FINAL REMOVAL ASSESSMENT REPORT

PUERTO RICO BATTERY RECYCLING
a/k/a ARECIBO BATTERY CERCLA SITE

Arecibo, Puerto Rico

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1.0 INTRODUCTION

Under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended 42 U.S.C. § 9601 et. seq., the U.S. Environmental Protection Agency, Region II (EPA), with the support of Weston Solutions, Inc., EPA's Removal Support Team 3 (RST 3) Contractor, conducted a Removal Assessment of the Battery Recycling Company, Inc. (BRC) facility located along State Road #2 at KM 72.2 in the community of Cambalache in the City of Arecibo, Puerto Rico. The facility is referred to as the Puerto Rico Battery Recycling a/k/a Arecibo Battery CERCLA Site (the Site).

The Removal Assessment of the BRC facility was conducted in two phases from January through March 2016. In January 2016, the Phase I soil investigation was completed at the Site which included the advancement of soil borings and the collection of soil samples at locations throughout the facility (not including within the on-site building footprints), including borings into soil surfaces, gravel surfaces, asphalt surfaces, and into the eastern drainage channel. In February and March 2016, the Phase II multi-media sampling event was completed at the Site which included the collection of aqueous, solid waste, wipe, and micro-vac samples from within the on-site structures. The results from both phases of the investigation are presented within this report.

1.1 Site Location and Description

The BRC facility is located along State Road #2 at KM 72.2 in the community of Cambalache in the city of Arecibo, Puerto Rico (refer to Attachment A, Figure 1: Site Location Map). The area consists of mixed agricultural, residential, and commercial properties and is located north of Arecibo, Puerto Rico and includes a cattle pasture adjacent to (north of) the facility, a residential neighborhood (Carretera #2 km 72.5 – Central Canvalache) located north of the facility, and a hardware store (Ferreteria Pajuil) located west of the facility. There are 10 structures located on the facility which are referred to as Structure Numbers (Nos.) 1 through 9 and 1A and consist of the following: Structure No. 1 (Administration), Structure No. 1A (Administration), Structure No. 2 (Process Building), Structure No. 3 (Waste Storage), Structure No. 4 (Wastewater Treatment Plant), Structure No. 5 (Storage), Structure No. 6 (Tank Farm), Structure No. 7 (Air Emissions Stacks), also referred to as the Bag House, Structure No. 8 (Waste Storage), and Structure No. 9 (Abandoned Tank) (refer to Attachment A, Figure 2: Site Map).

1.2 Site History

BRC has owned the battery processing facility at the Site since July 1994 and conducted secondary lead smelting and/or reclamation operations there beginning in 2004. Operations at the facility included breaking and sorting lead-acid batteries and refining the lead to be resold as lead blocks to battery manufacturers. BRC took in approximately 600 tons per month of spent batteries and produced approximately 500 tons per month of lead product. During its operations, BRC generated large quantities of battery acid and lead-contaminated waste. All secondary lead smelting and/or reclamation operations ceased at the Site in 2014.

During the course of BRC's operation of its battery processing facility, storm water runoff containing lead from the battery recycling operations migrated to the properties to the north and east of the facility.

In April 2008, personnel from the Lockheed Martin Response Engineering and Analytical Contract (REAC), in consultation with the EPA Environmental Response Team (ERT), performed soil sampling along the fence line between the cattle pasture (to the north) and the facility. Surficial soil samples were collected at depths of 0 to 2 inches and analysis of the samples indicated a maximum lead concentration of 57,500 milligrams per kilogram (mg/kg) in one sample location in the cattle pasture. The sampling results indicated that contamination was located in the southern portion of the cattle pasture, which contained a ditch located along a former rail line that ran in an east to west direction, parallel to the fence line between the pasture and the facility.

In July 2010, a second sampling event was conducted at the Site by REAC. A total of 68 soil samples were collected from the cattle pasture at depths down to 2 feet in 6 inch intervals from 17 locations. Analytical results documented lead concentrations up to 4,700 mg/kg, with average lead concentrations of 843 mg/kg. The highest concentration of lead was located in the ditch area of the Site at a depth of 0 to 6 inches. Lead concentrations at deeper depths tapered off in the ditch area with the exception of the 12 to 18 inch interval where average lead concentrations were 680 mg/kg.

