (240-97885-4), ED-01.14-SL01-1.0-1.5 (240-97885-5), ED-00.31-SL01-0.0-1.0 (240-97885-89), ED-00.33-SL01-0.0-0.7 (240-97885-94) and ED-00.33-SL01-0.7-1.6 (240-97885-95) required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur.

The surrogate recovery for the following samples ED-00.17-SL02-1.8-2.8 MSD (240-97885-25[MSD]), ED-00.29-SL01-1.7-2.7 (240-97885-74), ED-00.44-SL01-0.5-1.0 (240-97885-78), ED-00.44-SL01-1.0-1.5 (240-97885-79), ED-00.44-SL01-1.5-1.8 (240-97885-80) and ED-00.44-SL01-1.8-2.0 (240-97885-81) were outside control limits. Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

The following sample ED-00.44-SL01-0.0-0.5 (240-97885-77), required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur.

The following samples ED-00.19-SL01-1.8-2.3 (240-97885-34), ED-00.19-SL01-1.8-2.3 (240-97885-70), ED-00.29-SL01-1.7-2.7

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Job ID: 240-97885-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

(240-97885-74), ED-00.44-SL01-0.0-0.5 (240-97885-77), ED-00.44-SL01-0.5-1.0 (240-97885-78), ED-00.44-SL01-1.0-1.5 (240-97885-79), ED-00.44-SL01-1.5-1.8 (240-97885-80) and ED-00.44-SL01-1.8-2.0 (240-97885-81) appear to contain polychlorinated biphenyls (PCBs); however, the Aroclor patterns of the PCBs in the samples are altered and do not directly match the laboratory's individual Aroclor standards used for instrument calibration. These altered PCB patterns may be caused by weathering, other environmental processes, and/or contributions from the presence of multiple Aroclors resulting in overlapping PCB patterns. The samples have been quantified and reported using the best overall Aroclor/standard pattern match.

The following samples ED-00.19-SL01-1.8-2.3 MS (240-97885-34[MS]) and ED-00.19-SL01-1.8-2.3 MSD (240-97885-34[MSD]) were diluted due to the abundance of target analytes. Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

The following samples ED-00.17-SL02-0.0-0.8-FD (240-97885-22) and ED-00.17-SL02-0.0-0.8 (240-97885-23) were diluted due to abundance of target analytes. As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

The following samples ED-00.00-SL03-0.9-1.7 (240-97885-15), ED-00.00-SL03-0.9-1.7 MS (240-97885-15[MS]), ED-00.00-SL03-0.9-1.7 MSD (240-97885-15[MSD]), ED-00.00-SL04-1.8-2.7 (240-97885-20), ED-01.14-SL04-1.5-1.8 (240-97885-57), ED-01.14-SL04-1.0-1.5 (240-97885-58), ED-01.14-SL04-0.0-0.5 (240-97885-59) and ED-00.00-SL03-0.9-1.7 (240-97885-61) required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur.

The following sample ED-00.00-SL03-0.0-0.9 (240-97885-16) was diluted due to abundance of target analytes. As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

The following samples ED-00.00-SL03-0.9-1.7 (240-97885-15), ED-00.00-SL04-0.0-0.9 (240-97885-17), ED-00.00-SL04-0.9-1.8 (240-97885-18), ED-00.00-SL04-0.0-0.9-FD (240-97885-19), ED-00.17-SL02-0.0-0.8-FD (240-97885-22), ED-00.17-SL02-0.0-0.8 (240-97885-23), ED-00.17-SL02-0.8-1.8 (240-97885-24), ED-00.41-SL01-0.0-0.5 (240-97885-27), ED-00.41-SL01-1.0-1.5 (240-97885-28), ED-00.41-SL01-1.5-2.0 (240-97885-29), ED-00.41-SL01-1.5-2.0-FD (240-97885-30), ED-01.14-SL04-1.5-1.8 (240-97885-57), ED-01.14-SL04-1.0-1.5 (240-97885-58), ED-01.14-SL04-0.0-0.5 (240-97885-59), ED-00.00-SL03-0.9-1.7 (240-97885-61), ED-00.36-SL01-0.0-0.4 (240-97885-62), ED-00.41-SL01-0.5-1.0 (240-97885-66) and ED-00.36-SL01-1.5-2.0-FD (240-97885-68) appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration. The samples have been quantified and reported using the best overall Aroclor/standard pattern match.

The following sample ED-00.00-SL03-0.0-0.9 (240-97885-16) was diluted to bring the concentration of target analytes within the calibration range. Elevated reporting limits (RLs) are provided.

The following samples ED-01.14-SL05-1.0-1.5 (240-97885-11) and ED-00.00-SL03-0.0-0.9 (240-97885-16) appear to contain polychlorinated biphenyls (PCBs); however, due to weathering, other environmental processes and/or contributions from the presence of multiple Aroclors, resulting in overlapping PCB patterns, the PCBs in the samples do not directly match any of the laboratory's Aroclor standards used for instrument calibration. The samples have been quantified and reported using the best overall Aroclor/standard pattern match.

The following samples ED-00.00-SL03-1.7-2.5 (240-97885-14) and ED-00.00-SL03-0.0-0.9 (240-97885-16) required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur.

The following sample ED-00.27-SL01-0.0-1.0 (240-97885-46) was diluted due to abundance of target analytes. As such, surrogate recoveries are below the calibration range or are not reported, and elevated reporting limits (RLs) are provided.

The following samples ED-01.14-SL04-0.5-1.0 (240-97885-56), (240-98076-G-1-G), (240-98076-G-1-H MS) and (240-98076-G-1-I MSD) required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur.

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

General Chemistry:

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Job ID: 240-97885-1 (Continued)

Laboratory: TestAmerica Canton (Continued)

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

Organic Prep:

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Method Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Method	Method Description	Protocol	Laboratory
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL CAN
Moisture	Percent Moisture	EPA	TAL CAN
3540C	Soxhlet Extraction	SW846	TAL CAN

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 CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396



Sample Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-97885-2	ED-00.51-SL06-1.0-2.0	Solid	06/16/18 16:40	06/27/18 09:50
240-97885-4	ED-01.14-SL01-0.5-1.0	Solid	06/15/18 18:12	06/27/18 09:50
240-97885-5	ED-01.14-SL01-1.0-1.5	Solid	06/15/18 18:17	06/27/18 09:50
240-97885-8	ED-01.14-SL05-0.0-0.5	Solid	06/15/18 18:26	06/27/18 09:50
240-97885-9	ED-01.14-SL05-0.5-1.0	Solid	06/15/18 18:27	06/27/18 09:50
240-97885-11	ED-01.14-SL05-1.0-1.5	Solid	06/15/18 18:30	06/27/18 09:50
240-97885-14	ED-00.00-SL03-1.7-2.5	Solid	06/14/18 15:52	06/27/18 09:50
240-97885-15	ED-00.00-SL03-0.9-1.7	Solid	06/14/18 15:50	06/27/18 09:50
240-97885-16	ED-00.00-SL03-0.0-0.9	Solid	06/14/18 15:47	06/27/18 09:50
240-97885-17	ED-00.00-SL04-0.0-0.9	Solid	06/14/18 16:10	06/27/18 09:50
240-97885-18	ED-00.00-SL04-0.9-1.8	Solid	06/14/18 16:15	06/27/18 09:50
240-97885-19	ED-00.00-SL04-0.0-0.9-FD	Solid	06/14/18 16:10	06/27/18 09:50
240-97885-20	ED-00.00-SL04-1.8-2.7	Solid	06/14/18 16:19	06/27/18 09:50
240-97885-22	ED-00.17-SL02-0.0-0.8-FD	Solid	06/14/18 15:20	06/27/18 09:50
240-97885-23	ED-00.17-SL02-0.0-0.8	Solid	06/14/18 15:20	06/27/18 09:50
240-97885-24	ED-00.17-SL02-0.8-1.8	Solid	06/14/18 15:22	06/27/18 09:50
240-97885-25	ED-00.17-SL02-1.8-2.8	Solid	06/14/18 15:24	06/27/18 09:50
240-97885-27	ED-00.41-SL01-0.0-0.5	Solid	06/14/18 10:03	06/27/18 09:50
240-97885-28	ED-00.41-SL01-1.0-1.5	Solid	06/14/18 10:06	06/27/18 09:50
240-97885-29	ED-00.41-SL01-1.5-2.0	Solid	06/14/18 10:08	06/27/18 09:50
240-97885-30	ED-00.41-SL01-1.5-2.0-FD	Solid	06/14/18 10:08	06/27/18 09:50
240-97885-34	ED-00.19-SL01-1.8-2.3	Solid	06/14/18 14:48	06/27/18 09:50
240-97885-35	ED-00.19-SL01-1.5-1.8	Solid	06/14/18 14:46	06/27/18 09:50
240-97885-36	ED-00.19-SL01-0.0-0.8	Solid	06/14/18 04:40	06/27/18 09:50
240-97885-37	ED-00.19-SL01-0.8-1.5	Solid	06/14/18 14:42	06/27/18 09:50
240-97885-38	ED-00.19-SL01-0.8-1.5-FD	Solid	06/14/18 14:42	06/27/18 09:50
240-97885-41	ED-00.21-SL01-0.0-1.0	Solid	06/14/18 14:56	06/27/18 09:50
240-97885-42	ED-00.21-SL01-1.0-2.0	Solid	06/14/18 14:58	06/27/18 09:50
240-97885-43	ED-00.21-SL01-1.0-2.0-FD	Solid	06/14/18 14:58	06/27/18 09:50
240-97885-46	ED-00.27-SL01-0.0-1.0	Solid	06/14/18 13:39	06/27/18 09:50
240-97885-47	ED-00.27-SL01-1.0-1.9	Solid	06/14/18 13:41	06/27/18 09:50
240-97885-48	ED-00.27-SL01-1.9-2.8	Solid	06/14/18 13:43	06/27/18 09:50
240-97885-50	ED-00.23-SL01-0.7-1.2	Solid	06/14/18 12:55	06/27/18 09:50
240-97885-51	ED-00.23-SL01-0.7-1.2-FD	Solid	06/14/18 12:55	06/27/18 09:50
240-97885-56	ED-01.14-SL04-0.5-1.0	Solid	06/15/18 18:33	06/27/18 09:50
240-97885-57	ED-01.14-SL04-1.5-1.8	Solid	06/15/18 18:40	06/27/18 09:50
240-97885-58	ED-01.14-SL04-1.0-1.5	Solid	06/15/18 18:35	06/27/18 09:50
240-97885-59	ED-01.14-SL04-0.0-0.5	Solid	06/15/18 18:30	06/27/18 09:50
240-97885-60	ED-00.36-SL01-0.4-1.0	Solid	06/14/18 10:58	06/27/18 09:50
240-97885-61	ED-00.00-SL03-0.9-1.7	Solid	06/14/18 15:50	06/27/18 09:50
240-97885-62	ED-00.36-SL01-0.0-0.4	Solid	06/14/18 10:50	06/27/18 09:50
240-97885-65	ED-00.36-SL01-1.5-2.0	Solid	06/14/18 10:50	06/27/18 09:50
240-97885-66	ED-00.41-SL01-0.5-1.0	Solid	06/14/18 10:05	06/27/18 09:50
240-97885-68	ED-00.36-SL01-1.5-2.0-FD	Solid	06/14/18 10:50	06/27/18 09:50
240-97885-69	ED-00.36-SL01-0.4-1.0	Solid	06/14/18 10:55	06/27/18 09:50
240-97885-70	ED-00.19-SL01-1.8-2.3	Solid	06/14/18 14:48	06/27/18 09:50
240-97885-74	ED-00.29-SL01-1.7-2.7	Solid	06/14/18 13:36	06/27/18 09:50
240-97885-77	ED-00.44-SL01-0.0-0.5	Solid	06/14/18 11:20	06/27/18 09:50
240-97885-78	ED-00.44-SL01-0.5-1.0	Solid	06/14/18 11:22	06/27/18 09:50
240-97885-79	ED-00.44-SL01-1.0-1.5	Solid	06/14/18 11:27	06/27/18 09:50
240-97885-80	ED-00.44-SL01-1.5-1.8	Solid	06/14/18 11:34	06/27/18 09:50
240-97885-81	ED-00.44-SL01-1.8-2.0	Solid	06/14/18 11:40	06/27/18 09:50
240-97885-85	ED-01.14-SL06-0.0-0.5	Solid	06/13/18 13:56	06/27/18 09:50

TestAmerica Canton

Sample Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-97885-86	ED-01.14-SL06-0.5-1.0	Solid	06/13/18 13:58	06/27/18 09:50
240-97885-87	ED-01.14-SL06-1.0-1.5	Solid	06/13/18 14:12	06/27/18 09:50
240-97885-89	ED-00.31-SL01-0.0-1.0	Solid	06/14/18 12:13	06/27/18 09:50
240-97885-90	ED-00.31-SL01-1.0-2.0	Solid	06/14/18 12:15	06/27/18 09:50
240-97885-94	ED-00.33-SL01-0.0-0.7	Solid	06/14/18 12:20	06/27/18 09:50
240-97885-95	ED-00.33-SL01-0.7-1.6	Solid	06/14/18 12:25	06/27/18 09:50
240-97885-96	ED-00.33-SL01-1.6-2.3	Solid	06/14/18 12:27	06/27/18 09:50
240-97885-99	ED-00.23-SL01-0.0-0.7	Solid	06/14/18 12:51	06/27/18 09:50
240-97885-100	ED-00.23-SL01-1.2-2.0	Solid	06/14/18 12:56	06/27/18 09:50
240-97885-103	ED-00.29-SL01-0.0-0.7	Solid	06/14/18 13:32	06/27/18 09:50
240-97885-104	ED-00.29-SL01-0.7-1.7	Solid	06/14/18 13:34	06/27/18 09:50
240-97885-105	ED-00.29-SL01-1.7-2.7-FD	Solid	06/14/18 13:36	06/27/18 09:50
240-97885-106	ED-00.36-SL01-1.0-1.5	Solid	06/14/18 10:51	06/27/18 09:50

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.51-SL06-1.0-2.0

Lab Sample ID: 240-97885-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	2790		292	140	ug/Kg	5	☒	8082A	Total/NA
PCB-1260	422		292	128	ug/Kg	5	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	3210		292	181	ug/Kg	5	☒	8082A	Total/NA

Client Sample ID: ED-01.14-SL01-0.5-1.0

Lab Sample ID: 240-97885-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	11400		604	290	ug/Kg	10	☒	8082A	Total/NA
PCB-1260	1300		604	266	ug/Kg	10	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	12700		604	374	ug/Kg	10	☒	8082A	Total/NA

Client Sample ID: ED-01.14-SL01-1.0-1.5

Lab Sample ID: 240-97885-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	6330		624	299	ug/Kg	10	☒	8082A	Total/NA
PCB-1260	943		624	274	ug/Kg	10	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	7270		624	387	ug/Kg	10	☒	8082A	Total/NA

Client Sample ID: ED-01.14-SL05-0.0-0.5

Lab Sample ID: 240-97885-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	210		62.8	30.2	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	210		62.8	39.0	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.14-SL05-0.5-1.0

Lab Sample ID: 240-97885-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	230		60.3	29.0	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	230		60.3	37.4	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.14-SL05-1.0-1.5

Lab Sample ID: 240-97885-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	184		62.5	30.0	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	184		62.5	38.7	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.00-SL03-1.7-2.5

Lab Sample ID: 240-97885-14

No Detections.

Client Sample ID: ED-00.00-SL03-0.9-1.7

Lab Sample ID: 240-97885-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	73.6		55.4	26.6	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	73.6		55.4	34.4	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.00-SL03-0.0-0.9

Lab Sample ID: 240-97885-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	1260		327	157	ug/Kg	5	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1260		327	203	ug/Kg	5	☒	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.00-SL04-0.0-0.9

Lab Sample ID: 240-97885-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	35.3	J	60.1	28.9	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.00-SL04-0.9-1.8

Lab Sample ID: 240-97885-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	34.6	J	59.1	28.4	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.00-SL04-0.0-0.9-FD

Lab Sample ID: 240-97885-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	29.2	J	55.8	26.8	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.00-SL04-1.8-2.7

Lab Sample ID: 240-97885-20

No Detections.

Client Sample ID: ED-00.17-SL02-0.0-0.8-FD

Lab Sample ID: 240-97885-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	60400		3550	1710	ug/Kg	50	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	60400		3550	2200	ug/Kg	50	☒	8082A	Total/NA

Client Sample ID: ED-00.17-SL02-0.0-0.8

Lab Sample ID: 240-97885-23

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	94200		5890	2820	ug/Kg	100	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	94200		5890	3650	ug/Kg	100	☒	8082A	Total/NA

Client Sample ID: ED-00.17-SL02-0.8-1.8

Lab Sample ID: 240-97885-24

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	3940		289	139	ug/Kg	5	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	3940		289	179	ug/Kg	5	☒	8082A	Total/NA

Client Sample ID: ED-00.17-SL02-1.8-2.8

Lab Sample ID: 240-97885-25

No Detections.

Client Sample ID: ED-00.41-SL01-0.0-0.5

Lab Sample ID: 240-97885-27

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	19200		1340	644	ug/Kg	20	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	19200		1340	831	ug/Kg	20	☒	8082A	Total/NA

Client Sample ID: ED-00.41-SL01-1.0-1.5

Lab Sample ID: 240-97885-28

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	454		58.7	28.2	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	454		58.7	36.4	ug/Kg	1	☒	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.41-SL01-1.5-2.0

Lab Sample ID: 240-97885-29

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	39.2	J p	62.8	30.1	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	39.2	J	62.8	38.9	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.41-SL01-1.5-2.0-FD

Lab Sample ID: 240-97885-30

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	41.0	J	60.5	29.0	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	41.0	J	60.5	37.5	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.19-SL01-1.8-2.3

Lab Sample ID: 240-97885-34

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	1690		281	135	ug/Kg	5	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1690		281	174	ug/Kg	5	☒	8082A	Total/NA

Client Sample ID: ED-00.19-SL01-1.5-1.8

Lab Sample ID: 240-97885-35

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	1580		310	149	ug/Kg	5	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1580		310	193	ug/Kg	5	☒	8082A	Total/NA

Client Sample ID: ED-00.19-SL01-0.0-0.8

Lab Sample ID: 240-97885-36

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	1500		286	137	ug/Kg	5	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1500		286	177	ug/Kg	5	☒	8082A	Total/NA

Client Sample ID: ED-00.19-SL01-0.8-1.5

Lab Sample ID: 240-97885-37

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	182		61.4	29.5	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	182		61.4	38.1	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.19-SL01-0.8-1.5-FD

Lab Sample ID: 240-97885-38

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	170		60.8	29.2	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	170		60.8	37.7	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.21-SL01-0.0-1.0

Lab Sample ID: 240-97885-41

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	826		61.7	29.6	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	826		61.7	38.3	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.21-SL01-1.0-2.0

Lab Sample ID: 240-97885-42

No Detections.

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.21-SL01-1.0-2.0-FD

Lab Sample ID: 240-97885-43

No Detections.

Client Sample ID: ED-00.27-SL01-0.0-1.0

Lab Sample ID: 240-97885-46

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	25500		3640	1750	ug/Kg	50	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	25500		3640	2260	ug/Kg	50	☒	8082A	Total/NA

Client Sample ID: ED-00.27-SL01-1.0-1.9

Lab Sample ID: 240-97885-47

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	127		62.7	30.1	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	127		62.7	38.9	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.27-SL01-1.9-2.8

Lab Sample ID: 240-97885-48

No Detections.

Client Sample ID: ED-00.23-SL01-0.7-1.2

Lab Sample ID: 240-97885-50

No Detections.

Client Sample ID: ED-00.23-SL01-0.7-1.2-FD

Lab Sample ID: 240-97885-51

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	32.0	J	58.5	28.1	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.14-SL04-0.5-1.0

Lab Sample ID: 240-97885-56

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	729	p	62.0	29.8	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	729		62.0	38.5	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.14-SL04-1.5-1.8

Lab Sample ID: 240-97885-57

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	1080		63.8	30.6	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1080		63.8	39.5	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.14-SL04-1.0-1.5

Lab Sample ID: 240-97885-58

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	768		60.7	29.1	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	768		60.7	37.6	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.14-SL04-0.0-0.5

Lab Sample ID: 240-97885-59

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	2460		331	159	ug/Kg	5	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	2460		331	205	ug/Kg	5	☒	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.36-SL01-0.4-1.0

Lab Sample ID: 240-97885-60

No Detections.

Client Sample ID: ED-00.00-SL03-0.9-1.7

Lab Sample ID: 240-97885-61

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	141		57.8	27.8	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	141		57.8	35.8	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.36-SL01-0.0-0.4

Lab Sample ID: 240-97885-62

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	368		52.1	25.0	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	368		52.1	32.3	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.36-SL01-1.5-2.0

Lab Sample ID: 240-97885-65

No Detections.

Client Sample ID: ED-00.41-SL01-0.5-1.0

Lab Sample ID: 240-97885-66

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	1980		116	55.5	ug/Kg	2	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1980		116	71.7	ug/Kg	2	☒	8082A	Total/NA

Client Sample ID: ED-00.36-SL01-1.5-2.0-FD

Lab Sample ID: 240-97885-68

No Detections.

Client Sample ID: ED-00.36-SL01-0.4-1.0

Lab Sample ID: 240-97885-69

No Detections.

Client Sample ID: ED-00.19-SL01-1.8-2.3

Lab Sample ID: 240-97885-70

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	1780		116	55.7	ug/Kg	2	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1780		116	71.9	ug/Kg	2	☒	8082A	Total/NA

Client Sample ID: ED-00.29-SL01-1.7-2.7

Lab Sample ID: 240-97885-74

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	66.8	J	68.4	32.8	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	66.8	J	68.4	42.4	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.44-SL01-0.0-0.5

Lab Sample ID: 240-97885-77

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	340		53.4	25.6	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	340		53.4	33.1	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.44-SL01-0.5-1.0

Lab Sample ID: 240-97885-78

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.44-SL01-0.5-1.0 (Continued)

Lab Sample ID: 240-97885-78

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	405		53.1	25.3	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	405		53.1	32.9	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.44-SL01-1.0-1.5

Lab Sample ID: 240-97885-79

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	448		54.8	26.3	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	448		54.8	34.0	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.44-SL01-1.5-1.8

Lab Sample ID: 240-97885-80

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	30.2	J p	54.4	26.1	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	94.4		54.4	33.7	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.44-SL01-1.8-2.0

Lab Sample ID: 240-97885-81

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	142	p	58.1	27.9	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	287		58.1	36.1	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.14-SL06-0.0-0.5

Lab Sample ID: 240-97885-85

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	1180		65.8	31.6	ug/Kg	1	☒	8082A	Total/NA
PCB-1260	387		65.8	29.0	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1570		65.8	40.8	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.14-SL06-0.5-1.0

Lab Sample ID: 240-97885-86

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	319		62.1	29.8	ug/Kg	1	☒	8082A	Total/NA
PCB-1260	113		62.1	27.3	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	432		62.1	38.5	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-01.14-SL06-1.0-1.5

Lab Sample ID: 240-97885-87

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	221		64.2	30.8	ug/Kg	1	☒	8082A	Total/NA
PCB-1260	61.5	J	64.2	28.2	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	283		64.2	39.8	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.31-SL01-0.0-1.0

Lab Sample ID: 240-97885-89

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	22400		1300	624	ug/Kg	20	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	22400		1300	806	ug/Kg	20	☒	8082A	Total/NA

Client Sample ID: ED-00.31-SL01-1.0-2.0

Lab Sample ID: 240-97885-90

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.31-SL01-1.0-2.0 (Continued)

Lab Sample ID: 240-97885-90

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	372		57.9	27.8	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	372		57.9	35.9	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.33-SL01-0.0-0.7

Lab Sample ID: 240-97885-94

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	976		63.2	30.4	ug/Kg	1	☒	8082A	Total/NA
PCB-1260	166		63.2	27.8	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	1140		63.2	39.2	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.33-SL01-0.7-1.6

Lab Sample ID: 240-97885-95

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	333		56.0	26.9	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	333		56.0	34.7	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.33-SL01-1.6-2.3

Lab Sample ID: 240-97885-96

No Detections.

Client Sample ID: ED-00.23-SL01-0.0-0.7

Lab Sample ID: 240-97885-99

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	11400		620	298	ug/Kg	10	☒	8082A	Total/NA
PCB-1260	1260		620	273	ug/Kg	10	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	12700		620	385	ug/Kg	10	☒	8082A	Total/NA

Client Sample ID: ED-00.23-SL01-1.2-2.0

Lab Sample ID: 240-97885-100

No Detections.

Client Sample ID: ED-00.29-SL01-0.0-0.7

Lab Sample ID: 240-97885-103

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	6460		576	276	ug/Kg	10	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	6460		576	357	ug/Kg	10	☒	8082A	Total/NA

Client Sample ID: ED-00.29-SL01-0.7-1.7

Lab Sample ID: 240-97885-104

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	53.1	J	54.9	26.3	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	53.1	J	54.9	34.0	ug/Kg	1	☒	8082A	Total/NA

Client Sample ID: ED-00.29-SL01-1.7-2.7-FD

Lab Sample ID: 240-97885-105

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1248	45.2	J	65.3	31.3	ug/Kg	1	☒	8082A	Total/NA
Polychlorinated biphenyls, Total	45.2	J	65.3	40.5	ug/Kg	1	☒	8082A	Total/NA

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Detection Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.36-SL01-1.0-1.5

Lab Sample ID: 240-97885-106

No Detections.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

This Detection Summary does not include radiochemical test results.

