



LUCAS STAMPS
PROJECT MANAGER

August 24, 2018

Mr. Jason Sewell
On-Scene Coordinator
U.S. Environmental Protection Agency, Region 5
2525 North Shadeland Avenue
Indianapolis, Indiana 46219

**Subject: Removal Report Revision 0
 Indiana Battery Company Site
 EPA Contract No. EP-S5-13-01
 Technical Direction Document No. S05-0001-1712-001
 Document Tracking No. 2511**

Dear Mr. Sewell:

Tetra Tech, Inc. (Tetra Tech) is submitting this removal report summarizing time-critical removal activities conducted at the Indiana Battery Company site located at 1302 Bedford Street in Indianapolis, Marion County, Indiana, between April 10, 2018, and July 6, 2018.

If you have any questions regarding this report, please contact me at (317) 419-5586 or via e-mail at lucas.stamps@tetrattech.com.

Respectfully,

A handwritten signature in black ink, appearing to read 'Lucas Stamps'.

Lucas Stamps
Project Manager

**REMOVAL REPORT, REVISION 0
INDIANA BATTERY COMPANY SITE
INDIANAPOLIS, MARION COUNTY, INDIANA**

U.S. Environmental Protection Agency
Emergency Response Branch
Region 5
2525 North Shadeland Avenue
Indianapolis, IN 46219

Submitted by

Tetra Tech, Inc.
1 S. Wacker Drive, Suite 3700
Chicago, IL 60606

EPA Contract No. EP-S5-13-01

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Prepared by



Lucas Stamps
Project Manager

Approved by



Kristine Schnoes
START QC Reviewer

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1.0 INTRODUCTION

The U.S. Environmental Protection Agency (EPA) tasked Tetra Tech, Inc. (Tetra Tech) to provide support during a time-critical removal action at the Indiana Battery Company site located in Indianapolis, Marion County, Indiana. This work was assigned under Superfund Technical Assessment and Response Team (START) Contract No. EP-S5-13-01, Technical Direction Document (TDD) No. S05-0001-1712-001.

As part of removal activities, START assisted with drafting the site-specific health and safety plan, performed air monitoring, collected air and soil samples, documented site activities, and conducted oversight. START also prepared a site-specific Air Monitoring and Sampling Plan, dated April 6, 2018 (Tetra Tech 2018a). Work was performed in accordance with the START Quality Assurance Project Plan (QAPP), Revision 3, dated June 28, 2016 (Tetra Tech 2016a).

This removal report is organized into the following sections:

- 1.0 Introduction – describes the objectives and scope of the removal action and describes the site and its history.
- 2.0 Oversight and Documentation – documents removal oversight activities conducted by START and provides a timeline for the removal action.
- 3.0 Air Monitoring and Sampling – describes the methods and results of air monitoring and air sampling performed by START during the removal action.
- 4.0 Confirmation Soil Sampling – discusses the results of confirmation soil samples collected by START during the removal action.
- 5.0 Removal Summary – summarizes the time-critical removal action and documents the effectiveness of the completed activities.

In addition, this removal report contains six appendices and one attachment. Appendix A provides figures for this report. Appendix B provides analytical results summary tables. Appendix C provides metrics of waste that was removed from the site. Appendix D provides field notes recorded by START personnel. Appendix E provides representative photographs of site conditions and removal activities conducted at the site. Information on environmentally preferred practices used during this project are included in Appendix F. Attachment 1 provides laboratory analytical reports for samples collected during the removal action.

1.1 SITE LOCATION

The site is located at 1302 South Bedford Street in the City of Indianapolis, Marion County, Indiana (Appendix A, Figure 1). The geographic coordinates at the center of the site are 39.747600° north latitude and 86.205175° west longitude. The site consists of the 1.44-acre parcel located at 1302 South Bedford

Street and approximately 10 acres of city-owned property that includes Eagle Creek and the flood control levee east of the creek. During the 2015 and 2016 site assessment, these two areas were defined as Operable Units 1 and 3, respectively (OU1 and OU3).

The site is bordered to the south and west by Eagle Creek and a city-owned flood control levee. The city has begun construction on a multi-use walking path along the crest of the levee. To the north lies industrial and commercial properties, with residential areas across West Morris Street within 0.25 mile. To the east lies industrial and commercial properties, with residential areas along South Pershing Avenue within 0.25 mile. To the south and west lies Eagle Creek, with a flood control levee along its eastern bank (Appendix A, Figure 2).

1.2 SITE HISTORY

According to EPA, the property at 1302 South Bedford Street was operated by Indiana Battery Company from approximately 1962 to 2008. The site is currently owned by B1 Properties LLC and occupied by two businesses: a pallet company and a fencing installation service company. Three small commercial/industrial buildings and a covered concrete pad for salt storage are located on the property.

On August 3, 2015, EPA received an anonymous complaint that “truckloads” of batteries had been buried at the site for an unknown number of years. The EPA On-Scene Coordinator (OSC) visited the site and found that Indianapolis Power and Light (IPL) had recently discovered battery waste buried on a parcel the utility had purchased adjacent to the north (2749 West Morris Street). At that time, IPL was conducting its own site assessment and removal action. The OSC received a Final Excavation Report from IPL that described the assessment and removal action it conducted.

Based on the findings of IPL’s investigation and removal, EPA and START assessed 1302 South Bedford Street and the city-owned property along Eagle Creek during three sampling events from September 2015 to December 2016. As part of the assessment, START collected 85 soil samples, 16 groundwater samples, and 52 sediment samples. Analytical results revealed lead impacts that exceeded the EPA Removal Management Level (RML) of 800 milligrams per kilogram (mg/kg) for industrial/commercial soils and the Indiana Department of Environmental Management (IDEM) Recreational Soil Direct Contact Screening Level for Trails of 800 mg/kg (Tetra Tech 2016b, 2016c, and 2017). On November 30, 2017, EPA approved an action memorandum to fund a time-critical removal action at the Indiana Battery Company site (EPA 2017). EPA and START mobilized to the site on December 19, 2017 and on March 21, 2018, to delineate surface soil contamination prior to the start of the removal action (Tetra Tech 2018b).

2.0 OVERSIGHT AND DOCUMENTATION

This section discusses removal actions conducted at the Indiana Battery Company site from April 10, 2018 to July 6, 2018. Environmental Quality Management, Inc. (EQM) served as EPA's Emergency and Rapid Response Services (ERRS) contractor. START conducted perimeter air monitoring during removal activities, collected perimeter air samples, collected confirmation soil samples, oversaw work conducted by the ERRS contractor, and collected written and photographic documentation of site conditions and activities. ERRS excavated, treated, and profiled contaminated soil and debris; restored the site after excavation was complete; collected air samples to assess worker exposure; and arranged for off-site transportation and disposal of wastes.

2.1 DOCUMENTATION

START conducted written and photographic documentation of removal activities through the duration of the removal action. In the field logbook, START personnel recorded daily weather conditions, ERRS contractor activities, air monitoring results, and waste disposal events. START field notes are provided in Appendix D. START also maintained digital copies of air monitoring run data, laboratory analytical results, access agreements, and photographic documentation. Representative site photographs are presented in Appendix E. Laboratory analytical reports are provided in Attachment 1.

2.2 REMOVAL TIMELINE

The following timeline outlines removal activities that occurred each week. Appendix A, Figure 3 provides a map showing the grids that were used to track removal progress. Appendix C provides a summary of wastes removed from the site and lists the disposal facility.

Dates	Removal Activities
4/10/18 – 4/13/18	• EPA, START, and ERRS mobilized to the site and established work zones and an on-site project office. • ERRS mobilized heavy equipment to the site and prepared the site for excavation. • ERRS dug test pits to 2 feet below ground surface (bgs) at seven locations in OU1 and START screened the sidewalls with an X-ray fluorescence (XRF) analyzer to estimate waste totals. • ERRS maintained site security during non-work hours. • START conducted air monitoring and air sampling at the site perimeter (see Section 3.0 for more information).
4/16/18 – 4/20/18	• EPA worked with the City of Indianapolis to arrange for tree removal east of the flood control levee. • ERRS began excavating Grids OU1-05, OU1-06, OU1-07, and OU1-12. • ERRS completed excavating Grids OU1-06 and OU1-07.

Dates	Removal Activities
	• START collected confirmation soil samples from Grids OU1-06 and OU1-07 (see Section 4 for more information). • ERRS placed orange barrier fence on the excavation floor where XRF screening results exceeded the commercial/industrial RML for lead. • ERRS placed clean backfill in Grids OU1-06 and OU1-07. • ERRS established waste treatment and staging areas, including erosion control measures. • ERRS mixed the treatment chemical (Free Flow 200®, which decreases the leachability of lead to below hazardous waste criteria) with approximately 495 cubic yards of contaminated material. • ERRS collected a post-treatment soil sample to create a waste profile for disposal. • ERRS collected personal exposure air samples on laborers and operators during three workdays; lab results were all non-detect for heavy metals, indicating that additional personal exposure air sampling would not be required unless work conditions changed. • ERRS maintained site security during non-work hours. • START conducted air monitoring and air sampling at the site perimeter (see Section 3.0 for more information).
4/23/18 – 4/27/18	• EPA continued to work with the City of Indianapolis on tree removal east of the levee. • EPA received communication from the U.S. Fish and Wildlife Service indicating that tree clearing may proceed without additional measures to protect native bat species. • ERRS began excavating Grid OU1-11. • ERRS completed excavating Grids OU1-05 and OU1-12. • START collected a confirmation soil sample from Grid OU1-12; Grid OU1-05 was not sampled before it was backfilled (see Section 4.0 for more information). • ERRS placed orange barrier fence on the excavation floor where XRF screening results exceeded the commercial/industrial RML for lead. • ERRS began placing clean backfill in Grids OU1-05 and OU1-12. • ERRS mixed the treatment chemical with approximately 505 cubic yards of contaminated material. • ERRS completed the waste profile and arranged for transportation and disposal of treated material. • ERRS maintained site security during non-work hours. • START conducted air monitoring and air sampling at the site perimeter (see Section 3.0 for more information).
4/30/18 – 5/4/18	• EPA continued to work with the City of Indianapolis on tree removal east of the levee. • ERRS began excavating Grids OU1-18 and OU1-19. • ERRS finished backfilling Grids OU1-05 and OU1-12. • ERRS mixed the treatment chemical with 132 cubic yards of contaminated material.

Dates	Removal Activities
	• ERRS shipped 1,202.66 tons of treated waste off site for disposal (Appendix C). • ERRS maintained site security during non-working hours. • START conducted air monitoring and air sampling at the site perimeter (see Section 3.0 for more information).
5/7/18 – 5/11/18	• EPA continued to work with the City of Indianapolis on tree removal east of the levee. • ERRS began excavating Grids OU1-04, OU1-10, OU1-14, OU1-15, OU1-16, and OU1-17. • ERRS completed excavating Grids OU1-10, OU1-11, OU1-15, OU1-16, OU1-17, OU1-18, and OU1-19. • START collected confirmation soil samples from Grids OU1-10, OU1-11, OU1-15, OU1-16, OU1-17, OU1-18, and OU1-19 (see Section 4.0 for more information). • START collected soil samples from unexcavated Grids OU3-W04 and OU3-W06, which were sampled to document that the contamination found in Grid OU3-W05 did not extend laterally along the trail. • ERRS placed clean backfill and restored Grids OU1-11, OU1-15, OU1-16, OU1-17, OU1-18, and OU1-19. • ERRS mixed the treatment chemical with 800 cubic yards of contaminated material. • ERRS shipped 487.42 tons of treated waste off site for disposal (Appendix C). • ERRS maintained site security during non-working hours. • START conducted air monitoring and air sampling at the site perimeter (see Section 3.0 for more information).
5/14/18 – 5/18/18	• The contractor for the City of Indianapolis began tree and brush removal east of the levee. • ERRS began excavating Grids OU1-09 and OU1-13. • ERRS re-treated 1,600 cubic yards of contaminated material that was above the hazardous waste criteria for lead after the first treatment. • ERRS maintained site security during non-working hours. • START conducted air monitoring and air sampling at the site perimeter (see Section 3.0 for more information).
5/21/18 – 5/24/18	• The contractor for the City of Indianapolis finished clearing trees and brush east of the levee. • ERRS began excavating Grids OU3-E19, OU3-E20, OU3-E21, and a small portion of OU3-W05. • ERRS completed excavating the small portion of Grid OU3-W05. • START collected a confirmation sample from the bottom and north sidewall of the excavated area of Grid OU3-W05 (see Section 4.0 for more information). • EPA and the City of Indianapolis decided that the city's contractor will be responsible for backfilling and restoring Grid OU3-W05. • ERRS shipped 1,751.71 tons of treated waste off site for disposal (Appendix C).

Dates	Removal Activities
	• ERRS maintained site security during non-working hours. • START conducted air monitoring and air sampling at the site perimeter (see Section 3.0 for more information).
5/29/18 – 6/1/18	• ERRS began excavating Grids OU3-E17, OU3-E18, OU3-E22, and OU3-E23. • ERRS completed excavating Grids OU3-E17, OU3-E18, OU3-E19, OU3-E20, OU3-E21, OU3-E22, and OU3-E23. • ERRS mixed the treatment chemical with 500 cubic yards of contaminated material. • ERRS shipped 107.14 tons of treated waste off site for disposal (Appendix C). • ERRS maintained site security during non-working hours. • START conducted air monitoring and air sampling at the site perimeter (see Section 3.0 for more information).
6/4/18 – 6/8/18	• ERRS began excavating Grids OU1-01 and OU1-03. • ERRS continued excavating Grids OU1-09 and OU1-04. • ERRS completed excavating Grid OU1-04. • START collected confirmation soil samples from Grids OU1-04, OU3-E17, OU3-E18, OU3-E19, OU3-E20, OU3-E21, OU3-E22, and OU3-E23 (see Section 4.0 for more information). • START collected confirmation soil samples from Grids OU1-09A and OU1-09B, which were added to include areas beneath the pole barn. • ERRS mixed the treatment chemical with 100 cubic yards of contaminated material. • ERRS shipped 679.74 tons of treated waste off site for disposal (Appendix C). • ERRS maintained site security during non-working hours. • START conducted air monitoring and air sampling at the site perimeter (see Section 3.0 for more information).
6/11/18 – 6/15/18	• ERRS began excavating Grids OU1-02 and OU1-08. • ERRS completed excavating Grids OU1-01, OU1-02, OU1-03, OU1-08, OU1-09, OU1-13, and OU1-14. • START collected confirmation soil samples from Grids OU1-01, OU1-02, OU1-03, and OU1-13 (see Section 4.0 for more information). • ERRS mixed the treatment chemical with 200 cubic yards of contaminated material. • ERRS shipped 3,193.43 tons of treated waste off site for disposal (Appendix C). • ERRS maintained site security during non-working hours. • START conducted air monitoring and air sampling at the site perimeter (see Section 3.0 for more information).
6/18/18 – 6/22/18	• START collected confirmation soil samples from Grids OU1-08, OU1-09, OU1-14 (see Section 4.0 for more information).

Dates	Removal Activities
	• START collected a confirmation soil sample from Grid OU1-18A, which was added to include the area where the large storage trailers had been sitting before they were moved. • START collected a confirmation soil sample from OU3-LEVEE, which was added to include a small area of the levee that was excavated. • ERRS placed clean backfill and restored Grids OU1-08, OU1-09, OU1-13, and OU1-14. • ERRS mixed the treatment chemical with 40 cubic yards of contaminated material. • ERRS shipped 141.73 tons of treated waste off site for disposal (Appendix C). • ERRS maintained site security during non-working hours. • START conducted air monitoring and air sampling at the site perimeter (see Section 3.0 for more information).
6/25/18 – 6/29/18	• ERRS demobilized the site trailers to excavate grids in the Bedford Street right-of-way (ROW). • ERRS began excavating Grid ROW-01. • ERRS completed excavating Grid ROW-01 • START collected confirmation soil samples from Grid ROW-01 (see Section 4.0 for more information). • ERRS placed clean backfill and restored Grids OU1-01, OU1-02, OU1-03, OU1-04, OU1-10, OU3-E17, OU3-E18, OU3-E19, OU3-E20, OU3-E21, OU3-E22, and OU3-E23. • ERRS mixed the treatment chemical with 100 cubic yards of contaminated material. • ERRS shipped 108.18 tons of treated waste off site for disposal (Appendix C). • ERRS maintained site security during non-working hours. • START conducted air monitoring and air sampling at the site perimeter (see Section 3.0 for more information).
7/2/18 – 7/6/18	• ERRS began excavating Grids ROW-02, ROW-03, ROW-04, and ROW-05. • ERRS completed excavating Grids ROW-02, ROW-03, ROW-04, and ROW-05. • START collected confirmation soil samples from Grids ROW-02, ROW-03, ROW-04, and ROW-05 (see Section 4.0 for more information). • ERRS placed clean backfill and restored Grids ROW-01, ROW-02, ROW-03, ROW-04, and ROW-05. • ERRS placed grass seed and straw erosion matting to re-establish vegetation in Grids OU3-E24, OU3-E23, OU3-22, ROW-05, and ROW-06 (Grids OU3-E24 and ROW-06 were not excavated, but the landscape was damaged during the excavation of other grids). • ERRS mixed the treatment chemical with 450 cubic yards of contaminated material. • ERRS shipped 518.08 tons of treated waste off site for disposal (Appendix C). • ERRS maintained site security during non-working hours.

Dates	Removal Activities
	• START conducted air monitoring and air sampling at the site perimeter (see Section 3.0 for more information). • EPA, START, and ERRS demobilized remaining personnel and equipment from the site.

Notes:

EPA = U.S. Environmental Protection Agency

ERRS = Emergency and Rapid and Response Services

START = Superfund Technical Assessment and Response Team

3.0 AIR MONITORING AND SAMPLING

During site activities, START conducted perimeter air monitoring and collected perimeter air samples to ensure that site practices were sufficient to prevent the off-site migration of contaminated particulates. Air monitors and air samples were deployed every day that site work occurred, weather permitting, from April 12 to July 3, 2018. Air monitors and air samples were not deployed after July 3, 2018, because activities involving lead-contaminated waste concluded on that day. Air monitoring and sampling were performed in accordance with the site-specific Air Monitoring and Sampling Plan (Tetra Tech 2018a).

3.1 DUSTTRAK DRX PARTICULATE MONITORS

TSI DustTrak DRX particulate monitors (DustTraks) were used to monitor for particulate concentrations at the perimeter of the site in real time. DustTraks simultaneously measure the concentrations of total particulates, particulates less than 10 microns (μm) in diameter (PM_{10}), less than 4 μm in diameter (PM_4), less than 2.5 μm in diameter ($\text{PM}_{2.5}$), and less than 1 μm in diameter (PM_1). The minimum detectable particle size for a DustTrak is 0.1 μm . Initially, four DustTraks were placed at the perimeter of the site each day, with each one corresponding to a cardinal direction. Due to an equipment malfunction, only three units were deployed from June 12, 2018 to July 3, 2018, with locations chosen based on the forecasted wind direction. Perimeter air monitoring locations are presented in Appendix A, Figure 4.

DustTraks were connected to EPA's VIPER Survey Controller software to provide real-time telemetry to the command post. START personnel on site were sent e-mail alerts when the site-specific action level was exceeded. When an alert was received, START checked readings to ensure it was not an equipment malfunction and checked on the monitor in question. If an alert was determined to be legitimate, the EPA OSC was notified and dust suppression was implemented.

DustTrak run data were downloaded by START each day and were processed using a script written by START personnel. For each size fraction, the following values were calculated:

- Full run maximum value – single highest reading in the run file
- Full run minimum value – single lowest reading in the run file
- Full run time-weighted average (TWA) – TWA using the duration of the run as the averaging period
- Maximum 5-minute TWA – maximum value from every possible TWA with a 5-minute averaging period

Over the duration of the removal action, exceedances of the site-specific action level (5-minute TWA of 150 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$] for PM_{10}) occurred on 4 days, with a maximum 5-minute TWA value of 199.62 $\mu\text{g}/\text{m}^3$ for PM_{10} at the eastern air monitor on July 2, 2018. An air monitoring summary table with the maximum 5-minute TWA for the PM_{10} size fraction and the full run TWA for total particulates for each day is presented in Appendix B, Table 1. These values were chosen because the perimeter action level was based on 5-minute TWA for the PM_{10} size fraction and air samples were selected based on full run TWA for total particulates (see Section 3.2).

3.2 PERIMETER AIR SAMPLES

START collected daily perimeter air samples for lead during removal activities. If forecasted weather conditions seemed to prohibit sample collection, START would discuss the situation with the EPA OSC and decide whether to proceed with collecting samples. Air samples were co-located with DustTraks each day (Appendix A, Figure 4), and were collected using Gilian GilAir 5 sample pumps calibrated to a flow rate between 3 and 4 liters per minute. Pump flow rates were calibrated each morning before they were set up at their designated location and then again after they were turned off. Samples were submitted, along with daily field blanks, to EMSL Analytical, Inc. in Cinnaminson, New Jersey, under chain-of-custody for analysis of lead via National Institute for Occupational Safety and Health (NIOSH) analytical method 7300. For the first seven workdays, all air samples were submitted for laboratory analysis. After the first seven days, only the samples that were co-located with the two highest full run TWA DustTrak values for total particulates from the week were submitted. When perimeter air sample results exceeded the site-specific action level of 0.15 $\mu\text{g}/\text{m}^3$, START discussed the results with the EPA OSC and decided whether additional samples would be submitted. Over the duration of the removal, analytical results from four samples exceeded the action level, with a maximum lead concentration of 0.84 $\mu\text{g}/\text{m}^3$ from the northern air sample on June 8, 2018. When exceedances occurred, START alerted the OSC and ERRS response manager to determine appropriate mitigative actions. All exceedances occurred when material was being loaded into trucks, so additional dust suppression was implemented. Results for lead are presented in Appendix B, Table 2. Laboratory analytical results and the related data validation report are included in Attachment 1.

Analytical data from air samples were validated by a START chemist and submitted in a separate data validation report (Tetra Tech 2018c).

4.0 CONFIRMATION SOIL SAMPLING

Upon the completed excavation of a grid, START collected a 5-point composite soil sample from the bottom of the excavation. Five aliquots were collected by excavating soil no more than three inches past the excavation floor using a disposable trowel. One aliquot was collected from the center of the grid, and one from the midpoint between the center and each corner. The five aliquots were placed in a resealable plastic bag and homogenized before being transferred to laboratory-supplied sample containers. Samples were placed in a cooler on ice and submitted under chain-of-custody to CT Laboratories in Baraboo, Wisconsin, for analysis of Target Analyte List metals, which includes a list of 23 metals, via SW-846 Methods 6010C and 7471B. In total, 38 confirmation samples were collected over the duration of the removal action. Lead results from samples that exceeded the EPA RML are presented in Appendix A, Figure 5 and a summary table of confirmation soil sample results is presented in Appendix B, Table 3. Laboratory analytical results are included in Attachment 1. Analytical data from soil samples were validated by a START chemist and submitted in a separate data validation report (Tetra Tech 2018d).

Confirmation soil samples and in-situ XRF screening results were used to determine if high-visibility indicator barrier placement was required prior to the placement of clean backfill in the excavated area. If the concentration of lead in the soil exceeded 800 mg/kg at the bottom of the excavation, orange barrier fence was placed on the floor of the excavation prior to backfill. If the concentration of lead was below 800 mg/kg, no orange barrier fence was placed prior to backfill. Locations where lead-contaminated waste was left buried in place were recorded using a global positioning system (GPS) unit, and the owners of the respective properties (OU1 and OU3) agreed to file environmental restrictive covenants with the state as an institutional control against any future actions that could compromise the cap that the clean backfill provides. Over the duration of the removal action, several instances arose where the site conditions did not allow for the application of barrier fence above remaining lead-contaminated waste. These instances are described below.

4.1 OPERABLE UNIT 1

The total area where lead-contaminated waste remains capped in place in OU1 is presented in Appendix A, Figure 6. Areas where orange barrier fence was placed between the clean capping material and the lead-contaminated waste, as described in Section 4.0, is presented in Appendix A, Figure 7. In grids OU1-15 and OU1-19, confirmation sample results revealed lead above 800 mg/kg after backfill had

already been placed. These areas are considered restricted although the orange barrier fence is not present above the lead-contaminated waste (Appendix A, Figure 8). In two locations, concrete pads were already in place or were poured over contaminated waste (Appendix A, Figure 9). The structure on the west side of the site is a shelter for rock salt to be stored, and a concrete pad was already in place. The concrete floor of the pole barn in the center of the site was poured by the owner after EPA had excavated 2 feet of contaminated waste and placed capping material. The other two buildings on site are not considered restricted because XRF screening along the foundation of the building did not show contamination, and they were built prior to the burial of battery casings and the resulting contamination. In sections of the northwestern corner of OU1, it was determined that at least 2 feet of clean material already sat above lead-contaminated waste. These areas are considered restricted, although they were not excavated and orange barrier fence is not present (Appendix A, Figure 10).

4.2 OPERABLE UNIT 3

The total area where lead-contaminated waste remains capped in place in OU3 is presented in Appendix A, Figure 11. Besides the small area near OU3-W05, all areas of OU3 where lead-contaminated waste remains were covered with orange barrier fence prior to clean backfill being placed in the excavation. The lead concentration in the sample collected from the bottom of the excavation at OU3-W05 was 156 mg/kg, so the bottom of the excavation was not covered in orange barrier fence; however, the sample collected from the north sidewall (along the trail) was 1,100 mg/kg. The lead-contaminated soil is believed to extend under the walking path, but the pavement already in place forms an effective cap. Samples were also collected from Grids OU3-W04 and OU3-W06 to confirm that lead contamination did not extend laterally along the trail from OU3-W05 (Appendix A, Figure 5 and Appendix B, Table 3).

5.0 REMOVAL SUMMARY

The following is a summary of the removal activities completed from April 10 to July 6, 2018:

- In total, 8,190.09 tons of lead-contaminated waste was treated on site and shipped off site for disposal at the Twin Bridges recycling and disposal facility, a landfill operated by Waste Management, Inc. in Danville, Indiana.
- EPA worked in conjunction with the City of Indianapolis to remove trees and contaminated soil along a drainage ditch east of Eagle Creek flood control levee.
- EPA consulted engineers with the City of Indianapolis to ensure that all work near the levee maintained engineering standards.

- EPA collected daily perimeter air samples to monitor for the off-site migration of lead-contaminated dust. Samples exceeded the site-specific action level on four occasions and additional dust suppression was implemented as necessary.

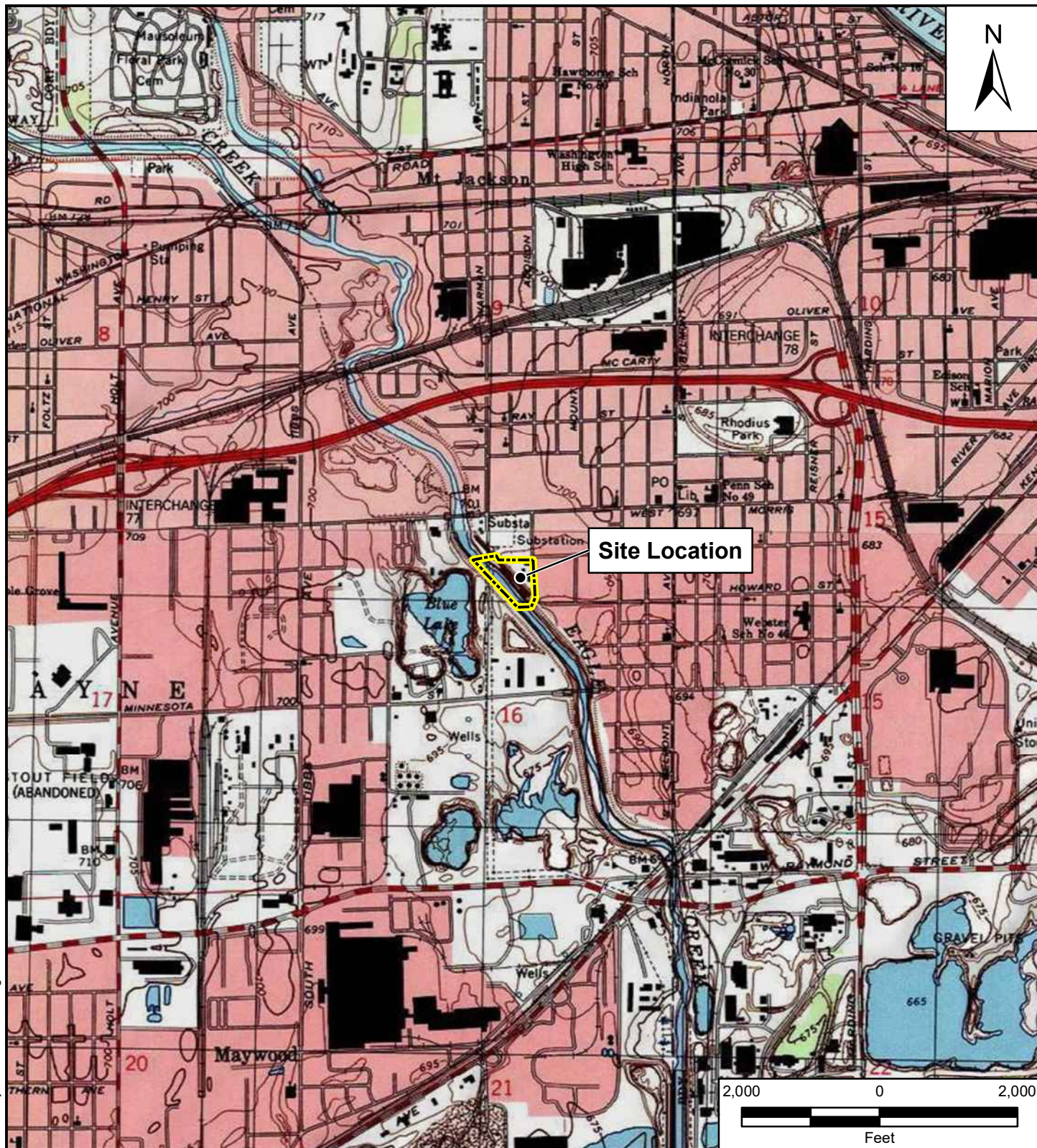
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- Tetra Tech. 2018c. “Data Validation Report – Indiana Battery Company Site.” Prepared for EPA under Contract No. EP-S5-13-01. August 21.
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APPENDIX A

FIGURES

- 1 – SITE LOCATION MAP
- 2 – SITE LAYOUT MAP
- 3 – REMOVAL GRID MAP
- 4 – PERIMETER AIR MONITORING AND SAMPLING LOCATIONS
- 5 – CONFIRMATION SAMPLE EXCEEDANCES
- 6 – OU1 RESTRICTED AREAS
- 7 – OU1 VISIBLE BARRIER
- 8 – OU1 NO VISIBLE BARRIER OVER BURIED WASTE
- 9 – OU1 CONCRETE PADS OVER BURIED WASTE
- 10 – OU1 EXISTING CAP OVER BURIED WASTE
- 11 – OU3 RESTRICTED AREAS



Reference Map



Legend

 Approximate Site Boundary

Indiana Battery Company
Indianapolis, Indiana

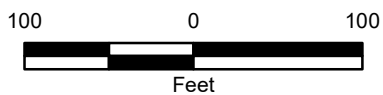
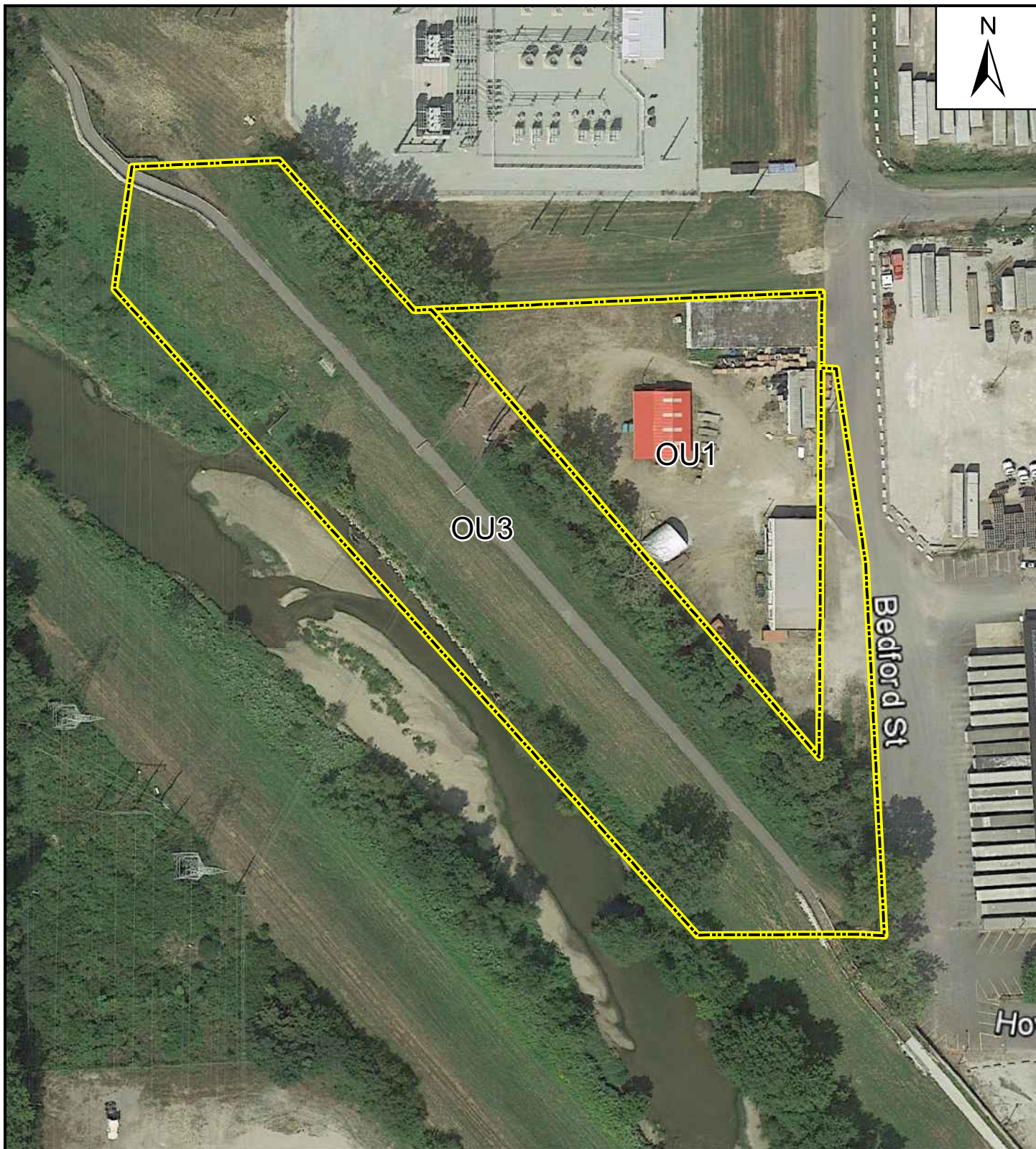
Figure 1 Site Location Map



Prepared For: EPA

Prepared By: Tetra Tech Inc.

Source: USGS 7.5-Minute Topographic Quadrangle Map:
Indianapolis East, IN 1998



Legend

 Operable Unit Boundaries

Source: ESRI

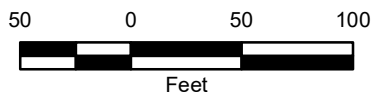
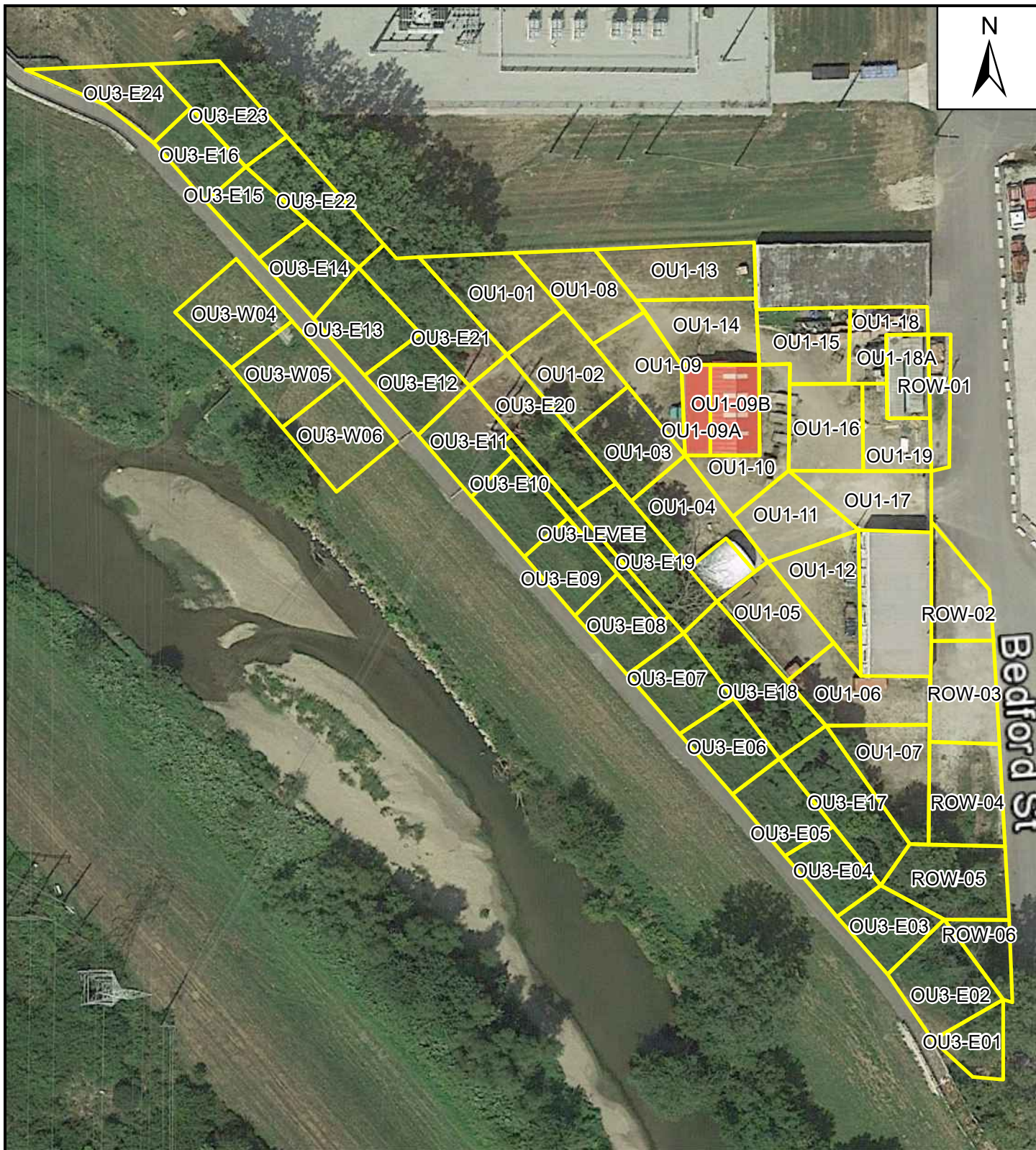
Indiana Battery Company
Indianapolis, Indiana

Figure 2 Site Layout Map



Prepared For: EPA Region 5

Prepared By: Tetra Tech



Legend

 Grid Boundaries

Source: ESRI

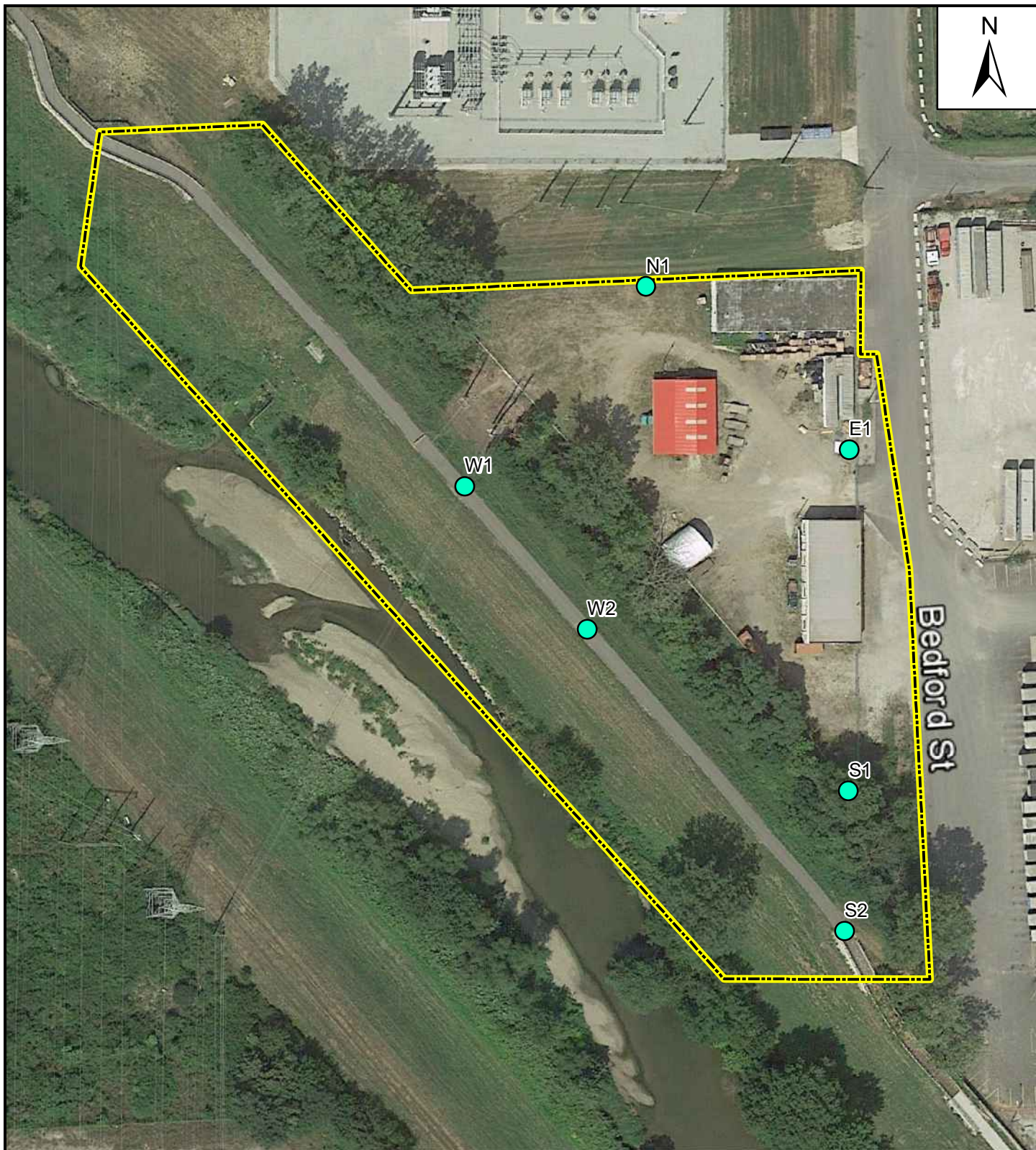
Indiana Battery Company
Indianapolis, Indiana

Figure 3 Removal Grid Map



Prepared For: EPA Region 5

Prepared By: Tetra Tech



75 0 75



Legend

● Air Monitoring Location

 Site Boundary

-Prior to 6/12/2018, four air monitoring locations were used each day (N1, E1, S1 or S2, and W1 or W2)
 -From 6/12/2018 to 7/3/2018, the number of locations was decreased to three, which were selected based on site work and weather conditions (N1, E1, and either S1, S2, W1, or W2)

Source: ESRI

Indiana Battery Company
 Indianapolis, Indiana

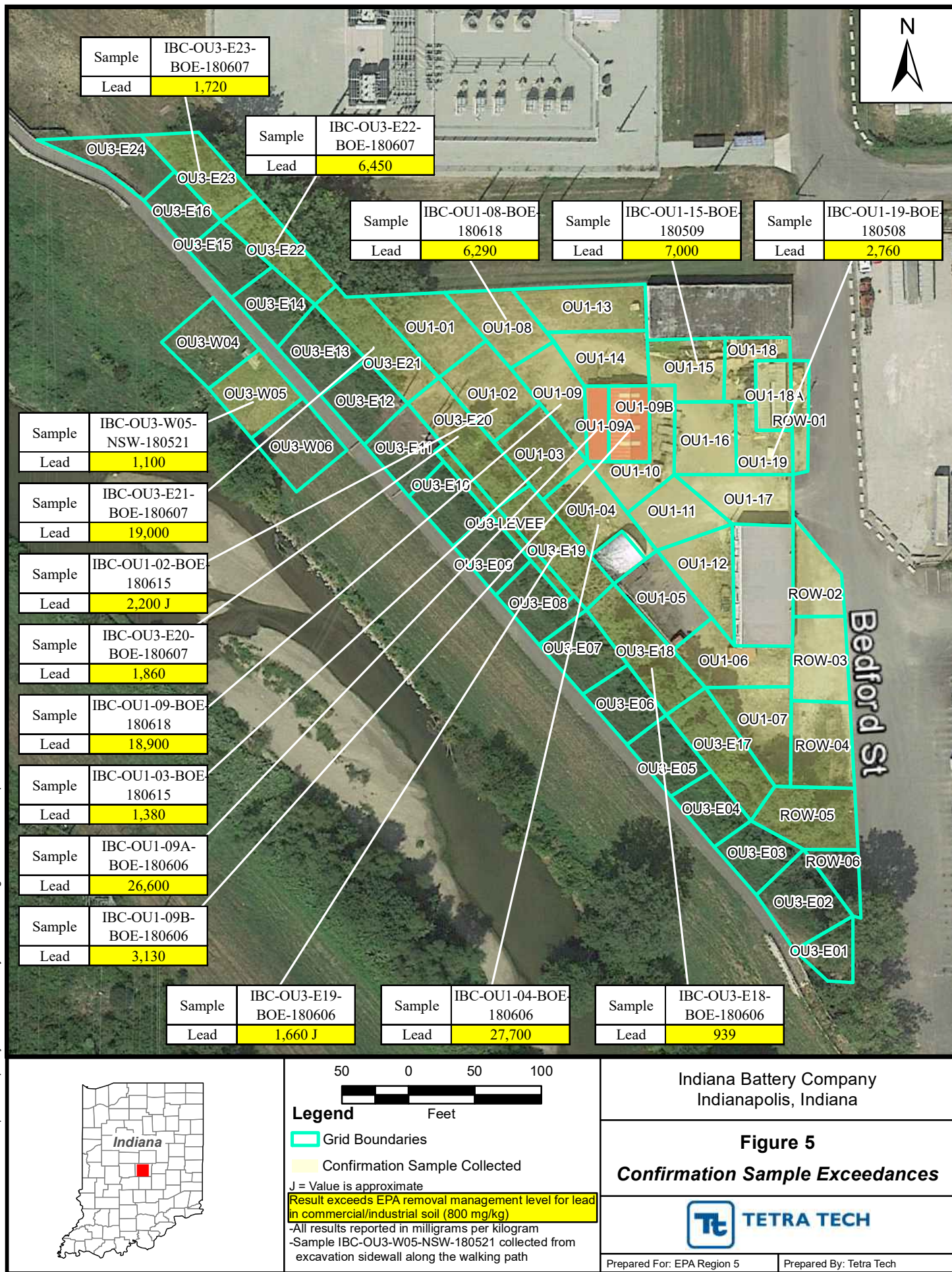
Figure 4
Perimeter Air Monitoring
and Sampling Locations

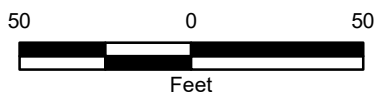
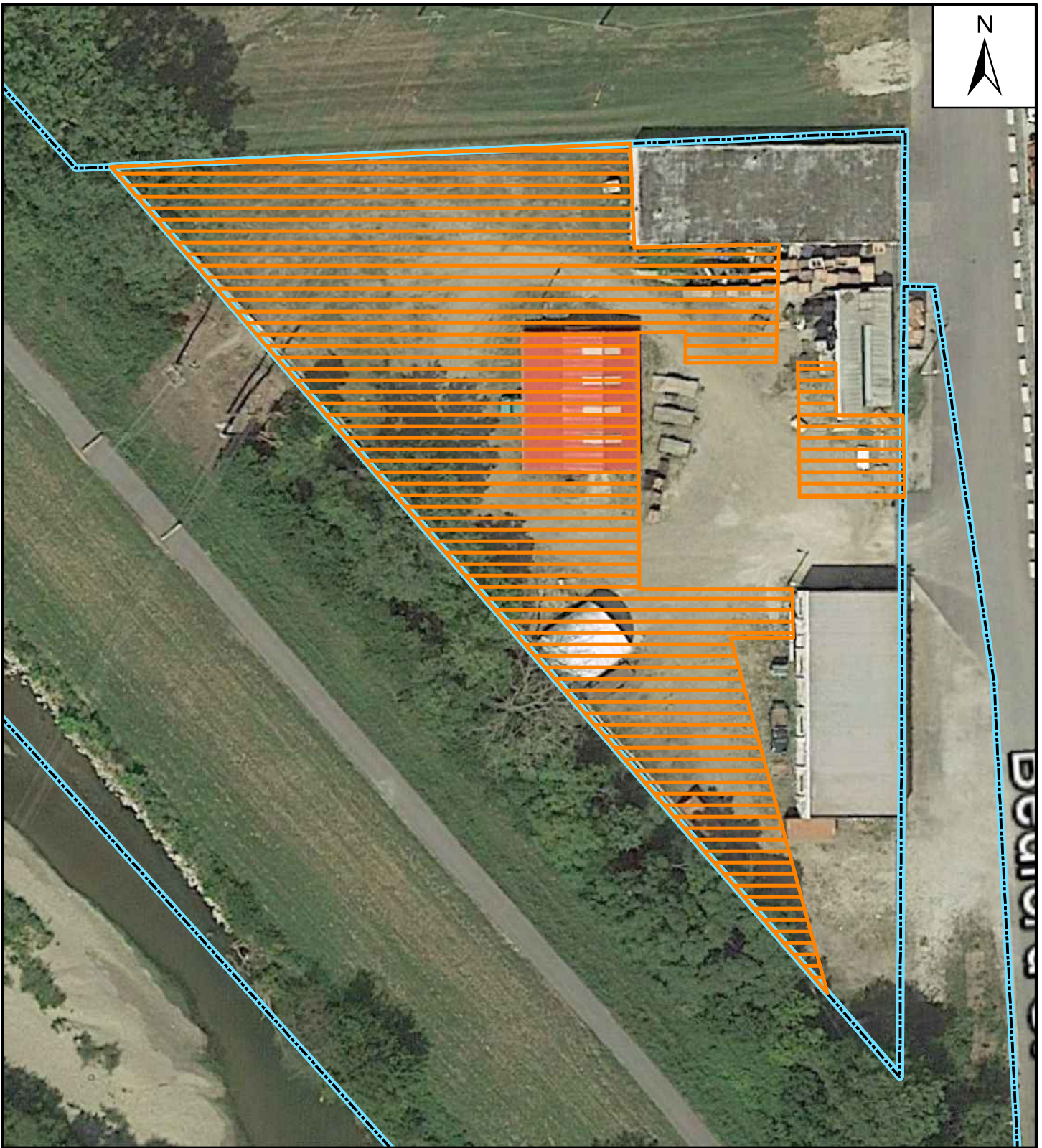


Prepared For: EPA Region 5

Prepared By: Tetra Tech

File Path: C:\Users\Lucas.Stamps\Desktop\Project Files\IN Battery Co\GIS\mxd\Fig5-ConfirmationSamples.mxd





Legend

-  Restricted Areas
-  Operable Unit Boundaries

Source: ESRI

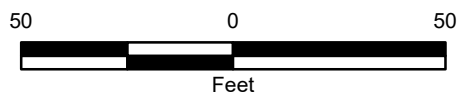
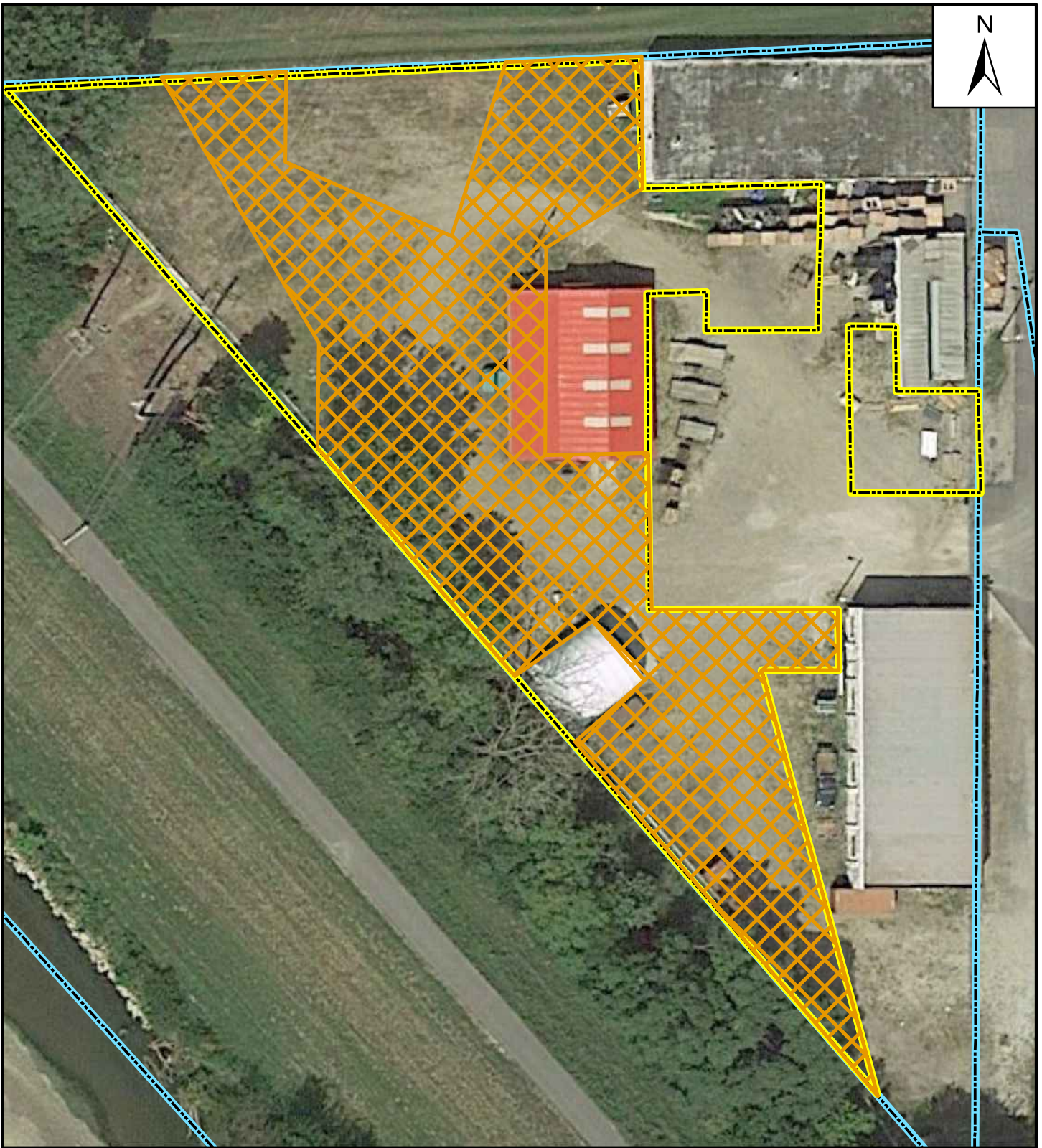
Indiana Battery Company
Indianapolis, Indiana

Figure 6
Operable Unit 1
Restricted Areas



Prepared For: EPA Region 5

Prepared By: Tetra Tech



Legend

-  Visible Barrier Placed
-  Restricted
-  Operable Unit Boundaries

Source: ESRI

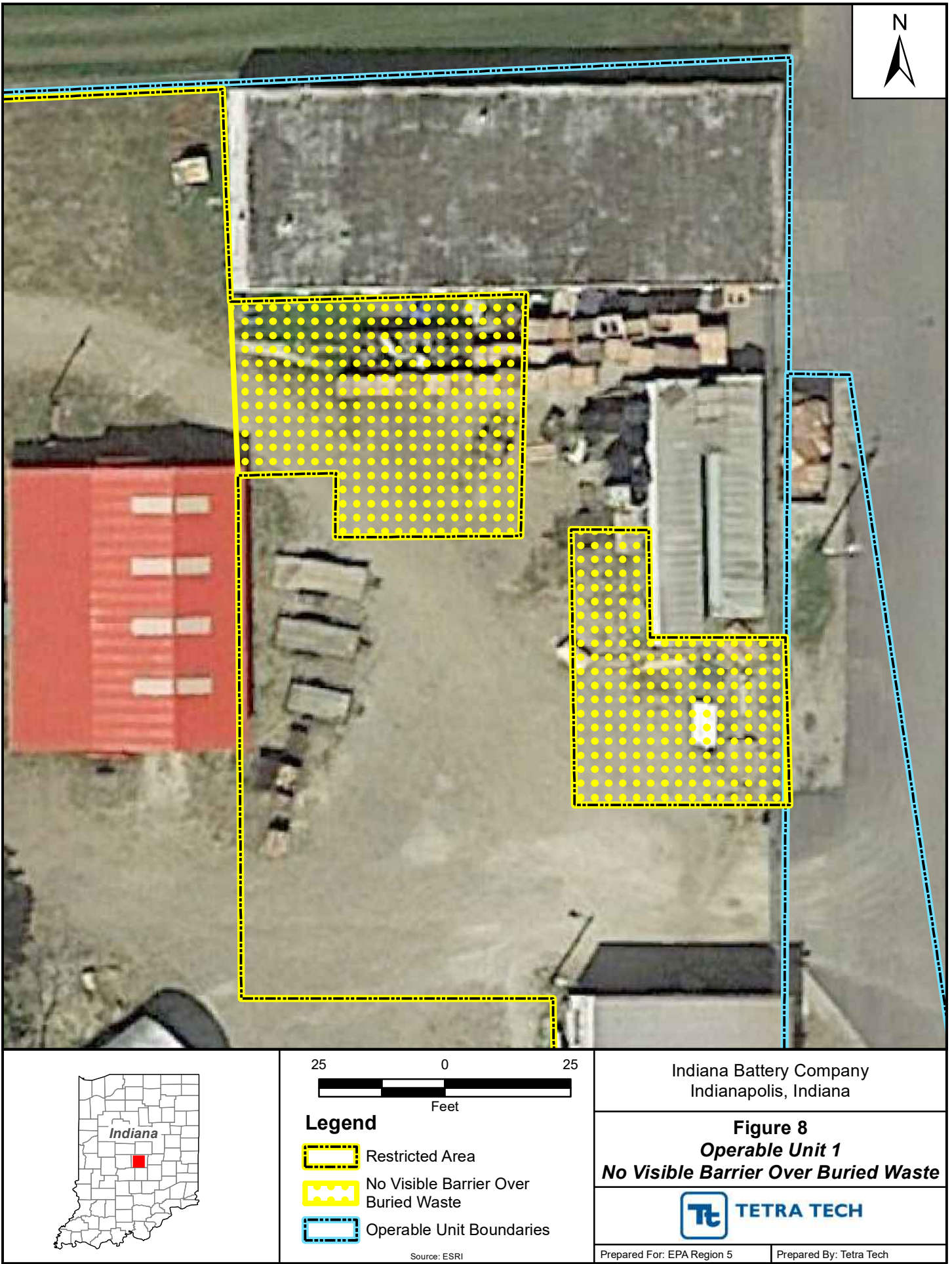
Indiana Battery Company
Indianapolis, Indiana

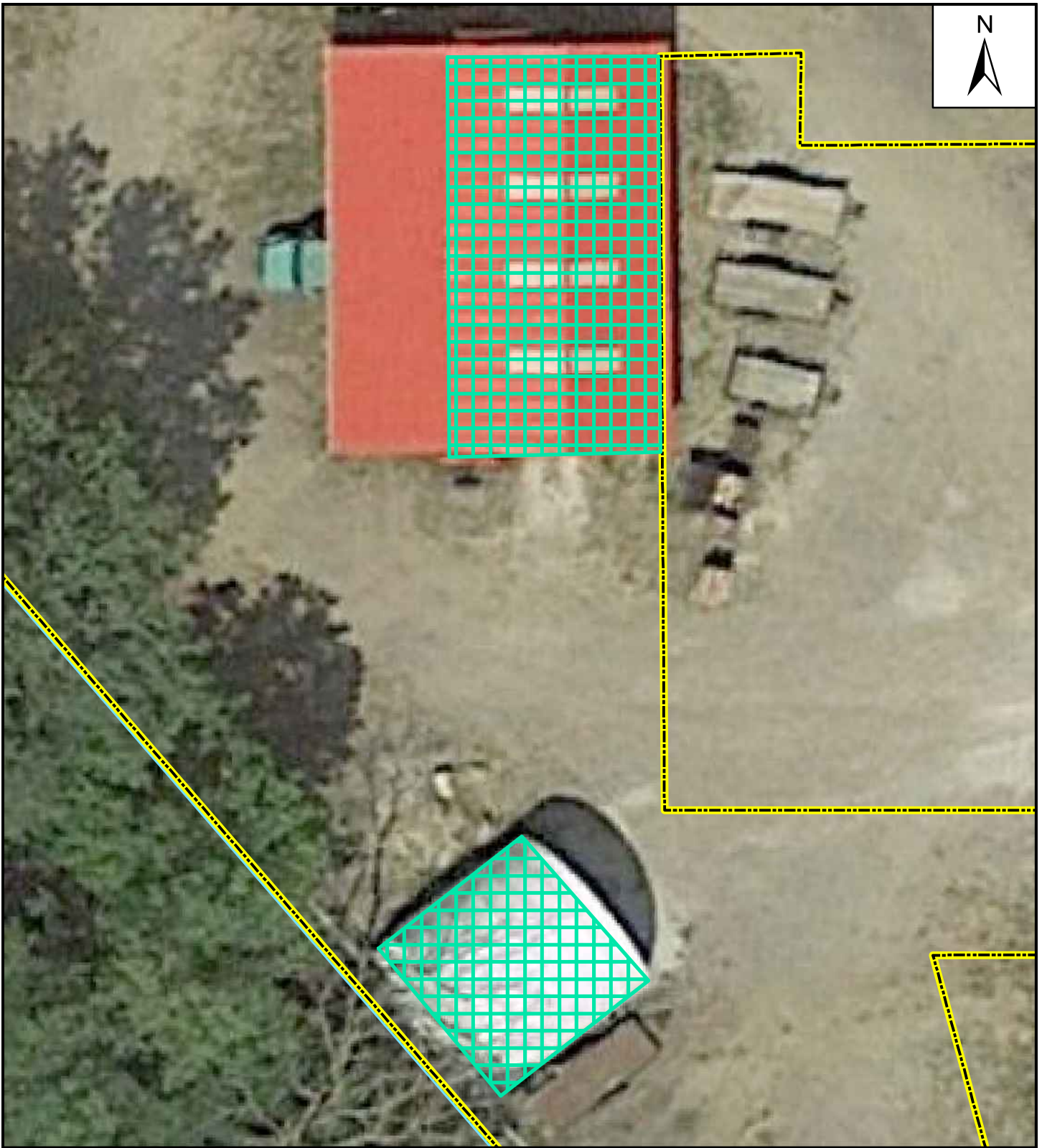
Figure 7 Operable Unit 1 Locations with Visible Barrier



Prepared For: EPA Region 5

Prepared By: Tetra Tech





Legend

-  Concrete Pads
-  Restricted
-  Operable Unit Boundaries

Source: ESRI

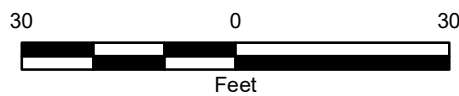
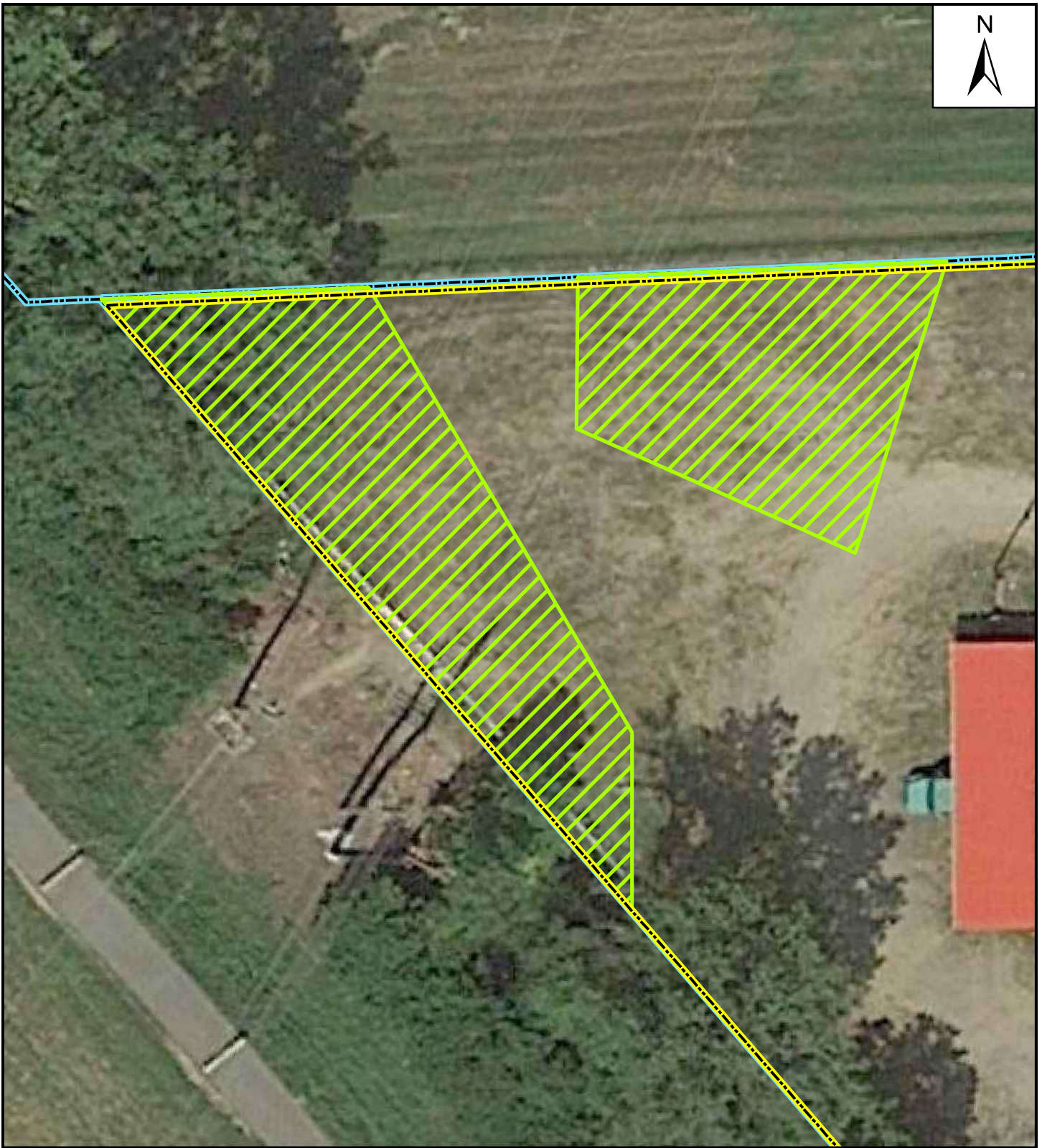
Indiana Battery Company
Indianapolis, Indiana

Figure 9
Operable Unit 1
Concrete Pads Over Buried Waste



Prepared For: EPA Region 5

Prepared By: Tetra Tech



Legend

-  Restricted Area
-  Existing Cap
-  Operable Unit Boundaries

Source: ESRI

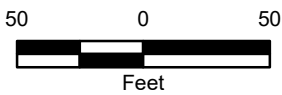
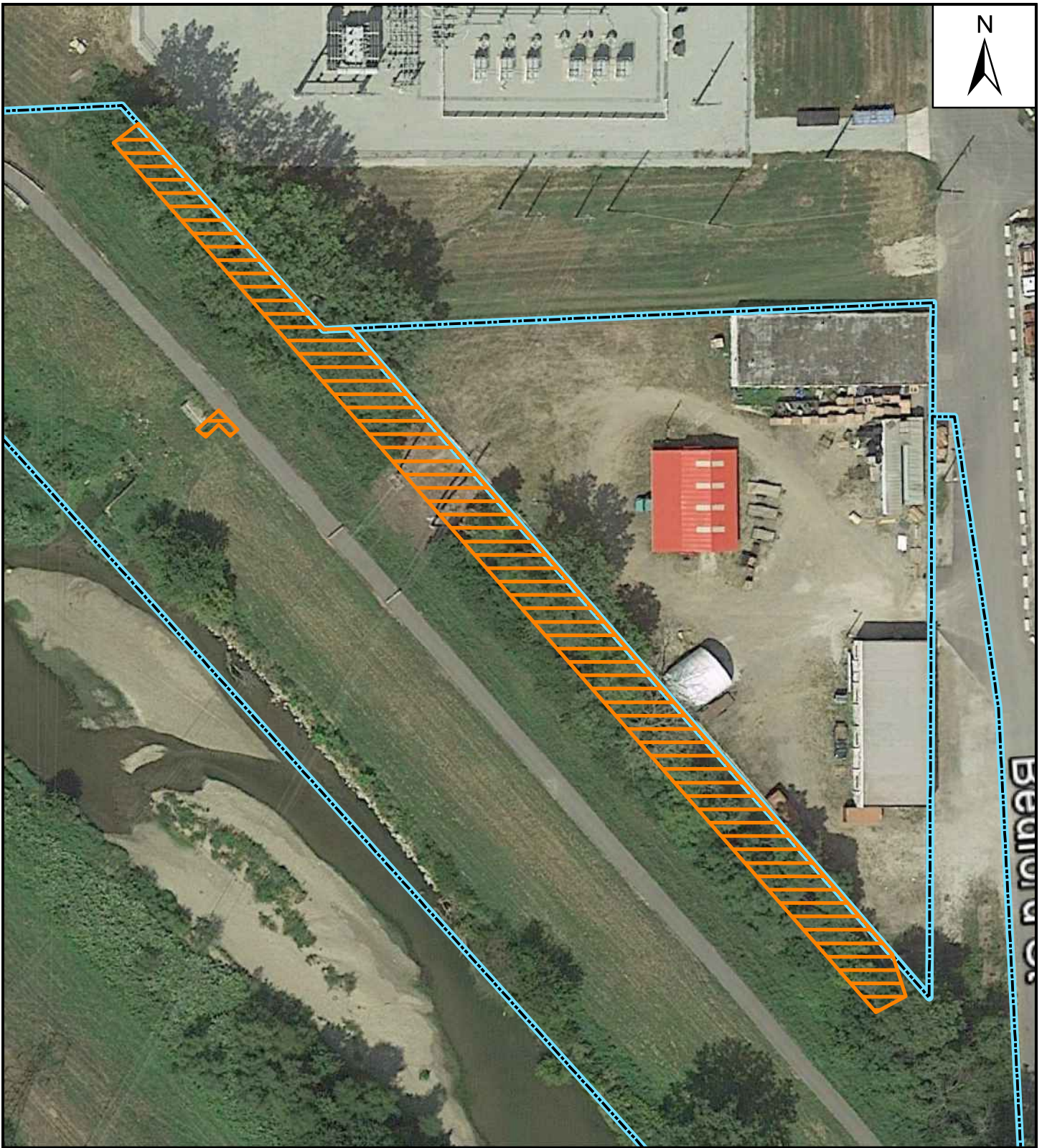
Indiana Battery Company
Indianapolis, Indiana