In November 2010 and April and May 2011, a number of children of BRC employees were tested by the Centers for Disease Control and Prevention (CDC) and 20 to 40 percent (%) of the sample from each clinic of the susceptible population (children below 7 years of age, pregnant, and lactating women) were found to have elevated levels of lead above 10 micrograms per deciliter (µg/dl), with a lead screening level of one five month old child testing greater than 65 µg/dl, for which confirmatory lead testing indicated a blood lead level of 32.9 µg/dl. Sampling conducted by EPA's contractor of vehicles and residences of BRC employees indicated elevated concentrations of lead above 40 micrograms per square foot ($\mu g/ft^2$), with 27 employee vehicles measuring above 100,000 $\mu g/ft^2$. The pathway of contamination was believed to be the transfer of lead-contaminated dust in the employees' boots and uniforms from the facility to the employees' vehicles and residences.

In June 2011, The EPA entered into a settlement agreement with BRC to remediate lead discharges into air and soil from the facility and continues to investigate potential lead contamination at the Site.

In June 2011, Weston Solutions, Inc., Removal Support Team 2 (RST 2) (currently RST 3) was tasked by the EPA Removal Action Branch (RAB) to conduct Removal Assessments of residential properties and vehicles of current and former employees of BRC to determine if any of the properties have been impacted by lead dust being transported from the BRC facility to the residence. The Removal Assessments were conducted at properties located throughout Puerto Rico.

The Removal Assessment of the residential properties and vehicles of current and former employees of BRC was conducted in separate phases. The first phase of the Removal Assessment was initiated in June 2011 and included contacting current and former employees, conducting assessments of 202 residential properties and 282 vehicles, and overseeing the removal at 129 residential properties and 140 vehicles that contained lead contamination associated with current and former employees of BRC. The second phase of the Removal Assessment was initiated in March 2012 and included the re-assessment of 61 properties and 45

vehicles that had previously been assessed and remediated, if needed, during the first phase and the completion of removals at 20 residential properties and five vehicles that had exceeded lead concentrations during the re-assessment sampling.

In July 2015, the focus of the investigation into the Site was concentrated on the cattle pasture located adjacent to (north of) the facility. During this period, RST 3 was tasked by the EPA to conduct surface soil screening activities for lead using a NITON XL3 portable x-ray fluorescence (XRF) elemental analyzer. The screening data assisted the EPA in delineating the areas of contaminations in the cattle pasture. The delineated area was excavated during an EPA Removal Action to address soil contamination and confirmation sampling confirmed that all lead contamination from the area had been removed.

In September 2015, as part of the continued investigation of the Site, EPA and RST 3 completed soil sampling activities within a heavily vegetated area located east and northeast of the Site and from the northeast corner of the BRC facility. As part of the investigation, a total of 294 soil samples were collected from the area located east and northeast of the Site and 63 soil samples were collected from the northeast corner of the BRC facility. All soil samples were screened on-site for total lead utilizing XRF technology. The XRF field screening results for the samples collected from the area located east and northeast of the Site indicated total lead concentrations exceeding the EPA Removal Management Level (RML) for Residential Soil (400 mg/kg) in 90 of the 294 soil samples, with a maximum concentration of 88,800 mg/kg. The XRF field screening results for the samples collected from the northeast corner of the BRC facility indicated total lead concentrations exceeding the EPA RML for Industrial Soil (800 mg/kg) in 36 of the 63 soil samples, with a maximum concentration of 50,000 mg/kg.

2.0 SCOPE OF WORK

In January 2016, EPA initiated the first full-scale investigation of the BRC facility. As part of the Removal Assessment of the facility, EPA tasked RST 3 with the collection of soil samples from locations throughout the Site (not including within the on-site building footprints) and the collection of aqueous, solid waste, wipe, and micro-vac samples from within the BRC facility's on-site structures. The Removal Assessment was conducted in phases with the soil sampling event being conducted as part of Phase I in January 2016 and the multi-media sampling event being conducted as part of Phase II in February and March 2016. The validated analytical results from the investigation were used by the EPA to determine if there were concentrations of contaminants related to historical operations conducted at the Site that exceeded the applicable EPA RMLs and Site-Specific Action Levels which potentially would warrant the initiation of additional Removal Action activities at the Site.