TestAmerica Canton

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.51-SL06-1.0-2.0

Lab Sample ID: 240-97885-2

Date Collected: 06/16/18 16:40

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	128	U	292	128	ug/Kg	☼	07/06/18 14:06	07/10/18 09:58	5
PCB-1221	140	U	292	140	ug/Kg	☼	07/06/18 14:06	07/10/18 09:58	5
PCB-1232	134	U	292	134	ug/Kg	☼	07/06/18 14:06	07/10/18 09:58	5
PCB-1242	111	U	292	111	ug/Kg	☼	07/06/18 14:06	07/10/18 09:58	5
PCB-1248	2790		292	140	ug/Kg	☼	07/06/18 14:06	07/10/18 09:58	5
PCB-1254	134	U	292	134	ug/Kg	☼	07/06/18 14:06	07/10/18 09:58	5
PCB-1260	422		292	128	ug/Kg	☼	07/06/18 14:06	07/10/18 09:58	5
Polychlorinated biphenyls, Total	3210		292	181	ug/Kg	☼	07/06/18 14:06	07/10/18 09:58	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	72		14 - 128	07/06/18 14:06	07/10/18 09:58	5
DCB Decachlorobiphenyl	73		10 - 132	07/06/18 14:06	07/10/18 09:58	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.3		0.1	0.1	%			07/02/18 08:55	1
Percent Moisture	16.7		0.1	0.1	%			07/02/18 08:55	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-01.14-SL01-0.5-1.0

Lab Sample ID: 240-97885-4

Date Collected: 06/15/18 18:12

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 81.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	266	U	604	266	ug/Kg	☼	07/06/18 14:06	07/10/18 10:15	10
PCB-1221	290	U	604	290	ug/Kg	☼	07/06/18 14:06	07/10/18 10:15	10
PCB-1232	278	U	604	278	ug/Kg	☼	07/06/18 14:06	07/10/18 10:15	10
PCB-1242	229	U	604	229	ug/Kg	☼	07/06/18 14:06	07/10/18 10:15	10
PCB-1248	11400		604	290	ug/Kg	☼	07/06/18 14:06	07/10/18 10:15	10
PCB-1254	278	U	604	278	ug/Kg	☼	07/06/18 14:06	07/10/18 10:15	10
PCB-1260	1300		604	266	ug/Kg	☼	07/06/18 14:06	07/10/18 10:15	10
Polychlorinated biphenyls, Total	12700		604	374	ug/Kg	☼	07/06/18 14:06	07/10/18 10:15	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	60	p	14 - 128	07/06/18 14:06	07/10/18 10:15	10
DCB Decachlorobiphenyl	57		10 - 132	07/06/18 14:06	07/10/18 10:15	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.0		0.1	0.1	%			07/02/18 08:55	1
Percent Moisture	19.0		0.1	0.1	%			07/02/18 08:55	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-01.14-SL01-1.0-1.5

Lab Sample ID: 240-97885-5

Date Collected: 06/15/18 18:17

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	274	U	624	274	ug/Kg	☼	07/06/18 14:06	07/10/18 10:33	10
PCB-1221	299	U	624	299	ug/Kg	☼	07/06/18 14:06	07/10/18 10:33	10
PCB-1232	287	U	624	287	ug/Kg	☼	07/06/18 14:06	07/10/18 10:33	10
PCB-1242	237	U	624	237	ug/Kg	☼	07/06/18 14:06	07/10/18 10:33	10
PCB-1248	6330		624	299	ug/Kg	☼	07/06/18 14:06	07/10/18 10:33	10
PCB-1254	287	U	624	287	ug/Kg	☼	07/06/18 14:06	07/10/18 10:33	10
PCB-1260	943		624	274	ug/Kg	☼	07/06/18 14:06	07/10/18 10:33	10
Polychlorinated biphenyls, Total	7270		624	387	ug/Kg	☼	07/06/18 14:06	07/10/18 10:33	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	62		14 - 128	07/06/18 14:06	07/10/18 10:33	10
DCB Decachlorobiphenyl	67		10 - 132	07/06/18 14:06	07/10/18 10:33	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.4		0.1	0.1	%			07/02/18 08:55	1
Percent Moisture	16.6		0.1	0.1	%			07/02/18 08:55	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-01.14-SL05-0.0-0.5

Lab Sample ID: 240-97885-8

Date Collected: 06/15/18 18:26

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 77.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	27.6	U	62.8	27.6	ug/Kg	☼	07/06/18 14:06	07/10/18 10:50	1
PCB-1221	30.2	U	62.8	30.2	ug/Kg	☼	07/06/18 14:06	07/10/18 10:50	1
PCB-1232	28.9	U	62.8	28.9	ug/Kg	☼	07/06/18 14:06	07/10/18 10:50	1
PCB-1242	23.9	U	62.8	23.9	ug/Kg	☼	07/06/18 14:06	07/10/18 10:50	1
PCB-1248	210		62.8	30.2	ug/Kg	☼	07/06/18 14:06	07/10/18 10:50	1
PCB-1254	28.9	U	62.8	28.9	ug/Kg	☼	07/06/18 14:06	07/10/18 10:50	1
PCB-1260	27.6	U	62.8	27.6	ug/Kg	☼	07/06/18 14:06	07/10/18 10:50	1
Polychlorinated biphenyls, Total	210		62.8	39.0	ug/Kg	☼	07/06/18 14:06	07/10/18 10:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	85		14 - 128	07/06/18 14:06	07/10/18 10:50	1
DCB Decachlorobiphenyl	79		10 - 132	07/06/18 14:06	07/10/18 10:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	77.0		0.1	0.1	%			07/02/18 08:55	1
Percent Moisture	23.0		0.1	0.1	%			07/02/18 08:55	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-01.14-SL05-0.5-1.0

Lab Sample ID: 240-97885-9

Date Collected: 06/15/18 18:27

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 79.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	26.5	U	60.3	26.5	ug/Kg	☼	07/06/18 14:06	07/10/18 11:08	1
PCB-1221	29.0	U	60.3	29.0	ug/Kg	☼	07/06/18 14:06	07/10/18 11:08	1
PCB-1232	27.7	U	60.3	27.7	ug/Kg	☼	07/06/18 14:06	07/10/18 11:08	1
PCB-1242	22.9	U	60.3	22.9	ug/Kg	☼	07/06/18 14:06	07/10/18 11:08	1
PCB-1248	230		60.3	29.0	ug/Kg	☼	07/06/18 14:06	07/10/18 11:08	1
PCB-1254	27.7	U	60.3	27.7	ug/Kg	☼	07/06/18 14:06	07/10/18 11:08	1
PCB-1260	26.5	U	60.3	26.5	ug/Kg	☼	07/06/18 14:06	07/10/18 11:08	1
Polychlorinated biphenyls, Total	230		60.3	37.4	ug/Kg	☼	07/06/18 14:06	07/10/18 11:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	78		14 - 128	07/06/18 14:06	07/10/18 11:08	1
DCB Decachlorobiphenyl	67		10 - 132	07/06/18 14:06	07/10/18 11:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.8		0.1	0.1	%			07/02/18 08:55	1
Percent Moisture	20.2		0.1	0.1	%			07/02/18 08:55	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-01.14-SL05-1.0-1.5

Lab Sample ID: 240-97885-11

Date Collected: 06/15/18 18:30

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 77.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	27.5	U	62.5	27.5	ug/Kg	☼	07/09/18 07:37	07/11/18 12:21	1
PCB-1221	30.0	U	62.5	30.0	ug/Kg	☼	07/09/18 07:37	07/11/18 12:21	1
PCB-1232	28.7	U	62.5	28.7	ug/Kg	☼	07/09/18 07:37	07/11/18 12:21	1
PCB-1242	23.7	U	62.5	23.7	ug/Kg	☼	07/09/18 07:37	07/11/18 12:21	1
PCB-1248	184		62.5	30.0	ug/Kg	☼	07/09/18 07:37	07/11/18 12:21	1
PCB-1254	28.7	U	62.5	28.7	ug/Kg	☼	07/09/18 07:37	07/11/18 12:21	1
PCB-1260	27.5	U	62.5	27.5	ug/Kg	☼	07/09/18 07:37	07/11/18 12:21	1
Polychlorinated biphenyls, Total	184		62.5	38.7	ug/Kg	☼	07/09/18 07:37	07/11/18 12:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	88		14 - 128	07/09/18 07:37	07/11/18 12:21	1
DCB Decachlorobiphenyl	90		10 - 132	07/09/18 07:37	07/11/18 12:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	77.8		0.1	0.1	%			07/02/18 08:55	1
Percent Moisture	22.2		0.1	0.1	%			07/02/18 08:55	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.00-SL03-1.7-2.5

Lab Sample ID: 240-97885-14

Date Collected: 06/14/18 15:52

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 77.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	27.4	U	62.2	27.4	ug/Kg	☼	07/09/18 07:37	07/11/18 12:40	1
PCB-1221	29.8	U	62.2	29.8	ug/Kg	☼	07/09/18 07:37	07/11/18 12:40	1
PCB-1232	28.6	U	62.2	28.6	ug/Kg	☼	07/09/18 07:37	07/11/18 12:40	1
PCB-1242	23.6	U	62.2	23.6	ug/Kg	☼	07/09/18 07:37	07/11/18 12:40	1
PCB-1248	29.8	U	62.2	29.8	ug/Kg	☼	07/09/18 07:37	07/11/18 12:40	1
PCB-1254	28.6	U	62.2	28.6	ug/Kg	☼	07/09/18 07:37	07/11/18 12:40	1
PCB-1260	27.4	U	62.2	27.4	ug/Kg	☼	07/09/18 07:37	07/11/18 12:40	1
Polychlorinated biphenyls, Total	38.5	U	62.2	38.5	ug/Kg	☼	07/09/18 07:37	07/11/18 12:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		14 - 128	07/09/18 07:37	07/11/18 12:40	1
DCB Decachlorobiphenyl	70		10 - 132	07/09/18 07:37	07/11/18 12:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	77.7		0.1	0.1	%			07/02/18 08:55	1
Percent Moisture	22.3		0.1	0.1	%			07/02/18 08:55	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.00-SL03-0.9-1.7

Lab Sample ID: 240-97885-15

Date Collected: 06/14/18 15:50

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 87.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	24.4	U F2	55.4	24.4	ug/Kg	☼	07/09/18 08:19	07/10/18 21:01	1
PCB-1221	26.6	U	55.4	26.6	ug/Kg	☼	07/09/18 08:19	07/10/18 21:01	1
PCB-1232	25.5	U	55.4	25.5	ug/Kg	☼	07/09/18 08:19	07/10/18 21:01	1
PCB-1242	21.1	U	55.4	21.1	ug/Kg	☼	07/09/18 08:19	07/10/18 21:01	1
PCB-1248	73.6		55.4	26.6	ug/Kg	☼	07/09/18 08:19	07/10/18 21:01	1
PCB-1254	25.5	U	55.4	25.5	ug/Kg	☼	07/09/18 08:19	07/10/18 21:01	1
PCB-1260	24.4	U	55.4	24.4	ug/Kg	☼	07/09/18 08:19	07/10/18 21:01	1
Polychlorinated biphenyls, Total	73.6		55.4	34.4	ug/Kg	☼	07/09/18 08:19	07/10/18 21:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	64		14 - 128	07/09/18 08:19	07/10/18 21:01	1
DCB Decachlorobiphenyl	63		10 - 132	07/09/18 08:19	07/10/18 21:01	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.2		0.1	0.1	%			07/02/18 08:55	1
Percent Moisture	12.8		0.1	0.1	%			07/02/18 08:55	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.00-SL03-0.0-0.9

Lab Sample ID: 240-97885-16

Date Collected: 06/14/18 15:47

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 74.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	144	U	327	144	ug/Kg	☼	07/09/18 07:37	07/11/18 12:58	5
PCB-1221	157	U	327	157	ug/Kg	☼	07/09/18 07:37	07/11/18 12:58	5
PCB-1232	150	U	327	150	ug/Kg	☼	07/09/18 07:37	07/11/18 12:58	5
PCB-1242	124	U	327	124	ug/Kg	☼	07/09/18 07:37	07/11/18 12:58	5
PCB-1248	1260		327	157	ug/Kg	☼	07/09/18 07:37	07/11/18 12:58	5
PCB-1254	150	U	327	150	ug/Kg	☼	07/09/18 07:37	07/11/18 12:58	5
PCB-1260	144	U	327	144	ug/Kg	☼	07/09/18 07:37	07/11/18 12:58	5
Polychlorinated biphenyls, Total	1260		327	203	ug/Kg	☼	07/09/18 07:37	07/11/18 12:58	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	77		14 - 128	07/09/18 07:37	07/11/18 12:58	5
DCB Decachlorobiphenyl	191	X	10 - 132	07/09/18 07:37	07/11/18 12:58	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	74.2		0.1	0.1	%			07/02/18 08:55	1
Percent Moisture	25.8		0.1	0.1	%			07/02/18 08:55	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.00-SL04-0.0-0.9

Lab Sample ID: 240-97885-17

Date Collected: 06/14/18 16:10

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 80.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	26.5	U	60.1	26.5	ug/Kg	☼	07/09/18 08:19	07/10/18 22:00	1
PCB-1221	28.9	U	60.1	28.9	ug/Kg	☼	07/09/18 08:19	07/10/18 22:00	1
PCB-1232	27.7	U	60.1	27.7	ug/Kg	☼	07/09/18 08:19	07/10/18 22:00	1
PCB-1242	22.8	U	60.1	22.8	ug/Kg	☼	07/09/18 08:19	07/10/18 22:00	1
PCB-1248	35.3	J	60.1	28.9	ug/Kg	☼	07/09/18 08:19	07/10/18 22:00	1
PCB-1254	27.7	U	60.1	27.7	ug/Kg	☼	07/09/18 08:19	07/10/18 22:00	1
PCB-1260	26.5	U	60.1	26.5	ug/Kg	☼	07/09/18 08:19	07/10/18 22:00	1
Polychlorinated biphenyls, Total	37.3	U	60.1	37.3	ug/Kg	☼	07/09/18 08:19	07/10/18 22:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	80		14 - 128	07/09/18 08:19	07/10/18 22:00	1
DCB Decachlorobiphenyl	79	p	10 - 132	07/09/18 08:19	07/10/18 22:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.5		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	19.5		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.00-SL04-0.9-1.8

Lab Sample ID: 240-97885-18

Date Collected: 06/14/18 16:15

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	26.0	U	59.1	26.0	ug/Kg	☼	07/09/18 08:19	07/10/18 22:19	1
PCB-1221	28.4	U	59.1	28.4	ug/Kg	☼	07/09/18 08:19	07/10/18 22:19	1
PCB-1232	27.2	U	59.1	27.2	ug/Kg	☼	07/09/18 08:19	07/10/18 22:19	1
PCB-1242	22.5	U	59.1	22.5	ug/Kg	☼	07/09/18 08:19	07/10/18 22:19	1
PCB-1248	34.6	J	59.1	28.4	ug/Kg	☼	07/09/18 08:19	07/10/18 22:19	1
PCB-1254	27.2	U	59.1	27.2	ug/Kg	☼	07/09/18 08:19	07/10/18 22:19	1
PCB-1260	26.0	U	59.1	26.0	ug/Kg	☼	07/09/18 08:19	07/10/18 22:19	1
Polychlorinated biphenyls, Total	36.6	U	59.1	36.6	ug/Kg	☼	07/09/18 08:19	07/10/18 22:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	58		14 - 128	07/09/18 08:19	07/10/18 22:19	1
DCB Decachlorobiphenyl	53	p	10 - 132	07/09/18 08:19	07/10/18 22:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.7		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	12.3		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.00-SL04-0.0-0.9-FD

Lab Sample ID: 240-97885-19

Date Collected: 06/14/18 16:10

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 86.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	24.5	U	55.8	24.5	ug/Kg	☼	07/09/18 08:19	07/10/18 22:39	1
PCB-1221	26.8	U	55.8	26.8	ug/Kg	☼	07/09/18 08:19	07/10/18 22:39	1
PCB-1232	25.7	U	55.8	25.7	ug/Kg	☼	07/09/18 08:19	07/10/18 22:39	1
PCB-1242	21.2	U	55.8	21.2	ug/Kg	☼	07/09/18 08:19	07/10/18 22:39	1
PCB-1248	29.2	J	55.8	26.8	ug/Kg	☼	07/09/18 08:19	07/10/18 22:39	1
PCB-1254	25.7	U	55.8	25.7	ug/Kg	☼	07/09/18 08:19	07/10/18 22:39	1
PCB-1260	24.5	U	55.8	24.5	ug/Kg	☼	07/09/18 08:19	07/10/18 22:39	1
Polychlorinated biphenyls, Total	34.6	U	55.8	34.6	ug/Kg	☼	07/09/18 08:19	07/10/18 22:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	79		14 - 128	07/09/18 08:19	07/10/18 22:39	1
DCB Decachlorobiphenyl	70	p	10 - 132	07/09/18 08:19	07/10/18 22:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.9		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	13.1		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.00-SL04-1.8-2.7

Lab Sample ID: 240-97885-20

Date Collected: 06/14/18 16:19

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 77.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	29.1	U	66.1	29.1	ug/Kg	☼	07/09/18 08:19	07/10/18 22:58	1
PCB-1221	31.7	U	66.1	31.7	ug/Kg	☼	07/09/18 08:19	07/10/18 22:58	1
PCB-1232	30.4	U	66.1	30.4	ug/Kg	☼	07/09/18 08:19	07/10/18 22:58	1
PCB-1242	25.1	U	66.1	25.1	ug/Kg	☼	07/09/18 08:19	07/10/18 22:58	1
PCB-1248	31.7	U	66.1	31.7	ug/Kg	☼	07/09/18 08:19	07/10/18 22:58	1
PCB-1254	30.4	U	66.1	30.4	ug/Kg	☼	07/09/18 08:19	07/10/18 22:58	1
PCB-1260	29.1	U	66.1	29.1	ug/Kg	☼	07/09/18 08:19	07/10/18 22:58	1
Polychlorinated biphenyls, Total	41.0	U	66.1	41.0	ug/Kg	☼	07/09/18 08:19	07/10/18 22:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	56		14 - 128	07/09/18 08:19	07/10/18 22:58	1
DCB Decachlorobiphenyl	55	p	10 - 132	07/09/18 08:19	07/10/18 22:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	77.2		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	22.8		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.17-SL02-0.0-0.8-FD

Lab Sample ID: 240-97885-22

Date Collected: 06/14/18 15:20

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 68.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	1560	U	3550	1560	ug/Kg	☼	07/09/18 08:19	07/10/18 23:18	50
PCB-1221	1710	U	3550	1710	ug/Kg	☼	07/09/18 08:19	07/10/18 23:18	50
PCB-1232	1640	U	3550	1640	ug/Kg	☼	07/09/18 08:19	07/10/18 23:18	50
PCB-1242	1350	U	3550	1350	ug/Kg	☼	07/09/18 08:19	07/10/18 23:18	50
PCB-1248	60400		3550	1710	ug/Kg	☼	07/09/18 08:19	07/10/18 23:18	50
PCB-1254	1640	U	3550	1640	ug/Kg	☼	07/09/18 08:19	07/10/18 23:18	50
PCB-1260	1560	U	3550	1560	ug/Kg	☼	07/09/18 08:19	07/10/18 23:18	50
Polychlorinated biphenyls, Total	60400		3550	2200	ug/Kg	☼	07/09/18 08:19	07/10/18 23:18	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	108		14 - 128	07/09/18 08:19	07/10/18 23:18	50
DCB Decachlorobiphenyl	203	p X	10 - 132	07/09/18 08:19	07/10/18 23:18	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	68.7		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	31.3		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.17-SL02-0.0-0.8

Lab Sample ID: 240-97885-23

Date Collected: 06/14/18 15:20

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	2590	U	5890	2590	ug/Kg	☼	07/09/18 08:19	07/10/18 23:37	100
PCB-1221	2820	U	5890	2820	ug/Kg	☼	07/09/18 08:19	07/10/18 23:37	100
PCB-1232	2710	U	5890	2710	ug/Kg	☼	07/09/18 08:19	07/10/18 23:37	100
PCB-1242	2240	U	5890	2240	ug/Kg	☼	07/09/18 08:19	07/10/18 23:37	100
PCB-1248	94200		5890	2820	ug/Kg	☼	07/09/18 08:19	07/10/18 23:37	100
PCB-1254	2710	U	5890	2710	ug/Kg	☼	07/09/18 08:19	07/10/18 23:37	100
PCB-1260	2590	U	5890	2590	ug/Kg	☼	07/09/18 08:19	07/10/18 23:37	100
Polychlorinated biphenyls, Total	94200		5890	3650	ug/Kg	☼	07/09/18 08:19	07/10/18 23:37	100

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	111		14 - 128	07/09/18 08:19	07/10/18 23:37	100
DCB Decachlorobiphenyl	358	p X	10 - 132	07/09/18 08:19	07/10/18 23:37	100

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.6		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	16.4		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.17-SL02-0.8-1.8

Lab Sample ID: 240-97885-24

Date Collected: 06/14/18 15:22

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 85.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	127	U	289	127	ug/Kg	☼	07/09/18 08:19	07/10/18 23:57	5
PCB-1221	139	U	289	139	ug/Kg	☼	07/09/18 08:19	07/10/18 23:57	5
PCB-1232	133	U	289	133	ug/Kg	☼	07/09/18 08:19	07/10/18 23:57	5
PCB-1242	110	U	289	110	ug/Kg	☼	07/09/18 08:19	07/10/18 23:57	5
PCB-1248	3940		289	139	ug/Kg	☼	07/09/18 08:19	07/10/18 23:57	5
PCB-1254	133	U	289	133	ug/Kg	☼	07/09/18 08:19	07/10/18 23:57	5
PCB-1260	127	U	289	127	ug/Kg	☼	07/09/18 08:19	07/10/18 23:57	5
Polychlorinated biphenyls, Total	3940		289	179	ug/Kg	☼	07/09/18 08:19	07/10/18 23:57	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	100		14 - 128	07/09/18 08:19	07/10/18 23:57	5
DCB Decachlorobiphenyl	111		10 - 132	07/09/18 08:19	07/10/18 23:57	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.9		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	14.1		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.17-SL02-1.8-2.8

Lab Sample ID: 240-97885-25

Date Collected: 06/14/18 15:24

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 77.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	28.8	U	65.5	28.8	ug/Kg	☼	07/09/18 14:12	07/10/18 23:25	1
PCB-1221	31.5	U	65.5	31.5	ug/Kg	☼	07/09/18 14:12	07/10/18 23:25	1
PCB-1232	30.1	U	65.5	30.1	ug/Kg	☼	07/09/18 14:12	07/10/18 23:25	1
PCB-1242	24.9	U	65.5	24.9	ug/Kg	☼	07/09/18 14:12	07/10/18 23:25	1
PCB-1248	31.5	U	65.5	31.5	ug/Kg	☼	07/09/18 14:12	07/10/18 23:25	1
PCB-1254	30.1	U	65.5	30.1	ug/Kg	☼	07/09/18 14:12	07/10/18 23:25	1
PCB-1260	28.8	U	65.5	28.8	ug/Kg	☼	07/09/18 14:12	07/10/18 23:25	1
Polychlorinated biphenyls, Total	40.6	U	65.5	40.6	ug/Kg	☼	07/09/18 14:12	07/10/18 23:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	30		14 - 128	07/09/18 14:12	07/10/18 23:25	1
DCB Decachlorobiphenyl	43		10 - 132	07/09/18 14:12	07/10/18 23:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	77.2		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	22.8		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.41-SL01-0.0-0.5

Lab Sample ID: 240-97885-27

Date Collected: 06/14/18 10:03

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 77.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	590	U	1340	590	ug/Kg	☼	07/09/18 08:19	07/11/18 00:16	20
PCB-1221	644	U	1340	644	ug/Kg	☼	07/09/18 08:19	07/11/18 00:16	20
PCB-1232	617	U	1340	617	ug/Kg	☼	07/09/18 08:19	07/11/18 00:16	20
PCB-1242	510	U	1340	510	ug/Kg	☼	07/09/18 08:19	07/11/18 00:16	20
PCB-1248	19200		1340	644	ug/Kg	☼	07/09/18 08:19	07/11/18 00:16	20
PCB-1254	617	U	1340	617	ug/Kg	☼	07/09/18 08:19	07/11/18 00:16	20
PCB-1260	590	U	1340	590	ug/Kg	☼	07/09/18 08:19	07/11/18 00:16	20
Polychlorinated biphenyls, Total	19200		1340	831	ug/Kg	☼	07/09/18 08:19	07/11/18 00:16	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	88		14 - 128	07/09/18 08:19	07/11/18 00:16	20
DCB Decachlorobiphenyl	103		10 - 132	07/09/18 08:19	07/11/18 00:16	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	77.4		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	22.6		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.41-SL01-1.0-1.5

Lab Sample ID: 240-97885-28

Date Collected: 06/14/18 10:06

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 85.6

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	25.8	U	58.7	25.8	ug/Kg	☼	07/09/18 08:19	07/11/18 00:36	1
PCB-1221	28.2	U	58.7	28.2	ug/Kg	☼	07/09/18 08:19	07/11/18 00:36	1
PCB-1232	27.0	U	58.7	27.0	ug/Kg	☼	07/09/18 08:19	07/11/18 00:36	1
PCB-1242	22.3	U	58.7	22.3	ug/Kg	☼	07/09/18 08:19	07/11/18 00:36	1
PCB-1248	454		58.7	28.2	ug/Kg	☼	07/09/18 08:19	07/11/18 00:36	1
PCB-1254	27.0	U	58.7	27.0	ug/Kg	☼	07/09/18 08:19	07/11/18 00:36	1
PCB-1260	25.8	U	58.7	25.8	ug/Kg	☼	07/09/18 08:19	07/11/18 00:36	1
Polychlorinated biphenyls, Total	454		58.7	36.4	ug/Kg	☼	07/09/18 08:19	07/11/18 00:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	66		14 - 128	07/09/18 08:19	07/11/18 00:36	1
DCB Decachlorobiphenyl	64		10 - 132	07/09/18 08:19	07/11/18 00:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.6		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	14.4		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.41-SL01-1.5-2.0

Lab Sample ID: 240-97885-29

Date Collected: 06/14/18 10:08

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 77.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	27.6	U	62.8	27.6	ug/Kg	☼	07/09/18 08:19	07/11/18 00:55	1
PCB-1221	30.1	U	62.8	30.1	ug/Kg	☼	07/09/18 08:19	07/11/18 00:55	1
PCB-1232	28.9	U	62.8	28.9	ug/Kg	☼	07/09/18 08:19	07/11/18 00:55	1
PCB-1242	23.8	U	62.8	23.8	ug/Kg	☼	07/09/18 08:19	07/11/18 00:55	1
PCB-1248	39.2	J p	62.8	30.1	ug/Kg	☼	07/09/18 08:19	07/11/18 00:55	1
PCB-1254	28.9	U	62.8	28.9	ug/Kg	☼	07/09/18 08:19	07/11/18 00:55	1
PCB-1260	27.6	U	62.8	27.6	ug/Kg	☼	07/09/18 08:19	07/11/18 00:55	1
Polychlorinated biphenyls, Total	39.2	J	62.8	38.9	ug/Kg	☼	07/09/18 08:19	07/11/18 00:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	92		14 - 128	07/09/18 08:19	07/11/18 00:55	1
DCB Decachlorobiphenyl	84		10 - 132	07/09/18 08:19	07/11/18 00:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	77.1		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	22.9		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.41-SL01-1.5-2.0-FD

Lab Sample ID: 240-97885-30

Date Collected: 06/14/18 10:08

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 84.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	26.6	U	60.5	26.6	ug/Kg	☼	07/09/18 08:19	07/11/18 01:15	1
PCB-1221	29.0	U	60.5	29.0	ug/Kg	☼	07/09/18 08:19	07/11/18 01:15	1
PCB-1232	27.8	U	60.5	27.8	ug/Kg	☼	07/09/18 08:19	07/11/18 01:15	1
PCB-1242	23.0	U	60.5	23.0	ug/Kg	☼	07/09/18 08:19	07/11/18 01:15	1
PCB-1248	41.0	J	60.5	29.0	ug/Kg	☼	07/09/18 08:19	07/11/18 01:15	1
PCB-1254	27.8	U	60.5	27.8	ug/Kg	☼	07/09/18 08:19	07/11/18 01:15	1
PCB-1260	26.6	U	60.5	26.6	ug/Kg	☼	07/09/18 08:19	07/11/18 01:15	1
Polychlorinated biphenyls, Total	41.0	J	60.5	37.5	ug/Kg	☼	07/09/18 08:19	07/11/18 01:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	86		14 - 128	07/09/18 08:19	07/11/18 01:15	1
DCB Decachlorobiphenyl	77	p	10 - 132	07/09/18 08:19	07/11/18 01:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.8		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	15.2		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.19-SL01-1.8-2.3