Figure 10 Operable Unit 1 Existing Cap Over Buried Waste



Prepared For: EPA Region 5

Prepared By: Tetra Tech



Legend

-  Restricted
-  Operable Unit Boundaries

Source: ESRI

Indiana Battery Company
Indianapolis, Indiana

Figure 11 Operable Unit 3 Restricted Areas



Prepared For: EPA Region 5

Prepared By: Tetra Tech

APPENDIX B
SUMMARY TABLES

Table 1
Air Monitoring Summary Table
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/12/2018 to 7/3/2018

Date and Air Monitor Location	Maximum 5-Minute Time-Weighted Average ($\mu\text{g}/\text{m}^3$ PM10)	Full Run Time-Weighted Average ($\mu\text{g}/\text{m}^3$ Total Particulate)
4/12/18		
E1	52.00	22.43
N1	34.10	12.52
S1	20.80	13.96
W1	38.56	24.16
4/13/18		
E1	30.79	20.36
N1	30.21	14.03
S1	28.59	18.79
W1	33.07	24.03
4/16/18		
E1	11.05	7.39
N1	10.28	5.31
S1	15.62	8.87
W1	40.38	9.02
4/17/18		
E1	32.05	11.02
N1	23.80	9.31
S1	18.10	12.26
W2	20.16	13.12
4/18/18		
E1	196.85	28.03
N1	159.87	12.89
S1	31.43	14.30
W2	35.18	16.77
4/19/18		
E1	64.59	11.29
N1	13.42	3.66
S1	147.20	18.68
W2	19.27	6.63
4/20/18		
E1	19.59	7.57
N1	21.66	3.82
S1	65.92	10.01
W2	17.18	7.98
4/23/18		
E1	28.82	13.81
N1	34.44	9.94

Table 1
Air Monitoring Summary Table
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/12/2018 to 7/3/2018

Date and Air Monitor Location	Maximum 5-Minute Time-Weighted Average ($\mu\text{g}/\text{m}^3$ PM10)	Full Run Time-Weighted Average ($\mu\text{g}/\text{m}^3$ Total Particulate)
S1	30.10	16.69
W2	52.02	18.75
4/25/18		
E1	38.43	28.07
N1	37.23	25.42
S1	44.30	28.76
W2	46.02	31.45
4/26/18		
E1	30.11	10.01
N1	17.92	3.89
S1	17.61	4.66
W2	44.16	10.23
4/27/18		
E1	43.30	21.04
N1	38.49	11.29
S1	54.28	14.10
W2	75.03	35.23
4/30/18		
E1	141.64	25.25
N1	86.42	13.43
S1	104.95	16.60
W2	98.57	25.94
5/1/18		
E1	99.72	18.32
N1	73.75	11.29
S1	134.03	10.92
W2	178.90	24.92
5/2/18		
E1	88.42	34.25
N1	38.69	20.30
S1	46.13	24.03
W2	102.87	82.52
5/3/18		
E1	31.25	24.38
N1	21.92	18.89
S1	26.15	21.79
W2	13.62	-74.58
5/4/18		

Table 1
Air Monitoring Summary Table
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/12/2018 to 7/3/2018

Date and Air Monitor Location	Maximum 5-Minute Time-Weighted Average ($\mu\text{g}/\text{m}^3$ PM10)	Full Run Time-Weighted Average ($\mu\text{g}/\text{m}^3$ Total Particulate)
E1	62.77	21.96
N1	26.67	10.46
S1	25.70	10.84
W2	57.23	-100.47
5/7/18		
E1	21.74	13.02
N1	15.69	3.83
S1	19.18	7.71
W2	17.80	-34.88
5/8/18		
E1	198.82	23.45
N1	46.59	6.94
S1	25.38	9.78
W2	43.07	24.47
5/9/18		
E1	67.11	30.16
N1	40.30	15.24
S1	56.20	20.24
W2	59.21	9.62
5/10/18		
E1	77.43	23.26
N1	35.39	5.93
S1	40.97	7.26
W2	41.19	-71.16
5/11/18		
E1	46.61	26.18
N1	41.72	16.08
S1	30.57	17.52
W2	20.15	-3.46
5/14/18		
E1	68.33	38.69
N1	64.11	25.90
S1	55.66	29.93
W2	82.57	-30.29
5/15/18		
E1	47.20	16.31
N1	36.85	8.70
S1	26.89	7.54

Table 1
Air Monitoring Summary Table
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/12/2018 to 7/3/2018

Date and Air Monitor Location	Maximum 5-Minute Time-Weighted Average ($\mu\text{g}/\text{m}^3$ PM10)	Full Run Time-Weighted Average ($\mu\text{g}/\text{m}^3$ Total Particulate)
W2	25.92	4.60
5/16/18		
E1	46.36	22.57
N1	28.77	14.72
S1	41.56	20.50
W2	28.87	11.06
5/17/18		
E1	43.59	28.71
N1	35.44	18.11
S1	41.18	25.94
W2	138.33	33.78
5/18/18		
E1	40.05	21.92
N1	34.67	14.51
S1	29.94	19.78
W2	80.41	21.90
5/21/18		
E1	40.55	28.96
N1	44.79	22.70
S1	41.87	26.32
W2	33.00	4.49
5/22/18		
E1	58.26	34.70
N1	77.59	30.80
S1	59.28	29.15
W2	60.95	14.87
5/23/18		
E1	23.54	12.68
N1	17.51	4.43
S1	57.66	5.51
W2	19.72	-0.55
5/24/18		
E1	60.74	21.00
N1	58.34	12.37
S1	26.97	8.65
W2	22.36	4.19
5/29/18		
E1	100.66	20.69

Table 1
Air Monitoring Summary Table
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/12/2018 to 7/3/2018

Date and Air Monitor Location	Maximum 5-Minute Time-Weighted Average ($\mu\text{g}/\text{m}^3$ PM10)	Full Run Time-Weighted Average ($\mu\text{g}/\text{m}^3$ Total Particulate)
N1	89.36	13.10
S2	92.42	14.26
W2	48.26	8.93
5/30/18		
E1	22.80	11.33
N1	20.24	5.54
S2	10.67	5.28
W2	22.56	13.85
5/31/18		
E1	128.25	25.70
N1	76.97	16.51
S2	84.00	19.09
W2	13.92	-8.81
6/1/18		
E1	60.84	25.41
N1	64.61	18.10
S2	63.97	17.13
6/4/18		
E1	26.67	7.98
N1	5.75	3.07
S2	48.98	6.77
W2	53.39	9.03
6/5/18		
E1	30.47	14.59
N1	27.10	4.74
S2	66.18	9.61
W2	38.61	20.00
6/6/18		
E1	18.08	11.77
N1	22.29	4.14
S2	19.39	5.08
W2	12.62	6.83
6/7/18		
E1	63.66	23.22
N1	61.08	12.04
S2	28.84	9.61
W2	22.76	17.32
6/8/18		

Table 1
Air Monitoring Summary Table
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/12/2018 to 7/3/2018

Date and Air Monitor Location	Maximum 5-Minute Time-Weighted Average ($\mu\text{g}/\text{m}^3$ PM10)	Full Run Time-Weighted Average ($\mu\text{g}/\text{m}^3$ Total Particulate)
E1	95.70	35.57
N1	58.84	24.69
S2	47.21	20.56
W2	41.25	6.66
6/11/18		
E1	21.87	11.82
N1	41.94	11.18
S2	19.51	7.39
6/12/18		
E1	48.49	17.19
N1	73.25	15.63
W2	22.00	11.29
6/13/18		
E1	46.18	32.46
N1	69.85	22.34
S1	56.49	18.60
6/14/18		
E1	47.25	15.62
W2	71.16	5.18
6/15/18		
E1	72.31	21.42
N1	41.48	8.50
W2	25.80	10.49
6/18/18		
E1	126.49	42.65
N1	105.38	28.04
W2	114.52	29.00
6/19/18		
E1	64.75	29.04
N1	74.61	17.99
W2	64.73	20.09
6/20/18		
E1	55.43	19.07
N1	21.75	8.70
S2	29.21	9.42
6/25/18		
E1	110.66	19.50
N1	123.43	13.12

Table 1
Air Monitoring Summary Table
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/12/2018 to 7/3/2018

Date and Air Monitor Location	Maximum 5-Minute Time-Weighted Average ($\mu\text{g}/\text{m}^3$ PM10)	Full Run Time-Weighted Average ($\mu\text{g}/\text{m}^3$ Total Particulate)
W2	22.61	12.08
6/26/18		
E1	38.16	31.86
N1	38.90	26.83
W2	38.58	29.35
6/27/18		
E1	28.06	15.78
N1	22.56	11.05
W2	24.54	13.41
6/28/18		
E1	38.15	22.98
N1	23.21	10.95
W2	36.80	14.41
6/29/18		
E1	68.48	30.15
N1	24.93	13.55
W2	40.48	15.90
7/2/18		
E1	199.62	26.68
N1	21.69	10.49
S2	29.89	15.57
7/3/18		
E1	81.70	26.01
N1	29.62	14.10
W2	36.11	14.11
Notes:		
$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter		
Exceeds site specific action level		

Table 2
Perimeter Air Sample Results
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/12/2018 to 7/3/2018

Sample ID	Date	Location	Lead ($\mu\text{g}/\text{m}^3$)
IBC-N1-180412	4/12/2018	N1	<0.20
IBC-E1-180412	4/12/2018	E1	<0.20
IBC-S1-180412	4/12/2018	S1	<0.20
IBC-W1-180412	4/12/2018	W1	<0.20
IBC-N1-180413	4/13/2018	N1	<0.18
IBC-E1-180413	4/13/2018	E1	<0.18
IBC-S1-180413	4/13/2018	S1	<0.19
IBC-W1-180413	4/13/2018	W1	<0.17
IBC-N1-180416	4/16/2018	N1	<0.13
IBC-E1-180416	4/16/2018	E1	<0.13
IBC-S1-180416	4/16/2018	S1	<0.14
IBC-W1-180416	4/16/2018	W1	<0.13
IBC-N1-180417	4/17/2018	N1	<0.12
IBC-E1-180417	4/17/2018	E1	<0.12
IBC-S1-180417	4/17/2018	S1	<0.12
IBC-W2-180417	4/17/2018	W2	<0.12
IBC-N1-180418	4/18/2018	N1	<0.12
IBC-E1-180418	4/18/2018	E1	<0.12
IBC-S1-180418	4/18/2018	S1	<0.12
IBC-W2-180418	4/18/2018	W2	<0.12
IBC-N1-180419	4/19/2018	N1	<0.12
IBC-E1-180419	4/19/2018	E1	<0.12
IBC-S1-180419	4/19/2018	S1	<0.12
IBC-W2-180419	4/19/2018	W2	<0.12
IBC-N1-180420	4/20/2018	N1	<0.12
IBC-E1-180420	4/20/2018	E1	<0.12
IBC-S1-180420	4/20/2018	S1	<0.12
IBC-W2-180420	4/20/2018	W2	<0.12
IBC-E1-180427	4/27/2018	E1	<0.13
IBC-W2-180427	4/27/2018	W2	<0.13
IBC-E1-180502	5/2/2018	E1	<0.13
IBC-W2-180502	5/2/2018	W2	<0.13
IBC-E1-180509	5/9/2018	E1	<0.12
IBC-E1-180511	5/11/2018	E1	<0.15
IBC-E1-180514	5/14/2018	E1	0.14
IBC-W2-180517	5/17/2018	W2	<0.13
IBC-N1-180522	5/22/2018	N1	0.5
IBC-E1-180522	5/22/2018	E1	<0.12
IBC-S1-180523	5/23/2018	S1	<0.11
IBC-W2-180524	5/24/2018	W2	<0.13
IBC-E1-180531	5/31/2018	E1	<0.11
IBC-E1-180601	6/1/2018	E1	<0.12
IBC-E1-180604	6/4/2018	E1	<0.11

Table 2
Perimeter Air Sample Results
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/12/2018 to 7/3/2018

Sample ID	Date	Location	Lead ($\mu\text{g}/\text{m}^3$)
IBC-E1-180605	6/5/2018	E1	0.14
IBC-W2-180606	6/6/2018	W2	<0.12
IBC-N1-180607	6/7/2018	N1	0.41
IBC-N1-180608	6/8/2018	N1	0.84
IBC-E1-180608	6/8/2018	E1	0.13
IBC-N1-180613	6/13/2018	N1	0.22
IBC-E1-180613	6/13/2018	E1	<0.10
IBC-N1-180614	6/14/2018	N1	<0.096
IBC-E1-180618	6/18/2018	E1	<0.11
IBC-E1-180619	6/19/2018	E1	<0.10
IBC-E1-180628	6/28/2018	E1	<0.11
IBC-E1-180629	6/29/2018	E1	<0.11
IBC-E1-180702	7/2/2018	E1	<0.10
IBC-E1-180703	7/3/2018	E1	<0.11

Notes:

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

Detected above laboratory reporting limit

Exceeds site-specific action level ($0.15 \mu\text{g}/\text{m}^3$)

Table 3
Soil Sample Results
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/19/2018 to 7/3/2018

Sample ID	EPA RML	IBC-OU1-01- BOE-180615	IBC-OU1-02- BOE-180615	IBC-OU1-03- BOE-180615	IBC-OU1-04- BOE-180606	IBC-OU1-06- BOE-180419
Sample Date		6/15/2018	6/15/2018	6/15/2018	6/6/2018	4/19/2018
Sample Grid		OU1-01	OU1-02	OU1-03	OU1-04	OU1-06
Analyte	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	3,400,000	5,020	4,740	6,660	3,850	4,500
Antimony	1,400	0.97 J-	17.4 J	6.5	1200	0.8 J
Arsenic	300	3.7	6.7 J	6.7	58.5	4.8
Barium	650,000	81.8	74.5	90	65.4	54.5
Beryllium	6,900	0.43 J	0.27 J	0.45	0.023 J	0.11
Cadmium	2,900	0.8 J-	0.86 J	0.96	4.3	< 0.047
Calcium	NL	83,200 J	77,500 J	75,300	79,600	43,200
Chromium	NL	5.9	7.4	9.4	11.1	7.9
Cobalt	1,000	2.7 J-	3.1	3.9	3.3	4.5
Copper	140,000	25.4 J+	18.5 J	57.3	18.8	12.5
Iron	2,500,000	9,330 J	10,400	11,900	8,490	8,580
Lead	800	215 J	2,200 J	1,380	27,700	25.3
Magnesium	NL	13,800 J-	13,000	14,800	20,100	18,600
Manganese	77,000	296	328	392	329	287
Mercury	140	0.097	0.26 J+	0.018	0.09	0.027
Nickel	33,000	7.4 J-	8.1	10.6	9.6	9.7
Potassium	NL	538	525	635	419	542
Selenium	18,000	< 0.44	< 0.43	< 0.45	< 0.42	1.2
Silver	18,000	< 0.11	< 0.11	< 0.11	2.6	< 0.12
Sodium	NL	129 J	124	203	422	84.6
Thallium	35	< 0.53	< 0.52	< 0.54	< 0.51	0.68
Vanadium	17,000	10.1 J	11.3	15.3	8.6	13.2
Zinc	1,100,000	68.1 J	91.7 J	69.7	130	45.6

Table 3
Soil Sample Results
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/19/2018 to 7/3/2018

Sample ID	EPA RML	IBC-OU1-07- BOE-180419	IBC-OU1-08- BOE-180618	IBC-OU1-09- BOE-180618	IBC-OU1-09A- BOE-180606	IBC-OU1-09B- BOE-180606
Sample Date		4/19/2018	6/18/2018	6/18/2018	6/6/2018	6/6/2018
Sample Grid		OU1-07	OU1-08	OU1-09	OU1-09A	OU1-09B
Analyte	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	3,400,000	3,840 J	5,540	5,410	3,530	5,240
Antimony	1,400	0.4 J-	14.4	828	971	12.3
Arsenic	300	2.1	10.8	34.5	65.8	6.4
Barium	650,000	38.1	92.2	64.3	52.4	69.6
Beryllium	6,900	0.16 J	0.21	0.084	0.079	< 0.047
Cadmium	2,900	< 0.046	1.7	0.51	1.8	1.5
Calcium	NL	32,100 J	62,100	65,700	80,600	67,900
Chromium	NL	6.6	15.4	8.6	13.5	23.8
Cobalt	1,000	3.6	3.9	3.5	2.7	3.1
Copper	140,000	8.3 J-	66.3	< 0.44	80	119
Iron	2,500,000	6,820 J	12,700	9,880	10,500	9,600
Lead	800	14.5 J	6,290	18,900	26,600	3,130
Magnesium	NL	15,300 J	12,400	11,400	22,300	18,100
Manganese	77,000	241 J	362	367	484	304
Mercury	140	0.0042 J	0.1	0.058	0.099	0.27
Nickel	33,000	8.3 J	11.3	8.6	7.6	8.5
Potassium	NL	424	657	524	382	641
Selenium	18,000	0.44 J	< 0.45	< 0.44	0.54	< 0.47
Silver	18,000	< 0.11	0.53	1.7	1.8	5.5
Sodium	NL	77.7	122	141	143	418
Thallium	35	< 0.55	< 0.53	< 0.53	< 0.51	< 0.56
Vanadium	17,000	9.9 J	12.5	11.7	9.8	11.5
Zinc	1,100,000	33.5 J	373	61.2	271	219

Table 3
Soil Sample Results
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/19/2018 to 7/3/2018

Sample ID	EPA RML	IBC-OU1-10- BOE-180509	IBC-OU1-11- BOE-180509	IBC-OU1-12- BOE-180425	IBC-OU1-13- BOE-180615	IBC-OU1-14- BOE-180618
Sample Date		5/9/2018	5/9/2018	4/25/2018	6/15/2018	6/18/2018
Sample Grid		OU1-10	OU1-11	OU1-12	OU1-13	OU1-14
Analyte	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	3,400,000	4,100	7,460	4,440	8,530	6,810
Antimony	1,400	1.8	0.66 J	0.76 J	0.19 J	0.72 J
Arsenic	300	4.4	3.4	3	3.8	3.4
Barium	650,000	49.6	87.6	44.7	77.8	67.3
Beryllium	6,900	0.14	0.27	0.087	0.23	0.21
Cadmium	2,900	0.038 J	0.079	< 0.048	0.65	0.53
Calcium	NL	63,700	19,800	27,100	47,900	49,500
Chromium	NL	8.4	13.9	7.6	11.9	10.2
Cobalt	1,000	3.5	6.2	4	5.5	4.5
Copper	140,000	15.2	16.7	9.5	17.8	22.5
Iron	2,500,000	7,800	12,200	8,010	13,900	11,600
Lead	800	233	56.9	27.5	177	324
Magnesium	NL	24,100	10,100	12,200	11,100	13,900
Manganese	77,000	242	602	294	565	481
Mercury	140	0.26	0.17	0.013	0.091	0.35
Nickel	33,000	8.6	14.2	9.3	12.2	10.3
Potassium	NL	491	743	453	675	678
Selenium	18,000	0.61	0.7	0.32 J	< 0.46	< 0.43
Silver	18,000	0.3	0.37	< 0.12	0.21	0.18 J+
Sodium	NL	100	79.3	61.2	68.6	343
Thallium	35	< 0.55	< 0.53	< 0.58	< 0.55	< 0.52
Vanadium	17,000	12.2	17.4	11.8	16.7	13.7
Zinc	1,100,000	99	62.2	39.9	59.4	63.5

Table 3
Soil Sample Results
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/19/2018 to 7/3/2018

Sample ID	EPA RML	IBC-OU1-15- BOE-180509	IBC-OU1-16- BOE-180509	IBC-OU1-17- BOE-180508	IBC-OU1-18- BOE-180508	IBC-OU1-18A- BOE-180622
Sample Date		5/9/2018	5/9/2018	5/8/2018	5/8/2018	6/22/2018
Sample Grid		OU1-15	OU1-16	OU1-17	OU1-18	OU1-18A
Analyte	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	3,400,000	8,410	6,590	5,530	6,430	6,330
Antimony	1,400	104	0.99	0.55 J	0.72 J	0.84 J
Arsenic	300	16.5	9.5	4.2	3.5	7.5
Barium	650,000	86.3	128	67	74.3	70.5
Beryllium	6,900	0.28	0.41	0.29	0.25	0.74
Cadmium	2,900	0.45	0.19	0.22	< 0.046	< 0.049
Calcium	NL	37,100	46,900	57,400	24,400	22,300
Chromium	NL	13.1	11.4	9.5	9.6	10.8
Cobalt	1,000	6.2	6.3	4.6	5.6	4.6
Copper	140,000	19.5	46.6	24.5	14.2	22.3
Iron	2,500,000	14,100	11,800	9,780	10,800	14,300
Lead	800	7,000	256	78.7 J	137	159
Magnesium	NL	13,100	12,600	15,700	11,500	5,350
Manganese	77,000	359	536	330	444	423
Mercury	140	0.3	0.82	0.35	0.18	0.18
Nickel	33,000	16	12.4	10.8	12.4	11.6
Potassium	NL	923	799	675	634	689
Selenium	18,000	0.51	0.73	0.71	0.83	0.18 J
Silver	18,000	0.41	0.27	0.16	0.029 J	< 0.12
Sodium	NL	90.5	116	142	78	118
Thallium	35	< 0.58	< 0.56	< 0.51	< 0.55	< 0.59
Vanadium	17,000	20.4	19.1	15.2	15.9	19
Zinc	1,100,000	84.7	182	94.4	58.9	54.7

Table 3
Soil Sample Results
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/19/2018 to 7/3/2018

Sample ID	EPA RML	IBC-OU1-19- BOE-180508	IBC-OU3-E17- BOE-180606	IBC-OU3-E18- BOE-180606	IBC-OU3-E19- BOE-180606	IBC-OU3-E20- BOE-180607
Sample Date		5/8/2018	6/6/2018	6/6/2018	6/6/2018	6/7/2018
Sample Grid		OU1-19	OU3-E17	OU3-E18	OU3-E19	OU3-E20
Analyte	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	3,400,000	7,620	5,070	5,250	4,410 J	6,230
Antimony	1,400	1.2	9	2.1	7.7 J-	6
Arsenic	300	4.3	6.7	7.5	8.4	6.2
Barium	650,000	103	87	190	45.2	59.5
Beryllium	6,900	0.39	< 0.045	< 0.04	< 0.043	< 0.049
Cadmium	2,900	0.096	5.3	3.4	2.7 J	2.7
Calcium	NL	28,200	115,000	65,900	67,000 J	85,000
Chromium	NL	11.6	15.1	20.4	23.2 J-	11.5
Cobalt	1,000	6.3	3.8	3.3	3.3 J-	3.6
Copper	140,000	17.9	99.7	60.2	78.4 J	58.9
Iron	2,500,000	12,400	10,200	11,500	15,200 J	9,660
Lead	800	2,760	704	939	1,660 J	1,860
Magnesium	NL	13,000	33,500	25,500	19,200 J+	24,700
Manganese	77,000	510	386	337	377 J	437
Mercury	140	0.36	0.093	0.069	0.051	0.091
Nickel	33,000	14	11.8	9.8	13 J-	10.3
Potassium	NL	811	608	555	473 J	568
Selenium	18,000	0.76	< 0.45	< 0.4	< 0.43	< 0.49
Silver	18,000	0.12	0.25	0.13	0.2	1.2
Sodium	NL	108	462	507	159 J	398
Thallium	35	< 0.52	< 0.54	< 0.48	< 0.51	< 0.58
Vanadium	17,000	18.3	11.1	11.2	11.7	12.8
Zinc	1,100,000	85.9	264	229	99.4 J+	154

Table 3
Soil Sample Results
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/19/2018 to 7/3/2018

Sample ID	EPA RML	IBC-OU3-E21- BOE-180607	IBC-OU3-E22- BOE-180607	IBC-OU3-E23- BOE-180607	IBC-OU3- LEVEE-BOE- 180618	IBC-OU3- W04-180510
Sample Date		6/7/2018	6/7/2018	6/7/2018	6/18/2018	5/10/2018
Sample Grid		OU3-E21	OU3-E22	OU3-E23	OU3-LEVEE	OU3-W04
Analyte	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	3,400,000	6,080	4,780	3,740	5,320	5480 J
Antimony	1,400	37.5	12.1	4.2	5.1	0.8 J-
Arsenic	300	10.6	8	4.8	4.8	5.6
Barium	650,000	86.1	65.3	24.1	61.9	56.9 J+
Beryllium	6,900	< 0.043	0.033 J	< 0.041	< 0.046	0.21 J
Cadmium	2,900	3.4	4	0.71	0.51	< 0.22
Calcium	NL	67,300	66,600	80,000	56,900	57,700 J
Chromium	NL	12.7	9.6	9.3	19.5	13.9 J+
Cobalt	1,000	3.8	3.1	2.7	2.9	5.5
Copper	140,000	14.4	23.7	17.8	46.8	37.1 J+
Iron	2,500,000	10,500	9,190	7,710	11,800	13,900 J
Lead	800	19,000	6,450	1,720	427	431 J
Magnesium	NL	23,500	21,300	26,800	10,500	21,300 J-
Manganese	77,000	296	299	245	389	442 J
Mercury	140	0.16	0.092	0.04	0.071	0.046
Nickel	33,000	11.7	13.6	7.2	8.7	23.1
Potassium	NL	586	526	444	572	637
Selenium	18,000	< 0.43	< 0.42	< 0.41	< 0.46	0.5 J
Silver	18,000	1.3	0.45	0.16	0.62	0.36 J+
Sodium	NL	358	351	299	164	84.4
Thallium	35	< 0.52	< 0.51	< 0.5	< 0.56	< 2.6
Vanadium	17,000	14	13.4	10.8	10.5	15.5 J+
Zinc	1,100,000	158	169	50.6	72.3	117 J

Table 3
Soil Sample Results
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/19/2018 to 7/3/2018

Sample ID	EPA RML	IBC-OU3-W05-BOE-180521	IBC-OU3-W05-NSW-180521	IBC-OU3-W06-180510	IBC-ROW-01-BOE-180629	IBC-ROW-02-BOE-180702
Sample Date		5/21/2018	5/21/2018	5/10/2018	6/29/2018	7/2/2018
Sample Grid		OU3-W05	OU3-W05	OU3-W06	ROW-01	ROW-02
Analyte	Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Aluminum	3,400,000	4,990	4,170	5,610	4,610	5,990
Antimony	1,400	< 0.84	2.6	1.5 J	3.5	< 0.87
Arsenic	300	4.5	4.4	8.1	6.5	4.4
Barium	650,000	60.6	41.4	69.7	43.1	89.9
Beryllium	6,900	< 0.042	0.0097 J	0.27	0.5	0.36
Cadmium	2,900	0.82	2.8	< 0.24	0.5	0.38
Calcium	NL	48,000	95,600	55,700	52,300	35,100
Chromium	NL	13.7	12.9	21.3	7.3	10
Cobalt	1,000	3.7	2.8	6.3	3.1	4.3
Copper	140,000	23.7	26.8	41	20.5	23.5
Iron	2,500,000	9,030	9,640	12,500	10,400	11,700
Lead	800	156	1,100	108	155	62.4
Magnesium	NL	18,900	35,400	23,200	14,900	10,800
Manganese	77,000	333	636	480	292	354
Mercury	140	0.11	0.12	0.052	0.081	0.44
Nickel	33,000	8.8	7.6	23.6	8.8	10.4
Potassium	NL	412	371	529	526	766
Selenium	18,000	< 0.42	< 0.46	4.1 J	0.074 J	0.44
Silver	18,000	0.39	0.49	1.1	< 0.11	0.16 J+
Sodium	NL	70.3 J	100	79.1	126	236
Thallium	35	< 0.5	< 0.55	2.4 J	< 0.52	< 0.52
Vanadium	17,000	10.2	10.1	16.1	12.6	14.6
Zinc	1,100,000	61.2	320	116	43.9	72.7

Table 3
Soil Sample Results
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/19/2018 to 7/3/2018

Sample ID	EPA RML	IBC-ROW-03- BOE-180702	IBC-ROW-04- BOE-180703	IBC-ROW-05- BOE-180703
Sample Date		7/2/2018	7/3/2018	7/3/2018
Sample Grid		ROW-03	ROW-04	ROW-05
Analyte	Units	mg/kg	mg/kg	mg/kg
Aluminum	3,400,000	4,240	4,310	6,400
Antimony	1,400	0.16 J	0.34 J	0.83 J
Arsenic	300	3.5	2.7 J	5.3
Barium	650,000	41.3	34.5 J	69
Beryllium	6,900	< 0.045	0.0047 J	0.14
Cadmium	2,900	0.3	< 0.045	0.38
Calcium	NL	73,700	29,800 J	43,500
Chromium	NL	7.8	6.7	10.3
Cobalt	1,000	3	3.3	4.6
Copper	140,000	17.9	8.2 J	27.1
Iron	2,500,000	8,990	8,210	10,900
Lead	800	35.7	8.6 J	148
Magnesium	NL	17,200	11,200	14,100
Manganese	77,000	385	284	421
Mercury	140	< 0.0093	0.045 J	0.059
Nickel	33,000	7.9	7.8	11.2
Potassium	NL	477	459	726
Selenium	18,000	< 0.45	0.21 J	0.5
Silver	18,000	< 0.11	< 0.11	< 0.12
Sodium	NL	124	75.4	400
Thallium	35	< 0.54	< 0.53	< 0.57
Vanadium	17,000	10.5	10.4	13.5
Zinc	1,100,000	46.6	27.4 J	97.8

Notes:

EPA = Environmental Protection Agency

mg/kg = milligrams per kilogram

NL = Not listed

RML = Removal Management Level for industrial soil at hazard quotient 3

APPENDIX C
WASTE METRICS

Waste Metrics
Indiana Battery Company Site
Indianapolis, Marion County, Indiana
4/10/2018 to 7/6/2018

Waste Stream	Medium	Quantity (tons)	Manifest	Treatment	Disposal Facility
Lead contaminated soil	Solid	8,190.09	N/A (nonhazardous)	Treated on- site	Twin Bridges Landfill; Danville, IN

APPENDIX D
START FIELD NOTES

—DEFYING—
MOTHER NATURE™

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Book 1 of 3

Contacts

Lucas Stamps (Tetra Tech)

317-797-2420

Jason Sewell (EPA) 317-517-6987

sewell.jason@epa.gov

IN Battery Co

12/19/17

Purpose: Soil Sampling

Personnel: Lucasstamps, Aaron Newmann

Wx: Part cloudy, high of 51°. winds
~8 MPH from W. — LS

0830 START on site. Began preparing
equipment for sampling. — LS

0900 OSC on site. (Jason Sewell, EPA).

Met w/ property owner to
discuss the state of the
project — LS

0930 START conducted H+S meeting
and finished setting up CRZ.

Began marking out sampling
grids and ^{collecting} ~~marking~~ grid
corner coordinates w/ Trimble

GPS. START and OSC decided to
lay a row of 50' x 50'

grids, starting at the top
of the levee and going down
to the northeast. Downhill

from the first row of grids,
START laid out a row of

25' x 100' grids due to interfer-
ence by fences and property

IN Battery Co 12/19/17

boundaries (see ^{sketch} figure on page 5)

1105 START began collecting composite soil samples to 1' bgs.

1120 Collected equipment rinsate blank after sampling and decon @ grid R03, LS

1220 Break For lunch LS

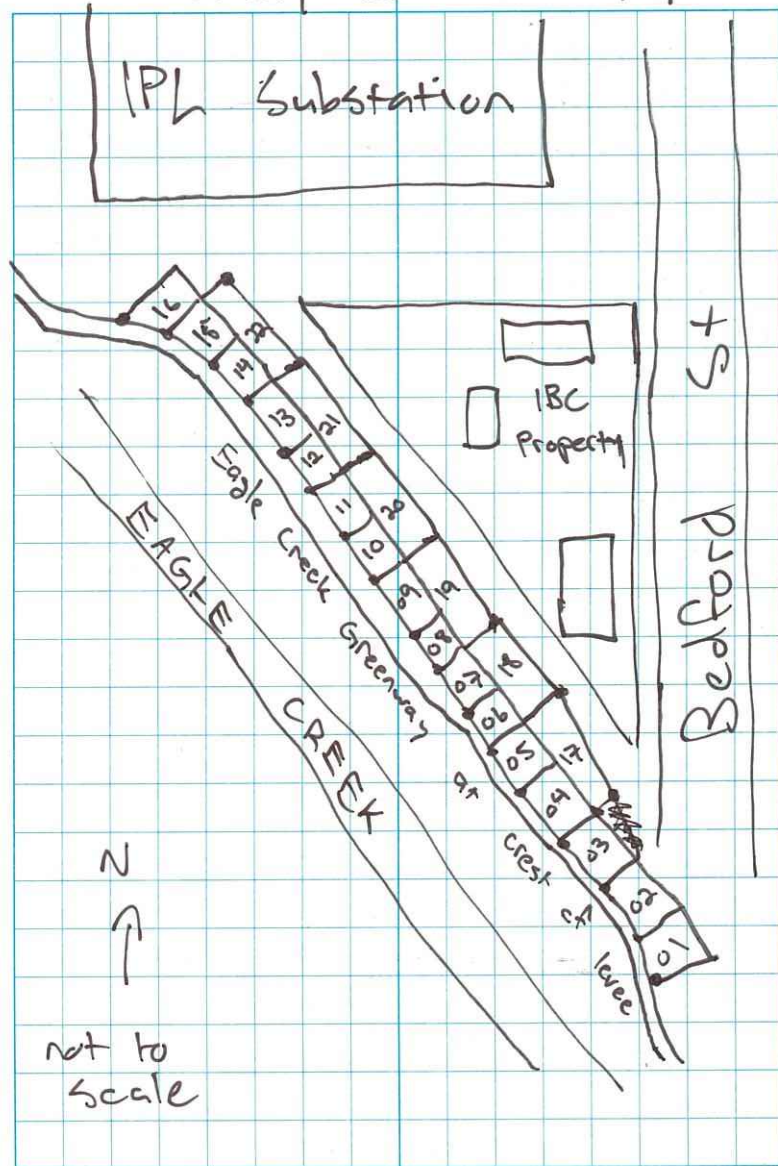
1610 START completed sampling 22 grids. Placed all PPE, decon water, and IDW in drums on IBC property. LS

1700 START off site. LS

12/19/17

IN Battery Co

12/19/17



IN Battery Co 12/26/17

Purpose: Collect GPS coordinates

Personnel: Lucas Stamps — LS

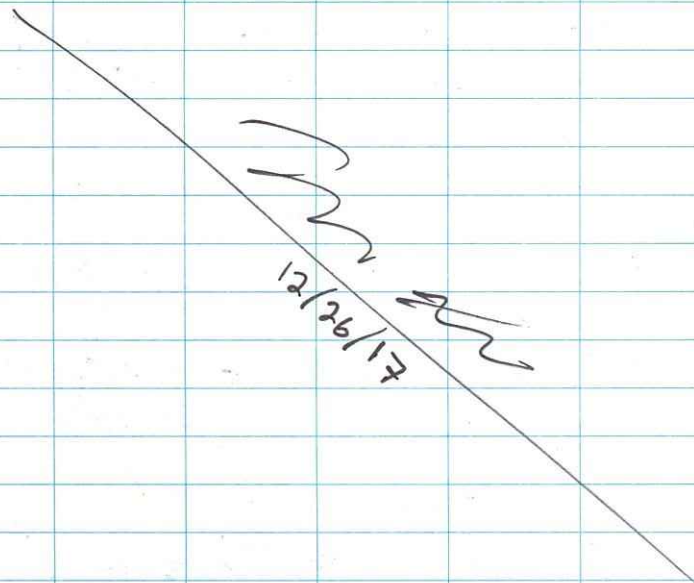
Wx: High of 110, winds ~ 7 mph from NW.

Cloudy with chance of snow.

0915 START on site. Met w/ OSC
Sewell. — LS

0930 Began measuring grids and
collecting GPS coordinates
using Trimble GPS unit.

1030 9 GPS points collected START
and EPA off site. — LS



IN Battery Co 3/21/18

Purpose: Collect soil samples

Personnel: Lucas Stamps, Joe Robert

Wx: High 440, snow in AM. Winds

12-23 mph from NNW.

0845 START on site. Met
w/ property owner and Gary
Butcher (EAM).

0900 marked out grids w/ flags
and marking paint.

1100 Began sampling grid BI-07.

1145 Noticed battery casings in soil
@ grid BI-06.

1345 Collected samples from grid
BI-05. Battery casings present in
soil.

1420 Collected samples from grid
BI-12.

1450 Collected composite sample from
grid BI-11.

1520 Collected composite sample from
grid BI-04. Battery casings
present.

1615 START off site

~~3/21/18 Joe Robert~~

4/10/18 IN Battery Co

Purpose: Oversight / Mobilization

Personnel: Lucas Stamps

Wx: High of 45°. Part Sunny w/ winds
S-9 mph from WNW.

1200 START on site. ERRS moved
3 storage containers outside of
fence prior to arrival. 2 containers
full of fragile items that
would break if moved. START
photographed items.

1300 United Rentals delivered water
truck for dust suppression.

1400 ERRS moved last two
storage containers outside of
fenced area. Electrician on
site to hook up office
trailers.

1500. START and OSC unpacked
air monitoring / sampling equipment.
START will inventory all
EPA equipment tomorrow.

1630 START off site.

4/10/18

4/11/18 Indiana Battery Company

Purpose: Oversight / Mobilization

Personnel: Lucas Stamps, Aaron Neumann

Wx: High of 62°F, Sunny, Wind 14mph S

0830 START on site. Begin taking inventory
of EPA equipment.

4 Dustraks: DRX010, DRX011
DRX012, DRX014

4 Batteries for Dustraks: BAT030,
BAT027, BAT026, BAT028

1 Drycal: DEF004

5 Gil Air5 Pumps: 05-PSP001,
05-PSP002, 05-PSP003, 05-PSP004,
05-PSP005

1 Charger for Gil Air5 Pumps: 05-FPC001

1 Trimble GPS: Unit # E006

1 Olympus Delta XRF: XRF001

4 Chargers for Dustrak Batteries:

ABC006, ABC013, ABC005, ABC014

2 High Gain Antennas w/ cord

4 Tri-Pods: TRI023, TRI022,
TRI020, TRI019

1 VIPER Laptop

0900 Electrician on site to fix hook up
for trailers.

- 0900 ERRS crew picking up equipment in Chicago and Cincinnati.
- 0930 START set up dostraks and began a test run.
- 1030 START set up VIPER system and NOAA weather station app.
- 1200 START break for lunch.
- 1300 ERRS crew arrives from Cincinnati with equipment. Unpacked trailer equipment and organized trailer.
- 1400 START scouted locations to set up air monitoring equipment for tomorrow.
- 1510 START off site

4/11/18
Atkinson

4/12/18

Indiana Battery Company

Purpose: Oversight, Mobilization

Personnel: Aaron Neumann

Wx: High of 75°F, Sunny, Wind 3mph
 but picking up later in the day from SW

0745 START on site

0800 Health and Safety meeting. Plan for the day is to continue mobilization until excavator arrives and then dig pits to XRF the soil.

0830 START begins the setup of 4 dostraks around the perimeter of site. ERRS crew cleans up around site.

0900 ERRS crew begins clearing off drainage grate on NW side of site.

1010 START begins viper run.

1120 Excavator arrives on site.

1130 Break for lunch

1230 START marked out spots to dig pits.

1240 START Tested Spot 1 (BI-16 NE corner)

1 Foot - 2111 2 Feet - 1000

- Soil mix of dark soil and bricks

1250 START tested Spot 2 (BI-13 E side)

1 Foot - 85 2 Feet - 1411

Soil - Mix of light and dark

- 1300 START tested spot 3 (B1-02 S side)
 1 Foot - 974 2 Feet - 188
 Soil - Dark soil w/ a lot of rock
 - Some battery casings around 1 Foot
- 1310 START tested spot 4 (B1-03 S side)
 1 Foot - 922 2 Feet - 796
 Soil - Mix of light and dark soil with gravel
- 1320 START tested spot 5 (B1-04 Center)
 1 Foot - 1742 2 Feet - 2.17%
 Soil - Mix of light and dark w/ a lot of rock
 - Battery casings at 2 Feet
- 1330 START tested spot 6 (B1-04 S side)
 1 Foot - 7766 2 Feet - 9771
 Soil - Dark soil w/ rock and battery casings
 - Pile of casings just below 2 Feet
- 1340 START tested spot 7 (B1-10 SE corner)
 1 Foot - 454 2 Feet - 163
 Soil - Light soil w/ dark spots and bricks
 - This spot is located under dumpster
- 1400 CAT on site to weld a plate onto the loader bucket on the excavator
- 1515 START began breaking down air monitoring stations
- 1615 START off site

[Signature] 4/12/18

IN Battery Co
~~AA and~~

4/13/18

- Purpose: Oversight + Air monitoring
 Personnel: Lucas Stamps
 Wx: Part cloudy, high of 74°. Winds 13-21 MPH from SSW.
- 0800 START on site. His meeting w/ ERRS and OSC. ERRS will set up fence to mark work zones.
- 0830 START deployed air monitors and samples @ the same locations as previous day.
 Free flow (treatment chemical) delivered to site.
- 0900 All air monitoring equipment deployed. START began VIPER run.
- 1000 START collected GPS points for test pits from previous day.
- 1100 START checked on air monitors and samples. ERRS moved Free Flow under shelter due to rain forecasted over the weekend.

Rite in the Rain

4/13/18

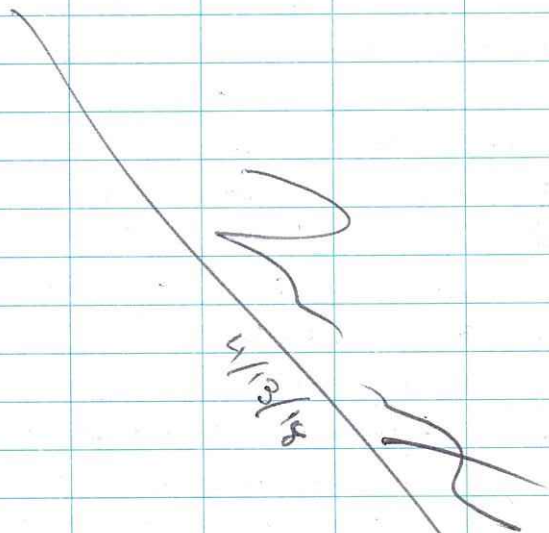
IN Battery Co

1230 ERRS put up barrier fence around work zones.

1400 ERRS moved Jersey barriers to black walking trail north and south of site.

1500 ERRS began securing site for weekend. START collected samples, turned off air monitors, and ended VIPER run.

1600 START off site.



IN Battery Co 4/16/18

Purpose: Oversight + Air Monitoring

Personnel: Lucas Stamps

Wx: High at 39°, cloudy w/ chance of snow. Winds 17-29 mph from west.

0645 START on site.

0700 HHS meeting w/ ERRS and OSC. START calibrated air pumps for ERRS personal air sampling.

0730 START deployed air monitors and samples at same locations from last week. Resumed H.

Started VIPER run.

0800 ERRS repaired barrier fence at N end of black walking path, which was torn down over weekend.

0830 ERRS began excavating grid B1-07. START screened bottom of excavation as they worked south to north. Soil was stockpiled in NW corner of site.

4/16/18 IN Battery Co

1230 START noticed DustTrak DRX 014 (east) had flow error.

Probably caused by low battery because one charger broke over the weekend. Began charging battery

1500 ERRS excavated approximately to the S side of the white concrete building. Battery casings observed along western fence line. Soil screening was below 200 ppm at 1' bgs over most of the area. Up to 2,000 ppm near buried battery casings @ 2' bgs.

1530 ERRS mixed piles w/ Free flow.

1620 ERRS finished mixing piles. Began covering piles and securing site for the night. START collected samples and air monitoring equipment.

1730 START off site.

4/16/18

IN Battery Co 4/17/18

Purpose: Oversight + Air Monitoring

Personnel: Lucas Stamps

Wx: Cloudy morning, sun in afternoon. High at 50° w/ winds 12-18 mph from West.

0645 START on site.

0700 HHS meeting w/ ERRS and OSC.

START assisted ERRS w/ setting up personal air samples.

0730 START deployed 4 DustTraks and 4 air samples for metals. Western location moved S down trail.

W2: 39.748103°N, -86.204912°W.

0800. START and OSC talked to 2 DPW employees about getting "trail closed" signs from city for walking path.

0810 START began working on new grid for OV1 and OV3.

Previous grids identified w/ "B1-##" will now be "OV1-##" and grids on OV3 will be identified w/ "OV3-##"

4/17/10 1N Battery Co

W(or E) ##" depending on which side of the trail they lie.

0930 Representative from Free Flow on-site to observe ERRS mixing soil w/ treatment chemical.

1000 ERRS constructed truck decou pad in preparation for shipping waste later in week. START continued mapping new grids.

1300 ERRS continued excavating southern portion of site. START screened soil as excavation progressed.

1445 Poly sheeting and barrier fence delivered to site.

1630 ERRS started covering piles and preparing to shut down for the day. START collected air samples and monitors.

1720 START off site to ship air samples to ALS.

~~2~~
4/17/10

1N Battery Co

4/18/10

Purposes: Oversight and air monitoring
Personnel: Lucas Stamps

Wx: Cloudy, high of 59°. chance of rain in afternoon. Winds 10-18 mph from S~~W~~E.

0645 START on site.

0700 H+S meeting w/ ERRS and OSC. ERRS will continue excavating and mixing.

0730 START deployed air monitoring equipment and samples. Started VIPER run.

0800 Free Flow delivered treatment chemical to site. ERRS unloaded and staged it under lean-to in center of site.

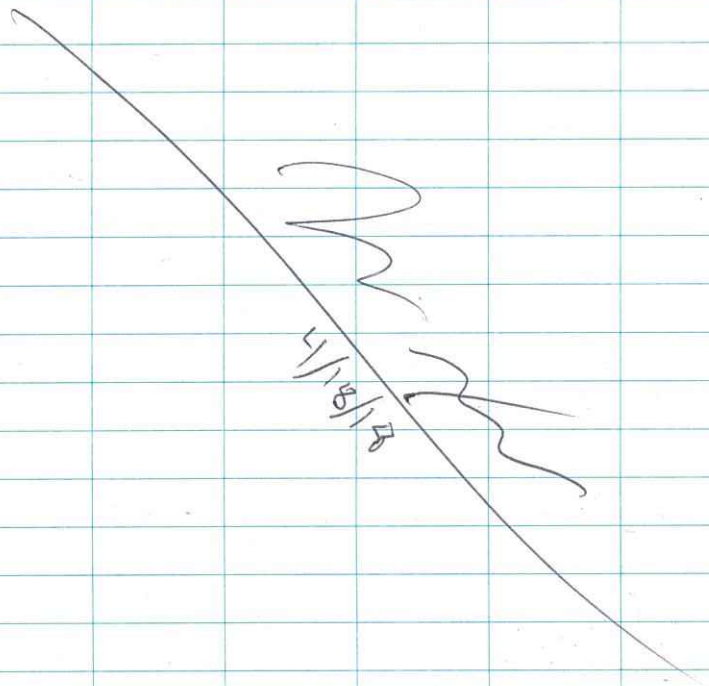
0830 ERRS continued excavating southern portion of site (Grid OVI-06). START screened soil as necessary. Uncovered additional battery casings near fence to the west.

0900 START off site to pick up large prints of grid

4/18/18

IN Battery Co

- map from Staples.
 1000 START back on site. Continued monitoring/screening excavation.
 1400 ERBS mixed piles and moved treated material into a larger pile at northend of site.
 1630 START collected air samples and monitors. Ended VIPER run.
 1730 START off site.



IN Battery Co 4/19/18

- Purpose: Oversight and air mon.
 Personnel: Lucas Stamps.
 WX: Part sunny, high of 54°. Winds 12-18 MPH from NNW.
 0700 START on site. Hqs meeting w/ ERBS and OSC.
 0720 START deployed air monitors and samples. Cinder block, lock, and cable were stolen from western position along rail overnight. Will move jersey barrier to lock monitor to.
 0815 START collected confirmation samples from OUI-07 and OUI-06. Collected 1 aliquot from southern ~~part~~ of OUI-12 prior to back fill. START also GPS'd boundaries of areas where visible barrier will be laid down. (places where waste will be left in ~~for~~ place below 2 ft bgs.)
 0830 ERBS adjusted exclusion zone to prepare for backfill.

4/19/18 IN Battery Co
 0930 START off site to buy
 new DustTrak battery
 1030 START replaced DustTrak battery
 Gravel arrived at site.
 ERRS began back filling
 excavated areas.
 1200 ERRS received vibratory roller
 on site to compact gravel
 at backfilled areas.
 1330 START received 75% alarm
 at South air monitoring station.
 Caused by ERRS compacting gravel
 just upwind of monitor.
 1610 Work order meeting w/ OSC
 and RM.
 1730 START off site.

4/19/18

IN Battery Co 4/20/18
 Purpose: Oversight + Air Monitoring
 Personnel: Lucas Stamps
 Wx: Sunny, high of 60°. Winds
 6-9 MPH from NE.
 0645 START on site.
 0700 H+J meeting w/ ERRS and
 RAA, OSC.
 0720 START deployed air monitors
 and samples. Started VIPER
 run.
 0800 ERRS resumed back filling
 excavation at southern part
 of site.
 1000. ERRS dug trench and
 installed silt fence around
 north, south, and west
 sides of ~~soil~~ soil
 stockpile.

 SD
 1535 ERRS moved Conex boxes back
 on property.

 SD
 1630 Work order meeting w/ OSC and
 RM.
 1723 START OFF SITE
 SKP
 4/20/18

4/23/14 IN Battery Co

Purpose: Oversight and air monitoring
Personnel: Lucas Stamps

Wx: Cloudy, high of 60°. Winds
9-15 mph from E. Rain in
afternoon

0645 START on site.

0700 HHS meeting w/ EARS and
2 OSCs. Shelly Lam will be
covering the site for Jason
Sewell until Thursday, 4/26/14.

0730 START deployed air monitors
and samples and started VIPER
run. Fence at trail closure
points north and south of
site ~~was~~ was torn down
over the weekend. EARS repaired
fence and prepped equipment to
resume excavating grids OVI-05
and OVI-12.

0800 EARS expanded silt fence
to accommodate larger stockpile.

0920 Began excavating OVI-05 and
OVI-12. START screened soil w/
XAF as needed. Dust alarm

IN Battery Co

4/23/14

levels exceeded action level
at southern perimeter.

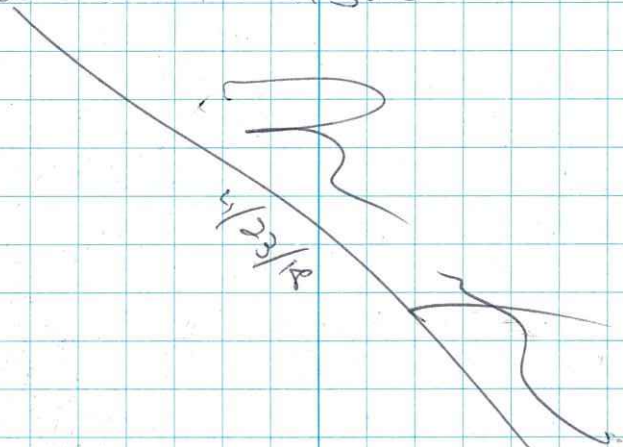
Caused by property owner
driving forklift near DustTrak.
1000 Rain started.

1020 ~~AA~~ Dust alarm at south
perimeter - again caused by
forklift on gravel again.

1300 EARS began mixing piles
at north end of site

1620 START collected air monitors
and samples. Ended VIPER run.

1730 START off site.



4/24/18 IN Battery Co

Purpose: Oversight and air monitoring

Personnel: Lucas Stamps

Wx: Cloudy, high of 58°. Winds 7-10 mph. Rain throughout the day.

0650 START on site.

0700 H+S meeting w/ OSC and EPRS. EPRS will reshape stockpile and continue excavating OUI-05 and OUI-12. START will hold off on putting out air monitors due to weather. Conducted maintenance on DnstTraks.

0730 EPRS mixing piles w/ treatment chemical.

0900 EPRS continued excavating OUI-05 and OUI-12. START close by to screen soil as needed.

1130 EPRS finished excavating grids OUI-05 and OUI-12. START will wait until tomorrow to sample and GPS excavated areas.

1245 EPRS mixed soil stockpile w/ treatment chemical.

1415 EPRS began excavating southern

IN Battery Co

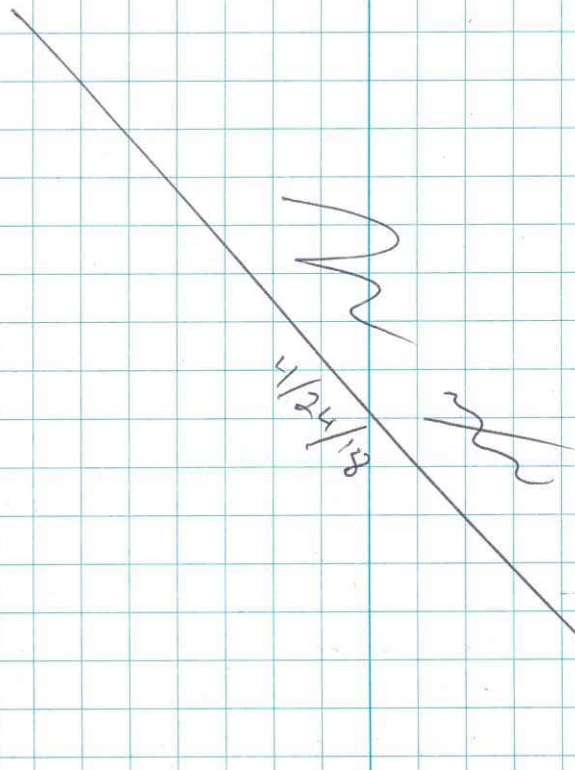
4/24/18

parts of OUI-04 and OUI-

11.

1600 Excavator having engine trouble. Crew will leave @ 1630 and pick up tomorrow.

1630 START off site



4/25/18 IN Battery Co

Purpose: Oversight and air monitoring

Personnel: Lucas Stamps

Wx: Part Cloudy, high of 64°. Winds
9-14 MPH from NNW.

0645 START on site.

0700 HHS meeting w/ ERRS and
OSC Lam.

0720 START deployed air monitors and
samples. Started VIPER run. Macalister
rentals on site to repair
excavator.

0800 ERRS amended fence along trail
w/ chainlink to prevent people from
using it during the cleanup.

0945 ERRS began excavating OUI-
11 and placing barrier in excavated areas.

1015 START screened areas where
waste is left in place w/
XRF and GPSed perimeter of
area.

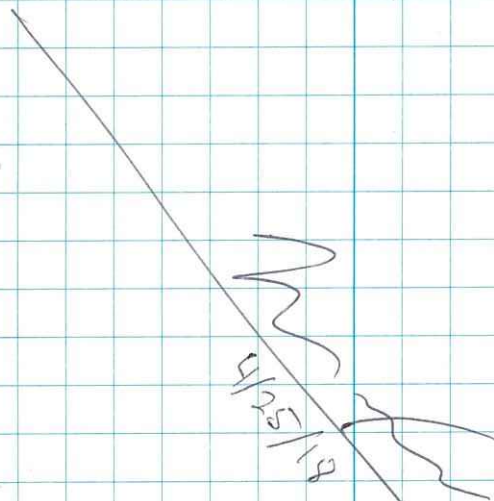
1045 START collected confirmation sample
from BOE in OUI-12, areas
where excavation was only
1 foot deep. (no visible barrier).

IN Battery Co 4/25/18

1105 Excavator and front-end loader
having mechanical issues.

1200 ERRS off site. START collected
air monitors and samples.

1230 START off site.



4/26/18 IN Battery Co.

Purpose: Oversight and air monitoring

Personnel: Lucas Stamps

WX: Mostly sunny, high of 66°. Winds
6-8 MPH from NNE

0645 START on site.

0700 H+S meeting w/ EARS. EARS will
backfill excavated areas.

0720 START deployed air monitors
and samples. EARS began backfilling
decorating excavator to prepare for
new unit from rental company.
Also decorated skid-steer to prepare
for backfill.

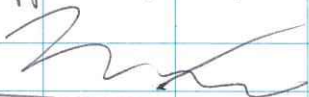
0830 CAT swapped excavators.
EARS began backfilling grids
OUI-05 and OUI-12. w/ clay

1100 EARS mixed piles

1245 Continued backfilling w/ clay.

1400 H+S on-site to scope tree
removal.

1630 START collected air monitors and
samples. Stopped VIPER run.



4/26/18

IN Battery Co

4/27/18

Purpose: Removal Oversight + Air monitoring

Personnel: Lucas Stamps

WX: Partly sunny; high of 65°. winds
10-17 MPH from WNW.

0645 START on site.

0700 H+S meeting w/ EARS.

0720 START deployed air monitors and
samples. First truck of fill (clay)
arrived. EARS ^{continued} began backfilling
OUI-05 and OUI-12.

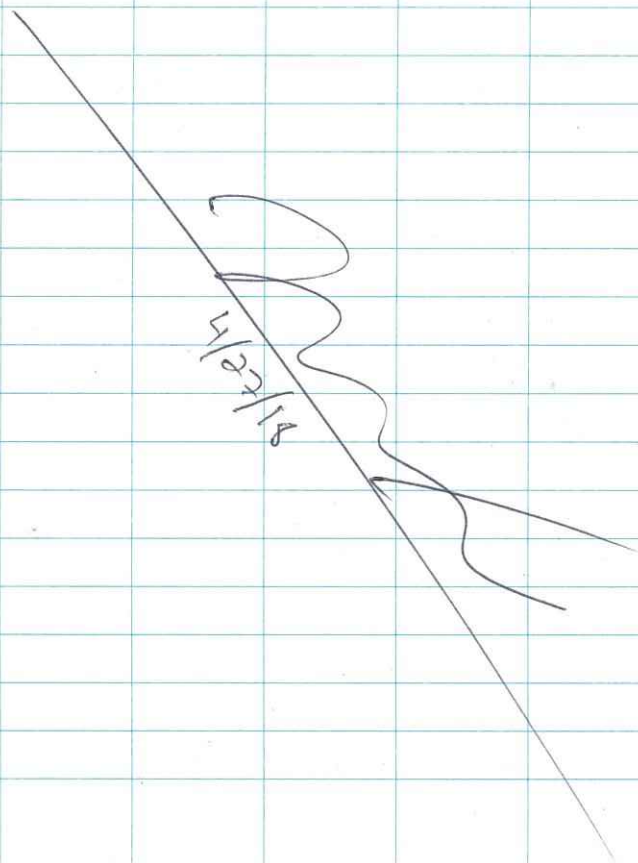
0750 START began VIPER run

0830 Dust alert at eastern DustTrak
(DRX 014). Caused by dusty
conditions on road. EARS
watered down road after getting
water truck filled.

1400 Dust alert at Southern
DustTrak (DRX 011). Max reading
on instrument was 121 $\mu\text{g}/\text{m}^3$,
so alert caused by equipment
malfunction.

1415 Dust alert @ eastern station
(DRX 014). Road was dusty
again.

4/27/18 In Battery Co
 1545 START collected air monitors
 and samples. Ended VIPER run.
 ERRS finished burying drain pipes
 against white block building near
 OUI-12.
 1630 START off site.



In Battery Co 4/30/18

Purpose: Oversight + Air Monitoring
 Personnel: Lucas Stamps
 Wx: Sunny, high of 72°. Winds
 7-13 mph from SSW
 0700 START on site. HHS meeting.
 ERRS will continue to backfill
 grids OUI-05 and OUI-12.
 0730 START deployed air monitors
 and samples and started VIPER
 run. Truck began delivering
 gravel for backfill.
 0900 START reviewed processed air
 monitoring results from previous
 week. They second, third, fourth,
 and fifth highest full run TWA
 results were on 4/25/18. Those
 samples will not be submitted
 due to insufficient run time.
 1200 ERRS finished backfilling and
 compacting OUI-05 and OUI-12.
 Started removing barbed wire
 along western fence.
 1415 START, OSC, ERRS had meeting
 and sitewalk w/ representatives

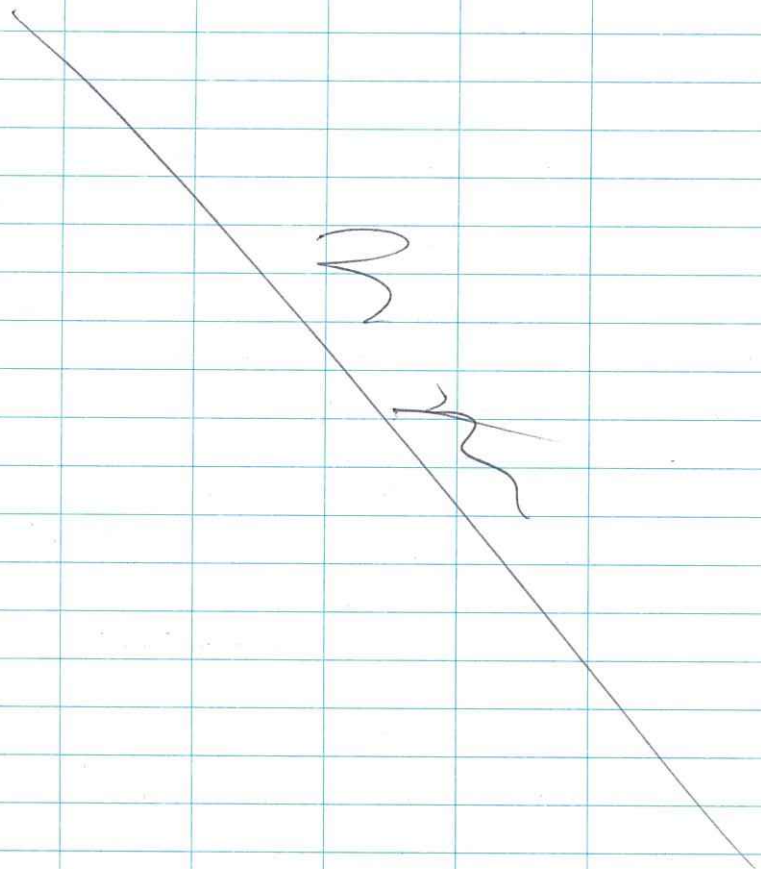
4/30/18

IN Battery Co

of the City of Indianapolis,
HHS, and IPL about tree removal.

1600 EARS off site. START collected
air monitors and samples.

1700 START off site.



IN Battery Co. 5/1/18

Purpose: Oversight and air monitoring

Personnel: Lucas Stamps

Wx- High of 85°, Sunny. winds
9-16 MPH from SSW.

0645 START on site.

0700 HHS meeting w/ EARS, OSC
Stamps Emmanuel covering for
OSC Sewell. EARS will begin
excavating various locations until
waste profile is approved.

0720. START deployed air monitors
and samples.

0750 START began VIPER run- EARS
reshaping stockpile to make room
for more soil.

1000 EARS began excavating accessible
areas of OVI-18 and OVI-19.
START screened soil w/ XRF as
they excavated.

1500 EARS began decontaminating
wheel loader.

1620 START collected air monitors
and samples. Ended VIPER run

1700 START off site

22 5/1/18 *Site in the Rain.*

IN Battery Co

5/2/18

Purpose: Oversight and Air Monitoring
 Personnel: Aaron Neumann
 Weather: Partly Cloudy, High of 82°F, Wind 16mph SSW
 0645 START on site
 0700 H+S meeting with ERRS and OSC Stavros
 Emaranovil who is covering for OSC Sewell.
 0730 START deployed air monitors and samples.
 0800 ERRS begins mixing free flow into stockpile.
 0915 IPL on site to cut down trees around powerline.
 1030 Received shipment of free flow
 1115 IPL finished trimming trees. OFF site.
 1200 Break for lunch
 1230 ERRS starts covering up stockpile. Water
 truck taken to be filled up.
 1315 ERRS begins mixing free flow into stockpile
 1430 ERRS works on fixing the power washer
 and covers the rest of the stockpile
 1500 START retrieves air monitoring equipment
 and ends viper run.
 1540 START off site

5/2/18

Aaron

Neumann

IN Battery Co

5/3/18

Purpose: Oversight and Air Monitoring
 Personnel: Aaron Neumann
 Weather: Cloudy with a chance of storms, High
 of 76°F, Wind 15mph SSW
 0645 START on site
 0700 H+S meeting with ERRS. OSC Stavros
 Emaranovil on site for OSC Sewell. ERRS
 will begin digging in Grid 0U1-17.
 0730 START deployed air monitors and samples
 0755 START began viper run. ERRS reshaping
 stockpile to prepare for trucks to load
 out. Will hold off on digging Grid 0U1-17
 0845 START began retrieving air monitoring
 equipment due to incoming storm.
 0900 Two trucks on site to load out soil
 from the stockpile.
 0930 START pauses viper run. ERRS takes a
 break due to lightning.
 0945 ERRS starts loading soil into trucks again.
 Trucks are being decanned before leaving site
 1200 Break for lunch
 1245 ERRS resumes loading soil from the stockpile
 into trucks to take to the land fill.
 1645 ERRS begins cleaning up for the day.
 1730 START off site.

5/3/18

Aaron Neumann

Rite in the Rain.

5/4/18 IN Battery Co

Purpose: Oversight + air monitoring

Personnel: Lucas Stamps

Wx: Cloudy, high of 76. winds 15-23
MPH from W. Chance of rain
throughout day.

0645 START on site.

0700 HHS meeting w/ ERRS. ERRS
will be shipping waste off site.

0710. START deployed air monitors
and samples. Started VIPER
run. ERRS began loading trucks
bound for Twin Bridges in
Danville, IN. Will have 10 trucks
throughout day.

1430 Last truck for the day left
for the disposal facility. START
collected samples and monitors.
Ended VIPER run.

1600 START off site.

5/4/18

IN Battery Co 5/7/18

Purpose: Oversight + air monitoring

Personnel: Lucas Stamps

Wx: Part Sunny, high of 73°. winds
8-13 MPH from NNE

0700 START on site. HHS meeting
w/ ERRS. Will begin excavating
OUI-17.

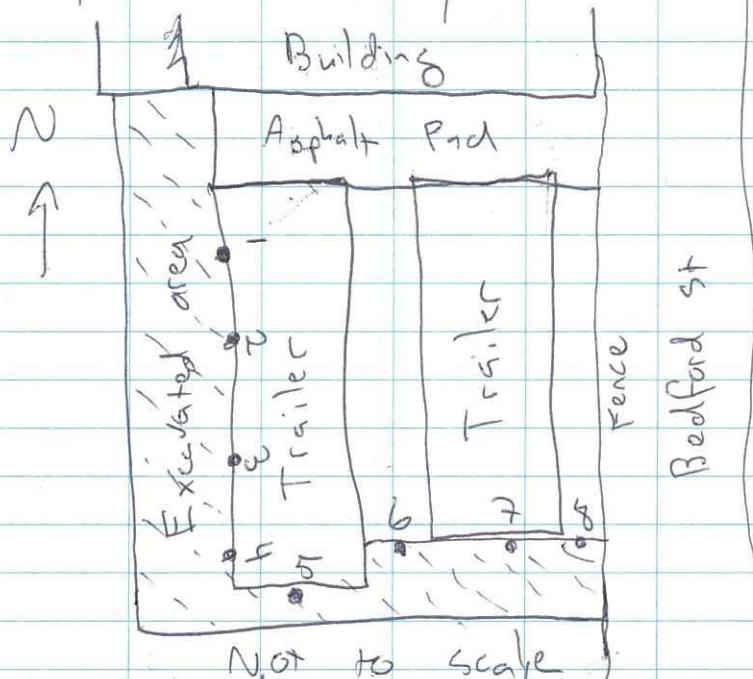
0720 START deployed air monitors
and samples. Started VIPER run.
Observed signs of trespassing
on trail. Chain link fence and
security cable were stricken over
the weekend.