2.1 Sample Collection Methodology - Phase I Soil Sampling Investigation

Phase I of the Removal Assessment was conducted between January 11 and 25, 2016 and focused on the outdoor portions of the BRC facility. As part of Phase I of the Removal Assessment of the BRC facility, RST 3 was tasked by EPA to procure drilling subcontracted services to advance 142 soil borings throughout the facility. The nomenclature for all soil boring locations advanced as part of the investigation began with "BRC001" which was representative of the BRC facility. The Site consists of multiple surfaces used for numerous functions so based on visual observations the area was split into the following four categories: soil surface boring

locations ("SB") - located in areas predominately with soil at the surface but the locations differed greatly [*i.e.,* some "SB" locations were soil surface while others were in disturbed areas (newly constructed road), overgrown vegetation, and manicured grass areas]; gravel surface boring locations ("GB") - located in areas where gravel was present and used for parking, roads, or staging equipment; asphalt surface boring locations ("AB") - located under roads or parking areas with asphalt at the surface; and drainage channel boring locations ("DB") - located in the drainage channel on the eastern portion of the Site. The 142 soil borings advanced throughout the facility included the following: 65 soil surface borings (BRC001-SB001 through BRC-SB061, BRC001-SB005A, BRC001-SB008A, BRC001-SB026A, and BRC001-SB026B), 46 gravel surface borings (BRC001-GB001 through BRC001-GB046), 26 asphalt surface borings (BRC001-AB001 through BRC-AB026), and five eastern drainage channel borings (BRC001-DB001 through BRC001-DB005) (refer to Attachment A, Figure 3 for the Phase I Soil Boring Location Map).

The soil surface and gravel surface borings were established with a 50 foot by 50 foot grid, the asphalt area borings were established based on 100 foot spacing, covering the entire Site, and the eastern drainage channel borings were collected from locations identified by the EPA On-Scene Coordinator (OSC). The soil borings were advanced by an RST 3-procured subcontractor, On-Site Environmental, Inc., using a direct-push Geoprobe® generally to a maximum depth of 4 feet below ground surface (bgs) (one macrocore throw). From each soil boring up to nine samples were collected from the 0 to 1, 1 to 6, 6 to 12, 12 to 18, 18 to 24, 24 to 30, 30 to 36, 36 to 42, and 42 to 48 inch depth intervals. However, the following seven soil borings were advanced to deeper depths based on on-site observations and EPA OSC direction (total depth advanced in parenthesis): BRC001-SB005A (100 inches bgs), BRC001-SB008A (66 inches bgs), BRC001-SB014 (120 inches bgs - organics only), BRC001-SB019 (120 inches bgs - organics only), BRC001-GB025 (108 inches bgs - organics only), BRC001-GB032 (120 inches bgs - organics only), and BRC001-AB014 (58 inches bgs - organics only). For the asphalt surface borings, the majority of the 0 to 1 inch depth interval soil samples (24 of the 26 borings advanced) were collected from soil/sand located on the surface of the asphalt, prior to removing the asphalt for the advancement of the soil boring. A total of 884 soil samples were collected from the on-site soil boring locations. The geology of each respective soil boring was classified using the Burmister Soil Classification system (refer to Section 3.1.1 of this report for a detailed discussion of the on-site lithology and its correlation to total lead concentrations in soil and Attachment D for the Geoprobe® soil boring logs).

In addition to the on-site soil boring samples collected as part of the Phase I Removal Assessment, a total of 77 soil samples were collected from the forested area located adjacent to the eastern portion of the Site. These samples were collected from a drainage channel and along the edges of the channel which ran north to south throughout the area. An additional nine soil samples were collected from slag piles identified by the EPA OSC located within on-site Structure Nos. 2 (Process Building), 3 (Waste Storage), and 5 (Storage). The samples collected from the area located adjacent to the eastern portion of the Site and the on-site slag piles were collected utilizing stainless-steel hand augers.