Lab Sample ID: 240-97885-34

Date Collected: 06/14/18 14:48

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 86.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	124	U	281	124	ug/Kg	☼	07/09/18 14:12	07/11/18 03:39	5
PCB-1221	135	U	281	135	ug/Kg	☼	07/09/18 14:12	07/11/18 03:39	5
PCB-1232	129	U	281	129	ug/Kg	☼	07/09/18 14:12	07/11/18 03:39	5
PCB-1242	107	U	281	107	ug/Kg	☼	07/09/18 14:12	07/11/18 03:39	5
PCB-1248	1690		281	135	ug/Kg	☼	07/09/18 14:12	07/11/18 03:39	5
PCB-1254	129	U	281	129	ug/Kg	☼	07/09/18 14:12	07/11/18 03:39	5
PCB-1260	124	U	281	124	ug/Kg	☼	07/09/18 14:12	07/11/18 03:39	5
Polychlorinated biphenyls, Total	1690		281	174	ug/Kg	☼	07/09/18 14:12	07/11/18 03:39	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Tetrachloro-m-xylene</i>	62		14 - 128	07/09/18 14:12	07/11/18 03:39	5
<i>DCB Decachlorobiphenyl</i>	863	X	10 - 132	07/09/18 14:12	07/11/18 03:39	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.5		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	13.5		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.19-SL01-1.5-1.8

Lab Sample ID: 240-97885-35

Date Collected: 06/14/18 14:46

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 82.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	137	U	310	137	ug/Kg	☼	07/06/18 07:48	07/08/18 22:17	5
PCB-1221	149	U	310	149	ug/Kg	☼	07/06/18 07:48	07/08/18 22:17	5
PCB-1232	143	U	310	143	ug/Kg	☼	07/06/18 07:48	07/08/18 22:17	5
PCB-1242	118	U	310	118	ug/Kg	☼	07/06/18 07:48	07/08/18 22:17	5
PCB-1248	1580		310	149	ug/Kg	☼	07/06/18 07:48	07/08/18 22:17	5
PCB-1254	143	U	310	143	ug/Kg	☼	07/06/18 07:48	07/08/18 22:17	5
PCB-1260	137	U	310	137	ug/Kg	☼	07/06/18 07:48	07/08/18 22:17	5
Polychlorinated biphenyls, Total	1580		310	193	ug/Kg	☼	07/06/18 07:48	07/08/18 22:17	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	86		14 - 128	07/06/18 07:48	07/08/18 22:17	5
DCB Decachlorobiphenyl	93	p	10 - 132	07/06/18 07:48	07/08/18 22:17	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.8		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	17.2		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.19-SL01-0.0-0.8

Lab Sample ID: 240-97885-36

Date Collected: 06/14/18 04:40

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 84.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	126	U	286	126	ug/Kg	☼	07/06/18 07:48	07/08/18 22:34	5
PCB-1221	137	U	286	137	ug/Kg	☼	07/06/18 07:48	07/08/18 22:34	5
PCB-1232	132	U	286	132	ug/Kg	☼	07/06/18 07:48	07/08/18 22:34	5
PCB-1242	109	U	286	109	ug/Kg	☼	07/06/18 07:48	07/08/18 22:34	5
PCB-1248	1500		286	137	ug/Kg	☼	07/06/18 07:48	07/08/18 22:34	5
PCB-1254	132	U	286	132	ug/Kg	☼	07/06/18 07:48	07/08/18 22:34	5
PCB-1260	126	U	286	126	ug/Kg	☼	07/06/18 07:48	07/08/18 22:34	5
Polychlorinated biphenyls, Total	1500		286	177	ug/Kg	☼	07/06/18 07:48	07/08/18 22:34	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	76		14 - 128	07/06/18 07:48	07/08/18 22:34	5
DCB Decachlorobiphenyl	213	X	10 - 132	07/06/18 07:48	07/08/18 22:34	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.2		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	15.8		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.19-SL01-0.8-1.5

Lab Sample ID: 240-97885-37

Date Collected: 06/14/18 14:42

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 84.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	27.0	U	61.4	27.0	ug/Kg	☼	07/06/18 07:48	07/08/18 22:51	1
PCB-1221	29.5	U	61.4	29.5	ug/Kg	☼	07/06/18 07:48	07/08/18 22:51	1
PCB-1232	28.2	U	61.4	28.2	ug/Kg	☼	07/06/18 07:48	07/08/18 22:51	1
PCB-1242	23.3	U	61.4	23.3	ug/Kg	☼	07/06/18 07:48	07/08/18 22:51	1
PCB-1248	182		61.4	29.5	ug/Kg	☼	07/06/18 07:48	07/08/18 22:51	1
PCB-1254	28.2	U	61.4	28.2	ug/Kg	☼	07/06/18 07:48	07/08/18 22:51	1
PCB-1260	27.0	U	61.4	27.0	ug/Kg	☼	07/06/18 07:48	07/08/18 22:51	1
Polychlorinated biphenyls, Total	182		61.4	38.1	ug/Kg	☼	07/06/18 07:48	07/08/18 22:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	80		14 - 128	07/06/18 07:48	07/08/18 22:51	1
DCB Decachlorobiphenyl	125		10 - 132	07/06/18 07:48	07/08/18 22:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.1		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	15.9		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.19-SL01-0.8-1.5-FD

Lab Sample ID: 240-97885-38

Date Collected: 06/14/18 14:42

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	26.7	U	60.8	26.7	ug/Kg	☼	07/06/18 07:48	07/08/18 23:08	1
PCB-1221	29.2	U	60.8	29.2	ug/Kg	☼	07/06/18 07:48	07/08/18 23:08	1
PCB-1232	28.0	U	60.8	28.0	ug/Kg	☼	07/06/18 07:48	07/08/18 23:08	1
PCB-1242	23.1	U	60.8	23.1	ug/Kg	☼	07/06/18 07:48	07/08/18 23:08	1
PCB-1248	170		60.8	29.2	ug/Kg	☼	07/06/18 07:48	07/08/18 23:08	1
PCB-1254	28.0	U	60.8	28.0	ug/Kg	☼	07/06/18 07:48	07/08/18 23:08	1
PCB-1260	26.7	U	60.8	26.7	ug/Kg	☼	07/06/18 07:48	07/08/18 23:08	1
Polychlorinated biphenyls, Total	170		60.8	37.7	ug/Kg	☼	07/06/18 07:48	07/08/18 23:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	72		14 - 128	07/06/18 07:48	07/08/18 23:08	1
DCB Decachlorobiphenyl	94		10 - 132	07/06/18 07:48	07/08/18 23:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.9		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	16.1		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.21-SL01-0.0-1.0

Lab Sample ID: 240-97885-41

Date Collected: 06/14/18 14:56

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 84.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	27.2	U	61.7	27.2	ug/Kg	☼	07/06/18 07:48	07/08/18 23:25	1
PCB-1221	29.6	U	61.7	29.6	ug/Kg	☼	07/06/18 07:48	07/08/18 23:25	1
PCB-1232	28.4	U	61.7	28.4	ug/Kg	☼	07/06/18 07:48	07/08/18 23:25	1
PCB-1242	23.4	U	61.7	23.4	ug/Kg	☼	07/06/18 07:48	07/08/18 23:25	1
PCB-1248	826		61.7	29.6	ug/Kg	☼	07/06/18 07:48	07/08/18 23:25	1
PCB-1254	28.4	U	61.7	28.4	ug/Kg	☼	07/06/18 07:48	07/08/18 23:25	1
PCB-1260	27.2	U	61.7	27.2	ug/Kg	☼	07/06/18 07:48	07/08/18 23:25	1
Polychlorinated biphenyls, Total	826		61.7	38.3	ug/Kg	☼	07/06/18 07:48	07/08/18 23:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		14 - 128	07/06/18 07:48	07/08/18 23:25	1
DCB Decachlorobiphenyl	95		10 - 132	07/06/18 07:48	07/08/18 23:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.5		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	15.5		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.21-SL01-1.0-2.0

Lab Sample ID: 240-97885-42

Date Collected: 06/14/18 14:58

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 85.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	25.1	U	57.1	25.1	ug/Kg	☼	07/06/18 10:36	07/10/18 14:11	1
PCB-1221	27.4	U	57.1	27.4	ug/Kg	☼	07/06/18 10:36	07/10/18 14:11	1
PCB-1232	26.3	U	57.1	26.3	ug/Kg	☼	07/06/18 10:36	07/10/18 14:11	1
PCB-1242	21.7	U	57.1	21.7	ug/Kg	☼	07/06/18 10:36	07/10/18 14:11	1
PCB-1248	27.4	U	57.1	27.4	ug/Kg	☼	07/06/18 10:36	07/10/18 14:11	1
PCB-1254	26.3	U	57.1	26.3	ug/Kg	☼	07/06/18 10:36	07/10/18 14:11	1
PCB-1260	25.1	U	57.1	25.1	ug/Kg	☼	07/06/18 10:36	07/10/18 14:11	1
Polychlorinated biphenyls, Total	35.4	U	57.1	35.4	ug/Kg	☼	07/06/18 10:36	07/10/18 14:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		14 - 128	07/06/18 10:36	07/10/18 14:11	1
DCB Decachlorobiphenyl	69		10 - 132	07/06/18 10:36	07/10/18 14:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	85.7		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	14.3		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.21-SL01-1.0-2.0-FD

Lab Sample ID: 240-97885-43

Date Collected: 06/14/18 14:58

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	25.9	U	58.8	25.9	ug/Kg	☼	07/06/18 10:36	07/10/18 14:30	1
PCB-1221	28.2	U	58.8	28.2	ug/Kg	☼	07/06/18 10:36	07/10/18 14:30	1
PCB-1232	27.1	U	58.8	27.1	ug/Kg	☼	07/06/18 10:36	07/10/18 14:30	1
PCB-1242	22.4	U	58.8	22.4	ug/Kg	☼	07/06/18 10:36	07/10/18 14:30	1
PCB-1248	28.2	U	58.8	28.2	ug/Kg	☼	07/06/18 10:36	07/10/18 14:30	1
PCB-1254	27.1	U	58.8	27.1	ug/Kg	☼	07/06/18 10:36	07/10/18 14:30	1
PCB-1260	25.9	U	58.8	25.9	ug/Kg	☼	07/06/18 10:36	07/10/18 14:30	1
Polychlorinated biphenyls, Total	36.5	U	58.8	36.5	ug/Kg	☼	07/06/18 10:36	07/10/18 14:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	76		14 - 128	07/06/18 10:36	07/10/18 14:30	1
DCB Decachlorobiphenyl	72		10 - 132	07/06/18 10:36	07/10/18 14:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.4		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	16.6		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.27-SL01-0.0-1.0

Lab Sample ID: 240-97885-46

Date Collected: 06/14/18 13:39

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 70.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	1600	U	3640	1600	ug/Kg	☼	07/06/18 10:36	07/10/18 14:50	50
PCB-1221	1750	U	3640	1750	ug/Kg	☼	07/06/18 10:36	07/10/18 14:50	50
PCB-1232	1670	U	3640	1670	ug/Kg	☼	07/06/18 10:36	07/10/18 14:50	50
PCB-1242	1380	U	3640	1380	ug/Kg	☼	07/06/18 10:36	07/10/18 14:50	50
PCB-1248	25500		3640	1750	ug/Kg	☼	07/06/18 10:36	07/10/18 14:50	50
PCB-1254	1670	U	3640	1670	ug/Kg	☼	07/06/18 10:36	07/10/18 14:50	50
PCB-1260	1600	U	3640	1600	ug/Kg	☼	07/06/18 10:36	07/10/18 14:50	50
Polychlorinated biphenyls, Total	25500		3640	2260	ug/Kg	☼	07/06/18 10:36	07/10/18 14:50	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	91		14 - 128	07/06/18 10:36	07/10/18 14:50	50
DCB Decachlorobiphenyl	1369	p X	10 - 132	07/06/18 10:36	07/10/18 14:50	50

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	70.1		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	29.9		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.27-SL01-1.0-1.9

Lab Sample ID: 240-97885-47

Date Collected: 06/14/18 13:41

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 81.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	27.6	U	62.7	27.6	ug/Kg	☼	07/06/18 10:40	07/10/18 15:09	1
PCB-1221	30.1	U	62.7	30.1	ug/Kg	☼	07/06/18 10:40	07/10/18 15:09	1
PCB-1232	28.8	U	62.7	28.8	ug/Kg	☼	07/06/18 10:40	07/10/18 15:09	1
PCB-1242	23.8	U	62.7	23.8	ug/Kg	☼	07/06/18 10:40	07/10/18 15:09	1
PCB-1248	127		62.7	30.1	ug/Kg	☼	07/06/18 10:40	07/10/18 15:09	1
PCB-1254	28.8	U	62.7	28.8	ug/Kg	☼	07/06/18 10:40	07/10/18 15:09	1
PCB-1260	27.6	U	62.7	27.6	ug/Kg	☼	07/06/18 10:40	07/10/18 15:09	1
Polychlorinated biphenyls, Total	127		62.7	38.9	ug/Kg	☼	07/06/18 10:40	07/10/18 15:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		14 - 128	07/06/18 10:40	07/10/18 15:09	1
DCB Decachlorobiphenyl	92	p	10 - 132	07/06/18 10:40	07/10/18 15:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.0		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	19.0		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.27-SL01-1.9-2.8

Lab Sample ID: 240-97885-48

Date Collected: 06/14/18 13:43

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 79.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	28.2	U	64.2	28.2	ug/Kg	☼	07/06/18 10:40	07/10/18 11:15	1
PCB-1221	30.8	U	64.2	30.8	ug/Kg	☼	07/06/18 10:40	07/10/18 11:15	1
PCB-1232	29.5	U	64.2	29.5	ug/Kg	☼	07/06/18 10:40	07/10/18 11:15	1
PCB-1242	24.4	U	64.2	24.4	ug/Kg	☼	07/06/18 10:40	07/10/18 11:15	1
PCB-1248	30.8	U	64.2	30.8	ug/Kg	☼	07/06/18 10:40	07/10/18 11:15	1
PCB-1254	29.5	U	64.2	29.5	ug/Kg	☼	07/06/18 10:40	07/10/18 11:15	1
PCB-1260	28.2	U	64.2	28.2	ug/Kg	☼	07/06/18 10:40	07/10/18 11:15	1
Polychlorinated biphenyls, Total	39.8	U	64.2	39.8	ug/Kg	☼	07/06/18 10:40	07/10/18 11:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	64		14 - 128	07/06/18 10:40	07/10/18 11:15	1
DCB Decachlorobiphenyl	59		10 - 132	07/06/18 10:40	07/10/18 11:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.2		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	20.8		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.23-SL01-0.7-1.2

Lab Sample ID: 240-97885-50

Date Collected: 06/14/18 12:55

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 86.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	26.5	U	60.3	26.5	ug/Kg	☼	07/06/18 11:08	07/10/18 16:47	1
PCB-1221	28.9	U	60.3	28.9	ug/Kg	☼	07/06/18 11:08	07/10/18 16:47	1
PCB-1232	27.7	U	60.3	27.7	ug/Kg	☼	07/06/18 11:08	07/10/18 16:47	1
PCB-1242	22.9	U	60.3	22.9	ug/Kg	☼	07/06/18 11:08	07/10/18 16:47	1
PCB-1248	28.9	U	60.3	28.9	ug/Kg	☼	07/06/18 11:08	07/10/18 16:47	1
PCB-1254	27.7	U	60.3	27.7	ug/Kg	☼	07/06/18 11:08	07/10/18 16:47	1
PCB-1260	26.5	U	60.3	26.5	ug/Kg	☼	07/06/18 11:08	07/10/18 16:47	1
Polychlorinated biphenyls, Total	37.4	U	60.3	37.4	ug/Kg	☼	07/06/18 11:08	07/10/18 16:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	78		14 - 128	07/06/18 11:08	07/10/18 16:47	1
DCB Decachlorobiphenyl	63	p	10 - 132	07/06/18 11:08	07/10/18 16:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.0		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	14.0		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.23-SL01-0.7-1.2-FD

Lab Sample ID: 240-97885-51

Date Collected: 06/14/18 12:55

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 84.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	25.7	U	58.5	25.7	ug/Kg	☼	07/06/18 11:08	07/10/18 17:07	1
PCB-1221	28.1	U	58.5	28.1	ug/Kg	☼	07/06/18 11:08	07/10/18 17:07	1
PCB-1232	26.9	U	58.5	26.9	ug/Kg	☼	07/06/18 11:08	07/10/18 17:07	1
PCB-1242	22.2	U	58.5	22.2	ug/Kg	☼	07/06/18 11:08	07/10/18 17:07	1
PCB-1248	32.0	J	58.5	28.1	ug/Kg	☼	07/06/18 11:08	07/10/18 17:07	1
PCB-1254	26.9	U	58.5	26.9	ug/Kg	☼	07/06/18 11:08	07/10/18 17:07	1
PCB-1260	25.7	U	58.5	25.7	ug/Kg	☼	07/06/18 11:08	07/10/18 17:07	1
Polychlorinated biphenyls, Total	36.2	U	58.5	36.2	ug/Kg	☼	07/06/18 11:08	07/10/18 17:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	82		14 - 128	07/06/18 11:08	07/10/18 17:07	1
DCB Decachlorobiphenyl	74		10 - 132	07/06/18 11:08	07/10/18 17:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.5		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	15.5		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-01.14-SL04-0.5-1.0

Lab Sample ID: 240-97885-56

Date Collected: 06/15/18 18:33

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 78.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	27.3	U	62.0	27.3	ug/Kg	☼	07/06/18 11:08	07/10/18 17:26	1
PCB-1221	29.8	U	62.0	29.8	ug/Kg	☼	07/06/18 11:08	07/10/18 17:26	1
PCB-1232	28.5	U	62.0	28.5	ug/Kg	☼	07/06/18 11:08	07/10/18 17:26	1
PCB-1242	23.6	U	62.0	23.6	ug/Kg	☼	07/06/18 11:08	07/10/18 17:26	1
PCB-1248	729	p	62.0	29.8	ug/Kg	☼	07/06/18 11:08	07/10/18 17:26	1
PCB-1254	28.5	U	62.0	28.5	ug/Kg	☼	07/06/18 11:08	07/10/18 17:26	1
PCB-1260	27.3	U	62.0	27.3	ug/Kg	☼	07/06/18 11:08	07/10/18 17:26	1
Polychlorinated biphenyls, Total	729		62.0	38.5	ug/Kg	☼	07/06/18 11:08	07/10/18 17:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	53	p	14 - 128	07/06/18 11:08	07/10/18 17:26	1
DCB Decachlorobiphenyl	93	p	10 - 132	07/06/18 11:08	07/10/18 17:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.0		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	22.0		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-01.14-SL04-1.5-1.8

Lab Sample ID: 240-97885-57

Date Collected: 06/15/18 18:40

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 75.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	28.1	U	63.8	28.1	ug/Kg	☼	07/09/18 08:19	07/11/18 01:35	1
PCB-1221	30.6	U	63.8	30.6	ug/Kg	☼	07/09/18 08:19	07/11/18 01:35	1
PCB-1232	29.3	U	63.8	29.3	ug/Kg	☼	07/09/18 08:19	07/11/18 01:35	1
PCB-1242	24.2	U	63.8	24.2	ug/Kg	☼	07/09/18 08:19	07/11/18 01:35	1
PCB-1248	1080		63.8	30.6	ug/Kg	☼	07/09/18 08:19	07/11/18 01:35	1
PCB-1254	29.3	U	63.8	29.3	ug/Kg	☼	07/09/18 08:19	07/11/18 01:35	1
PCB-1260	28.1	U	63.8	28.1	ug/Kg	☼	07/09/18 08:19	07/11/18 01:35	1
Polychlorinated biphenyls, Total	1080		63.8	39.5	ug/Kg	☼	07/09/18 08:19	07/11/18 01:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	56		14 - 128	07/09/18 08:19	07/11/18 01:35	1
DCB Decachlorobiphenyl	53	p	10 - 132	07/09/18 08:19	07/11/18 01:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	75.2		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	24.8		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-01.14-SL04-1.0-1.5

Lab Sample ID: 240-97885-58

Date Collected: 06/15/18 18:35

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	26.7	U	60.7	26.7	ug/Kg	☼	07/09/18 08:19	07/11/18 02:53	1
PCB-1221	29.1	U	60.7	29.1	ug/Kg	☼	07/09/18 08:19	07/11/18 02:53	1
PCB-1232	27.9	U	60.7	27.9	ug/Kg	☼	07/09/18 08:19	07/11/18 02:53	1
PCB-1242	23.1	U	60.7	23.1	ug/Kg	☼	07/09/18 08:19	07/11/18 02:53	1
PCB-1248	768		60.7	29.1	ug/Kg	☼	07/09/18 08:19	07/11/18 02:53	1
PCB-1254	27.9	U	60.7	27.9	ug/Kg	☼	07/09/18 08:19	07/11/18 02:53	1
PCB-1260	26.7	U	60.7	26.7	ug/Kg	☼	07/09/18 08:19	07/11/18 02:53	1
Polychlorinated biphenyls, Total	768		60.7	37.6	ug/Kg	☼	07/09/18 08:19	07/11/18 02:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	70		14 - 128	07/09/18 08:19	07/11/18 02:53	1
DCB Decachlorobiphenyl	72		10 - 132	07/09/18 08:19	07/11/18 02:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.2		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	16.8		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-01.14-SL04-0.0-0.5

Lab Sample ID: 240-97885-59

Date Collected: 06/15/18 18:30

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 75.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	146	U	331	146	ug/Kg	☼	07/09/18 08:19	07/11/18 03:12	5
PCB-1221	159	U	331	159	ug/Kg	☼	07/09/18 08:19	07/11/18 03:12	5
PCB-1232	152	U	331	152	ug/Kg	☼	07/09/18 08:19	07/11/18 03:12	5
PCB-1242	126	U	331	126	ug/Kg	☼	07/09/18 08:19	07/11/18 03:12	5
PCB-1248	2460		331	159	ug/Kg	☼	07/09/18 08:19	07/11/18 03:12	5
PCB-1254	152	U	331	152	ug/Kg	☼	07/09/18 08:19	07/11/18 03:12	5
PCB-1260	146	U	331	146	ug/Kg	☼	07/09/18 08:19	07/11/18 03:12	5
Polychlorinated biphenyls, Total	2460		331	205	ug/Kg	☼	07/09/18 08:19	07/11/18 03:12	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	75		14 - 128	07/09/18 08:19	07/11/18 03:12	5
DCB Decachlorobiphenyl	98		10 - 132	07/09/18 08:19	07/11/18 03:12	5

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	75.7		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	24.3		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.36-SL01-0.4-1.0

Lab Sample ID: 240-97885-60

Date Collected: 06/14/18 10:58

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 81.8

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	28.0	U	63.5	28.0	ug/Kg	☼	07/09/18 08:19	07/11/18 03:32	1
PCB-1221	30.5	U	63.5	30.5	ug/Kg	☼	07/09/18 08:19	07/11/18 03:32	1
PCB-1232	29.2	U	63.5	29.2	ug/Kg	☼	07/09/18 08:19	07/11/18 03:32	1
PCB-1242	24.1	U	63.5	24.1	ug/Kg	☼	07/09/18 08:19	07/11/18 03:32	1
PCB-1248	30.5	U	63.5	30.5	ug/Kg	☼	07/09/18 08:19	07/11/18 03:32	1
PCB-1254	29.2	U	63.5	29.2	ug/Kg	☼	07/09/18 08:19	07/11/18 03:32	1
PCB-1260	28.0	U	63.5	28.0	ug/Kg	☼	07/09/18 08:19	07/11/18 03:32	1
Polychlorinated biphenyls, Total	39.4	U	63.5	39.4	ug/Kg	☼	07/09/18 08:19	07/11/18 03:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	84		14 - 128	07/09/18 08:19	07/11/18 03:32	1
DCB Decachlorobiphenyl	69	p	10 - 132	07/09/18 08:19	07/11/18 03:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	81.8		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	18.2		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.00-SL03-0.9-1.7

Lab Sample ID: 240-97885-61

Date Collected: 06/14/18 15:50

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 82.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	25.4	U	57.8	25.4	ug/Kg	☼	07/09/18 08:19	07/11/18 03:51	1
PCB-1221	27.8	U	57.8	27.8	ug/Kg	☼	07/09/18 08:19	07/11/18 03:51	1
PCB-1232	26.6	U	57.8	26.6	ug/Kg	☼	07/09/18 08:19	07/11/18 03:51	1
PCB-1242	22.0	U	57.8	22.0	ug/Kg	☼	07/09/18 08:19	07/11/18 03:51	1
PCB-1248	141		57.8	27.8	ug/Kg	☼	07/09/18 08:19	07/11/18 03:51	1
PCB-1254	26.6	U	57.8	26.6	ug/Kg	☼	07/09/18 08:19	07/11/18 03:51	1
PCB-1260	25.4	U	57.8	25.4	ug/Kg	☼	07/09/18 08:19	07/11/18 03:51	1
Polychlorinated biphenyls, Total	141		57.8	35.8	ug/Kg	☼	07/09/18 08:19	07/11/18 03:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	55		14 - 128	07/09/18 08:19	07/11/18 03:51	1
DCB Decachlorobiphenyl	56		10 - 132	07/09/18 08:19	07/11/18 03:51	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	82.9		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	17.1		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.36-SL01-0.0-0.4

Lab Sample ID: 240-97885-62

Date Collected: 06/14/18 10:50

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 96.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	22.9	U	52.1	22.9	ug/Kg	☼	07/09/18 08:19	07/11/18 04:11	1
PCB-1221	25.0	U	52.1	25.0	ug/Kg	☼	07/09/18 08:19	07/11/18 04:11	1
PCB-1232	24.0	U	52.1	24.0	ug/Kg	☼	07/09/18 08:19	07/11/18 04:11	1
PCB-1242	19.8	U	52.1	19.8	ug/Kg	☼	07/09/18 08:19	07/11/18 04:11	1
PCB-1248	368		52.1	25.0	ug/Kg	☼	07/09/18 08:19	07/11/18 04:11	1
PCB-1254	24.0	U	52.1	24.0	ug/Kg	☼	07/09/18 08:19	07/11/18 04:11	1
PCB-1260	22.9	U	52.1	22.9	ug/Kg	☼	07/09/18 08:19	07/11/18 04:11	1
Polychlorinated biphenyls, Total	368		52.1	32.3	ug/Kg	☼	07/09/18 08:19	07/11/18 04:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		14 - 128	07/09/18 08:19	07/11/18 04:11	1
DCB Decachlorobiphenyl	75	p	10 - 132	07/09/18 08:19	07/11/18 04:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	96.4		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	3.6		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.36-SL01-1.5-2.0

Lab Sample ID: 240-97885-65

Date Collected: 06/14/18 10:50

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 86.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	25.8	U	58.7	25.8	ug/Kg	☼	07/06/18 14:06	07/10/18 13:44	1
PCB-1221	28.2	U	58.7	28.2	ug/Kg	☼	07/06/18 14:06	07/10/18 13:44	1
PCB-1232	27.0	U	58.7	27.0	ug/Kg	☼	07/06/18 14:06	07/10/18 13:44	1
PCB-1242	22.3	U	58.7	22.3	ug/Kg	☼	07/06/18 14:06	07/10/18 13:44	1
PCB-1248	28.2	U	58.7	28.2	ug/Kg	☼	07/06/18 14:06	07/10/18 13:44	1
PCB-1254	27.0	U	58.7	27.0	ug/Kg	☼	07/06/18 14:06	07/10/18 13:44	1
PCB-1260	25.8	U	58.7	25.8	ug/Kg	☼	07/06/18 14:06	07/10/18 13:44	1
Polychlorinated biphenyls, Total	36.4	U	58.7	36.4	ug/Kg	☼	07/06/18 14:06	07/10/18 13:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	79		14 - 128	07/06/18 14:06	07/10/18 13:44	1
DCB Decachlorobiphenyl	78		10 - 132	07/06/18 14:06	07/10/18 13:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.9		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	13.1		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.41-SL01-0.5-1.0