0820 ERRS began excavating OUI-17.
START screened soil as excavation
progressed.

0900 START screened sidewalks
around two trailers in OUI-18
and OUI-19. ~~Figure~~ Map on
next page. Screening results below
map. All XRF screenings @ 1 ft
bgs. Reading # refers to export
file from XRF which will be
saved w/ site files.

5/7/18

IN Battery Co.

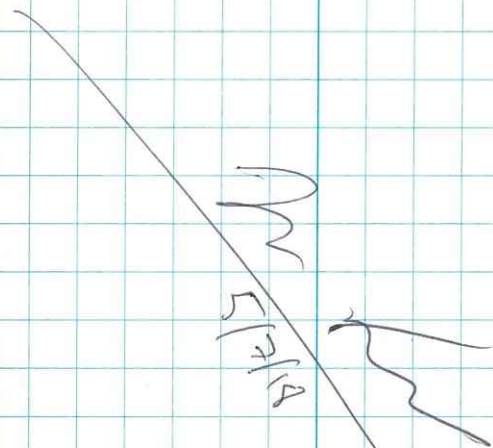


Point	lead	±	reading # of YRF
1	419	± 7	15
2	69	+ 4	16
3	212	± 5	17
4	389	± 8	18
5	545	± 9	20
6	270	± 9	19
7	247	± 6	20
8	148	± 4	21

IN Battery Co 5/7/18

1630 ERRS stopped excavating for the day. START collected air monitors and air samples. Stopped VIPER run. Will collect confirming soil samples tomorrow.

1730 START off site



5/8/18 IN Battery Co

Purpose: Oversight and air monitoring

Personnel: Lucas Stamps

Wx: Mostly sunny, high of 79°. Winds
5-8 MPH from ESE.

0645 START on site.

0700 HHS meeting w/ OSC and ERRS.
ERRS will backfill in the
AM.

0715 START collected confirmation
soil samples from bottom of
excavation @ OUI-17, OUI-18, and
OUI-19.

0730 Gravel delivered. ERRS began
backfilling OUI-17.

0750 START deployed air monitors
and samplers. Replaced filters
of DAX 012.

0830 Started VIPER run. ERRS
excavating accessible areas w/
bulldozer, and mixing stockpiled material

0930 START collected GPS points for
survey stakes around perimeter of
OUI.

1000 Dust exceedance at eastern

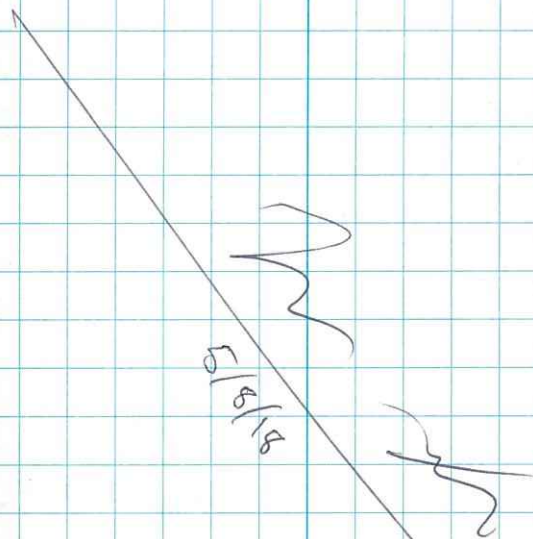
IN Battery Co

5/8/18

Location near gate (DAX 014).
ERRS watered the road
and gate

1630 START collected air monitors
and samples.

1745 START off site.



5/9/18 IN Battery Co

Purpose: Oversight and air monitoring

Personnel: Lucas Stamps

Wx: Part cloudy, high of 82°. Winds
12-18 mph from S.

0645 START on site

0700 H+S meeting. ERRS will backfill
OUI-11, OUI-10, OUI-16, and OUI-15.

0715 START collected confirmation
soil samples from OUI-10, OUI-11,
OUI-15, and OUI-16. First truck
of clay backfill arrived.

0730 START deployed air monitors
and samples. Started VIPER run.

1200 ERRS mixed treatment chemical
into stockpiled material.

1300 ERRS finished laying and
compacting clay backfill in grids
OUI-10, 11, 15, 16, 17, ~~and 18~~, and 19. They
plan to bring in gravel tomorrow.

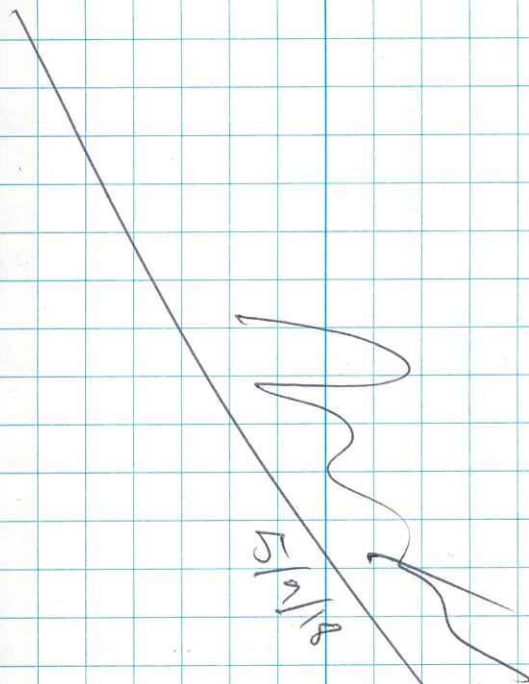
1400 ERRS began excavating near
building in OUI-14. START screened
soil as necessary.

1500 START collected air monitors
and samples. Ended VIPER

IN Battery Co

5/9/18

Run
1600 START off site.



5/10/18 IN Battery Co.

Purpose: Oversight and air monitoring

Personnel: Lucas Stamps

Wx: Mostly sunny, high of 81°. Winds
9-15 MPH from WNW.

0645 START on site.

0700 HHS meeting. EARS will backfill
and construct decon pad0720 START deployed air monitors
and samples. Started VIPER
run. First truck arrived w/
gravel. EARS spread and compacted
backfill gravel.1020 START off-site to ship soil
samples to lab1145 START collected soil samples
from 0-12" (5 pt composites) from
Grids 0U3W04, 0U3W05, and
0U3W06.

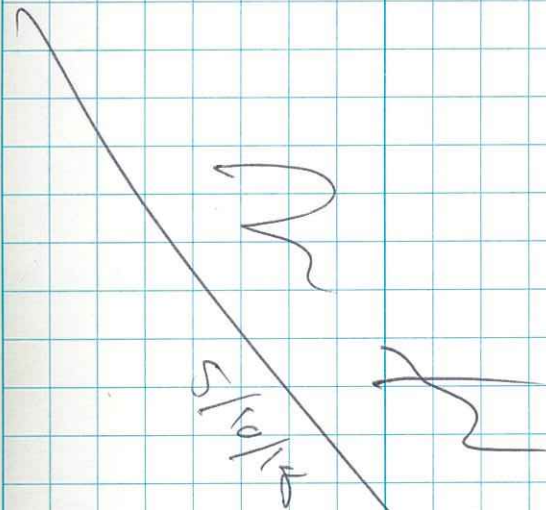
1245 Screened samples w/ XRF

Sample	XRF 1	XRF 2	XRF 3	Readings
W04	89±3	78±3	79±3	10, 11, 12
W05	1637±16	2122±20	3462±30	13, 14, 15
W06	71±3	69±3	74±3	16, 17, 18

IN Battery Co 5/10/18

1400 EARS installed caution tape around
0U3-W05.1500 EARS began constructing
decon pad to prepare for
shipping tomorrow.1530 START collected air monitors
and samples. Ended VIPER run.

1630 START off site.



Intentionally

Left

Blank

5/10/14



USE WET OR DRY
most pens stop writing when wet

- ALL PENCILS
- RITE IN THE RAIN PENS
- WAX MARKERS
- CRAYONS
- OIL PASTELS / PAINT

WHEN DRY ONLY
what you write won't wash off

- PERMANENT MARKERS
- STANDARD BALLPOINTS

WON'T WORK
water-based inks bead off sheet

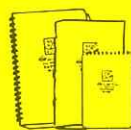
- GEL PENS
- MOST HIGHLIGHTERS
- FOUNTAIN PENS
- WATER COLORS
- ACRYLIC PAINT

EQUIPPING MULTIPLE INDUSTRIES WORLD-WIDE

other product styles available



BOUND BOOKS



NOTEBOOKS



LOOSE LEAF & PLANNERS



COPIER PAPER



PENS, PENCILS & REFILLS



RiteintheRain.com

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SINCE 1916

Rite in the Rain

DEFYING MOTHER NATURE

Yes, Rite in the Rain
is a wood-based & recyclable
paper, but unlike plain paper...
it won't turn to mush
when exposed to:



rain
storms



heavy
sweat



oil &
grease



mud &
grime



laundry
mishap

ALL-WEATHER TOUGH!



BRAND
HISTORY

J.L. DARLING
est. 1916

The Rite in the Rain story began nearly a century ago in the forests of the Great Northwest. Entrepreneur, Jerry Darling, recognized the logging industry's need for a durable material that could be written on and survive in poor weather conditions. Jerry developed a special coating that created a unique moisture shield on the hand-dipped sheets of paper that he and his wife, Mary, processed at their home.

From humble beginnings our first all-weather paper was born! Over the many years we've perfected and patented our environmentally responsible coating process. Still located in Tacoma, our continued mission is to provide innovative products for professionals and enthusiasts who brave the outdoors.

—DEFYING—
MOTHER NATURE®

SINCE 1916



All components of
this product are recyclable

—Rite in the Rain—

A patented, environmentally
responsible, all-weather writing paper
that sheds water and enables you to
write anywhere, in any weather.

Using a pencil or all-weather pen,
Rite in the Rain ensures that your
notes survive the rigors of the field,
regardless of the conditions.

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Tacoma, WA 98424-1017 USA
www.RiteintheRain.com

Item No. 311FX

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Made in the USA
US Pat No. 6,863,940



IN Battery Co



Rite in the Rain®

ALL-WEATHER

LEVEL

Nº 311FX

EPA Region V
505-0001-1712-001

Book 2 of 3

2 5/11/18 IN Battery Co

Purpose: Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Partly Cloudy, High of 87°F, Wind 9mph E

0645 START on site

0700 H+S meeting with OSC Sewell and ERRS.
ERRS will be loading out soil from the
stockpile.

0720 START began deploying air monitors
and samplers.

0730 ERRS began loading soil into trucks to
be taken to landfill.

0750 START began viper run. 2 dustraks were
not responding so ended viper run. Modem
was unplugged on 2 dustraks. Plugged them
back in and restarted viper run.

0900 Surveyors on site to mark out parcel
boundaries at northern most point.

0930 START marked out boundaries on east
side of site along Bedford St to be sampled

1100 START plotted GPS points off northern
most boundary on Trimble GPS

1200 Break for lunch

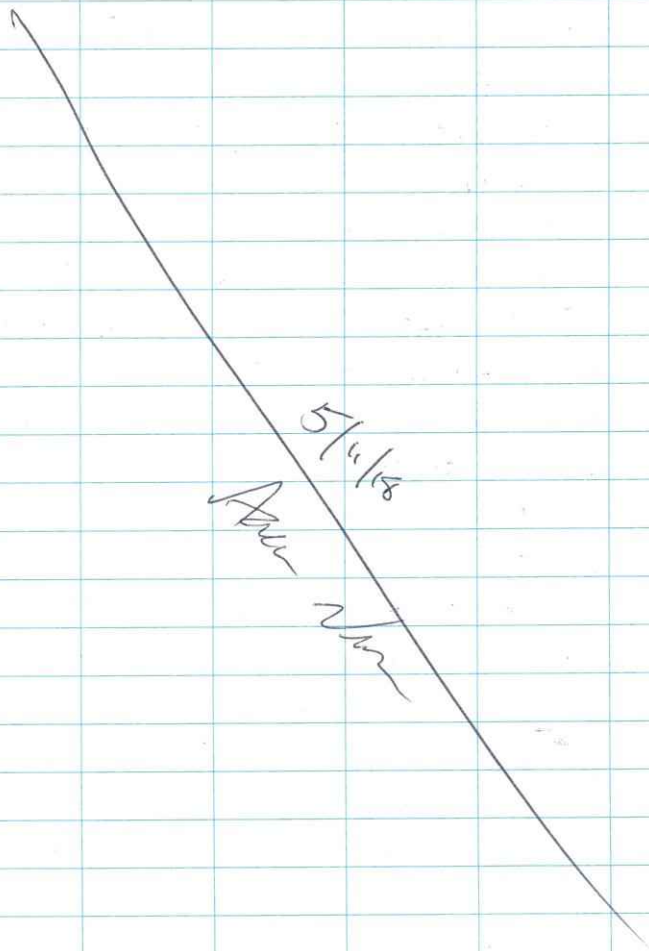
1230 ERRS crew begins cleaning up around
the site.

1330 ERRS puts up fencing along Eagle Creek
trail to block off public access

1415 START begins retrieving air monitoring
equipment.

1500 START ends viper run.

1515 START off site



4 5/14/18

Indiana Battery Co

Purpose: Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Partly Cloudy, High of 91°F, Wind 5mph S

0645 START on site

0700 Health and Safety meeting with ERPS. ERPS

will begin moving stuff from under lean-to so they can begin scraping soil.

0730 START began deploying air monitoring equipment and samplers. ERPS begins cleaning up under lean-to.

0800 START began Viper run.

0830 START re-collected GPS points for grids along Bedford Street.

0930 ERPS begins reshaping stockpile to make room for digging.

1200 Break for lunch

1400 ERPS begins digging under lean-to in grid 0U1-09.

1615 START off site

5/14/18

Aaron Neumann

5/15/18

Indiana Battery Co

5

Purpose: Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Cloudy, 60% chance of storms, High of 82°F
Wind 9mph WNW

0645 START on site

0700 Health and Safety meeting with ERPS and OSC Sewell. ERPS will continue to excavate in grids 0U1-09A and 0U1-09.

0730 START begins deploying air monitoring equipment and samplers. ERPS begins excavating in grid 0U1-09A.

0755 START begins Viper run.

0830 ERPS begins mixing Free Flow into stockpile.

1000 ERPS begins unloading Free Flow from delivery truck

1045 ERPS begins clearing off and cleaning up around the grate in the ditch on the north side of site.

1200 Break for lunch

1230 ERPS resumes clearing off grate area.

1445 START tested dirt pile by grate that was previously dug up. XRF showed lead levels of 1.46%.

1500 START began retrieving air monitoring equipment

1540 START ended Viper run.

1545 START off site

5/15/18

Aaron Neumann

Rite in the Rain

6 5/16/18

Indiana Battery Co

Purpose: Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Mostly Cloudy, High of 81°F, Slight chance of rain, wind 7mph NE

0645 START on site

0700 Health and Safety meeting with EPRS and OSC Sewell. EPRS will begin excavation of grid OU1-13. HIS on site today to begin tree and brush removal outside of fence.

0725 START begins deploying air monitoring equipment and samplers.

0730 EPRS begins reshaping stockpile.

0800 START began viper run.

0830 HIS begins tree and brush removal on south side of site.

0900 EPRS begins excavation of grid OU1-13

1200 START collected 5 point composite soil samples from Grids ROW-05 and ROW-06 and then screened them with XRF.

ROW-05 - 1) 745 $\pm$ 10 2) 656 $\pm$ 9 3) 873 $\pm$ 11
4) 1139 $\pm$ 13 5) 782 $\pm$ 10

ROW-06 1) 110 $\pm$ 4 2) 100 $\pm$ 3 3) 102 $\pm$ 3
4) 112 $\pm$ 4 5) 124 $\pm$ 4

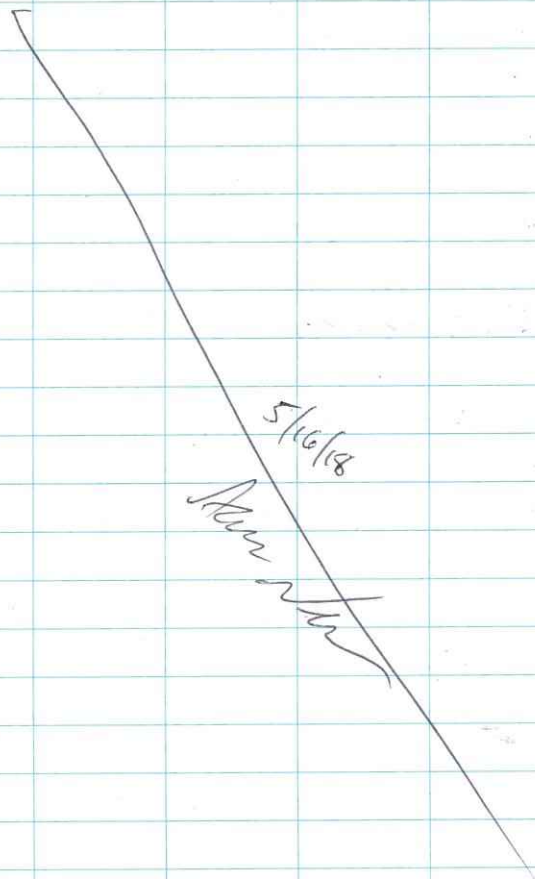
1230 Break for lunch

1300 EPRS begins reshaping stockpile and mixing in free flow

1615 START began retrieving air monitoring equipment.

1640 START ended viper run.

1645 START off site. HIS will remain on site to continue tree removal



8 5/17/18 Indiana Battery Co

Purpose: Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Partly Cloudy, High of 83°F, Wind 2 mph NE

0645 START on site

0700 Health and Safety meeting with ERRS and OSC Sewell. ERRS will spend most of the day mixing Free Flow into stock pile. ERRS crew Josh and Marcie off site.

0730 START begins deploying air monitoring equipment and samplers

0805 START begins viper run.

0830 HIS on site to continue tree removal

1000 START and ERRS laid down poly in the ditch next to the grate on north side of site to cover contaminated dirt that was previously dumped there.

1200 Break for lunch

1510 START began retrieving air monitoring equipment

1545 START ended viper run.

1550 START off site. HIS will remain on site to continue tree removal.

5/17/18

Aaron Neumann

5/18/18 Indiana Battery Co

Purpose: Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Mostly Cloudy, High of 70°F, Chance of rain starting around 1100, Wind 10 mph NE

0645 START on site

0700 Health and Safety meeting with ERRS and OSC Sewell. ERRS will continue to mix Free Flow into stock pile as well as woodchips from tree removal. ERRS crew Josh and Marcie off site.

0730 START begins to deploy air monitoring equipment and samplers.

0805 START begins viper run.

1030 START and OSC Sewell screened XRF points along ditch at bottom of levee and recorded them on collector app.

1200 Break for lunch

1300 START and OSC Sewell continued to screen XRF points along ditch at bottom of levee.

0830 HIS on site to continue tree removal.

1640 START collects air monitoring equipment.

1715 START ends viper run.

1730 START off site

5/18/18

Aaron Neumann

10 5/21/18 IN Battery Co

Purpose: Oversight + air monitoring

Personnel: Lucas Stamps

Wx: Cloudy, high at 80°. Winds 6-9 mph from SSE. Thunderstorms and

0645 hail possible throughout day.

~~0645~~ START on site.

0700 H+S meeting w/ ERRS. ERRS will excavate contaminated areas along west side of levee.

0730 START deployed air monitors and samples. Started VIPER run. ERRS moved wood chips to stock pile and mixed

0800 Representatives from Boush engineering and Remamdn on site. Site walk w/ OSC.

0930 ERRS began excavating section of OV3-W05 near concrete platform. Excavated 2 feet deep near eastern corner of platform. Northwestern sidewall tested ~~high~~ above 800 ppm but is capped by gravel and soil that was installed during

IN Battery Co 5/21/18 11

trail construction.

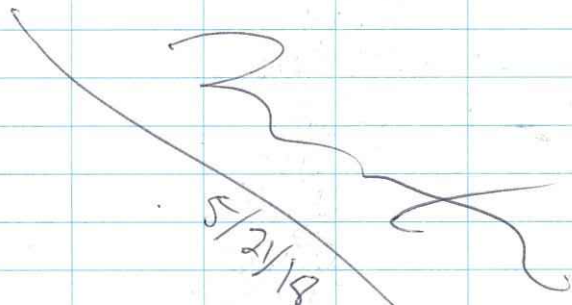
1345 START collected samples from BOE and northwestern sidewall of excavated area. ERRS stacked haybales around drain in grid OV3-E21 to prevent erosion.

1400 ERRS mixed treatment chemical into remaining soil piles

Backnote
1230 ERRS fencing subcontractor on site to take down fence on western edge of OV1.

1445 START collected air samples and monitors. Ended VIPER sun

1615 START off site.



5/21/18

12 5/22/18 Indiana Battery Co

Purpose: Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Mostly Cloudy, High of 82°F, Wind 1mph SSW

0645 START on site

0700 Health and Safety meeting with ERRS and OSC Sewell. ERRS will begin loading out soil from the stockpile.

0720 START begins deploying air monitoring equipment and samplers

0730 ERRS begins loading trucks with soil from the stockpile to take to the landfill.

0750 START began viper run.

0800 Keramida on site to observe

1000 One Keramida representative leaves site. Another on site to replace her.

1200 Break for lunch

1550 START began collecting air monitoring equipment and samples

1620 START ended viper run.

1655 START off site

~~5/22/18
Aaron~~

5/23/18 Indiana Battery Co

Purpose: Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Sunny, High of 84°F, Wind 5mph NNE

0645 START on site

0700 Health and Safety meeting with ERRS and OSC Sewell. ERRS will continue to load trucks with soil from stockpile. HIS will be on site to grind tree stumps.

0720 START begins deploying air monitoring equipment and samplers.

0755 START begins viper run

~~0840~~ 1415 and tree removal service on site to begin grinding tree stumps. Tri-State tree service will be doing the stump grinding.

1030 Tri-State tree service halts work on grinding tree stumps due to OSHA conflicts.

1200 Break for lunch

1430 START began plotting survey points along the ditch starting on the north side

1630 START collected air monitoring equipment

1700 START ended viper run.

1710 START off site

~~5/23/18
Aaron~~

5/24/18 Indiana Battery CO

Purpose: Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Sunny, High of 86°F, Wind 2 mph ENE

0645 START on site

0700 Health and Safety meeting with ERRS and OSC Sewell. ERRS will continue loading trucks with soil from the stockpile.

0720 START begins deploying air monitoring equipment and samplers.

0730 ERRS begins loading trucks

0755 START begins viper run

0900 START and ERRS began digging test pits in Grids ROW-01 through ROW-04 to screen with XRF and collect samples.

ROW-01 XRF Results

1) 1248 ± 15 2) 427 ± 7 3) $2.23\% \pm 0.1\%$
4) 3803 ± 35

ROW-02 XRF Results

1) 475 ± 8 2) 1446 ± 21 3) 40 ± 3
4) 2210 ± 29 5) 1088 ± 13

ROW-03 XRF Results

1) 1073 ± 13 2) 1378 ± 18 3) 892 ± 13
4) 1203 ± 15 5) 1052 ± 15

ROW-04 XRF Results

1) 275 ± 12 2) 39 ± 2 3) 146 ± 4
4) 1342 ± 15 5) 2546 ± 24

1200 Break for lunch

1230 START plotted survey points in collector app along ditch at bottom of levee.

1500 START screened XRF points on IPL property on north site boundary and plotted them in collector app.

1610 START collected air monitoring equipment

1640 START ended viper run.

Backlog While digging test pits in grids ROW-01 through ROW-04 START observed soil in grids ROW-02, ROW-03 and ROW-04 that were very black and tarry looking. It also smelled like oil. These spots tested high for lead.

1710 START off site

5/24/18
Aaron Neumann

16 5/29/18 IN Battery Co

Purpose: Removal oversight + air monitoring

Personnel: Lucas Stamps

WX: Part Sunny, high of 89°. winds

7-14 mph from east

0645 START on site.

0700 H+S meeting w/ EARS and OSC
Sowell. EARS will load out
logs and start excavating south
end of ditch.

0730 START deployed air monitors
and samples. started VIPER run.
2 trucks on site to
take logs to disposal facility.

0830 West DustTrak (RX 012) reading
negative. START re-zeroed w/o
autozero module.

Backnote START deployed ~~at new~~ southern DustTrak
at new location (S2) near
bridge of walking path.

Lat: 39.747339°N Long: 86.204064°W

0900 EARS excavating eastern bank
of ditch.

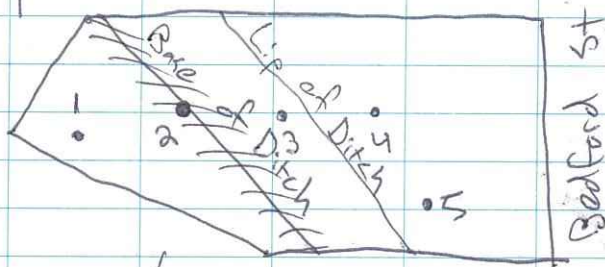
1000 Representatives from Indianapolis
DPW on site for site
walk.

IN Battery Co

5/29/18¹⁷

1230 EARS continued to excavate
east side of ditch and
stockpile material in
OUI-03 and OUI-02.

1516. START screened in situ
soil in grid ROW-05 w/ XRF
N
↑
NOT TO SCALE

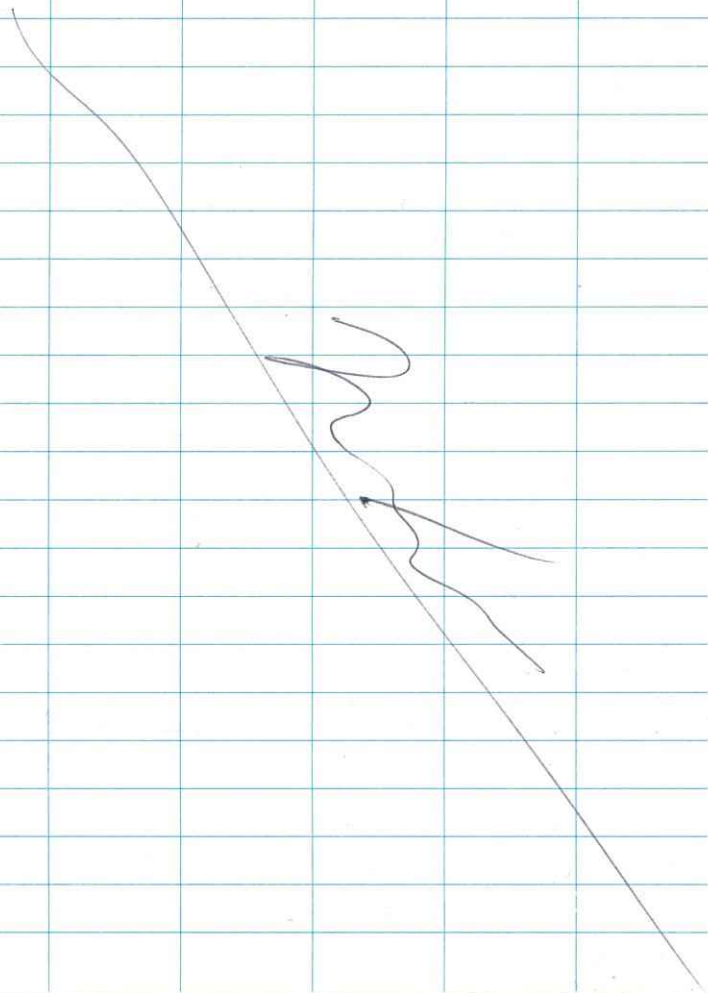


Point	Result (Lead)	Reading
1	74 ± 3	#4
2	124 ± 4	#5
3	2514 ± 25	#6
4	1827 ± 19	#9
5	161 ± 4	#10

START screened sidewall NE
sidewall of excavation in
OUI-03-W05 w/ XRF.

Lead: 1) 1.07% ± 1 2) 7462 ± 69 ppm
3) 9490 ± 82 ppm

18 5/29/18 IN Battery Co
1640 START collected air monitors
and samples and ended VIPER
run.
1745 START off site to ship
air samples from last week.



IN Battery Co 5/30/18 19
Purpose: Oversight and air monitoring
Personnel: Lucas Stamps
Wx: Cloudy, high of 90°. Winds 12-17 mph
from SE. Rain in afternoon.
0645 START on site.
0700 AHS meeting w/ ERAS and OSG.
ERAS will continue excavating ditch
east of levee.
0720 START deployed air monitors and
samples. Started VIPER run.
0730. ERAS began excavation in
ditch (grids OUG-E17 - OUG-E21)
Stockpiling material in OUI-02
and Row-05.
1000 Shipment of Freeflow arrived
on site.
1100 ERAS dug 2 test pits @
base of ditch in OUG-E19 and
OUG-E20. No visible battery
casings ~ 1 ft down. XRF lead
results @ 1 ft bgs were
300-400 ppm.
1500 ERAS began mixing stockpile
in OUI-08 w/ Free Flow.
1530 START collected air monitors

Rite in the Rain.

20 5/30/18 IN Battery Co
and samples due to rain.
Ended VIPER run.
1705 START off site.

5/30/18

21 IN Battery Co 5/31/18
Purpose: Oversight and air monitoring
Personnel: Lucas Stamps
Wx: Cloudy, high of 90°. Winds
9-13 mph from SW.
0645 START on site.
0700 H+S meeting w/ ERBS and OSC.
ERBS will continue excavating
OV3-E17-E22 and mixing
material w/ treatment chemical.
0730 START deployed air monitors and
samples and started VIPER run.
DustTrak 012 (west) would not
zero, will attempt to remedy
later.
0800 ERBS excavated base of
ditch in OV3-E18 and OV3-E17.
START screened base and west
sidewall as excavation progressed.
Readings added to GeoPlatform
using collector app.
1100 START screened soil 4" deep in
between trailers at north end of
grid OV1-19. for lead w/ XRF.
Result was ~1400 ppm. Result
added to geoplatform using

Rite in the Rain

5/31/18 IN Battery Co

Collector app.

1230 START screened floor of red-roof building w/ XRF for lead. Results below.

NW corner: 1.64% $\pm .1$ NE corner: 1.49% $\pm .1$ Center: 1.01% $\pm .1$ ~~SE corner:~~ LSSE corner: 6571 ppm ± 60 SW corner: 1.15% $\pm .1$

1245 Site walk with OSC Sewell and MCPHD employee.

1530 High winds and rain. START collected west air monitoring setup. DustTrak still reading negative. Will replace internal filters tomorrow.

1620 START collected remaining 3 air monitors and samples. ERRS mixing piles and covering pile in ROW-05 w/ plastic sheeting. Ended VIPER run.

1715 START off site.

5/31/18

IN Battery Co

6/1/18 23

Purpose: Removal oversight + air mon.

Personnel: Lucas Stamps

Wx: High at 88°. Intervals of clouds and sun. Winds 7-10 mph from NW.

0645 START on site.

0700 HHS meeting w/ OSC and ERRS. ERRS will continue excavating

OUB-E17 and OUB-E23.

0720 START deployed 3 air monitors and samples (N, E, S) locations. The W dustTrak was reading negative and START will attempt repairs today. Started VIPER run.

0745 ERRS began excavation @ OUB-E22 and E23.

1400 START screened soil on N edge of property (N of white building) w/ XRF for lead. Results below 800 ppm. Recorded using collector app.

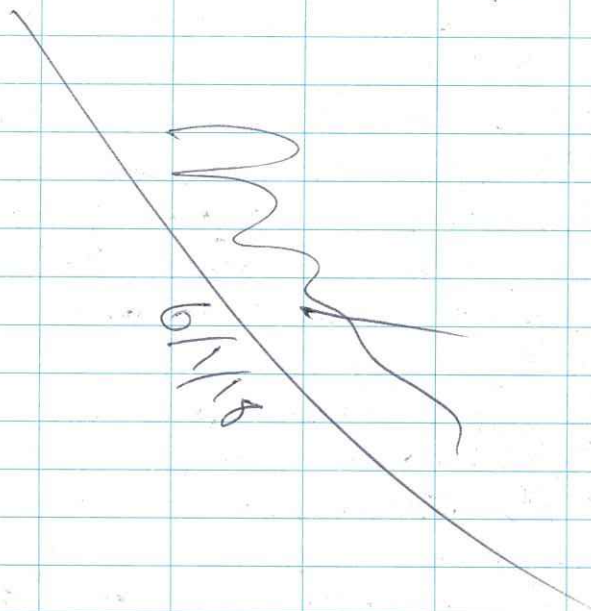
1430 START screened soil on IPL property to determine

Rite in the Rain

6/1/18 IN Battery Co
 extent of contamination.
 White flags placed at "clean"
 boundary. Could not record
 using collector due to iPad
 overheating.

1510 START collected air monitors
 and samples. Ended VIPER
 run and processed this
 week's dusttrak data.

1700 START off-site



6/4/18 IN Battery Co.

Purpose: Removal Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Sunny, High of 79°F, Wind 7mph NW

0645 START on site

0700 Health and Safety meeting with ERRS
 and OSC Sewell. ERRS will begin
 excavation of floor in pole barn and
 backfill in the ditch along the levee.

0730 START began deploying air monitoring
 equipment and samplers

0815 START began Viper run.

0830 ERRS begins mixing Free Flow into
 stockpile

0900 START marked property boundary and screened
 soil with XRF on IPL property for ERRS.

0930 ^{HIS} ERRS starts back filling grid 003-W05.
 A skidsteer is driving along the levee next
 to Western dusttrak creating a lot of dust.

1200 Break for lunch

1230 ERRS begins watering down inside of
 polebarn to prepare for excavation. START
 will monitor particulate levels using a PDR
 while excavating inside polebarn.

1300 ERRS begins excavation inside polebarn.
 START monitored particulates during
 excavation. Max 0.325 TWA0.85 *Below the Rain*

6/4/18 IN Battery Co

- 1645 START began retrieving air monitoring equipment.
 1720 START ended viper run.
 1730 START off site.

Aaron Neumann
 6/4/18

6/5/18 IN Battery Co

- Purpose: Removal Oversight and Air Monitoring
 Personnel: Aaron Neumann
 Weather: Partly Cloudy with a chance of afternoon storms, High of 86°F, Wind 7mph WSW
- 0645 START on site
 0700 Health and Safety meeting with ERPS and OSC Sewell. ERPS will continue excavation inside polebarn.
 0720 START begins deploying air monitoring equipment and samples
 0730 ERPS begins excavation inside polebarn
 0755 START begins viper run
 0800 HFS on site to brushing on levee.
 0900 START used a PDR to monitor particulate levels inside polebarn, Particulates rose above action level so ERPS stepped outside polebarn and watered down excavation area.
 1200 Break for lunch
 1245 START stopped run on Dust Trak 12 due to running negative. Dust Trak was zero calibrated and a new run started.
 1615 START retrieved air monitoring equipment
 1645 START ended viper run.
 1700 START off site.

Aaron Neumann
 6/5/18

Rite in the Rain

6/6/18 IN Battery Co

Purpose: Removal Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Partly Cloudy, High of 83°F, Wind 8mph NE

0645 START on site

0700 Health and Safety meeting with ERRS and OSC Sewell. ERRS plans to dig in grids OU1-09, OU1-01 through OU1-04 today.

0715 START begins deploying air monitoring equipment and samples.

0750 START begins a new viper run.

0945 Free Flow delivery arrives.

1000 START collected ROE confirmation samples from grids OU1-09A and OU1-09B and then screened them with XRF. Both were high for lead.

1100 ERRS finished excavating grid OU1-04 and is mixing Free Flow into stockpile.

1200 Break for lunch

1245 START observed DustTrak a2 running negative so run was stopped. DustTrak zero calibrated and then restarted.

1300 START collected confirmation samples from grids OU1-04, OU3-E17, OU3-E18 and OU3-E19, then screened them with XRF.

1430 START collected GPS points to make 4 grids on IPL property where ERRS excavated.

1430 ERRS put up a barrier fence along IPL property and Eagle Creek Trail

1530 START began retrieving air monitoring equipment and samples.

1600 START ended viper run.

1605 START off site

6/6/18

Aaron

6/7/18 IN Battery Co

Purpose: Removal Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Partly Cloudy, Chance of storms in the afternoon, High of 92°F, Wind 4mph SSE

0645 START on site

0700 Health and safety meeting with ERRS and OSC Sewell. ERRS will work on backfilling grids CU1-09A, CU1-09B and CU3-~~E17~~ through CU3-E19.

0715 Heritage trucking on site to receive load from IPL stockpile

0720 START began deploying air monitoring equipment and samples

0730 Backfill dirt arrives

0750 START begins new viper run.

0830 START recorded GPS locations of where ERRS is laying barrier fence at bottom of excavation.

0900 START collected BOE confirmation samples from grids CU3-E20 through CU3-E23 and then screened them with an XRF

1200 Break for lunch

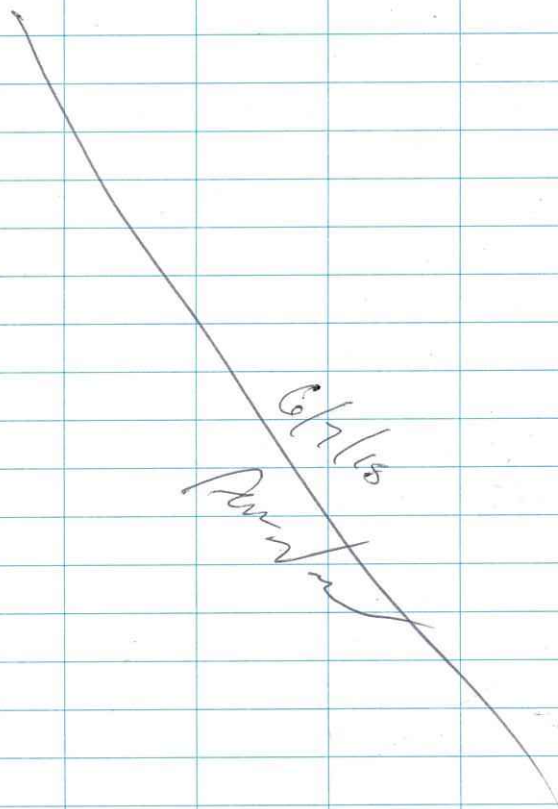
1245 START ended run on DustTrak C12 due to reading negative. Zero calibrated and started a new run.

6/7/18 IN Battery Co

1710 START began retrieving air monitoring equipment and samples

1740 START ended viper run.

1745 START off site



32 6/8/18 IN Battery Co

Purpose: Removal Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Partly Cloudy, High of 90°F, Wind 3mph SE

0645 START on site

0700 Health and safety meeting with ERRS and OSC Sewell. ERRS will be shipping dirt out from the stockpile all day.

0720 START begins deploying air monitoring equipment and samples

0730 Trucks on site to load from stockpile

0750 START begins new viper run

1200 Break for lunch.

1500 ERRS begins spreading gravel inside pile barn.

1505 START retrieved air monitoring equipment

1535 START ended viper run

1600 START off site

6/8/18

Aaron Neumann

IN Battery Co 6/11/18 33

Purpose: Oversight and air monitoring

Personnel: Lucas Stamps

Wx: Cloudy with rain and scattered storms. High of 82°. Wind 5-10 MPH from SSW.

0645 START on site.

0700 HRS meeting w/ ERRS and OSC. ERRS will be shipping waste off site for disposal. START did not deploy air monitors due to steady rain fall and chance of storms.

0730 Trucks arrived to ship waste off site. 10 trucks will run to landfill and back throughout day.

1145 START deployed DustTraks to N, E, and S locations. West DustTrak (012) would not display positive values. The Unit was not deployed.

1215 Started VIPER run. Air samples not deployed because of insufficient run time.

1500 Last truck left for the

Rite in the Rain.

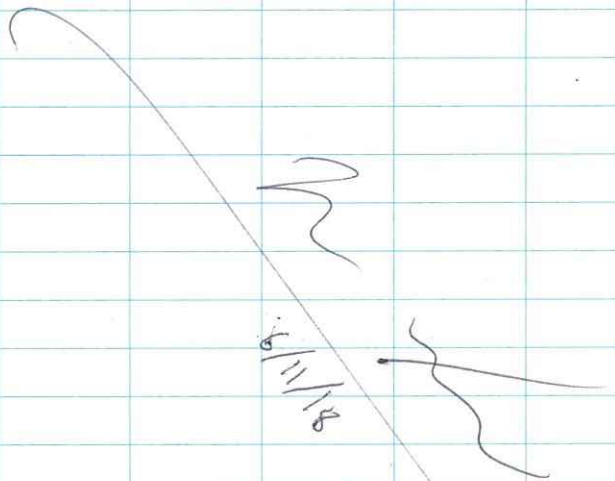
34 6/11/18 IN Battery Co

landfill For the day. ERRS began excavating OUI-03.

1600 ERRS began mixing pile w/ treatment chemical.

1630 START collected air monitors and samples. Ended VIPER run.

1715 START off site to ship air samples and confirmation soil samples.



IN Battery Co 6/12/18 35

Purpose: Oversight and air monitoring

Personnel: Lucas Stamps

Wx: Cloudy, high of 82°. Winds 8-12 mph from SSW

0700 START on site. HHS meeting w/ ERRS and OSC.

0720 START deployed air monitors to the N, E, and W locations. Deployed air samples w/ the DustTraks. ERRS began loading trucks w/ treated material.

EQM sent one operator to IPL property to load out hazardous soil for off-site treatment and disposal.

0750 START began VIPER run.

1030 ERRS excavated parts of OUI-13. Will continue excavating along northern fence between trucks.

1330 OSC Sewell off-site.

1440 START collected air monitors and samples. Ended VIPER run.

1530 START off site.

6/12/18

Ret in the Rain

36 6/13/18 IN Battery Co

Purpose: Oversight + air monitoring

Personnel: Lucas Stamps

Wx: Clouds and sun, high of 86°.

Winds 8-13 mph from NW,

0700 START on-site. H+S meeting
w/ EARS and OSC.

0720 EARS began loading truck with
treated material for off-site
disposal. 4 trucks will run today.
START deployed air monitors in
the N, E, and S locations. Also
deployed air samples

0745 Started VIPER run.

0830 EARS excavated areas of
OUI-06 and OUI-01. Will
continue to excavate between
trucks. START measured lead
> 10% @ ~1 ft bgs in
northern part of OUI-08.

1645 Last truck left the site
for the day. START collected
air monitors and samples.

1715 Ended VIPER run. START
off site.

6/13/18

IN Battery Co 6/14/18 37

Purpose: Oversight + air monitoring

Personnel: Lucas Stamps

Wx: High of 82°. Mostly sunny.

Winds 5-8 mph from east.

0645 START on site. H+S meeting
w/ EARS.

0720 START deployed air monitors
and samples at N/E and
W2 locations. ~~START~~ Trucks
began showing up to transport
material off site for disposal.

0750 Started VIPER run.

1400 EARS switched to loading
out stockpile in ROW-05
for disposal.

1645 START collected air monitors
and samples.

1715 Ended VIPER run. off site.

6/14/18

38 6/15/18 1N Battery Co.

Purpose: Oversight and air monitoring

Personnel: Lucas Stamps

Wx: Part sunny, high of 88°. Winds
6-9 mph from SE.

0645 START on site. HHS meeting
w/ EARS.

0710 START deployed air monitors
and samples at N1, E1, and W2
locations. EARS began shipping
material off site from stock-
pile in ROW-05.

0745 started VIPER run.

0800 START collected confirmation
soil samples from grids
OVI-01, OVI-02, OVI-03, and
OVI-13.

0815 screened area under decon
pad. Lead readings were
as high as 247%. EARS
will excavate the area later
today.

0830 HHS began raking land-side
of levee to remove roots.
START, OSC, and RM did
site walk w/ HHS and

1N Battery Co 6/15/18 39

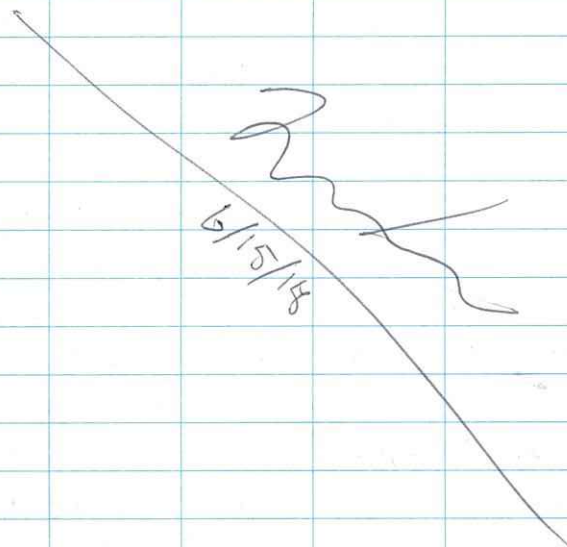
made plans for potentially remaining
contaminated material just up the
levee from the toe.

1000 EARS scraping surface in grid
ROW-05. START used XRF to
screen as they dug.

1300 EARS scraped material along
toe of levee in grids
OU3-E19 and OU3-E20.

1545 START collected air monitors
and samples.

1645 START off site



40 6/18/18 IN Battery Co

Purpose: Air monitoring and Oversight

Personnel: Lucas Stamps

WX: Sunny, high of 94°. Winds 18-30
MPH from WSW.

0645 START on site.

0700 HHS meeting w/ ERRS and OSC.

0715 Clay back fill was delivered
to site. ERRS began spreading
it in grids OUI-04 and OUI-03.

START collected confirmation
samples from grids OUI-14, OUI-08,
and OUI-09. Collected GPS information
for boundaries of excavation into
the toe of the levee. Collected
confirmation sample from base of
excavated area in the levee.

0745 START deployed air monitors
and samples @ N1/E1, and W2
locations.

0830 STARTED VIPER run. ERRS began
shipping waste from stockpile
near OUI-09.

1000 ERRS finished shipping stockpile
from OUI-09. Began shipping
material from stockpile in

IN Battery Co 6/18/18 41

ROW-05.

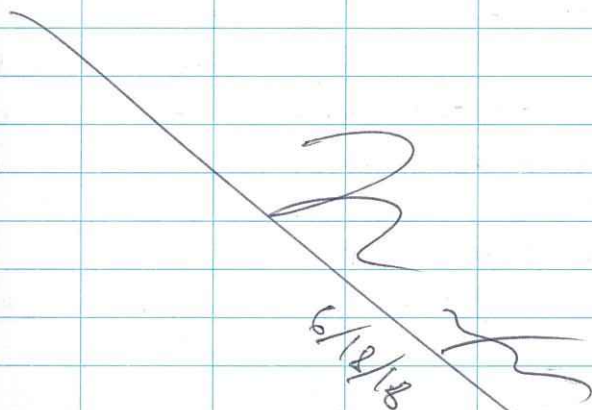
1130 ERRS finished loading stockpile
from ROW-05. Will continue to
bring in clay backfill throughout
day.

1300 ERRS began decoring large
excavator.

1630 START collected air monitors
and samples.

1700 Ended VIPER run.

1715 START off site to ship
air samples to ALS.



6/18/18

42 6/19/18 1N Battery Co

Purpose: Oversight + Air Monitoring

Personel: Lucas Stamps

WX: High of 89°, mix of sun and clouds. Chance of rain in afternoon. Winds 7-12 mph from W.

0650 START on site.

0700 HHS meeting w/ ERAS and OSC.
First truck arrived w/ clay back fill.

0715 START deployed air monitors and samples to N1, E1, W2 locations. North location moved east ~ 20 ft to stay out the way of the ERAS contractors equipment. ERAS began rolling/compacting clay in the ditch east of the levee.

0745 Started VIPER run.

1100 Dust alarm at western (upwind) dusttrak. START checked the location, but levels had dropped and no visible dust observed.

1400 ERAS also added clay backfill to O03-E22 and O03-E23.

1640 START collected air monitors

1N Battery Co 6/19/18 43

and Samples.

1700 Ended VIPER run. Rain started.

1715 START off site

6/19/18

44 6/20/18 IN Battery Co

Purpose: Oversight + air monitoring

Personnel: Lucas Stamps

Wx: High of 84°. Overcast w/ a chance of rain in afternoon. Winds 7-12 mph from W.

0700 START on site. HHS meeting w/ EARS and OSC.

0720 START deployed air monitors and samples at N, E, and S2 locations.

0745 Started VIPER run. Trucks will be delivering clay backfill throughout day.

1200 Break for lunch.

1230 EARS resumed backfilling w/ clay. START occasionally photographed the work and progress.

1715 START off site.

6/20/18

IN Battery Co 6/21/18

45

Purpose: Oversight + air monitoring

Personnel: Lucas Stamps

Wx: ~~Partly Cloudy~~, high Showers and thunderstorms, high of 78. Winds 5-10 mph from SSW.

0700 START on site. HHS meeting w/ EARS and OSC. START will not deploy air monitors or samples due to weather forecast.

0715 Trucks arrived w/ ± 2 gravel for backfill. EARS began spreading.

1030 Rain started.

1045 EARS began receiving #53 gravel.

1345 Rain stopped

1530 EARS began excavating/mixing soil in OUL- where the trailers used to sit. START present for oversight and XRF screening. Rain started again.

1700 START off site.

6/21/18

6/22/18

IN Battery Co

Purpose: Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Cloudy, Chance of storms starting at noon.

High of 79°F, Wind 3 mph SE

0645 START on site.

0700 Health and Safety meeting with EPRS and OSC Sewell. EPRS will load out dirt from stockpile and then backfill.

0730 EPRS began loading out dirt from grids OU1-18 and OU1-19. START measured dust using a personal data ram, Max concentration was 0.169 mg/m³. TWA was 0.045 mg/m³. START will not deploy dusttraks due to incoming rain and small amount of work being done that would cause dust.

0800 START collected a confirmation sample in grid OU1-18A where the two trailers were previously located. START screened the sample with XRF, highest reading was 127 ppm.

0830 EPRS is spreading gravel in grids OU1-01 through OU1-04.

1200 Break for lunch.

1300 EPRS works on gassing up equipment, compacting gravel and demobilization.

1630 START off site.

6/22/18

6/25/18

IN Battery Co

Purpose: Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Partly Cloudy, High of 83°F, Wind 7 mph E

0645 START on site

0700 Health and safety meeting with EPRS and OSC Sewell. EPRS will continue to backfill along levee ditch spreading clay and then top soil.

0745 START deployed air monitoring equipment.

0830 START began new viper run

0830 Tyson on site to take EPA trailer, ~~started~~ Demobilized trailer.

0900 EPRS continues to spread clay along levee ditch and gravel throughout 1302 Bedford St property.

1200 Break for lunch

1600 OSC Sewell off site to respond to ER

1645 START retrieved air monitoring equipment

1715 START ended viper run.

1745 START off site

6/25/18

Aaron Neumann

48 6/26/18

IN Battery Co

Purpose: Oversight and Air Monitoring

Personnel: Aaron Neumann

Weather: Cloudy, ~~Chance~~ Chance of afternoon storms,
High of 84°F, Wind 7mph ESE

0645 START on site

0700 Health and Safety with ERRS and OSC Sevell.
ERRS will continue to backfill and lay rip rap
along levee ditch.0750 START deployed air monitoring equipment
with a west station due to easterly winds

0810 START began a new viper run

0845 Tyson on site to pick up ERRS trailer

0930 START ended viper run and retrieved
air monitoring equipment due to incoming
severe weather.

1030 ERRS halts work due to weather

1315 START off site

6/26/18

Aaron

**USE WET OR DRY**

most pens stop writing when wet

- ALL PENCILS
- RITE IN THE RAIN PENS
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- CRAYONS
- OIL PASTELS / PAINT

**WHEN DRY ONLY**

what you write won't wash off

- PERMANENT MARKERS
- STANDARD BALLPOINTS

**WON'T WORK**

water-based inks bead off sheet

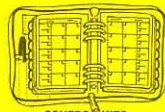
- GEL PENS
- MOST HIGHLIGHTERS
- FOUNTAIN PENS
- WATER COLORS
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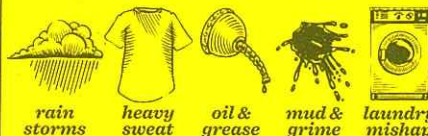
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Indiana Battery
Co



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ALL-WEATHER

LEVEL

Nº 311FX

EPA Region V
505-0001-1712-001

3 of 3

IN Battery Co 6/27/18³

Purpose: Oversight and air monitoring

Personnel: Lucas Stamps

Wx: Mostly cloudy, high of 83°. winds

9-14 mph From WSW.

0645 START on site.

0700 HRS meeting w/ EARS and
OSC.

0730 START deployed air monitors
and samples to N1, E1, and
W2 locations. EARS began
spreading gravel/restoring
parts of OUI.

0800 START moved some equipment
inside pole barn in OUI and
started VIPER run.

0830 START off site to transport
equipment for off-site storage.

0915 START back on site.

1015 OSC off site for walk-through
of a potential response.

1600 EARS moved trailer and portable
bathrooms into fenced area in
OUI.

1620 START collected air monitors and
samples.

4 6/27/18 1N Battery Co

1700 Ended VIPER run. START
off site.

6/27/18

1N Battery Co 6/28/18 5

Purpose: Oversight and air monitoring

Personnel: Lucas Stamp

Wx: Partly sunny, high of 84°. winds
5-7 MPH from ESE

0700 START on site. Hts meeting w/
ERRS and OSC.

0740 START deployed air monitors
and samples in N1, E1, and W2
locations. ERRS began spreading
rip rap in ditch.

0825 START began VIPER run.

1400 ERRS finished spreading rip rap
in ditch

1430 ERRS began excavating Grid
ROW-01.

1620 START collected air monitors and
samples. Ended VIPER run

1720 START off site.

6/28/18

6 6/29/18 IN Battery Co

Purpose: Oversight and air monitoring

Personnel: Lucas Stamps

Wx: Part sunny, high of 92°. Winds
7-12 mph from SSE.

0645 START on site.

0700 H+S meeting w/ ERRS and OSC.

0720 START deployed air monitors
and samples to N1, E1, W2
locations. ERRS continued excavation
and mixing in ROW-01. Also
laid grass seed at North end
of ditch near headwall.

0745 started VIPER run.

0945 ERRS completed excavation and
removal of waste from ROW-
01.

1000 START collected confirmation sample
from BOE in Row-01.

XRF 1: 108 ± 4

XRF 2: 202 ± 5

XRF 3: 205 ± 5

1015 ERRS continued grading and
compacting gravel throughout
GUL.

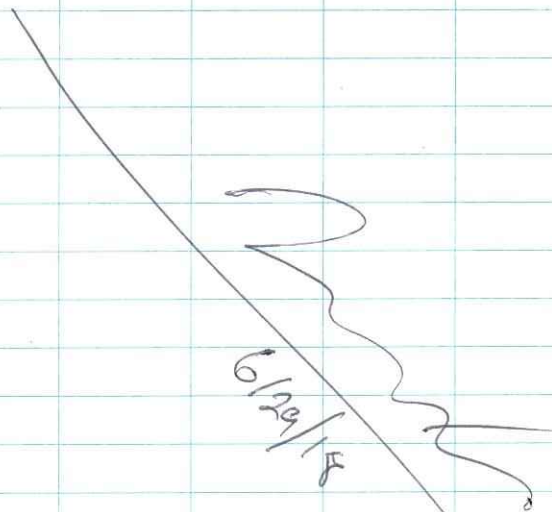
1400 ERRS began excavation
of grid ROW-02.

IN Battery Co 6/29/18 7

1620 START collected air monitors
and samples. ERRS began
securing site for weekend.

1645 START ended VIPER run

1710 START off site.



8 7/2/18 IN Battery Co.

Purpose: Oversight and air monitoring
Personnel: Lucas Stamps

Wx: Part cloudy, high of 86°. Winds
4-7 MPH from NNW.

0645 START on site.

0700 H+S meeting w/ EARS and OSL.

0720 START deployed air monitors and
samples @ locations N1, E1, and
S2. EARS ~~finished~~^{began} excavating
Row-02. Also loaded one truck w/ material for
off-site disposal.

0750 Started VIPER run.

0820 EARS Finished excavating
Row-02, START collected
confirmation soil sample.

XRF 1: 76 ± 3

XRF 2: 68 ± 3

XRF 3: 61 ± 3

0830 EARS began backfilling ~~Row~~
Row-01. and excavating Row-03.

1130 EARS Finished excavating Row-03.
START collected sample.

XRF 1: 56 ± 3

XRF 2: 56 ± 3

XRF 3: 48 ± 3

Began backfilling Row-02.

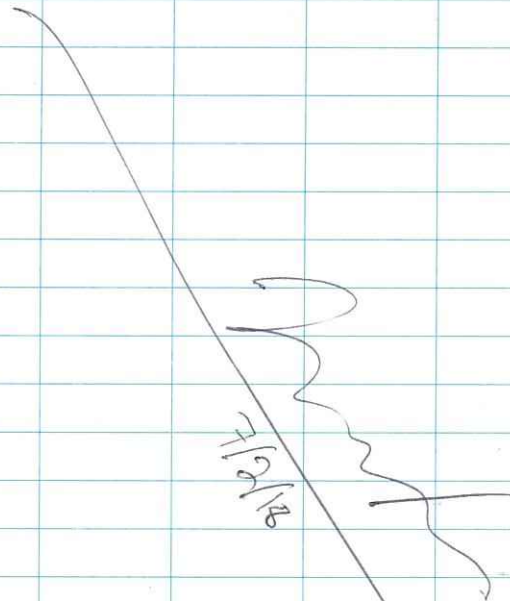
IN Battery Co 7/2/18 9

1530 EARS began mixing treatment
chemical w/ stockpile.

1620 START collected air samples
and monitors

1650 Ended VIPER run.

1715 START off site.



10 7/3/18

IN Battery Co

Purpose: Removal Oversight + air monitoring

Personnel: Lucas Stamp

WX: Part cloudy, high at 89° and
humid. Winds 6-9 mph from SE.

0700 START on site. H+S meeting w/
ERRS and OSC.

0715 ERRS began loading out stock
pile from ROW-04.

0720 START deployed air monitors and
samples @ N1, E1, and W2
locations.

0745 Started VIPER run.

0800 ERRS excavated remaining
areas of ROW-04 and ROW-
05 between trucks

1035 START collected and screened
confirmation sample from
ROW-05.

XRF1: 58 ± 12 XRF2: 200 ± 5

XRF3: 122 ± 4

1300 ERRS shipped last of remaining
stockpile from ROW-04. This
concludes waste removal
operations.

1315 START collected confirmation

IN Battery Co 7/3/18

11

Sample from ROW-04.

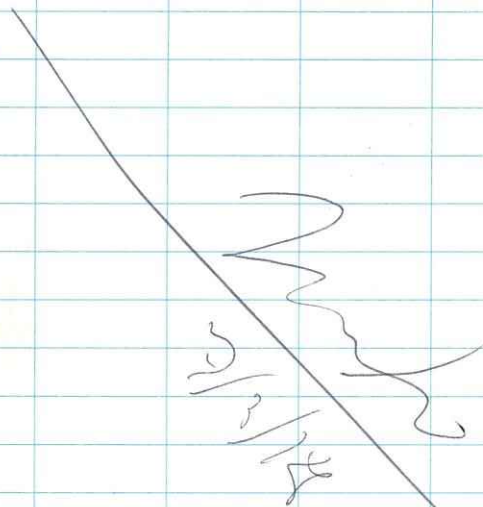
XRF 1: 19 ± 2 XRF-2 13 ± 2

XRF-3: 17 ± 2

1330 ERRS began fixing / leveling
gravel in ODI

1530 START collected air monitors
and samples. Ended VIPER run.

1630 START off site.



APPENDIX E
PHOTOGRAPHIC DOCUMENTATION LOG



Photographic Documentation

Client: EPA, Region 5

Site Name: Indiana Battery Company

Location: Indianapolis, Indiana

Prepared by: Lucas Stamps

TDD Number: S05-0001-1712-001

Dates: 4/16/18 – 6/29/18

Photograph No. 1

Date: 4/16/18

Description:

ERRS contractor excavating lead-contaminated soil for treatment and disposal.



Photograph No. 2

Date: 4/16/18

Description:

Example of the plastic battery casing chips that were found throughout the site.





Photographic Documentation

Client: EPA, Region 5

Site Name: Indiana Battery Company

Location: Indianapolis, Indiana

Prepared by: Lucas Stamps

TDD Number: S05-0001-1712-001

Dates: 4/16/18 – 6/29/18

Photograph No. 3

Date: 4/17/18

Description:

Decontamination pad that was constructed to decontaminate trucks prior to leaving the site with treated waste.



Photograph No. 4

Date: 4/19/18

Description:

ERRS contractor restoring excavated area with gravel.





Photographic Documentation

Client: EPA, Region 5

Site Name: Indiana Battery Company

Location: Indianapolis, Indiana

Prepared by: Lucas Stamps

TDD Number: S05-0001-1712-001

Dates: 4/16/18 – 6/29/18

Photograph No. 5

Date: 4/23/18

Description:

Trespassers removed trail barricade over the weekend; barricade was reinforced with chain link fence.



Photograph No. 6

Date: 4/23/18

Description:

Battery casing chips prevalent along western fence line of Operational Unit (OU) 1.





Photographic Documentation

Client: EPA, Region 5

Site Name: Indiana Battery Company

Location: Indianapolis, Indiana

Prepared by: Lucas Stamps

TDD Number: S05-0001-1712-001

Dates: 4/16/18 – 6/29/18

Photograph No. 7

Date: 5/2/18

Description:

ERRS contractor stored the treatment chemical beneath a lean-to shelter on the western side of the pole barn in the center of OU1.



Photograph No. 8

Date: 5/3/18

Description:

ERRS contractor loading trucks to transport treated material off site for disposal.





Photographic Documentation

Client: EPA, Region 5

Site Name: Indiana Battery Company

Location: Indianapolis, Indiana

Prepared by: Lucas Stamps

TDD Number: S05-0001-1712-001

Dates: 4/16/18 – 6/29/18

Photograph No. 9

Date: 5/3/18

Description:

ERRS contractor decontaminating a truck after being loaded with treated material for off-site disposal.



Photograph No. 10

Date: 5/9/18

Description:

Visible barrier was laid down prior to backfill in areas where contaminated material was left in place.





Photographic Documentation

Client: EPA, Region 5

Site Name: Indiana Battery Company

Location: Indianapolis, Indiana

Prepared by: Lucas Stamps

TDD Number: S05-0001-1712-001

Dates: 4/16/18 – 6/29/18

Photograph No. 11

Date: 5/15/18

Description:

ERRS contractor mixing the treatment chemical with contaminated soil to reduce the leachability of lead.



Photograph No. 12

Date: 5/17/18

Description:

The City of Indianapolis hired a contractor to remove trees and vegetation along the eastern bank of the levee.





Photographic Documentation

Client: EPA, Region 5

Site Name: Indiana Battery Company

Location: Indianapolis, Indiana

Prepared by: Lucas Stamps

TDD Number: S05-0001-1712-001

Dates: 4/16/18 – 6/29/18

Photograph No. 13

Date: 5/21/18

Description:

ERRS contractor placed hay bales and silt fence around a catchment basin prior to removing soil in the drainage ditch.



Photograph No. 14

Date: 6/4/18

Description:

ERRS contractor excavated the floor of the pole barn in the center of OU1.





Photographic Documentation

Client: EPA, Region 5

Site Name: Indiana Battery Company

Location: Indianapolis, Indiana

Prepared by: Lucas Stamps

TDD Number: S05-0001-1712-001

Dates: 4/16/18 – 6/29/18

Photograph No. 15

Date: 6/14/18

Description:

ERRS contractor adding water to stockpile for dust suppression.



Photograph No. 16

Date: 6/15/18

Description:

ERRS beginning to backfill the ditch east of the levee.





Photographic Documentation

Client: EPA, Region 5

Site Name: Indiana Battery Company

Location: Indianapolis, Indiana

Prepared by: Lucas Stamps

TDD Number: S05-0001-1712-001

Dates: 4/16/18 – 6/29/18

Photograph No. 17

Date: 6/19/18

Description:

ERRS contractor restoring the drainage ditch east of the levee.



Photograph No. 18

Date: 6/29/18

Description:

ERRS contractor loading out treated material from areas along the Bedford Street right-of-way.



APPENDIX F
ENVIRONMENTALLY PREFERRED PRACTICES

START implemented environmentally preferred practices to maximize sustainability; reduce energy, water use, and toxic air emissions; promote carbon neutrality; and encourage industrial material reuse and recycling. In accordance with contract requirements, U.S. Environmental Protection Agency (EPA) policies, and relevant guidance, START documented project-specific environmentally preferred practices and available metrics in the Environmental Field Practices Checklist, Environmental Office Practices Checklist, and Green Metrics Table (ASTM International 2016; EPA 2012a, 2012b, and 2016).

References:

- ASTM International (ASTM). 2016. "Standard Guide for Greener Cleanups." E2893-16. April 1.
- EPA. 2012a. "Methodology for Understanding and Reducing a Project's Environmental Footprint." Office of Solid Waste and Emergency Response, Office of Superfund Remediation and Technology Innovation. EPA 542-R-12-002. February.
- EPA. 2012b. "U.S. EPA Region 5 Superfund Greener Cleanup Implementation Strategy." March 16.
- EPA. 2016. Memorandum Regarding Consideration of Greener Cleanup Activities in the Superfund Cleanup Process. From Woolford, James, Director, *et. al.* To Regional Superfund National Program Managers and Regional Counsels, Regions 1 – 10. August 2.

TDD #:	S05-0001-1712-001
Site Name:	Indiana Battery Company
Site City, State:	Indianapolis, Indiana
Site Project Manager:	Lucas Stamps
EPA OSC:	Jason Sewell

Environmentally Preferred General Field Practices				
If a general category is not applicable, then check N/A for the category box, not for each subcategory.	N= Not Used	N/A= Not Applicable	Y = Yes Implemented	Comments Section Justify in the comments for each BMP field as to why the practice was not used, not applicable, or implemented.
Energy				
Use of Energy Efficient Equipment				
Computer Equipment (FEMP/Energy Star)			X	Energy Star laptops
Installation of Electric Service	X			Not logistically feasible, used generator
Reduce Carbon Emissions from Transportation				
Use Internet Based Meetings/Conferences		X		No meetings or conferences held outside of site operation hours
Maximize Carpooling		X		One START member on site at a time
Use of Local Labor/Suppliers/Waste Disposal Facilities (50 mile radius)			X	Indianapolis Tetra Tech staff and Indianapolis-based subcontractor QEPI
No idling, except for extreme weather conditions			X	Idling not necessary
Use of Alternative Fuels, if available within 10 miles	X			Vehicles not equipped for alternative fuel
Properly Inflated Tires			X	
Email Small Files (less than 8MB)			X	All files transmitted electronically
Reusable Electronic Storage Media or the Cloud			X	Files stored digitally
Water				
Use of Low Flow Sampling Pumps		X		No water sampling
Waste				
Use of Local Recycling Programs			X	ERRS contractor handled recycling
Use of Rechargeable Batteries			X	All monitoring equipment used rechargeable batteries
Recycling – Other		X		
Plastic Reduction		X		
Reuse of Resources			X	Supplies reused when possible
Direct Push Boring		X		No borings
Materials				
Printing when Required				
Double-sided Printing			X	Used

Environmentally Preferred General Field Practices				
If a general category is not applicable, then check N/A for the category box, not for each subcategory.	N = Not Used	N/A = Not Applicable	Y = Yes Implemented	Comments Section Justify in the comments for each BMP field as to why the practice was not used, not applicable, or implemented.
100% post-consumer recycled paper			X	Used
Land & Ecosystems				
Minimize Disruption to Natural Vegetation		X		Urban area
Use of Non-invasive Investigation Techniques			X	In situ XRF screening instead of collecting samples
Environmentally Preferred				
Green Procurement				
Environmentally Preferred Vendors			X	Field Environmental Instruments
Green Lodging/Hotels		X		No overnight travel
Use of Green Laboratories			X	CT Labs

TDD #:	S05-0001-1712-001
Site Name:	Indiana Battery Company
Site City, State:	Indianapolis, Indiana
Site Project Manager:	Lucas Stamps
EPA OSC:	Jason Sewell

Green Metrics		
Metric	Amount	Unit of Measure
Diesel Fuel Used		gallons
Distance Traveled ¹	648.00	Miles
Unleaded Fuel Used ²	24.64	gallons
Alternative/E-85 Fuel Used		gallons
Electricity from Coal		kW
Electricity from Natural Gas		kW
Electricity from solar/wind		kW
Electricity from grid/mix		kW
Solid waste reused		lbs
Solid waste recycled		lbs
Water Used		gallons

Greenhouse Gas Emissions (Site Specific)					
Source	Amount Used	Unit of Measure	Methane (CH ₄) (Grams) ³	Nitrous Oxide (N ₂ O) (Grams) ³	Carbon Dioxide (CO ₂) (Kilograms) ³
Gasoline	24.64	X gallons	4.28	10.56	219.53
Diesel		X gallons			
E-85		X gallons			
Electricity Office		X Kilowatts			
Natural Gas		X Therms			
Solid Waste		X lbs			
Other		X Unit of Measure			

Note:

¹ Distance traveled based on number of round trips between the Indiana Battery Site in Indianapolis, IN, and the START PM's home in Speedway, IN (10.8 miles) in a large sport utility vehicle, which was required for cargo space. A total of 60 trips were made by 1 Tetra Tech personnel totaling 648 miles.

² Fuel consumption based on distance traveled in a large sport utility vehicle. An average fuel efficiency of 26.3 miles per gallon was assumed based on 2014 light duty truck fuel efficiency from "Average Fuel Efficiency of U.S. Light Duty Vehicles," U.S. Department of Transportation, Bureau of Statistics Table 4-23 (Accessed online at http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/national_transportation_statistics/html/table_04_23.html on December 9, 2016).