A total of 970 soil samples were collected as part of the Phase I Removal Assessment, all of which were screened on-site for total lead. Field screening for total lead in soil was conducted using portable XRF technology. Each soil samples was screening in the on-site command post, located on the northern portion of the facility. The samples were collected in 6 by 9 inch plastic

bags, homogenized, dried, and analyzed using the XRF three times. Organic debris was removed from the samples prior to being homogenized. Each XRF sample screening run lasted approximately 60 seconds. The three screening runs were then averaged to determine the total lead concentration. Field screening samples were collected with dedicated plastic scoops.

A total of 199 of the soil boring soil samples (21%), including 10 field duplicates, 11 of the soil samples collected from the area located adjacent to the eastern portion of the Site (14%), and all nine of the soil samples collected from the slag piles (100%) were also submitted for confirmation laboratory target analyte list (TAL) metals analysis (a detailed discussion in regards to the regression analysis of the XRF field screening total lead results compared to the validated laboratory confirmation results can be found in Section 4.0 of this report). In addition, based on photoionization detector (PID) volatile organic compound (VOC) air monitoring readings and field observations, 10 soil boring samples, including one field duplicate, collected from soil borings BRC001-SB014, BRC001-SB019, BRC001-GB025, BRC001-GB032, BRC001-AB001, and BRC001-AB014 were also submitted for target compound list (TCL) VOC, semivolatile organic compound (SVOC), and polychlorinated biphenyl (PCB) laboratory analyses. Furthermore, all nine of the soil samples collected from the on-site slag piles were also submitted for toxicity characteristic leaching procedure (TCLP) metals and Resource Conservation and Recovery Act (RCRA) characteristics laboratory analyses. The confirmation laboratory TAL metals analysis for the soil samples collected from the on-site soil borings and the area located adjacent to the eastern portion of the Site was conducted by the EPA Division of Environmental Science and Assessment (DESA) laboratory located in Edison, New Jersey. The soil samples collected for TCL VOC, SVOC, and PCB analyses were submitted to a Contract Laboratory Program (CLP) laboratory (Chemtech Consulting Group located in Mountainside, New Jersey). The nine slag pile soil samples were submitted to an RST 3-procured laboratory (EQ Environmental Quality Laboratories Inc. located in Santurce, Puerto Rico) for confirmation TAL metals, TCLP metals, and RCRA characteristics analyses.

The locations of the on-site soil borings were documented utilizing global positioning system (GPS) technology. The locations of the soil samples collected from the area located adjacent to the eastern portion of the Site were not captured with the GPS technology due to the heavy vegetation location throughout the sample collection area. In addition, the locations of the soil samples collected from the on-site slag piles were not captured with the GPS technology due to the locations being within on-site structures.

All soil sampling activities were conducted in accordance with EPA ERT standard operating procedure (SOP) Nos 2001: *General Field Sampling Guidelines* and 2012: *Soil Sampling*. All Geoprobe® macrocore equipment and stainless-steel hand augers used during field sampling activities were decontaminated in the field in accordance to EPA ERT SOP No. 2006, *Sampling Equipment Decontamination*, prior to and subsequent to sampling. Decontamination of the Geoprobe® macrocore equipment and stainless-steel hand augers was conducted as follows:

1. Alconox detergent and potable water scrub.
2. Potable water rinse.
3. Deionized water rinse.
4. Air dry (sufficient time was allowed for the equipment to completely dry).
5. Deionized water rinse and air dry.

Rinsate blank samples were collected on a daily basis to document the effectiveness of the equipment decontamination procedures. A total of 11 aqueous rinsate blank samples were collected and submitted for the required laboratory analyses.

The soil samples were collected for a definitive data quality assurance (QA) Objective. Field duplicate and matrix spike/matrix spike duplicate (MS/MSD) samples were collected at a rate of one per 20 soil samples. All soil and rinsate blank sample information was entered into a Scribe database for the generation of the chain of custody (COC) records and sample labels.

In addition to the soil sampling activities conducted during the Phase I mobilization, EPA and RST 3 conducted a thorough reconnaissance of the structures located on the Site to assist in the planning of Phase II of the Removal Assessment.