Lab Sample ID: 240-97885-66

Date Collected: 06/14/18 10:05

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 87.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	50.9	U	116	50.9	ug/Kg	☼	07/09/18 08:19	07/11/18 04:30	2
PCB-1221	55.5	U	116	55.5	ug/Kg	☼	07/09/18 08:19	07/11/18 04:30	2
PCB-1232	53.2	U	116	53.2	ug/Kg	☼	07/09/18 08:19	07/11/18 04:30	2
PCB-1242	44.0	U	116	44.0	ug/Kg	☼	07/09/18 08:19	07/11/18 04:30	2
PCB-1248	1980		116	55.5	ug/Kg	☼	07/09/18 08:19	07/11/18 04:30	2
PCB-1254	53.2	U	116	53.2	ug/Kg	☼	07/09/18 08:19	07/11/18 04:30	2
PCB-1260	50.9	U	116	50.9	ug/Kg	☼	07/09/18 08:19	07/11/18 04:30	2
Polychlorinated biphenyls, Total	1980		116	71.7	ug/Kg	☼	07/09/18 08:19	07/11/18 04:30	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	74		14 - 128	07/09/18 08:19	07/11/18 04:30	2
DCB Decachlorobiphenyl	71		10 - 132	07/09/18 08:19	07/11/18 04:30	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.9		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	12.1		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.36-SL01-1.5-2.0-FD

Lab Sample ID: 240-97885-68

Date Collected: 06/14/18 10:50

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 84.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	25.9	U	58.8	25.9	ug/Kg	☼	07/09/18 08:19	07/11/18 04:50	1
PCB-1221	28.2	U	58.8	28.2	ug/Kg	☼	07/09/18 08:19	07/11/18 04:50	1
PCB-1232	27.1	U	58.8	27.1	ug/Kg	☼	07/09/18 08:19	07/11/18 04:50	1
PCB-1242	22.3	U	58.8	22.3	ug/Kg	☼	07/09/18 08:19	07/11/18 04:50	1
PCB-1248	28.2	U	58.8	28.2	ug/Kg	☼	07/09/18 08:19	07/11/18 04:50	1
PCB-1254	27.1	U	58.8	27.1	ug/Kg	☼	07/09/18 08:19	07/11/18 04:50	1
PCB-1260	25.9	U	58.8	25.9	ug/Kg	☼	07/09/18 08:19	07/11/18 04:50	1
Polychlorinated biphenyls, Total	36.5	U	58.8	36.5	ug/Kg	☼	07/09/18 08:19	07/11/18 04:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	62		14 - 128	07/09/18 08:19	07/11/18 04:50	1
DCB Decachlorobiphenyl	56	p	10 - 132	07/09/18 08:19	07/11/18 04:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	84.5		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	15.5		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.36-SL01-0.4-1.0

Lab Sample ID: 240-97885-69

Date Collected: 06/14/18 10:55

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 80.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	28.0	U	63.6	28.0	ug/Kg	☼	07/09/18 14:12	07/11/18 01:08	1
PCB-1221	30.6	U	63.6	30.6	ug/Kg	☼	07/09/18 14:12	07/11/18 01:08	1
PCB-1232	29.3	U	63.6	29.3	ug/Kg	☼	07/09/18 14:12	07/11/18 01:08	1
PCB-1242	24.2	U	63.6	24.2	ug/Kg	☼	07/09/18 14:12	07/11/18 01:08	1
PCB-1248	30.6	U	63.6	30.6	ug/Kg	☼	07/09/18 14:12	07/11/18 01:08	1
PCB-1254	29.3	U	63.6	29.3	ug/Kg	☼	07/09/18 14:12	07/11/18 01:08	1
PCB-1260	28.0	U	63.6	28.0	ug/Kg	☼	07/09/18 14:12	07/11/18 01:08	1
Polychlorinated biphenyls, Total	39.5	U	63.6	39.5	ug/Kg	☼	07/09/18 14:12	07/11/18 01:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	67		14 - 128	07/09/18 14:12	07/11/18 01:08	1
DCB Decachlorobiphenyl	98		10 - 132	07/09/18 14:12	07/11/18 01:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	80.4		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	19.6		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.19-SL01-1.8-2.3

Lab Sample ID: 240-97885-70

Date Collected: 06/14/18 14:48

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 88.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	51.1	U	116	51.1	ug/Kg	☼	07/09/18 14:12	07/11/18 01:24	2
PCB-1221	55.7	U	116	55.7	ug/Kg	☼	07/09/18 14:12	07/11/18 01:24	2
PCB-1232	53.4	U	116	53.4	ug/Kg	☼	07/09/18 14:12	07/11/18 01:24	2
PCB-1242	44.1	U	116	44.1	ug/Kg	☼	07/09/18 14:12	07/11/18 01:24	2
PCB-1248	1780		116	55.7	ug/Kg	☼	07/09/18 14:12	07/11/18 01:24	2
PCB-1254	53.4	U	116	53.4	ug/Kg	☼	07/09/18 14:12	07/11/18 01:24	2
PCB-1260	51.1	U	116	51.1	ug/Kg	☼	07/09/18 14:12	07/11/18 01:24	2
Polychlorinated biphenyls, Total	1780		116	71.9	ug/Kg	☼	07/09/18 14:12	07/11/18 01:24	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	76		14 - 128	07/09/18 14:12	07/11/18 01:24	2
DCB Decachlorobiphenyl	109		10 - 132	07/09/18 14:12	07/11/18 01:24	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.1		0.1	0.1	%			07/02/18 15:32	1
Percent Moisture	11.9		0.1	0.1	%			07/02/18 15:32	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.29-SL01-1.7-2.7

Lab Sample ID: 240-97885-74

Date Collected: 06/14/18 13:36

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 70.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	30.1	U	68.4	30.1	ug/Kg	☼	07/09/18 14:12	07/11/18 01:41	1
PCB-1221	32.8	U	68.4	32.8	ug/Kg	☼	07/09/18 14:12	07/11/18 01:41	1
PCB-1232	31.4	U	68.4	31.4	ug/Kg	☼	07/09/18 14:12	07/11/18 01:41	1
PCB-1242	26.0	U	68.4	26.0	ug/Kg	☼	07/09/18 14:12	07/11/18 01:41	1
PCB-1248	66.8	J	68.4	32.8	ug/Kg	☼	07/09/18 14:12	07/11/18 01:41	1
PCB-1254	31.4	U	68.4	31.4	ug/Kg	☼	07/09/18 14:12	07/11/18 01:41	1
PCB-1260	30.1	U	68.4	30.1	ug/Kg	☼	07/09/18 14:12	07/11/18 01:41	1
Polychlorinated biphenyls, Total	66.8	J	68.4	42.4	ug/Kg	☼	07/09/18 14:12	07/11/18 01:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	67		14 - 128	07/09/18 14:12	07/11/18 01:41	1
DCB Decachlorobiphenyl	339	X	10 - 132	07/09/18 14:12	07/11/18 01:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	70.1		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	29.9		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.44-SL01-0.0-0.5

Lab Sample ID: 240-97885-77

Date Collected: 06/14/18 11:20

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 95.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	23.5	U	53.4	23.5	ug/Kg	☼	07/09/18 14:12	07/11/18 01:58	1
PCB-1221	25.6	U	53.4	25.6	ug/Kg	☼	07/09/18 14:12	07/11/18 01:58	1
PCB-1232	24.6	U	53.4	24.6	ug/Kg	☼	07/09/18 14:12	07/11/18 01:58	1
PCB-1242	20.3	U	53.4	20.3	ug/Kg	☼	07/09/18 14:12	07/11/18 01:58	1
PCB-1248	340		53.4	25.6	ug/Kg	☼	07/09/18 14:12	07/11/18 01:58	1
PCB-1254	24.6	U	53.4	24.6	ug/Kg	☼	07/09/18 14:12	07/11/18 01:58	1
PCB-1260	23.5	U	53.4	23.5	ug/Kg	☼	07/09/18 14:12	07/11/18 01:58	1
Polychlorinated biphenyls, Total	340		53.4	33.1	ug/Kg	☼	07/09/18 14:12	07/11/18 01:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	63		14 - 128	07/09/18 14:12	07/11/18 01:58	1
DCB Decachlorobiphenyl	193	X	10 - 132	07/09/18 14:12	07/11/18 01:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	95.9		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	4.1		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.44-SL01-0.5-1.0

Lab Sample ID: 240-97885-78

Date Collected: 06/14/18 11:22

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 95.4

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	23.4	U	53.1	23.4	ug/Kg	☼	07/09/18 14:12	07/11/18 02:14	1
PCB-1221	25.5	U	53.1	25.5	ug/Kg	☼	07/09/18 14:12	07/11/18 02:14	1
PCB-1232	24.4	U	53.1	24.4	ug/Kg	☼	07/09/18 14:12	07/11/18 02:14	1
PCB-1242	20.2	U	53.1	20.2	ug/Kg	☼	07/09/18 14:12	07/11/18 02:14	1
PCB-1248	405		53.1	25.5	ug/Kg	☼	07/09/18 14:12	07/11/18 02:14	1
PCB-1254	24.4	U	53.1	24.4	ug/Kg	☼	07/09/18 14:12	07/11/18 02:14	1
PCB-1260	23.4	U	53.1	23.4	ug/Kg	☼	07/09/18 14:12	07/11/18 02:14	1
Polychlorinated biphenyls, Total	405		53.1	32.9	ug/Kg	☼	07/09/18 14:12	07/11/18 02:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	63		14 - 128	07/09/18 14:12	07/11/18 02:14	1
DCB Decachlorobiphenyl	309	X	10 - 132	07/09/18 14:12	07/11/18 02:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	95.4		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	4.6		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.44-SL01-1.0-1.5

Lab Sample ID: 240-97885-79

Date Collected: 06/14/18 11:27

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 94.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	24.1	U	54.8	24.1	ug/Kg	☼	07/09/18 14:12	07/11/18 02:32	1
PCB-1221	26.3	U	54.8	26.3	ug/Kg	☼	07/09/18 14:12	07/11/18 02:32	1
PCB-1232	25.2	U	54.8	25.2	ug/Kg	☼	07/09/18 14:12	07/11/18 02:32	1
PCB-1242	20.8	U	54.8	20.8	ug/Kg	☼	07/09/18 14:12	07/11/18 02:32	1
PCB-1248	448		54.8	26.3	ug/Kg	☼	07/09/18 14:12	07/11/18 02:32	1
PCB-1254	25.2	U	54.8	25.2	ug/Kg	☼	07/09/18 14:12	07/11/18 02:32	1
PCB-1260	24.1	U	54.8	24.1	ug/Kg	☼	07/09/18 14:12	07/11/18 02:32	1
Polychlorinated biphenyls, Total	448		54.8	34.0	ug/Kg	☼	07/09/18 14:12	07/11/18 02:32	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	50		14 - 128	07/09/18 14:12	07/11/18 02:32	1
DCB Decachlorobiphenyl	174	X	10 - 132	07/09/18 14:12	07/11/18 02:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	94.3		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	5.7		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.44-SL01-1.5-1.8

Lab Sample ID: 240-97885-80

Date Collected: 06/14/18 11:34

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 89.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	23.9	U	54.4	23.9	ug/Kg	☼	07/09/18 14:12	07/11/18 02:49	1
PCB-1221	26.1	U	54.4	26.1	ug/Kg	☼	07/09/18 14:12	07/11/18 02:49	1
PCB-1232	25.0	U	54.4	25.0	ug/Kg	☼	07/09/18 14:12	07/11/18 02:49	1
PCB-1242	20.7	U	54.4	20.7	ug/Kg	☼	07/09/18 14:12	07/11/18 02:49	1
PCB-1248	30.2	J p	54.4	26.1	ug/Kg	☼	07/09/18 14:12	07/11/18 02:49	1
PCB-1254	25.0	U	54.4	25.0	ug/Kg	☼	07/09/18 14:12	07/11/18 02:49	1
PCB-1260	23.9	U	54.4	23.9	ug/Kg	☼	07/09/18 14:12	07/11/18 02:49	1
Polychlorinated biphenyls, Total	94.4		54.4	33.7	ug/Kg	☼	07/09/18 14:12	07/11/18 02:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	60		14 - 128	07/09/18 14:12	07/11/18 02:49	1
Tetrachloro-m-xylene	59		14 - 128	07/09/18 14:12	07/11/18 02:49	1
DCB Decachlorobiphenyl	114	p	10 - 132	07/09/18 14:12	07/11/18 02:49	1
DCB Decachlorobiphenyl	277	X	10 - 132	07/09/18 14:12	07/11/18 02:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.1		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	10.9		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.44-SL01-1.8-2.0

Lab Sample ID: 240-97885-81

Date Collected: 06/14/18 11:40

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 89.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	25.6	U	58.1	25.6	ug/Kg	☼	07/09/18 14:12	07/11/18 03:05	1
PCB-1221	27.9	U	58.1	27.9	ug/Kg	☼	07/09/18 14:12	07/11/18 03:05	1
PCB-1232	26.7	U	58.1	26.7	ug/Kg	☼	07/09/18 14:12	07/11/18 03:05	1
PCB-1242	22.1	U	58.1	22.1	ug/Kg	☼	07/09/18 14:12	07/11/18 03:05	1
PCB-1248	142	p	58.1	27.9	ug/Kg	☼	07/09/18 14:12	07/11/18 03:05	1
PCB-1254	26.7	U	58.1	26.7	ug/Kg	☼	07/09/18 14:12	07/11/18 03:05	1
PCB-1260	25.6	U	58.1	25.6	ug/Kg	☼	07/09/18 14:12	07/11/18 03:05	1
Polychlorinated biphenyls, Total	287		58.1	36.1	ug/Kg	☼	07/09/18 14:12	07/11/18 03:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	52		14 - 128	07/09/18 14:12	07/11/18 03:05	1
Tetrachloro-m-xylene	51		14 - 128	07/09/18 14:12	07/11/18 03:05	1
DCB Decachlorobiphenyl	169	X	10 - 132	07/09/18 14:12	07/11/18 03:05	1
DCB Decachlorobiphenyl	194	X	10 - 132	07/09/18 14:12	07/11/18 03:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	89.2		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	10.8		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-01.14-SL06-0.0-0.5

Lab Sample ID: 240-97885-85

Date Collected: 06/13/18 13:56

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 78.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	29.0	U	65.8	29.0	ug/Kg	☼	07/06/18 14:06	07/10/18 07:22	1
PCB-1221	31.6	U	65.8	31.6	ug/Kg	☼	07/06/18 14:06	07/10/18 07:22	1
PCB-1232	30.3	U	65.8	30.3	ug/Kg	☼	07/06/18 14:06	07/10/18 07:22	1
PCB-1242	25.0	U	65.8	25.0	ug/Kg	☼	07/06/18 14:06	07/10/18 07:22	1
PCB-1248	1180		65.8	31.6	ug/Kg	☼	07/06/18 14:06	07/10/18 07:22	1
PCB-1254	30.3	U	65.8	30.3	ug/Kg	☼	07/06/18 14:06	07/10/18 07:22	1
PCB-1260	387		65.8	29.0	ug/Kg	☼	07/06/18 14:06	07/10/18 07:22	1
Polychlorinated biphenyls, Total	1570		65.8	40.8	ug/Kg	☼	07/06/18 14:06	07/10/18 07:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	72		14 - 128	07/06/18 14:06	07/10/18 07:22	1
DCB Decachlorobiphenyl	78		10 - 132	07/06/18 14:06	07/10/18 07:22	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.5		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	21.5		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-01.14-SL06-0.5-1.0

Lab Sample ID: 240-97885-86

Date Collected: 06/13/18 13:58

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	27.3	U	62.1	27.3	ug/Kg	☼	07/06/18 14:06	07/10/18 07:39	1
PCB-1221	29.8	U	62.1	29.8	ug/Kg	☼	07/06/18 14:06	07/10/18 07:39	1
PCB-1232	28.5	U	62.1	28.5	ug/Kg	☼	07/06/18 14:06	07/10/18 07:39	1
PCB-1242	23.6	U	62.1	23.6	ug/Kg	☼	07/06/18 14:06	07/10/18 07:39	1
PCB-1248	319		62.1	29.8	ug/Kg	☼	07/06/18 14:06	07/10/18 07:39	1
PCB-1254	28.5	U	62.1	28.5	ug/Kg	☼	07/06/18 14:06	07/10/18 07:39	1
PCB-1260	113		62.1	27.3	ug/Kg	☼	07/06/18 14:06	07/10/18 07:39	1
Polychlorinated biphenyls, Total	432		62.1	38.5	ug/Kg	☼	07/06/18 14:06	07/10/18 07:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	64		14 - 128	07/06/18 14:06	07/10/18 07:39	1
DCB Decachlorobiphenyl	70		10 - 132	07/06/18 14:06	07/10/18 07:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.1		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	16.9		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-01.14-SL06-1.0-1.5

Lab Sample ID: 240-97885-87

Date Collected: 06/13/18 14:12

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 79.9

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	28.2	U	64.2	28.2	ug/Kg	☼	07/06/18 14:06	07/10/18 07:56	1
PCB-1221	30.8	U	64.2	30.8	ug/Kg	☼	07/06/18 14:06	07/10/18 07:56	1
PCB-1232	29.5	U	64.2	29.5	ug/Kg	☼	07/06/18 14:06	07/10/18 07:56	1
PCB-1242	24.4	U	64.2	24.4	ug/Kg	☼	07/06/18 14:06	07/10/18 07:56	1
PCB-1248	221		64.2	30.8	ug/Kg	☼	07/06/18 14:06	07/10/18 07:56	1
PCB-1254	29.5	U	64.2	29.5	ug/Kg	☼	07/06/18 14:06	07/10/18 07:56	1
PCB-1260	61.5	J	64.2	28.2	ug/Kg	☼	07/06/18 14:06	07/10/18 07:56	1
Polychlorinated biphenyls, Total	283		64.2	39.8	ug/Kg	☼	07/06/18 14:06	07/10/18 07:56	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	63		14 - 128	07/06/18 14:06	07/10/18 07:56	1
DCB Decachlorobiphenyl	61		10 - 132	07/06/18 14:06	07/10/18 07:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.9		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	20.1		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.31-SL01-0.0-1.0

Lab Sample ID: 240-97885-89

Date Collected: 06/14/18 12:13

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 79.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	572	U	1300	572	ug/Kg	☼	07/06/18 14:06	07/10/18 08:31	20
PCB-1221	624	U	1300	624	ug/Kg	☼	07/06/18 14:06	07/10/18 08:31	20
PCB-1232	598	U	1300	598	ug/Kg	☼	07/06/18 14:06	07/10/18 08:31	20
PCB-1242	494	U	1300	494	ug/Kg	☼	07/06/18 14:06	07/10/18 08:31	20
PCB-1248	22400		1300	624	ug/Kg	☼	07/06/18 14:06	07/10/18 08:31	20
PCB-1254	598	U	1300	598	ug/Kg	☼	07/06/18 14:06	07/10/18 08:31	20
PCB-1260	572	U	1300	572	ug/Kg	☼	07/06/18 14:06	07/10/18 08:31	20
Polychlorinated biphenyls, Total	22400		1300	806	ug/Kg	☼	07/06/18 14:06	07/10/18 08:31	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	76	p	14 - 128	07/06/18 14:06	07/10/18 08:31	20
DCB Decachlorobiphenyl	71		10 - 132	07/06/18 14:06	07/10/18 08:31	20

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	79.2		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	20.8		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.31-SL01-1.0-2.0

Lab Sample ID: 240-97885-90

Date Collected: 06/14/18 12:15

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 87.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	25.5	U	57.9	25.5	ug/Kg	☼	07/06/18 14:06	07/10/18 08:48	1
PCB-1221	27.8	U	57.9	27.8	ug/Kg	☼	07/06/18 14:06	07/10/18 08:48	1
PCB-1232	26.6	U	57.9	26.6	ug/Kg	☼	07/06/18 14:06	07/10/18 08:48	1
PCB-1242	22.0	U	57.9	22.0	ug/Kg	☼	07/06/18 14:06	07/10/18 08:48	1
PCB-1248	372		57.9	27.8	ug/Kg	☼	07/06/18 14:06	07/10/18 08:48	1
PCB-1254	26.6	U	57.9	26.6	ug/Kg	☼	07/06/18 14:06	07/10/18 08:48	1
PCB-1260	25.5	U	57.9	25.5	ug/Kg	☼	07/06/18 14:06	07/10/18 08:48	1
Polychlorinated biphenyls, Total	372		57.9	35.9	ug/Kg	☼	07/06/18 14:06	07/10/18 08:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	69		14 - 128	07/06/18 14:06	07/10/18 08:48	1
DCB Decachlorobiphenyl	70		10 - 132	07/06/18 14:06	07/10/18 08:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.0		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	13.0		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.33-SL01-0.0-0.7

Lab Sample ID: 240-97885-94

Date Collected: 06/14/18 12:20

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 78.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	27.8	U	63.2	27.8	ug/Kg	☼	07/06/18 14:06	07/10/18 09:06	1
PCB-1221	30.4	U	63.2	30.4	ug/Kg	☼	07/06/18 14:06	07/10/18 09:06	1
PCB-1232	29.1	U	63.2	29.1	ug/Kg	☼	07/06/18 14:06	07/10/18 09:06	1
PCB-1242	24.0	U	63.2	24.0	ug/Kg	☼	07/06/18 14:06	07/10/18 09:06	1
PCB-1248	976		63.2	30.4	ug/Kg	☼	07/06/18 14:06	07/10/18 09:06	1
PCB-1254	29.1	U	63.2	29.1	ug/Kg	☼	07/06/18 14:06	07/10/18 09:06	1
PCB-1260	166		63.2	27.8	ug/Kg	☼	07/06/18 14:06	07/10/18 09:06	1
Polychlorinated biphenyls, Total	1140		63.2	39.2	ug/Kg	☼	07/06/18 14:06	07/10/18 09:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	66		14 - 128	07/06/18 14:06	07/10/18 09:06	1
DCB Decachlorobiphenyl	66		10 - 132	07/06/18 14:06	07/10/18 09:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	78.2		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	21.8		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.33-SL01-0.7-1.6

Lab Sample ID: 240-97885-95

Date Collected: 06/14/18 12:25

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 88.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	24.6	U	56.0	24.6	ug/Kg	☼	07/06/18 14:06	07/10/18 09:23	1
PCB-1221	26.9	U	56.0	26.9	ug/Kg	☼	07/06/18 14:06	07/10/18 09:23	1
PCB-1232	25.8	U	56.0	25.8	ug/Kg	☼	07/06/18 14:06	07/10/18 09:23	1
PCB-1242	21.3	U	56.0	21.3	ug/Kg	☼	07/06/18 14:06	07/10/18 09:23	1
PCB-1248	333		56.0	26.9	ug/Kg	☼	07/06/18 14:06	07/10/18 09:23	1
PCB-1254	25.8	U	56.0	25.8	ug/Kg	☼	07/06/18 14:06	07/10/18 09:23	1
PCB-1260	24.6	U	56.0	24.6	ug/Kg	☼	07/06/18 14:06	07/10/18 09:23	1
Polychlorinated biphenyls, Total	333		56.0	34.7	ug/Kg	☼	07/06/18 14:06	07/10/18 09:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	66		14 - 128	07/06/18 14:06	07/10/18 09:23	1
DCB Decachlorobiphenyl	70		10 - 132	07/06/18 14:06	07/10/18 09:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	88.2		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	11.8		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.33-SL01-1.6-2.3

Lab Sample ID: 240-97885-96

Date Collected: 06/14/18 12:27

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 86.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	26.1	U	59.3	26.1	ug/Kg	☼	07/06/18 14:06	07/10/18 09:41	1
PCB-1221	28.4	U	59.3	28.4	ug/Kg	☼	07/06/18 14:06	07/10/18 09:41	1
PCB-1232	27.3	U	59.3	27.3	ug/Kg	☼	07/06/18 14:06	07/10/18 09:41	1
PCB-1242	22.5	U	59.3	22.5	ug/Kg	☼	07/06/18 14:06	07/10/18 09:41	1
PCB-1248	28.4	U	59.3	28.4	ug/Kg	☼	07/06/18 14:06	07/10/18 09:41	1
PCB-1254	27.3	U	59.3	27.3	ug/Kg	☼	07/06/18 14:06	07/10/18 09:41	1
PCB-1260	26.1	U	59.3	26.1	ug/Kg	☼	07/06/18 14:06	07/10/18 09:41	1
Polychlorinated biphenyls, Total	36.7	U	59.3	36.7	ug/Kg	☼	07/06/18 14:06	07/10/18 09:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	54		14 - 128	07/06/18 14:06	07/10/18 09:41	1
DCB Decachlorobiphenyl	66		10 - 132	07/06/18 14:06	07/10/18 09:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.5		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	13.5		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.23-SL01-0.0-0.7

Lab Sample ID: 240-97885-99

Date Collected: 06/14/18 12:51

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	273	U	620	273	ug/Kg	☼	07/06/18 14:06	07/10/18 11:25	10
PCB-1221	298	U	620	298	ug/Kg	☼	07/06/18 14:06	07/10/18 11:25	10
PCB-1232	285	U	620	285	ug/Kg	☼	07/06/18 14:06	07/10/18 11:25	10
PCB-1242	236	U	620	236	ug/Kg	☼	07/06/18 14:06	07/10/18 11:25	10
PCB-1248	11400		620	298	ug/Kg	☼	07/06/18 14:06	07/10/18 11:25	10
PCB-1254	285	U	620	285	ug/Kg	☼	07/06/18 14:06	07/10/18 11:25	10
PCB-1260	1260		620	273	ug/Kg	☼	07/06/18 14:06	07/10/18 11:25	10
Polychlorinated biphenyls, Total	12700		620	385	ug/Kg	☼	07/06/18 14:06	07/10/18 11:25	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	82		14 - 128	07/06/18 14:06	07/10/18 11:25	10
DCB Decachlorobiphenyl	65	p	10 - 132	07/06/18 14:06	07/10/18 11:25	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.3		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	16.7		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.23-SL01-1.2-2.0

Lab Sample ID: 240-97885-100

Date Collected: 06/14/18 12:56

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.0

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	27.0	U	61.3	27.0	ug/Kg	☼	07/06/18 14:06	07/10/18 11:42	1
PCB-1221	29.4	U	61.3	29.4	ug/Kg	☼	07/06/18 14:06	07/10/18 11:42	1
PCB-1232	28.2	U	61.3	28.2	ug/Kg	☼	07/06/18 14:06	07/10/18 11:42	1
PCB-1242	23.3	U	61.3	23.3	ug/Kg	☼	07/06/18 14:06	07/10/18 11:42	1
PCB-1248	29.4	U	61.3	29.4	ug/Kg	☼	07/06/18 14:06	07/10/18 11:42	1
PCB-1254	28.2	U	61.3	28.2	ug/Kg	☼	07/06/18 14:06	07/10/18 11:42	1
PCB-1260	27.0	U	61.3	27.0	ug/Kg	☼	07/06/18 14:06	07/10/18 11:42	1
Polychlorinated biphenyls, Total	38.0	U	61.3	38.0	ug/Kg	☼	07/06/18 14:06	07/10/18 11:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	70		14 - 128	07/06/18 14:06	07/10/18 11:42	1
DCB Decachlorobiphenyl	69		10 - 132	07/06/18 14:06	07/10/18 11:42	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.0		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	17.0		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.29-SL01-0.0-0.7