³ Methane and nitrous oxide emissions based on emission factors of 0.0066 and 0.0163 grams per mile for EPA Tier 2 light duty gasoline trucks from "Voluntary Reporting of Greenhouse Gases Program, Fuel Emission Coefficients, Table 5" (Accessed online at <http://205.254.135.7/oiaf/1605/coefficients.html> on December 9, 2016)

⁴ Carbon dioxide emissions based on emission factors of 8.91 kilograms carbon dioxide per gallon of gasoline and 10.15 kilograms carbon dioxide per gallon of diesel fuel from "Voluntary Reporting of Greenhouse Gases Program, Fuel Emission Coefficients, Table 2" (Accessed online at <http://205.254.135.7/oiaf/1605/coefficients.html> on November 14, 2016).

ATTACHMENT 1

LABORATORY ANALYTICAL REPORTS



25-Jul-2018

Lucas Stamps
Tetra Tech - Indianapolis
1060 N. Capitol Avenue
Suite E360
Indianapolis, IN 46204

Tel: (317) 797-2420
Fax: (317) 423-3907

Re: Indiana Battery Company

Work Order: **1804526**

Dear Lucas,

ALS Environmental received 10 samples on 18-Apr-2018 09:20 AM for the analyses presented in the following report.

This is a REVISED REPORT. The Case Narrative provides information discussing the reason for issuing a revised report. The total number of pages in this revision is 16.

If you have any questions regarding these test results, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Chris Gibson

Chris Gibson
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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RIGHT SOLUTIONS RIGHT PARTNER

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1804526

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1804526-01	IBC-N1-180416	Air		4/16/2018	4/18/2018 09:20	☐
1804526-02	IBC-E1-180416	Air		4/16/2018	4/18/2018 09:20	☐
1804526-03	IBC-S1-180416	Air		4/16/2018	4/18/2018 09:20	☐
1804526-04	IBC-W1-180416	Air		4/16/2018	4/18/2018 09:20	☐
1804526-05	IBC-FB-180416	Air		4/16/2018	4/18/2018 09:20	☐
1804526-06	IBC-N1-180417	Air		4/17/2018	4/18/2018 09:20	☐
1804526-07	IBC-E1-180417	Air		4/17/2018	4/18/2018 09:20	☐
1804526-08	IBC-S1-180417	Air		4/17/2018	4/18/2018 09:20	☐
1804526-09	IBC-W2-180417	Air		4/17/2018	4/18/2018 09:20	☐
1804526-10	IBC-FB-180417	Air		4/17/2018	4/18/2018 09:20	☐

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1804526

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

Compound identification is based upon retention time matching only. Any compound with a similar retention time will interfere.

Samples were prepared and analyzed by the analytical method and the laboratory's applicable standard operating procedure listed below:

- IH-001- "Determination of Analytes Using NIOSH and OSHA Methods Using Gas Chromatography."
- IH-002- "Determination of Suspended Particulates in the Atmosphere Using Various Media"
- IH-003- "Determination of Suspended Particulates Not Otherwise Regulated (Total and Respirable)."
- IH-004- "Determination of Analytes by NIOSH and OSHA Methods Using Liquid Chromatography."
- IH-005- "Benzene-Soluble Fraction and Total Particulate (Asphalt Fume)."
- IH-006- "Methods IO-3.1 and IO-3.4 Modified for Metals Preparation and Analysis for Suspended Particulates."
- IH-196- "Carbon Black by OSHA 196."
- IH-6009- "Determination of Mercury in Industrial Hygiene Samples by Manual Cold Vapor Atomic Absorption Spectroscopy."
- ENV-6010B- "Determination of Trace Metals in Solution by Inductively Coupled Plasma-Atomic Emission Spectroscopy by EPA Method 6010B Non-VAP."
- IH-7300 modified- "Elements by ICP."

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

Revision 7/25/18: air volumes corrected.

ALS Environmental

Date: 25-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-N1-180416
Collection Date: 4/16/2018

Work Order: 1804526
Lab ID: 1804526-01
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1566.34	Analyst: SRL
Date Analyzed: 4/18/2018 14:54		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00064	
Barium	ND	1.0	<0.00064	
Cadmium	ND	0.10	<0.000064	
Chromium	ND	1.0	<0.00064	
Lead	ND	1.0	<0.00064	
Lead	ND	0.20	<0.00013	
Selenium	ND	1.0	<0.00064	
Silver	ND	0.50	<0.00032	

Note:

ALS Environmental

Date: 25-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180416
Collection Date: 4/16/2018

Work Order: 1804526
Lab ID: 1804526-02
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1552.02	Analyst: SRL
Date Analyzed: 4/18/2018 14:57		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00064	
Barium	ND	1.0	<0.00064	
Cadmium	ND	0.10	<0.000064	
Chromium	ND	1.0	<0.00064	
Lead	ND	1.0	<0.00064	
Lead	ND	0.20	<0.00013	
Selenium	ND	1.0	<0.00064	
Silver	ND	0.50	<0.00032	

Note:

ALS Environmental

Date: 25-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-S1-180416
Collection Date: 4/16/2018

Work Order: 1804526
Lab ID: 1804526-03
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1458.7	Analyst: SRL
Date Analyzed: 4/18/2018 15:14		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00069	
Barium	ND	1.0	<0.00069	
Cadmium	ND	0.10	<0.000069	
Chromium	ND	1.0	<0.00069	
Lead	ND	1.0	<0.00069	
Lead	ND	0.20	<0.00014	
Selenium	ND	1.0	<0.00069	
Silver	ND	0.50	<0.00034	

Note:

ALS Environmental

Date: 25-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-W1-180416
Collection Date: 4/16/2018

Work Order: 1804526
Lab ID: 1804526-04
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1582.42	Analyst: SRL
Date Analyzed: 4/18/2018 15:17		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00063	
Barium	ND	1.0	<0.00063	
Cadmium	ND	0.10	<0.000063	
Chromium	ND	1.0	<0.00063	
Lead	ND	1.0	<0.00063	
Lead	ND	0.20	<0.00013	
Selenium	ND	1.0	<0.00063	
Silver	ND	0.50	<0.00032	

Note:

ALS Environmental

Date: 25-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180416
Collection Date: 4/16/2018

Work Order: 1804526
Lab ID: 1804526-05
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 4/18/2018 15:20		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 25-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-N1-180417
Collection Date: 4/17/2018

Work Order: 1804526
Lab ID: 1804526-06
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1655.55	Analyst: SRL
Date Analyzed: 4/18/2018 15:23		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00060	
Barium	ND	1.0	<0.00060	
Cadmium	ND	0.10	<0.000060	
Chromium	ND	1.0	<0.00060	
Lead	ND	1.0	<0.00060	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00060	
Silver	ND	0.50	<0.00030	

Note:

ALS Environmental

Date: 25-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180417
Collection Date: 4/17/2018

Work Order: 1804526
Lab ID: 1804526-07
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1679.83	Analyst: SRL
Date Analyzed: 4/18/2018 15:27		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00060	
Barium	ND	1.0	<0.00060	
Cadmium	ND	0.10	<0.000060	
Chromium	ND	1.0	<0.00060	
Lead	ND	1.0	<0.00060	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00060	
Silver	ND	0.50	<0.00030	

Note:

ALS Environmental

Date: 25-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-S1-180417
Collection Date: 4/17/2018

Work Order: 1804526
Lab ID: 1804526-08
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1664.54	Analyst: SRL
Date Analyzed: 4/18/2018 15:30		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00060	
Barium	ND	1.0	<0.00060	
Cadmium	ND	0.10	<0.000060	
Chromium	ND	1.0	<0.00060	
Lead	ND	1.0	<0.00060	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00060	
Silver	ND	0.50	<0.00030	

Note:

ALS Environmental

Date: 25-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-W2-180417
Collection Date: 4/17/2018

Work Order: 1804526
Lab ID: 1804526-09
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1644.82	Analyst: SRL
Date Analyzed: 4/18/2018 15:34		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00061	
Barium	ND	1.0	<0.00061	
Cadmium	ND	0.10	<0.000061	
Chromium	ND	1.0	<0.00061	
Lead	ND	1.0	<0.00061	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00061	
Silver	ND	0.50	<0.00030	

Note:

ALS Environmental

Date: 25-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180417
Collection Date: 4/17/2018

Work Order: 1804526
Lab ID: 1804526-10
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 4/18/2018 15:37		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 25-Jul-18

Client: Tetra Tech - Indianapolis
Work Order: 1804526
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **50110** Instrument ID **ICP1** Method: **N7300**

MBLK	Sample ID: mblk-50110-50110			Units: µg/sample			Analysis Date: 4/18/2018 02:12 PM			
Client ID:	Run ID: ICP1_180418B			SeqNo: 1732179			Prep Date: 4/18/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS	Sample ID: lcs-50110-50110			Units: µg/sample			Analysis Date: 4/18/2018 02:15 PM			
Client ID:	Run ID: ICP1_180418B			SeqNo: 1732180			Prep Date: 4/18/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	19.76	1.0	20	0	98.8	80-120	0			
Barium	19.81	1.0	20	0	99	80-120	0			
Cadmium	20.06	0.10	20	0	100	80-120	0			
Chromium	19.71	1.0	20	0	98.5	80-120	0			
Lead	20.02	1.0	20	0	100	80-120	0			
Selenium	20.68	1.0	20	0	103	80-120	0			
Silver	19.49	0.50	20	0	97.4	80-120	0			

LCSD	Sample ID: lcsd-50110-50110			Units: µg/sample			Analysis Date: 4/18/2018 02:18 PM			
Client ID:	Run ID: ICP1_180418B			SeqNo: 1732181			Prep Date: 4/18/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	19.42	1.0	20	0	97.1	80-120	19.76	1.71	20	
Barium	19.31	1.0	20	0	96.5	80-120	19.81	2.56	20	
Cadmium	19.76	0.10	20	0	98.8	80-120	20.06	1.51	20	
Chromium	19.16	1.0	20	0	95.8	80-120	19.71	2.82	20	
Lead	19.83	1.0	20	0	99.2	80-120	20.02	0.954	20	
Selenium	20.36	1.0	20	0	102	80-120	20.68	1.56	20	
Silver	19.03	0.50	20	0	95.1	80-120	19.49	2.38	20	

The following samples were analyzed in this batch:

1804526-01a	1804526-02a	1804526-03a
1804526-04a	1804526-05a	1804526-06a
1804526-07a	1804526-08a	1804526-09a
1804526-10a		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
WorkOrder: 1804526

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **TETRATECH-INDIANAPOLIS**

Date/Time Received: **18-Apr-18 09:20**

Work Order: **1804526**

Received by: **SNH**

Checklist completed by **Chris Gibson**

18-Apr-18

Reviewed by: **Chris Gibson**

18-Apr-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☐

pH adjusted?

Yes ☐

No ☐

N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



23-Apr-2018

Lucas Stamps
Tetra Tech - Indianapolis
1060 N. Capitol Avenue
Suite E360
Indianapolis, IN 46204

Tel: (317) 797-2420
Fax: (317) 423-3907

Re: Indiana Battery Company

Work Order: **1804527**

Dear Lucas,

ALS Environmental received 10 samples on 18-Apr-2018 09:20 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 16.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Chris Gibson

Chris Gibson
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1804527

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1804527-01	IBC-N1-180412	Air		4/12/2018	4/18/2018	☐
1804527-02	IBC-E1-180412	Air		4/12/2018	4/18/2018	☐
1804527-03	IBC-S1-180412	Air		4/12/2018	4/18/2018	☐
1804527-04	IBC-W1-180412	Air		4/12/2018	4/18/2018	☐
1804527-05	IBC-FB-180412	Air		4/12/2018	4/18/2018	☐
1804527-06	IBC-N1-180413	Air		4/13/2018	4/18/2018	☐
1804527-07	IBC-E1-180413	Air		4/13/2018	4/18/2018	☐
1804527-08	IBC-S1-180413	Air		4/13/2018	4/18/2018	☐
1804527-09	IBC-W1-180413	Air		4/13/2018	4/18/2018	☐
1804527-10	IBC-FB-180413	Air		4/13/2018	4/18/2018	☐

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1804527

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

Compound identification is based upon retention time matching only. Any compound with a similar retention time will interfere.

Samples were prepared and analyzed by the analytical method and the laboratory's applicable standard operating procedure listed below:

- IH-001- "Determination of Analytes Using NIOSH and OSHA Methods Using Gas Chromatography."
- IH-002- "Determination of Suspended Particulates in the Atmosphere Using Various Media"
- IH-003- "Determination of Suspended Particulates Not Otherwise Regulated (Total and Respirable)."
- IH-004- "Determination of Analytes by NIOSH and OSHA Methods Using Liquid Chromatography."
- IH-005- "Benzene-Soluble Fraction and Total Particulate (Asphalt Fume)."
- IH-006- "Methods IO-3.1 and IO-3.4 Modified for Metals Preparation and Analysis for Suspended Particulates."
- IH-196- "Carbon Black by OSHA 196."
- IH-6009- "Determination of Mercury in Industrial Hygiene Samples by Manual Cold Vapor Atomic Absorption Spectroscopy."
- ENV-6010B- "Determination of Trace Metals in Solution by Inductively Coupled Plasma-Atomic Emission Spectroscopy by EPA Method 6010B Non-VAP."
- IH-7300 modified- "Elements by ICP."

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

ALS Environmental

Date: 23-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-N1-180412
Collection Date: 4/12/2018

Work Order: 1804527
Lab ID: 1804527-01
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1007.13	Analyst: SRL
Date Analyzed: 4/20/2018 14:30		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00099	
Barium	ND	1.0	<0.00099	
Cadmium	ND	0.10	<0.000099	
Chromium	ND	1.0	<0.00099	
Lead	ND	0.20	<0.00020	
Selenium	ND	1.0	<0.00099	
Silver	ND	0.50	<0.00050	

Note:

ALS Environmental

Date: 23-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180412
Collection Date: 4/12/2018

Work Order: 1804527
Lab ID: 1804527-02
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1006.57	Analyst: SRL
Date Analyzed: 4/20/2018 14:34		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00099	
Barium	ND	1.0	<0.00099	
Cadmium	ND	0.10	<0.000099	
Chromium	ND	1.0	<0.00099	
Lead	ND	0.20	<0.00020	
Selenium	ND	1.0	<0.00099	
Silver	ND	0.50	<0.00050	

Note:

ALS Environmental

Date: 23-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-S1-180412
Collection Date: 4/12/2018

Work Order: 1804527
Lab ID: 1804527-03
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 978.5	Analyst: SRL
Date Analyzed: 4/20/2018 14:37		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.0010	
Barium	ND	1.0	<0.0010	
Cadmium	ND	0.10	<0.00010	
Chromium	ND	1.0	<0.0010	
Lead	ND	0.20	<0.00020	
Selenium	ND	1.0	<0.0010	
Silver	ND	0.50	<0.00051	

Note:

ALS Environmental

Date: 23-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-W1-180412
Collection Date: 4/12/2018

Work Order: 1804527
Lab ID: 1804527-04
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 999.18	Analyst: SRL
Date Analyzed: 4/20/2018 14:40		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.0010	
Barium	ND	1.0	<0.0010	
Cadmium	ND	0.10	<0.00010	
Chromium	ND	1.0	<0.0010	
Lead	ND	0.20	<0.00020	
Selenium	ND	1.0	<0.0010	
Silver	ND	0.50	<0.00050	

Note:

ALS Environmental

Date: 23-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180412
Collection Date: 4/12/2018

Work Order: 1804527
Lab ID: 1804527-05
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 4/20/2018 14:50		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 23-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-N1-180413
Collection Date: 4/13/2018

Work Order: 1804527
Lab ID: 1804527-06
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1119.99	Analyst: SRL
Date Analyzed: 4/20/2018 14:53		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00089	
Barium	ND	1.0	<0.00089	
Cadmium	ND	0.10	<0.000089	
Chromium	ND	1.0	<0.00089	
Lead	ND	0.20	<0.00018	
Selenium	ND	1.0	<0.00089	
Silver	ND	0.50	<0.00045	

Note:

ALS Environmental

Date: 23-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180413
Collection Date: 4/13/2018

Work Order: 1804527
Lab ID: 1804527-07
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1114.72	Analyst: SRL
Date Analyzed: 4/20/2018 14:56		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00090	
Barium	ND	1.0	<0.00090	
Cadmium	ND	0.10	<0.000090	
Chromium	ND	1.0	<0.00090	
Lead	ND	0.20	<0.00018	
Selenium	ND	1.0	<0.00090	
Silver	ND	0.50	<0.00045	

Note:

ALS Environmental

Date: 23-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-S1-180413
Collection Date: 4/13/2018

Work Order: 1804527
Lab ID: 1804527-08
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1081.08	Analyst: SRL
Date Analyzed: 4/20/2018 15:00		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00093	
Barium	ND	1.0	<0.00093	
Cadmium	ND	0.10	<0.000093	
Chromium	ND	1.0	<0.00093	
Lead	ND	0.20	<0.00019	
Selenium	ND	1.0	<0.00093	
Silver	ND	0.50	<0.00046	

Note:

ALS Environmental

Date: 23-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-W1-180413
Collection Date: 4/13/2018

Work Order: 1804527
Lab ID: 1804527-09
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1151.05	Analyst: SRL
Date Analyzed: 4/20/2018 15:03		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00087	
Barium	ND	1.0	<0.00087	
Cadmium	ND	0.10	<0.000087	
Chromium	ND	1.0	<0.00087	
Lead	ND	0.20	<0.00017	
Selenium	ND	1.0	<0.00087	
Silver	ND	0.50	<0.00043	

Note:

ALS Environmental

Date: 23-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180413
Collection Date: 4/13/2018

Work Order: 1804527
Lab ID: 1804527-10
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 4/20/2018 15:06		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 23-Apr-18

Client: Tetra Tech - Indianapolis
Work Order: 1804527
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **50158** Instrument ID **ICP1** Method: **N7300**

MBLK	Sample ID: mblk-50158-50158			Units: µg/sample			Analysis Date: 4/20/2018 02:18 PM			
Client ID:	Run ID: ICP1_180420B			SeqNo: 1733957			Prep Date: 4/20/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS	Sample ID: lcs-50158-50158			Units: µg/sample			Analysis Date: 4/20/2018 02:25 PM			
Client ID:	Run ID: ICP1_180420B			SeqNo: 1733959			Prep Date: 4/20/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	17.43	1.0	20	0	87.2	80-120	0			
Barium	17.96	1.0	20	0	89.8	80-120	0			
Cadmium	18.45	0.10	20	0	92.3	80-120	0			
Chromium	17.96	1.0	20	0	89.8	80-120	0			
Lead	18.28	1.0	20	0	91.4	80-120	0			
Selenium	18.42	1.0	20	0	92.1	80-120	0			
Silver	17.93	0.50	20	0	89.7	80-120	0			

LCSD	Sample ID: lcsd-50158-50158			Units: µg/sample			Analysis Date: 4/20/2018 02:28 PM			
Client ID:	Run ID: ICP1_180420B			SeqNo: 1733960			Prep Date: 4/20/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	18.92	1.0	20	0	94.6	80-120	17.43	8.18	20	
Barium	19.37	1.0	20	0	96.8	80-120	17.96	7.54	20	
Cadmium	19.67	0.10	20	0	98.3	80-120	18.45	6.37	20	
Chromium	19.28	1.0	20	0	96.4	80-120	17.96	7.07	20	
Lead	19.52	1.0	20	0	97.6	80-120	18.28	6.52	20	
Selenium	19.77	1.0	20	0	98.8	80-120	18.42	7.06	20	
Silver	18.51	0.50	20	0	92.6	80-120	17.93	3.18	20	

The following samples were analyzed in this batch:

1804527-01a	1804527-02a	1804527-03a
1804527-04a	1804527-05a	1804527-06a
1804527-07a	1804527-08a	1804527-09a
1804527-10a		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
WorkOrder: 1804527

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **TETRATECH-INDIANAPOLIS**

Date/Time Received: **18-Apr-18 09:20**

Work Order: **1804527**

Received by: **SNH**

Checklist completed by **Jan Wilcox**

18-Apr-18

Reviewed by: **Chris Gibson**

18-Apr-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☐

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☐

pH adjusted? Yes ☐ No ☐ N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



25-Apr-2018

Lucas Stamps
Tetra Tech - Indianapolis
1060 N. Capitol Avenue
Suite E360
Indianapolis, IN 46204

Tel: (317) 797-2420
Fax: (317) 423-3907

Re: Indiana Battery Company

Work Order: **1804684**

Dear Lucas,

ALS Environmental received 10 samples on 23-Apr-2018 09:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 16.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Chris Gibson

Chris Gibson
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1804684

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1804684-01	IBC-N1-180418	Air		4/19/2018	4/23/2018 09:00	☐
1804684-02	IBC-E1-180418	Air		4/18/2018	4/23/2018 09:00	☐
1804684-03	IBC-S1-180418	Air		4/18/2018	4/23/2018 09:00	☐
1804684-04	IBC-W2-180418	Air		4/18/2018	4/23/2018 09:00	☐
1804684-05	IBC-FB-180418	Air		4/18/2018	4/23/2018 09:00	☐
1804684-06	IBC-N1-180419	Air		4/19/2018	4/23/2018 09:00	☐
1804684-07	IBC-E1-180419	Air		4/19/2018	4/23/2018 09:00	☐
1804684-08	IBC-S1-180419	Air		4/19/2018	4/23/2018 09:00	☐
1804684-09	IBC-W2-180419	Air		4/19/2018	4/23/2018 09:00	☐
1804684-10	IBC-FB-180419	Air		4/19/2018	4/23/2018 09:00	☐

Client:

Project:

Work Order:

Case Narrative

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-N1-180418
Collection Date: 4/19/2018

Work Order: 1804684
Lab ID: 1804684-01
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1607.47	Analyst: SRL
Date Analyzed: 4/24/2018 14:29		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00062	
Barium	ND	1.0	<0.00062	
Cadmium	ND	0.10	<0.000062	
Chromium	ND	1.0	<0.00062	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00062	
Silver	ND	0.50	<0.00031	

Note:

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180418
Collection Date: 4/18/2018

Work Order: 1804684
Lab ID: 1804684-02
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1624.92	Analyst: SRL
Date Analyzed: 4/24/2018 14:32		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00062	
Barium	ND	1.0	<0.00062	
Cadmium	ND	0.10	<0.000062	
Chromium	ND	1.0	<0.00062	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00062	
Silver	ND	0.50	<0.00031	

Note:

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-S1-180418
Collection Date: 4/18/2018

Work Order: 1804684
Lab ID: 1804684-03
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1629.02	Analyst: SRL
Date Analyzed: 4/24/2018 14:36		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00061	
Barium	ND	1.0	<0.00061	
Cadmium	ND	0.10	<0.000061	
Chromium	ND	1.0	<0.00061	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00061	
Silver	ND	0.50	<0.00031	

Note:

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-W2-180418
Collection Date: 4/18/2018

Work Order: 1804684
Lab ID: 1804684-04
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1646.88	Analyst: SRL
Date Analyzed: 4/24/2018 14:39		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00061	
Barium	ND	1.0	<0.00061	
Cadmium	ND	0.10	<0.000061	
Chromium	ND	1.0	<0.00061	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00061	
Silver	ND	0.50	<0.00030	

Note:

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180418
Collection Date: 4/18/2018

Work Order: 1804684
Lab ID: 1804684-05
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 4/24/2018 14:42		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-N1-180419
Collection Date: 4/19/2018

Work Order: 1804684
Lab ID: 1804684-06
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1614.62	Analyst: SRL
Date Analyzed: 4/24/2018 14:46		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00062	
Barium	ND	1.0	<0.00062	
Cadmium	ND	0.10	<0.000062	
Chromium	ND	1.0	<0.00062	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00062	
Silver	ND	0.50	<0.00031	

Note:

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180419
Collection Date: 4/19/2018

Work Order: 1804684
Lab ID: 1804684-07
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1601.25	Analyst: SRL
Date Analyzed: 4/24/2018 14:49		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00062	
Barium	ND	1.0	<0.00062	
Cadmium	ND	0.10	<0.000062	
Chromium	ND	1.0	<0.00062	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00062	
Silver	ND	0.50	<0.00031	

Note:

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-S1-180419
Collection Date: 4/19/2018

Work Order: 1804684
Lab ID: 1804684-08
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1608.73	Analyst: SRL
Date Analyzed: 4/24/2018 14:52		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00062	
Barium	ND	1.0	<0.00062	
Cadmium	ND	0.10	<0.000062	
Chromium	ND	1.0	<0.00062	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00062	
Silver	ND	0.50	<0.00031	

Note:

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-W2-180419
Collection Date: 4/19/2018

Work Order: 1804684
Lab ID: 1804684-09
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1628.64	Analyst: SRL
Date Analyzed: 4/24/2018 14:56		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00061	
Barium	ND	1.0	<0.00061	
Cadmium	ND	0.10	<0.000061	
Chromium	ND	1.0	<0.00061	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00061	
Silver	ND	0.50	<0.00031	

Note:

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180419
Collection Date: 4/19/2018

Work Order: 1804684
Lab ID: 1804684-10
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 4/24/2018 15:05		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Work Order: 1804684
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **50196** Instrument ID **ICP1** Method: **N7300**

MBLK	Sample ID: MBLK-50196-50196			Units: µg/sample			Analysis Date: 4/24/2018 01:51 PM			
Client ID:	Run ID: ICP1_180424A			SeqNo: 1735631			Prep Date: 4/23/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS	Sample ID: LCS-50196-50196			Units: µg/sample			Analysis Date: 4/24/2018 01:54 PM			
Client ID:	Run ID: ICP1_180424A			SeqNo: 1735633			Prep Date: 4/23/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	19.38	1.0	20	0	96.9	80-120	0			
Barium	19.32	1.0	20	0	96.6	80-120	0			
Cadmium	19.65	0.10	20	0	98.3	80-120	0			
Chromium	19.31	1.0	20	0	96.6	80-120	0			
Lead	19.49	1.0	20	0	97.4	80-120	0			
Selenium	20.2	1.0	20	0	101	80-120	0			
Silver	19	0.50	20	0	95	80-120	0			

LCSD	Sample ID: LCSD-50196-50196			Units: µg/sample			Analysis Date: 4/24/2018 01:57 PM			
Client ID:	Run ID: ICP1_180424A			SeqNo: 1735634			Prep Date: 4/23/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	20.28	1.0	20	0	101	80-120	19.38	4.52	20	
Barium	20.1	1.0	20	0	100	80-120	19.32	3.98	20	
Cadmium	20.48	0.10	20	0	102	80-120	19.65	4.13	20	
Chromium	20.32	1.0	20	0	102	80-120	19.31	5.1	20	
Lead	20.28	1.0	20	0	101	80-120	19.49	3.97	20	
Selenium	21.14	1.0	20	0	106	80-120	20.2	4.55	20	
Silver	19.57	0.50	20	0	97.8	80-120	19	2.95	20	

The following samples were analyzed in this batch:

1804684-01a	1804684-02a	1804684-03a
1804684-04a	1804684-05a	1804684-06a
1804684-07a	1804684-08a	1804684-09a
1804684-10a		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
WorkOrder: 1804684

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **TETRATECH-INDIANAPOLIS**

Date/Time Received: **23-Apr-18 09:00**

Work Order: **1804684**

Received by: **SNH**

Checklist completed by **Jan Wilcox**

23-Apr-18

Reviewed by: **Chris Gibson**

24-Apr-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☐

pH adjusted?

Yes ☐

No ☐

N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



25-Apr-2018

Lucas Stamps
Tetra Tech - Indianapolis
1060 N. Capitol Avenue
Suite E360
Indianapolis, IN 46204

Tel: (317) 797-2420
Fax: (317) 423-3907

Re: Indiana Battery Company

Work Order: **1804685**

Dear Lucas,

ALS Environmental received 5 samples on 23-Apr-2018 09:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 12.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Chris Gibson

Chris Gibson
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1804685

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1804685-01	IBC-N1-180420	Air		4/20/2018	4/23/2018 09:00	☐
1804685-02	IBC-E1-180420	Air		4/20/2018	4/23/2018 09:00	☐
1804685-03	IBC-S1-180420	Air		4/20/2018	4/23/2018 09:00	☐
1804685-04	IBC-W2-180420	Air		4/20/2018	4/23/2018 09:00	☐
1804685-05	IBC-FB-180420	Air		4/20/2018	4/23/2018 09:00	☐

Client:

Project:

Work Order:

Case Narrative

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-N1-180420
Collection Date: 4/20/2018

Work Order: 1804685
Lab ID: 1804685-01
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1656.18	Analyst: SRL
Date Analyzed: 4/24/2018 15:08		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00060	
Barium	ND	1.0	<0.00060	
Cadmium	ND	0.10	<0.000060	
Chromium	ND	1.0	<0.00060	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00060	
Silver	ND	0.50	<0.00030	

Note:

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180420
Collection Date: 4/20/2018

Work Order: 1804685
Lab ID: 1804685-02
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1639.87	Analyst: SRL
Date Analyzed: 4/24/2018 15:12		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00061	
Barium	ND	1.0	<0.00061	
Cadmium	ND	0.10	<0.000061	
Chromium	ND	1.0	<0.00061	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00061	
Silver	ND	0.50	<0.00030	

Note:

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-S1-180420
Collection Date: 4/20/2018

Work Order: 1804685
Lab ID: 1804685-03
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1633.83	Analyst: SRL
Date Analyzed: 4/24/2018 15:15		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00061	
Barium	ND	1.0	<0.00061	
Cadmium	ND	0.10	<0.000061	
Chromium	ND	1.0	<0.00061	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00061	
Silver	ND	0.50	<0.00031	

Note:

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-W2-180420
Collection Date: 4/20/2018

Work Order: 1804685
Lab ID: 1804685-04
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1674.88	Analyst: SRL
Date Analyzed: 4/24/2018 15:31		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00060	
Barium	ND	1.0	<0.00060	
Cadmium	ND	0.10	<0.000060	
Chromium	ND	1.0	<0.00060	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00060	
Silver	ND	0.50	<0.00030	

Note:

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180420
Collection Date: 4/20/2018

Work Order: 1804685
Lab ID: 1804685-05
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 4/24/2018 15:34		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 25-Apr-18

Client: Tetra Tech - Indianapolis
Work Order: 1804685
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **50196** Instrument ID **ICP1** Method: **N7300**

MBLK		Sample ID: MBLK-50196-50196				Units: µg/sample		Analysis Date: 4/24/2018 01:51 PM		
Client ID:		Run ID: ICP1_180424A				SeqNo: 1735631		Prep Date: 4/23/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS		Sample ID: LCS-50196-50196				Units: µg/sample		Analysis Date: 4/24/2018 01:54 PM		
Client ID:		Run ID: ICP1_180424A				SeqNo: 1735633		Prep Date: 4/23/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	19.38	1.0	20	0	96.9	80-120	0			
Barium	19.32	1.0	20	0	96.6	80-120	0			
Cadmium	19.65	0.10	20	0	98.3	80-120	0			
Chromium	19.31	1.0	20	0	96.6	80-120	0			
Lead	19.49	1.0	20	0	97.4	80-120	0			
Selenium	20.2	1.0	20	0	101	80-120	0			
Silver	19	0.50	20	0	95	80-120	0			

LCSD		Sample ID: LCSD-50196-50196				Units: µg/sample		Analysis Date: 4/24/2018 01:57 PM		
Client ID:		Run ID: ICP1_180424A				SeqNo: 1735634		Prep Date: 4/23/2018		DF: 1
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	20.28	1.0	20	0	101	80-120	19.38	4.52	20	
Barium	20.1	1.0	20	0	100	80-120	19.32	3.98	20	
Cadmium	20.48	0.10	20	0	102	80-120	19.65	4.13	20	
Chromium	20.32	1.0	20	0	102	80-120	19.31	5.1	20	
Lead	20.28	1.0	20	0	101	80-120	19.49	3.97	20	
Selenium	21.14	1.0	20	0	106	80-120	20.2	4.55	20	
Silver	19.57	0.50	20	0	97.8	80-120	19	2.95	20	

The following samples were analyzed in this batch:

1804685-01a 1804685-02a 1804685-03a

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech - Indianapolis
Work Order: 1804685
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **50197** Instrument ID **ICP1** Method: **N7300**

MBLK	Sample ID: mblk-50197-50197			Units: µg/sample			Analysis Date: 4/24/2018 03:22 PM			
Client ID:	Run ID: ICP1_180424A			SeqNo: 1735663			Prep Date: 4/23/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS	Sample ID: lcs-50197-50197			Units: µg/sample			Analysis Date: 4/24/2018 03:25 PM			
Client ID:	Run ID: ICP1_180424A			SeqNo: 1735664			Prep Date: 4/23/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	19.82	1.0	20	0	99.1	80-120	0			
Barium	19.73	1.0	20	0	98.7	80-120	0			
Cadmium	20.08	0.10	20	0	100	80-120	0			
Chromium	19.88	1.0	20	0	99.4	80-120	0			
Lead	19.95	1.0	20	0	99.8	80-120	0			
Selenium	20.56	1.0	20	0	103	80-120	0			
Silver	19.07	0.50	20	0	95.4	80-120	0			

LCSD	Sample ID: lcsd-50197-50197			Units: µg/sample			Analysis Date: 4/24/2018 03:28 PM			
Client ID:	Run ID: ICP1_180424A			SeqNo: 1735665			Prep Date: 4/23/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	19.87	1.0	20	0	99.4	80-120	19.82	0.262	20	
Barium	19.49	1.0	20	0	97.4	80-120	19.73	1.25	20	
Cadmium	20.14	0.10	20	0	101	80-120	20.08	0.298	20	
Chromium	19.92	1.0	20	0	99.6	80-120	19.88	0.191	20	
Lead	20.02	1.0	20	0	100	80-120	19.95	0.35	20	
Selenium	20.68	1.0	20	0	103	80-120	20.56	0.582	20	
Silver	18.74	0.50	20	0	93.7	80-120	19.07	1.79	20	

The following samples were analyzed in this batch:

1804685-04a 1804685-05a

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
WorkOrder: 1804685

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **TETRATECH-INDIANAPOLIS**

Date/Time Received: **23-Apr-18 09:00**

Work Order: **1804685**

Received by: **SNH**

Checklist completed by **Jan Wilcox**

23-Apr-18

Reviewed by: **Chris Gibson**

24-Apr-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☒

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



04-May-2018

Lucas Stamps
Tetra Tech - Indianapolis
1060 N. Capitol Avenue
Suite E360
Indianapolis, IN 46204

Tel: (317) 797-2420
Fax: (317) 423-3907

Re: Indiana Battery Company

Work Order: **1805061**

Dear Lucas,

ALS Environmental received 3 samples on 02-May-2018 09:22 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 9.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Chris Gibson

Chris Gibson
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1805061

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1805061-01	IBC-E1-180427	Air		4/27/2018	5/2/2018 09:22	☐
1805061-02	IBC-W2-180427	Air		4/27/2018	5/2/2018 09:22	☐
1805061-03	IBC-FB-180427	Air		4/27/2018	5/2/2018 09:22	☐

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1805061

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

Compound identification is based upon retention time matching only. Any compound with a similar retention time will interfere.

Samples were prepared and analyzed by the analytical method and the laboratory's applicable standard operating procedure listed below:

- IH-001- "Determination of Analytes Using NIOSH and OSHA Methods Using Gas Chromatography."
- IH-002- "Determination of Suspended Particulates in the Atmosphere Using Various Media"
- IH-003- "Determination of Suspended Particulates Not Otherwise Regulated (Total and Respirable)."
- IH-004- "Determination of Analytes by NIOSH and OSHA Methods Using Liquid Chromatography."
- IH-005- "Benzene-Soluble Fraction and Total Particulate (Asphalt Fume)."
- IH-006- "Methods IO-3.1 and IO-3.4 Modified for Metals Preparation and Analysis for Suspended Particulates."
- IH-196- "Carbon Black by OSHA 196."
- IH-6009- "Determination of Mercury in Industrial Hygiene Samples by Manual Cold Vapor Atomic Absorption Spectroscopy."
- ENV-6010B- "Determination of Trace Metals in Solution by Inductively Coupled Plasma-Atomic Emission Spectroscopy by EPA Method 6010B Non-VAP."
- IH-7300 modified- "Elements by ICP."

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

ALS Environmental

Date: 04-May-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180427
Collection Date: 4/27/2018

Work Order: 1805061
Lab ID: 1805061-01
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1484.11	Analyst: SRL
Date Analyzed: 5/3/2018 12:30		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00067	
Barium	ND	1.0	<0.00067	
Cadmium	ND	0.10	<0.000067	
Chromium	ND	1.0	<0.00067	
Lead	ND	0.20	<0.00013	
Selenium	ND	1.0	<0.00067	
Silver	ND	0.50	<0.00034	

Note:

ALS Environmental

Date: 04-May-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-W2-180427
Collection Date: 4/27/2018

Work Order: 1805061
Lab ID: 1805061-02
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1509.03	Analyst: SRL
Date Analyzed: 5/3/2018 12:33		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00066	
Barium	ND	1.0	<0.00066	
Cadmium	ND	0.10	<0.000066	
Chromium	ND	1.0	<0.00066	
Lead	ND	0.20	<0.00013	
Selenium	ND	1.0	<0.00066	
Silver	ND	0.50	<0.00033	

Note:

ALS Environmental

Date: 04-May-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180427
Collection Date: 4/27/2018

Work Order: 1805061
Lab ID: 1805061-03
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 5/3/2018 12:37		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 04-May-18

Client: Tetra Tech - Indianapolis
Work Order: 1805061
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **50380** Instrument ID **ICP1** Method: **N7300**

MBLK	Sample ID: mblk-50380-50380			Units: µg/sample			Analysis Date: 5/3/2018 11:51 AM			
Client ID:	Run ID: ICP1_180503A			SeqNo: 1741171			Prep Date: 5/3/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS	Sample ID: lcs-50380-50380			Units: µg/sample			Analysis Date: 5/3/2018 11:58 AM			
Client ID:	Run ID: ICP1_180503A			SeqNo: 1741173			Prep Date: 5/3/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	19.55	1.0	20	0	97.8	80-120	0			
Barium	19.86	1.0	20	0	99.3	80-120	0			
Cadmium	20.02	0.10	20	0	100	80-120	0			
Chromium	19.74	1.0	20	0	98.7	80-120	0			
Lead	20.06	1.0	20	0	100	80-120	0			
Selenium	20.42	1.0	20	0	102	80-120	0			
Silver	20.02	0.50	20	0	100	80-120	0			

LCSD	Sample ID: lcscd-50380-50380			Units: µg/sample			Analysis Date: 5/3/2018 12:01 PM			
Client ID:	Run ID: ICP1_180503A			SeqNo: 1741174			Prep Date: 5/3/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	19.81	1.0	20	0	99	80-120	19.55	1.3	20	
Barium	19.34	1.0	20	0	96.7	80-120	19.86	2.63	20	
Cadmium	20.24	0.10	20	0	101	80-120	20.02	1.09	20	
Chromium	19.8	1.0	20	0	99	80-120	19.74	0.344	20	
Lead	20.22	1.0	20	0	101	80-120	20.06	0.794	20	
Selenium	20.6	1.0	20	0	103	80-120	20.42	0.878	20	
Silver	19.38	0.50	20	0	96.9	80-120	20.02	3.25	20	

The following samples were analyzed in this batch:

1805061-01a	1805061-02a	1805061-03a
-------------	-------------	-------------

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
WorkOrder: 1805061

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **TETRATECH-INDIANAPOLIS**

Date/Time Received: **02-May-18 09:22**

Work Order: **1805061**

Received by: **DNS**

Checklist completed by **Stephanie H arrington**

02-May-18

Reviewed by: **Chris Gibson**

02-May-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☒

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



09-May-2018

Lucas Stamps
Tetra Tech - Indianapolis
1060 N. Capitol Avenue
Suite E360
Indianapolis, IN 46204

Tel: (317) 797-2420
Fax: (317) 423-3907

Re: Indiana Battery Company

Work Order: **1805290**

Dear Lucas,

ALS Environmental received 3 samples on 08-May-2018 09:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 9.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Chris Gibson

Chris Gibson
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1805290

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1805290-01	IBC-E1-180502	Air		5/2/2018	5/8/2018 09:00	☐
1805290-02	IBC-W2-180502	Air		5/2/2018	5/8/2018 09:00	☐
1805290-03	IBC-FB-180502	Air		5/2/2018	5/8/2018 09:00	☐

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1805290

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

Compound identification is based upon retention time matching only. Any compound with a similar retention time will interfere.

Samples were prepared and analyzed by the analytical method and the laboratory's applicable standard operating procedure listed below:

- IH-001- "Determination of Analytes Using NIOSH and OSHA Methods Using Gas Chromatography."
- IH-002- "Determination of Suspended Particulates in the Atmosphere Using Various Media"
- IH-003- "Determination of Suspended Particulates Not Otherwise Regulated (Total and Respirable)."
- IH-004- "Determination of Analytes by NIOSH and OSHA Methods Using Liquid Chromatography."
- IH-005- "Benzene-Soluble Fraction and Total Particulate (Asphalt Fume)."
- IH-006- "Methods IO-3.1 and IO-3.4 Modified for Metals Preparation and Analysis for Suspended Particulates."
- IH-196- "Carbon Black by OSHA 196."
- IH-6009- "Determination of Mercury in Industrial Hygiene Samples by Manual Cold Vapor Atomic Absorption Spectroscopy."
- ENV-6010B- "Determination of Trace Metals in Solution by Inductively Coupled Plasma-Atomic Emission Spectroscopy by EPA Method 6010B Non-VAP."
- IH-7300 modified- "Elements by ICP."

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

ALS Environmental

Date: 09-May-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180502
Collection Date: 5/2/2018

Work Order: 1805290
Lab ID: 1805290-01
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1567.97	Analyst: SRL
Date Analyzed: 5/9/2018 12:20		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00064	
Barium	ND	1.0	<0.00064	
Cadmium	ND	0.10	<0.000064	
Chromium	ND	1.0	<0.00064	
Lead	ND	0.20	<0.00013	
Selenium	ND	1.0	<0.00064	
Silver	ND	0.50	<0.00032	

Note:

ALS Environmental

Date: 09-May-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-W2-180502
Collection Date: 5/2/2018

Work Order: 1805290
Lab ID: 1805290-02
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 11598.96	Analyst: SRL
Date Analyzed: 5/9/2018 12:24		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.000086	
Barium	ND	1.0	<0.000086	
Cadmium	ND	0.10	<0.000086	
Chromium	ND	1.0	<0.000086	
Lead	ND	0.20	<0.000017	
Selenium	ND	1.0	<0.000086	
Silver	ND	0.50	<0.000043	

Note:

ALS Environmental

Date: 09-May-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180502
Collection Date: 5/2/2018

Work Order: 1805290
Lab ID: 1805290-03
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 5/9/2018 12:27		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 09-May-18

Client: Tetra Tech - Indianapolis
Work Order: 1805290
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **50510** Instrument ID **ICP1** Method: **N7300**

MBLK	Sample ID: mblk-50510-50510			Units: µg/sample			Analysis Date: 5/9/2018 11:04 AM			
Client ID:	Run ID: ICP1_180509A			SeqNo: 1744525			Prep Date: 5/9/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS	Sample ID: lcs-50510-50510			Units: µg/sample			Analysis Date: 5/9/2018 11:10 AM			
Client ID:	Run ID: ICP1_180509A			SeqNo: 1744527			Prep Date: 5/9/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	20.66	1.0	20	0	103	80-120	0			
Barium	20.76	1.0	20	0	104	80-120	0			
Cadmium	21.02	0.10	20	0	105	80-120	0			
Chromium	20.48	1.0	20	0	102	80-120	0			
Lead	20.8	1.0	20	0	104	80-120	0			
Selenium	21.54	1.0	20	0	108	80-120	0			
Silver	19.94	0.50	20	0	99.7	80-120	0			

LCSD	Sample ID: lcscd-50510-50510			Units: µg/sample			Analysis Date: 5/9/2018 11:13 AM			
Client ID:	Run ID: ICP1_180509A			SeqNo: 1744528			Prep Date: 5/9/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	20.4	1.0	20	0	102	80-120	20.66	1.27	20	
Barium	19.7	1.0	20	0	98.5	80-120	20.76	5.26	20	
Cadmium	20.84	0.10	20	0	104	80-120	21.02	0.86	20	
Chromium	20.28	1.0	20	0	101	80-120	20.48	0.981	20	
Lead	20.58	1.0	20	0	103	80-120	20.8	1.06	20	
Selenium	21.32	1.0	20	0	107	80-120	21.54	1.03	20	
Silver	18.91	0.50	20	0	94.6	80-120	19.94	5.28	20	

The following samples were analyzed in this batch:

1805290-01a	1805290-02a	1805290-03a
-------------	-------------	-------------

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
WorkOrder: 1805290

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **TETRATECH-INDIANAPOLIS**

Date/Time Received: **08-May-18 09:00**

Work Order: **1805290**

Received by: **SNH**

Checklist completed by **Jan Wilcox**

08-May-18

Reviewed by: **Chris Gibson**

08-May-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☐

pH adjusted?

Yes ☐

No ☐

N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



16-May-2018

Lucas Stamps
Tetra Tech - Indianapolis
1060 N. Capitol Avenue
Suite E360
Indianapolis, IN 46204

Tel: (317) 797-2420
Fax: (317) 423-3907

Re: Indiana Battery Company

Work Order: **1805576**

Dear Lucas,

ALS Environmental received 4 samples on 15-May-2018 for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 10.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Joe Ribar

Chris Gibson
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1805576

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1805576-01	IBC-E1-180509	Air		5/9/2018	5/15/2018	☐
1805576-02	IBC-E1-180511	Air		5/11/2018	5/15/2018	☐
1805576-03	IBC-FB-180509	Air		5/9/2018	5/15/2018	☐
1805576-04	IBC-FB-180511	Air		5/11/2018	5/15/2018	☐

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1805576

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

Compound identification is based upon retention time matching only. Any compound with a similar retention time will interfere.

Samples were prepared and analyzed by the analytical method and the laboratory's applicable standard operating procedure listed below:

- IH-001- "Determination of Analytes Using NIOSH and OSHA Methods Using Gas Chromatography."
- IH-002- "Determination of Suspended Particulates in the Atmosphere Using Various Media"
- IH-003- "Determination of Suspended Particulates Not Otherwise Regulated (Total and Respirable)."
- IH-004- "Determination of Analytes by NIOSH and OSHA Methods Using Liquid Chromatography."
- IH-005- "Benzene-Soluble Fraction and Total Particulate (Asphalt Fume)."
- IH-006- "Methods IO-3.1 and IO-3.4 Modified for Metals Preparation and Analysis for Suspended Particulates."
- IH-196- "Carbon Black by OSHA 196."
- IH-6009- "Determination of Mercury in Industrial Hygiene Samples by Manual Cold Vapor Atomic Absorption Spectroscopy."
- ENV-6010B- "Determination of Trace Metals in Solution by Inductively Coupled Plasma-Atomic Emission Spectroscopy by EPA Method 6010B Non-VAP."
- IH-7300 modified- "Elements by ICP."

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

ALS Environmental

Date: 16-May-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180509
Collection Date: 5/9/2018

Work Order: 1805576
Lab ID: 1805576-01
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1642.55	Analyst: SRL
Date Analyzed: 5/15/2018 21:48		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00061	
Barium	ND	1.0	<0.00061	
Cadmium	ND	0.10	<0.000061	
Chromium	ND	1.0	<0.00061	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00061	
Silver	ND	0.50	<0.00030	

Note:

ALS Environmental

Date: 16-May-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180511
Collection Date: 5/11/2018

Work Order: 1805576
Lab ID: 1805576-02
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1360.92	Analyst: SRL
Date Analyzed: 5/15/2018 21:51		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00073	
Barium	ND	1.0	<0.00073	
Cadmium	ND	0.10	<0.000073	
Chromium	ND	1.0	<0.00073	
Lead	ND	0.20	<0.00015	
Selenium	ND	1.0	<0.00073	
Silver	ND	0.50	<0.00037	

Note:

ALS Environmental

Date: 16-May-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180509
Collection Date: 5/9/2018

Work Order: 1805576
Lab ID: 1805576-03
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 5/15/2018 21:54		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 16-May-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180511
Collection Date: 5/11/2018

Work Order: 1805576
Lab ID: 1805576-04
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 5/15/2018 21:57		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
WorkOrder: 1805576

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Client: Tetra Tech - Indianapolis
Work Order: 1805576
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **50674** Instrument ID **ICP1** Method: **N7300**

MBLK		Sample ID mblk-50674-50674		Units: µg/sample		Analysis Date: 5/15/2018 08:45 PM				
Client ID:		Run ID: ICP1_180515B		SeqNo: 1749294		Prep Date: 5/15/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS		Sample ID lcs-50674-50674		Units: µg/sample		Analysis Date: 5/15/2018 08:48 PM				
Client ID:		Run ID: ICP1_180515B		SeqNo: 1749295		Prep Date: 5/15/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	19.48	1.0	20	0	97.4	80-120	0			
Barium	19.36	1.0	20	0	96.8	80-120	0			
Cadmium	19.78	0.10	20	0	98.9	80-120	0			
Chromium	20	1.0	20	0	100	80-120	0			
Lead	19.47	1.0	20	0	97.4	80-120	0			
Selenium	20.04	1.0	20	0	100	80-120	0			
Silver	19.71	0.50	20	0	98.6	80-120	0			

LCSD		Sample ID lcscd-50674-50674		Units: µg/sample		Analysis Date: 5/15/2018 08:57 PM				
Client ID:		Run ID: ICP1_180515B		SeqNo: 1749296		Prep Date: 5/15/2018		DF: 1		
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	19.69	1.0	20	0	98.4	80-120	19.48	1.09	20	
Barium	19.32	1.0	20	0	96.6	80-120	19.36	0.238	20	
Cadmium	20.02	0.10	20	0	100	80-120	19.78	1.19	20	
Chromium	20.22	1.0	20	0	101	80-120	20	1.09	20	
Lead	19.73	1.0	20	0	98.6	80-120	19.47	1.31	20	
Selenium	20.1	1.0	20	0	100	80-120	20.04	0.299	20	
Silver	19.33	0.50	20	0	96.6	80-120	19.71	1.98	20	

The following samples were analyzed in this batch:

1805576-01a	1805576-02a	1805576-03a
1805576-04a		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Sample Receipt Checklist

Client Name: **TETRATECH-INDIANAPOLIS**

Date/Time Received: **15-May-18 00:00**

Work Order: **1805576**

Received by: **SNH**

Checklist completed by **Jan Wilcox**

15-May-18

Reviewed by: **Rob Nieman**

15-May-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☐

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☐

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☐

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☐

pH adjusted?

Yes ☐

No ☐

N/A ☐

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



24-May-2018

Lucas Stamps
Tetra Tech - Indianapolis
1060 N. Capitol Avenue
Suite E360
Indianapolis, IN 46204

Tel: (317) 797-2420
Fax: (317) 423-3907

Re: Indiana Battery Company

Work Order: **1805826**

Dear Lucas,

ALS Environmental received 4 samples on 22-May-2018 10:20 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 10.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Chris Gibson

Chris Gibson
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

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Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1805826

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1805826-01	IBC-E1-180514	Air		5/14/2018	5/22/2018 10:20	☐
1805826-02	IBC-W2-180517	Air		5/17/2018	5/22/2018 10:20	☐
1805826-03	IBC-FB-180514	Air		5/14/2018	5/22/2018 10:20	☐
1805826-04	IBC-FB-180517	Air		5/17/2018	5/22/2018 10:20	☐

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1805826

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

Compound identification is based upon retention time matching only. Any compound with a similar retention time will interfere.

Samples were prepared and analyzed by the analytical method and the laboratory's applicable standard operating procedure listed below:

- IH-001- "Determination of Analytes Using NIOSH and OSHA Methods Using Gas Chromatography."
- IH-002- "Determination of Suspended Particulates in the Atmosphere Using Various Media"
- IH-003- "Determination of Suspended Particulates Not Otherwise Regulated (Total and Respirable)."
- IH-004- "Determination of Analytes by NIOSH and OSHA Methods Using Liquid Chromatography."
- IH-005- "Benzene-Soluble Fraction and Total Particulate (Asphalt Fume)."
- IH-006- "Methods IO-3.1 and IO-3.4 Modified for Metals Preparation and Analysis for Suspended Particulates."
- IH-196- "Carbon Black by OSHA 196."
- IH-6009- "Determination of Mercury in Industrial Hygiene Samples by Manual Cold Vapor Atomic Absorption Spectroscopy."
- ENV-6010B- "Determination of Trace Metals in Solution by Inductively Coupled Plasma-Atomic Emission Spectroscopy by EPA Method 6010B Non-VAP."
- IH-7300 modified- "Elements by ICP."

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

ALS Environmental

Date: 24-May-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180514
Collection Date: 5/14/2018

Work Order: 1805826
Lab ID: 1805826-01
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1574.47	Analyst: SRL
Date Analyzed: 5/24/2018 16:05		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00064	
Barium	ND	1.0	<0.00064	
Cadmium	ND	0.10	<0.000064	
Chromium	ND	1.0	<0.00064	
Lead	0.22	0.20	0.00014	
Selenium	ND	1.0	<0.00064	
Silver	ND	0.50	<0.00032	

Note:

ALS Environmental

Date: 24-May-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-W2-180517
Collection Date: 5/17/2018

Work Order: 1805826
Lab ID: 1805826-02
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1563.86	Analyst: SRL
Date Analyzed: 5/24/2018 16:08		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00064	
Barium	ND	1.0	<0.00064	
Cadmium	ND	0.10	<0.000064	
Chromium	ND	1.0	<0.00064	
Lead	ND	0.20	<0.00013	
Selenium	ND	1.0	<0.00064	
Silver	ND	0.50	<0.00032	

Note:

ALS Environmental

Date: 24-May-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180514
Collection Date: 5/14/2018

Work Order: 1805826
Lab ID: 1805826-03
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 5/24/2018 16:12		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 24-May-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180517
Collection Date: 5/17/2018

Work Order: 1805826
Lab ID: 1805826-04
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 5/24/2018 16:15		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 24-May-18

Client: Tetra Tech - Indianapolis
Work Order: 1805826
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **50885** Instrument ID **ICP1** Method: **N7300**

MBLK	Sample ID: mblk-50885-50885			Units: µg/sample			Analysis Date: 5/24/2018 03:34 PM			
Client ID:	Run ID: ICP1_180524C			SeqNo: 1755518			Prep Date: 5/24/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS	Sample ID: lcs-50885-50885			Units: µg/sample			Analysis Date: 5/24/2018 03:40 PM			
Client ID:	Run ID: ICP1_180524C			SeqNo: 1755520			Prep Date: 5/24/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	20.54	1.0	20	0	103	80-120	0			
Barium	20.52	1.0	20	0	103	80-120	0			
Cadmium	21.1	0.10	20	0	106	80-120	0			
Chromium	21.08	1.0	20	0	105	80-120	0			
Lead	20.66	1.0	20	0	103	80-120	0			
Selenium	21.18	1.0	20	0	106	80-120	0			
Silver	20.84	0.50	20	0	104	80-120	0			

LCSD	Sample ID: lcscd-50885-50885			Units: µg/sample			Analysis Date: 5/24/2018 03:49 PM			
Client ID:	Run ID: ICP1_180524C			SeqNo: 1755521			Prep Date: 5/24/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	20.62	1.0	20	0	103	80-120	20.54	0.389	20	
Barium	20.7	1.0	20	0	104	80-120	20.52	0.873	20	
Cadmium	21.02	0.10	20	0	105	80-120	21.1	0.38	20	
Chromium	21.14	1.0	20	0	106	80-120	21.08	0.284	20	
Lead	20.6	1.0	20	0	103	80-120	20.66	0.291	20	
Selenium	21.2	1.0	20	0	106	80-120	21.18	0.0944	20	
Silver	21.08	0.50	20	0	105	80-120	20.84	1.15	20	

The following samples were analyzed in this batch:

1805826-01a	1805826-02a	1805826-03a
1805826-04a		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
WorkOrder: 1805826

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **TETRATECH-INDIANAPOLIS**

Date/Time Received: **22-May-18 10:20**

Work Order: **1805826**

Received by: **SNH**

Checklist completed by **Jan Wilcox**

22-May-18

Reviewed by: **Chris Gibson**

24-May-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

pH adjusted?

Yes ☐

No ☐

N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



01-Jun-2018

Lucas Stamps
Tetra Tech - Indianapolis
1060 N. Capitol Avenue
Suite E360
Indianapolis, IN 46204

Tel: (317) 797-2420
Fax: (317) 423-3907

Re: Indiana Battery Company

Work Order: **18051087**

Dear Lucas,

ALS Environmental received 3 samples on 30-May-2018 09:56 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 9.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Chris Gibson

Chris Gibson
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 18051087

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
18051087-01	IBC-N1-180522	Air		5/22/2018	5/30/2018 09:56	☐
18051087-02	IBC-E1-180522	Air		5/22/2018	5/30/2018 09:56	☐
18051087-03	IBC-FB-180522	Air		5/22/2018	5/30/2018 09:56	☐

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 18051087

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

Compound identification is based upon retention time matching only. Any compound with a similar retention time will interfere.

Samples were prepared and analyzed by the analytical method and the laboratory's applicable standard operating procedure listed below:

- IH-001- "Determination of Analytes Using NIOSH and OSHA Methods Using Gas Chromatography."
- IH-002- "Determination of Suspended Particulates in the Atmosphere Using Various Media"
- IH-003- "Determination of Suspended Particulates Not Otherwise Regulated (Total and Respirable)."
- IH-004- "Determination of Analytes by NIOSH and OSHA Methods Using Liquid Chromatography."
- IH-005- "Benzene-Soluble Fraction and Total Particulate (Asphalt Fume)."
- IH-006- "Methods IO-3.1 and IO-3.4 Modified for Metals Preparation and Analysis for Suspended Particulates."
- IH-196- "Carbon Black by OSHA 196."
- IH-6009- "Determination of Mercury in Industrial Hygiene Samples by Manual Cold Vapor Atomic Absorption Spectroscopy."
- ENV-6010B- "Determination of Trace Metals in Solution by Inductively Coupled Plasma-Atomic Emission Spectroscopy by EPA Method 6010B Non-VAP."
- IH-7300 modified- "Elements by ICP."

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

ALS Environmental

Date: 01-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-N1-180522
Collection Date: 5/22/2018

Work Order: 18051087
Lab ID: 18051087-01
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1719.17	Analyst: SRL
Date Analyzed: 5/31/2018 18:29		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00058	
Barium	ND	1.0	<0.00058	
Cadmium	ND	0.10	<0.000058	
Chromium	ND	1.0	<0.00058	
Lead	0.87	0.20	0.00050	
Selenium	ND	1.0	<0.00058	
Silver	ND	0.50	<0.00029	

Note:

ALS Environmental

Date: 01-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180522
Collection Date: 5/22/2018

Work Order: 18051087
Lab ID: 18051087-02
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1713.78	Analyst: SRL
Date Analyzed: 5/31/2018 18:33		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00058	
Barium	ND	1.0	<0.00058	
Cadmium	ND	0.10	<0.000058	
Chromium	ND	1.0	<0.00058	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00058	
Silver	ND	0.50	<0.00029	

Note:

ALS Environmental

Date: 01-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180522
Collection Date: 5/22/2018

Work Order: 18051087
Lab ID: 18051087-03
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 5/31/2018 18:37		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 01-Jun-18

Client: Tetra Tech - Indianapolis
Work Order: 18051087
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **50987** Instrument ID **ICP3** Method: **N7300**

MBLK	Sample ID: mblk-50987-50987			Units: µg/sample			Analysis Date: 5/31/2018 05:28 PM			
Client ID:	Run ID: ICP3_180531B			SeqNo: 1759675			Prep Date: 5/31/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS	Sample ID: lcs-50987-50987			Units: µg/sample			Analysis Date: 5/31/2018 05:37 PM			
Client ID:	Run ID: ICP3_180531B			SeqNo: 1759677			Prep Date: 5/31/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	21.16	1.0	20	0	106	80-120	0			
Barium	20.84	1.0	20	0	104	80-120	0			
Cadmium	21.44	0.10	20	0	107	80-120	0			
Chromium	21.08	1.0	20	0	105	80-120	0			
Lead	21.5	1.0	20	0	108	80-120	0			
Selenium	22.24	1.0	20	0	111	80-120	0			
Silver	20.46	0.50	20	0	102	80-120	0			

LCSD	Sample ID: lcscd-50987-50987			Units: µg/sample			Analysis Date: 5/31/2018 05:41 PM			
Client ID:	Run ID: ICP3_180531B			SeqNo: 1759678			Prep Date: 5/31/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	21.08	1.0	20	0	105	80-120	0			
Barium	20.68	1.0	20	0	103	80-120	0			
Cadmium	21.44	0.10	20	0	107	80-120	0			
Chromium	21.02	1.0	20	0	105	80-120	0			
Lead	21.48	1.0	20	0	107	80-120	0			
Selenium	22.26	1.0	20	0	111	80-120	0			
Silver	20.38	0.50	20	0	102	80-120	0			

The following samples were analyzed in this batch:

18051087-01a	18051087-02a	18051087-03a
--------------	--------------	--------------

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
WorkOrder: 18051087

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **TETRATECH-INDIANAPOLIS**

Date/Time Received: **30-May-18 09:56**

Work Order: **18051087**

Received by: **JNW**

Checklist completed by **Jan Wilcox**

30-May-18

Reviewed by: **Chris Gibson**

01-Jun-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **UPS**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

pH adjusted?

Yes ☐

No ☐

N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



07-Jun-2018

Lucas Stamps
Tetra Tech - Indianapolis
1060 N. Capitol Avenue
Suite E360
Indianapolis, IN 46204

Tel: (317) 797-2420
Fax: (317) 423-3907

Re: Indiana Battery Company

Work Order: **1806117**

Dear Lucas,

ALS Environmental received 8 samples on 05-Jun-2018 09:15 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 14.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Chris Gibson

Chris Gibson
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1806117

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1806117-01	IBC-S1-180523	Air		5/23/2018	6/5/2018 09:15	☐
1806117-02	IBC-W2-180524	Air		5/24/2018	6/5/2018 09:15	☐
1806117-03	IBC-E1-180531	Air		5/31/2018	6/5/2018 09:15	☐
1806117-04	IBC-E1-180601	Air		6/1/2018	6/5/2018 09:15	☐
1806117-05	IBC-FB-180523	Air		5/23/2018	6/5/2018 09:15	☐
1806117-06	IBC-FB-180524	Air		5/24/2018	6/5/2018 09:15	☐
1806117-07	IBC-FB-180531	Air		5/31/2018	6/5/2018 09:15	☐
1806117-08	IBC-FB-180601	Air		6/1/2018	6/5/2018 09:15	☐

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1806117

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

Compound identification is based upon retention time matching only. Any compound with a similar retention time will interfere.

Samples were prepared and analyzed by the analytical method and the laboratory's applicable standard operating procedure listed below:

- IH-001- "Determination of Analytes Using NIOSH and OSHA Methods Using Gas Chromatography."
- IH-002- "Determination of Suspended Particulates in the Atmosphere Using Various Media"
- IH-003- "Determination of Suspended Particulates Not Otherwise Regulated (Total and Respirable)."
- IH-004- "Determination of Analytes by NIOSH and OSHA Methods Using Liquid Chromatography."
- IH-005- "Benzene-Soluble Fraction and Total Particulate (Asphalt Fume)."
- IH-006- "Methods IO-3.1 and IO-3.4 Modified for Metals Preparation and Analysis for Suspended Particulates."
- IH-196- "Carbon Black by OSHA 196."
- IH-6009- "Determination of Mercury in Industrial Hygiene Samples by Manual Cold Vapor Atomic Absorption Spectroscopy."
- ENV-6010B- "Determination of Trace Metals in Solution by Inductively Coupled Plasma-Atomic Emission Spectroscopy by EPA Method 6010B Non-VAP."
- IH-7300 modified- "Elements by ICP."

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

ALS Environmental

Date: 07-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-S1-180523
Collection Date: 5/23/2018

Work Order: 1806117
Lab ID: 1806117-01
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1799.21	Analyst: SRL
Date Analyzed: 6/6/2018 13:51		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00056	
Barium	ND	1.0	<0.00056	
Cadmium	ND	0.10	<0.000056	
Chromium	ND	1.0	<0.00056	
Lead	ND	0.20	<0.00011	
Selenium	ND	1.0	<0.00056	
Silver	ND	0.50	<0.00028	

Note:

ALS Environmental

Date: 07-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-W2-180524
Collection Date: 5/24/2018

Work Order: 1806117
Lab ID: 1806117-02
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1587.11	Analyst: SRL
Date Analyzed: 6/6/2018 13:54		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00063	
Barium	ND	1.0	<0.00063	
Cadmium	ND	0.10	<0.000063	
Chromium	ND	1.0	<0.00063	
Lead	ND	0.20	<0.00013	
Selenium	ND	1.0	<0.00063	
Silver	ND	0.50	<0.00032	

Note:

ALS Environmental

Date: 07-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180531
Collection Date: 5/31/2018

Work Order: 1806117
Lab ID: 1806117-03
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1829.66	Analyst: SRL
Date Analyzed: 6/6/2018 13:58		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00055	
Barium	ND	1.0	<0.00055	
Cadmium	ND	0.10	<0.000055	
Chromium	ND	1.0	<0.00055	
Lead	ND	0.20	<0.00011	
Selenium	ND	1.0	<0.00055	
Silver	ND	0.50	<0.00027	

Note:

ALS Environmental

Date: 07-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180601
Collection Date: 6/1/2018

Work Order: 1806117
Lab ID: 1806117-04
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1679.86	Analyst: SRL
Date Analyzed: 6/6/2018 14:07		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00060	
Barium	ND	1.0	<0.00060	
Cadmium	ND	0.10	<0.000060	
Chromium	ND	1.0	<0.00060	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00060	
Silver	ND	0.50	<0.00030	

Note:

ALS Environmental

Date: 07-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180523
Collection Date: 5/23/2018

Work Order: 1806117
Lab ID: 1806117-05
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 6/6/2018 14:10		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 07-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180524
Collection Date: 5/24/2018

Work Order: 1806117
Lab ID: 1806117-06
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 6/6/2018 14:14		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 07-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180531
Collection Date: 5/31/2018

Work Order: 1806117
Lab ID: 1806117-07
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 6/6/2018 14:17		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 07-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180601
Collection Date: 6/1/2018

Work Order: 1806117
Lab ID: 1806117-08
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 6/6/2018 14:20		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 07-Jun-18

Client: Tetra Tech - Indianapolis
Work Order: 1806117
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **51088** Instrument ID **ICP1** Method: **N7300**

MBLK	Sample ID: mblk-51088-51088			Units: µg/sample			Analysis Date: 6/6/2018 01:39 PM			
Client ID:	Run ID: ICP1_180606B			SeqNo: 1762685			Prep Date: 6/6/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS	Sample ID: lcs-51088-51088			Units: µg/sample			Analysis Date: 6/6/2018 01:45 PM			
Client ID:	Run ID: ICP1_180606B			SeqNo: 1762687			Prep Date: 6/6/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	20.54	1.0	20	0	103	80-120	0			
Barium	20.42	1.0	20	0	102	80-120	0			
Cadmium	21.06	0.10	20	0	105	80-120	0			
Chromium	21.22	1.0	20	0	106	80-120	0			
Lead	20.64	1.0	20	0	103	80-120	0			
Selenium	21.16	1.0	20	0	106	80-120	0			
Silver	20.38	0.50	20	0	102	80-120	0			

LCSD	Sample ID: lcscd-51088-51088			Units: µg/sample			Analysis Date: 6/6/2018 01:48 PM			
Client ID:	Run ID: ICP1_180606B			SeqNo: 1762688			Prep Date: 6/6/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	20.74	1.0	20	0	104	80-120	20.54	0.969	20	
Barium	20.72	1.0	20	0	104	80-120	20.42	1.46	20	
Cadmium	21.16	0.10	20	0	106	80-120	21.06	0.474	20	
Chromium	21.2	1.0	20	0	106	80-120	21.22	0.0943	20	
Lead	20.74	1.0	20	0	104	80-120	20.64	0.483	20	
Selenium	21.22	1.0	20	0	106	80-120	21.16	0.283	20	
Silver	20.94	0.50	20	0	105	80-120	20.38	2.71	20	

The following samples were analyzed in this batch:

1806117-01a	1806117-02a	1806117-03a
1806117-04a	1806117-05a	1806117-06a
1806117-07a	1806117-08a	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

ALS Environmental

Date: 07-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
WorkOrder: 1806117

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **TETRATECH-INDIANAPOLIS**

Date/Time Received: **05-Jun-18 09:15**

Work Order: **1806117**

Received by: **SNH**

Checklist completed by **Jan Wilcox**

05-Jun-18

Reviewed by:

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

pH adjusted?

Yes ☐

No ☐

N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



14-Jun-2018

Lucas Stamps
Tetra Tech - Indianapolis
1060 N. Capitol Avenue
Suite E360
Indianapolis, IN 46204

Tel: (317) 797-2420
Fax: (317) 423-3907

Re: Indiana Battery Company

Work Order: **1806410**

Dear Lucas,

ALS Environmental received 3 samples on 12-Jun-2018 09:25 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 9.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Shawn Smythe

Chris Gibson
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Environmental

www.alsglobal.com

RIGHT SOLUTIONS RIGHT PARTNER

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1806410

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1806410-01	IBC-N1-180608	Air		6/8/2018	6/12/2018 09:25	☐
1806410-02	IBC-E1-180608	Air		6/5/2018	6/12/2018 09:25	☐
1806410-03	IBC-FB-180608	Air		6/8/2018	6/12/2018 09:25	☐

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1806410

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

Compound identification is based upon retention time matching only. Any compound with a similar retention time will interfere.