Refer to Attachment C for the Photographic Documentation Log for general photographs of the Phase I Removal Assessment of the facility and Attachment H for all digital photographs.

2.2 Sample Collection Methodology - Phase II Multi-Media Sampling Investigation

Phase II of the Removal Assessment was conducted between February 29, 2016 and March 10, 2016 and focused on the interior portions of the structures present on the BRC facility. The structures present on the BRC facility are as follows (Structure Nos. were generated by RST 3):

1. Structure No. 1 - Administration
2. Structure No. 1A - Administration
3. Structure No. 2 - Process Building
4. Structure No. 3 - Waste Storage
5. Structure No. 4 - Wastewater Treatment Plant
6. Structure No. 5 - Storage
7. Structure No. 6 - Tank Farm
8. Structure No. 7 - Air Emissions Stacks (Bag House)
9. Structure No. 8 - Waste Storage
10. Structure No. 9 - Abandoned Tank

The Phase II Removal Assessment sampling activities targeted the 10 sumps located on the facility and Structure Nos. 1, 1A, 2, 4, and 7 (refer to Attachment A, Figure 2: Site Map for the locations of the on-site structures). RST 3 was tasked by the EPA with conducting multi-media sampling within these on-site facilities. A combination of aqueous, solid waste [consisting of process waste (accumulated dust), sludge, hopper contents, hopper room concrete chips, furnace contents, kettle contents, and Process Building concrete chips], wipe, and micro-vac samples were collected from various materials depending on location, including the 10 sumps and Structure Nos. 1, 1A, 2, 4, and 7.

A total of 16 aqueous samples, including one field duplicate, were collected from the on-site sumps (11 samples, including one field duplicate), the Slag Collection Unit No. 2 sump located within Structure No. 2 (Process Building) (one sample), and Structure No. 4 (Wastewater Treatment Plant) (four samples) (refer to Attachment A, Figure 7 for the Phase II Wastewater Sample Location Map and Attachment B, Table 2D for detailed information in regards to sample collection locations). Two of the aqueous samples, collected from Lagoon Nos. 1 and 2 of the

Wastewater Treatment Plant (BRC001-AT01-AQ001-01 and BRC001-AT02-AQ001-01), were collected as composite samples and the remainder of the aqueous samples were collected as grab samples. The aqueous grab samples were collected from Tank 1 and Tank 2 of the Wastewater Treatment Plant, the 10 outdoor on-site sumps located through the facility, and the Slag Collection Unit No. 2 sump located within the Process Building. All aqueous samples were collected using a composite liquid waste sampler (COLIWASA), port (if available), or direct sampling. As part of the aqueous sample collection activities, the pH of each sample was recorded utilizing a pH Tester unit and pH test strips (refer to Attachment B, Table 2D for the documented pH values of each aqueous sample). All aqueous samples were placed into sample jars, preserved, sealed, and shipped to a CLP laboratory for TAL metals analysis. Bonner Analytical Testing Company located in Hattiesburg, Mississippi was assigned the CLP case for all multi-media samples collected as part of Phase II of the Removal Assessment of the BRC facility. All aqueous sampling activities adhered to EPA ERT SOP Nos. 2001, *General Field Sampling Guidelines* and 2010, *Tank Sampling*.

A total of 99 solid waste samples, including seven field duplicates, were collected from the on-site sumps (11 samples, including one field duplicate), Structure No. 2 (Process Building) (78 samples, including five field duplicates), Structure No. 4 (Wastewater Treatment Plant) (four samples), and Structure No. 7 [Air Emissions Stacks (Bag Houses)] (six samples, including one field duplicate) (refer to Attachment A, Figure 6 for the Phase II Solid Waste Sample Location Map and Attachment B, Tables 2C and 2E for detailed information in regards to sample collection locations). The solid waste samples consisted of various materials depending on location, including process waste (accumulated dust), sludge, hopper contents, hopper room concrete chips, furnace contents, kettle contents, and Process Building concrete chips (refer to Attachment B, Tables 2C and 2E for the matrix classification of each solid waste sample). The hopper content samples consisted of process waste found within the hoppers; the hopper room concrete chip samples consisted of concrete chips from the walls and floors of the hopper room; the furnace and kettle content samples consisted of slag, process waste, dust, etc. found within the vessels; and the Process Building concrete chip samples consisted of concrete chips from the walls and floors present throughout the structure.