Lab Sample ID: 240-97885-103

Date Collected: 06/14/18 13:32

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 86.5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	253	U	576	253	ug/Kg	☼	07/06/18 14:06	07/10/18 12:00	10
PCB-1221	276	U	576	276	ug/Kg	☼	07/06/18 14:06	07/10/18 12:00	10
PCB-1232	265	U	576	265	ug/Kg	☼	07/06/18 14:06	07/10/18 12:00	10
PCB-1242	219	U	576	219	ug/Kg	☼	07/06/18 14:06	07/10/18 12:00	10
PCB-1248	6460		576	276	ug/Kg	☼	07/06/18 14:06	07/10/18 12:00	10
PCB-1254	265	U	576	265	ug/Kg	☼	07/06/18 14:06	07/10/18 12:00	10
PCB-1260	253	U	576	253	ug/Kg	☼	07/06/18 14:06	07/10/18 12:00	10
Polychlorinated biphenyls, Total	6460		576	357	ug/Kg	☼	07/06/18 14:06	07/10/18 12:00	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	64		14 - 128	07/06/18 14:06	07/10/18 12:00	10
DCB Decachlorobiphenyl	56		10 - 132	07/06/18 14:06	07/10/18 12:00	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	86.5		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	13.5		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.29-SL01-0.7-1.7

Lab Sample ID: 240-97885-104

Date Collected: 06/14/18 13:34

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 87.7

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	24.1	U	54.9	24.1	ug/Kg	☼	07/06/18 14:06	07/10/18 12:17	1
PCB-1221	26.3	U	54.9	26.3	ug/Kg	☼	07/06/18 14:06	07/10/18 12:17	1
PCB-1232	25.2	U	54.9	25.2	ug/Kg	☼	07/06/18 14:06	07/10/18 12:17	1
PCB-1242	20.8	U	54.9	20.8	ug/Kg	☼	07/06/18 14:06	07/10/18 12:17	1
PCB-1248	53.1	J	54.9	26.3	ug/Kg	☼	07/06/18 14:06	07/10/18 12:17	1
PCB-1254	25.2	U	54.9	25.2	ug/Kg	☼	07/06/18 14:06	07/10/18 12:17	1
PCB-1260	24.1	U	54.9	24.1	ug/Kg	☼	07/06/18 14:06	07/10/18 12:17	1
Polychlorinated biphenyls, Total	53.1	J	54.9	34.0	ug/Kg	☼	07/06/18 14:06	07/10/18 12:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	77		14 - 128	07/06/18 14:06	07/10/18 12:17	1
DCB Decachlorobiphenyl	84		10 - 132	07/06/18 14:06	07/10/18 12:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	87.7		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	12.3		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.29-SL01-1.7-2.7-FD

Lab Sample ID: 240-97885-105

Date Collected: 06/14/18 13:36

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 74.3

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	28.7	U	65.3	28.7	ug/Kg	☼	07/06/18 14:06	07/10/18 13:27	1
PCB-1221	31.3	U	65.3	31.3	ug/Kg	☼	07/06/18 14:06	07/10/18 13:27	1
PCB-1232	30.0	U	65.3	30.0	ug/Kg	☼	07/06/18 14:06	07/10/18 13:27	1
PCB-1242	24.8	U	65.3	24.8	ug/Kg	☼	07/06/18 14:06	07/10/18 13:27	1
PCB-1248	45.2	J	65.3	31.3	ug/Kg	☼	07/06/18 14:06	07/10/18 13:27	1
PCB-1254	30.0	U	65.3	30.0	ug/Kg	☼	07/06/18 14:06	07/10/18 13:27	1
PCB-1260	28.7	U	65.3	28.7	ug/Kg	☼	07/06/18 14:06	07/10/18 13:27	1
Polychlorinated biphenyls, Total	45.2	J	65.3	40.5	ug/Kg	☼	07/06/18 14:06	07/10/18 13:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	81		14 - 128	07/06/18 14:06	07/10/18 13:27	1
DCB Decachlorobiphenyl	77		10 - 132	07/06/18 14:06	07/10/18 13:27	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	74.3		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	25.7		0.1	0.1	%			07/02/18 15:45	1

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.36-SL01-1.0-1.5

Lab Sample ID: 240-97885-106

Date Collected: 06/14/18 10:51

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.2

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	25.5	U	58.0	25.5	ug/Kg	☼	07/06/18 14:06	07/10/18 08:14	1
PCB-1221	27.9	U	58.0	27.9	ug/Kg	☼	07/06/18 14:06	07/10/18 08:14	1
PCB-1232	26.7	U	58.0	26.7	ug/Kg	☼	07/06/18 14:06	07/10/18 08:14	1
PCB-1242	22.1	U	58.0	22.1	ug/Kg	☼	07/06/18 14:06	07/10/18 08:14	1
PCB-1248	27.9	U	58.0	27.9	ug/Kg	☼	07/06/18 14:06	07/10/18 08:14	1
PCB-1254	26.7	U	58.0	26.7	ug/Kg	☼	07/06/18 14:06	07/10/18 08:14	1
PCB-1260	25.5	U	58.0	25.5	ug/Kg	☼	07/06/18 14:06	07/10/18 08:14	1
Polychlorinated biphenyls, Total	36.0	U	58.0	36.0	ug/Kg	☼	07/06/18 14:06	07/10/18 08:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	71		14 - 128	07/06/18 14:06	07/10/18 08:14	1
DCB Decachlorobiphenyl	68		10 - 132	07/06/18 14:06	07/10/18 08:14	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Solids	83.2		0.1	0.1	%			07/02/18 15:45	1
Percent Moisture	16.8		0.1	0.1	%			07/02/18 15:45	1

Surrogate Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (14-128)	TCX2 (14-128)	DCBP1 (10-132)	DCBP2 (10-132)
240-97885-2	ED-00.51-SL06-1.0-2.0		72		73
240-97885-4	ED-01.14-SL01-0.5-1.0		60 p		57
240-97885-5	ED-01.14-SL01-1.0-1.5		62		67
240-97885-8	ED-01.14-SL05-0.0-0.5		85		79
240-97885-9	ED-01.14-SL05-0.5-1.0		78		67
240-97885-11	ED-01.14-SL05-1.0-1.5		88		90
240-97885-14	ED-00.00-SL03-1.7-2.5		71		70
240-97885-15	ED-00.00-SL03-0.9-1.7	64		63	
240-97885-15 MS	ED-00.00-SL03-0.9-1.7 MS	63		60	
240-97885-15 MSD	ED-00.00-SL03-0.9-1.7 MSD	78		70 p	
240-97885-16	ED-00.00-SL03-0.0-0.9		77		191 X
240-97885-17	ED-00.00-SL04-0.0-0.9	80		79 p	
240-97885-18	ED-00.00-SL04-0.9-1.8	58		53 p	
240-97885-19	ED-00.00-SL04-0.0-0.9-FD	79		70 p	
240-97885-20	ED-00.00-SL04-1.8-2.7	56		55 p	
240-97885-22	ED-00.17-SL02-0.0-0.8-FD	108		203 p X	
240-97885-23	ED-00.17-SL02-0.0-0.8	111		358 p X	
240-97885-24	ED-00.17-SL02-0.8-1.8	100		111	
240-97885-25	ED-00.17-SL02-1.8-2.8		30		43
240-97885-25 MS	ED-00.17-SL02-1.8-2.8 MS		71		113
240-97885-25 MSD	ED-00.17-SL02-1.8-2.8 MSD		56		161 X
240-97885-27	ED-00.41-SL01-0.0-0.5	88		103	
240-97885-28	ED-00.41-SL01-1.0-1.5	66		64	
240-97885-29	ED-00.41-SL01-1.5-2.0	92		84	
240-97885-30	ED-00.41-SL01-1.5-2.0-FD	86		77 p	
240-97885-34	ED-00.19-SL01-1.8-2.3		62		863 X
240-97885-34 MS	ED-00.19-SL01-1.8-2.3 MS		84		542 X
240-97885-34 MSD	ED-00.19-SL01-1.8-2.3 MSD		74		323 X
240-97885-35	ED-00.19-SL01-1.5-1.8	86		93 p	
240-97885-36	ED-00.19-SL01-0.0-0.8	76		213 X	
240-97885-37	ED-00.19-SL01-0.8-1.5	80		125	
240-97885-38	ED-00.19-SL01-0.8-1.5-FD	72		94	
240-97885-41	ED-00.21-SL01-0.0-1.0	73		95	
240-97885-42	ED-00.21-SL01-1.0-2.0	71		69	
240-97885-43	ED-00.21-SL01-1.0-2.0-FD	76		72	
240-97885-46	ED-00.27-SL01-0.0-1.0	91		1369 p X	
240-97885-47	ED-00.27-SL01-1.0-1.9	74		92 p	
240-97885-48	ED-00.27-SL01-1.9-2.8	64		59	
240-97885-50	ED-00.23-SL01-0.7-1.2	78		63 p	
240-97885-51	ED-00.23-SL01-0.7-1.2-FD	82		74	
240-97885-56	ED-01.14-SL04-0.5-1.0	53 p		93 p	
240-97885-57	ED-01.14-SL04-1.5-1.8	56		53 p	
240-97885-58	ED-01.14-SL04-1.0-1.5	70		72	
240-97885-59	ED-01.14-SL04-0.0-0.5	75		98	
240-97885-60	ED-00.36-SL01-0.4-1.0	84		69 p	
240-97885-61	ED-00.00-SL03-0.9-1.7	55		56	
240-97885-62	ED-00.36-SL01-0.0-0.4	73		75 p	
240-97885-65	ED-00.36-SL01-1.5-2.0		79		78
240-97885-65 MS	ED-00.36-SL01-1.5-2.0 MS		91		84

TestAmerica Canton

Surrogate Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

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

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TCX1 (14-128)	TCX2 (14-128)	DCBP1 (10-132)	DCBP2 (10-132)
240-97885-65 MSD	ED-00.36-SL01-1.5-2.0 MSD		90		76
240-97885-66	ED-00.41-SL01-0.5-1.0	74		71	
240-97885-68	ED-00.36-SL01-1.5-2.0-FD	62		56 p	
240-97885-69	ED-00.36-SL01-0.4-1.0		67		98
240-97885-70	ED-00.19-SL01-1.8-2.3		76		109
240-97885-74	ED-00.29-SL01-1.7-2.7		67		339 X
240-97885-77	ED-00.44-SL01-0.0-0.5		63		193 X
240-97885-78	ED-00.44-SL01-0.5-1.0		63		309 X
240-97885-79	ED-00.44-SL01-1.0-1.5		50		174 X
240-97885-80	ED-00.44-SL01-1.5-1.8	60	59	114 p	277 X
240-97885-81	ED-00.44-SL01-1.8-2.0	52	51	169 X	194 X
240-97885-85	ED-01.14-SL06-0.0-0.5		72		78
240-97885-86	ED-01.14-SL06-0.5-1.0		64		70
240-97885-87	ED-01.14-SL06-1.0-1.5		63		61
240-97885-89	ED-00.31-SL01-0.0-1.0		76 p		71
240-97885-90	ED-00.31-SL01-1.0-2.0		69		70
240-97885-94	ED-00.33-SL01-0.0-0.7		66		66
240-97885-95	ED-00.33-SL01-0.7-1.6		66		70
240-97885-96	ED-00.33-SL01-1.6-2.3		54		66
240-97885-99	ED-00.23-SL01-0.0-0.7		82		65 p
240-97885-100	ED-00.23-SL01-1.2-2.0		70		69
240-97885-103	ED-00.29-SL01-0.0-0.7		64		56
240-97885-104	ED-00.29-SL01-0.7-1.7		77		84
240-97885-105	ED-00.29-SL01-1.7-2.7-FD		81		77
240-97885-106	ED-00.36-SL01-1.0-1.5		71		68
LCS 240-334947/24-A	Lab Control Sample	64		80 p	
LCS 240-334984/10-A	Lab Control Sample	57		70	
LCS 240-335042/24-A	Lab Control Sample		83		91
LCS 240-335210/24-A	Lab Control Sample		59		87
LCS 240-335217/24-A	Lab Control Sample	70		72 p	
LCS 240-335309/17-A	Lab Control Sample		67		107
MB 240-334947/23-A	Method Blank	45		79 p	
MB 240-334984/9-A	Method Blank	65		78	
MB 240-335042/23-A	Method Blank		73		97
MB 240-335210/23-A	Method Blank		67		91
MB 240-335217/23-A	Method Blank	77		72 p	
MB 240-335309/16-A	Method Blank		71		127

Surrogate Legend

TCX = Tetrachloro-m-xylene
 DCBP = DCB Decachlorobiphenyl

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

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

Lab Sample ID: MB 240-334947/23-A
Matrix: Solid
Analysis Batch: 335161

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 334947

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	22.0	U	50.0	22.0	ug/Kg		07/06/18 07:48	07/08/18 23:41	1
PCB-1221	24.0	U	50.0	24.0	ug/Kg		07/06/18 07:48	07/08/18 23:41	1
PCB-1232	23.0	U	50.0	23.0	ug/Kg		07/06/18 07:48	07/08/18 23:41	1
PCB-1242	19.0	U	50.0	19.0	ug/Kg		07/06/18 07:48	07/08/18 23:41	1
PCB-1248	24.0	U	50.0	24.0	ug/Kg		07/06/18 07:48	07/08/18 23:41	1
PCB-1254	23.0	U	50.0	23.0	ug/Kg		07/06/18 07:48	07/08/18 23:41	1
PCB-1260	22.0	U	50.0	22.0	ug/Kg		07/06/18 07:48	07/08/18 23:41	1
Polychlorinated biphenyls, Total	31.0	U	50.0	31.0	ug/Kg		07/06/18 07:48	07/08/18 23:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	45		14 - 128	07/06/18 07:48	07/08/18 23:41	1
DCB Decachlorobiphenyl	79	p	10 - 132	07/06/18 07:48	07/08/18 23:41	1

Lab Sample ID: LCS 240-334947/24-A
Matrix: Solid
Analysis Batch: 335161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 334947

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	1000	638.2		ug/Kg		64	47 - 120
PCB-1260	1000	781.8		ug/Kg		78	46 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	64		14 - 128
DCB Decachlorobiphenyl	80	p	10 - 132

Lab Sample ID: MB 240-334984/9-A
Matrix: Solid
Analysis Batch: 335385

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 334984

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	22.0	U	50.0	22.0	ug/Kg		07/06/18 10:36	07/10/18 12:33	1
PCB-1221	24.0	U	50.0	24.0	ug/Kg		07/06/18 10:36	07/10/18 12:33	1
PCB-1232	23.0	U	50.0	23.0	ug/Kg		07/06/18 10:36	07/10/18 12:33	1
PCB-1242	19.0	U	50.0	19.0	ug/Kg		07/06/18 10:36	07/10/18 12:33	1
PCB-1248	24.0	U	50.0	24.0	ug/Kg		07/06/18 10:36	07/10/18 12:33	1
PCB-1254	23.0	U	50.0	23.0	ug/Kg		07/06/18 10:36	07/10/18 12:33	1
PCB-1260	22.0	U	50.0	22.0	ug/Kg		07/06/18 10:36	07/10/18 12:33	1
Polychlorinated biphenyls, Total	31.0	U	50.0	31.0	ug/Kg		07/06/18 10:36	07/10/18 12:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	65		14 - 128	07/06/18 10:36	07/10/18 12:33	1
DCB Decachlorobiphenyl	78		10 - 132	07/06/18 10:36	07/10/18 12:33	1

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

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

Lab Sample ID: LCS 240-334984/10-A
Matrix: Solid
Analysis Batch: 335385

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 334984

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	1000	617.7		ug/Kg		62	47 - 120
PCB-1260	1000	740.5		ug/Kg		74	46 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	57		14 - 128
DCB Decachlorobiphenyl	70		10 - 132

Lab Sample ID: MB 240-335042/23-A
Matrix: Solid
Analysis Batch: 335388

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 335042

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	22.0	U	50.0	22.0	ug/Kg		07/06/18 14:06	07/10/18 12:35	1
PCB-1221	24.0	U	50.0	24.0	ug/Kg		07/06/18 14:06	07/10/18 12:35	1
PCB-1232	23.0	U	50.0	23.0	ug/Kg		07/06/18 14:06	07/10/18 12:35	1
PCB-1242	19.0	U	50.0	19.0	ug/Kg		07/06/18 14:06	07/10/18 12:35	1
PCB-1248	24.0	U	50.0	24.0	ug/Kg		07/06/18 14:06	07/10/18 12:35	1
PCB-1254	23.0	U	50.0	23.0	ug/Kg		07/06/18 14:06	07/10/18 12:35	1
PCB-1260	22.0	U	50.0	22.0	ug/Kg		07/06/18 14:06	07/10/18 12:35	1
Polychlorinated biphenyls, Total	31.0	U	50.0	31.0	ug/Kg		07/06/18 14:06	07/10/18 12:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	73		14 - 128	07/06/18 14:06	07/10/18 12:35	1
DCB Decachlorobiphenyl	97		10 - 132	07/06/18 14:06	07/10/18 12:35	1

Lab Sample ID: LCS 240-335042/24-A
Matrix: Solid
Analysis Batch: 335388

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 335042

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	1000	745.9		ug/Kg		75	47 - 120
PCB-1260	1000	767.8		ug/Kg		77	46 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	83		14 - 128
DCB Decachlorobiphenyl	91		10 - 132

Lab Sample ID: 240-97885-65 MS
Matrix: Solid
Analysis Batch: 335388

Client Sample ID: ED-00.36-SL01-1.5-2.0 MS
Prep Type: Total/NA
Prep Batch: 335042

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
PCB-1016	25.8	U	1160	894.2		ug/Kg	☼	77	31 - 120
PCB-1260	25.8	U	1160	975.1		ug/Kg	☼	84	21 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	91		14 - 128

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

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

Lab Sample ID: 240-97885-65 MS
Matrix: Solid
Analysis Batch: 335388

Client Sample ID: ED-00.36-SL01-1.5-2.0 MS
Prep Type: Total/NA
Prep Batch: 335042

Surrogate	MS %Recovery	MS Qualifier	Limits
DCB Decachlorobiphenyl	84		10 - 132

Lab Sample ID: 240-97885-65 MSD
Matrix: Solid
Analysis Batch: 335388

Client Sample ID: ED-00.36-SL01-1.5-2.0 MSD
Prep Type: Total/NA
Prep Batch: 335042

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	25.8	U	1150	855.7		ug/Kg	☼	75	31 - 120	12	30
PCB-1260	25.8	U	1150	909.1		ug/Kg	☼	79	21 - 122	7	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	90		14 - 128
DCB Decachlorobiphenyl	76		10 - 132

Lab Sample ID: MB 240-335210/23-A
Matrix: Solid
Analysis Batch: 335576

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 335210

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	22.0	U	50.0	22.0	ug/Kg		07/09/18 07:37	07/11/18 08:29	1
PCB-1221	24.0	U	50.0	24.0	ug/Kg		07/09/18 07:37	07/11/18 08:29	1
PCB-1232	23.0	U	50.0	23.0	ug/Kg		07/09/18 07:37	07/11/18 08:29	1
PCB-1242	19.0	U	50.0	19.0	ug/Kg		07/09/18 07:37	07/11/18 08:29	1
PCB-1248	24.0	U	50.0	24.0	ug/Kg		07/09/18 07:37	07/11/18 08:29	1
PCB-1254	23.0	U	50.0	23.0	ug/Kg		07/09/18 07:37	07/11/18 08:29	1
PCB-1260	22.0	U	50.0	22.0	ug/Kg		07/09/18 07:37	07/11/18 08:29	1
Polychlorinated biphenyls, Total	31.0	U	50.0	31.0	ug/Kg		07/09/18 07:37	07/11/18 08:29	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	67		14 - 128	07/09/18 07:37	07/11/18 08:29	1
DCB Decachlorobiphenyl	91		10 - 132	07/09/18 07:37	07/11/18 08:29	1

Lab Sample ID: LCS 240-335210/24-A
Matrix: Solid
Analysis Batch: 335576

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 335210

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
PCB-1016	1000	682.9		ug/Kg		68	47 - 120
PCB-1260	1000	823.9		ug/Kg		82	46 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	59		14 - 128
DCB Decachlorobiphenyl	87		10 - 132

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

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

Lab Sample ID: MB 240-335217/23-A
Matrix: Solid
Analysis Batch: 335539

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 335217

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	22.0	U	50.0	22.0	ug/Kg		07/09/18 08:19	07/11/18 01:54	1
PCB-1221	24.0	U	50.0	24.0	ug/Kg		07/09/18 08:19	07/11/18 01:54	1
PCB-1232	23.0	U	50.0	23.0	ug/Kg		07/09/18 08:19	07/11/18 01:54	1
PCB-1242	19.0	U	50.0	19.0	ug/Kg		07/09/18 08:19	07/11/18 01:54	1
PCB-1248	24.0	U	50.0	24.0	ug/Kg		07/09/18 08:19	07/11/18 01:54	1
PCB-1254	23.0	U	50.0	23.0	ug/Kg		07/09/18 08:19	07/11/18 01:54	1
PCB-1260	22.0	U	50.0	22.0	ug/Kg		07/09/18 08:19	07/11/18 01:54	1
Polychlorinated biphenyls, Total	31.0	U	50.0	31.0	ug/Kg		07/09/18 08:19	07/11/18 01:54	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	77		14 - 128	07/09/18 08:19	07/11/18 01:54	1
DCB Decachlorobiphenyl	72	p	10 - 132	07/09/18 08:19	07/11/18 01:54	1

Lab Sample ID: LCS 240-335217/24-A
Matrix: Solid
Analysis Batch: 335539

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 335217

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	1000	662.0		ug/Kg		66	47 - 120
PCB-1260	1000	759.5		ug/Kg		76	46 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	70		14 - 128
DCB Decachlorobiphenyl	72	p	10 - 132

Lab Sample ID: 240-97885-15 MS
Matrix: Solid
Analysis Batch: 335539

Client Sample ID: ED-00.00-SL03-0.9-1.7 MS
Prep Type: Total/NA
Prep Batch: 335217

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
PCB-1016	24.4	U F2	1110	603.6		ug/Kg	☼	54	31 - 120
PCB-1260	24.4	U	1110	674.7		ug/Kg	☼	61	21 - 122

Surrogate	MS %Recovery	MS Qualifier	Limits
Tetrachloro-m-xylene	63		14 - 128
DCB Decachlorobiphenyl	60		10 - 132

Lab Sample ID: 240-97885-15 MSD
Matrix: Solid
Analysis Batch: 335539

Client Sample ID: ED-00.00-SL03-0.9-1.7 MSD
Prep Type: Total/NA
Prep Batch: 335217

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
PCB-1016	24.4	U F2	1210	824.6	F2	ug/Kg	☼	68	31 - 120	31	30
PCB-1260	24.4	U	1210	897.8		ug/Kg	☼	74	21 - 122	28	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Tetrachloro-m-xylene	78		14 - 128

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

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

Lab Sample ID: 240-97885-15 MSD
Matrix: Solid
Analysis Batch: 335539

Client Sample ID: ED-00.00-SL03-0.9-1.7 MSD
Prep Type: Total/NA
Prep Batch: 335217

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	70	p	10 - 132

Lab Sample ID: MB 240-335309/16-A
Matrix: Solid
Analysis Batch: 335509

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 335309

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
PCB-1016	22.0	U	50.0	22.0	ug/Kg		07/09/18 14:18	07/11/18 04:29	1
PCB-1221	24.0	U	50.0	24.0	ug/Kg		07/09/18 14:18	07/11/18 04:29	1
PCB-1232	23.0	U	50.0	23.0	ug/Kg		07/09/18 14:18	07/11/18 04:29	1
PCB-1242	19.0	U	50.0	19.0	ug/Kg		07/09/18 14:18	07/11/18 04:29	1
PCB-1248	24.0	U	50.0	24.0	ug/Kg		07/09/18 14:18	07/11/18 04:29	1
PCB-1254	23.0	U	50.0	23.0	ug/Kg		07/09/18 14:18	07/11/18 04:29	1
PCB-1260	22.0	U	50.0	22.0	ug/Kg		07/09/18 14:18	07/11/18 04:29	1
Polychlorinated biphenyls, Total	31.0	U	50.0	31.0	ug/Kg		07/09/18 14:18	07/11/18 04:29	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Tetrachloro-m-xylene	71		14 - 128	07/09/18 14:18	07/11/18 04:29	1
DCB Decachlorobiphenyl	127		10 - 132	07/09/18 14:18	07/11/18 04:29	1

Lab Sample ID: LCS 240-335309/17-A
Matrix: Solid
Analysis Batch: 335509

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 335309

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
PCB-1016	1000	632.2		ug/Kg		63	47 - 120
PCB-1260	1000	728.8		ug/Kg		73	46 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	67		14 - 128
DCB Decachlorobiphenyl	107		10 - 132

Lab Sample ID: 240-97885-25 MS
Matrix: Solid
Analysis Batch: 335509

Client Sample ID: ED-00.17-SL02-1.8-2.8 MS
Prep Type: Total/NA
Prep Batch: 335309

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
PCB-1016	28.8	U	1270	855.2		ug/Kg	☼	67	31 - 120
PCB-1260	28.8	U	1270	969.3		ug/Kg	☼	76	21 - 122

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	71		14 - 128
DCB Decachlorobiphenyl	113		10 - 132

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

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

Lab Sample ID: 240-97885-25 MSD

Matrix: Solid
Analysis Batch: 335509

Client Sample ID: ED-00.17-SL02-1.8-2.8 MSD

Prep Type: Total/NA
Prep Batch: 335309

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
PCB-1016	28.8	U	1270	666.1		ug/Kg	☼	52	31 - 120	25	30
PCB-1260	28.8	U	1270	742.2		ug/Kg	☼	58	21 - 122	25	30
		MSD MSD									
Surrogate	%Recovery	Qualifier	Limits								
Tetrachloro-m-xylene	56		14 - 128								
DCB Decachlorobiphenyl	161	X	10 - 132								

Lab Sample ID: 240-97885-34 MS

Matrix: Solid
Analysis Batch: 335509

Client Sample ID: ED-00.19-SL01-1.8-2.3 MS

Prep Type: Total/NA
Prep Batch: 335309

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
PCB-1016	124	U	1210	1352		ug/Kg	☼	112	31 - 120		
PCB-1260	124	U	1210	1163		ug/Kg	☼	96	21 - 122		
		MS MS									
Surrogate	%Recovery	Qualifier	Limits								
Tetrachloro-m-xylene	84		14 - 128								
DCB Decachlorobiphenyl	542	X	10 - 132								

Lab Sample ID: 240-97885-34 MSD

Matrix: Solid
Analysis Batch: 335509

Client Sample ID: ED-00.19-SL01-1.8-2.3 MSD

Prep Type: Total/NA
Prep Batch: 335309

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
PCB-1016	124	U	1180	1221		ug/Kg	☼	103	31 - 120	10	30
PCB-1260	124	U	1180	1004		ug/Kg	☼	85	21 - 122	15	30
		MSD MSD									
Surrogate	%Recovery	Qualifier	Limits								
Tetrachloro-m-xylene	74		14 - 128								
DCB Decachlorobiphenyl	323	X	10 - 132								