Samples were prepared and analyzed by the analytical method and the laboratory's applicable standard operating procedure listed below:

- IH-001- "Determination of Analytes Using NIOSH and OSHA Methods Using Gas Chromatography."
- IH-002- "Determination of Suspended Particulates in the Atmosphere Using Various Media"
- IH-003- "Determination of Suspended Particulates Not Otherwise Regulated (Total and Respirable)."
- IH-004- "Determination of Analytes by NIOSH and OSHA Methods Using Liquid Chromatography."
- IH-005- "Benzene-Soluble Fraction and Total Particulate (Asphalt Fume)."
- IH-006- "Methods IO-3.1 and IO-3.4 Modified for Metals Preparation and Analysis for Suspended Particulates."
- IH-196- "Carbon Black by OSHA 196."
- IH-6009- "Determination of Mercury in Industrial Hygiene Samples by Manual Cold Vapor Atomic Absorption Spectroscopy."
- ENV-6010B- "Determination of Trace Metals in Solution by Inductively Coupled Plasma-Atomic Emission Spectroscopy by EPA Method 6010B Non-VAP."
- IH-7300 modified- "Elements by ICP."

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

ALS Environmental

Date: 14-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-N1-180608
Collection Date: 6/8/2018

Work Order: 1806410
Lab ID: 1806410-01
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1540.48	Analyst: SRL
Date Analyzed: 6/14/2018 15:56		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00065	
Barium	ND	1.0	<0.00065	
Cadmium	ND	0.10	<0.000065	
Chromium	ND	1.0	<0.00065	
Lead	1.3	0.20	0.00084	
Selenium	ND	1.0	<0.00065	
Silver	ND	0.50	<0.00032	

Note:

ALS Environmental

Date: 14-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180608
Collection Date: 6/5/2018

Work Order: 1806410
Lab ID: 1806410-02
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1544.74	Analyst: SRL
Date Analyzed: 6/14/2018 16:00		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00065	
Barium	ND	1.0	<0.00065	
Cadmium	ND	0.10	<0.000065	
Chromium	ND	1.0	<0.00065	
Lead	0.20	0.20	0.00013	
Selenium	ND	1.0	<0.00065	
Silver	ND	0.50	<0.00032	

Note:

ALS Environmental

Date: 14-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180608
Collection Date: 6/8/2018

Work Order: 1806410
Lab ID: 1806410-03
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 6/14/2018 16:09		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 14-Jun-18

Client: Tetra Tech - Indianapolis
Work Order: 1806410
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **51260** Instrument ID **ICP1** Method: **N7300**

MBLK		Sample ID mblk-51260-51260			Units: µg/sample		Analysis Date: 6/14/2018 04:19 PM			
Client ID:		Run ID: ICP1_180614A			SeqNo: 1768092		Prep Date: 6/13/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS		Sample ID lcs-51260-51260			Units: µg/sample		Analysis Date: 6/14/2018 04:22 PM			
Client ID:		Run ID: ICP1_180614A			SeqNo: 1768093		Prep Date: 6/13/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	20.08	1.0	20	0	100	80-120	0			
Barium	20.4	1.0	20	0	102	80-120	0			
Cadmium	20.4	0.10	20	0	102	80-120	0			
Chromium	20.46	1.0	20	0	102	80-120	0			
Lead	20.02	1.0	20	0	100	80-120	0			
Selenium	20.84	1.0	20	0	104	80-120	0			
Silver	19.71	0.50	20	0	98.6	80-120	0			

LCSD		Sample ID lcsd-51260-51260			Units: µg/sample		Analysis Date: 6/14/2018 04:25 PM			
Client ID:		Run ID: ICP1_180614A			SeqNo: 1768094		Prep Date: 6/13/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	20.06	1.0	20	0	100	80-120	20.08	0.0997	20	
Barium	20.12	1.0	20	0	101	80-120	20.4	1.38	20	
Cadmium	20.38	0.10	20	0	102	80-120	20.4	0.0981	20	
Chromium	20.48	1.0	20	0	102	80-120	20.46	0.0977	20	
Lead	20.04	1.0	20	0	100	80-120	20.02	0.0999	20	
Selenium	20.66	1.0	20	0	103	80-120	20.84	0.867	20	
Silver	19.26	0.50	20	0	96.3	80-120	19.71	2.35	20	

The following samples were analyzed in this batch:

1806410-01a 1806410-02a 1806410-03a

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
WorkOrder: 1806410

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **TETRATECH-INDIANAPOLIS**

Date/Time Received: **12-Jun-18 09:25**

Work Order: **1806410**

Received by: **RDN**

Checklist completed by **Stephanie Harrington**

12-Jun-18

Reviewed by: **Chris Gibson**

13-Jun-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☒

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



21-Jun-2018

Lucas Stamps
Tetra Tech - Indianapolis
1060 N. Capitol Avenue
Suite E360
Indianapolis, IN 46204

Tel: (317) 797-2420
Fax: (317) 423-3907

Re: Indiana Battery Company

Work Order: **1806671**

Dear Lucas,

ALS Environmental received 8 samples on 19-Jun-2018 10:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 14.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Chris Gibson

Chris Gibson
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Environmental

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Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1806671

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1806671-01	IBC-E1-180604	Air		6/4/2018	6/19/2018 10:00	☐
1806671-02	IBC-FB-180604	Air		6/4/2018	6/19/2018 10:00	☐
1806671-03	IBC-E1-180605	Air		6/5/2018	6/19/2018 10:00	☐
1806671-04	IBC-FB-180605	Air		6/5/2018	6/19/2018 10:00	☐
1806671-05	IBC-W2-180606	Air		6/6/2018	6/19/2018 10:00	☐
1806671-06	IBC-FB-180606	Air		6/6/2018	6/19/2018 10:00	☐
1806671-07	IBC-N1-180607	Air		6/7/2018	6/19/2018 10:00	☐
1806671-08	IBC-FB-180607	Air		6/7/2018	6/19/2018 10:00	☐

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1806671

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

Compound identification is based upon retention time matching only. Any compound with a similar retention time will interfere.

Samples were prepared and analyzed by the analytical method and the laboratory's applicable standard operating procedure listed below:

- IH-001- "Determination of Analytes Using NIOSH and OSHA Methods Using Gas Chromatography."
- IH-002- "Determination of Suspended Particulates in the Atmosphere Using Various Media"
- IH-003- "Determination of Suspended Particulates Not Otherwise Regulated (Total and Respirable)."
- IH-004- "Determination of Analytes by NIOSH and OSHA Methods Using Liquid Chromatography."
- IH-005- "Benzene-Soluble Fraction and Total Particulate (Asphalt Fume)."
- IH-006- "Methods IO-3.1 and IO-3.4 Modified for Metals Preparation and Analysis for Suspended Particulates."
- IH-196- "Carbon Black by OSHA 196."
- IH-6009- "Determination of Mercury in Industrial Hygiene Samples by Manual Cold Vapor Atomic Absorption Spectroscopy."
- ENV-6010B- "Determination of Trace Metals in Solution by Inductively Coupled Plasma-Atomic Emission Spectroscopy by EPA Method 6010B Non-VAP."
- IH-7300 modified- "Elements by ICP."

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

ALS Environmental

Date: 21-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180604
Collection Date: 6/4/2018

Work Order: 1806671
Lab ID: 1806671-01
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1895.91	Analyst: SRL
Date Analyzed: 6/20/2018 17:24		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00053	
Barium	ND	1.0	<0.00053	
Cadmium	ND	0.10	<0.000053	
Chromium	ND	1.0	<0.00053	
Lead	ND	0.20	<0.00011	
Selenium	ND	1.0	<0.00053	
Silver	ND	0.50	<0.00026	

Note:

ALS Environmental

Date: 21-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180604
Collection Date: 6/4/2018

Work Order: 1806671
Lab ID: 1806671-02
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 6/20/2018 17:28		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 21-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180605
Collection Date: 6/5/2018

Work Order: 1806671
Lab ID: 1806671-03
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1762.02	Analyst: SRL
Date Analyzed: 6/20/2018 17:32		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00057	
Barium	ND	1.0	<0.00057	
Cadmium	ND	0.10	<0.000057	
Chromium	ND	1.0	<0.00057	
Lead	0.24	0.20	0.00014	
Selenium	ND	1.0	<0.00057	
Silver	ND	0.50	<0.00028	

Note:

ALS Environmental

Date: 21-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180605
Collection Date: 6/5/2018

Work Order: 1806671
Lab ID: 1806671-04
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 6/20/2018 17:36		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 21-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-W2-180606
Collection Date: 6/6/2018

Work Order: 1806671
Lab ID: 1806671-05
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1659.56	Analyst: SRL
Date Analyzed: 6/20/2018 17:48		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00060	
Barium	ND	1.0	<0.00060	
Cadmium	ND	0.10	<0.000060	
Chromium	ND	1.0	<0.00060	
Lead	ND	0.20	<0.00012	
Selenium	ND	1.0	<0.00060	
Silver	ND	0.50	<0.00030	

Note:

ALS Environmental

Date: 21-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180606
Collection Date: 6/6/2018

Work Order: 1806671
Lab ID: 1806671-06
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 6/20/2018 17:52		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 21-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-N1-180607
Collection Date: 6/7/2018

Work Order: 1806671
Lab ID: 1806671-07
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1820.17	Analyst: SRL
Date Analyzed: 6/20/2018 17:55		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00055	
Barium	ND	1.0	<0.00055	
Cadmium	ND	0.10	<0.000055	
Chromium	ND	1.0	<0.00055	
Lead	0.74	0.20	0.00041	
Selenium	ND	1.0	<0.00055	
Silver	ND	0.50	<0.00027	

Note:

ALS Environmental

Date: 21-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180607
Collection Date: 6/7/2018

Work Order: 1806671
Lab ID: 1806671-08
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 6/20/2018 17:59		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 21-Jun-18

Client: Tetra Tech - Indianapolis
Work Order: 1806671
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **51393** Instrument ID **ICP3** Method: **N7300**

MBLK	Sample ID: mblk-51393-51393			Units: µg/sample			Analysis Date: 6/20/2018 05:12 PM			
Client ID:	Run ID: ICP3_180620C			SeqNo: 1772860			Prep Date: 6/20/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS	Sample ID: lcs-51393-51393			Units: µg/sample			Analysis Date: 6/20/2018 05:16 PM			
Client ID:	Run ID: ICP3_180620C			SeqNo: 1772861			Prep Date: 6/20/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	18.77	1.0	20	0	93.8	80-120	0			
Barium	18.25	1.0	20	0	91.3	80-120	0			
Cadmium	19.1	0.10	20	0	95.5	80-120	0			
Chromium	18.52	1.0	20	0	92.6	80-120	0			
Lead	19.15	1.0	20	0	95.8	80-120	0			
Selenium	19.78	1.0	20	0	98.9	80-120	0			
Silver	18.87	0.50	20	0	94.3	80-120	0			

LCSD	Sample ID: lcscd-51393-51393			Units: µg/sample			Analysis Date: 6/20/2018 05:20 PM			
Client ID:	Run ID: ICP3_180620C			SeqNo: 1772862			Prep Date: 6/20/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	20.12	1.0	20	0	101	80-120	18.77	6.94	20	
Barium	19.54	1.0	20	0	97.7	80-120	18.25	6.8	20	
Cadmium	20.48	0.10	20	0	102	80-120	19.1	6.99	20	
Chromium	19.81	1.0	20	0	99	80-120	18.52	6.73	20	
Lead	20.5	1.0	20	0	102	80-120	19.15	6.81	20	
Selenium	20.92	1.0	20	0	105	80-120	19.78	5.62	20	
Silver	18.93	0.50	20	0	94.7	80-120	18.87	0.36	20	

The following samples were analyzed in this batch:

1806671-01a	1806671-02a	1806671-03a
1806671-04a	1806671-05a	1806671-06a
1806671-07a	1806671-08a	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
WorkOrder: 1806671

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **TETRATECH-INDIANAPOLIS**

Date/Time Received: **19-Jun-18 10:00**

Work Order: **1806671**

Received by: **SNH**

Checklist completed by **Jan Wilcox**

19-Jun-18

Reviewed by: **Chris Gibson**

20-Jun-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☒

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



21-Jun-2018

Lucas Stamps
Tetra Tech - Indianapolis
1060 N. Capitol Avenue
Suite E360
Indianapolis, IN 46204

Tel: (317) 797-2420
Fax: (317) 423-3907

Re: Indiana Battery Company

Work Order: **1806672**

Dear Lucas,

ALS Environmental received 5 samples on 19-Jun-2018 10:00 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 11.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Chris Gibson

Chris Gibson
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1806672

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1806672-01	IBC-N1-180613	Air		6/13/2018	6/19/2018 10:00	☐
1806672-02	IBC-E1-180613	Air		6/13/2018	6/19/2018 10:00	☐
1806672-03	IBC-FB-180613	Air		6/13/2018	6/19/2018 10:00	☐
1806672-04	IBC-N1-180614	Air		6/14/2018	6/19/2018 10:00	☐
1806672-05	IBC-FB-180614	Air		6/14/2018	6/19/2018 10:00	☐

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1806672

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

Compound identification is based upon retention time matching only. Any compound with a similar retention time will interfere.

Samples were prepared and analyzed by the analytical method and the laboratory's applicable standard operating procedure listed below:

- IH-001- "Determination of Analytes Using NIOSH and OSHA Methods Using Gas Chromatography."
- IH-002- "Determination of Suspended Particulates in the Atmosphere Using Various Media"
- IH-003- "Determination of Suspended Particulates Not Otherwise Regulated (Total and Respirable)."
- IH-004- "Determination of Analytes by NIOSH and OSHA Methods Using Liquid Chromatography."
- IH-005- "Benzene-Soluble Fraction and Total Particulate (Asphalt Fume)."
- IH-006- "Methods IO-3.1 and IO-3.4 Modified for Metals Preparation and Analysis for Suspended Particulates."
- IH-196- "Carbon Black by OSHA 196."
- IH-6009- "Determination of Mercury in Industrial Hygiene Samples by Manual Cold Vapor Atomic Absorption Spectroscopy."
- ENV-6010B- "Determination of Trace Metals in Solution by Inductively Coupled Plasma-Atomic Emission Spectroscopy by EPA Method 6010B Non-VAP."
- IH-7300 modified- "Elements by ICP."

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

ALS Environmental

Date: 21-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-N1-180613
Collection Date: 6/13/2018

Work Order: 1806672
Lab ID: 1806672-01
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1977.6	Analyst: SRL
Date Analyzed: 6/20/2018 18:03		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00051	
Barium	ND	1.0	<0.00051	
Cadmium	ND	0.10	<0.000051	
Chromium	ND	1.0	<0.00051	
Lead	0.43	0.20	0.00022	
Selenium	ND	1.0	<0.00051	
Silver	ND	0.50	<0.00025	

Note:

ALS Environmental

Date: 21-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180613
Collection Date: 6/13/2018

Work Order: 1806672
Lab ID: 1806672-02
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1987.05	Analyst: SRL
Date Analyzed: 6/20/2018 18:07		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00050	
Barium	ND	1.0	<0.00050	
Cadmium	ND	0.10	<0.000050	
Chromium	ND	1.0	<0.00050	
Lead	ND	0.20	<0.00010	
Selenium	ND	1.0	<0.00050	
Silver	ND	0.50	<0.00025	

Note:

ALS Environmental

Date: 21-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180613
Collection Date: 6/13/2018

Work Order: 1806672
Lab ID: 1806672-03
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 6/20/2018 18:11		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 21-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-N1-180614
Collection Date: 6/14/2018

Work Order: 1806672
Lab ID: 1806672-04
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 2086.75	Analyst: SRL
Date Analyzed: 6/20/2018 18:15		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00048	
Barium	ND	1.0	<0.00048	
Cadmium	ND	0.10	<0.000048	
Chromium	ND	1.0	<0.00048	
Lead	ND	0.20	<0.000096	
Selenium	ND	1.0	<0.00048	
Silver	ND	0.50	<0.00024	

Note:

ALS Environmental

Date: 21-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180614
Collection Date: 6/14/2018

Work Order: 1806672
Lab ID: 1806672-05
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 6/20/2018 18:19		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 21-Jun-18

Client: Tetra Tech - Indianapolis
Work Order: 1806672
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **51393** Instrument ID **ICP3** Method: **N7300**

MBLK	Sample ID: mblk-51393-51393			Units: µg/sample			Analysis Date: 6/20/2018 05:12 PM			
Client ID:	Run ID: ICP3_180620C			SeqNo: 1772860			Prep Date: 6/20/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS	Sample ID: lcs-51393-51393			Units: µg/sample			Analysis Date: 6/20/2018 05:16 PM			
Client ID:	Run ID: ICP3_180620C			SeqNo: 1772861			Prep Date: 6/20/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	18.77	1.0	20	0	93.8	80-120	0			
Barium	18.25	1.0	20	0	91.3	80-120	0			
Cadmium	19.1	0.10	20	0	95.5	80-120	0			
Chromium	18.52	1.0	20	0	92.6	80-120	0			
Lead	19.15	1.0	20	0	95.8	80-120	0			
Selenium	19.78	1.0	20	0	98.9	80-120	0			
Silver	18.87	0.50	20	0	94.3	80-120	0			

LCSD	Sample ID: lcscd-51393-51393			Units: µg/sample			Analysis Date: 6/20/2018 05:20 PM			
Client ID:	Run ID: ICP3_180620C			SeqNo: 1772862			Prep Date: 6/20/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	20.12	1.0	20	0	101	80-120	18.77	6.94	20	
Barium	19.54	1.0	20	0	97.7	80-120	18.25	6.8	20	
Cadmium	20.48	0.10	20	0	102	80-120	19.1	6.99	20	
Chromium	19.81	1.0	20	0	99	80-120	18.52	6.73	20	
Lead	20.5	1.0	20	0	102	80-120	19.15	6.81	20	
Selenium	20.92	1.0	20	0	105	80-120	19.78	5.62	20	
Silver	18.93	0.50	20	0	94.7	80-120	18.87	0.36	20	

The following samples were analyzed in this batch:

1806672-01a	1806672-02a	1806672-03a
1806672-04a	1806672-05a	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
WorkOrder: 1806672

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **TETRATECH-INDIANAPOLIS**

Date/Time Received: **19-Jun-18 10:00**

Work Order: **1806672**

Received by: **SNH**

Checklist completed by **Jan Wilcox**

19-Jun-18

Reviewed by: **Chris Gibson**

20-Jun-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

pH adjusted?

Yes ☐

No ☐

N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



28-Jun-2018

Lucas Stamps
Tetra Tech - Indianapolis
1060 N. Capitol Avenue
Suite E360
Indianapolis, IN 46204

Tel: (317) 797-2420
Fax: (317) 423-3907

Re: Indiana Battery Company

Work Order: **1806923**

Dear Lucas,

ALS Environmental received 4 samples on 26-Jun-2018 09:34 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 10.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Rob Neman

Chris Gibson
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1806923

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1806923-01	IBC-E1-180618	Air		6/26/2018	6/26/2018 09:34	☐
1806923-02	IBC-E1-180619	Air		6/26/2018	6/26/2018 09:34	☐
1806923-03	IBC-FB-180618	Air		6/26/2018	6/26/2018 09:34	☐
1806923-04	IBC-FB-180619	Air		6/26/2018	6/26/2018 09:34	☐

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1806923

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

Compound identification is based upon retention time matching only. Any compound with a similar retention time will interfere.

Samples were prepared and analyzed by the analytical method and the laboratory's applicable standard operating procedure listed below:

- IH-001- "Determination of Analytes Using NIOSH and OSHA Methods Using Gas Chromatography."
- IH-002- "Determination of Suspended Particulates in the Atmosphere Using Various Media"
- IH-003- "Determination of Suspended Particulates Not Otherwise Regulated (Total and Respirable)."
- IH-004- "Determination of Analytes by NIOSH and OSHA Methods Using Liquid Chromatography."
- IH-005- "Benzene-Soluble Fraction and Total Particulate (Asphalt Fume)."
- IH-006- "Methods IO-3.1 and IO-3.4 Modified for Metals Preparation and Analysis for Suspended Particulates."
- IH-196- "Carbon Black by OSHA 196."
- IH-6009- "Determination of Mercury in Industrial Hygiene Samples by Manual Cold Vapor Atomic Absorption Spectroscopy."
- ENV-6010B- "Determination of Trace Metals in Solution by Inductively Coupled Plasma-Atomic Emission Spectroscopy by EPA Method 6010B Non-VAP."
- IH-7300 modified- "Elements by ICP."

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

ALS Environmental

Date: 28-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180618
Collection Date: 6/26/2018

Work Order: 1806923
Lab ID: 1806923-01
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1860.28	Analyst: SRL
Date Analyzed: 6/27/2018 12:14		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00054	
Barium	ND	1.0	<0.00054	
Cadmium	ND	0.10	<0.000054	
Chromium	ND	1.0	<0.00054	
Lead	ND	0.20	<0.00011	
Selenium	ND	1.0	<0.00054	
Silver	ND	0.50	<0.00027	

Note:

ALS Environmental

Date: 28-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180619
Collection Date: 6/26/2018

Work Order: 1806923
Lab ID: 1806923-02
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1976.93	Analyst: SRL
Date Analyzed: 6/27/2018 12:18		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00051	
Barium	ND	1.0	<0.00051	
Cadmium	ND	0.10	<0.000051	
Chromium	ND	1.0	<0.00051	
Lead	ND	0.20	<0.00010	
Selenium	ND	1.0	<0.00051	
Silver	ND	0.50	<0.00025	

Note:

ALS Environmental

Date: 28-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180618
Collection Date: 6/26/2018

Work Order: 1806923
Lab ID: 1806923-03
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 6/27/2018 12:22		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 28-Jun-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180619
Collection Date: 6/26/2018

Work Order: 1806923
Lab ID: 1806923-04
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 6/27/2018 12:26		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 28-Jun-18

Client: Tetra Tech - Indianapolis
Work Order: 1806923
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **51545** Instrument ID: **ICP1** Method: **N7300**

MBLK		Sample ID: mblk-51545-51545			Units: µg/sample		Analysis Date: 6/27/2018 12:03 PM			
Client ID:		Run ID: ICP1_180627B			SeqNo: 1776651		Prep Date: 6/27/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS		Sample ID: lcs-51545-51545			Units: µg/sample		Analysis Date: 6/27/2018 12:07 PM			
Client ID:		Run ID: ICP1_180627B			SeqNo: 1776652		Prep Date: 6/27/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	24.14	1.0	25	0	96.6	80-120	0			
Barium	24.46	1.0	25	0	97.8	80-120	0			
Cadmium	24.56	0.10	25	0	98.2	80-120	0			
Chromium	23.94	1.0	25	0	95.8	80-120	0			
Lead	24.46	1.0	25	0	97.8	80-120	0			
Selenium	25.44	1.0	25	0	102	80-120	0			
Silver	23.84	0.50	25	0	95.4	80-120	0			

LCSD		Sample ID: lcsd-51545-51545			Units: µg/sample		Analysis Date: 6/27/2018 12:11 PM			
Client ID:		Run ID: ICP1_180627B			SeqNo: 1776653		Prep Date: 6/27/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual
Arsenic	23.9	1.0	25	0	95.6	80-120	24.14	0.999	20	
Barium	23.9	1.0	25	0	95.6	80-120	24.46	2.32	20	
Cadmium	24.34	0.10	25	0	97.4	80-120	24.56	0.9	20	
Chromium	23.74	1.0	25	0	95	80-120	23.94	0.839	20	
Lead	24.28	1.0	25	0	97.1	80-120	24.46	0.739	20	
Selenium	25.24	1.0	25	0	101	80-120	25.44	0.789	20	
Silver	23.24	0.50	25	0	93	80-120	23.84	2.55	20	

The following samples were analyzed in this batch:

1806923-01a	1806923-02a	1806923-03a
1806923-04a		

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
WorkOrder: 1806923

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **TETRATECH-INDIANAPOLIS**

Date/Time Received: **26-Jun-18 09:34**

Work Order: **1806923**

Received by: **SNH**

Checklist completed by: **Stephanie Harrington**

26-Jun-18

Reviewed by: **Chris Gibson**

27-Jun-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition?

Yes ☒

No ☐

Not Present ☐

Custody seals intact on shipping container/cooler?

Yes ☐

No ☐

Not Present ☒

Custody seals intact on sample bottles?

Yes ☐

No ☐

Not Present ☒

Chain of custody present?

Yes ☒

No ☐

Chain of custody signed when relinquished and received?

Yes ☒

No ☐

Chain of custody agrees with sample labels?

Yes ☒

No ☐

Samples in proper container/bottle?

Yes ☒

No ☐

Sample containers intact?

Yes ☒

No ☐

Sufficient sample volume for indicated test?

Yes ☒

No ☐

All samples received within holding time?

Yes ☒

No ☐

Container/Temp Blank temperature in compliance?

Yes ☒

No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace?

Yes ☐

No ☐

No VOA vials submitted ☒

Water - pH acceptable upon receipt?

Yes ☐

No ☐

N/A ☒

pH adjusted?

Yes ☐

No ☐

N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



11-Jul-2018

Lucas Stamps
Tetra Tech - Indianapolis
1060 N. Capitol Avenue
Suite E360
Indianapolis, IN 46204

Tel: (317) 797-2420
Fax: (317) 423-3907

Re: Indiana Battery Company

Work Order: **1807277**

Dear Lucas,

ALS Environmental received 8 samples on 10-Jul-2018 09:12 AM for the analyses presented in the following report.

The analytical data provided relates directly to the samples received by ALS Environmental and for only the analyses requested.

QC sample results for this data met laboratory specifications. Any exceptions are noted in the Case Narrative, or noted with qualifiers in the report or QC batch information. Should this laboratory report need to be reproduced, it should be reproduced in full unless written approval has been obtained from ALS Laboratory Group. Samples will be disposed in 30 days unless storage arrangements are made.

The total number of pages in this report is 14.

If you have any questions regarding this report, please feel free to contact me.

Sincerely,

Chris Gibson

Electronically approved by: Chris Gibson

Chris Gibson
Project Manager

ADDRESS 4388 Glendale Milford Rd Cincinnati, OH 45242- | PHONE (513) 733-5336 | FAX (513) 733-5347

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Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1807277

Work Order Sample Summary

<u>Lab Samp ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Tag Number</u>	<u>Collection Date</u>	<u>Date Received</u>	<u>Hold</u>
1807277-01	IBC-E1-180628	Air		7/3/2018	7/10/2018 09:12	☐
1807277-02	IBC-E1-180629	Air		6/29/2018	7/10/2018 09:12	☐
1807277-03	IBC-E1-180702	Air		7/2/2018	7/10/2018 09:12	☐
1807277-04	IBC-E1-180703	Air		7/3/2018	7/10/2018 09:12	☐
1807277-05	IBC-E1-180628	Air		6/28/2018	7/10/2018 09:12	☐
1807277-06	IBC-FB-180629	Air		6/29/2018	7/10/2018 09:12	☐
1807277-07	IBC-FB-180702	Air		7/2/2018	7/10/2018 09:12	☐
1807277-08	IBC-FB-180703	Air		7/3/2018	7/10/2018 09:12	☐

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Work Order: 1807277

Case Narrative

The sample condition upon receipt was acceptable except where noted.

Results relate only to the items tested and are not blank corrected unless indicated.

Compound identification is based upon retention time matching only. Any compound with a similar retention time will interfere.

Samples were prepared and analyzed by the analytical method and the laboratory's applicable standard operating procedure listed below:

- IH-001- "Determination of Analytes Using NIOSH and OSHA Methods Using Gas Chromatography."
- IH-002- "Determination of Suspended Particulates in the Atmosphere Using Various Media"
- IH-003- "Determination of Suspended Particulates Not Otherwise Regulated (Total and Respirable)."
- IH-004- "Determination of Analytes by NIOSH and OSHA Methods Using Liquid Chromatography."
- IH-005- "Benzene-Soluble Fraction and Total Particulate (Asphalt Fume)."
- IH-006- "Methods IO-3.1 and IO-3.4 Modified for Metals Preparation and Analysis for Suspended Particulates."
- IH-196- "Carbon Black by OSHA 196."
- IH-6009- "Determination of Mercury in Industrial Hygiene Samples by Manual Cold Vapor Atomic Absorption Spectroscopy."
- ENV-6010B- "Determination of Trace Metals in Solution by Inductively Coupled Plasma-Atomic Emission Spectroscopy by EPA Method 6010B Non-VAP."
- IH-7300 modified- "Elements by ICP."

ALS is an EPA recognized NLLAP laboratory for lead paint, soil, and dust wipe analyses under its AIHA-LAP accreditation.

ALS Environmental

Date: 11-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180628
Collection Date: 7/3/2018

Work Order: 1807277
Lab ID: 1807277-01
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1898.5	Analyst: SRL
Date Analyzed: 7/10/2018 19:39		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00053	
Barium	ND	1.0	<0.00053	
Cadmium	ND	0.10	<0.000053	
Chromium	ND	1.0	<0.00053	
Lead	ND	0.20	<0.00011	
Selenium	ND	1.0	<0.00053	
Silver	ND	0.50	<0.00026	

Note:

ALS Environmental

Date: 11-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180629
Collection Date: 6/29/2018

Work Order: 1807277
Lab ID: 1807277-02
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1866.91	Analyst: SRL
Date Analyzed: 7/10/2018 19:43		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00054	
Barium	ND	1.0	<0.00054	
Cadmium	ND	0.10	<0.000054	
Chromium	ND	1.0	<0.00054	
Lead	ND	0.20	<0.00011	
Selenium	ND	1.0	<0.00054	
Silver	ND	0.50	<0.00027	

Note:

ALS Environmental

Date: 11-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180702
Collection Date: 7/2/2018

Work Order: 1807277
Lab ID: 1807277-03
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1965.1	Analyst: SRL
Date Analyzed: 7/10/2018 19:58		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00051	
Barium	ND	1.0	<0.00051	
Cadmium	ND	0.10	<0.000051	
Chromium	ND	1.0	<0.00051	
Lead	ND	0.20	<0.00010	
Selenium	ND	1.0	<0.00051	
Silver	ND	0.50	<0.00025	

Note:

ALS Environmental

Date: 11-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180703
Collection Date: 7/3/2018

Work Order: 1807277
Lab ID: 1807277-04
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 1761.17	Analyst: SRL
Date Analyzed: 7/10/2018 20:01		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	<0.00057	
Barium	ND	1.0	<0.00057	
Cadmium	ND	0.10	<0.000057	
Chromium	ND	1.0	<0.00057	
Lead	ND	0.20	<0.00011	
Selenium	ND	1.0	<0.00057	
Silver	ND	0.50	<0.00028	

Note:

ALS Environmental

Date: 11-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-E1-180628
Collection Date: 6/28/2018

Work Order: 1807277
Lab ID: 1807277-05
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 7/10/2018 20:05		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 11-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180629
Collection Date: 6/29/2018

Work Order: 1807277
Lab ID: 1807277-06
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 7/10/2018 20:08		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 11-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180702
Collection Date: 7/2/2018

Work Order: 1807277
Lab ID: 1807277-07
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 7/10/2018 20:11		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 11-Jul-18

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
Sample ID: IBC-FB-180703
Collection Date: 7/3/2018

Work Order: 1807277
Lab ID: 1807277-08
Matrix: AIR

Analytical Results

Analyses

METALS BY NIOSH 7300 MOD.		Method: N7300	Air Volume (L): 0	Analyst: SRL
Date Analyzed: 7/10/2018 20:14		Reporting Limit		
	µg/sample	µg/sample	mg/m3	
Arsenic	ND	1.0	NA	
Barium	ND	1.0	NA	
Cadmium	ND	0.10	NA	
Chromium	ND	1.0	NA	
Lead	ND	0.20	NA	
Selenium	ND	1.0	NA	
Silver	ND	0.50	NA	

Note:

ALS Environmental

Date: 11-Jul-18

Client: Tetra Tech - Indianapolis
Work Order: 1807277
Project: Indiana Battery Company

QC BATCH REPORT

Batch ID: **51844** Instrument ID **ICP1** Method: **N7300**

MBLK	Sample ID: mblk-51844-51844			Units: µg/sample			Analysis Date: 7/10/2018 06:55 PM			
Client ID:	Run ID: ICP1_180710B			SeqNo: 1785049			Prep Date: 7/10/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	ND	1.0								
Barium	ND	1.0								
Cadmium	ND	0.10								
Chromium	ND	1.0								
Lead	ND	1.0								
Selenium	ND	1.0								
Silver	ND	0.50								

LCS	Sample ID: lcs-51844-51844			Units: µg/sample			Analysis Date: 7/10/2018 06:59 PM			
Client ID:	Run ID: ICP1_180710B			SeqNo: 1785050			Prep Date: 7/10/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	19.32	1.0	20	0	96.6	80-120	0			
Barium	19.36	1.0	20	0	96.8	80-120	0			
Cadmium	19.76	0.10	20	0	98.8	80-120	0			
Chromium	19.51	1.0	20	0	97.6	80-120	0			
Lead	19.56	1.0	20	0	97.8	80-120	0			
Selenium	19.87	1.0	20	0	99.4	80-120	0			
Silver	19.35	0.50	20	0	96.8	80-120	0			

LCSD	Sample ID: lcscd-51844-51844			Units: µg/sample			Analysis Date: 7/10/2018 07:01 PM			
Client ID:	Run ID: ICP1_180710B			SeqNo: 1785051			Prep Date: 7/10/2018		DF: 1	
Analyte	Result	PQL	SPK Val	SPK Ref Value	%REC	Control Limit	RPD Ref Value	%RPD	RPD Limit	Qual

Arsenic	19.78	1.0	20	0	98.9	80-120	19.32	2.36	20	
Barium	19.67	1.0	20	0	98.4	80-120	19.36	1.59	20	
Cadmium	20.1	0.10	20	0	100	80-120	19.76	1.72	20	
Chromium	20.14	1.0	20	0	101	80-120	19.51	3.16	20	
Lead	19.97	1.0	20	0	99.9	80-120	19.56	2.07	20	
Selenium	20.16	1.0	20	0	101	80-120	19.87	1.43	20	
Silver	19.59	0.50	20	0	98	80-120	19.35	1.25	20	

The following samples were analyzed in this batch:

1807277-01a	1807277-02a	1807277-03a
1807277-04a	1807277-05a	1807277-06a
1807277-07a	1807277-08a	

Note: See Qualifiers Page for a list of Qualifiers and their explanation.

Client: Tetra Tech - Indianapolis
Project: Indiana Battery Company
WorkOrder: 1807277

QUALIFIERS, ACRONYMS, UNITS

<u>Qualifier</u>	<u>Description</u>
*	Value exceeds Regulatory Limit
a	Not accredited
B	Analyte detected in the associated Method Blank above the Reporting Limit
E	Value above quantitation range
H	Analyzed outside of Holding Time
J	Analyte detected below quantitation limit
n	Not offered for accreditation
ND	Not Detected at the Reporting Limit
O	Sample amount is > 4 times amount spiked
P	Dual Column results percent difference > 40%
R	RPD above laboratory control limit
S	Spike Recovery outside laboratory control limits
U	Analyzed but not detected above the MDL

<u>Acronym</u>	<u>Description</u>
DUP	Method Duplicate
E	EPA Method
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MBLK	Method Blank
MDL	Method Detection Limit
MQL	Method Quantitation Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
PDS	Post Digestion Spike
PQL	Practical Quantitation Limit
SDL	Sample Detection Limit
SW	SW-846 Method

<u>Units Reported</u>	<u>Description</u>
µg/sample	

Sample Receipt Checklist

Client Name: **TETRATECH-INDIANAPOLIS**

Date/Time Received: **10-Jul-18 09:12**

Work Order: **1807277**

Received by: **SNH**

Checklist completed by **Stephanie H arrington**

10-Jul-18

Reviewed by: **Chris Gibson**

11-Jul-18

eSignature

Date

eSignature

Date

Matrices:

Carrier name: **FedEx**

Shipping container/cooler in good condition? Yes ☒ No ☐ Not Present ☐

Custody seals intact on shipping container/cooler? Yes ☐ No ☐ Not Present ☒

Custody seals intact on sample bottles? Yes ☐ No ☐ Not Present ☒

Chain of custody present? Yes ☒ No ☐

Chain of custody signed when relinquished and received? Yes ☒ No ☐

Chain of custody agrees with sample labels? Yes ☒ No ☐

Samples in proper container/bottle? Yes ☒ No ☐

Sample containers intact? Yes ☒ No ☐

Sufficient sample volume for indicated test? Yes ☒ No ☐

All samples received within holding time? Yes ☒ No ☐

Container/Temp Blank temperature in compliance? Yes ☒ No ☐

Temperature(s)/Thermometer(s):

Cooler(s)/Kit(s):

Water - VOA vials have zero headspace? Yes ☐ No ☐ No VOA vials submitted ☒

Water - pH acceptable upon receipt? Yes ☐ No ☐ N/A ☒

pH adjusted? Yes ☐ No ☐ N/A ☒

pH adjusted by:

Login Notes:

Client Contacted:

Date Contacted:

Person Contacted:

Contacted By:

Regarding:

Comments:

CorrectiveAction:



ANALYTICAL REPORT

This report at a minimum contains the following information:

- Analytical Report of Test Results
- Description of QC Qualifiers
- Chain of Custody (copy)
- Quality Control Summary
- Case Narrative (if applicable)
- Correspondence with Client (if applicable)

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for parameters where accreditation is required or available, unless otherwise noted in the case narrative.



ANALYTICAL REPORT

TETRA TECH
 LUCAS STAMPS
 1811 EXECUTIVE DR.
 SUITE R
 INDIANAPOLIS, IN 46241

Project Name: INDIANA BATTERY CO
 Project Phase: INDIANAPOLIS, IN
 Contract #: 3019
 Project #: 103X90260001S051712001
 Folder #: 136087
 Purchase Order #: 1144695 / CT-13

Page 1 of 13
 Arrival Temperature: 2.6
 Report Date: 05/25/2018
 Date Received: 05/11/2018
 Reprint Date: 05/25/2018

CT LAB#: 118782

Sample Description: IBC-OU1-07-BOE-180419

Client Sample #:

Sampled: 04/19/2018 0815

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	85.9	%	0.1	0.1	0.1	0.1	1.00			5/17/18 14:26	BMM	EPA 8000C
Metals Results												
Aluminum	3840	mg/kg	0.046	0.14	0.28	0.28	1.00	M	05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Antimony	0.40	mg/kg	0.15	0.46	0.92	0.92	1.00	J	05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Arsenic	2.1	mg/kg	0.15	0.46	0.92	0.92	1.00		05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Barium	38.1	mg/kg	0.010	0.029	0.057	0.057	1.00		05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Beryllium	0.16	mg/kg	0.0046	0.014	0.046	0.046	1.00	Y	05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Cadmium	<0.0069	mg/kg	0.0069	0.023	0.046	0.046	1.00	U	05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Calcium	32100	mg/kg	0.28	0.80	1.6	1.6	1.00		05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Chromium	6.6	mg/kg	0.026	0.080	0.16	0.16	1.00		05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Cobalt	3.6	mg/kg	0.046	0.14	0.28	0.28	1.00		05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Copper	8.3	mg/kg	0.080	0.23	0.46	0.46	1.00	M	05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Iron	6820	mg/kg	0.34	1.0	2.1	2.1	1.00	M	05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Lead	14.5	mg/kg	0.046	0.14	0.29	0.29	1.00		05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Magnesium	15300	mg/kg	0.16	0.46	0.92	0.92	1.00		05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Manganese	241	mg/kg	0.029	0.086	0.17	0.17	1.00	M	05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 118782	Sample Description: IBC-OU1-07-BOE-180419	Client Sample #:	Sampled: 04/19/2018 0815
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Nickel	8.3	mg/kg	0.024	0.069	0.14	0.14	1.00	M	05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Selenium	0.44	mg/kg	0.069	0.23	0.46	0.46	1.00	J	05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Silver	<0.019	mg/kg	0.019	0.057	0.11	0.11	1.00	U	05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Thallium	<0.092	mg/kg	0.092	0.28	0.55	0.55	1.00	U M	05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Vanadium	9.9	mg/kg	0.014	0.046	0.092	0.092	1.00		05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Zinc	33.5	mg/kg	0.057	0.17	0.34	0.34	1.00		05/14/2018 12:15	5/16/18 01:26	NAH	EPA 6010C ^
Potassium	424	mg/kg	13	38	76	76	1.00		05/14/2018 12:15	5/17/18 15:00	MDS	EPA 6010C ^
Sodium	77.7	mg/kg	4.6	14	28	28	1.00		05/14/2018 12:15	5/17/18 15:00	MDS	EPA 6010C ^
Mercury	0.0042	mg/kg	0.0026	0.0051	0.010	0.010	1.00	J	05/16/2018 10:00	5/17/18 09:15	LJF	EPA 7471B ^

CT LAB#: 118788	Sample Description: IBC-OU1-06-BOE-180419	Client Sample #:	Sampled: 04/19/2018 0822
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	86.2	%	0.1	0.1	0.1	0.1	1.00			5/17/18 14:26	BMM	EPA 8000C
Metals Results												
Aluminum	4500	mg/kg	0.047	0.14	0.28	0.28	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Antimony	0.80	mg/kg	0.15	0.47	0.95	0.95	1.00	J	05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Arsenic	4.8	mg/kg	0.15	0.47	0.95	0.95	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Barium	54.5	mg/kg	0.011	0.030	0.059	0.059	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Beryllium	0.11	mg/kg	0.0047	0.014	0.047	0.047	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Cadmium	<0.0071	mg/kg	0.0071	0.024	0.047	0.047	1.00	U	05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Calcium	43200	mg/kg	0.28	0.83	1.7	1.7	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Chromium	7.9	mg/kg	0.027	0.083	0.17	0.17	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Cobalt	4.5	mg/kg	0.047	0.14	0.28	0.28	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Copper	12.5	mg/kg	0.083	0.24	0.47	0.47	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 118788	Sample Description: IBC-OU1-06-BOE-180419	Client Sample #:	Sampled: 04/19/2018 0822
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Iron	8580	mg/kg	0.36	1.1	2.1	2.1	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Lead	25.3	mg/kg	0.047	0.15	0.30	0.30	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Magnesium	18600	mg/kg	0.17	0.47	0.95	0.95	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Manganese	287	mg/kg	0.030	0.089	0.18	0.18	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Nickel	9.7	mg/kg	0.025	0.071	0.14	0.14	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Selenium	1.2	mg/kg	0.071	0.24	0.47	0.47	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Silver	<0.020	mg/kg	0.020	0.059	0.12	0.12	1.00	U	05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Thallium	0.68	mg/kg	0.095	0.28	0.57	0.57	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Vanadium	13.2	mg/kg	0.014	0.047	0.095	0.095	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Zinc	45.6	mg/kg	0.059	0.18	0.36	0.36	1.00		05/14/2018 12:15	5/16/18 02:31	NAH	EPA 6010C ^
Potassium	542	mg/kg	13	39	78	78	1.00		05/14/2018 12:15	5/17/18 15:20	MDS	EPA 6010C ^
Sodium	84.6	mg/kg	4.7	14	28	28	1.00		05/14/2018 12:15	5/17/18 15:20	MDS	EPA 6010C ^
Mercury	0.027	mg/kg	0.0027	0.0053	0.011	0.011	1.00		05/16/2018 10:00	5/17/18 09:24	LJF	EPA 7471B ^

CT LAB#: 118789	Sample Description: IBC-OU1-12-BOE-180425	Client Sample #:	Sampled: 04/25/2018 1045
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

Solids, Percent	85.5	%	0.1	0.1	0.1	0.1	1.00			5/17/18 14:26	BMM	EPA 8000C
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Metals Results

Aluminum	4440	mg/kg	0.048	0.14	0.29	0.29	1.00		05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Antimony	0.76	mg/kg	0.16	0.48	0.96	0.96	1.00	J	05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Arsenic	3.0	mg/kg	0.16	0.48	0.96	0.96	1.00		05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Barium	44.7	mg/kg	0.011	0.030	0.060	0.060	1.00		05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Beryllium	0.087	mg/kg	0.0048	0.014	0.048	0.048	1.00		05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Cadmium	<0.0072	mg/kg	0.0072	0.024	0.048	0.048	1.00	U	05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 118789	Sample Description: IBC-OU1-12-BOE-180425	Client Sample #:	Sampled: 04/25/2018 1045
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Calcium	27100	mg/kg	0.29	0.84	1.7	1.7	1.00		05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Chromium	7.6	mg/kg	0.028	0.084	0.17	0.17	1.00		05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Cobalt	4.0	mg/kg	0.048	0.14	0.29	0.29	1.00		05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Copper	9.5	mg/kg	0.084	0.24	0.48	0.48	1.00		05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Iron	8010	mg/kg	0.36	1.1	2.2	2.2	1.00		05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Lead	27.5	mg/kg	0.048	0.15	0.30	0.30	1.00		05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Magnesium	12200	mg/kg	0.17	0.48	0.96	0.96	1.00		05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Manganese	294	mg/kg	0.030	0.090	0.18	0.18	1.00		05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Nickel	9.3	mg/kg	0.025	0.072	0.14	0.14	1.00		05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Selenium	0.32	mg/kg	0.072	0.24	0.48	0.48	1.00	J	05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Silver	<0.020	mg/kg	0.020	0.060	0.12	0.12	1.00	U	05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Thallium	<0.096	mg/kg	0.096	0.29	0.58	0.58	1.00	U	05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Vanadium	11.8	mg/kg	0.014	0.048	0.096	0.096	1.00		05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Zinc	39.9	mg/kg	0.060	0.18	0.36	0.36	1.00		05/14/2018 12:15	5/16/18 02:39	NAH	EPA 6010C ^
Potassium	453	mg/kg	13	40	79	79	1.00		05/14/2018 12:15	5/17/18 15:23	MDS	EPA 6010C ^
Sodium	61.2	mg/kg	4.8	14	29	29	1.00		05/14/2018 12:15	5/17/18 15:23	MDS	EPA 6010C ^
Mercury	0.013	mg/kg	0.0026	0.0052	0.010	0.010	1.00		05/16/2018 10:00	5/17/18 09:27	LJF	EPA 7471B ^

CT LAB#: 118790	Sample Description: IBC-OU1-17-BOE-180508	Client Sample #:	Sampled: 05/08/2018 0715
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	91.3	%	0.1	0.1	0.1	0.1	1.00			5/17/18 14:26	BMM	EPA 8000C
Metals Results												
Aluminum	5530	mg/kg	0.043	0.13	0.26	0.26	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Antimony	0.55	mg/kg	0.14	0.43	0.85	0.85	1.00	J	05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 118790	Sample Description: IBC-OU1-17-BOE-180508	Client Sample #:	Sampled: 05/08/2018 0715
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Arsenic	4.2	mg/kg	0.14	0.43	0.85	0.85	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Barium	67.0	mg/kg	0.0096	0.027	0.053	0.053	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Beryllium	0.29	mg/kg	0.0043	0.013	0.043	0.043	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Cadmium	0.22	mg/kg	0.0064	0.021	0.043	0.043	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Calcium	57400	mg/kg	0.26	0.74	1.5	1.5	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Chromium	9.5	mg/kg	0.024	0.074	0.15	0.15	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Cobalt	4.6	mg/kg	0.043	0.13	0.26	0.26	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Copper	24.5	mg/kg	0.074	0.21	0.43	0.43	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Iron	9780	mg/kg	0.32	0.96	1.9	1.9	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Lead	78.7	mg/kg	0.043	0.13	0.27	0.27	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Magnesium	15700	mg/kg	0.15	0.43	0.85	0.85	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Manganese	330	mg/kg	0.027	0.080	0.16	0.16	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Nickel	10.8	mg/kg	0.022	0.064	0.13	0.13	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Selenium	0.71	mg/kg	0.064	0.21	0.43	0.43	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Silver	0.16	mg/kg	0.018	0.053	0.11	0.11	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Thallium	<0.085	mg/kg	0.085	0.26	0.51	0.51	1.00	U	05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Vanadium	15.2	mg/kg	0.013	0.043	0.085	0.085	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Zinc	94.4	mg/kg	0.053	0.16	0.32	0.32	1.00		05/14/2018 12:15	5/16/18 02:46	NAH	EPA 6010C ^
Potassium	675	mg/kg	12	35	70	70	1.00		05/14/2018 12:15	5/17/18 15:33	MDS	EPA 6010C ^
Sodium	142	mg/kg	4.3	13	26	26	1.00		05/14/2018 12:15	5/17/18 15:33	MDS	EPA 6010C ^
Mercury	0.35	mg/kg	0.0024	0.0048	0.0096	0.0096	1.00		05/16/2018 10:00	5/17/18 09:29	LJF	EPA 7471B ^

CT LAB#: 118791	Sample Description: IBC-OU1-19-BOE-180508	Client Sample #:	Sampled: 05/08/2018 0720
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

Solids, Percent	90.0	%	0.1	0.1	0.1	0.1	1.00		5/17/18 14:26	BMM	EPA 8000C
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Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 118791

Sample Description: IBC-OU1-19-BOE-180508

Client Sample #:

Sampled: 05/08/2018 0720

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Metals Results												
Aluminum	7620	mg/kg	0.043	0.13	0.26	0.26	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Antimony	1.2	mg/kg	0.14	0.43	0.86	0.86	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Arsenic	4.3	mg/kg	0.14	0.43	0.86	0.86	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Barium	103	mg/kg	0.0097	0.027	0.054	0.054	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Beryllium	0.39	mg/kg	0.0043	0.013	0.043	0.043	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Cadmium	0.096	mg/kg	0.0064	0.021	0.043	0.043	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Calcium	28200	mg/kg	0.26	0.75	1.5	1.5	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Chromium	11.6	mg/kg	0.025	0.075	0.15	0.15	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Cobalt	6.3	mg/kg	0.043	0.13	0.26	0.26	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Copper	17.9	mg/kg	0.075	0.21	0.43	0.43	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Iron	12400	mg/kg	0.32	0.97	1.9	1.9	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Lead	2760	mg/kg	0.043	0.13	0.27	0.27	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Magnesium	13000	mg/kg	0.15	0.43	0.86	0.86	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Manganese	510	mg/kg	0.027	0.081	0.16	0.16	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Nickel	14.0	mg/kg	0.023	0.064	0.13	0.13	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Selenium	0.76	mg/kg	0.064	0.21	0.43	0.43	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Silver	0.12	mg/kg	0.018	0.054	0.11	0.11	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Thallium	<0.086	mg/kg	0.086	0.26	0.52	0.52	1.00	U	05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Vanadium	18.3	mg/kg	0.013	0.043	0.086	0.086	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Zinc	85.9	mg/kg	0.054	0.16	0.32	0.32	1.00		05/14/2018 12:15	5/16/18 02:53	NAH	EPA 6010C ^
Potassium	811	mg/kg	12	35	71	71	1.00		05/14/2018 12:15	5/17/18 15:36	MDS	EPA 6010C ^
Sodium	108	mg/kg	4.3	13	26	26	1.00		05/14/2018 12:15	5/17/18 15:36	MDS	EPA 6010C ^
Mercury	0.36	mg/kg	0.0024	0.0048	0.0095	0.0095	1.00		05/16/2018 10:00	5/17/18 09:31	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 118792

Sample Description: IBC-OU1-18-BOE-180508

Client Sample #:

Sampled: 05/08/2018 0725

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	87.0	%	0.1	0.1	0.1	0.1	1.00			5/17/18 14:26	BMM	EPA 8000C
Metals Results												
Aluminum	6430	mg/kg	0.046	0.14	0.27	0.27	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Antimony	0.72	mg/kg	0.15	0.46	0.91	0.91	1.00	J	05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Arsenic	3.5	mg/kg	0.15	0.46	0.91	0.91	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Barium	74.3	mg/kg	0.010	0.028	0.057	0.057	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Beryllium	0.25	mg/kg	0.0046	0.014	0.046	0.046	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Cadmium	<0.0068	mg/kg	0.0068	0.023	0.046	0.046	1.00	U	05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Calcium	24400	mg/kg	0.27	0.80	1.6	1.6	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Chromium	9.6	mg/kg	0.026	0.080	0.16	0.16	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Cobalt	5.6	mg/kg	0.046	0.14	0.27	0.27	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Copper	14.2	mg/kg	0.080	0.23	0.46	0.46	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Iron	10800	mg/kg	0.34	1.0	2.0	2.0	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Lead	137	mg/kg	0.046	0.14	0.28	0.28	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Magnesium	11500	mg/kg	0.16	0.46	0.91	0.91	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Manganese	444	mg/kg	0.028	0.085	0.17	0.17	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Nickel	12.4	mg/kg	0.024	0.068	0.14	0.14	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Selenium	0.83	mg/kg	0.068	0.23	0.46	0.46	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Silver	0.029	mg/kg	0.019	0.057	0.11	0.11	1.00	J	05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Thallium	<0.091	mg/kg	0.091	0.27	0.55	0.55	1.00	U	05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Vanadium	15.9	mg/kg	0.014	0.046	0.091	0.091	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Zinc	58.9	mg/kg	0.057	0.17	0.34	0.34	1.00		05/14/2018 12:15	5/16/18 03:01	NAH	EPA 6010C ^
Potassium	634	mg/kg	13	38	75	75	1.00		05/14/2018 12:15	5/17/18 15:39	MDS	EPA 6010C ^
Sodium	78.0	mg/kg	4.6	14	27	27	1.00		05/14/2018 12:15	5/17/18 15:39	MDS	EPA 6010C ^
Mercury	0.18	mg/kg	0.0026	0.0052	0.010	0.010	1.00		05/16/2018 10:00	5/17/18 09:38	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 118793

Sample Description: IBC-OU1-11-BOE-180509

Client Sample #:

Sampled: 05/09/2018 0715

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	87.4	%	0.1	0.1	0.1	0.1	1.00			5/17/18 14:26	BMM	EPA 8000C
Metals Results												
Aluminum	7460	mg/kg	0.044	0.13	0.27	0.27	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Antimony	0.66	mg/kg	0.14	0.44	0.88	0.88	1.00	J	05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Arsenic	3.4	mg/kg	0.14	0.44	0.88	0.88	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Barium	87.6	mg/kg	0.0099	0.028	0.055	0.055	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Beryllium	0.27	mg/kg	0.0044	0.013	0.044	0.044	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Cadmium	0.079	mg/kg	0.0066	0.022	0.044	0.044	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Calcium	19800	mg/kg	0.27	0.77	1.5	1.5	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Chromium	13.9	mg/kg	0.025	0.077	0.15	0.15	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Cobalt	6.2	mg/kg	0.044	0.13	0.27	0.27	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Copper	16.7	mg/kg	0.077	0.22	0.44	0.44	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Iron	12200	mg/kg	0.33	0.99	2.0	2.0	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Lead	56.9	mg/kg	0.044	0.14	0.28	0.28	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Magnesium	10100	mg/kg	0.15	0.44	0.88	0.88	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Manganese	602	mg/kg	0.028	0.083	0.17	0.17	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Nickel	14.2	mg/kg	0.023	0.066	0.13	0.13	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Selenium	0.70	mg/kg	0.066	0.22	0.44	0.44	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Silver	0.37	mg/kg	0.019	0.055	0.11	0.11	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Thallium	<0.088	mg/kg	0.088	0.27	0.53	0.53	1.00	U	05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Vanadium	17.4	mg/kg	0.013	0.044	0.088	0.088	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Zinc	62.2	mg/kg	0.055	0.17	0.33	0.33	1.00		05/14/2018 12:15	5/16/18 03:08	NAH	EPA 6010C ^
Potassium	743	mg/kg	12	36	73	73	1.00		05/14/2018 12:15	5/17/18 15:43	MDS	EPA 6010C ^
Sodium	79.3	mg/kg	4.4	13	27	27	1.00		05/14/2018 12:15	5/17/18 15:43	MDS	EPA 6010C ^
Mercury	0.17	mg/kg	0.0024	0.0049	0.0097	0.0097	1.00		05/16/2018 10:00	5/17/18 09:40	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 118794

Sample Description: IBC-OU1-10-BOE-180509

Client Sample #:

Sampled: 05/09/2018 0720

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	90.3	%	0.1	0.1	0.1	0.1	1.00			5/17/18 14:26	BMM	EPA 8000C
Metals Results												
Aluminum	4100	mg/kg	0.046	0.14	0.28	0.28	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Antimony	1.8	mg/kg	0.15	0.46	0.92	0.92	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Arsenic	4.4	mg/kg	0.15	0.46	0.92	0.92	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Barium	49.6	mg/kg	0.010	0.029	0.057	0.057	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Beryllium	0.14	mg/kg	0.0046	0.014	0.046	0.046	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Cadmium	0.038	mg/kg	0.0069	0.023	0.046	0.046	1.00	J	05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Calcium	63700	mg/kg	0.28	0.80	1.6	1.6	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Chromium	8.4	mg/kg	0.026	0.080	0.16	0.16	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Cobalt	3.5	mg/kg	0.046	0.14	0.28	0.28	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Copper	15.2	mg/kg	0.080	0.23	0.46	0.46	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Iron	7800	mg/kg	0.34	1.0	2.1	2.1	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Lead	233	mg/kg	0.046	0.14	0.29	0.29	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Magnesium	24100	mg/kg	0.16	0.46	0.92	0.92	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Manganese	242	mg/kg	0.029	0.086	0.17	0.17	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Nickel	8.6	mg/kg	0.024	0.069	0.14	0.14	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Selenium	0.61	mg/kg	0.069	0.23	0.46	0.46	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Silver	0.30	mg/kg	0.020	0.057	0.11	0.11	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Thallium	<0.092	mg/kg	0.092	0.28	0.55	0.55	1.00	U	05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Vanadium	12.2	mg/kg	0.014	0.046	0.092	0.092	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Zinc	99.0	mg/kg	0.057	0.17	0.34	0.34	1.00		05/14/2018 12:15	5/16/18 03:16	NAH	EPA 6010C ^
Potassium	491	mg/kg	13	38	76	76	1.00		05/14/2018 12:15	5/17/18 15:46	MDS	EPA 6010C ^
Sodium	100	mg/kg	4.6	14	28	28	1.00		05/14/2018 12:15	5/17/18 15:46	MDS	EPA 6010C ^
Mercury	0.26	mg/kg	0.024	0.048	0.095	0.095	10.00		05/16/2018 10:00	5/17/18 10:54	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 118795

Sample Description: IBC-OU1-16-BOE-180509

Client Sample #:

Sampled: 05/09/2018 0725

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	90.3	%	0.1	0.1	0.1	0.1	1.00			5/17/18 14:26	BMM	EPA 8000C
Metals Results												
Aluminum	6590	mg/kg	0.047	0.14	0.28	0.28	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Antimony	0.99	mg/kg	0.15	0.47	0.93	0.93	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Arsenic	9.5	mg/kg	0.15	0.47	0.93	0.93	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Barium	128	mg/kg	0.010	0.029	0.058	0.058	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Beryllium	0.41	mg/kg	0.0047	0.014	0.047	0.047	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Cadmium	0.19	mg/kg	0.0070	0.023	0.047	0.047	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Calcium	46900	mg/kg	0.28	0.82	1.6	1.6	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Chromium	11.4	mg/kg	0.027	0.082	0.16	0.16	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Cobalt	6.3	mg/kg	0.047	0.14	0.28	0.28	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Copper	46.6	mg/kg	0.082	0.23	0.47	0.47	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Iron	11800	mg/kg	0.35	1.0	2.1	2.1	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Lead	256	mg/kg	0.047	0.15	0.29	0.29	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Magnesium	12600	mg/kg	0.16	0.47	0.93	0.93	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Manganese	536	mg/kg	0.029	0.087	0.17	0.17	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Nickel	12.4	mg/kg	0.024	0.070	0.14	0.14	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Selenium	0.73	mg/kg	0.070	0.23	0.47	0.47	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Silver	0.27	mg/kg	0.020	0.058	0.12	0.12	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Thallium	<0.093	mg/kg	0.093	0.28	0.56	0.56	1.00	U	05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Vanadium	19.1	mg/kg	0.014	0.047	0.093	0.093	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Zinc	182	mg/kg	0.058	0.17	0.35	0.35	1.00		05/14/2018 12:15	5/16/18 03:44	NAH	EPA 6010C ^
Potassium	799	mg/kg	13	38	77	77	1.00		05/14/2018 12:15	5/17/18 15:49	MDS	EPA 6010C ^
Sodium	116	mg/kg	4.7	14	28	28	1.00		05/14/2018 12:15	5/17/18 15:49	MDS	EPA 6010C ^
Mercury	0.82	mg/kg	0.024	0.049	0.097	0.097	10.00		05/16/2018 10:00	5/17/18 11:01	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 118796

Sample Description: IBC-OU1-15-BOE-180509

Client Sample #:

Sampled: 05/09/2018 0730

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	85.9	%	0.1	0.1	0.1	0.1	1.00			5/17/18 14:26	BMM	EPA 8000C
Metals Results												
Aluminum	8410	mg/kg	0.048	0.14	0.29	0.29	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Antimony	104	mg/kg	0.16	0.48	0.97	0.97	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Arsenic	16.5	mg/kg	0.16	0.48	0.97	0.97	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Barium	86.3	mg/kg	0.011	0.030	0.060	0.060	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Beryllium	0.28	mg/kg	0.0048	0.014	0.048	0.048	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Cadmium	0.45	mg/kg	0.0072	0.024	0.048	0.048	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Calcium	37100	mg/kg	0.29	0.84	1.7	1.7	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Chromium	13.1	mg/kg	0.028	0.084	0.17	0.17	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Cobalt	6.2	mg/kg	0.048	0.14	0.29	0.29	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Copper	19.5	mg/kg	0.084	0.24	0.48	0.48	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Iron	14100	mg/kg	0.36	1.1	2.2	2.2	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Lead	7000	mg/kg	0.048	0.15	0.30	0.30	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Magnesium	13100	mg/kg	0.17	0.48	0.97	0.97	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Manganese	359	mg/kg	0.030	0.090	0.18	0.18	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Nickel	16.0	mg/kg	0.025	0.072	0.14	0.14	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Selenium	0.51	mg/kg	0.072	0.24	0.48	0.48	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Silver	0.41	mg/kg	0.021	0.060	0.12	0.12	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Thallium	<0.097	mg/kg	0.097	0.29	0.58	0.58	1.00	U	05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Vanadium	20.4	mg/kg	0.014	0.048	0.097	0.097	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Zinc	84.7	mg/kg	0.060	0.18	0.36	0.36	1.00		05/14/2018 12:15	5/16/18 03:52	NAH	EPA 6010C ^
Potassium	923	mg/kg	13	40	80	80	1.00		05/14/2018 12:15	5/17/18 15:52	MDS	EPA 6010C ^
Sodium	90.5	mg/kg	4.8	14	29	29	1.00		05/14/2018 12:15	5/17/18 15:52	MDS	EPA 6010C ^
Mercury	0.30	mg/kg	0.0026	0.0052	0.010	0.010	1.00		05/16/2018 10:00	5/17/18 09:48	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 118797

Sample Description: IBC-OU1-17-BOE-180508-D

Client Sample #:

Sampled: 05/08/2018 0715

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	90.4	%	0.1	0.1	0.1	0.1	1.00			5/17/18 14:26	BMM	EPA 8000C
Metals Results												
Aluminum	6170	mg/kg	0.047	0.14	0.28	0.28	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Antimony	4.7	mg/kg	0.15	0.47	0.93	0.93	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Arsenic	5.7	mg/kg	0.15	0.47	0.93	0.93	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Barium	74.5	mg/kg	0.010	0.029	0.058	0.058	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Beryllium	0.31	mg/kg	0.0047	0.014	0.047	0.047	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Cadmium	0.18	mg/kg	0.0070	0.023	0.047	0.047	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Calcium	35800	mg/kg	0.28	0.82	1.6	1.6	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Chromium	9.9	mg/kg	0.027	0.082	0.16	0.16	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Cobalt	4.4	mg/kg	0.047	0.14	0.28	0.28	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Copper	25.3	mg/kg	0.082	0.23	0.47	0.47	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Iron	10400	mg/kg	0.35	1.0	2.1	2.1	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Lead	370	mg/kg	0.047	0.15	0.29	0.29	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Magnesium	12200	mg/kg	0.16	0.47	0.93	0.93	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Manganese	303	mg/kg	0.029	0.087	0.17	0.17	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Nickel	11.0	mg/kg	0.024	0.070	0.14	0.14	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Selenium	0.58	mg/kg	0.070	0.23	0.47	0.47	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Silver	0.16	mg/kg	0.020	0.058	0.12	0.12	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Thallium	<0.093	mg/kg	0.093	0.28	0.56	0.56	1.00	U	05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Vanadium	15.6	mg/kg	0.014	0.047	0.093	0.093	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Zinc	103	mg/kg	0.058	0.17	0.35	0.35	1.00		05/14/2018 12:15	5/16/18 03:59	NAH	EPA 6010C ^
Potassium	722	mg/kg	13	38	77	77	1.00		05/14/2018 12:15	5/17/18 15:56	MDS	EPA 6010C ^
Sodium	216	mg/kg	4.7	14	28	28	1.00		05/14/2018 12:15	5/17/18 15:56	MDS	EPA 6010C ^
Mercury	0.22	mg/kg	0.0025	0.0051	0.010	0.010	1.00		05/16/2018 10:00	5/17/18 09:50	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

Notes:

^ Indicates the laboratory is NELAP accredited for this analyte by the indicated matrix and method. DL (detection limit), LOD (limit of detection), loq (limit of quantitation) as defined by most recent DOD QSM version.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for the parameters where accreditation is required or available, unless noted in the case narrative.

Submitted by: Brett M. Szymanski
Project Manager
608-356-2760

QC Qualifiers		Current CT Laboratories Certifications
Code	Description	
B	Analyte detected in the associated Method Blank.	Wisconsin (WDNR) Chemistry ID# 157066030 Wisconsin (DATCP) Bacteriology ID# 105-289 Louisiana NELAP (primary) ID# ACC20160002 Illinois NELAP Lab ID# 200073 Kansas NELAP Lab ID# E-10368 Virginia NELAP Lab ID# 460203 Maryland Lab ID# WI00061 ISO/IEC 17025-2005 A2LA Cert # 3806.01 DoD-ELAP A2LA 3806.01 GA EPD Stipulation ID ACC20160002
C	Toxicity present in BOD sample.	
D	Diluted Out.	
E	Safe, No Total Coliform detected.	
F	Unsafe, Total Coliform detected, no E. Coli detected.	
G	Unsafe, Total Coliform detected and E. Coli detected.	
H	Holding time exceeded.	
I	BOD incubator temperature was outside acceptance limits during test period.	
J	Estimated value.	
L	Significant peaks were detected outside the chromatographic window.	
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.	
N	Insufficient BOD oxygen depletion.	
O	Complete BOD oxygen depletion.	
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.	
Q	Laboratory Control Sample outside acceptance limits.	
R	See Narrative at end of report.	
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.	
T	Sample received with improper preservation or temperature.	
U	Analyte concentration was below detection limit.	
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.	
W	Sample amount received was below program minimum.	
X	Analyte exceeded calibration range.	
Y	Replicate/Duplicate precision outside acceptance limits.	
Z	Specified calibration criteria was not met.	