A total of 11 grab sludge samples, including one field duplicate, were collected from the bottom of each of the 10 on-site sumps and were submitted for TAL metals analysis. Two composite sludge samples, including one field duplicate, were also collected from the bottom of the 10 exterior sumps which were submitted for TCLP metals analysis. Two grab sludge samples were collected from the bottom of Tank 1 and Tank 2 located within the Wastewater Treatment Plant and two composite sludge samples were collected from Lagoon Nos. 1 and 2 which were submitted for TAL metals analysis. Three composite sludge samples were also collected from Tank 1 and Tank 2 (composited) and Lagoon Nos. 1 and 2 which were submitted for TCLP metals analysis. A total of four grab hopper content samples, including one field duplicate, and two grab hopper room concrete chip samples were collected from the hoppers and walls/floors, respectively, present within the Bag Houses which were submitted for TAL metals analysis. Two composite hopper content samples were also collected from the hoppers present within the Bag Houses which were submitted for TCLP metals analysis. A total of five grab sludge samples were collected from the Process Building which were submitted for TAL metals (three samples) and TCLP metals (two samples) analyses. A total of 27 grab process waste (accumulated dust) samples, including four field duplicates, and 18 composite process waste (accumulated dust) samples were collected from the Process Building which were submitted for

TAL metals analysis. In addition, 10 grab process waste (accumulated dust) samples and six composite process waste (accumulated dust) samples, including one field duplicate, were collected from the Process Building which were submitted for TCLP metals analysis. Two grab furnace content samples were collected from the Process Building which were submitted for TAL metals analysis. A total of four composite kettle content samples were collected from the Process Building which were submitted for TAL metals (two samples) and TCLP metals (two samples) analyses. A total of 26 grab Process Building concrete chip samples, including one field duplicate, were also collected which were submitted for TAL metals analysis. Refer to Attachment B, Tables 2C and 2E for the matrix classification of each solid waste sample.

The sludge samples collected from the bottom of the on-site sumps and tanks located within the Wastewater Treatment Plant were collected using dedicated extended scoops in accordance with EPA ERT SOP Nos. 2001: *General Field Sampling Guidelines* and 2010, *Tank Sampling.* All hopper, furnace, and kettle content samples were collected with dedicated scoops in accordance with EPA ERT SOP No. 2001: *General Field Sampling Guidelines.* All hopper room concrete chip and Process Building concrete chip samples were collected with hammers and chisels in accordance with EPA ERT SOP Nos. 2001: *General Field Sampling Guidelines* and 2011, *Chip, Wipe, and Sweep Sampling*. Each concrete chip sample was collected from a 1 foot by 1 foot area using a dedicated disposable template. Only the surface concrete of each area was sampled. All process waste (accumulated dust) samples were collected brushes and dust pans in accordance with EPA ERT SOP Nos. 2001: *General Field Sampling Guidelines* and 2011, *Chip, Wipe, and Sweep Sampling.* Grab process waste (accumulated dust) samples were collected from accumulated dust present within specific areas of concern throughout the structures and composite samples were collected to document contamination across large areas of the facilities, where no accumulated dust was present. All solid waste samples collected were placed into sample jars, sealed, and shipped to the CLP laboratory for analysis.