Method: Moisture - Percent Moisture

Lab Sample ID: 240-97885-9 DU

Matrix: Solid
Analysis Batch: 334355

Client Sample ID: ED-01.14-SL05-0.5-1.0

Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Percent Solids	79.8		81.5		%		2	20
Percent Moisture	20.2		18.5		%		9	20

Lab Sample ID: 240-97885-15 DU

Matrix: Solid
Analysis Batch: 334355

Client Sample ID: ED-00.00-SL03-0.9-1.7 DUP

Prep Type: Total/NA

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Percent Solids	87.2		85.0		%		3	20

TestAmerica Canton

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Method: Moisture - Percent Moisture (Continued)

Lab Sample ID: 240-97885-15 DU
Matrix: Solid
Analysis Batch: 334355

Client Sample ID: ED-00.00-SL03-0.9-1.7 DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	12.8		15.0		%		16	20

Lab Sample ID: 240-97885-25 DU
Matrix: Solid
Analysis Batch: 334355

Client Sample ID: ED-00.17-SL02-1.8-2.8 DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	77.2		75.7		%		2	20
Percent Moisture	22.8		24.3		%		7	20

Lab Sample ID: 240-97885-34 DU
Matrix: Solid
Analysis Batch: 334355

Client Sample ID: ED-00.19-SL01-1.8-2.3 DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	86.5		89.8		%		4	20
Percent Moisture	13.5		10.2	F3	%		27	20

Lab Sample ID: 240-97885-58 DU
Matrix: Solid
Analysis Batch: 334355

Client Sample ID: ED-01.14-SL04-1.0-1.5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	83.2		83.4		%		0.3	20
Percent Moisture	16.8		16.6		%		2	20

Lab Sample ID: 240-97885-65 DU
Matrix: Solid
Analysis Batch: 334355

Client Sample ID: ED-00.36-SL01-1.5-2.0 DUP
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	86.9		82.8		%		5	20
Percent Moisture	13.1		17.2	F3	%		27	20

Lab Sample ID: 240-97885-66 DU
Matrix: Solid
Analysis Batch: 334355

Client Sample ID: ED-00.41-SL01-0.5-1.0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	87.9		88.6		%		0.8	20
Percent Moisture	12.1		11.4		%		6	20

Lab Sample ID: 240-97885-106 DU
Matrix: Solid
Analysis Batch: 334355

Client Sample ID: ED-00.36-SL01-1.0-1.5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Solids	83.2		83.8		%		0.7	20
Percent Moisture	16.8		16.2		%		3	20

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

GC Semi VOA

Prep Batch: 334947

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-35	ED-00.19-SL01-1.5-1.8	Total/NA	Solid	3540C	
240-97885-36	ED-00.19-SL01-0.0-0.8	Total/NA	Solid	3540C	
240-97885-37	ED-00.19-SL01-0.8-1.5	Total/NA	Solid	3540C	
240-97885-38	ED-00.19-SL01-0.8-1.5-FD	Total/NA	Solid	3540C	
240-97885-41	ED-00.21-SL01-0.0-1.0	Total/NA	Solid	3540C	
MB 240-334947/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-334947/24-A	Lab Control Sample	Total/NA	Solid	3540C	

Prep Batch: 334984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-42	ED-00.21-SL01-1.0-2.0	Total/NA	Solid	3540C	
240-97885-43	ED-00.21-SL01-1.0-2.0-FD	Total/NA	Solid	3540C	
240-97885-46	ED-00.27-SL01-0.0-1.0	Total/NA	Solid	3540C	
240-97885-47	ED-00.27-SL01-1.0-1.9	Total/NA	Solid	3540C	
240-97885-48	ED-00.27-SL01-1.9-2.8	Total/NA	Solid	3540C	
240-97885-50	ED-00.23-SL01-0.7-1.2	Total/NA	Solid	3540C	
240-97885-51	ED-00.23-SL01-0.7-1.2-FD	Total/NA	Solid	3540C	
240-97885-56	ED-01.14-SL04-0.5-1.0	Total/NA	Solid	3540C	
MB 240-334984/9-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-334984/10-A	Lab Control Sample	Total/NA	Solid	3540C	

Prep Batch: 335042

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-2	ED-00.51-SL06-1.0-2.0	Total/NA	Solid	3540C	
240-97885-4	ED-01.14-SL01-0.5-1.0	Total/NA	Solid	3540C	
240-97885-5	ED-01.14-SL01-1.0-1.5	Total/NA	Solid	3540C	
240-97885-8	ED-01.14-SL05-0.0-0.5	Total/NA	Solid	3540C	
240-97885-9	ED-01.14-SL05-0.5-1.0	Total/NA	Solid	3540C	
240-97885-65	ED-00.36-SL01-1.5-2.0	Total/NA	Solid	3540C	
240-97885-85	ED-01.14-SL06-0.0-0.5	Total/NA	Solid	3540C	
240-97885-86	ED-01.14-SL06-0.5-1.0	Total/NA	Solid	3540C	
240-97885-87	ED-01.14-SL06-1.0-1.5	Total/NA	Solid	3540C	
240-97885-89	ED-00.31-SL01-0.0-1.0	Total/NA	Solid	3540C	
240-97885-90	ED-00.31-SL01-1.0-2.0	Total/NA	Solid	3540C	
240-97885-94	ED-00.33-SL01-0.0-0.7	Total/NA	Solid	3540C	
240-97885-95	ED-00.33-SL01-0.7-1.6	Total/NA	Solid	3540C	
240-97885-96	ED-00.33-SL01-1.6-2.3	Total/NA	Solid	3540C	
240-97885-99	ED-00.23-SL01-0.0-0.7	Total/NA	Solid	3540C	
240-97885-100	ED-00.23-SL01-1.2-2.0	Total/NA	Solid	3540C	
240-97885-103	ED-00.29-SL01-0.0-0.7	Total/NA	Solid	3540C	
240-97885-104	ED-00.29-SL01-0.7-1.7	Total/NA	Solid	3540C	
240-97885-105	ED-00.29-SL01-1.7-2.7-FD	Total/NA	Solid	3540C	
240-97885-106	ED-00.36-SL01-1.0-1.5	Total/NA	Solid	3540C	
MB 240-335042/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-335042/24-A	Lab Control Sample	Total/NA	Solid	3540C	
240-97885-65 MS	ED-00.36-SL01-1.5-2.0 MS	Total/NA	Solid	3540C	
240-97885-65 MSD	ED-00.36-SL01-1.5-2.0 MSD	Total/NA	Solid	3540C	

Analysis Batch: 335161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-35	ED-00.19-SL01-1.5-1.8	Total/NA	Solid	8082A	334947

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

GC Semi VOA (Continued)

Analysis Batch: 335161 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-36	ED-00.19-SL01-0.0-0.8	Total/NA	Solid	8082A	334947
240-97885-37	ED-00.19-SL01-0.8-1.5	Total/NA	Solid	8082A	334947
240-97885-38	ED-00.19-SL01-0.8-1.5-FD	Total/NA	Solid	8082A	334947
240-97885-41	ED-00.21-SL01-0.0-1.0	Total/NA	Solid	8082A	334947
MB 240-334947/23-A	Method Blank	Total/NA	Solid	8082A	334947
LCS 240-334947/24-A	Lab Control Sample	Total/NA	Solid	8082A	334947

Prep Batch: 335210

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-11	ED-01.14-SL05-1.0-1.5	Total/NA	Solid	3540C	
240-97885-14	ED-00.00-SL03-1.7-2.5	Total/NA	Solid	3540C	
240-97885-16	ED-00.00-SL03-0.0-0.9	Total/NA	Solid	3540C	
MB 240-335210/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-335210/24-A	Lab Control Sample	Total/NA	Solid	3540C	

Prep Batch: 335217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-15	ED-00.00-SL03-0.9-1.7	Total/NA	Solid	3540C	
240-97885-17	ED-00.00-SL04-0.0-0.9	Total/NA	Solid	3540C	
240-97885-18	ED-00.00-SL04-0.9-1.8	Total/NA	Solid	3540C	
240-97885-19	ED-00.00-SL04-0.0-0.9-FD	Total/NA	Solid	3540C	
240-97885-20	ED-00.00-SL04-1.8-2.7	Total/NA	Solid	3540C	
240-97885-22	ED-00.17-SL02-0.0-0.8-FD	Total/NA	Solid	3540C	
240-97885-23	ED-00.17-SL02-0.0-0.8	Total/NA	Solid	3540C	
240-97885-24	ED-00.17-SL02-0.8-1.8	Total/NA	Solid	3540C	
240-97885-27	ED-00.41-SL01-0.0-0.5	Total/NA	Solid	3540C	
240-97885-28	ED-00.41-SL01-1.0-1.5	Total/NA	Solid	3540C	
240-97885-29	ED-00.41-SL01-1.5-2.0	Total/NA	Solid	3540C	
240-97885-30	ED-00.41-SL01-1.5-2.0-FD	Total/NA	Solid	3540C	
240-97885-57	ED-01.14-SL04-1.5-1.8	Total/NA	Solid	3540C	
240-97885-58	ED-01.14-SL04-1.0-1.5	Total/NA	Solid	3540C	
240-97885-59	ED-01.14-SL04-0.0-0.5	Total/NA	Solid	3540C	
240-97885-60	ED-00.36-SL01-0.4-1.0	Total/NA	Solid	3540C	
240-97885-61	ED-00.00-SL03-0.9-1.7	Total/NA	Solid	3540C	
240-97885-62	ED-00.36-SL01-0.0-0.4	Total/NA	Solid	3540C	
240-97885-66	ED-00.41-SL01-0.5-1.0	Total/NA	Solid	3540C	
240-97885-68	ED-00.36-SL01-1.5-2.0-FD	Total/NA	Solid	3540C	
MB 240-335217/23-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-335217/24-A	Lab Control Sample	Total/NA	Solid	3540C	
240-97885-15 MS	ED-00.00-SL03-0.9-1.7 MS	Total/NA	Solid	3540C	
240-97885-15 MSD	ED-00.00-SL03-0.9-1.7 MSD	Total/NA	Solid	3540C	

Prep Batch: 335309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-25	ED-00.17-SL02-1.8-2.8	Total/NA	Solid	3540C	
240-97885-34	ED-00.19-SL01-1.8-2.3	Total/NA	Solid	3540C	
240-97885-69	ED-00.36-SL01-0.4-1.0	Total/NA	Solid	3540C	
240-97885-70	ED-00.19-SL01-1.8-2.3	Total/NA	Solid	3540C	
240-97885-74	ED-00.29-SL01-1.7-2.7	Total/NA	Solid	3540C	
240-97885-77	ED-00.44-SL01-0.0-0.5	Total/NA	Solid	3540C	
240-97885-78	ED-00.44-SL01-0.5-1.0	Total/NA	Solid	3540C	

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

GC Semi VOA (Continued)

Prep Batch: 335309 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-79	ED-00.44-SL01-1.0-1.5	Total/NA	Solid	3540C	
240-97885-80	ED-00.44-SL01-1.5-1.8	Total/NA	Solid	3540C	
240-97885-81	ED-00.44-SL01-1.8-2.0	Total/NA	Solid	3540C	
MB 240-335309/16-A	Method Blank	Total/NA	Solid	3540C	
LCS 240-335309/17-A	Lab Control Sample	Total/NA	Solid	3540C	
240-97885-25 MS	ED-00.17-SL02-1.8-2.8 MS	Total/NA	Solid	3540C	
240-97885-25 MSD	ED-00.17-SL02-1.8-2.8 MSD	Total/NA	Solid	3540C	
240-97885-34 MS	ED-00.19-SL01-1.8-2.3 MS	Total/NA	Solid	3540C	
240-97885-34 MSD	ED-00.19-SL01-1.8-2.3 MSD	Total/NA	Solid	3540C	

Analysis Batch: 335385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-42	ED-00.21-SL01-1.0-2.0	Total/NA	Solid	8082A	334984
240-97885-43	ED-00.21-SL01-1.0-2.0-FD	Total/NA	Solid	8082A	334984
240-97885-46	ED-00.27-SL01-0.0-1.0	Total/NA	Solid	8082A	334984
240-97885-47	ED-00.27-SL01-1.0-1.9	Total/NA	Solid	8082A	334984
240-97885-48	ED-00.27-SL01-1.9-2.8	Total/NA	Solid	8082A	334984
240-97885-50	ED-00.23-SL01-0.7-1.2	Total/NA	Solid	8082A	334984
240-97885-51	ED-00.23-SL01-0.7-1.2-FD	Total/NA	Solid	8082A	334984
240-97885-56	ED-01.14-SL04-0.5-1.0	Total/NA	Solid	8082A	334984
MB 240-334984/9-A	Method Blank	Total/NA	Solid	8082A	334984
LCS 240-334984/10-A	Lab Control Sample	Total/NA	Solid	8082A	334984

Analysis Batch: 335388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-2	ED-00.51-SL06-1.0-2.0	Total/NA	Solid	8082A	335042
240-97885-4	ED-01.14-SL01-0.5-1.0	Total/NA	Solid	8082A	335042
240-97885-5	ED-01.14-SL01-1.0-1.5	Total/NA	Solid	8082A	335042
240-97885-8	ED-01.14-SL05-0.0-0.5	Total/NA	Solid	8082A	335042
240-97885-9	ED-01.14-SL05-0.5-1.0	Total/NA	Solid	8082A	335042
240-97885-65	ED-00.36-SL01-1.5-2.0	Total/NA	Solid	8082A	335042
240-97885-85	ED-01.14-SL06-0.0-0.5	Total/NA	Solid	8082A	335042
240-97885-86	ED-01.14-SL06-0.5-1.0	Total/NA	Solid	8082A	335042
240-97885-87	ED-01.14-SL06-1.0-1.5	Total/NA	Solid	8082A	335042
240-97885-89	ED-00.31-SL01-0.0-1.0	Total/NA	Solid	8082A	335042
240-97885-90	ED-00.31-SL01-1.0-2.0	Total/NA	Solid	8082A	335042
240-97885-94	ED-00.33-SL01-0.0-0.7	Total/NA	Solid	8082A	335042
240-97885-95	ED-00.33-SL01-0.7-1.6	Total/NA	Solid	8082A	335042
240-97885-96	ED-00.33-SL01-1.6-2.3	Total/NA	Solid	8082A	335042
240-97885-99	ED-00.23-SL01-0.0-0.7	Total/NA	Solid	8082A	335042
240-97885-100	ED-00.23-SL01-1.2-2.0	Total/NA	Solid	8082A	335042
240-97885-103	ED-00.29-SL01-0.0-0.7	Total/NA	Solid	8082A	335042
240-97885-104	ED-00.29-SL01-0.7-1.7	Total/NA	Solid	8082A	335042
240-97885-105	ED-00.29-SL01-1.7-2.7-FD	Total/NA	Solid	8082A	335042
240-97885-106	ED-00.36-SL01-1.0-1.5	Total/NA	Solid	8082A	335042
MB 240-335042/23-A	Method Blank	Total/NA	Solid	8082A	335042
LCS 240-335042/24-A	Lab Control Sample	Total/NA	Solid	8082A	335042
240-97885-65 MS	ED-00.36-SL01-1.5-2.0 MS	Total/NA	Solid	8082A	335042
240-97885-65 MSD	ED-00.36-SL01-1.5-2.0 MSD	Total/NA	Solid	8082A	335042

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

GC Semi VOA (Continued)

Analysis Batch: 335509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-25	ED-00.17-SL02-1.8-2.8	Total/NA	Solid	8082A	335309
240-97885-34	ED-00.19-SL01-1.8-2.3	Total/NA	Solid	8082A	335309
240-97885-69	ED-00.36-SL01-0.4-1.0	Total/NA	Solid	8082A	335309
240-97885-70	ED-00.19-SL01-1.8-2.3	Total/NA	Solid	8082A	335309
240-97885-74	ED-00.29-SL01-1.7-2.7	Total/NA	Solid	8082A	335309
240-97885-77	ED-00.44-SL01-0.0-0.5	Total/NA	Solid	8082A	335309
240-97885-78	ED-00.44-SL01-0.5-1.0	Total/NA	Solid	8082A	335309
240-97885-79	ED-00.44-SL01-1.0-1.5	Total/NA	Solid	8082A	335309
240-97885-80	ED-00.44-SL01-1.5-1.8	Total/NA	Solid	8082A	335309
240-97885-81	ED-00.44-SL01-1.8-2.0	Total/NA	Solid	8082A	335309
MB 240-335309/16-A	Method Blank	Total/NA	Solid	8082A	335309
LCS 240-335309/17-A	Lab Control Sample	Total/NA	Solid	8082A	335309
240-97885-25 MS	ED-00.17-SL02-1.8-2.8 MS	Total/NA	Solid	8082A	335309
240-97885-25 MSD	ED-00.17-SL02-1.8-2.8 MSD	Total/NA	Solid	8082A	335309
240-97885-34 MS	ED-00.19-SL01-1.8-2.3 MS	Total/NA	Solid	8082A	335309
240-97885-34 MSD	ED-00.19-SL01-1.8-2.3 MSD	Total/NA	Solid	8082A	335309

Analysis Batch: 335539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-15	ED-00.00-SL03-0.9-1.7	Total/NA	Solid	8082A	335217
240-97885-17	ED-00.00-SL04-0.0-0.9	Total/NA	Solid	8082A	335217
240-97885-18	ED-00.00-SL04-0.9-1.8	Total/NA	Solid	8082A	335217
240-97885-19	ED-00.00-SL04-0.0-0.9-FD	Total/NA	Solid	8082A	335217
240-97885-20	ED-00.00-SL04-1.8-2.7	Total/NA	Solid	8082A	335217
240-97885-22	ED-00.17-SL02-0.0-0.8-FD	Total/NA	Solid	8082A	335217
240-97885-23	ED-00.17-SL02-0.0-0.8	Total/NA	Solid	8082A	335217
240-97885-24	ED-00.17-SL02-0.8-1.8	Total/NA	Solid	8082A	335217
240-97885-27	ED-00.41-SL01-0.0-0.5	Total/NA	Solid	8082A	335217
240-97885-28	ED-00.41-SL01-1.0-1.5	Total/NA	Solid	8082A	335217
240-97885-29	ED-00.41-SL01-1.5-2.0	Total/NA	Solid	8082A	335217
240-97885-30	ED-00.41-SL01-1.5-2.0-FD	Total/NA	Solid	8082A	335217
240-97885-57	ED-01.14-SL04-1.5-1.8	Total/NA	Solid	8082A	335217
240-97885-58	ED-01.14-SL04-1.0-1.5	Total/NA	Solid	8082A	335217
240-97885-59	ED-01.14-SL04-0.0-0.5	Total/NA	Solid	8082A	335217
240-97885-60	ED-00.36-SL01-0.4-1.0	Total/NA	Solid	8082A	335217
240-97885-61	ED-00.00-SL03-0.9-1.7	Total/NA	Solid	8082A	335217
240-97885-62	ED-00.36-SL01-0.0-0.4	Total/NA	Solid	8082A	335217
240-97885-66	ED-00.41-SL01-0.5-1.0	Total/NA	Solid	8082A	335217
240-97885-68	ED-00.36-SL01-1.5-2.0-FD	Total/NA	Solid	8082A	335217
MB 240-335217/23-A	Method Blank	Total/NA	Solid	8082A	335217
LCS 240-335217/24-A	Lab Control Sample	Total/NA	Solid	8082A	335217
240-97885-15 MS	ED-00.00-SL03-0.9-1.7 MS	Total/NA	Solid	8082A	335217
240-97885-15 MSD	ED-00.00-SL03-0.9-1.7 MSD	Total/NA	Solid	8082A	335217

Analysis Batch: 335576

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-11	ED-01.14-SL05-1.0-1.5	Total/NA	Solid	8082A	335210
240-97885-14	ED-00.00-SL03-1.7-2.5	Total/NA	Solid	8082A	335210
240-97885-16	ED-00.00-SL03-0.0-0.9	Total/NA	Solid	8082A	335210
MB 240-335210/23-A	Method Blank	Total/NA	Solid	8082A	335210
LCS 240-335210/24-A	Lab Control Sample	Total/NA	Solid	8082A	335210

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

General Chemistry

Analysis Batch: 334355

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-2	ED-00.51-SL06-1.0-2.0	Total/NA	Solid	Moisture	
240-97885-4	ED-01.14-SL01-0.5-1.0	Total/NA	Solid	Moisture	
240-97885-5	ED-01.14-SL01-1.0-1.5	Total/NA	Solid	Moisture	
240-97885-8	ED-01.14-SL05-0.0-0.5	Total/NA	Solid	Moisture	
240-97885-9	ED-01.14-SL05-0.5-1.0	Total/NA	Solid	Moisture	
240-97885-11	ED-01.14-SL05-1.0-1.5	Total/NA	Solid	Moisture	
240-97885-14	ED-00.00-SL03-1.7-2.5	Total/NA	Solid	Moisture	
240-97885-15	ED-00.00-SL03-0.9-1.7	Total/NA	Solid	Moisture	
240-97885-16	ED-00.00-SL03-0.0-0.9	Total/NA	Solid	Moisture	
240-97885-17	ED-00.00-SL04-0.0-0.9	Total/NA	Solid	Moisture	
240-97885-18	ED-00.00-SL04-0.9-1.8	Total/NA	Solid	Moisture	
240-97885-19	ED-00.00-SL04-0.0-0.9-FD	Total/NA	Solid	Moisture	
240-97885-20	ED-00.00-SL04-1.8-2.7	Total/NA	Solid	Moisture	
240-97885-22	ED-00.17-SL02-0.0-0.8-FD	Total/NA	Solid	Moisture	
240-97885-23	ED-00.17-SL02-0.0-0.8	Total/NA	Solid	Moisture	
240-97885-24	ED-00.17-SL02-0.8-1.8	Total/NA	Solid	Moisture	
240-97885-25	ED-00.17-SL02-1.8-2.8	Total/NA	Solid	Moisture	
240-97885-27	ED-00.41-SL01-0.0-0.5	Total/NA	Solid	Moisture	
240-97885-28	ED-00.41-SL01-1.0-1.5	Total/NA	Solid	Moisture	
240-97885-29	ED-00.41-SL01-1.5-2.0	Total/NA	Solid	Moisture	
240-97885-30	ED-00.41-SL01-1.5-2.0-FD	Total/NA	Solid	Moisture	
240-97885-34	ED-00.19-SL01-1.8-2.3	Total/NA	Solid	Moisture	
240-97885-35	ED-00.19-SL01-1.5-1.8	Total/NA	Solid	Moisture	
240-97885-36	ED-00.19-SL01-0.0-0.8	Total/NA	Solid	Moisture	
240-97885-37	ED-00.19-SL01-0.8-1.5	Total/NA	Solid	Moisture	
240-97885-38	ED-00.19-SL01-0.8-1.5-FD	Total/NA	Solid	Moisture	
240-97885-41	ED-00.21-SL01-0.0-1.0	Total/NA	Solid	Moisture	
240-97885-42	ED-00.21-SL01-1.0-2.0	Total/NA	Solid	Moisture	
240-97885-43	ED-00.21-SL01-1.0-2.0-FD	Total/NA	Solid	Moisture	
240-97885-46	ED-00.27-SL01-0.0-1.0	Total/NA	Solid	Moisture	
240-97885-47	ED-00.27-SL01-1.0-1.9	Total/NA	Solid	Moisture	
240-97885-48	ED-00.27-SL01-1.9-2.8	Total/NA	Solid	Moisture	
240-97885-50	ED-00.23-SL01-0.7-1.2	Total/NA	Solid	Moisture	
240-97885-51	ED-00.23-SL01-0.7-1.2-FD	Total/NA	Solid	Moisture	
240-97885-56	ED-01.14-SL04-0.5-1.0	Total/NA	Solid	Moisture	
240-97885-57	ED-01.14-SL04-1.5-1.8	Total/NA	Solid	Moisture	
240-97885-58	ED-01.14-SL04-1.0-1.5	Total/NA	Solid	Moisture	
240-97885-59	ED-01.14-SL04-0.0-0.5	Total/NA	Solid	Moisture	
240-97885-60	ED-00.36-SL01-0.4-1.0	Total/NA	Solid	Moisture	
240-97885-61	ED-00.00-SL03-0.9-1.7	Total/NA	Solid	Moisture	
240-97885-62	ED-00.36-SL01-0.0-0.4	Total/NA	Solid	Moisture	
240-97885-65	ED-00.36-SL01-1.5-2.0	Total/NA	Solid	Moisture	
240-97885-66	ED-00.41-SL01-0.5-1.0	Total/NA	Solid	Moisture	
240-97885-68	ED-00.36-SL01-1.5-2.0-FD	Total/NA	Solid	Moisture	
240-97885-69	ED-00.36-SL01-0.4-1.0	Total/NA	Solid	Moisture	
240-97885-70	ED-00.19-SL01-1.8-2.3	Total/NA	Solid	Moisture	
240-97885-74	ED-00.29-SL01-1.7-2.7	Total/NA	Solid	Moisture	
240-97885-77	ED-00.44-SL01-0.0-0.5	Total/NA	Solid	Moisture	
240-97885-78	ED-00.44-SL01-0.5-1.0	Total/NA	Solid	Moisture	
240-97885-79	ED-00.44-SL01-1.0-1.5	Total/NA	Solid	Moisture	
240-97885-80	ED-00.44-SL01-1.5-1.8	Total/NA	Solid	Moisture	

TestAmerica Canton

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

General Chemistry (Continued)

Analysis Batch: 334355 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-97885-81	ED-00.44-SL01-1.8-2.0	Total/NA	Solid	Moisture	
240-97885-85	ED-01.14-SL06-0.0-0.5	Total/NA	Solid	Moisture	
240-97885-86	ED-01.14-SL06-0.5-1.0	Total/NA	Solid	Moisture	
240-97885-87	ED-01.14-SL06-1.0-1.5	Total/NA	Solid	Moisture	
240-97885-89	ED-00.31-SL01-0.0-1.0	Total/NA	Solid	Moisture	
240-97885-90	ED-00.31-SL01-1.0-2.0	Total/NA	Solid	Moisture	
240-97885-94	ED-00.33-SL01-0.0-0.7	Total/NA	Solid	Moisture	
240-97885-95	ED-00.33-SL01-0.7-1.6	Total/NA	Solid	Moisture	
240-97885-96	ED-00.33-SL01-1.6-2.3	Total/NA	Solid	Moisture	
240-97885-99	ED-00.23-SL01-0.0-0.7	Total/NA	Solid	Moisture	
240-97885-100	ED-00.23-SL01-1.2-2.0	Total/NA	Solid	Moisture	
240-97885-103	ED-00.29-SL01-0.0-0.7	Total/NA	Solid	Moisture	
240-97885-104	ED-00.29-SL01-0.7-1.7	Total/NA	Solid	Moisture	
240-97885-105	ED-00.29-SL01-1.7-2.7-FD	Total/NA	Solid	Moisture	
240-97885-106	ED-00.36-SL01-1.0-1.5	Total/NA	Solid	Moisture	
240-97885-9 DU	ED-01.14-SL05-0.5-1.0	Total/NA	Solid	Moisture	
240-97885-15 DU	ED-00.00-SL03-0.9-1.7 DUP	Total/NA	Solid	Moisture	
240-97885-25 DU	ED-00.17-SL02-1.8-2.8 DUP	Total/NA	Solid	Moisture	
240-97885-34 DU	ED-00.19-SL01-1.8-2.3 DUP	Total/NA	Solid	Moisture	
240-97885-58 DU	ED-01.14-SL04-1.0-1.5	Total/NA	Solid	Moisture	
240-97885-65 DU	ED-00.36-SL01-1.5-2.0 DUP	Total/NA	Solid	Moisture	
240-97885-66 DU	ED-00.41-SL01-0.5-1.0	Total/NA	Solid	Moisture	
240-97885-106 DU	ED-00.36-SL01-1.0-1.5	Total/NA	Solid	Moisture	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.51-SL06-1.0-2.0