QC SUMMARY REPORT

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	149084	Analysis Date:	05/17/2018	Prep Batch #:	Matrix:	SOIL
CTLab #:	122817	Analysis Time:	14:26	Prep Date/Time:	Method:	SW8000C
Parent Sample #:	118782	Analyst:	BMM	Prep Analyst:		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Solids, Percent	86.1	%	85.9					0	8

Duplicate

Analytical Run #:	149131	Analysis Date:	05/16/2018	Prep Batch #:	66924	Matrix:	SOIL
CTLab #:	119220	Analysis Time:	01:41	Prep Date/Time:	05/14/2018 12:15	Method:	SW6010
Parent Sample #:	118782	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	4000	mg/kg	3840				9.6	4	20
Antimony	0.52	mg/kg	0.40				32	26	20
Arsenic	2.4	mg/kg	2.1				32	13	20
Barium	39.1	mg/kg	38.1				2.0	3	20
Beryllium	0.11	mg/kg	0.16				1.60	37	20
Cadmium	0.00706	mg/kg	<0.00706 U				1.60	0	20
Calcium	33800	mg/kg	32100				56	5	20
Chromium	6.9	mg/kg	6.6				5.6	4	20
Cobalt	3.6	mg/kg	3.6				9.6	0	20
Copper	8.3	mg/kg	8.3				16.0	0	20
Iron	7170	mg/kg	6820				72	5	20
Lead	15.8	mg/kg	14.5				10.0	9	20
Magnesium	15400	mg/kg	15300				32	1	20
Manganese	244	mg/kg	241				6.0	1	20
Nickel	8.4	mg/kg	8.3				4.8	1	20
Selenium	0.39	mg/kg	0.44				16	12	20
Silver	0.0200	mg/kg	<0.0200 U				4.0	0	20
Thallium	0.0941	mg/kg	<0.0941 U				19	0	20
Vanadium	10.5	mg/kg	9.9				3.2	6	20
Zinc	34.7	mg/kg	33.5				12.0	4	20

Lab Control Spike Soil

Analytical Run #:	149131	Analysis Date:	05/16/2018	Prep Batch #:	66924	Matrix:	SOLID
CTLab #:	119218	Analysis Time:	01:11	Prep Date/Time:	05/14/2018 12:15	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	103	mg/kg			100	103	80 --- 120		
Antimony	26.3	mg/kg			25.0	105	80 --- 120		
Arsenic	108	mg/kg			100	108	80 --- 120		
Barium	109	mg/kg			100	109	80 --- 120		
Beryllium	2.5	mg/kg			2.5	100	80 --- 120		
Cadmium	2.4	mg/kg			2.5	96	80 --- 120		
Calcium	4880	mg/kg			5000	98	80 --- 120		
Chromium	10.4	mg/kg			10.0	104	80 --- 120		
Cobalt	25.5	mg/kg			25.0	102	80 --- 120		
Copper	11.2	mg/kg			12.5	90	80 --- 120		
Iron	49.3	mg/kg			50.0	99	80 --- 120		
Lead	22.9	mg/kg			25.0	92	80 --- 120		
Magnesium	2500	mg/kg			2500	100	80 --- 120		
Manganese	21.2	mg/kg			25.0	85	80 --- 120		
Nickel	25.3	mg/kg			25.0	101	80 --- 120		
Selenium	101	mg/kg			100	101	80 --- 120		
Silver	2.5	mg/kg			2.5	100	75 --- 120		
Thallium	94.3	mg/kg			100	94	80 --- 120		
Vanadium	25.3	mg/kg			25.0	101	80 --- 120		
Zinc	26.0	mg/kg			25.0	104	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	149131	Analysis Date:	05/16/2018	Prep Batch #:	66924	Matrix:	SOLID
CTLab #:	119217	Analysis Time:	01:18	Prep Date/Time:	05/14/2018 12:15	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	0.04	mg/kg		U	0		0.12		
Antimony	0.13	mg/kg		U	0		0.40		
Arsenic	0.13	mg/kg		U	0		0.40		
Barium	0.009	mg/kg		U	0		0.025		
Beryllium	0.004	mg/kg		U	0		0.020		
Cadmium	0.006	mg/kg		U	0		0.020		
Calcium	0.29	mg/kg			0		0.70		
Chromium	0.023	mg/kg		U	0		0.125		
Cobalt	0.04	mg/kg		U	0		0.12		
Copper	0.07	mg/kg		U	0		0.20		
Iron	0.3	mg/kg		U	0		0.9		
Lead	0.04	mg/kg		U	0		0.125		
Magnesium	0.14	mg/kg		U	0		0.40		
Manganese	0.025	mg/kg		U	0		0.075		
Nickel	0.021	mg/kg		U	0		0.060		
Selenium	0.06	mg/kg		U	0		0.20		
Silver	0.017	mg/kg		U	0		0.050		
Thallium	0.08	mg/kg		U	0		0.24		
Vanadium	0.012	mg/kg		U	0		0.040		
Zinc	0.054	mg/kg			0		0.15		

Matrix Spike Duplicate Soil

Analytical Run #:	149131	Analysis Date:	05/16/2018	Prep Batch #:	66924	Matrix:	SOIL
CTLab #:	119222	Analysis Time:	02:17	Prep Date/Time:	05/14/2018 12:15	Method:	SW6010
Parent Sample #:	119221	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	4570	mg/kg	3840		111	658	80 --- 120	1	20
Antimony	9.1	mg/kg	0.40		27.9	31	80 --- 120	5	20
Arsenic	117	mg/kg	2.1		111	104	80 --- 120	4	20
Barium	159	mg/kg	38.1		111	109	80 --- 120	2	20
Beryllium	2.0	mg/kg	0.16		2.8	66	80 --- 120	29	20
Cadmium	3.6	mg/kg	BDL		2.8	129	80 --- 120	4	20
Calcium	38200	mg/kg	32100		5570	110	80 --- 120	4	20
Chromium	17.9	mg/kg	6.6		11.1	102	80 --- 120	2	20
Cobalt	28.7	mg/kg	3.6		27.9	90	80 --- 120	3	20
Copper	19.4	mg/kg	8.3		13.9	80	80 --- 120	2	20
Iron	7130	mg/kg	6820		55.7	557	80 --- 120	2	20
Lead	41.5	mg/kg	14.5		27.9	97	80 --- 120	3	20
Magnesium	19300	mg/kg	15300		2790	143	80 --- 120	3	20
Manganese	254	mg/kg	241		27.9	47	80 --- 120	8	20
Nickel	33.7	mg/kg	8.3		27.9	91	80 --- 120	3	20
Selenium	100	mg/kg	0.44		111	90	80 --- 120	5	20
Silver	2.8	mg/kg	BDL		2.8	100	75 --- 125	4	20
Thallium	87.7	mg/kg	BDL		111	79	80 --- 120	5	20
Vanadium	36.5	mg/kg	9.9		27.9	95	80 --- 120	3	20
Zinc	61.3	mg/kg	33.5		27.9	100	80 --- 120	1	20

Matrix Spike Soil

Analytical Run #:	149131	Analysis Date:	05/16/2018	Prep Batch #:	66924	Matrix:	SOIL
CTLab #:	119221	Analysis Time:	02:09	Prep Date/Time:	05/14/2018 12:15	Method:	SW6010
Parent Sample #:	118782	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	4620	mg/kg	3840		112	696	80 --- 120		
Antimony	8.7	mg/kg	0.40		28.0	30	80 --- 120		
Arsenic	113	mg/kg	2.1		112	99	80 --- 120		
Barium	156	mg/kg	38.1		112	105	80 --- 120		
Beryllium	2.7	mg/kg	0.16		2.8	91	80 --- 120		
Cadmium	3.5	mg/kg	BDL		2.8	125	80 --- 120		
Calcium	39700	mg/kg	32100		5600	136	80 --- 120		
Chromium	17.6	mg/kg	6.6		11.2	98	80 --- 120		
Cobalt	28.0	mg/kg	3.6		28.0	87	80 --- 120		
Copper	19.1	mg/kg	8.3		14.0	77	80 --- 120		
Iron	7330	mg/kg	6820		56.0	911	80 --- 120		
Lead	43.1	mg/kg	14.5		28.0	102	80 --- 120		
Magnesium	20000	mg/kg	15300		2800	168	80 --- 120		
Manganese	276	mg/kg	241		28.0	125	80 --- 120		
Nickel	33.0	mg/kg	8.3		28.0	88	80 --- 120		
Selenium	95.4	mg/kg	0.44		112	85	80 --- 120		
Silver	2.8	mg/kg	BDL		2.8	100	75 --- 125		
Thallium	84.2	mg/kg	BDL		112	75	80 --- 120		
Vanadium	35.5	mg/kg	9.9		28.0	91	80 --- 120		
Zinc	60.7	mg/kg	33.5		28.0	97	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	149133	Analysis Date:	05/17/2018	Prep Batch #:	66924	Matrix:	SOIL
CTLab #:	119220	Analysis Time:	15:07	Prep Date/Time:	05/14/2018 12:15	Method:	SW6010
Parent Sample #:	118782	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	450	mg/kg	424				2.64	6	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	149133	Analysis Date:	05/17/2018	Prep Batch #:	66924	Matrix:	SOIL
CTLab #:	119220	Analysis Time:	15:07	Prep Date/Time:	05/14/2018 12:15	Method:	SW6010
Parent Sample #:	118782	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	82.0	mg/kg	77.7				0.96	5	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Lab Control Spike Soil

Analytical Run #:	149133	Analysis Date:	05/17/2018	Prep Batch #:	66924	Matrix:	SOLID
CTLab #:	119218	Analysis Time:	14:54	Prep Date/Time:	05/14/2018 12:15	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	2600	mg/kg			2500	104	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Lab Control Spike Soil

Analytical Run #:	149133	Analysis Date:	05/17/2018	Prep Batch #:	66924	Matrix:	SOLID
CTLab #:	119218	Analysis Time:	14:54	Prep Date/Time:	05/14/2018 12:15	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	2600	mg/kg			2500	104	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	149133	Analysis Date:	05/17/2018	Prep Batch #:	66924	Matrix:	SOLID
CTLab #:	119217	Analysis Time:	14:57	Prep Date/Time:	05/14/2018 12:15	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	11	mg/kg		U	0		33		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	149133	Analysis Date:	05/17/2018	Prep Batch #:	66924	Matrix:	SOLID
CTLab #:	119217	Analysis Time:	14:57	Prep Date/Time:	05/14/2018 12:15	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	4	mg/kg		U	0		12		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Matrix Spike Duplicate Soil

Analytical Run #:	149133	Analysis Date:	05/17/2018	Prep Batch #:	66924	Matrix:	SOIL
CTLab #:	119222	Analysis Time:	15:13	Prep Date/Time:	05/14/2018 12:15	Method:	SW6010
Parent Sample #:	119221	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	3450	mg/kg	424		2790	108	80 --- 120	1	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Matrix Spike Duplicate Soil

Analytical Run #:	149133	Analysis Date:	05/17/2018	Prep Batch #:	66924	Matrix:	SOIL
CTLab #:	119222	Analysis Time:	15:13	Prep Date/Time:	05/14/2018 12:15	Method:	SW6010
Parent Sample #:	119221	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	2950	mg/kg	77.7		2790	103	80 --- 120	2	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Matrix Spike Soil

Analytical Run #:	149133	Analysis Date:	05/17/2018	Prep Batch #:	66924	Matrix:	SOIL
CTLab #:	119221	Analysis Time:	15:10	Prep Date/Time:	05/14/2018 12:15	Method:	SW6010
Parent Sample #:	118782	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	3440	mg/kg	424		2800	108	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Matrix Spike Soil

Analytical Run #:	149133	Analysis Date:	05/17/2018	Prep Batch #:	66924	Matrix:	SOIL
CTLab #:	119221	Analysis Time:	15:10	Prep Date/Time:	05/14/2018 12:15	Method:	SW6010
Parent Sample #:	118782	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	3020	mg/kg	77.7		2800	105	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	149210	Analysis Date:	05/17/2018	Prep Batch #:	66956	Matrix:	SOIL
CTLab #:	119986	Analysis Time:	09:17	Prep Date/Time:	05/16/2018 10:00	Method:	SW7471B
Parent Sample #:	118782	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.00225	mg/kg	0.0036	U			0.20	200	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Lab Control Spike Soil

Analytical Run #:	149210	Analysis Date:	05/17/2018	Prep Batch #:	66956	Matrix:	SOLID
CTLab #:	119985	Analysis Time:	09:11	Prep Date/Time:	05/16/2018 10:00	Method:	SW7471B
Parent Sample #:		Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.074	mg/kg			0.083	89	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	149210	Analysis Date:	05/17/2018	Prep Batch #:	66956	Matrix:	SOLID
CTLab #:	119984	Analysis Time:	09:13	Prep Date/Time:	05/16/2018 10:00	Method:	SW7471B
Parent Sample #:		Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.0021	mg/kg		U	0		00415		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Matrix Spike Duplicate Soil

Analytical Run #:	149210	Analysis Date:	05/17/2018	Prep Batch #:	66956	Matrix:	SOIL
CTLab #:	119988	Analysis Time:	09:22	Prep Date/Time:	05/16/2018 10:00	Method:	SW7471B
Parent Sample #:	119987	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.085	mg/kg	0.0042		0.099	82	80 --- 120	11	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136087

Project #: 103X90260001S051712001

Matrix Spike Soil

Analytical Run #:	149210	Analysis Date:	05/17/2018	Prep Batch #:	66956	Matrix:	SOIL
CTLab #:	119987	Analysis Time:	09:20	Prep Date/Time:	05/16/2018 10:00	Method:	SW7471B
Parent Sample #:	118782	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.097	mg/kg	0.0042		0.10	93	80 --- 120		

Sample Condition Report

Folder #: 136087
Client: TETRA TECH

Print Date / Time: 05/11/2018 10:33
Received Date / Time / By: 05/11/2018 10:00 DRT

Project Name: INDIANA BATTERY CO
Project Phase: INDIANAPOLIS, IN

Log-In Date / Time / By: 05/11/2018 10:16 BNA
Project #: 103X90260001S051712001 PM: BMS

Coolers: 6076
Custody Seals Present : Y

Temperature: 2.6 C On Ice: Y
COC Present?: Y Complete? Y

Seal Intact? Y
Ship Method: FEDEX EXPRESS
Adequate Packaging: Y

Numbers: SIGNED AND DATED
Tracking Number: 772198721431
Temp Blank Enclosed? Y

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 5/10/18 AND SIGNED.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
118782 IBC-OU1-07-BOE-180419	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	Total # of Containers of Type (SOLIDS) = 2			
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
118788 IBC-OU1-06-BOE-180419	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	Total # of Containers of Type (SOLIDS) = 1			
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
118789 IBC-OU1-12-BOE-180425	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	Total # of Containers of Type (SOLIDS) = 1			
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
118790 IBC-OU1-17-BOE-180508	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	Total # of Containers of Type (SOLIDS) = 1			
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
118791 IBC-OU1-19-BOE-180508	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	Total # of Containers of Type (SOLIDS) = 1			
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
118792 IBC-OU1-18-BOE-180508	SOLIDS	1	/	%SOL,HG,ICP,K,NA

136087

Total # of Containers of Type (SOLIDS) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
118793 IBC-OU1-11-BOE-180509	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
118794 IBC-OU1-10-BOE-180509	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
118795 IBC-OU1-16-BOE-180509	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
118796 IBC-OU1-15-BOE-180509	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
118797 IBC-OU1-17-BOE-180508-D	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

<u>Condition Code</u>	<u>Condition Description</u>
1	Sample Received OK

Company: Tetra Tech
 Project Contact: Lucas Stamps
 Telephone: 317-797-2420
 Project Name: Indiana Battery
 Project #: 103X90260001505171200
 Location: Indianapolis, IN
 Sampled By: Lucas Stamps

 T I N R A D D T A D I C

Folder #: 136087

Company: TETRA TECH

Project: INDIANA BATTERY CO

Logged By: BNA PM: BM

1230 Lange Court, Baraboo, WI 53913
 608-356-2760 Fax 608-356-2766
 www.ctlaboratories.com

gram:

1 ACRA SDWA NPDES

1 Waste Other _____

#

144695

Report To: Lucas Stamps
 EMAIL: lucas.stamps@tetratech.com
 Company: Tetra Tech
 Address: 1811 Executive Dr, Suite A
 Indianapolis, IN 46241
 Invoice To: *
 EMAIL:
 Company: Same
 Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

Level IV
 Scribe EDD

ANALYSES REQUESTED

Turnaround Time
 Normal RUSH*
 Date Needed: _____

Rush analysis requires prior
 CT Laboratories' approval
 Surcharges:
 24 hr 200%
 2-3 days 100%
 4-9 days 50%

Matrix:

GW - groundwater SW - surface water WW - wastewater DW - drinking water
 S - soil/sediment SL - sludge A - air M - misc/waste

Filtered? Y/N

TAL metals

Total # Containers

Designated MS/MSD

Collection		Matrix	Grab/ Comp	Sample #	Sample ID Description			Fill in Spaces with Bottles per Test															CT Lab ID # Lab use only
Date	Time																						
4/19/18	0815	S	L		IBC-OUI-07-BOE-180419	N	X													2	X	118782	
4/19/18	0822				IBC-OUI-06-BOE-180419															1		118788	
4/25/18	1045				IBC-OUI-12-BOE-180425																	118789	
5/8/18	0715				IBC-OUI-17-BOE-180508																	118790	
5/8/18	0720				IBC-OUI-19-BOE-180508																	118791	
5/8/18	0725				IBC-OUI-18-BOE-180508																	118792	
5/9/19	0715				IBC-OUI-11-BOE-180509																	118793	
5/9/19	0720				IBC-OUI-10-BOE-180509																	118794	
5/9/19	0725				IBC-OUI-16-BOE-180509																	118795	
5/9/19	0730				IBC-OUI-15-BOE-180509																	118796	
5/8/18	0715	✓	✓		IBC-OUI-17-BOE-180508	✓	✓													✓		118797	

Relinquished By:

Date/Time

5/10/18 1030

Received By:

Date/Time

5/11/18 1000

Lab Use Only

Ice Present Yes No

Temp 21.0 °R Gun 19

Cooler # 6076

Received by:

Date/Time

Received for Laboratory by:

Date/Time

5-11-18 1016

CT Laboratories Terms and Conditions

Where a purchaser (Client) places an order for laboratory, consulting or sampling services from CT Laboratories (CTL), CTL shall provide the ordered services pursuant to these Terms and Conditions, and the related Quotation, or as agreed in a negotiated contract. In the absence of a written agreement to the contrary, the Order constitutes an acceptance by the Client of CTL's offer to do business under these Terms and Conditions, and an agreement to be bound by these Terms and Conditions. No contrary or additional terms and conditions expressed in a Client's document shall be deemed to become a part of the contract created upon acceptance of these Terms and Conditions, unless accepted by CTL in advance of the start of the project and in writing.

1. ORDERS AND RECEIPT OF SAMPLES (Sample Acceptance Policy)

- 1.1 The Client may place the Order (i.e., specify a Scope of Work) either by submitting a purchase order to CTL in writing, by telephone (confirmed in writing) or by negotiated contract. Whichever option the Client selects for placing the Order, the Order shall not be valid unless it contains sufficient information to enable CTL to carry out the Client's requirements. It is the policy of CTL that samples not meeting the acceptance criteria, outlined in the NELAC standards and Section 5.8.3.2 of the DOD QSM, will not be accepted by the laboratory or will be qualified on the final report. All samples submitted to the laboratory must: (a) be accompanied by proper, full and complete documentation, including sample identification, location, date and time of collection, the collector's name, type of preservation (if any), type of sample, any special comments concerning the sample and any additional pertinent fields on the chain-of-custody. In the absence of any of the required information, the laboratory will attempt to contact the client to obtain the information; if unable to obtain the necessary information, the final report will be qualified. (b) samples must be labeled appropriately with a unique sample identification written with indelible ink on water resistant labels. If the laboratory cannot determine the identity of a sample, it may be rejected and the client will be contacted for further instructions or resampling. (c) samples must be in an appropriate sample container. If the container is inappropriate, the client will be contacted for further instructions or resampling. If analysis is possible, the final report will be qualified. CTL can provide a sampling guide containing approved containers and preservations for analytical methods requested. (d) adhere to method specified holding times. If samples are received with less than ½ the holding time remaining for the requested test, CTL will make its best effort to analyze the samples and notify the client. If holding times are exceeded, the final report will be qualified. (e) contain adequate sample volume to perform the necessary testing. If sufficient volume is not present, the sample may be rejected and the client will be contacted for further instructions or resampling. If samples show signs of damage, contamination or inadequate preservation, the client will be notified. If analysis can be performed, the final report will be qualified. If not, the samples will be rejected and the client notified for further instructions or resampling. It is the Client's responsibility to understand and package samples correctly and provide the proper amount of temperature control (ice) suitable to current weather conditions.
- 1.2 CTL must be supplied with complete written disclosure of the known or suspected presence of any hazardous substances, as defined by applicable federal or state law. Where any samples which were not accompanied by the required disclosure, cause interruptions in the lab's ability to process work due to contamination of instruments or work areas, the Client will be responsible for the costs of clean up and recovery.
- 1.3 Prior to Sample Acceptance, the entire risk of loss or damage to samples remains with the Client. In no event will CTL have any responsibility or liability for the action or inaction of any carrier shipping or delivering any sample to or from CTL's premises. Client is responsible to assure that any sample containing any hazardous substance which is to be delivered to CTL's premises will be packaged, labeled, transported and delivered properly and in accordance with applicable laws.
- 1.4 Clients using CTL's shipping account(s) do so at their own risk and must purchase separate insurance if they do not wish to assume risk of loss. CTL will not assume any risk whatsoever for any samples outside of CTL's control and not successfully delivered to the laboratory within specified hold times.
- 1.5 CTL will not accept liability for any sample(s), except sample(s) damaged or broken by log-in staff prior to successful log-in of the sample(s) into the CTL- LIMS system. This includes, but may not be limited to: complete, valid COC documentation, all sample receiving issues being resolved from a delay caused by the Client in CTL's ability to log-in samples, including missed turnaround and hold times, delay in processing and, ultimately, additional charges to the Client.
- 1.6 CTL will only reject samples per directions from the Client. CTL's sole liability is to inform the Client of any sample receipt issues, and may provide an indication how proceeding with the analysis may affect results and final acceptance by the regulating agency. Ultimately, suitability for use is between the Client and the regulating agency(s).
- 1.7 Signing of this COC by the Client or Client's representative, or directions to CTL via email or Fax constitutes acceptance of these Terms and Conditions, and guarantees payment by the Client to CTL.

2. PAYMENT TERMS

2.1 Services performed by CTL will be in accordance with prices quoted and later confirmed in writing or as stated in the Price Schedule. Invoices may be submitted to Client upon completion of any sample delivery group. Payment in advance is required for all Clients except those whose credit has been established with CTL. For Clients with approved credit, payment terms are net 30 days from the date of invoice by CTL. All overdue payments are subject to an additional interest and service charge of one and one-half percent (1.5%) or the maximum rate permissible by law, per month or portion thereof from the due date until the date of payment. All fees are charged or billed directly to the Client. The billing of a third party will not be accepted without a statement, signed by the third party that acknowledges and accepts payment responsibility. CTL may suspend work and withhold delivery of data under this order at any time in the event Client fails to make timely payment of its invoices. Client shall be responsible for all costs and expenses of collection including reasonable attorney's fees. CTL reserves the right to refuse to proceed with work at any time based upon an unfavorable Client credit report.

3. CHANGE ORDERS, TERMINATION

- 3.1 Changes to the Scope of Work, price, or result delivery date may be initiated by CTL after Sample Acceptance due to any condition which conflicts with analytical, QA or other protocols warranted in these Terms and Conditions. CTL will not proceed with such changes until an agreement with the Client is reached on the amount of any cost, schedule change or technical change to the Scope of Work, and such agreement is documented in writing.
- 3.2 Changes to the Scope of Work, including but not limited to increasing or decreasing the work, changing test and analysis specification or acceleration in the performance of the work may be initiated by the Client after sample acceptance. Such a change will be documented in writing and may result in a change in cost and turnaround time commitment. CTL's acceptance of such changes is contingent upon technical feasibility and operational capacity.
- 3.3 Suspension or termination of all or any part of the work may be initiated by the Client. CTL will be compensated consistent with Section 2 of these Terms and Conditions. CTL will complete all work in progress and be paid in full for all work completed.

4. WARRANTIES AND LIABILITY

- 4.1 Where applicable, CTL will use analytical methodologies which are in substantial conformity with published test methods. CTL has implemented these methods in its Laboratory Quality Manuals and referenced Standard Operating Procedures and where the nature or composition of the sample requires it, CTL reserves the right to deviate from these methodologies as necessary or appropriate, based on the reasonable judgment of CTL, which deviations, if any, will be made on a basis consistent with recognized standards of the industry and/or CTL's Laboratory Quality Manuals. Client may request that CTL perform according to a mutually agreed Quality Assurance Project Plan (QAPP). In the event that samples arrive prior to agreement on a QAPP, CTL will proceed with analyses under its standard Quality Manuals then in effect, and CTL will not be responsible for any resampling or other charges if work must be repeated to comply with a subsequently finalized QAPP.
- 4.2 CTL shall start preparation and/or analysis within holding times provided that Sample Acceptance occurs within 48 hours of sampling or 1/2 of the holding time for the test, whichever is less. Samples received that do not meet this provision will be charged as expedited samples and the appropriate rate will be added accordingly. Where resolution of inconsistencies leading to Sample Acceptance does not occur within this period, CTL will use its best efforts to meet holding times and will proceed with the work provided that, in CTL's judgment, the chain-of-custody or definition of the Scope of Work provide sufficient guidance. Reanalysis of samples to comply with CTL's Quality Manuals will be deemed to have met holding times provided the initial analysis was performed within the applicable holding time. Where reanalysis demonstrates that sample matrix interference is the cause of failure to meet any Quality Manual requirements, the warranty will be deemed to have been met.
- 4.3 CTL warrants that it possesses and maintains all licenses and certifications which are required to perform services under these Terms and Conditions provided that such requirements are specified in writing to CTL prior to Sample Acceptance. CTL will notify the Client in writing of any decertification or revocation of any license, or notice of either, which affects work in progress.
- 4.4 The warranty obligations set forth in Sections 4.1, 4.2 and 4.3 are the sole and exclusive warranties given by CTL in connection with any services performed by CTL or any Results generated from such services, and CTL gives and makes NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. No representative of CTL is authorized to give or make any other representation or warranty or modify this warranty in any way.
- 4.5 Client's sole and exclusive remedy for the breach of warranty in connection with any services performed by CTL, will be limited to repeating any services performed, contingent on the Client's providing, at the request of CTL and at the Client's expense, additional sample(s) if necessary. Any reanalysis requested by the Client generating Results consistent with the original Results will be at the Client's expense. If resampling is necessary, CTL's liability for resampling costs will be limited to actual cost or one hundred or one hundred fifty dollars (\$150) per sample, whichever is less.
- 4.6 CTL's liability for any and all causes of action arising hereunder, whether based in contract, tort, warranty, negligence or otherwise, shall be limited to the lesser amount of compensation for the services performed or \$100,000. All claims, including those for negligence, shall be deemed waived unless suit thereon is filed within one year after CTL's completion of the services. Under no circumstances, whether arising in contract, tort (including negligence), or otherwise, shall CTL be responsible for loss of use, loss of profits, or for any special, indirect, incidental or consequential damages occasioned by the services performed or by application or use of the reports prepared.
- 4.7 In no event shall CTL have any responsibility or liability to the Client for any failure or delay in performance by CTL which results, directly or indirectly, in whole or in part, from any cause or circumstance beyond the reasonable control of CTL. Such causes and circumstances shall include, but not be limited to, acts of God, acts of Client, acts or orders of any governmental authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, equipment breakdown, matrix interference or unknown highly contaminated samples that impact instrument operation, unavailability of supplies from usual suppliers, difficulties or delays in transportation, mail or delivery services, or any other cause beyond CTL's reasonable control.

5. RESULTS, WORK PRODUCT

- 5.1 Data or information provided to CTL or generated by services performed under this agreement shall only become the property of the Client upon receipt in full by CTL of payment for the whole Order. Ownership of any analytical method, QA/QC protocols, software programs or equipment developed by CTL for performance of work will be retained by CTL, and Client shall not disclose such information to any third party.
- 5.2 Data and sample materials provided by Client or at Client's request, and the result obtained by CTL shall be held in confidence (unless such information is generally available to the public or is in the public domain or Client has failed to pay CTL for all services rendered or is otherwise in breach of these Terms and Conditions), subject to any disclosure required by law or legal process.
- 5.3 Should the Results delivered by CTL be used by the Client or Client's client, even though subsequently determined not to meet the warranties described in these Terms and Conditions, then the compensation will be adjusted based upon mutual agreement. In no case shall the Client unreasonably withhold CTL's right to independently defend its data.
- 5.4 CTL reserves the right to subcontract services ordered by the Client to another laboratory or laboratories, if, in CTL's sole judgment, it is reasonably necessary, appropriate or advisable to do so, and with the Client's permission. CTL will in no way be liable for any subcontracted services and all applicable warranties, guarantees and insurance are those of the subcontracted laboratory.
- 5.5 CTL shall dispose of the Client's samples and extracts 30 days after the analytical report is issued, unless instructed to store them for an alternate period of time or to return such samples to the Client, in a manner consistent with U.S. Environmental Protection Agency regulations or other applicable Federal, state or local requirements. Additional charges will apply for samples or extracts stored longer than 30 days at the Client's request. Any samples for projects that are canceled or not accepted, or for which return was requested, will be returned to the Client at Client expense. CTL reserves the right to return to the Client any sample or unused portion of a sample that is not within CTL's permitted capability or the capabilities of CTL's designated waste disposal vendor(s), or will make arrangements to dispose of these samples at Client direction and expense.
- 5.6 Unless a different time period is agreed to in any order under these Terms and Conditions, CTL agrees to retain all records for five (5) years.
- 5.7 In the event that CTL is required to respond to legal process related to services for Client, Client agrees to reimburse CTL for hourly charges for personnel involved in the response and attorney fees reasonably incurred in obtaining advice concerning the response, preparation to testify, and appearances related to the legal process, travel and all reasonable expenses associated with the litigation.

6. INSURANCE

6.1 CTL shall maintain in force during the performance of services under these Terms and Conditions, Workers' Compensation and Employer's Liability Insurance in accordance with the laws of the states having jurisdiction over CTL's employees who are engaged in the performance of the work. CTL shall also maintain during such period, Comprehensive General and Contractual Liability (limit of \$2,000,000 per occurrence/ aggregate), Comprehensive Automobile Liability, owned and hired, (\$1,000,000 combined single limit), and Professional/Pollution Liability Insurance (limit of \$5,000,000 per occurrence/aggregate). Any Client required changes to these limits or conditions will result in a change in cost to the Client.

7. AUDIT

7.1 Upon prior notice to CTL, the Client may audit and inspect CTL's records and accounts covering reimbursable costs related to work done for the Client, for a period of one (1) year after completion of the work. The purpose of any such audit shall be only for verification of such costs, and CTL shall not be required to provide access to cost records where prices are expressed as fixed fees or published unit prices.

Ice Present YES NO
Temperature 26
IR Gun # 19
Initials R
Date 5/11/18 Time 1000
Cooler #: 6076

Cooler Receipt Form

ORIGIN ID: HNBA (317) 797-2420
LUCAS STAMPS
TETRA TECH
1811 EXECUTIVE DR
SUITE R
INDIANAPOLIS, IN 46241
UNITED STATES US

SHIP DATE: 10MAY18
ACTWGT: 12.00 LB
CAD: 102185950/NET3980
DIMS: 13x12x12 IN
BILL SENDER

TO RECEIVING
CT LABORATORIES
1230 LANGE CT

BARABOO WI 53913

(608) 356-2760
INV:
PO:

REF: 103X90260001S051712001.004AC

DEPT:



552.12/782810C45

FRI - 11 MAY 3:00P

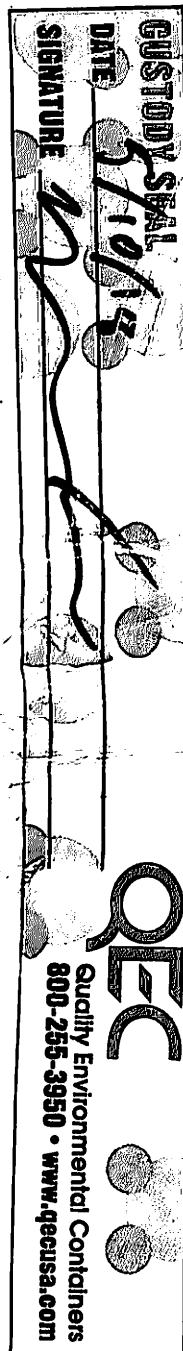
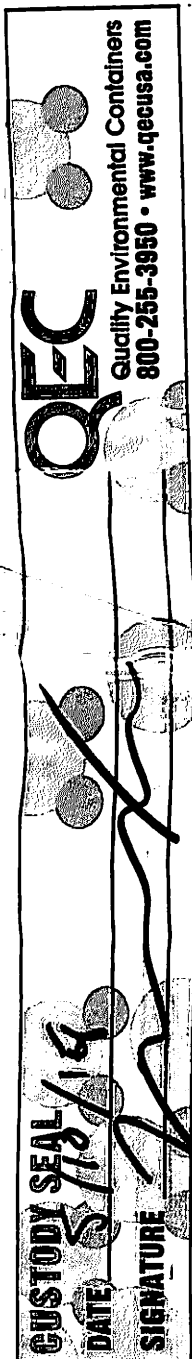
STANDARD OVERNIGHT

TRK# 7721 9872 1431
0201

NA MSNA

53913

WI-US MSN





ANALYTICAL REPORT

This report at a minimum contains the following information:

- Analytical Report of Test Results
- Description of QC Qualifiers
- Chain of Custody (copy)
- Quality Control Summary
- Case Narrative (if applicable)
- Correspondence with Client (if applicable)

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for parameters where accreditation is required or available, unless otherwise noted in the case narrative.



ANALYTICAL REPORT

TETRA TECH
 LUCAS STAMPS
 1811 EXECUTIVE DR.
 SUITE R
 INDIANAPOLIS, IN 46241

Project Name: INDIANA BATTERY CO
 Project Phase: INDIANAPOLIS. IN
 Contract #: 3019
 Project #: 103X90260001S051712001
 Folder #: 136111
 Purchase Order #: 1144695 / CT-13

Page 1 of 5
 Arrival Temperature: 1.3
 Report Date: 05/31/2018
 Date Received: 05/12/2018
 Reprint Date: 05/31/2018

CT LAB#: 119238

Sample Description: IBC-OU3-W04-180510

Client Sample #:

Sampled: 05/10/2018 1145

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	89.2	%	0.1	0.1	0.1	0.1	1.00			5/17/18 15:12	BMM	EPA 8000C
Metals Results												
Aluminum	5480	mg/kg	0.22	0.66	1.3	1.3	5.00	M	05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Antimony	0.80	mg/kg	0.71	2.2	4.4	4.4	5.00	J V	05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Arsenic	5.6	mg/kg	0.71	2.2	4.4	4.4	5.00		05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Barium	56.9	mg/kg	0.049	0.14	0.27	0.27	5.00	Y	05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Beryllium	0.21	mg/kg	0.022	0.066	0.22	0.22	5.00	J V	05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Cadmium	<0.033	mg/kg	0.033	0.11	0.22	0.22	5.00	U V	05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Calcium	57700	mg/kg	1.3	3.8	7.7	7.7	5.00	M	05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Chromium	13.9	mg/kg	0.13	0.38	0.77	0.77	5.00		05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Cobalt	5.5	mg/kg	0.22	0.66	1.3	1.3	5.00		05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Copper	37.1	mg/kg	0.38	1.1	2.2	2.2	5.00	M	05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Iron	13900	mg/kg	1.6	4.9	9.9	9.9	5.00	M	05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Lead	431	mg/kg	0.22	0.69	1.4	1.4	5.00	Y,M	05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Magnesium	21300	mg/kg	0.77	2.2	4.4	4.4	5.00	M	05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Manganese	442	mg/kg	0.14	0.41	0.82	0.82	5.00	M	05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 119238	Sample Description: IBC-OU3-W04-180510	Client Sample #:	Sampled: 05/10/2018 1145
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Nickel	23.1	mg/kg	0.12	0.33	0.66	0.66	5.00		05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Selenium	0.50	mg/kg	0.33	1.1	2.2	2.2	5.00	J V	05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Silver	0.36	mg/kg	0.093	0.27	0.55	0.55	5.00	J V	05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Thallium	<0.44	mg/kg	0.44	1.3	2.6	2.6	5.00	U V	05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Vanadium	15.5	mg/kg	0.066	0.22	0.44	0.44	5.00		05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Zinc	117	mg/kg	0.27	0.82	1.6	1.6	5.00	M	05/17/2018 12:33	5/21/18 19:13	NAH	EPA 6010C ^
Potassium	637	mg/kg	12	36	73	73	1.00		05/17/2018 12:33	5/23/18 11:06	MDS	EPA 6010C ^
Sodium	84.4	mg/kg	4.4	13	26	26	1.00		05/17/2018 12:33	5/23/18 11:06	MDS	EPA 6010C ^
Mercury	0.046	mg/kg	0.0024	0.0047	0.0093	0.0093	1.00		05/16/2018 10:00	5/17/18 09:57	LJF	EPA 7471B ^

CT LAB#: 119239	Sample Description: IBC-OU3-W06-180510	Client Sample #:	Sampled: 05/10/2018 1155
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	88.2	%	0.1	0.1	0.1	0.1	1.00			5/17/18 15:12	BMM	EPA 8000C
Metals Results												
Aluminum	5610	mg/kg	0.24	0.71	1.4	1.4	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Antimony	1.5	mg/kg	0.77	2.4	4.7	4.7	5.00	J V	05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Arsenic	8.1	mg/kg	0.77	2.4	4.7	4.7	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Barium	69.7	mg/kg	0.053	0.15	0.30	0.30	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Beryllium	0.27	mg/kg	0.024	0.071	0.24	0.24	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Cadmium	<0.035	mg/kg	0.035	0.12	0.24	0.24	5.00	U V	05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Calcium	55700	mg/kg	1.4	4.1	8.3	8.3	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Chromium	21.3	mg/kg	0.14	0.41	0.83	0.83	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Cobalt	6.3	mg/kg	0.24	0.71	1.4	1.4	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Copper	41.0	mg/kg	0.41	1.2	2.4	2.4	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 119239	Sample Description: IBC-OU3-W06-180510	Client Sample #:	Sampled: 05/10/2018 1155
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Iron	12500	mg/kg	1.8	5.3	11	11	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Lead	108	mg/kg	0.24	0.74	1.5	1.5	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Magnesium	23200	mg/kg	0.83	2.4	4.7	4.7	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Manganese	480	mg/kg	0.15	0.44	0.89	0.89	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Nickel	23.6	mg/kg	0.12	0.35	0.71	0.71	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Selenium	4.1	mg/kg	0.35	1.2	2.4	2.4	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Silver	1.1	mg/kg	0.10	0.30	0.59	0.59	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Thallium	2.4	mg/kg	0.47	1.4	2.8	2.8	5.00	J V	05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Vanadium	16.1	mg/kg	0.071	0.24	0.47	0.47	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Zinc	116	mg/kg	0.30	0.89	1.8	1.8	5.00		05/17/2018 12:33	5/21/18 20:18	NAH	EPA 6010C ^
Potassium	529	mg/kg	13	39	78	78	1.00		05/17/2018 12:33	5/23/18 11:25	MDS	EPA 6010C ^
Sodium	79.1	mg/kg	4.7	14	28	28	1.00		05/17/2018 12:33	5/23/18 11:25	MDS	EPA 6010C ^
Mercury	0.052	mg/kg	0.0025	0.0049	0.0097	0.0097	1.00		05/16/2018 10:00	5/17/18 10:11	LJF	EPA 7471B ^

CT LAB#: 119240	Sample Description: IBC-OU3-W06-180510-D	Client Sample #:	Sampled: 05/10/2018 1155
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

Solids, Percent	88.8	%	0.1	0.1	0.1	0.1	1.00			5/17/18 15:12	BMM	EPA 8000C
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Metals Results

Aluminum	6190	mg/kg	0.23	0.69	1.4	1.4	5.00		05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Antimony	0.89	mg/kg	0.75	2.3	4.6	4.6	5.00	J V	05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Arsenic	5.1	mg/kg	0.75	2.3	4.6	4.6	5.00		05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Barium	72.3	mg/kg	0.052	0.14	0.29	0.29	5.00		05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Beryllium	0.22	mg/kg	0.023	0.069	0.23	0.23	5.00	J V	05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Cadmium	0.062	mg/kg	0.034	0.11	0.23	0.23	5.00	J V	05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 119240

Sample Description: IBC-OU3-W06-180510-D

Client Sample #:

Sampled: 05/10/2018 1155

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Calcium	66100	mg/kg	1.4	4.0	8.0	8.0	5.00		05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Chromium	22.0	mg/kg	0.13	0.40	0.80	0.80	5.00		05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Cobalt	6.1	mg/kg	0.23	0.69	1.4	1.4	5.00		05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Copper	43.7	mg/kg	0.40	1.1	2.3	2.3	5.00		05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Iron	13500	mg/kg	1.7	5.2	10	10	5.00		05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Lead	92.2	mg/kg	0.23	0.72	1.4	1.4	5.00		05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Magnesium	27100	mg/kg	0.80	2.3	4.6	4.6	5.00		05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Manganese	520	mg/kg	0.14	0.43	0.86	0.86	5.00		05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Nickel	24.8	mg/kg	0.12	0.34	0.69	0.69	5.00		05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Selenium	0.99	mg/kg	0.34	1.1	2.3	2.3	5.00	J V	05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Silver	0.92	mg/kg	0.098	0.29	0.57	0.57	5.00		05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Thallium	<0.46	mg/kg	0.46	1.4	2.8	2.8	5.00	U V	05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Vanadium	16.8	mg/kg	0.069	0.23	0.46	0.46	5.00		05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Zinc	137	mg/kg	0.29	0.86	1.7	1.7	5.00		05/17/2018 12:33	5/21/18 20:26	NAH	EPA 6010C ^
Potassium	534	mg/kg	13	38	76	76	1.00		05/17/2018 12:33	5/23/18 11:29	MDS	EPA 6010C ^
Sodium	88.2	mg/kg	4.6	14	28	28	1.00		05/17/2018 12:33	5/23/18 11:29	MDS	EPA 6010C ^
Mercury	0.055	mg/kg	0.0024	0.0047	0.0093	0.0093	1.00		05/16/2018 10:00	5/17/18 10:13	LJF	EPA 7471B ^

Notes:

^ Indicates the laboratory is NELAP accredited for this analyte by the indicated matrix and method. DL (detection limit), LOD (limit of detection), loq (limit of quantitation) as defined by most recent DOD QSM version.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for the parameters where accreditation is required or available, unless noted in the case narrative.

Submitted by: Brett M. Szymanski
Project Manager
608-356-2760

QC Qualifiers		Current CT Laboratories Certifications
Code	Description	
B	Analyte detected in the associated Method Blank.	Wisconsin (WDNR) Chemistry ID# 157066030 Wisconsin (DATCP) Bacteriology ID# 105-289 Louisiana NELAP (primary) ID# ACC20160002 Illinois NELAP Lab ID# 200073 Kansas NELAP Lab ID# E-10368 Virginia NELAP Lab ID# 460203 Maryland Lab ID# WI00061 ISO/IEC 17025-2005 A2LA Cert # 3806.01 DoD-ELAP A2LA 3806.01 GA EPD Stipulation ID ACC20160002
C	Toxicity present in BOD sample.	
D	Diluted Out.	
E	Safe, No Total Coliform detected.	
F	Unsafe, Total Coliform detected, no E. Coli detected.	
G	Unsafe, Total Coliform detected and E. Coli detected.	
H	Holding time exceeded.	
I	BOD incubator temperature was outside acceptance limits during test period.	
J	Estimated value.	
L	Significant peaks were detected outside the chromatographic window.	
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.	
N	Insufficient BOD oxygen depletion.	
O	Complete BOD oxygen depletion.	
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.	
Q	Laboratory Control Sample outside acceptance limits.	
R	See Narrative at end of report.	
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.	
T	Sample received with improper preservation or temperature.	
U	Analyte concentration was below detection limit.	
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.	
W	Sample amount received was below program minimum.	
X	Analyte exceeded calibration range.	
Y	Replicate/Duplicate precision outside acceptance limits.	
Z	Specified calibration criteria was not met.	

QC SUMMARY REPORT

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	149088	Analysis Date:	05/17/2018	Prep Batch #:	Matrix:	SOIL
CTLab #:	122937	Analysis Time:	15:12	Prep Date/Time:	Method:	SW8000C
Parent Sample #:	119238	Analyst:	BMM	Prep Analyst:		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Solids, Percent	89.5	%	89.2					0	8

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	149213	Analysis Date:	05/17/2018	Prep Batch #:	66957	Matrix:	SOIL
CTLab #:	119991	Analysis Time:	09:59	Prep Date/Time:	05/16/2018 10:00	Method:	SW7471B
Parent Sample #:	119238	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.048	mg/kg	0.046				0.20	4	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Lab Control Spike Soil

Analytical Run #:	149213	Analysis Date:	05/17/2018	Prep Batch #:	66957	Matrix:	SOLID
CTLab #:	119990	Analysis Time:	11:03	Prep Date/Time:	05/16/2018 10:00	Method:	SW7471B
Parent Sample #:		Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.087	mg/kg			0.083	105	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	149213	Analysis Date:	05/17/2018	Prep Batch #:	66957	Matrix:	SOLID
CTLab #:	119989	Analysis Time:	09:55	Prep Date/Time:	05/16/2018 10:00	Method:	SW7471B
Parent Sample #:		Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.0021	mg/kg		U	0		00415		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Matrix Spike Duplicate Soil

Analytical Run #:	149213	Analysis Date:	05/17/2018	Prep Batch #:	66957	Matrix:	SOIL
CTLab #:	119993	Analysis Time:	10:09	Prep Date/Time:	05/16/2018 10:00	Method:	SW7471B
Parent Sample #:	119992	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.12	mg/kg	0.046		0.093	80	80 --- 120	17	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Matrix Spike Soil

Analytical Run #:	149213	Analysis Date:	05/17/2018	Prep Batch #:	66957	Matrix:	SOIL
CTLab #:	119992	Analysis Time:	10:06	Prep Date/Time:	05/16/2018 10:00	Method:	SW7471B
Parent Sample #:	119238	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.15	mg/kg	0.046		0.098	106	80 --- 120		

Duplicate

Analytical Run #:	149288	Analysis Date:	05/21/2018	Prep Batch #:	66989	Matrix:	SOIL
CTLab #:	121230	Analysis Time:	19:28	Prep Date/Time:	05/17/2018 12:33	Method:	SW6010
Parent Sample #:	119238	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	6140	mg/kg	5480				9.6	11	20
Antimony	0.89	mg/kg	0.80				32	11	20
Arsenic	5.4	mg/kg	5.6				32	4	20
Barium	71.0	mg/kg	56.9				2.0	22	20
Beryllium	0.21	mg/kg	0.21				1.60	0	20
Cadmium	0.56	mg/kg	<0.0330				1.60	200	20
Calcium	56300	mg/kg	57700				56	2	20
Chromium	15.1	mg/kg	13.9				5.6	8	20
Cobalt	6.1	mg/kg	5.5				9.6	10	20
Copper	40.8	mg/kg	37.1				16.0	9	20
Iron	13600	mg/kg	13900				72	2	20
Lead	103	mg/kg	431				10.0	123	20
Magnesium	23800	mg/kg	21300				32	11	20
Manganese	474	mg/kg	442				6.0	7	20
Nickel	27.2	mg/kg	23.1				4.8	16	20
Selenium	0.82	mg/kg	0.50				16	48	20
Silver	0.41	mg/kg	0.36				4.0	13	20
Thallium	0.440	mg/kg	<0.440 U				19	0	20
Vanadium	16.8	mg/kg	15.5				3.2	8	20
Zinc	126	mg/kg	117				12.0	7	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Lab Control Spike Soil

Analytical Run #:	149288	Analysis Date:	05/21/2018	Prep Batch #:	66989	Matrix:	SOLID
CTLab #:	121228	Analysis Time:	18:58	Prep Date/Time:	05/17/2018 12:33	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	99.0	mg/kg			100	99	80 --- 120		
Antimony	26.0	mg/kg			25.0	104	80 --- 120		
Arsenic	97.0	mg/kg			100	97	80 --- 120		
Barium	105	mg/kg			100	105	80 --- 120		
Beryllium	2.5	mg/kg			2.5	100	80 --- 120		
Cadmium	2.3	mg/kg			2.5	92	80 --- 120		
Calcium	4450	mg/kg			5000	89	80 --- 120		
Chromium	10.1	mg/kg			10.0	101	80 --- 120		
Cobalt	25.5	mg/kg			25.0	102	80 --- 120		
Copper	12.2	mg/kg			12.5	98	80 --- 120		
Iron	52.5	mg/kg			50.0	105	80 --- 120		
Lead	23.2	mg/kg			25.0	93	80 --- 120		
Magnesium	2400	mg/kg			2500	96	80 --- 120		
Manganese	22.7	mg/kg			25.0	91	80 --- 120		
Nickel	23.1	mg/kg			25.0	92	80 --- 120		
Selenium	97.0	mg/kg			100	97	80 --- 120		
Silver	2.5	mg/kg			2.5	100	75 --- 120		
Thallium	90.8	mg/kg			100	91	80 --- 120		
Vanadium	26.0	mg/kg			25.0	104	80 --- 120		
Zinc	24.8	mg/kg			25.0	99	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	149288	Analysis Date:	05/21/2018	Prep Batch #:	66989	Matrix:	SOLID
CTLab #:	121227	Analysis Time:	19:06	Prep Date/Time:	05/17/2018 12:33	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	0.04	mg/kg		U	0		0.12		
Antimony	0.13	mg/kg		U	0		0.40		
Arsenic	0.13	mg/kg		U	0		0.40		
Barium	0.009	mg/kg		U	0		0.025		
Beryllium	0.004	mg/kg		U	0		0.020		
Cadmium	0.006	mg/kg		U	0		0.020		
Calcium	0.24	mg/kg		U	0		0.70		
Chromium	0.023	mg/kg		U	0		0.125		
Cobalt	0.04	mg/kg		U	0		0.12		
Copper	0.07	mg/kg		U	0		0.20		
Iron	0.3	mg/kg		U	0		0.9		
Lead	0.04	mg/kg		U	0		0.125		
Magnesium	0.14	mg/kg		U	0		0.40		
Manganese	0.025	mg/kg		U	0		0.075		
Nickel	0.021	mg/kg		U	0		0.060		
Selenium	0.06	mg/kg		U	0		0.20		
Silver	0.017	mg/kg		U	0		0.050		
Thallium	0.08	mg/kg		U	0		0.24		
Vanadium	0.012	mg/kg		U	0		0.040		
Zinc	0.05	mg/kg		U	0		0.15		

Matrix Spike Duplicate Soil

Analytical Run #:	149288	Analysis Date:	05/21/2018	Prep Batch #:	66989	Matrix:	SOIL
CTLab #:	121232	Analysis Time:	20:04	Prep Date/Time:	05/17/2018 12:33	Method:	SW6010
Parent Sample #:	121231	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	6100	mg/kg	5480		110	564	80 --- 120	14	20
Antimony	12.1	mg/kg	0.80		27.6	41	80 --- 120	1	20
Arsenic	137	mg/kg	5.6		110	119	80 --- 120	2	20
Barium	218	mg/kg	56.9		110	146	80 --- 120	5	20
Beryllium	3.7	mg/kg	0.21		2.8	125	80 --- 120	5	20
Cadmium	4.0	mg/kg	BDL		2.8	143	80 --- 120	9	20
Calcium	66700	mg/kg	57700		5520	163	80 --- 120	6	20
Chromium	29.5	mg/kg	13.9		11.0	142	80 --- 120	11	20
Cobalt	39.6	mg/kg	5.5		27.6	124	80 --- 120	4	20
Copper	58.3	mg/kg	37.1		13.8	154	80 --- 120	1	20
Iron	12400	mg/kg	13900		55.2	0	80 --- 120	11	20
Lead	124	mg/kg	431		27.6	0	80 --- 120	2	20
Magnesium	29300	mg/kg	21300		2760	290	80 --- 120	2	20
Manganese	497	mg/kg	442		27.6	199	80 --- 120	48	20
Nickel	54.9	mg/kg	23.1		27.6	115	80 --- 120	1	20
Selenium	126	mg/kg	0.50		110	114	80 --- 120	0	20
Silver	4.0	mg/kg	0.36		2.8	130	75 --- 125	4	20
Thallium	121	mg/kg	BDL		110	110	80 --- 120	5	20
Vanadium	50.9	mg/kg	15.5		27.6	128	80 --- 120	14	20
Zinc	149	mg/kg	117		27.6	116	80 --- 120	1	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Matrix Spike Soil

Analytical Run #:	149288	Analysis Date:	05/21/2018	Prep Batch #:	66989	Matrix:	SOIL
CTLab #:	121231	Analysis Time:	19:35	Prep Date/Time:	05/17/2018 12:33	Method:	SW6010
Parent Sample #:	119238	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	6990	mg/kg	5480		110	1373	80 --- 120		
Antimony	12.0	mg/kg	0.80		27.6	41	80 --- 120		
Arsenic	134	mg/kg	5.6		110	117	80 --- 120		
Barium	208	mg/kg	56.9		110	137	80 --- 120		
Beryllium	3.5	mg/kg	0.21		2.8	118	80 --- 120		
Cadmium	3.7	mg/kg	BDL		2.8	132	80 --- 120		
Calcium	70700	mg/kg	57700		5520	236	80 --- 120		
Chromium	33.1	mg/kg	13.9		11.0	175	80 --- 120		
Cobalt	38.0	mg/kg	5.5		27.6	118	80 --- 120		
Copper	57.8	mg/kg	37.1		13.8	150	80 --- 120		
Iron	13800	mg/kg	13900		55.2	0	80 --- 120		
Lead	121	mg/kg	431		27.6	0	80 --- 120		
Magnesium	28600	mg/kg	21300		2760	264	80 --- 120		
Manganese	810	mg/kg	442		27.6	1333	80 --- 120		
Nickel	54.4	mg/kg	23.1		27.6	113	80 --- 120		
Selenium	126	mg/kg	0.50		110	114	80 --- 120		
Silver	3.9	mg/kg	0.36		2.8	126	75 --- 125		
Thallium	115	mg/kg	BDL		110	105	80 --- 120		
Vanadium	58.8	mg/kg	15.5		27.6	157	80 --- 120		
Zinc	150	mg/kg	117		27.6	120	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	149289	Analysis Date:	05/23/2018	Prep Batch #:	66989	Matrix:	SOIL
CTLab #:	121230	Analysis Time:	11:12	Prep Date/Time:	05/17/2018 12:33	Method:	SW6010
Parent Sample #:	119238	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	662	mg/kg	637				2.64	4	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	149289	Analysis Date:	05/23/2018	Prep Batch #:	66989	Matrix:	SOIL
CTLab #:	121230	Analysis Time:	11:12	Prep Date/Time:	05/17/2018 12:33	Method:	SW6010
Parent Sample #:	119238	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	86.8	mg/kg	84.4				0.96	3	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Lab Control Spike Soil

Analytical Run #:	149289	Analysis Date:	05/23/2018	Prep Batch #:	66989	Matrix:	SOLID
CTLab #:	121228	Analysis Time:	11:00	Prep Date/Time:	05/17/2018 12:33	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	2440	mg/kg			2500	98	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Lab Control Spike Soil

Analytical Run #:	149289	Analysis Date:	05/23/2018	Prep Batch #:	66989	Matrix:	SOLID
CTLab #:	121228	Analysis Time:	11:00	Prep Date/Time:	05/17/2018 12:33	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	2340	mg/kg			2500	94	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	149289	Analysis Date:	05/23/2018	Prep Batch #:	66989	Matrix:	SOLID
CTLab #:	121227	Analysis Time:	11:03	Prep Date/Time:	05/17/2018 12:33	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	11	mg/kg		U	0		33		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	149289	Analysis Date:	05/23/2018	Prep Batch #:	66989	Matrix:	SOLID
CTLab #:	121227	Analysis Time:	11:03	Prep Date/Time:	05/17/2018 12:33	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	4	mg/kg		U	0		12		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Matrix Spike Duplicate Soil

Analytical Run #:	149289	Analysis Date:	05/23/2018	Prep Batch #:	66989	Matrix:	SOIL
CTLab #:	121232	Analysis Time:	11:19	Prep Date/Time:	05/17/2018 12:33	Method:	SW6010
Parent Sample #:	121231	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	3480	mg/kg	637		2760	103	80 --- 120	2	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Matrix Spike Duplicate Soil

Analytical Run #:	149289	Analysis Date:	05/23/2018	Prep Batch #:	66989	Matrix:	SOIL
CTLab #:	121232	Analysis Time:	11:19	Prep Date/Time:	05/17/2018 12:33	Method:	SW6010
Parent Sample #:	121231	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	2760	mg/kg	84.4		2760	97	80 --- 120	0	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Matrix Spike Soil

Analytical Run #:	149289	Analysis Date:	05/23/2018	Prep Batch #:	66989	Matrix:	SOIL
CTLab #:	121231	Analysis Time:	11:15	Prep Date/Time:	05/17/2018 12:33	Method:	SW6010
Parent Sample #:	119238	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	3530	mg/kg	637		2760	105	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136111

Project #: 103X90260001S051712001

Matrix Spike Soil

Analytical Run #:	149289	Analysis Date:	05/23/2018	Prep Batch #:	66989	Matrix:	SOIL
CTLab #:	121231	Analysis Time:	11:15	Prep Date/Time:	05/17/2018 12:33	Method:	SW6010
Parent Sample #:	119238	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	2750	mg/kg	84.4		2760	97	80 --- 120		

Sample Condition Report

Folder #: 136111
Client: TETRA TECH

Print Date / Time: 05/14/2018 07:55
Received Date / Time / By: 05/12/2018 11:30 DRT

Project Name: INDIANA BATTERY CO
Project Phase: INDIANAPOLIS. IN

Log-In Date / Time / By: 05/14/2018 07:55 BNA
Project #: 103X90260001S051712001 PM: BMS

Coolers: 6051
Custody Seals Present : Y

Temperature: 1.3 C On Ice: Y
COC Present?: Y Complete? Y

Seal Intact? Y
Ship Method: FEDEX EXPRESS
Adequate Packaging: Y

Numbers: SIGNED AND DATED
Tracking Number: 772203469945
Temp Blank Enclosed? Y

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 5/11/18 AND SIGNED.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
119238 IBC-OU3-W04-180510	UNPRES GL	1	/	%SOL,HG,ICP,K,NA
	UNPRES GL	1	/	%SOL,HG,ICP,K,NA
	Total # of Containers of Type (UNPRES GL) = 2			
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
119239 IBC-OU3-W06-180510	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	Total # of Containers of Type (SOLIDS) = 1			
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
119240 IBC-OU3-W06-180510-D	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	Total # of Containers of Type (SOLIDS) = 1			

Condition Code Condition Description
1 Sample Received OK

Report To: Lucas Stamps
EMAIL: lucas.stamps@tetrattech.com
Company: Tetra Tech
Address: 1811 Executive Dr Suite R
Indianapolis IN 46241

Invoice To: *
EMAIL: Same
Company:
Address:

***Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions**

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CT Laboratories Terms and Conditions

Where a purchaser (Client) places an order for laboratory, consulting or sampling services from CT Laboratories (CTL), CTL shall provide the ordered services pursuant to these Terms and Conditions, and the related Quotation, or as agreed in a negotiated contract. In the absence of a written agreement to the contrary, the Order constitutes an acceptance by the Client of CTL's offer to do business under these Terms and Conditions, and an agreement to be bound by these Terms and Conditions. No contrary or additional terms and conditions expressed in a Client's document shall be deemed to become a part of the contract created upon acceptance of these Terms and Conditions, unless accepted by CTL in advance of the start of the project and in writing.

1. ORDERS AND RECEIPT OF SAMPLES (Sample Acceptance Policy)

- 1.1 The Client may place the Order (i.e., specify a Scope of Work) either by submitting a purchase order to CTL in writing, by telephone (confirmed in writing) or by negotiated contract. Whichever option the Client selects for placing the Order, the Order shall not be valid unless it contains sufficient information to enable CTL to carry out the Client's requirements. It is the policy of CTL that samples not meeting the acceptance criteria, outlined in the NELAC standards and Section 5.8.3.2 of the DOD QSM, will not be accepted by the laboratory or will be qualified on the final report. All samples submitted to the laboratory must: (a) be accompanied by proper, full and complete documentation, including sample identification, location, date and time of collection, the collector's name, type of preservation (if any), type of sample, any special comments concerning the sample and any additional pertinent fields on the chain-of-custody. In the absence of any of the required information, the laboratory will attempt to contact the client to obtain the information; if unable to obtain the necessary information, the final report will be qualified. (b) samples must be labeled appropriately with a unique sample identification written with indelible ink on water resistant labels. If the laboratory cannot determine the identity of a sample, it may be rejected and the client will be contacted for further instructions or resampling. (c) samples must be in an appropriate sample container. If the container is inappropriate, the client will be contacted for further instructions or resampling. If analysis is possible, the final report will be qualified. CTL can provide a sampling guide containing approved containers and preservations for analytical methods requested. (d) adhere to method specified holding times. If samples are received with less than ½ the holding time remaining for the requested test, CTL will make its best effort to analyze the samples and notify the client. If holding times are exceeded, the final report will be qualified. (e) contain adequate sample volume to perform the necessary testing. If sufficient volume is not present, the sample may be rejected and the client will be contacted for further instructions or resampling. If samples show signs of damage, contamination or inadequate preservation, the client will be notified. If analysis can be performed, the final report will be qualified. If not, the samples will be rejected and the client notified for further instructions or resampling. It is the Client's responsibility to understand and package samples correctly and provide the proper amount of temperature control (ice) suitable to current weather conditions.
- 1.2 CTL must be supplied with complete written disclosure of the known or suspected presence of any hazardous substances, as defined by applicable federal or state law. Where any samples which were not accompanied by the required disclosure, cause interruptions in the lab's ability to process work due to contamination of instruments or work areas, the Client will be responsible for the costs of clean up and recovery.
- 1.3 Prior to Sample Acceptance, the entire risk of loss or damage to samples remains with the Client. In no event will CTL have any responsibility or liability for the action or inaction of any carrier shipping or delivering any sample to or from CTL's premises. Client is responsible to assure that any sample containing any hazardous substance which is to be delivered to CTL's premises will be packaged, labeled, transported and delivered properly and in accordance with applicable laws.
- 1.4 Clients using CTL's shipping account(s) do so at their own risk and must purchase separate insurance if they do not wish to assume risk of loss. CTL will not assume any risk whatsoever for any samples outside of CTL's control and not successfully delivered to the laboratory within specified hold times.
- 1.5 CTL will not accept liability for any sample(s), except sample(s) damaged or broken by log-in staff prior to successful log-in of the sample(s) into the CTL- LIMS system. This includes, but may not be limited to: complete, valid COC documentation, all sample receiving issues being resolved from a delay caused by the Client in CTL's ability to log-in samples, including missed turnaround and hold times, delay in processing and, ultimately, additional charges to the Client.
- 1.6 CTL will only reject samples per directions from the Client. CTL's sole liability is to inform the Client of any sample receipt issues, and may provide an Indication how proceeding with the analysis may affect results and final acceptance by the regulating agency. Ultimately, suitability for use is between the Client and the regulating agency(ies).
- 1.7 Signing of this COC by the Client or Client's representative, or directions to CTL via email or Fax constitutes acceptance of these Terms and Conditions, and guarantees payment by the Client to CTL.

2. PAYMENT TERMS

- 2.1 Services performed by CTL will be in accordance with prices quoted and later confirmed in writing or as stated in the Price Schedule. Invoices may be submitted to Client upon completion of any sample delivery group. Payment in advance is required for all Clients except those whose credit has been established with CTL. For Clients with approved credit, payment terms are net 30 days from the date of invoice by CTL. All overdue payments are subject to an additional interest and service charge of one and one-half percent (1.5%) or the maximum rate permissible by law, per month or portion thereof from the due date until the date of payment. All fees are charged or billed directly to the Client. The billing of a third party will not be accepted without a statement, signed by the third party that acknowledges and accepts payment responsibility. CTL may suspend work and withhold delivery of data under this order at any time in the event Client fails to make timely payment of its invoices. Client shall be responsible for all costs and expenses of collection including reasonable attorney's fees. CTL reserves the right to refuse to proceed with work at any time based upon an unfavorable Client credit report.

3. CHANGE ORDERS, TERMINATION

- 3.1 Changes to the Scope of Work, price, or result delivery date may be initiated by CTL after Sample Acceptance due to any condition which conflicts with analytical, QA or other protocols warranted in these Terms and Conditions. CTL will not proceed with such changes until an agreement with the Client is reached on the amount of any cost, schedule change or technical change to the Scope of Work, and such agreement is documented in writing.
- 3.2 Changes to the Scope of Work, including but not limited to increasing or decreasing the work, changing test and analysis specification or acceleration in the performance of the work may be initiated by the Client after sample acceptance. Such a change will be documented in writing and may result in a change in cost and turnaround time commitment. CTL's acceptance of such changes is contingent upon technical feasibility and operational capacity.
- 3.3 Suspension or termination of all or any part of the work may be initiated by the Client. CTL will be compensated consistent with Section 2 of these Terms and Conditions. CTL will complete all work in progress and be paid in full for all work completed.

4. WARRANTIES AND LIABILITY

- 4.1 Where applicable, CTL will use analytical methodologies which are in substantial conformity with published test methods. CTL has implemented these methods in its Laboratory Quality Manuals and referenced Standard Operating Procedures and where the nature or composition of the sample requires it, CTL reserves the right to deviate from these methodologies as necessary or appropriate, based on the reasonable judgment of CTL, which deviations, if any, will be made on a basis consistent with recognized standards of the industry and/or CTL's Laboratory Quality Manuals. Client may request that CTL perform according to a mutually agreed Quality Assurance Project Plan (QAPP). In the event that samples arrive prior to agreement on a QAPP, CTL will proceed with analyses under its standard Quality Manuals then in effect, and CTL will not be responsible for any resampling or other charges if work must be repeated to comply with a subsequently finalized QAPP.
- 4.2 CTL shall start preparation and/or analysis within holding times provided that Sample Acceptance occurs within 48 hours of sampling or 1/2 of the holding time for the test, whichever is less. Samples received that do not meet this provision will be charged as expedited samples and the appropriate rate will be added accordingly. Where resolution of inconsistencies leading to Sample Acceptance does not occur within this period, CTL will use its best efforts to meet holding times and will proceed with the work provided that, in CTL's judgment, the chain-of-custody or definition of the Scope of Work provide sufficient guidance. Reanalysis of samples to comply with CTL's Quality Manuals will be deemed to have met holding times provided the initial analysis was performed within the applicable holding time. Where reanalysis demonstrates that sample matrix interference is the cause of failure to meet any Quality Manual requirements, the warranty will be deemed to have been met.
- 4.3 CTL warrants that it possesses and maintains all licenses and certifications which are required to perform services under these Terms and Conditions provided that such requirements are specified in writing to CTL prior to Sample Acceptance. CTL will notify the Client in writing of any decertification or revocation of any license, or notice of either, which affects work in progress.
- 4.4 The warranty obligations set forth in Sections 4.1, 4.2 and 4.3 are the sole and exclusive warranties given by CTL in connection with any services performed by CTL or any Results generated from such services, and CTL gives and makes NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. No representative of CTL is authorized to give or make any other representation or warranty or modify this warranty in any way.
- 4.5 Client's sole and exclusive remedy for the breach of warranty in connection with any services performed by CTL, will be limited to repeating any services performed, contingent on the Client's providing, at the request of CTL and at the Client's expense, additional sample(s) if necessary. Any reanalysis requested by the Client generating Results consistent with the original Results will be at the Client's expense. If resampling is necessary, CTL's liability for resampling costs will be limited to actual cost or one hundred or one hundred fifty dollars (\$150) per sample, whichever is less.
- 4.6 CTL's liability for any and all causes of action arising hereunder, whether based in contract, tort, warranty, negligence or otherwise, shall be limited to the lesser amount of compensation for the services performed or \$100,000. All claims, including those for negligence, shall be deemed waived unless suit thereon is filed within one year after CTL's completion of the services. Under no circumstances, whether arising in contract, tort (including negligence), or otherwise, shall CTL be responsible for loss of use, loss of profits, or for any special, indirect, incidental or consequential damages occasioned by the services performed or by application or use of the reports prepared.
- 4.7 In no event shall CTL have any responsibility or liability to the Client for any failure or delay in performance by CTL which results, directly or indirectly, in whole or in part, from any cause or circumstance beyond the reasonable control of CTL. Such causes and circumstances shall include, but not be limited to, acts of God, acts of Client, acts or orders of any governmental authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, equipment breakdown, matrix interference or unknown highly contaminated samples that impact instrument operation, unavailability of supplies from usual suppliers, difficulties or delays in transportation, mail or delivery services, or any other cause beyond CTL's reasonable control.

5. RESULTS, WORK PRODUCT

- 5.1 Data or information provided to CTL or generated by services performed under this agreement shall only become the property of the Client upon receipt in full by CTL of payment for the whole Order. Ownership of any analytical method, QA/QC protocols, software programs or equipment developed by CTL for performance of work will be retained by CTL, and Client shall not disclose such information to any third party.
- 5.2 Data and sample materials provided by Client or at Client's request, and the result obtained by CTL shall be held in confidence (unless such information is generally available to the public or is in the public domain or Client has failed to pay CTL for all services rendered or is otherwise in breach of these Terms and Conditions), subject to any disclosure required by law or legal process.
- 5.3 Should the Results delivered by CTL be used by the Client or Client's client, even though subsequently determined not to meet the warranties described in these Terms and Conditions, then the compensation will be adjusted based upon mutual agreement. In no case shall the Client unreasonably withhold CTL's right to independently defend its data.
- 5.4 CTL reserves the right to subcontract services ordered by the Client to another laboratory or laboratories, if, in CTL's sole judgment, it is reasonably necessary, appropriate or advisable to do so, and with the Client's permission. CTL will in no way be liable for any subcontracted services and all applicable warranties, guarantees and insurance are those of the subcontracted laboratory.
- 5.5 CTL shall dispose of the Client's samples and extracts 30 days after the analytical report is issued, unless instructed to store them for an alternate period of time or to return such samples to the Client, in a manner consistent with U.S. Environmental Protection Agency regulations or other applicable Federal, state or local requirements. Additional charges will apply for samples or extracts stored longer than 30 days at the Client's request. Any samples for projects that are canceled or not accepted, or for which return was requested, will be returned to the Client at Client expense. CTL reserves the right to return to the Client any sample or unused portion of a sample that is not within CTL's permitted capability or the capabilities of CTL's designated waste disposal vendor(s), or will make arrangements to dispose of these samples at Client direction and expense.
- 5.6 Unless a different time period is agreed to in any order under these Terms and Conditions, CTL agrees to retain all records for five (5) years.
- 5.7 In the event that CTL is required to respond to legal process related to services for Client, Client agrees to reimburse CTL for hourly charges for personnel involved in the response and attorney fees reasonably incurred in obtaining advice concerning the response, preparation to testify, and appearances related to the legal process, travel and all reasonable expenses associated with the litigation.

6. INSURANCE

- 6.1 CTL shall maintain in force during the performance of services under these Terms and Conditions, Workers' Compensation and Employer's Liability Insurance in accordance with the laws of the states having jurisdiction over CTL's employees who are engaged in the performance of the work. CTL shall also maintain during such period, Comprehensive General and Contractual Liability (limit of \$2,000,000 per occurrence/ aggregate), Comprehensive Automobile Liability, owned and hired, (\$1,000,000 combined single limit), and Professional/Pollution Liability Insurance (limit of \$5,000,000 per occurrence/aggregate). Any Client required changes to these limits or conditions will result in a change in cost to the Client.

7. AUDIT

- 7.1 Upon prior notice to CTL, the Client may audit and inspect CTL's records and accounts covering reimbursable costs related to work done for the Client, for a period of one (1) year after completion of the work. The purpose of any such audit shall be only for verification of such costs, and CTL shall not be required to provide access to cost records where prices are expressed as fixed fees or published unit prices.