A total of 120 wipe samples were collected from the on-site structures including Structure No. 1 (Administration) (26 samples), Structure No. 1A (Administration) (three samples), Structure No. 2 (Process Building) (84 samples), and Structure No. 7 [Air Emissions Stacks (Bag House)] (seven samples) (refer to Attachment A, Figure 4 for the Phase II Wipe Sample Location Map). The grab wipe samples were collected from various locations throughout the structures, including kettles, furnaces, slag collection units, hoppers, battery crushing area, floors, walls, troughs, etc. (refer to Attachment B, Tables 2A for detailed information in regards to sample collection locations). Each wipe sample was collected utilizing dedicated Ghost Wipe™ pre-moistened sterile sampling pads. Each sample was collected from a 10 centimeter (cm) by 10 cm [100 square cm (cm^2)] area using a dedicated disposable template for each sample. The marked surface area to be sampled was wiped firmly vertically and then horizontally to ensure complete surface coverage for analysis. All wipe samples collected were placed into sample jars, sealed, and shipped to the CLP laboratory for TAL metals analysis. All wipe sampling activities adhered to EPA ERT SOP Nos 2001: *General Field Sampling Guidelines* and 2011: *Chip, Wipe, and Sweep Sampling*.

A total of 15 micro-vac samples were collected from Structure No. 1 (Administration) (13 samples) and Structure No. 7 [Air Emissions Stacks (Bag House)] (two samples) (refer to Attachment A, Figure 5 for the Phase II Micro-Vac Sample Location Map). The micro-vac samples collected from the Administration building were collected from various fabric-covered surfaces located throughout the structure, including chairs, floor mats, clothes, etc. The micro-

vac samples collected from the Bag Houses were collected from the hopper bags (refer to Attachment B, Tables 2B for detailed information in regards to sample collection locations). The micro-vac surface dust samples were collected using a 0.45 micrometer (µm), 25 millimeter (mm) cellulose ester membrane cartridge and a low-volume pump. A small piece of tubing, approximately 2 inches in length and cut at a 45 degree (°) angle, was placed at the end of the cartridge. Each sample was collected from a 10 cm by 10 cm (100 cm^2) area, using a dedicated disposable template for each sample. The marked surface area to be sampled was vacuumed for at least two minutes until all visible dust had been removed. All micro-vac samples collected were placed into sample jars, sealed, and shipped to the CLP laboratory for TAL metals analysis. All micro-vac sampling activities adhered to EPA ERT SOP Nos 2001: *General Field Sampling Guidelines* and 2011: *Chip, Wipe, and Sweep Sampling*.

The multi-media samples collected as part of the Phase II Removal Assessment were collected for a definitive data QA Objective. All sample information was entered into the Scribe database for the generation of the COC records and sample labels. The locations of the interior samples were documented by RST 3, via field sketches, during sample collection activities.

Refer to Attachment C for the Photographic Documentation Log for general photographs of the Phase II Removal Assessment of the facility and Attachment H for all digital photographs.

2.3 Laboratories Receiving Samples

The following laboratories were utilized during the Phase I and II investigations of the BRC facility:

Laboratory Name/Location	Sample Matrix	Analyses
Phase I Sampling Event - January 11 through 25, 2016		
EPA DESA Laboratory 2890 Woodbridge Avenue Building 209, MS-230 Edison, NJ 08837	Soil (on-site soil borings and the area located adjacent to the eastern portion of the Site) and Rinsate Blank	TAL Metals
Chemtech Consulting Group 284 Sheffield Street Mountainside, NJ 07092 **(CLP Case No. 45919)**	Soil (on-site soil borings) and Rinsate Blank	TCL VOCs, SVOCs, and PCBs
EQ Environmental Quality Laboratories Inc. P.O. Box 11458 Santurce, PR 00910 **(RST 3-Procured Laboratory)**	Soil (on-site slag piles)	TAL Metals, TCLP Metals, and RCRA Characteristics
Phase II Sampling Event - February 29, 2016 through March 10, 2016		
Bonner Analytical Testing Company 2703 Oak Grove Road Hattiesburg, MS 39402 **(CLP Case No. 46023)**	Aqueous, Solid Waste, Wipe, and Micro-Vac	TAL Metals and TCLP Metals

TAL = Target Analyte List
VOC = Volatile Organic Compound
PCB = Polychlorinated Biphenyl
RCRA = Resource Conservation and Recovery Act
RST 3 = Removal Support Team 3
DESA = Division of Environmental Science and Assessment
TCL = Target Compound List
SVOC = Semivolatile Organic Compound
TCLP = Toxicity Characteristic Leaching Procedure
CLP = Contract Laboratory Program
EPA = U.S. Environmental Protection Agency

2.4 Sample Dispatch Summary

On January 18, 2016, RST 3 shipped eight soil samples, including one field duplicate, and two rinsate blank samples to a CLP laboratory, Chemtech Consulting Group located in Mountainside, New Jersey, for TCL VOC, SVOC, and PCB analyses under COC Record Nos. 2-011816-133838-0001 and 2-011816-142028-0002.