Date Collected: 06/16/18 16:40

Date Received: 06/27/18 09:50

Lab Sample ID: 240-97885-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 08:55	LKG	TAL CAN

Client Sample ID: ED-00.51-SL06-1.0-2.0

Date Collected: 06/16/18 16:40

Date Received: 06/27/18 09:50

Lab Sample ID: 240-97885-2

Matrix: Solid

Percent Solids: 83.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		5	335388	07/10/18 09:58	CSC	TAL CAN

Client Sample ID: ED-01.14-SL01-0.5-1.0

Date Collected: 06/15/18 18:12

Date Received: 06/27/18 09:50

Lab Sample ID: 240-97885-4

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 08:55	LKG	TAL CAN

Client Sample ID: ED-01.14-SL01-0.5-1.0

Date Collected: 06/15/18 18:12

Date Received: 06/27/18 09:50

Lab Sample ID: 240-97885-4

Matrix: Solid

Percent Solids: 81.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		10	335388	07/10/18 10:15	CSC	TAL CAN

Client Sample ID: ED-01.14-SL01-1.0-1.5

Date Collected: 06/15/18 18:17

Date Received: 06/27/18 09:50

Lab Sample ID: 240-97885-5

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 08:55	LKG	TAL CAN

Client Sample ID: ED-01.14-SL01-1.0-1.5

Date Collected: 06/15/18 18:17

Date Received: 06/27/18 09:50

Lab Sample ID: 240-97885-5

Matrix: Solid

Percent Solids: 83.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		10	335388	07/10/18 10:33	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-01.14-SL05-0.0-0.5

Lab Sample ID: 240-97885-8

Date Collected: 06/15/18 18:26

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 08:55	LKG	TAL CAN

Client Sample ID: ED-01.14-SL05-0.0-0.5

Lab Sample ID: 240-97885-8

Date Collected: 06/15/18 18:26

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 77.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		1	335388	07/10/18 10:50	CSC	TAL CAN

Client Sample ID: ED-01.14-SL05-0.5-1.0

Lab Sample ID: 240-97885-9

Date Collected: 06/15/18 18:27

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 08:55	LKG	TAL CAN

Client Sample ID: ED-01.14-SL05-0.5-1.0

Lab Sample ID: 240-97885-9

Date Collected: 06/15/18 18:27

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 79.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		1	335388	07/10/18 11:08	CSC	TAL CAN

Client Sample ID: ED-01.14-SL05-1.0-1.5

Lab Sample ID: 240-97885-11

Date Collected: 06/15/18 18:30

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 08:55	LKG	TAL CAN

Client Sample ID: ED-01.14-SL05-1.0-1.5

Lab Sample ID: 240-97885-11

Date Collected: 06/15/18 18:30

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 77.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335210	07/09/18 07:37	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335576	07/11/18 12:21	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.00-SL03-1.7-2.5

Lab Sample ID: 240-97885-14

Date Collected: 06/14/18 15:52

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 08:55	LKG	TAL CAN

Client Sample ID: ED-00.00-SL03-1.7-2.5

Lab Sample ID: 240-97885-14

Date Collected: 06/14/18 15:52

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 77.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335210	07/09/18 07:37	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335576	07/11/18 12:40	CSC	TAL CAN

Client Sample ID: ED-00.00-SL03-0.9-1.7

Lab Sample ID: 240-97885-15

Date Collected: 06/14/18 15:50

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 08:55	LKG	TAL CAN

Client Sample ID: ED-00.00-SL03-0.9-1.7

Lab Sample ID: 240-97885-15

Date Collected: 06/14/18 15:50

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335539	07/10/18 21:01	KMG	TAL CAN

Client Sample ID: ED-00.00-SL03-0.0-0.9

Lab Sample ID: 240-97885-16

Date Collected: 06/14/18 15:47

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 08:55	LKG	TAL CAN

Client Sample ID: ED-00.00-SL03-0.0-0.9

Lab Sample ID: 240-97885-16

Date Collected: 06/14/18 15:47

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 74.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335210	07/09/18 07:37	DVT	TAL CAN
Total/NA	Analysis	8082A		5	335576	07/11/18 12:58	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.00-SL04-0.0-0.9

Lab Sample ID: 240-97885-17

Date Collected: 06/14/18 16:10

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.00-SL04-0.0-0.9

Lab Sample ID: 240-97885-17

Date Collected: 06/14/18 16:10

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 80.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335539	07/10/18 22:00	KMG	TAL CAN

Client Sample ID: ED-00.00-SL04-0.9-1.8

Lab Sample ID: 240-97885-18

Date Collected: 06/14/18 16:15

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.00-SL04-0.9-1.8

Lab Sample ID: 240-97885-18

Date Collected: 06/14/18 16:15

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335539	07/10/18 22:19	KMG	TAL CAN

Client Sample ID: ED-00.00-SL04-0.0-0.9-FD

Lab Sample ID: 240-97885-19

Date Collected: 06/14/18 16:10

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.00-SL04-0.0-0.9-FD

Lab Sample ID: 240-97885-19

Date Collected: 06/14/18 16:10

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 86.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335539	07/10/18 22:39	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.00-SL04-1.8-2.7

Lab Sample ID: 240-97885-20

Date Collected: 06/14/18 16:19

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.00-SL04-1.8-2.7

Lab Sample ID: 240-97885-20

Date Collected: 06/14/18 16:19

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 77.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335539	07/10/18 22:58	KMG	TAL CAN

Client Sample ID: ED-00.17-SL02-0.0-0.8-FD

Lab Sample ID: 240-97885-22

Date Collected: 06/14/18 15:20

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.17-SL02-0.0-0.8-FD

Lab Sample ID: 240-97885-22

Date Collected: 06/14/18 15:20

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 68.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		50	335539	07/10/18 23:18	KMG	TAL CAN

Client Sample ID: ED-00.17-SL02-0.0-0.8

Lab Sample ID: 240-97885-23

Date Collected: 06/14/18 15:20

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.17-SL02-0.0-0.8

Lab Sample ID: 240-97885-23

Date Collected: 06/14/18 15:20

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		100	335539	07/10/18 23:37	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.17-SL02-0.8-1.8

Lab Sample ID: 240-97885-24

Date Collected: 06/14/18 15:22

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.17-SL02-0.8-1.8

Lab Sample ID: 240-97885-24

Date Collected: 06/14/18 15:22

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 85.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		5	335539	07/10/18 23:57	KMG	TAL CAN

Client Sample ID: ED-00.17-SL02-1.8-2.8

Lab Sample ID: 240-97885-25

Date Collected: 06/14/18 15:24

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.17-SL02-1.8-2.8

Lab Sample ID: 240-97885-25

Date Collected: 06/14/18 15:24

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 77.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335309	07/09/18 14:12	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335509	07/10/18 23:25	LSH	TAL CAN

Client Sample ID: ED-00.41-SL01-0.0-0.5

Lab Sample ID: 240-97885-27

Date Collected: 06/14/18 10:03

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.41-SL01-0.0-0.5

Lab Sample ID: 240-97885-27

Date Collected: 06/14/18 10:03

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 77.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		20	335539	07/11/18 00:16	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.41-SL01-1.0-1.5

Lab Sample ID: 240-97885-28

Date Collected: 06/14/18 10:06

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.41-SL01-1.0-1.5

Lab Sample ID: 240-97885-28

Date Collected: 06/14/18 10:06

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 85.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335539	07/11/18 00:36	KMG	TAL CAN

Client Sample ID: ED-00.41-SL01-1.5-2.0

Lab Sample ID: 240-97885-29

Date Collected: 06/14/18 10:08

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.41-SL01-1.5-2.0

Lab Sample ID: 240-97885-29

Date Collected: 06/14/18 10:08

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 77.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335539	07/11/18 00:55	KMG	TAL CAN

Client Sample ID: ED-00.41-SL01-1.5-2.0-FD

Lab Sample ID: 240-97885-30

Date Collected: 06/14/18 10:08

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.41-SL01-1.5-2.0-FD

Lab Sample ID: 240-97885-30

Date Collected: 06/14/18 10:08

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 84.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335539	07/11/18 01:15	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.19-SL01-1.8-2.3

Lab Sample ID: 240-97885-34

Date Collected: 06/14/18 14:48

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.19-SL01-1.8-2.3

Lab Sample ID: 240-97885-34

Date Collected: 06/14/18 14:48

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 86.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335309	07/09/18 14:12	DVT	TAL CAN
Total/NA	Analysis	8082A		5	335509	07/11/18 03:39	LSH	TAL CAN

Client Sample ID: ED-00.19-SL01-1.5-1.8

Lab Sample ID: 240-97885-35

Date Collected: 06/14/18 14:46

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.19-SL01-1.5-1.8

Lab Sample ID: 240-97885-35

Date Collected: 06/14/18 14:46

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 82.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			334947	07/06/18 07:48	DVT	TAL CAN
Total/NA	Analysis	8082A		5	335161	07/08/18 22:17	LSH	TAL CAN

Client Sample ID: ED-00.19-SL01-0.0-0.8

Lab Sample ID: 240-97885-36

Date Collected: 06/14/18 04:40

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.19-SL01-0.0-0.8

Lab Sample ID: 240-97885-36

Date Collected: 06/14/18 04:40

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 84.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			334947	07/06/18 07:48	DVT	TAL CAN
Total/NA	Analysis	8082A		5	335161	07/08/18 22:34	LSH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.19-SL01-0.8-1.5

Lab Sample ID: 240-97885-37

Date Collected: 06/14/18 14:42

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.19-SL01-0.8-1.5

Lab Sample ID: 240-97885-37

Date Collected: 06/14/18 14:42

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 84.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			334947	07/06/18 07:48	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335161	07/08/18 22:51	LSH	TAL CAN

Client Sample ID: ED-00.19-SL01-0.8-1.5-FD

Lab Sample ID: 240-97885-38

Date Collected: 06/14/18 14:42

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.19-SL01-0.8-1.5-FD

Lab Sample ID: 240-97885-38

Date Collected: 06/14/18 14:42

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			334947	07/06/18 07:48	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335161	07/08/18 23:08	LSH	TAL CAN

Client Sample ID: ED-00.21-SL01-0.0-1.0

Lab Sample ID: 240-97885-41

Date Collected: 06/14/18 14:56

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.21-SL01-0.0-1.0

Lab Sample ID: 240-97885-41

Date Collected: 06/14/18 14:56

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 84.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			334947	07/06/18 07:48	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335161	07/08/18 23:25	LSH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.21-SL01-1.0-2.0

Lab Sample ID: 240-97885-42

Date Collected: 06/14/18 14:58

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.21-SL01-1.0-2.0

Lab Sample ID: 240-97885-42

Date Collected: 06/14/18 14:58

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 85.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			334984	07/06/18 10:36	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335385	07/10/18 14:11	KMG	TAL CAN

Client Sample ID: ED-00.21-SL01-1.0-2.0-FD

Lab Sample ID: 240-97885-43

Date Collected: 06/14/18 14:58

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.21-SL01-1.0-2.0-FD

Lab Sample ID: 240-97885-43

Date Collected: 06/14/18 14:58

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			334984	07/06/18 10:36	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335385	07/10/18 14:30	KMG	TAL CAN

Client Sample ID: ED-00.27-SL01-0.0-1.0

Lab Sample ID: 240-97885-46

Date Collected: 06/14/18 13:39

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.27-SL01-0.0-1.0

Lab Sample ID: 240-97885-46

Date Collected: 06/14/18 13:39

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 70.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			334984	07/06/18 10:36	DVT	TAL CAN
Total/NA	Analysis	8082A		50	335385	07/10/18 14:50	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.27-SL01-1.0-1.9

Lab Sample ID: 240-97885-47

Date Collected: 06/14/18 13:41

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.27-SL01-1.0-1.9

Lab Sample ID: 240-97885-47

Date Collected: 06/14/18 13:41

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 81.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			334984	07/06/18 10:40	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335385	07/10/18 15:09	KMG	TAL CAN

Client Sample ID: ED-00.27-SL01-1.9-2.8

Lab Sample ID: 240-97885-48

Date Collected: 06/14/18 13:43

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.27-SL01-1.9-2.8

Lab Sample ID: 240-97885-48

Date Collected: 06/14/18 13:43

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 79.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			334984	07/06/18 10:40	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335385	07/10/18 11:15	KMG	TAL CAN

Client Sample ID: ED-00.23-SL01-0.7-1.2

Lab Sample ID: 240-97885-50

Date Collected: 06/14/18 12:55

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.23-SL01-0.7-1.2

Lab Sample ID: 240-97885-50

Date Collected: 06/14/18 12:55

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 86.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			334984	07/06/18 11:08	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335385	07/10/18 16:47	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.23-SL01-0.7-1.2-FD

Lab Sample ID: 240-97885-51

Date Collected: 06/14/18 12:55

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.23-SL01-0.7-1.2-FD

Lab Sample ID: 240-97885-51

Date Collected: 06/14/18 12:55

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 84.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			334984	07/06/18 11:08	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335385	07/10/18 17:07	KMG	TAL CAN

Client Sample ID: ED-01.14-SL04-0.5-1.0

Lab Sample ID: 240-97885-56

Date Collected: 06/15/18 18:33

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-01.14-SL04-0.5-1.0

Lab Sample ID: 240-97885-56

Date Collected: 06/15/18 18:33

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 78.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			334984	07/06/18 11:08	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335385	07/10/18 17:26	KMG	TAL CAN

Client Sample ID: ED-01.14-SL04-1.5-1.8

Lab Sample ID: 240-97885-57

Date Collected: 06/15/18 18:40

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-01.14-SL04-1.5-1.8

Lab Sample ID: 240-97885-57

Date Collected: 06/15/18 18:40

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 75.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335539	07/11/18 01:35	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-01.14-SL04-1.0-1.5

Lab Sample ID: 240-97885-58

Date Collected: 06/15/18 18:35

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-01.14-SL04-1.0-1.5

Lab Sample ID: 240-97885-58

Date Collected: 06/15/18 18:35

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335539	07/11/18 02:53	KMG	TAL CAN

Client Sample ID: ED-01.14-SL04-0.0-0.5

Lab Sample ID: 240-97885-59

Date Collected: 06/15/18 18:30

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-01.14-SL04-0.0-0.5

Lab Sample ID: 240-97885-59

Date Collected: 06/15/18 18:30

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 75.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		5	335539	07/11/18 03:12	KMG	TAL CAN

Client Sample ID: ED-00.36-SL01-0.4-1.0

Lab Sample ID: 240-97885-60

Date Collected: 06/14/18 10:58

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.36-SL01-0.4-1.0

Lab Sample ID: 240-97885-60

Date Collected: 06/14/18 10:58

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 81.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335539	07/11/18 03:32	KMG	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.00-SL03-0.9-1.7

Lab Sample ID: 240-97885-61

Date Collected: 06/14/18 15:50

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.00-SL03-0.9-1.7

Lab Sample ID: 240-97885-61

Date Collected: 06/14/18 15:50

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 82.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335539	07/11/18 03:51	KMG	TAL CAN

Client Sample ID: ED-00.36-SL01-0.0-0.4

Lab Sample ID: 240-97885-62

Date Collected: 06/14/18 10:50

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.36-SL01-0.0-0.4

Lab Sample ID: 240-97885-62

Date Collected: 06/14/18 10:50

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 96.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335539	07/11/18 04:11	KMG	TAL CAN

Client Sample ID: ED-00.36-SL01-1.5-2.0

Lab Sample ID: 240-97885-65

Date Collected: 06/14/18 10:50

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.36-SL01-1.5-2.0

Lab Sample ID: 240-97885-65

Date Collected: 06/14/18 10:50

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 86.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		1	335388	07/10/18 13:44	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.41-SL01-0.5-1.0

Lab Sample ID: 240-97885-66

Date Collected: 06/14/18 10:05

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.41-SL01-0.5-1.0

Lab Sample ID: 240-97885-66

Date Collected: 06/14/18 10:05

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 87.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		2	335539	07/11/18 04:30	KMG	TAL CAN

Client Sample ID: ED-00.36-SL01-1.5-2.0-FD

Lab Sample ID: 240-97885-68

Date Collected: 06/14/18 10:50

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.36-SL01-1.5-2.0-FD

Lab Sample ID: 240-97885-68

Date Collected: 06/14/18 10:50

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 84.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335217	07/09/18 08:19	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335539	07/11/18 04:50	KMG	TAL CAN

Client Sample ID: ED-00.36-SL01-0.4-1.0

Lab Sample ID: 240-97885-69

Date Collected: 06/14/18 10:55

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.36-SL01-0.4-1.0

Lab Sample ID: 240-97885-69

Date Collected: 06/14/18 10:55

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 80.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335309	07/09/18 14:12	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335509	07/11/18 01:08	LSH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.19-SL01-1.8-2.3

Lab Sample ID: 240-97885-70

Date Collected: 06/14/18 14:48

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:32	LKG	TAL CAN

Client Sample ID: ED-00.19-SL01-1.8-2.3

Lab Sample ID: 240-97885-70

Date Collected: 06/14/18 14:48

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 88.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335309	07/09/18 14:12	DVT	TAL CAN
Total/NA	Analysis	8082A		2	335509	07/11/18 01:24	LSH	TAL CAN

Client Sample ID: ED-00.29-SL01-1.7-2.7

Lab Sample ID: 240-97885-74

Date Collected: 06/14/18 13:36

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.29-SL01-1.7-2.7

Lab Sample ID: 240-97885-74

Date Collected: 06/14/18 13:36

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 70.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335309	07/09/18 14:12	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335509	07/11/18 01:41	LSH	TAL CAN

Client Sample ID: ED-00.44-SL01-0.0-0.5

Lab Sample ID: 240-97885-77

Date Collected: 06/14/18 11:20

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.44-SL01-0.0-0.5

Lab Sample ID: 240-97885-77

Date Collected: 06/14/18 11:20

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 95.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335309	07/09/18 14:12	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335509	07/11/18 01:58	LSH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.44-SL01-0.5-1.0

Lab Sample ID: 240-97885-78

Date Collected: 06/14/18 11:22

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.44-SL01-0.5-1.0

Lab Sample ID: 240-97885-78

Date Collected: 06/14/18 11:22

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 95.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335309	07/09/18 14:12	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335509	07/11/18 02:14	LSH	TAL CAN

Client Sample ID: ED-00.44-SL01-1.0-1.5

Lab Sample ID: 240-97885-79

Date Collected: 06/14/18 11:27

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.44-SL01-1.0-1.5

Lab Sample ID: 240-97885-79

Date Collected: 06/14/18 11:27

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 94.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335309	07/09/18 14:12	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335509	07/11/18 02:32	LSH	TAL CAN

Client Sample ID: ED-00.44-SL01-1.5-1.8

Lab Sample ID: 240-97885-80

Date Collected: 06/14/18 11:34

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.44-SL01-1.5-1.8

Lab Sample ID: 240-97885-80

Date Collected: 06/14/18 11:34

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 89.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335309	07/09/18 14:12	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335509	07/11/18 02:49	LSH	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.44-SL01-1.8-2.0

Lab Sample ID: 240-97885-81

Date Collected: 06/14/18 11:40

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.44-SL01-1.8-2.0

Lab Sample ID: 240-97885-81

Date Collected: 06/14/18 11:40

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 89.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335309	07/09/18 14:12	DVT	TAL CAN
Total/NA	Analysis	8082A		1	335509	07/11/18 03:05	LSH	TAL CAN

Client Sample ID: ED-01.14-SL06-0.0-0.5

Lab Sample ID: 240-97885-85

Date Collected: 06/13/18 13:56

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-01.14-SL06-0.0-0.5

Lab Sample ID: 240-97885-85

Date Collected: 06/13/18 13:56

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 78.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		1	335388	07/10/18 07:22	CSC	TAL CAN

Client Sample ID: ED-01.14-SL06-0.5-1.0

Lab Sample ID: 240-97885-86

Date Collected: 06/13/18 13:58

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-01.14-SL06-0.5-1.0

Lab Sample ID: 240-97885-86

Date Collected: 06/13/18 13:58

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		1	335388	07/10/18 07:39	CSC	TAL CAN

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-01.14-SL06-1.0-1.5

Lab Sample ID: 240-97885-87

Date Collected: 06/13/18 14:12

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-01.14-SL06-1.0-1.5

Lab Sample ID: 240-97885-87

Date Collected: 06/13/18 14:12

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 79.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		1	335388	07/10/18 07:56	CSC	TAL CAN

Client Sample ID: ED-00.31-SL01-0.0-1.0

Lab Sample ID: 240-97885-89

Date Collected: 06/14/18 12:13

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.31-SL01-0.0-1.0

Lab Sample ID: 240-97885-89

Date Collected: 06/14/18 12:13

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 79.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		20	335388	07/10/18 08:31	CSC	TAL CAN

Client Sample ID: ED-00.31-SL01-1.0-2.0

Lab Sample ID: 240-97885-90

Date Collected: 06/14/18 12:15

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.31-SL01-1.0-2.0

Lab Sample ID: 240-97885-90

Date Collected: 06/14/18 12:15

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 87.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		1	335388	07/10/18 08:48	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.33-SL01-0.0-0.7

Lab Sample ID: 240-97885-94

Date Collected: 06/14/18 12:20

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.33-SL01-0.0-0.7

Lab Sample ID: 240-97885-94

Date Collected: 06/14/18 12:20

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 78.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		1	335388	07/10/18 09:06	CSC	TAL CAN

Client Sample ID: ED-00.33-SL01-0.7-1.6

Lab Sample ID: 240-97885-95

Date Collected: 06/14/18 12:25

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.33-SL01-0.7-1.6

Lab Sample ID: 240-97885-95

Date Collected: 06/14/18 12:25

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 88.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		1	335388	07/10/18 09:23	CSC	TAL CAN

Client Sample ID: ED-00.33-SL01-1.6-2.3

Lab Sample ID: 240-97885-96

Date Collected: 06/14/18 12:27

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.33-SL01-1.6-2.3

Lab Sample ID: 240-97885-96

Date Collected: 06/14/18 12:27

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 86.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		1	335388	07/10/18 09:41	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.23-SL01-0.0-0.7

Lab Sample ID: 240-97885-99

Date Collected: 06/14/18 12:51

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.23-SL01-0.0-0.7

Lab Sample ID: 240-97885-99

Date Collected: 06/14/18 12:51

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		10	335388	07/10/18 11:25	CSC	TAL CAN

Client Sample ID: ED-00.23-SL01-1.2-2.0

Lab Sample ID: 240-97885-100

Date Collected: 06/14/18 12:56

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.23-SL01-1.2-2.0

Lab Sample ID: 240-97885-100

Date Collected: 06/14/18 12:56

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		1	335388	07/10/18 11:42	CSC	TAL CAN

Client Sample ID: ED-00.29-SL01-0.0-0.7

Lab Sample ID: 240-97885-103

Date Collected: 06/14/18 13:32

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.29-SL01-0.0-0.7

Lab Sample ID: 240-97885-103

Date Collected: 06/14/18 13:32

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 86.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		10	335388	07/10/18 12:00	CSC	TAL CAN

TestAmerica Canton

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Client Sample ID: ED-00.29-SL01-0.7-1.7

Lab Sample ID: 240-97885-104

Date Collected: 06/14/18 13:34

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.29-SL01-0.7-1.7

Lab Sample ID: 240-97885-104

Date Collected: 06/14/18 13:34

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		1	335388	07/10/18 12:17	CSC	TAL CAN

Client Sample ID: ED-00.29-SL01-1.7-2.7-FD

Lab Sample ID: 240-97885-105

Date Collected: 06/14/18 13:36

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.29-SL01-1.7-2.7-FD

Lab Sample ID: 240-97885-105

Date Collected: 06/14/18 13:36

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 74.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		1	335388	07/10/18 13:27	CSC	TAL CAN

Client Sample ID: ED-00.36-SL01-1.0-1.5

Lab Sample ID: 240-97885-106

Date Collected: 06/14/18 10:51

Matrix: Solid

Date Received: 06/27/18 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	334355	07/02/18 15:45	LKG	TAL CAN

Client Sample ID: ED-00.36-SL01-1.0-1.5

Lab Sample ID: 240-97885-106

Date Collected: 06/14/18 10:51

Matrix: Solid

Date Received: 06/27/18 09:50

Percent Solids: 83.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3540C			335042	07/06/18 14:06	AMT	TAL CAN
Total/NA	Analysis	8082A		1	335388	07/10/18 08:14	CSC	TAL CAN

Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TestAmerica Canton

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Arconic, Inc. - Elliott Ditch

TestAmerica Job ID: 240-97885-1

Laboratory: TestAmerica Canton

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2927	02-23-19
Connecticut	State Program	1	PH-0590	12-31-19
Florida	NELAP	4	E87225	06-30-19
Illinois	NELAP	5	200004	07-31-18 *
Kansas	NELAP	7	E-10336	01-31-19
Kentucky (UST)	State Program	4	58	02-23-19
Kentucky (WW)	State Program	4	98016	12-31-18
Minnesota	NELAP	5	039-999-348	12-31-18
Minnesota (Petrofund)	State Program	1	3506	07-31-18 *
Nevada	State Program	9	OH-000482008A	07-31-18 *
New Jersey	NELAP	2	OH001	06-30-19
New York	NELAP	2	10975	03-31-19
Ohio VAP	State Program	5	CL0024	09-06-19
Oregon	NELAP	10	4062	02-23-19
Pennsylvania	NELAP	3	68-00340	08-31-18 *
Texas	NELAP	6	T104704517-17-9	08-31-18 *
USDA	Federal		P330-16-00404	12-28-19
Virginia	NELAP	3	460175	09-14-18 *
Washington	State Program	10	C971	01-12-19
West Virginia DEP	State Program	3	210	12-31-18

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

TestAmerica Canton

TestAmerica Canton
 4101 Shuffel Street NW
 North Canton, OH 44720
 Phone (330) 497-9396 Fax (330) 497-0772

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

11.2/C11.2
 13.4/C13.4

Client Information
 Client Contact: Greg Schwartz
 Phone: 808 268-4981
 Email: dominic.nestiasie@testamericainc.com

Lab P/N: Nestiasie, Dominic J
 Lab P/N: Greg Schwartz
 Phone: 808 268-4981
 Email: dominic.nestiasie@testamericainc.com

Carrier Tracking No(s):
 COC No: 240-52180-22484.2
 Page: 2 of 4
 Job #:

Analysis Requested
 8082A - PCBs 7 Analytes
 8082A - Moisture
 Perform MS/MSD (Yes or No)
 Field Filtered Sample (Yes or No)
 Total Number of Containers

Preservation Codes:
 M - Hexane
 B - NaOH
 N - None
 O - AsNaO2
 C - Zn Acetate
 D - Nitric Acid
 E - NaHSO4
 F - MeOH
 R - Na2SO3
 G - Amchlor
 H - Ascorbic Acid
 T - TSP Dodecahydrate
 I - Ice
 U - Acetone
 J - DI Water
 V - MCAA
 W - PH 4-5
 K - EDTA
 L - EDA
 Z - other (specify)
 Other:

Sample Identification
 Sample Date
 Sample Time
 Sample Type (C=Comp, G=grab)
 Matrix (Water, Soil, Overstabil, BT-Tissue, Air)

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Soil, Overstabil, BT-Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8082A - PCBs 7 Analytes	8082A - Moisture	Total Number of Containers	Special Instructions/Note:
ED-00.01-SL06-1.5-2.0-FD	6/16/18	1647	G	S	X	X	X	X	1	Hold CS
ED-00.01-SL06-1.0-2.0	6/16/18	1640	G	S	X	X	X	X	1	Hold CS
ED-00.01-SL06-1.5-2.0	6/16/18	1647	G	S	X	X	X	X	1	Hold CS
ED-01.14-SL01-0.5-1.0	6/15/18	1812	G	S	X	X	X	X	1	Hold CS
ED-01.14-SL01-1.0-1.5	6/15/18	1817	G	S	X	X	X	X	1	Hold CS
ED-01.14-SL01-1.0-1.5	6/15/18	1817	G	S	X	X	X	X	1	Hold CS
ED-01.14-SL01-1.5-2.0-FD	6/15/18	1820	G	S	X	X	X	X	1	Hold CS
ED-01.14-SL01-1.5-2.0	6/15/18	1820	G	S	X	X	X	X	1	Hold CS
ED-01.14-SL05-0.0-0.5	6/15/18	1826	G	S	X	X	X	X	1	Hold CS
ED-01.14-SL05-0.5-1.0	6/15/18	1827	G	S	X	X	X	X	1	Hold CS
ED-01.14-SL05-1.5-2.0	6/15/18	1832	G	S	X	X	X	X	1	Hold CS

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

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

Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 6/14/18 16:15/18 Company: CEE
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____

Custody Seals Intact: _____ Custody Seal No.: _____
 Δ Yes Δ No

Method of Shipment: FedEx Cooler A
 Date/Time: 6/27/18 9:50 Company: TAL
 Date/Time: _____ Company: _____
 Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks:



Chain of Custody Record

Client Information Client Contact: <u>Greg Schwartz</u> Company: <u>Civil & Environmental Consultants Inc</u> Address: <u>2704 Cherokee Farm Way, Suite 101</u> City: <u>Knoxville</u> State, Zip: <u>TN, 37920</u> Phone: <u>513-309-1966(Tel)</u> Email: <u>gschwartz@cecinc.com</u> Project Name: <u>Arconic, Inc. - Elliott Ditch</u> Site: <u>Lafayette, IN</u>		Lab PM: <u>Nestlasie, Dominic J</u> E-Mail: <u>dominic.nestlasie@testamericainc.com</u> Sampler: <u>Greg Schwartz</u> Phone: <u>303 268-4441</u>		Carrier Tracking No(s): COC No: <u>240-52180-22484.3</u> Page: <u>65</u> Page # of # <u>119/118</u> <u>R.F.I.</u> Job #:	
Due Date Requested: TAT Requested (days): <u>14</u> PO #: <u>172-367</u> WO #: <u>172-367</u> Purchase Order Requested Project #: <u>24019083</u> SOW#:		Analysis Requested 8082A - PCBs 7 Aroclors 8082A - Moisture Perform MS/MSD (Yes or No) Field Filtered Sample (Yes or No)			
Sample Identification ED-0114-8205-1.0-1.5 ED-0000-8203-3.4-4.0 ED-0000-8203-2.5-3.4 ED-0000-8203-1.7-2.5 ED-0000-8203-0.9-1.7 ED-0000-8203-0.0-0.9 ED-0000-8204-0.0-0.9 ED-0000-8204-0.9-1.8 ED-0000-8204-1.8-2.7 ED-0000-8204-2.7-3.6		Sample Date <u>6/15/16</u> <u>6/14/16</u> <u>6/14/16</u> <u>6/14/16</u> <u>6/14/16</u> <u>6/14/16</u> <u>6/14/16</u> <u>6/14/16</u> <u>6/14/16</u> <u>6/14/16</u>		Sample Time <u>1630</u> <u>1557</u> <u>1555</u> <u>1552</u> <u>1550</u> <u>1547</u> <u>1610</u> <u>1615</u> <u>1610</u> <u>1619</u> <u>1621</u>	
Matrix (W=water, S=solid, O=oil, G=grab) <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u> <u>S</u>		Preservation Code: 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 - EDTA Other:			
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/Note: <u>Hold</u> <u>Hold</u> <u>MS/MSD</u> <u>Hold</u>			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Total Number of containers			
Deliverable Requested: I, II, III, IV, Other (specify)		Method of Shipment: <u>Fed Ex</u> Cooler <u>A</u> Date/Time: <u>6/14/16 1310</u> Date/Time: <u>6/23/16 900</u> Date/Time:			
Empty Kit Relinquished by: <u>Greg Schwartz</u>		Received by: <u>Bob</u> Received by: <u>Bob</u> Received by:			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:			

TestAmerica Canton
 4101 Shuffel Street NW
 North Canton, OH 44720
 Phone (330) 497-9396 Fax (330) 497-0772

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Lab PM		Carrier Tracking Net(s)		COC No:		
Company: Civil & Environmental Consultants Inc		Greg Schwartz		Nestasia, Dominic J		240-52180-22484.4		
Address: 2704 Cherokee Farm Way Suite 101		Phone: 800-268-4551		E-Mail: dominic.nestasia@testamericainc.com		Page: 3 of 11		
City: Knoxville		Due Date Requested:		Analysis Requested		Job #:		
State, Zip: TN, 37920		TAT Requested (days): 10		8082A, PCBs 7 Analytes		8082A, Moisture		
Phone: 513-309-1966(Tel)		Purchase Order Requested		Perform MS/MSD (Yes or No)		Total Number of Containers		
Email: gschwartz@cecinc.com		WO #: 172-367		Field Filtered Sample (Yes or No)		Preservation Codes:		
Project #: 24019083		Project #: 24019083		Matrix		A - HCL		
Site: Lafayette, IN		SSOW#:		Sample Type (C=Comp, G=grab)		M - Hexane		
Sample Identification	Sample Date	Sample Time	Sample Matrix	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8082A, PCBs 7 Analytes	8082A, Moisture	Special Instructions/Note:
ED-00.17-SL02-6.0-0.8-FD	6/14/18	1520	G S	N	N	X	X	
ED-00.17-SL02-0.0-0.8-	6/14/18	1520	G S	N	N	X	X	
ED-00.17-SL02-0.8-1.5	6/14/18	1522	G S	N	N	X	X	
ED-00.17-SL02-1.8-2.8	6/14/18	1524	G S	N	N	X	X	
ED-00.17-SL02-2.8-3.8	6/14/18	1526	G S	N	N	X	X	
ED-00.41-SL01-0.0-0.5	6/14/18	1003	G S	N	N	X	X	
ED-00.41-SL01-1.0-1.5	6/14/18	1006	G S	N	N	X	X	
ED-00.41-SL01-1.5-2.0	6/14/18	1008	G S	N	N	X	X	
ED-00.41-SL01-2.0-2.5	6/14/18	1010	G S	N	N	X	X	
ED-00.41-SL01-2.5-3.0	6/14/18	1012	G S	N	N	X	X	
Possible Hazard Identification								
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological								
Deliverable Requested: I, II, III, IV, Other (specify)								
Empty Kit Relinquished by: _____ Date: _____								
Relinquished by: _____ Date/Time: 6/14/18 6:25/18			Relinquished by: _____ Date/Time: 6/25/18 1310			Relinquished by: _____ Date/Time: _____		
Relinquished by: _____ Date/Time: _____			Relinquished by: _____ Date/Time: _____			Relinquished by: _____ Date/Time: _____		
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No			Custody Seal No.:			Cooler Temperature(s) °C and Other Remarks:		

Ver: 08/04/2016
 1
2
3
4
5
6
7
8
9
10
11
12
13
14

Chain of Custody Record

Client Information		Sampler: Greg Schwartz		Lab PM: Nestasis, Dominic J		Carrier Tracking No(s):		GOC No: 240-52180-22484-5	
Client Contact: Greg Schwartz		Phone: 808 268-4981		E-Mail: dominic.nestasis@testamericainc.com				Page: 4 of 11	
Company: Civil & Environmental Consultants Inc		Address: 2704 Cherokee Farm Way Suite 101		City: Knoxville		State: TN		Zip: 37920	
Phone: 513-309-1966(Tel)		PO #: 10		Purchase Order Requested		WO #:		Project #:	
Email: gschwartz@cecinc.com		172-367		Project #:		24019083		SSOW#:	
Site: Elliot Ditch, Lefflyth, TN		Due Date Requested:		TAT Requested (days):		8082A - PCBs 7 Analytes		8082A - Moisture	
Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=soil, BT=Tissue, A=Air)	
ED-00.19-8L01-1.8-2.3		6/14/18		1016		G		S	
ED-00.19-8L01-1.5-1.8		6/14/18		1446		G		S	
ED-00.19-8L01-0.0-0.9		6/14/18		1446		G		S	
ED-00.19-8L01-0.8-1.5		6/14/18		1442		G		S	
ED-00.19-8L01-1.8-2.3		6/14/18		1448		G		S	
ED-00.19-8L01-2.3-3.5		6/14/18		1450		G		S	
ED-00.21-8L01-0.0-1.0		6/14/18		1453		G		S	
ED-00.21-8L01-1.0-2.0		6/14/18		1458		G		S	
Possible Hazard Identification		Poison B		Unknown		Radiological		Skin Irritant	
Deliverable Requested: I, II, III, IV, Other (specify)		Flammable		Non-Hazard		Other (specify)		Other (specify)	
Empty Kit Relinquished by:		Date:		Time:		Special Instructions/QC Requirements:		Special Instructions/Note:	
Relinquished by: Greg Schwartz / Greg W		6/12/18		6:19:16		1310		MS/MSD	
Relinquished by:		Date/Time:		Date/Time:		Company:		Company:	
Relinquished by:		Date/Time:		Date/Time:		Company:		Company:	
Custody Seals Intact: Yes		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Special Instructions/Note:	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>						Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months		Hold any sample taken > 2.0	
						Method of Shipment: Fed Ex Cooler		Date/Time: 6/12/18	
						Received by: POP		Company: TAC	
						Received by:		Company:	
						Received by:		Company:	



Chain of Custody Record

Client Information Client Contact: Greg Schwartz Phone: 866-268-4981 Company: Civil & Environmental Consultants Inc Address: 2704 Cherokee Farm Way Suite 101 City: Knoxville State, Zip: TN, 37920 Phone: 513-309-1966(Tel) Email: gschwartz@cecinc.com Project Name: Arconic, Inc. - Elliott Ditch Site: Elliott Ditch, LeFayette, TN		Lab PM: Nestlasie, Dominic J E-Mail: dominic.nestlasie@testamericainc.com Carrier Tracking No(s): COC No: 240-52180-22484.6 Page: 5 of 11 Job #:	
Due Date Requested: TAT Requested (days): 10 PO #: Purchase Order Requested WO #: 172-367 Project #: 24019083 SSOW#:		Analysis Requested 8082A - PCBs 7 Analyzers 8082A - Moisture Perform MS/MSD (Yes or No) Field Filtered Sample (Yes or No)	
Sample Identification ED-00.21-SL01-1.0-2.0-FD ED-00.21-SL01-2.0-2.9-FD ED-00.21-SL01-2.9-3.8 ED-00.27-SL01-0.0-1.0 ED-00.27-SL01-1.0-1.9 ED-00.27-SL01-1.9-2.8 ED-00.27-SL01-2.8-3.7 ED-00.23-SL01-0.7-1.2 ED-00.23-SL01-0.7-1.2-FD ED-00.23-SL01-2.0-2.9 ED-00.23-SL01-2.9-3.5		Sample Date 6/14/18 6/14/18 6/14/18 6/14/18 6/14/18 6/14/18 6/14/18 6/14/18 6/14/18 6/14/18 6/14/18	
Sample Time 1458 1459 1503 1339 1341 1343 1345 1255 1255 1310 1315		Sample Type (C=comp, G=grab) G G G G G G G G G G G	
Matrix (W=water, S=solid, O=wastewater, BT=bitumen, A=air) S S S S S S S S S S S		Preservation Code: S S S S S S S S S S S	
Special Instructions/Note: Hold Hold Hold Hold Hold		Total Number of Containers: 1 1 1 1 1 1 1 1 1 1 1 1	
Special Instructions/QC Requirements: <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months <input type="checkbox"/> Poison B <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Flammable <input type="checkbox"/> Non-Hazard Deliverable Requested: I, II, III, IV, Other (specify)			
Empty Kit Relinquished by: Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]		Method of Shipment: FEDEX Cooler A Date/Time: 6/25/18 1310 Date/Time: 6/25/18 930 Date/Time: [Blank]	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.: [Blank]	



Chain of Custody Record

Client Information Client Contact: Greg Schwartz Company: Civil & Environmental Consultants Inc Address: 2704 Cherokee Farm Way Suite 101 City: Knoxville State, Zip: TN, 37920 Phone: 513-309-1966(Tel) Email: gschwartz@cecinc.com Project Name: Arconic, Inc. - Elliott Ditch Site: <i>Wahpeton, MN</i>		Lab PM: Nestasie, Dominic J E-Mail: dominic.nestasie@testamericainc.com Phone: 800-268-4981 Carner Tracking No(s): COC No: 240-52180-22484.7 Page: 6 of 11 Page: 7 of 11 Job #: 6 of 11	
Due Date Requested: TAT Requested (days): PO #: Purchase Order Requested WO #: Project #: SSOW#:		Analysis Requested Total Number of Containers:	
Sample Identification ED-00.44-SL01-3.0-3.5 ED-00.44-SL01-3.5-4.0 ED-01.14-SL06-1.0-1.5 ED-01.14-SL04-0.5-1.0 ED-01.14-SL04-1.5-1.8 ED-01.14-SL04-1.0-1.5 ED-01.14-SL04-0.0-0.5 ED-00.36-SL01-0.9-1.0 ED-00.36-SL01-0.4-1.0-ED ED-00.36-SL01-0.0-0.4		Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 8082A, Moisture 8082A - PCBs 7 Analytes Special Instructions/Note: Hold Hold CS CS	
Sample Date 6/14/18 1151 6/14/18 1151 6/15/18 1825 6/15/18 1838 6/15/18 1840 6/15/18 1835 6/15/18 1830 6/14/18 1058 6/14/18 1550 6/14/18 1050 6/14/18 1050		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 Other: M - Hexane N - None O - AsKAO2 P - NaZOH5 Q - NaZSO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Z - other (specify)	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements:	
Empty Kit Relinquished by: <i>Greg Schwartz</i> Relinquished by: <i>Greg Schwartz</i> Relinquished by: Relinquished by:		Method of Shipment: Fed Ex Cooler B Date/Time: 6/25/18 - 13:0 Received by: Company Date/Time: Company Received by: Company Date/Time: Company	
Custody Seals Intact: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:	



TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information		Sampier: <u>Greg Schwartz</u>		Lab P/N: <u>Nestastie, Dominic J</u>		Carrier Tracking No(s):		COC No: <u>240-52180-22484.7</u>	
Client Contact: <u>Greg Schwartz</u>		Phone: <u>800-266-181</u>		E-Mail: <u>dominic.nestastie@testamericainc.com</u>				Page: <u>6/19/16</u>	
Company: <u>Civil & Environmental Consultants Inc</u>		Address: <u>2704 Cherokee Farm Way Suite 101</u>		City: <u>Knoxville</u>		State, Zip: <u>TN, 37920</u>		Job #: <u>7.011</u>	
Phone: <u>513-309-1966(Tel)</u>		Due Date Requested:		TAT Requested (days): <u>10</u>					
Email: <u>gschwartz@cecinc.com</u>		Purchase Order Requested		FO #: <u>172-367</u>					
Project Name: <u>Arocloric, Inc. - Elliott Ditch</u>		Project #: <u>24019083</u>		SSOW#:					
Site: <u>Elliott Ditch Lafayette, TN</u>									

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=oil, A=air)	Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		8082A - PCBs 7 Aroclors		Special Instructions/Note:
					Y	N	Y	N	Y	N	
ED-00.17 - SLO2 - 1.8 - 2.8 - FD	6/14/18	1524	C	S	X		X				Hold
ED-00.41 - SLO1 - 3.0 - 3.7	6/14/18	1524	C	S	X		X				Hold
ED-00.36 - SLO1 - 1.5 - 2.0	6/14/18	1050	C	S	X		X				Hold
ED-00.41 - SLO1 - 0.5 - 1.0	6/14/18	1005	C	S	X		X				Hold
ED-00.36 - SLO1 - 3.5 - 4.0	6/14/18	1105	C	S	X		X				Hold
ED-00.36 - SLO1 - 1.5 - 2.0 - FD	6/14/18	1050	C	S	X		X				Hold
ED-00.36 - SLO1 - 0.4 - 1.0	6/14/18	1055	C	S	X		X				Hold
ED-00.19 - SLO1 - 1.8 - 2.5 - FD	6/14/18	1448	C	S	X		X				Hold
ED-00.33 - SLO1 - 2.3 - 3.1 - FD	6/14/18	1230	C	S	X		X				Hold
ED-00.36 - SLO1 - 2.0 - 2.5	6/14/18	1050	C	S	X		X				Hold
ED-00.36 - SLO1 - 2.5 - 3.5	6/14/18	1059	C	S	X		X				Hold

<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Date:	
Relinquished by: <u>Greg Schwartz</u>		Date/Time: <u>6/25/18 1330</u>	
Relinquished by:		Date/Time:	
Relinquished by:		Date/Time:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:	

Method of Shipment: <u>FedEx</u>		Company: <u>Cedar B</u>	
Received by: <u>Bob</u>		Date/Time: <u>6/27/18 950</u>	
Received by:		Date/Time:	
Received by:		Date/Time:	
Cooler Temperature(s) °C and Other Remarks:			

Ver: 08/04/2016
1
2
3
4
5
6
7
8
9
10
11
12
13
14

Chain of Custody Record

Client Information Client Contact: Greg Schwartz Phone: 806 269-4481 Lab PM: Nestasie, Dominic J E-Mail: dominic.nestasie@testamericainc.com		Carrier/Tracking No(s): COC No: 240-52180-22484.7 Page: 6/19/18 Job #: 8 of 11	
Due Date Requested: TAT Requested (days): 10 PO #: Purchase Order Requested W/O #: 172-367 Project #: 24019083 S/SOW #:		Analysis Requested 8082A - PCBs 7 Analyzers 8082A - Moisture Perform MS/MSD (Yes or No) Field Filtered Sample (Yes or No)	
Address: 2704 Cherokee Farm Way Suite 101 City: Knoxville State, Zip: TN, 37920 Phone: 513-309-1966(Tel) Email: gschwartz@cecinc.com Project Name: Arconic, Inc. - Elliott Ditch Site: Lafayette IN		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 Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecalhydrate U - Acetone V - NCA W - pH 4-5 Z - other (specify)	
Sample Identification ED-00.29-SL01-1.7-2.7 ED-00.29-SL01-2.7-3.7 ED-00.52-SL03-1.5-2.0 ED-00.44-SL01-0.0-0.5 ED-00.44-SL01-0.5-1.0 ED-00.44-SL01-1.0-1.5 ED-00.44-SL01-1.5-1.8 ED-00.44-SL01-1.5-1.8 ED-00.44-SL01-2.0-2.5 ED-00.44-SL01-1.5-1.9 ED-00.44-SL01-2.5-3.0		Special Instructions/Note: Hold Hold Hold Hold	
Sample Date 6/14/18 6/14/18 6/15/18 6/14/18 6/14/18 6/14/18 6/14/18 6/14/18 6/14/18		Sample Time 1536 1338 1745 1120 1122 1127 1134 1140 1143 1134 1148	
Sample Type (C=comp, G=grab) G G G G G G G G G		Matrix (W=water, S=solid, D=dustfall, A=air) S S S S S S S S S	
Preservation Code: S S S S S S S S S		Total Number of Containers: 45 51	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: <input type="checkbox"/> I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by: _____ Date: 6/15/18 12:10 Relinquished by: _____ Date/Time: 6/15/18 12:10 Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____		Method of Shipment: Fed Ex Cooler B Date/Time: 6-27-18 9:50 Company: TOL Date/Time: _____ Company: _____ Date/Time: _____ Company: _____	
Custody Seal No.: _____ Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:	

Chain of Custody Record

Client Information Client Contact: Greg Schwartz Phone: 608-266-4981 Lab PM: Nestasie, Dominic J E-Mail: dominic.nestasie@testamericainc.com		Carrier Tracking No(s): ICC No: 240-52180-22484.7 Page: 7 of 18 Date: 6/14/18 Job #: 2011								
Company: Civil & Environmental Consultants Inc Address: 2704 Cherokee Farm Way Suite 101 City: Knoxville State, Zip: TN, 37920 Phone: 513-309-1966(Tel) Email: gschwartz@cecinc.com Project Name: Arconic, Inc. - Elliott Ditch Site: Elliott Ditch Lafayette, IN		Analysis Requested Due Date Requested: YAT Requested (days): 14 PO #: Purchase Order Requested WO #: 172-367 Project #: 24019083 SSO#:								
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=organic, B=trace, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8082A - PCBs 7 Aroclors	8082A - PCBs 7 Aroclors	Total Number of Containers	Special Instructions/Note:
ED-01.14-SL06-0.0-0.5	6/13/18	1756	G	S	X	X	X	X		
ED-01.14-SL06-0.5-1.0	6/13/18	1358	G	S	X	X	X	X		
ED-01.14-SL06-1.0-1.5	6/13/18	1412	G	S	X	X	X	X		
ED-01.14-SL06-1.5-2.0	6/13/18	1430	G	S	X	X	X	X		Hold
ED-00.31-SL01-0.0-1.0	6/14/18	1213	G	S	X	X	X	X		
ED-00.31-SL01-1.0-2.0	6/14/18	1215	G	S	X	X	X	X		
ED-00.31-SL01-1.0-2.0-FD	6/14/18	1215	G	S	X	X	X	X		
ED-00.31-2.0-2.0-SL01-2.0-2.8	6/14/18	1217	G	S	X	X	X	X		Hold
ED-00.31-SL01-2.8-3.8	6/14/18	1219	G	S	X	X	X	X		
ED-00.33-SL01-0.0-0.7	6/14/18	1220	G	S	X	X	X	X		
ED-00.33-SL01-0.7-1.6	6/14/18	1225	G	S	X	X	X	X		Hold
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, IV, Other (specify)										
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months										
Special Instructions/QC Requirements:										
Empty Kit Relinquished by: _____ Date: _____ Relinquished by: _____ Date/Time: 6/25/18 - 1310 Company: CEC Relinquished by: _____ Date/Time: _____ Company: _____ Relinquished by: _____ Date/Time: _____ Company: _____ Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.: _____ Cooler Temperature(s) °C and Other Remarks:										
Method of Shipment: Fed Ex Cooler <input checked="" type="checkbox"/> Received by: _____ Date/Time: 6/27/18 950 Company: TAC Received by: _____ Date/Time: _____ Company: _____ Received by: _____ Date/Time: _____ Company: _____										



Chain of Custody Record

Client Information		Lab PM: Nestasie, Dominic J		Carrier Tracking Not(s):	
Company: Civil & Environmental Consultants Inc		E-Mail: dominic.nestasie@testamericainc.com		COC No: 240-52180-22484.7	
Address: 2704 Cherokee Farm Way, Suite 101		Phone: 800 668-4181		Page: 6 of 11	
City: Knoxville		State, Zip: TN, 37920		Job #:	
Phone: 513-309-1966(Tel)		Purchase Order Requested		Preservation Codes:	
E-mail: gschwartz@cecinc.com		WO #: 172-367		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ipa J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - NiZnOAS Q - NiZSO3 R - NiZSO3 S - HZSO4 T - TSP Dodecalhydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
Project Name: Arconic, Inc. - Elliott Ditch		Project #: 24019083		Other:	
Site: Lafayette IN		SSOW#:		Special Instructions/Note: Hold any sample > 2.0' depth	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Wetwater, Solid, On-water)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8082A - PCBs 7 Aroclors	8082A - Moisture	Analysis Requested	Total Number of Containers
ED-00.33 - SL01 - 1.6-2.3	6/14/18	1227	G	S	X	X	X	X		
ED-00.33 - SL01 - 2.3-3.1	6/14/18	1230	G	S	X	X	X			
ED-00.33 - SL01 - 3.1-4.0	6/14/18	1236	G	S	X	X	X			
ED-00.23 - SL01 - 0.7-1.2	6/14/18	1257	G	S	X	X	X			
ED-00.23 - SL01 - 1.2-2.0	6/14/18	1256	G	S	X	X	X			
ED-00.23 - SL01 - 2.0-2.8	6/14/18	1302	G	S	X	X	X			
ED-00.23 - SL01 - 3.5-4.0	6/14/18	1318	G	S	X	X	X			
ED-00.29 - SL01 - 0.0-0.7	6/14/18	1332	G	S	X	X	X			
ED-00.29 - SL01 - 0.7-1.7	6/14/18	1334	G	S	X	X	X			
ED-00.29 - SL01 - 1.7-2.7-FO	6/14/18	1336	G	S	X	X	X			

<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/OC Requirements:	
Empty Kit Relinquished by: _____ Date: 6/14/18 Time: 13:10	Relinquished by: Greg Schwartz / byler Date: 6/25/18 Time: 13:10	Relinquished by: _____ Date: _____ Time: _____	Relinquished by: _____ Date: _____ Time: _____
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:	

TestAmerica Canton Sample Receipt Form/Narrative

Login # : 97805

Canton Facility

Client Civil Eng. & Cons. Site Name _____

Cooler unpacked by: _____

Cooler Received on 6-27-18 Opened on 6-27-18

FedEx: 1st Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 7A Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None


- 1. Cooler temperature upon receipt See Multiple Cooler Form
 - IR GUN# IR-8 (CF +0 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 - IR GUN #36 (CF -0.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 - IR GUN # 627 (CF -1.3 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

- 2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1
 - Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 - Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 - Were tamper/custody seals intact and uncompromised? Yes No NA

- 3. Shippers' packing slip attached to the cooler(s)? Yes No
- 4. Did custody papers accompany the sample(s)? Yes No
- 5. Were the custody papers relinquished & signed in the appropriate place? Yes No
- 6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
- 7. Did all bottles arrive in good condition (Unbroken)? Yes No
- 8. Could all bottle labels be reconciled with the COC? Yes No
- 9. Were correct bottle(s) used for the test(s) indicated? Yes No
- 10. Sufficient quantity received to perform indicated analyses? Yes No
- 11. Are these work share samples? Yes No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

- If yes, Questions 12-16 have been checked at the originating laboratory.
- 12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC740840
- 13. Were VOAs on the COC? Yes No
- 14. Were air bubbles >6 mm in any VOA vials? Yes No NA  ← Larger than this.
- 15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
- 16. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

Listed on COC, but did not rec'y: | Rec'd not listed on COC.

ED-00.19-SL01-1.8-2.3 @ 1448 | ED-00.36-SL01-3.0-3.5 (6.14.18 @ 1050)

ED-01.14-SL06-1.0-1.5 @ 1825 | ED-01.14-SL04-15-1.5 FD (6.15.18 @ 1825)

ED-00.36-SL01-0.4-1.0 FD @ 1053 |

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