Ice Present YES NO
Temperature 13
IR Gun # 24
Initials R
Date 5/12/18 Time 1130
Cooler #: 6051

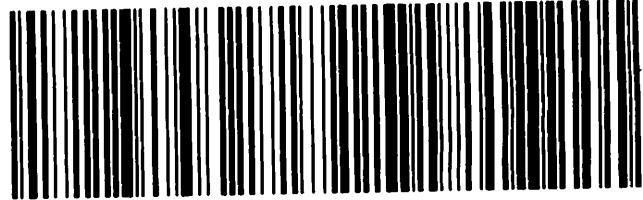
Cooler Receipt Form

FedEx
TRK# 7722 0346 9945
0201

SATURDAY 12:00P
PRIORITY OVERNIGHT

XO MSNA

53913
WI-US MSN



ORIGIN ID: HNBA (317) 797-2420
LUCAS STAMPS
TETRA TECH
1811 EXECUTIVE DR
SUITE R
INDIANAPOLIS, IN 46241
UNITED STATES US

SHIP DATE: 11MAY18
ACTWGT: 12.00 LB
CAD: 102185950/NET3980
DIMS: 12x12x14 IN
BILL SENDER

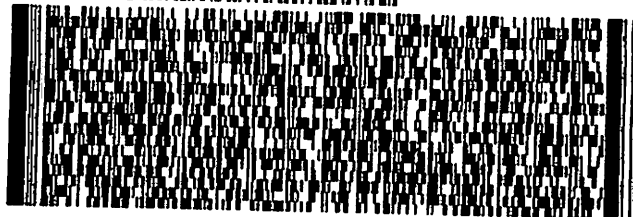
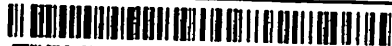
TO **RECEIVING**
CT LABORATORIES
1230 LANGE CT

BARABOO WI 53913

(608) 356-2760
INV:
PO:

REF: 103X90260001S051712001.004AC

DEPT:



SATURDAY 12:00P
PRIORITY OVERNIGHT

TRK# 7722 0346 9945
0201

XO MSNA

53913
WI-US MSN



ANALYTICAL REPORT

This report at a minimum contains the following information:

- Analytical Report of Test Results
- Description of QC Qualifiers
- Chain of Custody (copy)
- Quality Control Summary
- Case Narrative (if applicable)
- Correspondence with Client (if applicable)

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for parameters where accreditation is required or available, unless otherwise noted in the case narrative.



ANALYTICAL REPORT

TETRA TECH
 LUCAS STAMPS
 1811 EXECUTIVE DR.
 SUITE R
 INDIANAPOLIS, IN 46241

Project Name: INDIANA BATTERY CO
 Project Phase: INDIANAPOLIS, IN
 Contract #: 3019
 Project #: 103X90260001S051712001
 Folder #: 136894
 Purchase Order #: 1144695 / CT-13

Page 1 of 16
 Arrival Temperature: 2.1
 Report Date: 06/29/2018
 Date Received: 06/12/2018
 Reprint Date: 06/29/2018

CT LAB#: 133522 Sample Description: IBC-OU3-W05-BOE-180521 Client Sample #: Sampled: 05/21/2018 1345

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	94.3	%	0.1	0.1	0.1	0.1	1.00			6/14/18 10:45 BMM	EPA 8000C	
Metals Results												
Aluminum	4990	mg/kg	0.042	0.13	0.25	0.25	1.00		06/13/2018 13:18	6/15/18 18:13 NAH	EPA 6010C	^
Antimony	0.41	mg/kg	0.14	0.42	0.84	0.84	1.00	J	06/13/2018 13:18	6/15/18 18:13 NAH	EPA 6010C	^
Arsenic	4.5	mg/kg	0.14	0.42	0.84	0.84	1.00		06/13/2018 13:18	6/15/18 18:13 NAH	EPA 6010C	^
Barium	60.6	mg/kg	0.0094	0.026	0.052	0.052	1.00		06/13/2018 13:18	6/15/18 18:13 NAH	EPA 6010C	^
Beryllium	<0.0042	mg/kg	0.0042	0.013	0.042	0.042	1.00	U	06/13/2018 13:18	6/15/18 18:13 NAH	EPA 6010C	^
Cadmium	0.82	mg/kg	0.0063	0.021	0.042	0.042	1.00		06/13/2018 13:18	6/15/18 18:13 NAH	EPA 6010C	^
Calcium	48000	mg/kg	0.25	0.73	1.5	1.5	1.00		06/13/2018 13:18	6/15/18 18:13 NAH	EPA 6010C	^
Chromium	13.7	mg/kg	0.024	0.073	0.15	0.15	1.00		06/13/2018 13:18	6/15/18 18:13 NAH	EPA 6010C	^
Cobalt	3.7	mg/kg	0.042	0.13	0.25	0.25	1.00		06/13/2018 13:18	6/15/18 18:13 NAH	EPA 6010C	^
Copper	23.7	mg/kg	0.073	0.21	0.42	0.42	1.00		06/13/2018 13:18	6/15/18 18:13 NAH	EPA 6010C	^
Iron	9030	mg/kg	0.31	0.94	1.9	1.9	1.00		06/13/2018 13:18	6/15/18 18:13 NAH	EPA 6010C	^
Lead	156	mg/kg	0.042	0.13	0.26	0.26	1.00		06/13/2018 13:18	6/15/18 18:13 NAH	EPA 6010C	^
Magnesium	18900	mg/kg	0.15	0.42	0.84	0.84	1.00		06/13/2018 13:18	6/15/18 18:13 NAH	EPA 6010C	^
Manganese	333	mg/kg	0.026	0.079	0.16	0.16	1.00		06/13/2018 13:18	6/15/18 18:13 NAH	EPA 6010C	^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 133522	Sample Description: IBC-OU3-W05-BOE-180521	Client Sample #:	Sampled: 05/21/2018 1345
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Nickel	8.8	mg/kg	0.022	0.063	0.13	0.13	1.00		06/13/2018 13:18	6/15/18 18:13	NAH	EPA 6010C ^
Selenium	<0.063	mg/kg	0.063	0.21	0.42	0.42	1.00	U	06/13/2018 13:18	6/15/18 18:13	NAH	EPA 6010C ^
Silver	0.39	mg/kg	0.018	0.052	0.10	0.10	1.00		06/13/2018 13:18	6/15/18 18:13	NAH	EPA 6010C ^
Thallium	<0.084	mg/kg	0.084	0.25	0.50	0.50	1.00	U	06/13/2018 13:18	6/15/18 18:13	NAH	EPA 6010C ^
Vanadium	10.2	mg/kg	0.013	0.042	0.084	0.084	1.00		06/13/2018 13:18	6/15/18 18:13	NAH	EPA 6010C ^
Zinc	61.2	mg/kg	0.052	0.16	0.31	0.31	1.00		06/13/2018 13:18	6/15/18 18:13	NAH	EPA 6010C ^
Potassium	412	mg/kg	12	35	69	69	1.00		06/13/2018 13:18	6/18/18 10:47	MDS	EPA 6010C ^
Sodium	70.3	mg/kg	4.2	13	25	25	1.00		06/13/2018 13:18	6/18/18 10:47	MDS	EPA 6010C ^
Mercury	0.11	mg/kg	0.0024	0.0049	0.0096	0.0096	1.00		06/15/2018 12:00	6/18/18 08:22	LJF	EPA 7471B ^

CT LAB#: 133523	Sample Description: IBC-OU3-W05-NSW-180521	Client Sample #:	Sampled: 05/21/2018 1350
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	88.5	%	0.1	0.1	0.1	0.1	1.00			6/14/18 10:45	BMM	EPA 8000C
Metals Results												
Aluminum	4170	mg/kg	0.046	0.14	0.27	0.27	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Antimony	2.6	mg/kg	0.15	0.46	0.91	0.91	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Arsenic	4.4	mg/kg	0.15	0.46	0.91	0.91	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Barium	41.4	mg/kg	0.010	0.029	0.057	0.057	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Beryllium	0.0097	mg/kg	0.0046	0.014	0.046	0.046	1.00	J	06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Cadmium	2.8	mg/kg	0.0068	0.023	0.046	0.046	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Calcium	95600	mg/kg	0.27	0.80	1.6	1.6	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Chromium	12.9	mg/kg	0.026	0.080	0.16	0.16	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Cobalt	2.8	mg/kg	0.046	0.14	0.27	0.27	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Copper	26.8	mg/kg	0.080	0.23	0.46	0.46	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 133523	Sample Description: IBC-OU3-W05-NSW-180521	Client Sample #:	Sampled: 05/21/2018 1350
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Iron	9640	mg/kg	0.34	1.0	2.1	2.1	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Lead	1100	mg/kg	0.046	0.14	0.29	0.29	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Magnesium	35400	mg/kg	0.16	0.46	0.91	0.91	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Manganese	636	mg/kg	0.029	0.086	0.17	0.17	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Nickel	7.6	mg/kg	0.024	0.068	0.14	0.14	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Selenium	<0.068	mg/kg	0.068	0.23	0.46	0.46	1.00	U	06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Silver	0.49	mg/kg	0.019	0.057	0.11	0.11	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Thallium	<0.091	mg/kg	0.091	0.27	0.55	0.55	1.00	U	06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Vanadium	10.1	mg/kg	0.014	0.046	0.091	0.091	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Zinc	320	mg/kg	0.057	0.17	0.34	0.34	1.00		06/13/2018 13:18	6/15/18 18:21	NAH	EPA 6010C ^
Potassium	371	mg/kg	13	38	75	75	1.00		06/13/2018 13:18	6/18/18 10:50	MDS	EPA 6010C ^
Sodium	100	mg/kg	4.6	14	27	27	1.00		06/13/2018 13:18	6/18/18 10:50	MDS	EPA 6010C ^
Mercury	0.12	mg/kg	0.0025	0.0051	0.010	0.010	1.00		06/15/2018 12:00	6/18/18 08:29	LJF	EPA 7471B ^

CT LAB#: 133524	Sample Description: IBC-OU1-09A-BOE-180606	Client Sample #:	Sampled: 06/06/2018 1000
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

Solids, Percent	97.4	%	0.1	0.1	0.1	0.1	1.00			6/14/18 10:45	BMM	EPA 8000C
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Metals Results

Aluminum	3530	mg/kg	0.042	0.13	0.25	0.25	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Antimony	971	mg/kg	14	42	84	84	100.00		06/13/2018 13:18	6/26/18 17:09	NAH	EPA 6010C ^
Arsenic	65.8	mg/kg	0.14	0.42	0.84	0.84	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Barium	52.4	mg/kg	0.0095	0.026	0.053	0.053	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Beryllium	0.079	mg/kg	0.0042	0.013	0.042	0.042	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Cadmium	1.8	mg/kg	0.0063	0.021	0.042	0.042	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 133524	Sample Description: IBC-OU1-09A-BOE-180606	Client Sample #:	Sampled: 06/06/2018 1000
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Calcium	80600	mg/kg	0.25	0.74	1.5	1.5	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Chromium	13.5	mg/kg	0.024	0.074	0.15	0.15	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Cobalt	2.7	mg/kg	0.042	0.13	0.25	0.25	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Copper	80.0	mg/kg	0.074	0.21	0.42	0.42	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Iron	10500	mg/kg	0.32	0.95	1.9	1.9	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Lead	26600	mg/kg	4.2	13	26	26	100.00		06/13/2018 13:18	6/26/18 17:09	NAH	EPA 6010C ^
Magnesium	22300	mg/kg	0.15	0.42	0.84	0.84	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Manganese	484	mg/kg	0.026	0.079	0.16	0.16	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Nickel	7.6	mg/kg	0.022	0.063	0.13	0.13	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Selenium	0.54	mg/kg	0.063	0.21	0.42	0.42	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Silver	1.8	mg/kg	0.018	0.053	0.11	0.11	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Thallium	<0.084	mg/kg	0.084	0.25	0.51	0.51	1.00	U	06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Vanadium	9.8	mg/kg	0.013	0.042	0.084	0.084	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Zinc	271	mg/kg	0.053	0.16	0.32	0.32	1.00		06/13/2018 13:18	6/15/18 18:28	NAH	EPA 6010C ^
Potassium	382	mg/kg	12	35	69	69	1.00		06/13/2018 13:18	6/18/18 10:53	MDS	EPA 6010C ^
Sodium	143	mg/kg	4.2	13	25	25	1.00		06/13/2018 13:18	6/18/18 10:53	MDS	EPA 6010C ^
Mercury	0.099	mg/kg	0.0022	0.0045	0.0088	0.0088	1.00		06/15/2018 12:00	6/18/18 08:31	LJF	EPA 7471B ^

CT LAB#: 133525	Sample Description: IBC-OU1-09B-BOE-180606	Client Sample #:	Sampled: 06/06/2018 1030
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	88.1	%	0.1	0.1	0.1	0.1	1.00			6/14/18 10:45	BMM	EPA 8000C
Metals Results												
Aluminum	5240	mg/kg	0.047	0.14	0.28	0.28	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Antimony	12.3	mg/kg	0.15	0.47	0.94	0.94	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 133525	Sample Description: IBC-OU1-09B-BOE-180606	Client Sample #:	Sampled: 06/06/2018 1030
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Arsenic	6.4	mg/kg	0.15	0.47	0.94	0.94	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Barium	69.6	mg/kg	0.011	0.029	0.059	0.059	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Beryllium	<0.0047	mg/kg	0.0047	0.014	0.047	0.047	1.00	U	06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Cadmium	1.5	mg/kg	0.0070	0.023	0.047	0.047	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Calcium	67900	mg/kg	0.28	0.82	1.6	1.6	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Chromium	23.8	mg/kg	0.027	0.082	0.16	0.16	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Cobalt	3.1	mg/kg	0.047	0.14	0.28	0.28	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Copper	119	mg/kg	0.082	0.23	0.47	0.47	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Iron	9600	mg/kg	0.35	1.1	2.1	2.1	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Lead	3130	mg/kg	4.7	15	29	29	100.00		06/13/2018 13:18	6/26/18 17:16	NAH	EPA 6010C ^
Magnesium	18100	mg/kg	0.16	0.47	0.94	0.94	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Manganese	304	mg/kg	0.029	0.088	0.18	0.18	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Nickel	8.5	mg/kg	0.025	0.070	0.14	0.14	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Selenium	<0.070	mg/kg	0.070	0.23	0.47	0.47	1.00	U	06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Silver	5.5	mg/kg	0.020	0.059	0.12	0.12	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Thallium	<0.094	mg/kg	0.094	0.28	0.56	0.56	1.00	U	06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Vanadium	11.5	mg/kg	0.014	0.047	0.094	0.094	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Zinc	219	mg/kg	0.059	0.18	0.35	0.35	1.00		06/13/2018 13:18	6/15/18 18:55	NAH	EPA 6010C ^
Potassium	641	mg/kg	13	39	77	77	1.00		06/13/2018 13:18	6/18/18 10:57	MDS	EPA 6010C ^
Sodium	418	mg/kg	4.7	14	28	28	1.00		06/13/2018 13:18	6/18/18 10:57	MDS	EPA 6010C ^
Mercury	0.27	mg/kg	0.0024	0.0048	0.0094	0.0094	1.00		06/15/2018 12:00	6/18/18 08:33	LJF	EPA 7471B ^

CT LAB#: 133526	Sample Description: IBC-OU1-04-BOE-180606	Client Sample #:	Sampled: 06/06/2018 1300
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

Solids, Percent	96.8	%	0.1	0.1	0.1	0.1	1.00		6/14/18 10:45	BMM	EPA 8000C
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Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 133526

Sample Description: IBC-OU1-04-BOE-180606

Client Sample #:

Sampled: 06/06/2018 1300

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Metals Results												
Aluminum	3850	mg/kg	0.042	0.13	0.25	0.25	1.00		06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Antimony	1200	mg/kg	14	42	84	84	100.00		06/13/2018 13:18	6/26/18 17:24	NAH	EPA 6010C ^
Arsenic	58.5	mg/kg	0.14	0.42	0.84	0.84	1.00		06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Barium	65.4	mg/kg	0.0095	0.026	0.053	0.053	1.00		06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Beryllium	0.023	mg/kg	0.0042	0.013	0.042	0.042	1.00	J	06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Cadmium	4.3	mg/kg	0.0063	0.021	0.042	0.042	1.00		06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Calcium	79600	mg/kg	0.25	0.74	1.5	1.5	1.00		06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Chromium	11.1	mg/kg	0.024	0.074	0.15	0.15	1.00		06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Cobalt	3.3	mg/kg	0.042	0.13	0.25	0.25	1.00		06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Copper	18.8	mg/kg	0.074	0.21	0.42	0.42	1.00		06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Iron	8490	mg/kg	0.32	0.95	1.9	1.9	1.00		06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Lead	27700	mg/kg	4.2	13	26	26	100.00		06/13/2018 13:18	6/26/18 17:24	NAH	EPA 6010C ^
Magnesium	20100	mg/kg	0.15	0.42	0.84	0.84	1.00		06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Manganese	329	mg/kg	0.026	0.079	0.16	0.16	1.00		06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Nickel	9.6	mg/kg	0.022	0.063	0.13	0.13	1.00		06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Selenium	<0.063	mg/kg	0.063	0.21	0.42	0.42	1.00	U	06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Silver	2.6	mg/kg	0.018	0.053	0.11	0.11	1.00		06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Thallium	<0.084	mg/kg	0.084	0.25	0.51	0.51	1.00	U	06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Vanadium	8.6	mg/kg	0.013	0.042	0.084	0.084	1.00		06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Zinc	130	mg/kg	0.053	0.16	0.32	0.32	1.00		06/13/2018 13:18	6/15/18 19:02	NAH	EPA 6010C ^
Potassium	419	mg/kg	12	35	70	70	1.00		06/13/2018 13:18	6/18/18 11:00	MDS	EPA 6010C ^
Sodium	422	mg/kg	4.2	13	25	25	1.00		06/13/2018 13:18	6/18/18 11:00	MDS	EPA 6010C ^
Mercury	0.090	mg/kg	0.0023	0.0046	0.0090	0.0090	1.00		06/15/2018 12:00	6/18/18 08:35	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 133527

Sample Description: IBC-OU3-E17-BOE-180606

Client Sample #:

Sampled: 06/06/2018 1310

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	92.0	%	0.1	0.1	0.1	0.1	1.00			6/14/18 10:45	BMM	EPA 8000C
Metals Results												
Aluminum	5070	mg/kg	0.045	0.14	0.27	0.27	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Antimony	9.0	mg/kg	0.15	0.45	0.90	0.90	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Arsenic	6.7	mg/kg	0.15	0.45	0.90	0.90	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Barium	87.0	mg/kg	0.010	0.028	0.056	0.056	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Beryllium	<0.0045	mg/kg	0.0045	0.014	0.045	0.045	1.00	U	06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Cadmium	5.3	mg/kg	0.0068	0.023	0.045	0.045	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Calcium	115000	mg/kg	0.27	0.79	1.6	1.6	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Chromium	15.1	mg/kg	0.026	0.079	0.16	0.16	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Cobalt	3.8	mg/kg	0.045	0.14	0.27	0.27	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Copper	99.7	mg/kg	0.079	0.23	0.45	0.45	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Iron	10200	mg/kg	0.34	1.0	2.0	2.0	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Lead	704	mg/kg	0.045	0.14	0.28	0.28	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Magnesium	33500	mg/kg	0.16	0.45	0.90	0.90	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Manganese	386	mg/kg	0.028	0.084	0.17	0.17	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Nickel	11.8	mg/kg	0.024	0.068	0.14	0.14	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Selenium	<0.068	mg/kg	0.068	0.23	0.45	0.45	1.00	U	06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Silver	0.25	mg/kg	0.019	0.056	0.11	0.11	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Thallium	<0.090	mg/kg	0.090	0.27	0.54	0.54	1.00	U	06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Vanadium	11.1	mg/kg	0.014	0.045	0.090	0.090	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Zinc	264	mg/kg	0.056	0.17	0.34	0.34	1.00		06/13/2018 13:18	6/15/18 19:09	NAH	EPA 6010C ^
Potassium	608	mg/kg	12	37	74	74	1.00		06/13/2018 13:18	6/18/18 11:09	MDS	EPA 6010C ^
Sodium	462	mg/kg	4.5	14	27	27	1.00		06/13/2018 13:18	6/18/18 11:09	MDS	EPA 6010C ^
Mercury	0.093	mg/kg	0.0024	0.0048	0.0095	0.0095	1.00		06/15/2018 12:00	6/18/18 08:38	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 133528

Sample Description: IBC-OU3-E18-BOE-180606

Client Sample #:

Sampled: 06/06/2018 1320

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	98.6	%	0.1	0.1	0.1	0.1	1.00			6/14/18 10:45	BMM	EPA 8000C
Metals Results												
Aluminum	5250	mg/kg	0.040	0.12	0.24	0.24	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Antimony	2.1	mg/kg	0.13	0.40	0.80	0.80	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Arsenic	7.5	mg/kg	0.13	0.40	0.80	0.80	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Barium	190	mg/kg	0.0090	0.025	0.050	0.050	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Beryllium	<0.0040	mg/kg	0.0040	0.012	0.040	0.040	1.00	U	06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Cadmium	3.4	mg/kg	0.0060	0.020	0.040	0.040	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Calcium	65900	mg/kg	0.24	0.70	1.4	1.4	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Chromium	20.4	mg/kg	0.023	0.070	0.14	0.14	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Cobalt	3.3	mg/kg	0.040	0.12	0.24	0.24	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Copper	60.2	mg/kg	0.070	0.20	0.40	0.40	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Iron	11500	mg/kg	0.30	0.90	1.8	1.8	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Lead	939	mg/kg	0.040	0.12	0.25	0.25	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Magnesium	25500	mg/kg	0.14	0.40	0.80	0.80	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Manganese	337	mg/kg	0.025	0.075	0.15	0.15	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Nickel	9.8	mg/kg	0.021	0.060	0.12	0.12	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Selenium	<0.060	mg/kg	0.060	0.20	0.40	0.40	1.00	U	06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Silver	0.13	mg/kg	0.017	0.050	0.10	0.10	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Thallium	<0.080	mg/kg	0.080	0.24	0.48	0.48	1.00	U	06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Vanadium	11.2	mg/kg	0.012	0.040	0.080	0.080	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Zinc	229	mg/kg	0.050	0.15	0.30	0.30	1.00		06/13/2018 13:18	6/15/18 19:16	NAH	EPA 6010C ^
Potassium	555	mg/kg	11	33	66	66	1.00		06/13/2018 13:18	6/18/18 11:13	MDS	EPA 6010C ^
Sodium	507	mg/kg	4.0	12	24	24	1.00		06/13/2018 13:18	6/18/18 11:13	MDS	EPA 6010C ^
Mercury	0.069	mg/kg	0.0021	0.0043	0.0084	0.0084	1.00		06/15/2018 12:00	6/18/18 08:40	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 133529

Sample Description: IBC-OU3-E19-BOE-180606

Client Sample #:

Sampled: 06/06/2018 1330

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	99.0	%	0.1	0.1	0.1	0.1	1.00			6/14/18 10:45	BMM	EPA 8000C
Metals Results												
Aluminum	4410	mg/kg	0.043	0.13	0.26	0.26	1.00	Y,M	06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Antimony	7.7	mg/kg	0.14	0.43	0.85	0.85	1.00		06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Arsenic	8.4	mg/kg	0.14	0.43	0.85	0.85	1.00		06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Barium	45.2	mg/kg	0.0096	0.027	0.053	0.053	1.00		06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Beryllium	<0.0043	mg/kg	0.0043	0.013	0.043	0.043	1.00	U M	06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Cadmium	2.7	mg/kg	0.0064	0.021	0.043	0.043	1.00		06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Calcium	67000	mg/kg	0.26	0.74	1.5	1.5	1.00	M	06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Chromium	23.2	mg/kg	0.024	0.074	0.15	0.15	1.00	Y,M	06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Cobalt	3.3	mg/kg	0.043	0.13	0.26	0.26	1.00	M	06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Copper	78.4	mg/kg	0.074	0.21	0.43	0.43	1.00	Y,M	06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Iron	15200	mg/kg	0.32	0.96	1.9	1.9	1.00	Y,M	06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Lead	1660	mg/kg	0.043	0.13	0.27	0.27	1.00	Y,M	06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Magnesium	19200	mg/kg	0.15	0.43	0.85	0.85	1.00	Y,M	06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Manganese	377	mg/kg	0.027	0.080	0.16	0.16	1.00	Y,M	06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Nickel	13.0	mg/kg	0.022	0.064	0.13	0.13	1.00	Y,M	06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Selenium	<0.064	mg/kg	0.064	0.21	0.43	0.43	1.00	U	06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Silver	0.20	mg/kg	0.018	0.053	0.11	0.11	1.00		06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Thallium	<0.085	mg/kg	0.085	0.26	0.51	0.51	1.00	U M	06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Vanadium	11.7	mg/kg	0.013	0.043	0.085	0.085	1.00		06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Zinc	99.4	mg/kg	0.053	0.16	0.32	0.32	1.00	M	06/13/2018 13:18	6/15/18 19:23	NAH	EPA 6010C ^
Potassium	473	mg/kg	12	35	70	70	1.00	Y	06/13/2018 13:18	6/18/18 11:16	MDS	EPA 6010C ^
Sodium	159	mg/kg	4.3	13	26	26	1.00	Y	06/13/2018 13:18	6/18/18 11:16	MDS	EPA 6010C ^
Mercury	0.051	mg/kg	0.0022	0.0045	0.0088	0.0088	1.00		06/15/2018 12:00	6/18/18 08:42	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 133530

Sample Description: IBC-OU3-E20-BOE-180607

Client Sample #:

Sampled: 06/07/2018 0900

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	86.2	%	0.1	0.1	0.1	0.1	1.00			6/14/18 10:45 BMM	EPA 8000C	
Metals Results												
Aluminum	6230	mg/kg	0.049	0.15	0.29	0.29	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Antimony	6.0	mg/kg	0.16	0.49	0.97	0.97	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Arsenic	6.2	mg/kg	0.16	0.49	0.97	0.97	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Barium	59.5	mg/kg	0.011	0.030	0.061	0.061	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Beryllium	<0.0049	mg/kg	0.0049	0.015	0.049	0.049	1.00	U	06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Cadmium	2.7	mg/kg	0.0073	0.024	0.049	0.049	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Calcium	85000	mg/kg	0.29	0.85	1.7	1.7	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Chromium	11.5	mg/kg	0.028	0.085	0.17	0.17	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Cobalt	3.6	mg/kg	0.049	0.15	0.29	0.29	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Copper	58.9	mg/kg	0.085	0.24	0.49	0.49	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Iron	9660	mg/kg	0.36	1.1	2.2	2.2	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Lead	1860	mg/kg	0.049	0.15	0.30	0.30	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Magnesium	24700	mg/kg	0.17	0.49	0.97	0.97	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Manganese	437	mg/kg	0.030	0.091	0.18	0.18	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Nickel	10.3	mg/kg	0.026	0.073	0.15	0.15	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Selenium	<0.073	mg/kg	0.073	0.24	0.49	0.49	1.00	U	06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Silver	1.2	mg/kg	0.021	0.061	0.12	0.12	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Thallium	<0.097	mg/kg	0.097	0.29	0.58	0.58	1.00	U	06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Vanadium	12.8	mg/kg	0.015	0.049	0.097	0.097	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Zinc	154	mg/kg	0.061	0.18	0.36	0.36	1.00		06/13/2018 13:18	6/15/18 20:25 NAH	EPA 6010C	^
Potassium	568	mg/kg	13	40	80	80	1.00		06/13/2018 13:18	6/18/18 11:36 MDS	EPA 6010C	^
Sodium	398	mg/kg	4.9	15	29	29	1.00		06/13/2018 13:18	6/18/18 11:36 MDS	EPA 6010C	^
Mercury	0.091	mg/kg	0.0026	0.0052	0.010	0.010	1.00		06/15/2018 12:00	6/18/18 08:56 LJF	EPA 7471B	^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 133531

Sample Description: IBC-OU3-E21-BOE-180607

Client Sample #:

Sampled: 06/07/2018 0910

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	89.4	%	0.1	0.1	0.1	0.1	1.00			6/14/18 10:45	BMM	EPA 8000C
Metals Results												
Aluminum	6080	mg/kg	0.043	0.13	0.26	0.26	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Antimony	37.5	mg/kg	0.14	0.43	0.87	0.87	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Arsenic	10.6	mg/kg	0.14	0.43	0.87	0.87	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Barium	86.1	mg/kg	0.0098	0.027	0.054	0.054	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Beryllium	<0.0043	mg/kg	0.0043	0.013	0.043	0.043	1.00	U	06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Cadmium	3.4	mg/kg	0.0065	0.022	0.043	0.043	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Calcium	67300	mg/kg	0.26	0.76	1.5	1.5	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Chromium	12.7	mg/kg	0.025	0.076	0.15	0.15	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Cobalt	3.8	mg/kg	0.043	0.13	0.26	0.26	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Copper	14.4	mg/kg	0.076	0.22	0.43	0.43	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Iron	10500	mg/kg	0.33	0.98	2.0	2.0	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Lead	19000	mg/kg	4.3	14	27	27	100.00		06/13/2018 13:18	6/26/18 17:31	NAH	EPA 6010C ^
Magnesium	23500	mg/kg	0.15	0.43	0.87	0.87	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Manganese	296	mg/kg	0.027	0.081	0.16	0.16	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Nickel	11.7	mg/kg	0.023	0.065	0.13	0.13	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Selenium	<0.065	mg/kg	0.065	0.22	0.43	0.43	1.00	U	06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Silver	1.3	mg/kg	0.018	0.054	0.11	0.11	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Thallium	<0.087	mg/kg	0.087	0.26	0.52	0.52	1.00	U	06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Vanadium	14.0	mg/kg	0.013	0.043	0.087	0.087	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Zinc	158	mg/kg	0.054	0.16	0.33	0.33	1.00		06/13/2018 13:18	6/15/18 20:32	NAH	EPA 6010C ^
Potassium	586	mg/kg	12	36	72	72	1.00		06/13/2018 13:18	6/18/18 11:39	MDS	EPA 6010C ^
Sodium	358	mg/kg	4.3	13	26	26	1.00		06/13/2018 13:18	6/18/18 11:39	MDS	EPA 6010C ^
Mercury	0.16	mg/kg	0.0024	0.0049	0.0096	0.0096	1.00		06/15/2018 12:00	6/18/18 08:58	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 133532

Sample Description: IBC-OU3-E22-BOE-180607

Client Sample #:

Sampled: 06/07/2018 0920

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	95.1	%	0.1	0.1	0.1	0.1	1.00			6/14/18 10:45	BMM	EPA 8000C
Metals Results												
Aluminum	4780	mg/kg	0.042	0.13	0.25	0.25	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Antimony	12.1	mg/kg	0.14	0.42	0.85	0.85	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Arsenic	8.0	mg/kg	0.14	0.42	0.85	0.85	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Barium	65.3	mg/kg	0.0095	0.026	0.053	0.053	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Beryllium	0.033	mg/kg	0.0042	0.013	0.042	0.042	1.00	J	06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Cadmium	4.0	mg/kg	0.0063	0.021	0.042	0.042	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Calcium	66600	mg/kg	0.25	0.74	1.5	1.5	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Chromium	9.6	mg/kg	0.024	0.074	0.15	0.15	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Cobalt	3.1	mg/kg	0.042	0.13	0.25	0.25	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Copper	23.7	mg/kg	0.074	0.21	0.42	0.42	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Iron	9190	mg/kg	0.32	0.95	1.9	1.9	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Lead	6450	mg/kg	4.2	13	26	26	100.00		06/13/2018 13:18	6/26/18 17:39	NAH	EPA 6010C ^
Magnesium	21300	mg/kg	0.15	0.42	0.85	0.85	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Manganese	299	mg/kg	0.026	0.079	0.16	0.16	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Nickel	13.6	mg/kg	0.022	0.063	0.13	0.13	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Selenium	<0.063	mg/kg	0.063	0.21	0.42	0.42	1.00	U	06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Silver	0.45	mg/kg	0.018	0.053	0.11	0.11	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Thallium	<0.085	mg/kg	0.085	0.25	0.51	0.51	1.00	U	06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Vanadium	13.4	mg/kg	0.013	0.042	0.085	0.085	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Zinc	169	mg/kg	0.053	0.16	0.32	0.32	1.00		06/13/2018 13:18	6/15/18 20:39	NAH	EPA 6010C ^
Potassium	526	mg/kg	12	35	70	70	1.00		06/13/2018 13:18	6/18/18 11:48	MDS	EPA 6010C ^
Sodium	351	mg/kg	4.2	13	25	25	1.00		06/13/2018 13:18	6/18/18 11:48	MDS	EPA 6010C ^
Mercury	0.092	mg/kg	0.0023	0.0046	0.0090	0.0090	1.00		06/15/2018 12:00	6/18/18 09:00	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 133533

Sample Description: IBC-OU3-E23-BOE-180607

Client Sample #:

Sampled: 06/07/2018 0930

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	98.9	%	0.1	0.1	0.1	0.1	1.00			6/14/18 10:45	BMM	EPA 8000C
Metals Results												
Aluminum	3740	mg/kg	0.041	0.12	0.25	0.25	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Antimony	4.2	mg/kg	0.13	0.41	0.83	0.83	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Arsenic	4.8	mg/kg	0.13	0.41	0.83	0.83	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Barium	24.1	mg/kg	0.0093	0.026	0.052	0.052	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Beryllium	<0.0041	mg/kg	0.0041	0.012	0.041	0.041	1.00	U	06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Cadmium	0.71	mg/kg	0.0062	0.021	0.041	0.041	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Calcium	80000	mg/kg	0.25	0.72	1.4	1.4	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Chromium	9.3	mg/kg	0.024	0.072	0.14	0.14	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Cobalt	2.7	mg/kg	0.041	0.12	0.25	0.25	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Copper	17.8	mg/kg	0.072	0.21	0.41	0.41	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Iron	7710	mg/kg	0.31	0.93	1.9	1.9	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Lead	1720	mg/kg	0.041	0.13	0.26	0.26	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Magnesium	26800	mg/kg	0.14	0.41	0.83	0.83	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Manganese	245	mg/kg	0.026	0.077	0.15	0.15	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Nickel	7.2	mg/kg	0.022	0.062	0.12	0.12	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Selenium	0.16	mg/kg	0.062	0.21	0.41	0.41	1.00	J	06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Silver	0.16	mg/kg	0.018	0.052	0.10	0.10	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Thallium	<0.083	mg/kg	0.083	0.25	0.50	0.50	1.00	U	06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Vanadium	10.8	mg/kg	0.012	0.041	0.083	0.083	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Zinc	50.6	mg/kg	0.052	0.15	0.31	0.31	1.00		06/13/2018 13:18	6/15/18 20:46	NAH	EPA 6010C ^
Potassium	444	mg/kg	11	34	68	68	1.00		06/13/2018 13:18	6/18/18 11:52	MDS	EPA 6010C ^
Sodium	299	mg/kg	4.1	12	25	25	1.00		06/13/2018 13:18	6/18/18 11:52	MDS	EPA 6010C ^
Mercury	0.040	mg/kg	0.0022	0.0043	0.0085	0.0085	1.00		06/15/2018 12:00	6/18/18 09:03	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 133534

Sample Description: IBC-OU3-W05-BOE-180521-D

Client Sample #:

Sampled: 05/21/2018

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	93.7	%	0.1	0.1	0.1	0.1	1.00			6/14/18 10:45	BMM	EPA 8000C
Metals Results												
Aluminum	5730	mg/kg	0.045	0.13	0.27	0.27	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Antimony	0.31	mg/kg	0.15	0.45	0.90	0.90	1.00	J	06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Arsenic	4.8	mg/kg	0.15	0.45	0.90	0.90	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Barium	59.5	mg/kg	0.010	0.028	0.056	0.056	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Beryllium	<0.0045	mg/kg	0.0045	0.013	0.045	0.045	1.00	U	06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Cadmium	0.70	mg/kg	0.0067	0.022	0.045	0.045	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Calcium	45500	mg/kg	0.27	0.79	1.6	1.6	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Chromium	16.3	mg/kg	0.026	0.079	0.16	0.16	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Cobalt	4.0	mg/kg	0.045	0.13	0.27	0.27	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Copper	22.2	mg/kg	0.079	0.22	0.45	0.45	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Iron	10300	mg/kg	0.34	1.0	2.0	2.0	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Lead	172	mg/kg	0.045	0.14	0.28	0.28	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Magnesium	18900	mg/kg	0.16	0.45	0.90	0.90	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Manganese	326	mg/kg	0.028	0.084	0.17	0.17	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Nickel	9.7	mg/kg	0.024	0.067	0.13	0.13	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Selenium	<0.067	mg/kg	0.067	0.22	0.45	0.45	1.00	U	06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Silver	0.40	mg/kg	0.019	0.056	0.11	0.11	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Thallium	<0.090	mg/kg	0.090	0.27	0.54	0.54	1.00	U	06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Vanadium	12.6	mg/kg	0.013	0.045	0.090	0.090	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Zinc	64.0	mg/kg	0.056	0.17	0.34	0.34	1.00		06/13/2018 13:18	6/15/18 20:54	NAH	EPA 6010C ^
Potassium	494	mg/kg	12	37	74	74	1.00		06/13/2018 13:18	6/18/18 11:55	MDS	EPA 6010C ^
Sodium	295	mg/kg	4.5	13	27	27	1.00		06/13/2018 13:18	6/18/18 11:55	MDS	EPA 6010C ^
Mercury	0.063	mg/kg	0.0023	0.0046	0.0092	0.0092	1.00		06/15/2018 12:00	6/18/18 09:05	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 133535

Sample Description: IBC-OU3-E22-BOE-180607-D

Client Sample #:

Sampled: 06/07/2018

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	95.2	%	0.1	0.1	0.1	0.1	1.00			6/14/18 10:45	BMM	EPA 8000C
Metals Results												
Aluminum	5390	mg/kg	0.044	0.13	0.26	0.26	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Antimony	12.8	mg/kg	0.14	0.44	0.87	0.87	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Arsenic	9.1	mg/kg	0.14	0.44	0.87	0.87	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Barium	65.6	mg/kg	0.0098	0.027	0.054	0.054	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Beryllium	0.13	mg/kg	0.0044	0.013	0.044	0.044	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Cadmium	4.3	mg/kg	0.0065	0.022	0.044	0.044	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Calcium	73500	mg/kg	0.26	0.76	1.5	1.5	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Chromium	9.7	mg/kg	0.025	0.076	0.15	0.15	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Cobalt	3.2	mg/kg	0.044	0.13	0.26	0.26	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Copper	25.9	mg/kg	0.076	0.22	0.44	0.44	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Iron	9960	mg/kg	0.33	0.98	2.0	2.0	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Lead	6910	mg/kg	4.4	14	27	27	100.00		06/13/2018 13:18	6/26/18 17:39	NAH	EPA 6010C ^
Magnesium	24400	mg/kg	0.15	0.44	0.87	0.87	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Manganese	305	mg/kg	0.027	0.082	0.16	0.16	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Nickel	15.0	mg/kg	0.023	0.065	0.13	0.13	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Selenium	<0.065	mg/kg	0.065	0.22	0.44	0.44	1.00	U	06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Silver	0.39	mg/kg	0.019	0.054	0.11	0.11	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Thallium	<0.087	mg/kg	0.087	0.26	0.52	0.52	1.00	U	06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Vanadium	14.0	mg/kg	0.013	0.044	0.087	0.087	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Zinc	180	mg/kg	0.054	0.16	0.33	0.33	1.00		06/13/2018 13:18	6/15/18 21:01	NAH	EPA 6010C ^
Potassium	601	mg/kg	12	36	72	72	1.00		06/13/2018 13:18	6/18/18 11:58	MDS	EPA 6010C ^
Sodium	400	mg/kg	4.4	13	26	26	1.00		06/13/2018 13:18	6/18/18 11:58	MDS	EPA 6010C ^
Mercury	0.12	mg/kg	0.0022	0.0045	0.0089	0.0089	1.00		06/15/2018 12:00	6/18/18 09:07	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

Notes:

^ Indicates the laboratory is NELAP accredited for this analyte by the indicated matrix and method. DL (detection limit), LOD (limit of detection), loq (limit of quantitation) as defined by most recent DOD QSM version.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for the parameters where accreditation is required or available, unless noted in the case narrative.

Submitted by: Brett M. Szymanski
Project Manager
608-356-2760

QC Qualifiers		Current CT Laboratories Certifications
Code	Description	
B	Analyte detected in the associated Method Blank.	Wisconsin (WDNR) Chemistry ID# 157066030 Wisconsin (DATCP) Bacteriology ID# 105-289 Louisiana NELAP (primary) ID# ACC20160002 Illinois NELAP Lab ID# 200073 Kansas NELAP Lab ID# E-10368 Virginia NELAP Lab ID# 460203 Maryland Lab ID# WI00061 ISO/IEC 17025-2005 A2LA Cert # 3806.01 DoD-ELAP A2LA 3806.01 GA EPD Stipulation ID ACC20160002
C	Toxicity present in BOD sample.	
D	Diluted Out.	
E	Safe, No Total Coliform detected.	
F	Unsafe, Total Coliform detected, no E. Coli detected.	
G	Unsafe, Total Coliform detected and E. Coli detected.	
H	Holding time exceeded.	
I	BOD incubator temperature was outside acceptance limits during test period.	
J	Estimated value.	
L	Significant peaks were detected outside the chromatographic window.	
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.	
N	Insufficient BOD oxygen depletion.	
O	Complete BOD oxygen depletion.	
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.	
Q	Laboratory Control Sample outside acceptance limits.	
R	See Narrative at end of report.	
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.	
T	Sample received with improper preservation or temperature.	
U	Analyte concentration was below detection limit.	
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.	
W	Sample amount received was below program minimum.	
X	Analyte exceeded calibration range.	
Y	Replicate/Duplicate precision outside acceptance limits.	
Z	Specified calibration criteria was not met.	

QC SUMMARY REPORT

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	150185	Analysis Date:	06/14/2018	Prep Batch #:	Matrix:	SOIL
CTLab #:	135488	Analysis Time:	10:45	Prep Date/Time:	Method:	SW8000C
Parent Sample #:	133529	Analyst:	BMM	Prep Analyst:		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Solids, Percent	99.2	%	99.0					0	8

Duplicate

Analytical Run #:	150250	Analysis Date:	06/15/2018	Prep Batch #:	67432	Matrix:	SOIL
CTLab #:	133921	Analysis Time:	19:37	Prep Date/Time:	06/13/2018 13:18	Method:	SW6010
Parent Sample #:	133529	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	5580	mg/kg	4410				9.6	23	20
Antimony	6.6	mg/kg	7.7				32	15	20
Arsenic	8.0	mg/kg	8.4				32	5	20
Barium	55.5	mg/kg	45.2				2.0	20	20
Beryllium	0.00423	mg/kg	<0.00423 U				1.60	0	20
Cadmium	3.2	mg/kg	2.7				1.60	17	20
Calcium	75100	mg/kg	67000				56	11	20
Chromium	18.8	mg/kg	23.2				5.6	21	20
Cobalt	3.3	mg/kg	3.3				9.6	0	20
Copper	51.0	mg/kg	78.4				16.0	42	20
Iron	11400	mg/kg	15200				72	29	20
Lead	2080	mg/kg	1660				10.0	22	20
Magnesium	25200	mg/kg	19200				32	27	20
Manganese	500	mg/kg	377				6.0	28	20
Nickel	9.7	mg/kg	13.0				4.8	29	20
Selenium	4.3	mg/kg	<0.0635				16	200	20
Silver	0.19	mg/kg	0.20				4.0	5	20
Thallium	0.0846	mg/kg	<0.0846 U				19	0	20
Vanadium	12.4	mg/kg	11.7				3.2	6	20
Zinc	120	mg/kg	99.4				12.0	19	20

Lab Control Spike Soil

Analytical Run #:	150250	Analysis Date:	06/15/2018	Prep Batch #:	67432	Matrix:	SOLID
CTLab #:	133919	Analysis Time:	17:59	Prep Date/Time:	06/13/2018 13:18	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	103	mg/kg			100	103	80 --- 120		
Antimony	24.0	mg/kg			25.0	96	80 --- 120		
Arsenic	100	mg/kg			100	100	80 --- 120		
Barium	107	mg/kg			100	107	80 --- 120		
Beryllium	2.6	mg/kg			2.5	104	80 --- 120		
Cadmium	2.6	mg/kg			2.5	104	80 --- 120		
Calcium	5100	mg/kg			5000	102	80 --- 120		
Chromium	9.5	mg/kg			10.0	95	80 --- 120		
Cobalt	23.0	mg/kg			25.0	92	80 --- 120		
Copper	11.9	mg/kg			12.5	95	80 --- 120		
Iron	52.0	mg/kg			50.0	104	80 --- 120		
Lead	21.4	mg/kg			25.0	86	80 --- 120		
Magnesium	2880	mg/kg			2500	115	80 --- 120		
Manganese	21.8	mg/kg			25.0	87	80 --- 120		
Nickel	22.3	mg/kg			25.0	89	80 --- 120		
Selenium	96.5	mg/kg			100	96	80 --- 120		
Silver	2.4	mg/kg			2.5	96	75 --- 120		
Thallium	86.5	mg/kg			100	86	80 --- 120		
Vanadium	23.1	mg/kg			25.0	92	80 --- 120		
Zinc	22.6	mg/kg			25.0	90	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	150250	Analysis Date:	06/15/2018	Prep Batch #:	67432	Matrix:	SOLID
CTLab #:	133918	Analysis Time:	18:06	Prep Date/Time:	06/13/2018 13:18	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	0.04	mg/kg		U	0		0.12		
Antimony	0.13	mg/kg		U	0		0.40		
Arsenic	0.13	mg/kg		U	0		0.40		
Barium	0.009	mg/kg		U	0		0.025		
Beryllium	0.004	mg/kg		U	0		0.020		
Cadmium	0.006	mg/kg		U	0		0.020		
Calcium	0.24	mg/kg		U	0		0.70		
Chromium	0.023	mg/kg		U	0		0.125		
Cobalt	0.04	mg/kg		U	0		0.12		
Copper	0.07	mg/kg		U	0		0.20		
Iron	0.3	mg/kg		U	0		0.9		
Lead	0.04	mg/kg		U	0		0.125		
Magnesium	0.14	mg/kg		U	0		0.40		
Manganese	0.025	mg/kg		U	0		0.075		
Nickel	0.021	mg/kg		U	0		0.060		
Selenium	0.06	mg/kg		U	0		0.20		
Silver	0.017	mg/kg		U	0		0.050		
Thallium	0.08	mg/kg		U	0		0.24		
Vanadium	0.012	mg/kg		U	0		0.040		
Zinc	0.05	mg/kg		U	0		0.15		

Matrix Spike Duplicate Soil

Analytical Run #:	150250	Analysis Date:	06/15/2018	Prep Batch #:	67432	Matrix:	SOIL
CTLab #:	133923	Analysis Time:	19:51	Prep Date/Time:	06/13/2018 13:18	Method:	SW6010
Parent Sample #:	133922	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	5580	mg/kg	4410		106	1104	80 --- 120	1	20
Antimony	27.0	mg/kg	7.7		26.4	73	80 --- 120	25	20
Arsenic	105	mg/kg	8.4		106	91	80 --- 120	6	20
Barium	165	mg/kg	45.2		106	113	80 --- 120	0	20
Beryllium	2.4	mg/kg	BDL		2.6	92	80 --- 120	8	20
Cadmium	5.9	mg/kg	2.7		2.6	123	80 --- 120	6	20
Calcium	54700	mg/kg	67000		5290	0	80 --- 120	19	20
Chromium	26.0	mg/kg	23.2		10.6	26	80 --- 120	9	20
Cobalt	23.2	mg/kg	3.3		26.4	75	80 --- 120	6	20
Copper	68.2	mg/kg	78.4		13.2	0	80 --- 120	12	20
Iron	11700	mg/kg	15200		52.9	0	80 --- 120	9	20
Lead	1740	mg/kg	1660		26.4	303	80 --- 120	22	20
Magnesium	21700	mg/kg	19200		2640	95	80 --- 120	11	20
Manganese	391	mg/kg	377		26.4	53	80 --- 120	3	20
Nickel	31.5	mg/kg	13.0		26.4	70	80 --- 120	2	20
Selenium	99.7	mg/kg	BDL		106	94	80 --- 120	4	20
Silver	3.3	mg/kg	0.20		2.6	119	75 --- 125	4	20
Thallium	64.8	mg/kg	BDL		106	61	80 --- 120	7	20
Vanadium	40.7	mg/kg	11.7		26.4	110	80 --- 120	3	20
Zinc	134	mg/kg	99.4		26.4	131	80 --- 120	2	20

Matrix Spike Soil

Analytical Run #:	150250	Analysis Date:	06/15/2018	Prep Batch #:	67432	Matrix:	SOIL
CTLab #:	133922	Analysis Time:	19:44	Prep Date/Time:	06/13/2018 13:18	Method:	SW6010
Parent Sample #:	133529	Analyst:	NAH	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	5660	mg/kg	4410		106	1179	80 --- 120		
Antimony	21.1	mg/kg	7.7		26.6	50	80 --- 120		
Arsenic	99.1	mg/kg	8.4		106	86	80 --- 120		
Barium	165	mg/kg	45.2		106	113	80 --- 120		
Beryllium	2.3	mg/kg	BDL		2.7	85	80 --- 120		
Cadmium	5.6	mg/kg	2.7		2.7	107	80 --- 120		
Calcium	66700	mg/kg	67000		5320	0	80 --- 120		
Chromium	28.7	mg/kg	23.2		10.6	52	80 --- 120		
Cobalt	21.9	mg/kg	3.3		26.6	70	80 --- 120		
Copper	77.4	mg/kg	78.4		13.3	0	80 --- 120		
Iron	13000	mg/kg	15200		53.2	0	80 --- 120		
Lead	2170	mg/kg	1660		26.6	1917	80 --- 120		
Magnesium	24300	mg/kg	19200		2660	192	80 --- 120		
Manganese	404	mg/kg	377		26.6	102	80 --- 120		
Nickel	32.2	mg/kg	13.0		26.6	72	80 --- 120		
Selenium	96.2	mg/kg	BDL		106	91	80 --- 120		
Silver	3.2	mg/kg	0.20		2.7	111	75 --- 125		
Thallium	60.6	mg/kg	BDL		106	57	80 --- 120		
Vanadium	39.6	mg/kg	11.7		26.6	105	80 --- 120		
Zinc	132	mg/kg	99.4		26.6	123	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	150252	Analysis Date:	06/18/2018	Prep Batch #:	67432	Matrix:	SOIL
CTLab #:	133921	Analysis Time:	11:22	Prep Date/Time:	06/13/2018 13:18	Method:	SW6010
Parent Sample #:	133529	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	584	mg/kg	473				2.64	21	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	150252	Analysis Date:	06/18/2018	Prep Batch #:	67432	Matrix:	SOIL
CTLab #:	133921	Analysis Time:	11:22	Prep Date/Time:	06/13/2018 13:18	Method:	SW6010
Parent Sample #:	133529	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	399	mg/kg	159				0.96	86	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Lab Control Spike Soil

Analytical Run #:	150252	Analysis Date:	06/18/2018	Prep Batch #:	67432	Matrix:	SOLID
CTLab #:	133919	Analysis Time:	10:41	Prep Date/Time:	06/13/2018 13:18	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	2450	mg/kg			2500	98	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Lab Control Spike Soil

Analytical Run #:	150252	Analysis Date:	06/18/2018	Prep Batch #:	67432	Matrix:	SOLID
CTLab #:	133919	Analysis Time:	10:41	Prep Date/Time:	06/13/2018 13:18	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	2320	mg/kg			2500	93	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	150252	Analysis Date:	06/18/2018	Prep Batch #:	67432	Matrix:	SOLID
CTLab #:	133918	Analysis Time:	10:43	Prep Date/Time:	06/13/2018 13:18	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	11	mg/kg		U	0		33		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	150252	Analysis Date:	06/18/2018	Prep Batch #:	67432	Matrix:	SOLID
CTLab #:	133918	Analysis Time:	10:43	Prep Date/Time:	06/13/2018 13:18	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	4	mg/kg		U	0		12		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Matrix Spike Duplicate Soil

Analytical Run #:	150252	Analysis Date:	06/18/2018	Prep Batch #:	67432	Matrix:	SOIL
CTLab #:	133923	Analysis Time:	11:29	Prep Date/Time:	06/13/2018 13:18	Method:	SW6010
Parent Sample #:	133922	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	3360	mg/kg	473		2640	109	80 --- 120	2	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Matrix Spike Duplicate Soil

Analytical Run #:	150252	Analysis Date:	06/18/2018	Prep Batch #:	67432	Matrix:	SOIL
CTLab #:	133923	Analysis Time:	11:29	Prep Date/Time:	06/13/2018 13:18	Method:	SW6010
Parent Sample #:	133922	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	3120	mg/kg	159		2640	112	80 --- 120	2	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Matrix Spike Soil

Analytical Run #:	150252	Analysis Date:	06/18/2018	Prep Batch #:	67432	Matrix:	SOIL
CTLab #:	133922	Analysis Time:	11:26	Prep Date/Time:	06/13/2018 13:18	Method:	SW6010
Parent Sample #:	133529	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	3430	mg/kg	473		2660	111	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Matrix Spike Soil

Analytical Run #:	150252	Analysis Date:	06/18/2018	Prep Batch #:	67432	Matrix:	SOIL
CTLab #:	133922	Analysis Time:	11:26	Prep Date/Time:	06/13/2018 13:18	Method:	SW6010
Parent Sample #:	133529	Analyst:	MDS	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	3080	mg/kg	159		2660	110	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	150350	Analysis Date:	06/18/2018	Prep Batch #:	67480	Matrix:	SOIL
CTLab #:	135458	Analysis Time:	08:45	Prep Date/Time:	06/15/2018 12:00	Method:	SW7471B
Parent Sample #:	133529	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.059	mg/kg	0.051				0.20	15	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Lab Control Spike Soil

Analytical Run #:	150350	Analysis Date:	06/18/2018	Prep Batch #:	67480	Matrix:	SOLID
CTLab #:	135457	Analysis Time:	08:17	Prep Date/Time:	06/15/2018 12:00	Method:	SW7471B
Parent Sample #:		Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.10	mg/kg			0.083	120	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	150350	Analysis Date:	06/18/2018	Prep Batch #:	67480	Matrix:	SOLID
CTLab #:	135456	Analysis Time:	08:20	Prep Date/Time:	06/15/2018 12:00	Method:	SW7471B
Parent Sample #:		Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.0021	mg/kg		U	0		00415		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Matrix Spike Duplicate Soil

Analytical Run #:	150350	Analysis Date:	06/18/2018	Prep Batch #:	67480	Matrix:	SOIL
CTLab #:	135460	Analysis Time:	08:49	Prep Date/Time:	06/15/2018 12:00	Method:	SW7471B
Parent Sample #:	135459	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.15	mg/kg	0.051		0.092	108	80 --- 120	5	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 136894

Project #: 103X90260001S051712001

Matrix Spike Soil

Analytical Run #:	150350	Analysis Date:	06/18/2018	Prep Batch #:	67480	Matrix:	SOIL
CTLab #:	135459	Analysis Time:	08:47	Prep Date/Time:	06/15/2018 12:00	Method:	SW7471B
Parent Sample #:	133529	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.14	mg/kg	0.051		0.084	106	80 --- 120		

Sample Condition Report

Folder #: 136894
 Client: TETRA TECH

Print Date / Time: 06/12/2018 10:56
 Received Date / Time / By: 06/12/2018 10:00 DRT

Project Name: INDIANA BATTERY CO
 Project Phase: INDIANAPOLIS, IN

Log-In Date / Time / By: 06/12/2018 10:56 JLS
 Project #: 103X90260001S051712001 PM: BMS

Coolers: 4004
 Custody Seals Present : Y

Temperature: 2.1 C On Ice: Y
 COC Present?: Y Complete? Y

Seal Intact? Y
 Ship Method: FEDEX EXPRESS
 Adequate Packaging: Y

Numbers: DATED AND SIGNED
 Tracking Number: 772440454390
 Temp Blank Enclosed? Y

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 6/11/18 AND SIGNED.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
133522 IBC-OU3-W05-BOE-180521	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
133523 IBC-OU3-W05-NSW-180521	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
133524 IBC-OU1-09A-BOE-180606	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
133525 IBC-OU1-09B-BOE-180606	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
133526 IBC-OU1-04-BOE-180606	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
133527 IBC-OU3-E17-BOE-180606	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

136894

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
133528 IBC-OU3-E18-BOE-180606	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
133529 IBC-OU3-E19-BOE-180606	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 2				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
133530 IBC-OU3-E20-BOE-180607	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
133531 IBC-OU3-E21-BOE-180607	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
133532 IBC-OU3-E22-BOE-180607	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
133533 IBC-OU3-E23-BOE-180607	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
133534 IBC-OU3-W05-BOE-180521-D	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
133535 IBC-OU3-E22-BOE-180607-D	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

Condition Code Condition Description
1 Sample Received OK

Company: Tetra Tech
 Project Contact: Lucas Stamps
 Telephone: 317-797-2420
 Project Name: Indiana Battery
 Project #: 103X90260001S051712001
 Location: Indianapolis, IN
 Sampled By: Lucas Stamps

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
 608-356-2760 Fax 608-356-2766
 www.ctlaboratories.com

Report To: Lucas Stamps
 EMAIL: lucas.stamps@tetratech.com
 Company: 1811 Executive D, Suite R
 Address: Indianapolis, IN 46241

Folder #: 136894
 Company: TETRA TECH
 Project: INDIANA BATTERY CO
 Logged By: DRT PM: BM

Program:
 QSM RCRA SDWA NPDES
 Solid Waste Other _____

PO # 1144695

Invoice To:*
 EMAIL: same
 Company:
 Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

- Level IV
 - scribe EDD

ANALYSES REQUESTED

Turnaround Time

Normal RUSH*
 Date Needed: _____

Rush analysis requires prior
 CT Laboratories' approval

Surcharges:
 24 hr 200%
 2-3 days 100%
 4-9 days 50%

Matrix:
 GW - groundwater SW - surface water WW - wastewater DW - drinking water
 S - soil/sediment SL - sludge A - air M - misc/waste

Collection		Matrix	Grab/ Comp	Sample #	Sample ID Description	N	Fill in Spaces with Bottles per Test																CT Lab ID # Lab use only	
Date	Time																							
5/21/18	1345	S	C		IBC-003-W05-BoE-180521	1																		133522
5/21/18	1350				IBC-003-W05-NSW-180521	1																		" 523
6/6/18	1000				IBC-001-09A-BoE-180606	1																		524
6/6/18	1030				IBC-001-09B-BoE-180606	1																		525
6/6/18	1300				IBC-001-04-BoE-180606	1																		526
6/6/18	1310				IBC-003-E17-BoE-180606	1																		527
6/6/18	1320				IBC-003-E18-BoE-180606	1																		528
6/6/18	1330				IBC-003-E19-BoE-180606	2																2	X	529
6/7/18	0900				IBC-003-E20-BoE-180607	1																		530
6/7/18	0910				IBC-003-E21-BoE-180607	1																		531
6/7/18	0920				IBC-003-E22-BoE-180607	1																		532
6/7/18	0930				IBC-003-E23-BoE-180607	1																		533

Relinquished By:

Date/Time
 6/11/18 1430

Received By:

Date/Time
 6/12/18 1000

Lab Use Only
 Ice Present Yes No

Received by:

Date/Time

Received for Laboratory by:

Date/Time
 6/12/18 1056

Temp 2.1 IR Gun 19
 Cooler # 4004

[illegible]

Ice Present YES NO
Temperature 2.1
IR Gun # 19
Initials OT
Date 6/12/18 Time 1000
Cooler #: 4004

Cooler Receipt Form

ORIGIN ID: HNBA (317) 797-2420
LUCAS STAMPS
TETRA TECH
1811 EXECUTIVE DR
SUITE R
INDIANAPOLIS, IN 46241
UNITED STATES US

SHIP DATE: 11JUN18
ACTWGT: 20.00 LB
CAD: 102185950/NET3980
DIMS: 24x14x15 IN
BILL SENDER

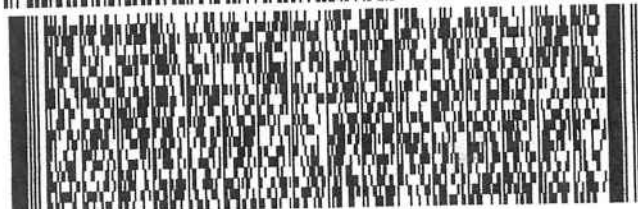
TO RECEIVING
CT LABORATORIES
1230 LANGE CT

BARABOO WI 53913

(608) 356-2760
INV:
PO:

REF: 103X90260001S051712001.004AC

DEPT:



FedEx
Express



552J1148E5DCAS

FedEx Ship Manager - Print Your Label(s)

TUE - 12 JUN 3:00P
STANDARD OVERNIGHT

TRK# 7724 4045 4390
0201

NA MSNA

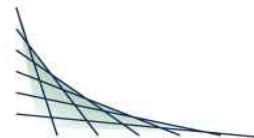
53913
WI-US MSN



CUSTODY SEAL
DATE 6/11/18
SIGNATURE [Signature]

QEC
Quality Environmental Containers
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800-255-3950



ANALYTICAL REPORT

This report at a minimum contains the following information:

- Analytical Report of Test Results
- Description of QC Qualifiers
- Chain of Custody (copy)
- Quality Control Summary
- Case Narrative (if applicable)
- Correspondence with Client (if applicable)

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for parameters where accreditation is required or available, unless otherwise noted in the case narrative.



ANALYTICAL REPORT

TETRA TECH
 LUCAS STAMPS
 1811 EXECUTIVE DR.
 SUITE R
 INDIANAPOLIS, IN 46241

Project Name: INDIANA BATTERY CO
 Project Phase: INDIANAPOLIS, IN
 Contract #: 3019
 Project #: 103X90260001S051712001
 Folder #: 137570
 Purchase Order #: 1144695 / CT-13

Page 1 of 18
 Arrival Temperature: 3.3
 Report Date: 07/19/2018
 Date Received: 07/10/2018
 Reprint Date: 07/19/2018

CT LAB#: 146758

Sample Description: IBC-OU1-01-BOE-180615

Client Sample #:

Sampled: 06/15/2018 0800

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	94.4	%	0.1	0.1	0.1	0.1	1.00			7/10/18 13:30	BMM	EPA 8000C
Metals Results												
Aluminum	5020	mg/kg	0.044	0.13	0.26	0.26	1.00	M	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Antimony	0.97	mg/kg	0.14	0.44	0.88	0.88	1.00		07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Arsenic	3.7	mg/kg	0.14	0.44	0.88	0.88	1.00		07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Barium	81.8	mg/kg	0.0099	0.027	0.055	0.055	1.00	M	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Beryllium	0.43	mg/kg	0.0044	0.013	0.044	0.044	1.00	Y	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Cadmium	0.80	mg/kg	0.0066	0.022	0.044	0.044	1.00	Y,M	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Calcium	83200	mg/kg	0.26	0.77	1.5	1.5	1.00	M	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Chromium	5.9	mg/kg	0.025	0.077	0.15	0.15	1.00		07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Cobalt	2.7	mg/kg	0.044	0.13	0.26	0.26	1.00	M	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Copper	25.4	mg/kg	0.077	0.22	0.44	0.44	1.00	M	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Iron	9330	mg/kg	0.33	0.99	2.0	2.0	1.00	M	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Lead	215	mg/kg	0.044	0.14	0.27	0.27	1.00	Y,M	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Magnesium	13800	mg/kg	0.15	0.44	0.88	0.88	1.00	M	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Manganese	296	mg/kg	0.027	0.082	0.16	0.16	1.00	M	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146758	Sample Description: IBC-OU1-01-BOE-180615	Client Sample #:	Sampled: 06/15/2018 0800
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Nickel	7.4	mg/kg	0.023	0.066	0.13	0.13	1.00	M	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Selenium	<0.066	mg/kg	0.066	0.22	0.44	0.44	1.00	U	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Silver	<0.019	mg/kg	0.019	0.055	0.11	0.11	1.00	U	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Thallium	<0.088	mg/kg	0.088	0.26	0.53	0.53	1.00	U M	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Vanadium	10.1	mg/kg	0.013	0.044	0.088	0.088	1.00		07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Zinc	68.1	mg/kg	0.055	0.16	0.33	0.33	1.00	M	07/11/2018 11:35	7/12/18 23:37	NAH	EPA 6010C ^
Potassium	538	mg/kg	12	36	72	72	1.00		07/11/2018 11:35	7/16/18 12:21	MDS	EPA 6010C ^
Sodium	129	mg/kg	4.4	13	26	26	1.00		07/11/2018 11:35	7/16/18 12:21	MDS	EPA 6010C ^
Mercury	0.097	mg/kg	0.0023	0.0046	0.0091	0.0091	1.00		07/11/2018 10:30	7/12/18 09:02	LJF	EPA 7471B ^

CT LAB#: 146762	Sample Description: IBC-OU1-02-BOE-180615	Client Sample #:	Sampled: 06/15/2018 0805
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	95.3	%	0.1	0.1	0.1	0.1	1.00			7/10/18 13:30	BMM	EPA 8000C
Metals Results												
Aluminum	4740	mg/kg	0.043	0.13	0.26	0.26	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Antimony	17.4	mg/kg	0.14	0.43	0.86	0.86	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Arsenic	6.7	mg/kg	0.14	0.43	0.86	0.86	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Barium	74.5	mg/kg	0.0097	0.027	0.054	0.054	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Beryllium	0.27	mg/kg	0.0043	0.013	0.043	0.043	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Cadmium	0.86	mg/kg	0.0065	0.022	0.043	0.043	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Calcium	77500	mg/kg	0.26	0.75	1.5	1.5	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Chromium	7.4	mg/kg	0.025	0.075	0.15	0.15	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Cobalt	3.1	mg/kg	0.043	0.13	0.26	0.26	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Copper	18.5	mg/kg	0.075	0.22	0.43	0.43	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146762	Sample Description: IBC-OU1-02-BOE-180615	Client Sample #:	Sampled: 06/15/2018 0805
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Iron	10400	mg/kg	0.32	0.97	1.9	1.9	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Lead	2200	mg/kg	0.043	0.13	0.27	0.27	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Magnesium	13000	mg/kg	0.15	0.43	0.86	0.86	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Manganese	328	mg/kg	0.027	0.081	0.16	0.16	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Nickel	8.1	mg/kg	0.023	0.065	0.13	0.13	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Selenium	<0.065	mg/kg	0.065	0.22	0.43	0.43	1.00	U	07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Silver	0.043	mg/kg	0.018	0.054	0.11	0.11	1.00	J B	07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Thallium	<0.086	mg/kg	0.086	0.26	0.52	0.52	1.00	U	07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Vanadium	11.3	mg/kg	0.013	0.043	0.086	0.086	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Zinc	91.7	mg/kg	0.054	0.16	0.32	0.32	1.00		07/11/2018 11:35	7/13/18 00:19	NAH	EPA 6010C ^
Potassium	525	mg/kg	12	36	71	71	1.00		07/11/2018 11:35	7/16/18 12:47	MDS	EPA 6010C ^
Sodium	124	mg/kg	4.3	13	26	26	1.00		07/11/2018 11:35	7/16/18 12:47	MDS	EPA 6010C ^
Mercury	0.26	mg/kg	0.0023	0.0046	0.0090	0.0090	1.00	Y,M	07/11/2018 10:30	7/12/18 09:04	LJF	EPA 7471B ^

CT LAB#: 146763	Sample Description: IBC-OU1-03-BOE-180615	Client Sample #:	Sampled: 06/15/2018 0810
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

Solids, Percent	92.8	%	0.1	0.1	0.1	0.1	1.00			7/10/18 13:30	BMM	EPA 8000C
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Metals Results

Aluminum	6660	mg/kg	0.045	0.14	0.27	0.27	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Antimony	6.5	mg/kg	0.15	0.45	0.90	0.90	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Arsenic	6.7	mg/kg	0.15	0.45	0.90	0.90	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Barium	90.0	mg/kg	0.010	0.028	0.056	0.056	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Beryllium	0.45	mg/kg	0.0045	0.014	0.045	0.045	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Cadmium	0.96	mg/kg	0.0068	0.023	0.045	0.045	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146763	Sample Description: IBC-OU1-03-BOE-180615	Client Sample #:	Sampled: 06/15/2018 0810
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Calcium	75300	mg/kg	0.27	0.79	1.6	1.6	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Chromium	9.4	mg/kg	0.026	0.079	0.16	0.16	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Cobalt	3.9	mg/kg	0.045	0.14	0.27	0.27	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Copper	57.3	mg/kg	0.079	0.23	0.45	0.45	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Iron	11900	mg/kg	0.34	1.0	2.0	2.0	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Lead	1380	mg/kg	0.045	0.14	0.28	0.28	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Magnesium	14800	mg/kg	0.16	0.45	0.90	0.90	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Manganese	392	mg/kg	0.028	0.085	0.17	0.17	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Nickel	10.6	mg/kg	0.024	0.068	0.14	0.14	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Selenium	<0.068	mg/kg	0.068	0.23	0.45	0.45	1.00	U	07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Silver	<0.019	mg/kg	0.019	0.056	0.11	0.11	1.00	U	07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Thallium	<0.090	mg/kg	0.090	0.27	0.54	0.54	1.00	U	07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Vanadium	15.3	mg/kg	0.014	0.045	0.090	0.090	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Zinc	69.7	mg/kg	0.056	0.17	0.34	0.34	1.00		07/11/2018 11:35	7/13/18 00:47	NAH	EPA 6010C ^
Potassium	635	mg/kg	12	37	74	74	1.00		07/11/2018 11:35	7/16/18 12:50	MDS	EPA 6010C ^
Sodium	203	mg/kg	4.5	14	27	27	1.00		07/11/2018 11:35	7/16/18 12:50	MDS	EPA 6010C ^
Mercury	0.018	mg/kg	0.0023	0.0045	0.0089	0.0089	1.00		07/11/2018 10:30	7/12/18 09:13	LJF	EPA 7471B ^

CT LAB#: 146764	Sample Description: IBC-OU1-13-BOE-180615	Client Sample #:	Sampled: 06/15/2018 0815
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	91.2	%	0.1	0.1	0.1	0.1	1.00			7/10/18 13:30	BMM	EPA 8000C
Metals Results												
Aluminum	8530	mg/kg	0.046	0.14	0.28	0.28	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Antimony	0.19	mg/kg	0.15	0.46	0.92	0.92	1.00	J	07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146764	Sample Description: IBC-OU1-13-BOE-180615	Client Sample #:	Sampled: 06/15/2018 0815
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Arsenic	3.8	mg/kg	0.15	0.46	0.92	0.92	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Barium	77.8	mg/kg	0.010	0.029	0.057	0.057	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Beryllium	0.23	mg/kg	0.0046	0.014	0.046	0.046	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Cadmium	0.65	mg/kg	0.0069	0.023	0.046	0.046	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Calcium	47900	mg/kg	0.28	0.80	1.6	1.6	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Chromium	11.9	mg/kg	0.026	0.080	0.16	0.16	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Cobalt	5.5	mg/kg	0.046	0.14	0.28	0.28	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Copper	17.8	mg/kg	0.080	0.23	0.46	0.46	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Iron	13900	mg/kg	0.34	1.0	2.1	2.1	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Lead	177	mg/kg	0.046	0.14	0.29	0.29	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Magnesium	11100	mg/kg	0.16	0.46	0.92	0.92	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Manganese	565	mg/kg	0.029	0.086	0.17	0.17	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Nickel	12.2	mg/kg	0.024	0.069	0.14	0.14	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Selenium	<0.069	mg/kg	0.069	0.23	0.46	0.46	1.00	U	07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Silver	0.21	mg/kg	0.020	0.057	0.11	0.11	1.00	B	07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Thallium	<0.092	mg/kg	0.092	0.28	0.55	0.55	1.00	U	07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Vanadium	16.7	mg/kg	0.014	0.046	0.092	0.092	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Zinc	59.4	mg/kg	0.057	0.17	0.34	0.34	1.00		07/11/2018 11:35	7/13/18 00:54	NAH	EPA 6010C ^
Potassium	675	mg/kg	13	38	76	76	1.00		07/11/2018 11:35	7/16/18 12:54	MDS	EPA 6010C ^
Sodium	68.6	mg/kg	4.6	14	28	28	1.00		07/11/2018 11:35	7/16/18 12:54	MDS	EPA 6010C ^
Mercury	0.091	mg/kg	0.0023	0.0046	0.0091	0.0091	1.00		07/11/2018 10:30	7/12/18 09:20	LJF	EPA 7471B ^

CT LAB#: 146765	Sample Description: IBC-OU1-14-BOE-180618	Client Sample #:	Sampled: 06/18/2018 0715
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Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
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Inorganic Results

Solids, Percent	94.4	%	0.1	0.1	0.1	0.1	1.00		7/10/18 13:30	BMM	EPA 8000C
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Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146765

Sample Description: IBC-OU1-14-BOE-180618

Client Sample #:

Sampled: 06/18/2018 0715

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Metals Results												
Aluminum	6810	mg/kg	0.043	0.13	0.26	0.26	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Antimony	0.72	mg/kg	0.14	0.43	0.86	0.86	1.00	J	07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Arsenic	3.4	mg/kg	0.14	0.43	0.86	0.86	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Barium	67.3	mg/kg	0.0097	0.027	0.054	0.054	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Beryllium	0.21	mg/kg	0.0043	0.013	0.043	0.043	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Cadmium	0.53	mg/kg	0.0065	0.022	0.043	0.043	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Calcium	49500	mg/kg	0.26	0.76	1.5	1.5	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Chromium	10.2	mg/kg	0.025	0.076	0.15	0.15	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Cobalt	4.5	mg/kg	0.043	0.13	0.26	0.26	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Copper	22.5	mg/kg	0.076	0.22	0.43	0.43	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Iron	11600	mg/kg	0.32	0.97	1.9	1.9	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Lead	324	mg/kg	0.043	0.14	0.27	0.27	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Magnesium	13900	mg/kg	0.15	0.43	0.86	0.86	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Manganese	481	mg/kg	0.027	0.081	0.16	0.16	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Nickel	10.3	mg/kg	0.023	0.065	0.13	0.13	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Selenium	<0.065	mg/kg	0.065	0.22	0.43	0.43	1.00	U	07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Silver	0.18	mg/kg	0.018	0.054	0.11	0.11	1.00	B	07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Thallium	<0.086	mg/kg	0.086	0.26	0.52	0.52	1.00	U	07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Vanadium	13.7	mg/kg	0.013	0.043	0.086	0.086	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Zinc	63.5	mg/kg	0.054	0.16	0.32	0.32	1.00		07/11/2018 11:35	7/13/18 01:01	NAH	EPA 6010C ^
Potassium	678	mg/kg	12	36	71	71	1.00		07/11/2018 11:35	7/16/18 12:57	MDS	EPA 6010C ^
Sodium	343	mg/kg	4.3	13	26	26	1.00		07/11/2018 11:35	7/16/18 12:57	MDS	EPA 6010C ^
Mercury	0.35	mg/kg	0.0022	0.0044	0.0088	0.0088	1.00		07/11/2018 10:30	7/12/18 09:23	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146766

Sample Description: IBC-OU1-08-BOE-180618

Client Sample #:

Sampled: 06/18/2018 0720

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	93.5	%	0.1	0.1	0.1	0.1	1.00			7/10/18 13:30	BMM	EPA 8000C
Metals Results												
Aluminum	5540	mg/kg	0.045	0.13	0.27	0.27	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Antimony	14.4	mg/kg	0.14	0.45	0.89	0.89	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Arsenic	10.8	mg/kg	0.14	0.45	0.89	0.89	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Barium	92.2	mg/kg	0.010	0.028	0.056	0.056	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Beryllium	0.21	mg/kg	0.0045	0.013	0.045	0.045	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Cadmium	1.7	mg/kg	0.0067	0.022	0.045	0.045	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Calcium	62100	mg/kg	0.27	0.78	1.6	1.6	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Chromium	15.4	mg/kg	0.026	0.078	0.16	0.16	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Cobalt	3.9	mg/kg	0.045	0.13	0.27	0.27	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Copper	66.3	mg/kg	0.078	0.22	0.45	0.45	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Iron	12700	mg/kg	0.33	1.0	2.0	2.0	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Lead	6290	mg/kg	0.045	0.14	0.28	0.28	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Magnesium	12400	mg/kg	0.16	0.45	0.89	0.89	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Manganese	362	mg/kg	0.028	0.084	0.17	0.17	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Nickel	11.3	mg/kg	0.023	0.067	0.13	0.13	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Selenium	<0.067	mg/kg	0.067	0.22	0.45	0.45	1.00	U	07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Silver	0.53	mg/kg	0.019	0.056	0.11	0.11	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Thallium	<0.089	mg/kg	0.089	0.27	0.53	0.53	1.00	U	07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Vanadium	12.5	mg/kg	0.013	0.045	0.089	0.089	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Zinc	373	mg/kg	0.056	0.17	0.33	0.33	1.00		07/11/2018 11:35	7/13/18 01:08	NAH	EPA 6010C ^
Potassium	657	mg/kg	12	37	74	74	1.00		07/11/2018 11:35	7/16/18 13:00	MDS	EPA 6010C ^
Sodium	122	mg/kg	4.5	13	27	27	1.00		07/11/2018 11:35	7/16/18 13:00	MDS	EPA 6010C ^
Mercury	0.10	mg/kg	0.0024	0.0047	0.0093	0.0093	1.00		07/11/2018 10:30	7/12/18 09:25	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146767

Sample Description: IBC-OU1-09-BOE-180618

Client Sample #:

Sampled: 06/18/2018 0725

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	95.4	%	0.1	0.1	0.1	0.1	1.00			7/10/18 13:30	BMM	EPA 8000C
Metals Results												
Aluminum	5410	mg/kg	0.044	0.13	0.26	0.26	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Antimony	828	mg/kg	0.14	0.44	0.88	0.88	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Arsenic	34.5	mg/kg	0.14	0.44	0.88	0.88	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Barium	64.3	mg/kg	0.0099	0.028	0.055	0.055	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Beryllium	0.084	mg/kg	0.0044	0.013	0.044	0.044	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Cadmium	0.51	mg/kg	0.0066	0.022	0.044	0.044	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Calcium	65700	mg/kg	0.26	0.77	1.5	1.5	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Chromium	8.6	mg/kg	0.025	0.077	0.15	0.15	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Cobalt	3.5	mg/kg	0.044	0.13	0.26	0.26	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Copper	<0.077	mg/kg	0.077	0.22	0.44	0.44	1.00	U	07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Iron	9880	mg/kg	0.33	0.99	2.0	2.0	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Lead	18900	mg/kg	0.044	0.14	0.28	0.28	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Magnesium	11400	mg/kg	0.15	0.44	0.88	0.88	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Manganese	367	mg/kg	0.028	0.083	0.17	0.17	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Nickel	8.6	mg/kg	0.023	0.066	0.13	0.13	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Selenium	<0.066	mg/kg	0.066	0.22	0.44	0.44	1.00	U	07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Silver	1.7	mg/kg	0.019	0.055	0.11	0.11	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Thallium	<0.088	mg/kg	0.088	0.26	0.53	0.53	1.00	U	07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Vanadium	11.7	mg/kg	0.013	0.044	0.088	0.088	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Zinc	61.2	mg/kg	0.055	0.17	0.33	0.33	1.00		07/11/2018 11:35	7/13/18 01:15	NAH	EPA 6010C ^
Potassium	524	mg/kg	12	36	73	73	1.00		07/11/2018 11:35	7/16/18 13:04	MDS	EPA 6010C ^
Sodium	141	mg/kg	4.4	13	26	26	1.00		07/11/2018 11:35	7/16/18 13:04	MDS	EPA 6010C ^
Mercury	0.058	mg/kg	0.0023	0.0046	0.0092	0.0092	1.00		07/11/2018 10:30	7/12/18 09:27	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146768 Sample Description: IBC-OU3-LEEVEE-BOE-180618 Client Sample #: Sampled: 06/18/2018 0735

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	90.6	%	0.1	0.1	0.1	0.1	1.00			7/10/18 13:30	BMM	EPA 8000C
Metals Results												
Aluminum	5320	mg/kg	0.046	0.14	0.28	0.28	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Antimony	5.1	mg/kg	0.15	0.46	0.93	0.93	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Arsenic	4.8	mg/kg	0.15	0.46	0.93	0.93	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Barium	61.9	mg/kg	0.010	0.029	0.058	0.058	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Beryllium	<0.0046	mg/kg	0.0046	0.014	0.046	0.046	1.00	U	07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Cadmium	0.51	mg/kg	0.0070	0.023	0.046	0.046	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Calcium	56900	mg/kg	0.28	0.81	1.6	1.6	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Chromium	19.5	mg/kg	0.027	0.081	0.16	0.16	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Cobalt	2.9	mg/kg	0.046	0.14	0.28	0.28	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Copper	46.8	mg/kg	0.081	0.23	0.46	0.46	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Iron	11800	mg/kg	0.35	1.0	2.1	2.1	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Lead	427	mg/kg	0.046	0.15	0.29	0.29	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Magnesium	10500	mg/kg	0.16	0.46	0.93	0.93	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Manganese	389	mg/kg	0.029	0.087	0.17	0.17	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Nickel	8.7	mg/kg	0.024	0.070	0.14	0.14	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Selenium	<0.070	mg/kg	0.070	0.23	0.46	0.46	1.00	U	07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Silver	0.62	mg/kg	0.020	0.058	0.12	0.12	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Thallium	<0.093	mg/kg	0.093	0.28	0.56	0.56	1.00	U	07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Vanadium	10.5	mg/kg	0.014	0.046	0.093	0.093	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Zinc	72.3	mg/kg	0.058	0.17	0.35	0.35	1.00		07/11/2018 11:35	7/13/18 01:22	NAH	EPA 6010C ^
Potassium	572	mg/kg	13	38	77	77	1.00		07/11/2018 11:35	7/16/18 13:13	MDS	EPA 6010C ^
Sodium	164	mg/kg	4.6	14	28	28	1.00		07/11/2018 11:35	7/16/18 13:13	MDS	EPA 6010C ^
Mercury	0.071	mg/kg	0.0023	0.0046	0.0092	0.0092	1.00		07/11/2018 10:30	7/12/18 09:30	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146769

Sample Description: IBC-OU1-18A-BOE-180622

Client Sample #:

Sampled: 06/22/2018 0800

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	80.1	%	0.1	0.1	0.1	0.1	1.00			7/10/18 13:30	BMM	EPA 8000C
Metals Results												
Aluminum	6330	mg/kg	0.049	0.15	0.30	0.30	1.00		07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Antimony	0.84	mg/kg	0.16	0.49	0.99	0.99	1.00	J	07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Arsenic	7.5	mg/kg	0.16	0.49	0.99	0.99	1.00		07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Barium	70.5	mg/kg	0.011	0.031	0.062	0.062	1.00		07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Beryllium	0.74	mg/kg	0.0049	0.015	0.049	0.049	1.00		07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Cadmium	<0.0074	mg/kg	0.0074	0.025	0.049	0.049	1.00	U	07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Calcium	22300	mg/kg	0.30	0.87	1.7	1.7	1.00		07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Chromium	10.8	mg/kg	0.028	0.087	0.17	0.17	1.00		07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Cobalt	4.6	mg/kg	0.049	0.15	0.30	0.30	1.00		07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Copper	22.3	mg/kg	0.087	0.25	0.49	0.49	1.00		07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Iron	14300	mg/kg	0.37	1.1	2.2	2.2	1.00		07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Lead	159	mg/kg	0.049	0.15	0.31	0.31	1.00		07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Magnesium	5350	mg/kg	0.17	0.49	0.99	0.99	1.00		07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Manganese	423	mg/kg	0.031	0.093	0.19	0.19	1.00		07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Nickel	11.6	mg/kg	0.026	0.074	0.15	0.15	1.00		07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Selenium	0.18	mg/kg	0.074	0.25	0.49	0.49	1.00	J	07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Silver	<0.021	mg/kg	0.021	0.062	0.12	0.12	1.00	U	07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Thallium	<0.099	mg/kg	0.099	0.30	0.59	0.59	1.00	U	07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Vanadium	19.0	mg/kg	0.015	0.049	0.099	0.099	1.00		07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Zinc	54.7	mg/kg	0.062	0.19	0.37	0.37	1.00		07/11/2018 11:35	7/13/18 01:29	NAH	EPA 6010C ^
Potassium	689	mg/kg	14	41	82	82	1.00		07/11/2018 11:35	7/16/18 13:16	MDS	EPA 6010C ^
Sodium	118	mg/kg	4.9	15	30	30	1.00		07/11/2018 11:35	7/16/18 13:16	MDS	EPA 6010C ^
Mercury	0.18	mg/kg	0.0028	0.0055	0.011	0.011	1.00		07/11/2018 10:30	7/12/18 09:32	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146770

Sample Description: IBC-ROW-01-BOE-180629

Client Sample #:

Sampled: 06/29/2018 1000

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	88.6	%	0.1	0.1	0.1	0.1	1.00			7/10/18 13:30	BMM	EPA 8000C
Metals Results												
Aluminum	4610	mg/kg	0.044	0.13	0.26	0.26	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Antimony	3.5	mg/kg	0.14	0.44	0.87	0.87	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Arsenic	6.5	mg/kg	0.14	0.44	0.87	0.87	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Barium	43.1	mg/kg	0.0098	0.027	0.055	0.055	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Beryllium	0.50	mg/kg	0.0044	0.013	0.044	0.044	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Cadmium	0.50	mg/kg	0.0065	0.022	0.044	0.044	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Calcium	52300	mg/kg	0.26	0.76	1.5	1.5	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Chromium	7.3	mg/kg	0.025	0.076	0.15	0.15	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Cobalt	3.1	mg/kg	0.044	0.13	0.26	0.26	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Copper	20.5	mg/kg	0.076	0.22	0.44	0.44	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Iron	10400	mg/kg	0.33	0.98	2.0	2.0	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Lead	155	mg/kg	0.044	0.14	0.27	0.27	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Magnesium	14900	mg/kg	0.15	0.44	0.87	0.87	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Manganese	292	mg/kg	0.027	0.082	0.16	0.16	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Nickel	8.8	mg/kg	0.023	0.065	0.13	0.13	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Selenium	0.074	mg/kg	0.065	0.22	0.44	0.44	1.00	J	07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Silver	<0.019	mg/kg	0.019	0.055	0.11	0.11	1.00	U	07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Thallium	<0.087	mg/kg	0.087	0.26	0.52	0.52	1.00	U	07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Vanadium	12.6	mg/kg	0.013	0.044	0.087	0.087	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Zinc	43.9	mg/kg	0.055	0.16	0.33	0.33	1.00		07/11/2018 11:35	7/13/18 01:35	NAH	EPA 6010C ^
Potassium	526	mg/kg	12	36	72	72	1.00		07/11/2018 11:35	7/16/18 13:19	MDS	EPA 6010C ^
Sodium	126	mg/kg	4.4	13	26	26	1.00		07/11/2018 11:35	7/16/18 13:19	MDS	EPA 6010C ^
Mercury	0.081	mg/kg	0.0024	0.0048	0.0095	0.0095	1.00		07/11/2018 10:30	7/12/18 09:34	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146771

Sample Description: IBC-ROW-02-BOE-180702

Client Sample #:

Sampled: 07/02/2018 0820

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	91.3	%	0.1	0.1	0.1	0.1	1.00			7/10/18 13:30	BMM	EPA 8000C
Metals Results												
Aluminum	5990	mg/kg	0.044	0.13	0.26	0.26	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Antimony	<0.14	mg/kg	0.14	0.44	0.87	0.87	1.00	U	07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Arsenic	4.4	mg/kg	0.14	0.44	0.87	0.87	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Barium	89.9	mg/kg	0.0098	0.027	0.054	0.054	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Beryllium	0.36	mg/kg	0.0044	0.013	0.044	0.044	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Cadmium	0.38	mg/kg	0.0065	0.022	0.044	0.044	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Calcium	35100	mg/kg	0.26	0.76	1.5	1.5	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Chromium	10.0	mg/kg	0.025	0.076	0.15	0.15	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Cobalt	4.3	mg/kg	0.044	0.13	0.26	0.26	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Copper	23.5	mg/kg	0.076	0.22	0.44	0.44	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Iron	11700	mg/kg	0.33	0.98	2.0	2.0	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Lead	62.4	mg/kg	0.044	0.14	0.27	0.27	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Magnesium	10800	mg/kg	0.15	0.44	0.87	0.87	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Manganese	354	mg/kg	0.027	0.082	0.16	0.16	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Nickel	10.4	mg/kg	0.023	0.065	0.13	0.13	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Selenium	0.44	mg/kg	0.065	0.22	0.44	0.44	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Silver	0.16	mg/kg	0.019	0.054	0.11	0.11	1.00	B	07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Thallium	<0.087	mg/kg	0.087	0.26	0.52	0.52	1.00	U	07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Vanadium	14.6	mg/kg	0.013	0.044	0.087	0.087	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Zinc	72.7	mg/kg	0.054	0.16	0.33	0.33	1.00		07/11/2018 11:35	7/13/18 01:42	NAH	EPA 6010C ^
Potassium	766	mg/kg	12	36	72	72	1.00		07/11/2018 11:35	7/16/18 13:23	MDS	EPA 6010C ^
Sodium	236	mg/kg	4.4	13	26	26	1.00		07/11/2018 11:35	7/16/18 13:23	MDS	EPA 6010C ^
Mercury	0.44	mg/kg	0.0024	0.0048	0.0094	0.0094	1.00		07/11/2018 10:30	7/12/18 09:36	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146772

Sample Description: IBC-ROW-03-BOE-180702

Client Sample #:

Sampled: 07/02/2018 1140

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	93.8	%	0.1	0.1	0.1	0.1	1.00			7/10/18 13:30	BMM	EPA 8000C
Metals Results												
Aluminum	4240	mg/kg	0.045	0.13	0.27	0.27	1.00		07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Antimony	0.16	mg/kg	0.15	0.45	0.89	0.89	1.00	J	07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Arsenic	3.5	mg/kg	0.15	0.45	0.89	0.89	1.00		07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Barium	41.3	mg/kg	0.010	0.028	0.056	0.056	1.00		07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Beryllium	<0.0045	mg/kg	0.0045	0.013	0.045	0.045	1.00	U	07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Cadmium	0.30	mg/kg	0.0067	0.022	0.045	0.045	1.00		07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Calcium	73700	mg/kg	0.27	0.78	1.6	1.6	1.00		07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Chromium	7.8	mg/kg	0.026	0.078	0.16	0.16	1.00		07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Cobalt	3.0	mg/kg	0.045	0.13	0.27	0.27	1.00		07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Copper	17.9	mg/kg	0.078	0.22	0.45	0.45	1.00		07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Iron	8990	mg/kg	0.33	1.0	2.0	2.0	1.00		07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Lead	35.7	mg/kg	0.045	0.14	0.28	0.28	1.00		07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Magnesium	17200	mg/kg	0.16	0.45	0.89	0.89	1.00		07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Manganese	385	mg/kg	0.028	0.084	0.17	0.17	1.00		07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Nickel	7.9	mg/kg	0.023	0.067	0.13	0.13	1.00		07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Selenium	<0.067	mg/kg	0.067	0.22	0.45	0.45	1.00	U	07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Silver	<0.019	mg/kg	0.019	0.056	0.11	0.11	1.00	U	07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Thallium	<0.089	mg/kg	0.089	0.27	0.54	0.54	1.00	U	07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Vanadium	10.5	mg/kg	0.013	0.045	0.089	0.089	1.00		07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Zinc	46.6	mg/kg	0.056	0.17	0.33	0.33	1.00		07/11/2018 11:35	7/13/18 01:49	NAH	EPA 6010C ^
Potassium	477	mg/kg	12	37	74	74	1.00		07/11/2018 11:35	7/16/18 13:26	MDS	EPA 6010C ^
Sodium	124	mg/kg	4.5	13	27	27	1.00		07/11/2018 11:35	7/16/18 13:26	MDS	EPA 6010C ^
Mercury	<0.0024	mg/kg	0.0024	0.0047	0.0093	0.0093	1.00	U	07/11/2018 10:30	7/12/18 09:39	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146773

Sample Description: IBC-ROW-05-BOE-180703

Client Sample #:

Sampled: 07/03/2018 1035

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	87.0	%	0.1	0.1	0.1	0.1	1.00			7/10/18 13:30	BMM	EPA 8000C
Metals Results												
Aluminum	6400	mg/kg	0.047	0.14	0.28	0.28	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Antimony	0.83	mg/kg	0.15	0.47	0.95	0.95	1.00	J	07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Arsenic	5.3	mg/kg	0.15	0.47	0.95	0.95	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Barium	69.0	mg/kg	0.011	0.030	0.059	0.059	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Beryllium	0.14	mg/kg	0.0047	0.014	0.047	0.047	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Cadmium	0.38	mg/kg	0.0071	0.024	0.047	0.047	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Calcium	43500	mg/kg	0.28	0.83	1.7	1.7	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Chromium	10.3	mg/kg	0.027	0.083	0.17	0.17	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Cobalt	4.6	mg/kg	0.047	0.14	0.28	0.28	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Copper	27.1	mg/kg	0.083	0.24	0.47	0.47	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Iron	10900	mg/kg	0.36	1.1	2.1	2.1	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Lead	148	mg/kg	0.047	0.15	0.30	0.30	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Magnesium	14100	mg/kg	0.17	0.47	0.95	0.95	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Manganese	421	mg/kg	0.030	0.089	0.18	0.18	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Nickel	11.2	mg/kg	0.025	0.071	0.14	0.14	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Selenium	0.50	mg/kg	0.071	0.24	0.47	0.47	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Silver	<0.020	mg/kg	0.020	0.059	0.12	0.12	1.00	U	07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Thallium	<0.095	mg/kg	0.095	0.28	0.57	0.57	1.00	U	07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Vanadium	13.5	mg/kg	0.014	0.047	0.095	0.095	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Zinc	97.8	mg/kg	0.059	0.18	0.36	0.36	1.00		07/11/2018 11:35	7/13/18 02:17	NAH	EPA 6010C ^
Potassium	726	mg/kg	13	39	78	78	1.00		07/11/2018 11:35	7/16/18 13:29	MDS	EPA 6010C ^
Sodium	400	mg/kg	4.7	14	28	28	1.00		07/11/2018 11:35	7/16/18 13:29	MDS	EPA 6010C ^
Mercury	0.059	mg/kg	0.0025	0.0051	0.010	0.010	1.00		07/11/2018 10:30	7/12/18 09:41	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146774

Sample Description: IBC-ROW-04-BOE-180703

Client Sample #:

Sampled: 07/03/2018 1315

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	88.5	%	0.1	0.1	0.1	0.1	1.00			7/10/18 13:30	BMM	EPA 8000C
Metals Results												
Aluminum	4310	mg/kg	0.045	0.13	0.27	0.27	1.00		07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Antimony	0.34	mg/kg	0.14	0.45	0.89	0.89	1.00	J	07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Arsenic	2.7	mg/kg	0.14	0.45	0.89	0.89	1.00		07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Barium	34.5	mg/kg	0.010	0.028	0.056	0.056	1.00		07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Beryllium	0.0047	mg/kg	0.0045	0.013	0.045	0.045	1.00	J	07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Cadmium	<0.0067	mg/kg	0.0067	0.022	0.045	0.045	1.00	U	07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Calcium	29800	mg/kg	0.27	0.78	1.6	1.6	1.00		07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Chromium	6.7	mg/kg	0.026	0.078	0.16	0.16	1.00		07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Cobalt	3.3	mg/kg	0.045	0.13	0.27	0.27	1.00		07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Copper	8.2	mg/kg	0.078	0.22	0.45	0.45	1.00		07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Iron	8210	mg/kg	0.33	1.0	2.0	2.0	1.00		07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Lead	8.6	mg/kg	0.045	0.14	0.28	0.28	1.00		07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Magnesium	11200	mg/kg	0.16	0.45	0.89	0.89	1.00		07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Manganese	284	mg/kg	0.028	0.083	0.17	0.17	1.00		07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Nickel	7.8	mg/kg	0.023	0.067	0.13	0.13	1.00		07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Selenium	0.21	mg/kg	0.067	0.22	0.45	0.45	1.00	J	07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Silver	<0.019	mg/kg	0.019	0.056	0.11	0.11	1.00	U	07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Thallium	<0.089	mg/kg	0.089	0.27	0.53	0.53	1.00	U	07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Vanadium	10.4	mg/kg	0.013	0.045	0.089	0.089	1.00		07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Zinc	27.4	mg/kg	0.056	0.17	0.33	0.33	1.00		07/11/2018 11:35	7/13/18 02:24	NAH	EPA 6010C ^
Potassium	459	mg/kg	12	37	73	73	1.00		07/11/2018 11:35	7/16/18 13:33	MDS	EPA 6010C ^
Sodium	75.4	mg/kg	4.5	13	27	27	1.00		07/11/2018 11:35	7/16/18 13:33	MDS	EPA 6010C ^
Mercury	0.045	mg/kg	0.0025	0.0051	0.010	0.010	1.00		07/11/2018 10:30	7/12/18 11:45	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146775

Sample Description: IBC-OU1-02-BOE-02-180615D

Client Sample #:

Sampled: 06/15/2018 0805

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	91.0	%	0.1	0.1	0.1	0.1	1.00			7/10/18 13:30	BMM	EPA 8000C
Metals Results												
Aluminum	4380	mg/kg	0.045	0.13	0.27	0.27	1.00		07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Antimony	0.32	mg/kg	0.15	0.45	0.89	0.89	1.00	J	07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Arsenic	2.7	mg/kg	0.15	0.45	0.89	0.89	1.00		07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Barium	43.2	mg/kg	0.010	0.028	0.056	0.056	1.00		07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Beryllium	0.013	mg/kg	0.0045	0.013	0.045	0.045	1.00	J	07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Cadmium	<0.0067	mg/kg	0.0067	0.022	0.045	0.045	1.00	U	07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Calcium	27100	mg/kg	0.27	0.78	1.6	1.6	1.00		07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Chromium	6.6	mg/kg	0.026	0.078	0.16	0.16	1.00		07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Cobalt	3.2	mg/kg	0.045	0.13	0.27	0.27	1.00		07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Copper	8.0	mg/kg	0.078	0.22	0.45	0.45	1.00		07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Iron	8120	mg/kg	0.33	1.0	2.0	2.0	1.00		07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Lead	11.0	mg/kg	0.045	0.14	0.28	0.28	1.00		07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Magnesium	10400	mg/kg	0.16	0.45	0.89	0.89	1.00		07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Manganese	250	mg/kg	0.028	0.084	0.17	0.17	1.00		07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Nickel	7.7	mg/kg	0.023	0.067	0.13	0.13	1.00		07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Selenium	0.40	mg/kg	0.067	0.22	0.45	0.45	1.00	J	07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Silver	<0.019	mg/kg	0.019	0.056	0.11	0.11	1.00	U	07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Thallium	<0.089	mg/kg	0.089	0.27	0.54	0.54	1.00	U	07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Vanadium	10.3	mg/kg	0.013	0.045	0.089	0.089	1.00		07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Zinc	29.6	mg/kg	0.056	0.17	0.33	0.33	1.00		07/11/2018 11:35	7/13/18 02:31	NAH	EPA 6010C ^
Potassium	480	mg/kg	12	37	74	74	1.00		07/11/2018 11:35	7/16/18 13:36	MDS	EPA 6010C ^
Sodium	119	mg/kg	4.5	13	27	27	1.00		07/11/2018 11:35	7/16/18 13:36	MDS	EPA 6010C ^
Mercury	0.33	mg/kg	0.0023	0.0046	0.0091	0.0091	1.00		07/11/2018 10:30	7/12/18 11:47	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

CT LAB#: 146776

Sample Description: IBC-ROW-04-BOE-180703-D

Client Sample #:

Sampled: 07/03/2018 1315

Analyte	Result	Units	DL	DOD LOD	DOD LOQ	RL	DF	Qualifier	Prep Date/Time	Analysis Date/Time	Analyst	Method
Inorganic Results												
Solids, Percent	88.6	%	0.1	0.1	0.1	0.1	1.00			7/10/18 13:30	BMM	EPA 8000C
Metals Results												
Aluminum	4310	mg/kg	0.046	0.14	0.28	0.28	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Antimony	6.7	mg/kg	0.15	0.46	0.93	0.93	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Arsenic	6.4	mg/kg	0.15	0.46	0.93	0.93	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Barium	90.3	mg/kg	0.010	0.029	0.058	0.058	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Beryllium	0.30	mg/kg	0.0046	0.014	0.046	0.046	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Cadmium	0.47	mg/kg	0.0069	0.023	0.046	0.046	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Calcium	70900	mg/kg	0.28	0.81	1.6	1.6	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Chromium	7.4	mg/kg	0.027	0.081	0.16	0.16	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Cobalt	3.2	mg/kg	0.046	0.14	0.28	0.28	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Copper	20.3	mg/kg	0.081	0.23	0.46	0.46	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Iron	9520	mg/kg	0.35	1.0	2.1	2.1	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Lead	1830	mg/kg	0.046	0.14	0.29	0.29	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Magnesium	16700	mg/kg	0.16	0.46	0.93	0.93	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Manganese	324	mg/kg	0.029	0.087	0.17	0.17	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Nickel	9.1	mg/kg	0.024	0.069	0.14	0.14	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Selenium	0.38	mg/kg	0.069	0.23	0.46	0.46	1.00	J	07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Silver	<0.020	mg/kg	0.020	0.058	0.12	0.12	1.00	U	07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Thallium	<0.093	mg/kg	0.093	0.28	0.56	0.56	1.00	U	07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Vanadium	11.5	mg/kg	0.014	0.046	0.093	0.093	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Zinc	96.7	mg/kg	0.058	0.17	0.35	0.35	1.00		07/11/2018 11:35	7/13/18 02:38	NAH	EPA 6010C ^
Potassium	457	mg/kg	13	38	76	76	1.00		07/11/2018 11:35	7/16/18 13:39	MDS	EPA 6010C ^
Sodium	75.8	mg/kg	4.6	14	28	28	1.00		07/11/2018 11:35	7/16/18 13:39	MDS	EPA 6010C ^
Mercury	0.0034	mg/kg	0.0025	0.0049	0.0097	0.0097	1.00	J	07/11/2018 10:30	7/12/18 11:49	LJF	EPA 7471B ^

Unless specifically stated to the contrary, soil/sediment/sludge sample results reported on a Dry Weight Basis

Notes:

^ Indicates the laboratory is NELAP accredited for this analyte by the indicated matrix and method. DL (detection limit), LOD (limit of detection), loq (limit of quantitation) as defined by most recent DOD QSM version.

All samples were received intact and properly preserved unless otherwise noted. The results reported relate only to the samples tested. This report shall not be reproduced, except in full, without written approval of this laboratory. The Chain of Custody is attached.

This report has been specifically prepared to satisfy project or program requirements. These results are in compliance with NELAC requirements for the parameters where accreditation is required or available, unless noted in the case narrative.

Submitted by: Brett M. Szymanski
Project Manager
608-356-2760

QC Qualifiers		Current CT Laboratories Certifications
Code	Description	
B	Analyte detected in the associated Method Blank.	Wisconsin (WDNR) Chemistry ID# 157066030 Wisconsin (DATCP) Bacteriology ID# 105-289 Louisiana NELAP (primary) ID# ACC20160002 Illinois NELAP Lab ID# 200073 Kansas NELAP Lab ID# E-10368 Virginia NELAP Lab ID# 460203 Maryland Lab ID# WI00061 ISO/IEC 17025-2005 A2LA Cert # 3806.01 DoD-ELAP A2LA 3806.01 GA EPD Stipulation ID ACC20160002
C	Toxicity present in BOD sample.	
D	Diluted Out.	
E	Safe, No Total Coliform detected.	
F	Unsafe, Total Coliform detected, no E. Coli detected.	
G	Unsafe, Total Coliform detected and E. Coli detected.	
H	Holding time exceeded.	
I	BOD incubator temperature was outside acceptance limits during test period.	
J	Estimated value.	
L	Significant peaks were detected outside the chromatographic window.	
M	Matrix spike and/or Matrix Spike Duplicate recovery outside acceptance limits.	
N	Insufficient BOD oxygen depletion.	
O	Complete BOD oxygen depletion.	
P	Concentration of analyte differs more than 40% between primary and confirmation analysis.	
Q	Laboratory Control Sample outside acceptance limits.	
R	See Narrative at end of report.	
S	Surrogate standard recovery outside acceptance limits due to apparent matrix effects.	
T	Sample received with improper preservation or temperature.	
U	Analyte concentration was below detection limit.	
V	Raised Quantitation or Reporting Limit due to limited sample amount or dilution for matrix background interference.	
W	Sample amount received was below program minimum.	
X	Analyte exceeded calibration range.	
Y	Replicate/Duplicate precision outside acceptance limits.	
Z	Specified calibration criteria was not met.	

QC SUMMARY REPORT

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	151089	Analysis Date:	07/10/2018	Prep Batch #:	Matrix:	SOIL
CTLab #:	147097	Analysis Time:	13:30	Prep Date/Time:	Method:	SW8000C
Parent Sample #:	146758	Analyst:	BMM	Prep Analyst:		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Solids, Percent	95.0	%	94.4					1	8

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	151138	Analysis Date:	07/12/2018	Prep Batch #:	67788	Matrix:	SOIL
CTLab #:	146883	Analysis Time:	09:06	Prep Date/Time:	07/11/2018 10:30	Method:	SW7471B
Parent Sample #:	146762	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.19	mg/kg	0.26				0.20	31	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Lab Control Spike Soil

Analytical Run #:	151138	Analysis Date:	07/12/2018	Prep Batch #:	67788	Matrix:	SOLID
CTLab #:	146882	Analysis Time:	08:57	Prep Date/Time:	07/11/2018 10:30	Method:	SW7471B
Parent Sample #:		Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.099	mg/kg			0.083	119	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	151138	Analysis Date:	07/12/2018	Prep Batch #:	67788	Matrix:	SOLID
CTLab #:	146881	Analysis Time:	08:59	Prep Date/Time:	07/11/2018 10:30	Method:	SW7471B
Parent Sample #:		Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.0021	mg/kg		U	0		00415		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Matrix Spike Duplicate Soil

Analytical Run #:	151138	Analysis Date:	07/12/2018	Prep Batch #:	67788	Matrix:	SOIL
CTLab #:	146885	Analysis Time:	09:11	Prep Date/Time:	07/11/2018 10:30	Method:	SW7471B
Parent Sample #:	146884	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.38	mg/kg	0.26		0.092	130	80 --- 120	11	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Matrix Spike Soil

Analytical Run #:	151138	Analysis Date:	07/12/2018	Prep Batch #:	67788	Matrix:	SOIL
CTLab #:	146884	Analysis Time:	09:09	Prep Date/Time:	07/11/2018 10:30	Method:	SW7471B
Parent Sample #:	146762	Analyst:	LJF	Prep Analyst:	LJF		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Mercury	0.40	mg/kg	0.26		0.087	161	80 --- 120		

Duplicate

Analytical Run #:	151151	Analysis Date:	07/12/2018	Prep Batch #:	67804	Matrix:	SOIL
CTLab #:	147025	Analysis Time:	23:51	Prep Date/Time:	07/11/2018 11:35	Method:	SW6010
Parent Sample #:	146758	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	4300	mg/kg	5020				9.6	15	20
Antimony	0.48	mg/kg	0.97				32	68	20
Arsenic	3.6	mg/kg	3.7				32	3	20
Barium	76.4	mg/kg	81.8				2.0	7	20
Beryllium	0.33	mg/kg	0.43				1.60	26	20
Cadmium	0.61	mg/kg	0.80				1.60	27	20
Calcium	80600	mg/kg	83200				56	3	20
Chromium	6.6	mg/kg	5.9				5.6	11	20
Cobalt	2.7	mg/kg	2.7				9.6	0	20
Copper	22.6	mg/kg	25.4				16.0	12	20
Iron	9190	mg/kg	9330				72	2	20
Lead	130	mg/kg	215				10.0	49	20
Magnesium	12200	mg/kg	13800				32	12	20
Manganese	298	mg/kg	296				6.0	1	20
Nickel	7.5	mg/kg	7.4				4.8	1	20
Selenium	0.069	mg/kg	<0.0662				16	200	20
Silver	0.0188	mg/kg	<0.0188 U				4.0	0	20
Thallium	0.0883	mg/kg	<0.0883 U				19	0	20
Vanadium	10	mg/kg	10.1				3.2	1	20
Zinc	64.0	mg/kg	68.1				12.0	6	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Lab Control Spike Soil

Analytical Run #:	151151	Analysis Date:	07/12/2018	Prep Batch #:	67804	Matrix:	SOLID
CTLab #:	147019	Analysis Time:	23:22	Prep Date/Time:	07/11/2018 11:35	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	108	mg/kg			100	108	80 --- 120		
Antimony	24.9	mg/kg			25.0	100	80 --- 120		
Arsenic	106	mg/kg			100	106	80 --- 120		
Barium	96.3	mg/kg			100	96	80 --- 120		
Beryllium	2.7	mg/kg			2.5	108	80 --- 120		
Cadmium	2.2	mg/kg			2.5	88	80 --- 120		
Calcium	4850	mg/kg			5000	97	80 --- 120		
Chromium	9.6	mg/kg			10.0	96	80 --- 120		
Cobalt	24.4	mg/kg			25.0	98	80 --- 120		
Copper	12.3	mg/kg			12.5	98	80 --- 120		
Iron	50.5	mg/kg			50.0	101	80 --- 120		
Lead	23.8	mg/kg			25.0	95	80 --- 120		
Magnesium	2370	mg/kg			2500	95	80 --- 120		
Manganese	21.3	mg/kg			25.0	85	80 --- 120		
Nickel	23.1	mg/kg			25.0	92	80 --- 120		
Selenium	101	mg/kg			100	101	80 --- 120		
Silver	2.6	mg/kg			2.5	104	75 --- 120		
Thallium	90.0	mg/kg			100	90	80 --- 120		
Vanadium	23.6	mg/kg			25.0	94	80 --- 120		
Zinc	23.9	mg/kg			25.0	96	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	151151	Analysis Date:	07/12/2018	Prep Batch #:	67804	Matrix:	SOLID
CTLab #:	147018	Analysis Time:	23:29	Prep Date/Time:	07/11/2018 11:35	Method:	SW6010
Parent Sample #:		Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	0.04	mg/kg		U	0		0.12		
Antimony	0.13	mg/kg		U	0		0.40		
Arsenic	0.13	mg/kg		U	0		0.40		
Barium	0.009	mg/kg		U	0		0.025		
Beryllium	0.004	mg/kg		U	0		0.020		
Cadmium	0.006	mg/kg		U	0		0.020		
Calcium	0.45	mg/kg			0		0.70		
Chromium	0.023	mg/kg		U	0		0.125		
Cobalt	0.04	mg/kg		U	0		0.12		
Copper	0.07	mg/kg		U	0		0.20		
Iron	0.3	mg/kg		U	0		0.9		
Lead	0.04	mg/kg		U	0		0.125		
Magnesium	0.14	mg/kg		U	0		0.40		
Manganese	0.025	mg/kg		U	0		0.075		
Nickel	0.021	mg/kg		U	0		0.060		
Selenium	0.06	mg/kg		U	0		0.20		
Silver	0.019	mg/kg			0		0.050		
Thallium	0.26	mg/kg			0		0.24		
Vanadium	0.012	mg/kg		U	0		0.040		
Zinc	0.05	mg/kg		U	0		0.15		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Matrix Spike Duplicate Soil

Analytical Run #:	151151	Analysis Date:	07/13/2018	Prep Batch #:	67804	Matrix:	SOIL
CTLab #:	147027	Analysis Time:	00:05	Prep Date/Time:	07/11/2018 11:35	Method:	SW6010
Parent Sample #:	147026	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	4970	mg/kg	5020		110	0	80 --- 120	0	20
Antimony	13.9	mg/kg	0.97		27.4	47	80 --- 120	10	20
Arsenic	123	mg/kg	3.7		110	108	80 --- 120	6	20
Barium	178	mg/kg	81.8		110	87	80 --- 120	6	20
Beryllium	3.2	mg/kg	0.43		2.7	103	80 --- 120	4	20
Cadmium	2.6	mg/kg	0.80		2.7	67	80 --- 120	3	20
Calcium	86400	mg/kg	83200		5490	58	80 --- 120	12	20
Chromium	15.9	mg/kg	5.9		11.0	91	80 --- 120	4	20
Cobalt	22.6	mg/kg	2.7		27.4	73	80 --- 120	5	20
Copper	56.8	mg/kg	25.4		13.7	229	80 --- 120	29	20
Iron	9330	mg/kg	9330		54.9	0	80 --- 120	3	20
Lead	180	mg/kg	215		27.4	0	80 --- 120	1	20
Magnesium	15100	mg/kg	13800		2740	47	80 --- 120	3	20
Manganese	332	mg/kg	296		27.4	131	80 --- 120	9	20
Nickel	27.3	mg/kg	7.4		27.4	73	80 --- 120	3	20
Selenium	99.1	mg/kg	BDL		110	90	80 --- 120	6	20
Silver	3.4	mg/kg	BDL		2.7	126	75 --- 125	7	20
Thallium	64.2	mg/kg	BDL		110	58	80 --- 120	4	20
Vanadium	40.3	mg/kg	10.1		27.4	110	80 --- 120	6	20
Zinc	81.8	mg/kg	68.1		27.4	50	80 --- 120	38	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Matrix Spike Soil

Analytical Run #:	151151	Analysis Date:	07/12/2018	Prep Batch #:	67804	Matrix:	SOIL
CTLab #:	147026	Analysis Time:	23:58	Prep Date/Time:	07/11/2018 11:35	Method:	SW6010
Parent Sample #:	146758	Analyst:	NAH	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Aluminum	4990	mg/kg	5020		110	0	80 --- 120		
Antimony	12.6	mg/kg	0.97		27.6	42	80 --- 120		
Arsenic	116	mg/kg	3.7		110	102	80 --- 120		
Barium	169	mg/kg	81.8		110	79	80 --- 120		
Beryllium	3.1	mg/kg	0.43		2.8	95	80 --- 120		
Cadmium	2.6	mg/kg	0.80		2.8	64	80 --- 120		
Calcium	77200	mg/kg	83200		5520	0	80 --- 120		
Chromium	15.3	mg/kg	5.9		11.0	85	80 --- 120		
Cobalt	21.7	mg/kg	2.7		27.6	69	80 --- 120		
Copper	76.4	mg/kg	25.4		13.8	370	80 --- 120		
Iron	9130	mg/kg	9330		55.2	0	80 --- 120		
Lead	179	mg/kg	215		27.6	0	80 --- 120		
Magnesium	14800	mg/kg	13800		2760	36	80 --- 120		
Manganese	306	mg/kg	296		27.6	36	80 --- 120		
Nickel	26.6	mg/kg	7.4		27.6	70	80 --- 120		
Selenium	93.8	mg/kg	BDL		110	85	80 --- 120		
Silver	3.2	mg/kg	BDL		2.8	114	75 --- 125		
Thallium	62.1	mg/kg	BDL		110	56	80 --- 120		
Vanadium	38.1	mg/kg	10.1		27.6	101	80 --- 120		
Zinc	120	mg/kg	68.1		27.6	188	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	151152	Analysis Date:	07/16/2018	Prep Batch #:	67804	Matrix:	SOIL
CTLab #:	147025	Analysis Time:	12:34	Prep Date/Time:	07/11/2018 11:35	Method:	SW6010
Parent Sample #:	146758	Analyst:	MDS	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	461	mg/kg	538				2.64	15	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Duplicate

Analytical Run #:	151152	Analysis Date:	07/16/2018	Prep Batch #:	67804	Matrix:	SOIL
CTLab #:	147025	Analysis Time:	12:34	Prep Date/Time:	07/11/2018 11:35	Method:	SW6010
Parent Sample #:	146758	Analyst:	MDS	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	96.8	mg/kg	129				0.96	29	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Lab Control Spike Soil

Analytical Run #:	151152	Analysis Date:	07/16/2018	Prep Batch #:	67804	Matrix:	SOLID
CTLab #:	147019	Analysis Time:	12:15	Prep Date/Time:	07/11/2018 11:35	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	2680	mg/kg			2500	107	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Lab Control Spike Soil

Analytical Run #:	151152	Analysis Date:	07/16/2018	Prep Batch #:	67804	Matrix:	SOLID
CTLab #:	147019	Analysis Time:	12:15	Prep Date/Time:	07/11/2018 11:35	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	2530	mg/kg			2500	101	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	151152	Analysis Date:	07/16/2018	Prep Batch #:	67804	Matrix:	SOLID
CTLab #:	147018	Analysis Time:	12:18	Prep Date/Time:	07/11/2018 11:35	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	11	mg/kg		U	0		33		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Method Blank Soil

Analytical Run #:	151152	Analysis Date:	07/16/2018	Prep Batch #:	67804	Matrix:	SOLID
CTLab #:	147018	Analysis Time:	12:18	Prep Date/Time:	07/11/2018 11:35	Method:	SW6010
Parent Sample #:		Analyst:	MDS	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	4	mg/kg		U	0		12		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Matrix Spike Duplicate Soil

Analytical Run #:	151152	Analysis Date:	07/16/2018	Prep Batch #:	67804	Matrix:	SOIL
CTLab #:	147027	Analysis Time:	12:40	Prep Date/Time:	07/11/2018 11:35	Method:	SW6010
Parent Sample #:	147026	Analyst:	MDS	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	3510	mg/kg	538		2740	108	80 --- 120	1	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Matrix Spike Duplicate Soil

Analytical Run #:	151152	Analysis Date:	07/16/2018	Prep Batch #:	67804	Matrix:	SOIL
CTLab #:	147027	Analysis Time:	12:40	Prep Date/Time:	07/11/2018 11:35	Method:	SW6010
Parent Sample #:	147026	Analyst:	MDS	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	2880	mg/kg	129		2740	100	80 --- 120	0	20

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Matrix Spike Soil

Analytical Run #:	151152	Analysis Date:	07/16/2018	Prep Batch #:	67804	Matrix:	SOIL
CTLab #:	147026	Analysis Time:	12:37	Prep Date/Time:	07/11/2018 11:35	Method:	SW6010
Parent Sample #:	146758	Analyst:	MDS	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Potassium	3500	mg/kg	538		2760	107	80 --- 120		

TETRA TECH

Project Name: INDIANA BATTERY CO

SDG #: 0

Folder #: 137570

Project #: 103X90260001S051712001

Matrix Spike Soil

Analytical Run #:	151152	Analysis Date:	07/16/2018	Prep Batch #:	67804	Matrix:	SOIL
CTLab #:	147026	Analysis Time:	12:37	Prep Date/Time:	07/11/2018 11:35	Method:	SW6010
Parent Sample #:	146758	Analyst:	MDS	Prep Analyst:	NAH		

Analyte	QC sample result	Units	Parent sample result	Qualifier(s)	Spike Amount Added	% Recovery	Control Limits	RPD	RPD Limit
Sodium	2900	mg/kg	129		2760	100	80 --- 120		

Sample Condition Report

Folder #: 137570
Client: TETRA TECH

Print Date / Time: 07/10/2018 11:01
Received Date / Time / By: 07/10/2018 09:45D DRT

Project Name: INDIANA BATTERY CO
Project Phase: INDIANAPOLIS, IN

Log-In Date / Time / By: 07/10/2018 10:58 DRT
Project #: 103X90260001S051712001 PM: BMS

Coolers: 6101
Custody Seals Present : Y

Temperature: 3.3 C On Ice: Y
COC Present?: Y Complete? Y

Seal Intact? Y
Ship Method: FEDEX EXPRESS
Adequate Packaging: Y

Numbers: SIGNED & DATED
Tracking Number: 772655569589
Temp Blank Enclosed? Y

Notes: THE SAMPLES WERE RECEIVED IN GOOD CONDITION ON ICE.

TWO CUSTODY SEALS WERE PRESENT AND INTACT UPON RECEIPT - BOTH WERE DATED 7/9/18 AND SIGNED.

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
146758 IBC-OU1-01-BOE-180615	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	Total # of Containers of Type (SOLIDS) = 2			
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
146762 IBC-OU1-02-BOE-180615	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	Total # of Containers of Type (SOLIDS) = 1			
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
146763 IBC-OU1-03-BOE-180615	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	Total # of Containers of Type (SOLIDS) = 1			
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
146764 IBC-OU1-13-BOE-180615	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	Total # of Containers of Type (SOLIDS) = 1			
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
146765 IBC-OU1-14-BOE-180618	SOLIDS	1	/	%SOL,HG,ICP,K,NA
	Total # of Containers of Type (SOLIDS) = 1			
Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
146766 IBC-OU1-08-BOE-180618	SOLIDS	1	/	%SOL,HG,ICP,K,NA

137570

Total # of Containers of Type (SOLIDS) = 1

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
146767 IBC-OU1-09-BOE-180618	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
146768 IBC-OU3-LEEVEE-BOE-18061	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
146769 IBC-OU1-18A-BOE-180622	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
146770 IBC-ROW-01-BOE-180629	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
146771 IBC-ROW-02-BOE-180702	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
146772 IBC-ROW-03-BOE-180702	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
146773 IBC-ROW-05-BOE-180703	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
146774 IBC-ROW-04-BOE-180703	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
146775 IBC-OU1-02-BOE-02-180615D	SOLIDS	1	/	%SOL,HG,ICP,K,NA
Total # of Containers of Type (SOLIDS) = 1				

Sample ID / Description	Container Type	Cond. Code	pH OK?/Filtered?	Tests
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146776	IBC-ROW-04-BOE-180703-D	SOLIDS	1	/	%SOL,HG,ICP,K,NA
		Total # of Containers of Type	(SOLIDS)	=	1

<u>Condition Code</u>	<u>Condition Description</u>
1	Sample Received OK

Company: Tetra Tech
 Project Contact: Lucas Stamps
 Telephone: 317-797-2420
 Project Name: IN Battery
 Project #: 103X902600015051712001
 Location: Indianapolis
 Sampled By: Lucas Stamps

CT LABORATORIES

1230 Lange Court, Baraboo, WI 53913
 608-356-2760 Fax 608-356-2766
 www.ctlaboratories.com

Report To: Lucas Stamps
 EMAIL: lucas.stamps@tetratech.com
 Company:
 Address:

Folder #: 137570

Company: TETRA TECH

Project: INDIANA BATTERY CO

Logged By: DRT PML BM

Program:

QSM RCRA SDWA NPDES

Solid Waste Other

PO #

Invoice To:*

EMAIL:

Company:

Address:

*Party listed is responsible for payment of invoice as per CT Laboratories' terms and conditions

Client Special Instructions

- Level IV
 - scribe EDD

Matrix:

GW - groundwater SW - surface water WW - wastewater DW - drinking water
 S - soil/sediment SL - sludge A - air M - misc/waste

ANALYSES REQUESTED

Filtered? Y/N

TAL metals

Total # Containers

Designated MS/MSD

Turnaround Time

Normal RUSH*

Date Needed:

Rush analysis requires prior
 CT Laboratories' approval

Surcharges:

24 hr 200%

2-3 days 100%

4-9 days 50%

Collection		Matrix	Grab/Comp	Sample #	Sample ID Description	Fill in Spaces with Bottles per Test																CT Lab ID #	
Date	Time																					Lab use only	
6/15/18	0800	S	C		IBC-001-01-BoE-180615	2															2	X	146758
6/15/18	0805	S	C		IBC-001-02-BoE-180615	1															1		146762
6/15/18	0810	S	C		IBC-001-03-BoE-180615	1															1		146763
6/15/18	0815	S	C		IBC-001-13-BoE-180615	1															1		146764
6/18/18	0715	S	C		IBC-001-14-BoE-180618	1															1		146765
6/18/18	0720	S	C		IBC-001-08-BoE-180618	1															1		146766
6/18/18	0725	S	C		IBC-001-09-BoE-180618	1															1		146767
6/18/18	0735	S	C		IBC-003-Levee-BoE-180618	1															1		146768
6/22/18	0800	S	C		IBC-001-18A-BoE-180622	1															1		146769
6/29/18	1000	S	C		IBC-ROW-01-BoE-180629	1															1		146770
7/2/18	0820	S	C		IBC-ROW-02-BoE-180702	1															1		146771
7/2/18	1140	S	C		IBC-ROW-03-BoE-180702	1															1		146772

Relinquished By:

Date/Time

7/9/18 1430

Received By:

Date/Time

7/10/18 1058

Received by:

Date/Time

Received for Laboratory by:

Date/Time

7/10/18 1058

Lab Use Only

Ice Present Yes No

Temp 3.3 IR Gun 23

Cooler # 1001

CT Laboratories Terms and Conditions

Where a purchaser (Client) places an order for laboratory, consulting or sampling services from CT Laboratories (CTL), CTL shall provide the ordered services pursuant to these Terms and Conditions, and the related Quotation, or as agreed in a negotiated contract. In the absence of a written agreement to the contrary, the Order constitutes an acceptance by the Client of CTL's offer to do business under these Terms and Conditions, and an agreement to be bound by these Terms and Conditions. No contrary or additional terms and conditions expressed in a Client's document shall be deemed to become a part of the contract created upon acceptance of these Terms and Conditions, unless accepted by CTL in advance of the start of the project and in writing.

1. ORDERS AND RECEIPT OF SAMPLES (Sample Acceptance Policy)

- 1.1 The Client may place the Order (i.e., specify a Scope of Work) either by submitting a purchase order to CTL in writing, by telephone (confirmed in writing) or by negotiated contract. Whichever option the Client selects for placing the Order, the Order shall not be valid unless it contains sufficient information to enable CTL to carry out the Client's requirements. It is the policy of CTL that samples not meeting the acceptance criteria, outlined in the NELAC standards and Section 5.8.3.2 of the DOD QSM, will not be accepted by the laboratory or will be qualified on the final report. All samples submitted to the laboratory must: (a) be accompanied by proper, full and complete documentation, including sample identification, location, date and time of collection, the collector's name, type of preservation (if any), type of sample, any special comments concerning the sample and any additional pertinent fields on the chain-of-custody. In the absence of any of the required information, the laboratory will attempt to contact the client to obtain the information; if unable to obtain the necessary information, the final report will be qualified. (b) samples must be labeled appropriately with a unique sample identification written with indelible ink on water resistant labels. If the laboratory cannot determine the identity of a sample, it may be rejected and the client will be contacted for further instructions or resampling. (c) samples must be in an appropriate sample container. If the container is inappropriate, the client will be contacted for further instructions or resampling. If analysis is possible, the final report will be qualified. CTL can provide a sampling guide containing approved containers and preservations for analytical methods requested. (d) adhere to method specified holding times. If samples are received with less than ½ the holding time remaining for the requested test, CTL will make its best effort to analyze the samples and notify the client. If holding times are exceeded, the final report will be qualified. (e) contain adequate sample volume to perform the necessary testing. If sufficient volume is not present, the sample may be rejected and the client will be contacted for further instructions or resampling. It is the Client's responsibility to understand and package samples correctly and provide the proper amount of temperature control (ice) suitable to current weather conditions. The report will be qualified. If not, the samples will be rejected and the client notified for further instructions or resampling. 1.2 CTL must be supplied with complete written disclosure of the known or suspected presence of any hazardous substances, as defined by applicable federal or state law. Where any samples which were not accompanied by the required disclosure, cause interruptions in the lab's ability to process work due to contamination of instruments or work areas, the Client will be responsible for the costs of clean up and recovery. 1.3 Prior to Sample Acceptance, the entire risk of loss or damage to samples remains with the Client. In no event will CTL have any responsibility or liability for the action or inaction of any carrier shipping or delivering any sample to or from CTL's premises. Client is responsible to assure that any sample containing any hazardous substance which is to be delivered to CTL's premises will be packaged, labeled, transported and delivered properly and in accordance with applicable laws. 1.4 Clients using CTL's shipping account(s) do so at their own risk and must purchase separate insurance if they do not wish to assume risk of loss. CTL will not assume any risk whatsoever for any samples outside of CTL's control and not successfully delivered to the laboratory within specified hold times. 1.5 CTL will not accept liability for any sample(s), except sample(s) damaged or broken by log-in staff prior to successful log-in of the sample(s) into the CTL-LIMS system. This includes, but may not be limited to: complete, valid COC documentation, all sample receiving issues being resolved from a delay caused by the Client in CTL's ability to log-in samples, including missed turnaround and hold times, delay in processing and, ultimately, additional charges to the Client. 1.6 CTL will only reject samples per directions from the Client. CTL's sole liability is to inform the Client of any sample receipt issues, and may provide an indication how proceeding with the analysis may affect results and final acceptance by the regulating agency. Ultimately, suitability for use is between the Client and the regulating agency(s).
- 1.7 Signing of this COC by the Client or Client's representative, or directions to CTL via email or Fax constitutes acceptance of these Terms and Conditions, and guarantees payment by the Client to CTL.

2. PAYMENT TERMS

2.1 Services performed by CTL will be in accordance with prices quoted and later confirmed in writing or as stated in the Price Schedule. Invoices may be submitted to Client upon completion of any sample delivery group. Payment in advance is required for all Clients except those whose credit has been established with CTL. For Clients with approved credit, payment terms are net 30 days from the date of invoice by CTL. All overdue payments are subject to an additional interest and service charge of one and one-half percent (1.5%) or the maximum rate permissible by law, per month or portion thereof from the due date until the date of payment. All fees are charged or billed directly to the Client. The billing of a third party will not be accepted without a statement, signed by the third party that acknowledges and accepts payment responsibility. CTL may suspend work and withhold delivery of data under this order at any time in the event Client fails to make timely payment of its invoices. Client shall be responsible for all costs and expenses of collection including reasonable attorney's fees. CTL reserves the right to refuse to proceed with work at any time based upon an unfavorable Client credit report.

3. CHANGE ORDERS, TERMINATION

- 3.1 Changes to the Scope of Work, price, or result delivery date may be initiated by CTL after Sample Acceptance due to any condition which conflicts with analytical, QA or other protocols warranted in these Terms and Conditions. CTL will not proceed with such changes until an agreement with the Client is reached on the amount of any cost, schedule change or technical change to the Scope of Work, and such agreement is documented in writing.
- 3.2 Changes to the Scope of Work, including but not limited to increasing or decreasing the work, changing test and analysis specification or acceleration in the performance of the work may be initiated by the Client after sample acceptance. Such a change will be documented in writing and may result in a change in cost and turnaround time commitment. CTL's acceptance of such changes is contingent upon technical feasibility and operational capacity.
- 3.3 Suspension or termination of all or any part of the work may be initiated by the Client. CTL will be compensated consistent with Section 2 of these Terms and Conditions. CTL will complete all work in progress and be paid in full for all work completed.

4. WARRANTIES AND LIABILITY

- 4.1 Where applicable, CTL will use analytical methodologies which are in substantial conformity with published test methods. CTL has implemented these methods in its Laboratory Quality Manuals and referenced Standard Operating Procedures and where the nature or composition of the sample requires it, CTL reserves the right to deviate from these methodologies as necessary or appropriate, based on the reasonable judgment of CTL, which deviations, if any, will be made on a basis consistent with recognized standards of the industry and/or CTL's Laboratory Quality Manuals. Client may request that CTL perform according to a mutually agreed Quality Assurance Project Plan (QAPP). In the event that samples arrive prior to agreement on a QAPP, CTL will proceed with analyses under its standard Quality Manuals then in effect, and CTL will not be responsible for any resampling or other charges if work must be repeated to comply with a subsequently finalized QAPP.
- 4.2 CTL shall start preparation and/or analysis within holding times provided that Sample Acceptance occurs within 48 hours of sampling or 1/2 of the holding time for the test, whichever is less. Samples received that do not meet this provision will be charged as expedited samples and the appropriate rate will be added accordingly. Where resolution of inconsistencies leading to Sample Acceptance does not occur within this period, CTL will use its best efforts to meet holding times and will proceed with the work provided that, in CTL's judgment, the chain-of-custody or definition of the Scope of Work provide sufficient guidance. Reanalysis of samples to comply with CTL's Quality Manuals will be deemed to have met holding times provided the initial analysis was performed within the applicable holding time. Where reanalysis demonstrates that sample matrix interference is the cause of failure to meet any Quality Manual requirements, the warranty will be deemed to have been met.
- 4.3 CTL warrants that it possesses and maintains all licenses and certifications which are required to perform services under these Terms and Conditions provided that such requirements are specified in writing to CTL prior to Sample Acceptance. CTL will notify the Client in writing of any decertification or revocation of any license, or notice of either, which affects work in progress.
- 4.4 The warranty obligations set forth in Sections 4.1, 4.2 and 4.3 are the sole and exclusive warranties given by CTL in connection with any services performed by CTL or any Results generated from such services, and CTL gives and makes NO OTHER REPRESENTATION OR WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. No representative of CTL is authorized to give or make any other representation or warranty or modify this warranty in any way.
- 4.5 Client's sole and exclusive remedy for the breach of warranty in connection with any services performed by CTL, will be limited to repeating any services performed, contingent on the Client's providing, at the request of CTL and at the Client's expense, additional sample(s) if necessary. Any reanalysis requested by the Client generating Results consistent with the original Results will be at the Client's expense. If resampling is necessary, CTL's liability for resampling costs will be limited to actual cost or one hundred or one hundred fifty dollars (\$150) per sample, whichever is less.
- 4.6 CTL's liability for any and all causes of action arising hereunder, whether based in contract, tort, warranty, negligence or otherwise, shall be limited to the lesser amount of compensation for the services performed or \$100,000. All claims, including those for negligence, shall be deemed waived unless suit thereon is filed within one year after CTL's completion of the services. Under no circumstances, whether arising in contract, tort (including negligence), or otherwise, shall CTL be responsible for loss of use, loss of profits, or for any special, indirect, incidental or consequential damages occasioned by the services performed or by application or use of the reports prepared.
- 4.7 In no event shall CTL have any responsibility or liability to the Client for any failure or delay in performance by CTL which results, directly or indirectly, in whole or in part, from any cause or circumstance beyond the reasonable control of CTL. Such causes and circumstances shall include, but not be limited to, acts of God, acts of Client, acts or orders of any governmental authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disturbances, equipment breakdown, matrix interference or unknown highly contaminated samples that impact instrument operation, unavailability of supplies from usual suppliers, difficulties or delays in transportation, mail or delivery services, or any other cause beyond CTL's reasonable control.

5. RESULTS, WORK PRODUCT

- 5.1 Data or information provided to CTL or generated by services performed under this agreement shall only become the property of the Client upon receipt in full by CTL of payment for the whole Order. Ownership of any analytical method, QA/QC protocols, software programs or equipment developed by CTL for performance of work will be retained by CTL, and Client shall not disclose such information to any third party.
- 5.2 Data and sample materials provided by Client or at Client's request, and the result obtained by CTL shall be held in confidence (unless such information is generally available to the public or is in the public domain or Client has failed to pay CTL for all services rendered or is otherwise in breach of these Terms and Conditions), subject to any disclosure required by law or legal process.
- 5.3 Should the Results delivered by CTL be used by the Client or Client's client, even though subsequently determined not to meet the warranties described in these Terms and Conditions, then the compensation will be adjusted based upon mutual agreement. In no case shall the Client unreasonably withhold CTL's right to independently defend its data.
- 5.4 CTL reserves the right to subcontract services ordered by the Client to another laboratory or laboratories, if, in CTL's sole judgment, it is reasonably necessary, appropriate or advisable to do so, and with the Client's permission. CTL will in no way be liable for any subcontracted services and all applicable warranties, guarantees and insurance are those of the subcontracted laboratory.
- 5.5 CTL shall dispose of the Client's samples and extracts 30 days after the analytical report is issued, unless instructed to store them for an alternate period of time or to return such samples to the Client, in a manner consistent with U.S. Environmental Protection Agency regulations or other applicable Federal, state or local requirements. Additional charges will apply for samples or extracts stored longer than 30 days at the Client's request. Any samples for projects that are canceled or not accepted, or for which return was requested, will be returned to the Client at Client expense. CTL reserves the right to return to the Client any sample or unused portion of a sample that is not within CTL's permitted capacity or the capabilities of CTL's designated waste disposal vendor(s), or will make arrangements to dispose of these samples at Client direction and expense.
- 5.6 Unless a different time period is agreed to in any order under these Terms and Conditions, CTL agrees to retain all records for five (5) years.
- 5.7 In the event that CTL is required to respond to legal process related to services for Client, Client agrees to reimburse CTL for hourly charges for personnel involved in the response and attorney fees reasonably incurred in obtaining advice concerning the response, preparation to testify, and appearances related to the legal process, travel and all reasonable expenses associated with the litigation.

6. INSURANCE

6.1 CTL shall maintain in force during the performance of services under these Terms and Conditions, Workers' Compensation and Employer's Liability Insurance in accordance with the laws of the states having jurisdiction over CTL's employees who are engaged in the performance of the work. CTL shall also maintain during such period, Comprehensive General and Contractual Liability (limit of \$2,000,000 per occurrence/ aggregate), Comprehensive Automobile Liability, owned and hired, (\$1,000,000 combined single limit), and Professional/Pollution Liability Insurance (limit of \$5,000,000 per occurrence/aggregate). Any Client required changes to these limits or conditions will result in a change in cost to the Client.

7. AUDIT

7.1 Upon prior notice to CTL, the Client may audit and inspect CTL's records and accounts covering reimbursable costs related to work done for the Client for a period of one (1) year after completion of the work. The purpose of any such audit shall be only for verification of such costs, and CTL shall not be required to provide access to cost records where prices are expressed as fixed fees or published unit prices.

Cooler Receipt Form

Ice Present YES NO

Temperature 3.3

IR Gun # 19

Initials 12

Date 7/10/18 Time 0945

Cooler #: 6101

ORIGIN ID: HNBA (317) 797-2420
LUCAS STAMPS
TETRA TECH
1811 EXECUTIVE DR
SUITE R
INDIANAPOLIS, IN 46241
UNITED STATES US

SHIP DATE: 09JUL18
ACTWGT: 20.00 LB
CAD: 102185950/INET3980
DIMS: 18x12x12 IN

BILL SENDER

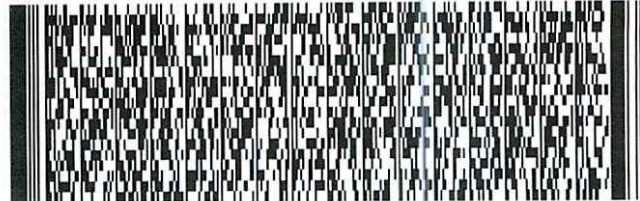
TO RECEIVING
CT LABORATORIES
1230 LANGE CT

BARABOO WI 53913

(608) 356-2760
INV
PO

REF 103X90260001S051712001 004AC

DEPT



FedEx
Express



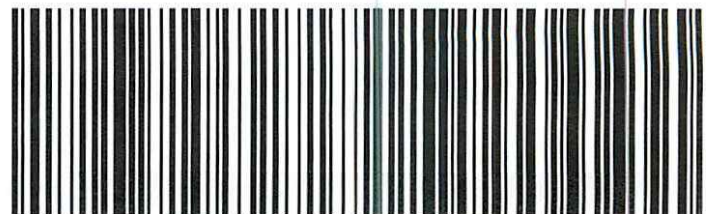
552.028532/DCA5

TUE - 10 JUL 3:00P
STANDARD OVERNIGHT

TRK# 7726 5556 9589
0201

NA MSNA

53913
WI-US MSN



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Quality Environmental Containers
800-255-3950 • www.qecusa.com

CUSTODY SEAL

DATE

7/9/18

SIGNATURE

[Signature]

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