On January 19, 2016, RST 3 shipped 106 soil samples, including five field duplicates, and six rinsate blank samples to the EPA DESA laboratory located in Edison, New Jersey for TAL metals analysis under COC Record No. 2-011916-144748-0003.

On January 20, 2016, RST 3 shipped two soil samples and one rinsate blank sample to a CLP laboratory, Chemtech Consulting Group located in Mountainside, New Jersey, for TCL VOC, SVOC, and PCB analyses under COC Record No. 2-012016-104422-0004.

On January 25, 2016, RST 3 shipped 93 soil samples, including five field duplicates, and four rinsate blank samples to the EPA DESA laboratory located in Edison, New Jersey for TAL metals analysis under COC Record No. 2-012216-091443-0005.

On January 26, 2016, RST 3 hand-delivered nine slag pile soil samples to an RST 3-procured laboratory, EQ Environmental Quality Laboratories Inc. located in Santurce, Puerto Rico, for TAL metals, TCLP metals, and RCRA characteristics analyses under COC Record No. 2-012616-120109-0001.

On January 28, 2016, RST 3 shipped 11 soil samples collected from the area located adjacent to the eastern portion of the Site and two rinsate blank samples to the EPA DESA laboratory located in Edison, New Jersey for TAL metals analysis under COC Record No. 2-012716-163407-0006.

On March 3, 2016, RST 3 shipped 16 aqueous samples, including one field duplicate, and 15 solid waste samples, including one field duplicate, to a CLP laboratory, Bonner Analytical Testing Company located in Hattiesburg, Mississippi, for TAL metals analysis. In addition, RST 3 shipped five solid waste samples to the CLP laboratory for TCLP metals analysis. All samples were submitted under COC Record Nos. 2-030216-093507-0006 and 2-030216-180523-0007.

On March 7, 2016, RST 3 shipped seven wipe samples, eight solid waste samples, including one field duplicate, and two field blank samples to a CLP laboratory, Bonner Analytical Testing Company located in Hattiesburg, Mississippi, for TAL metals analysis. In addition, RST 3 shipped two solid waste samples to the CLP laboratory for TCLP metals analysis. All samples were submitted under COC Record Nos. 2-030616-101549-0008 and 2-030716-093611-0009.

On March 8, 2016, RST 3 shipped 61 solid waste samples, including three field duplicates, to a CLP laboratory, Bonner Analytical Testing Company located in Hattiesburg, Mississippi, for TAL metals analysis under COC Record Nos. 2-030816-092434-0010 and 2-030816-093115-0011.

On March 9, 2016, RST 3 shipped 27 wipe samples, 15 solid waste samples, including two field duplicates, and two field blank samples to a CLP laboratory, Bonner Analytical Testing

Company located in Hattiesburg, Mississippi, for TAL metals analysis. In addition, RST 3 shipped 20 solid waste samples, including one field duplicate, to the CLP laboratory for TCLP metals analysis. All samples were submitted under COC Record Nos. 2-030916-075454-0012 and 2-030916-134644-0013.

On March 10, 2016, RST 3 shipped 86 wipe samples, two solid waste samples, 15 micro-vac samples, and two field blanks to a CLP laboratory, Bonner Analytical Testing Company located in Hattiesburg, Mississippi, for TAL metals analysis under COC Record Nos. 2-031016-082818-0014, 2-031016-112454-0015, 2-031016-131459-0016, and 2-031016-140617-0017.

Refer to Attachment E for the COC Records.

2.5 On-Site Personnel

The following is a summary of EPA and RST 3 personnel on-site for the Phase I and II Removal Assessment of the BRC facility:

Name	Representing	Duties On-Site	Sampling Event
Dave Rosoff	U.S. EPA, Region II	On-Scene Coordinator	Phase I and II
Geoffrey Garrison	U.S. EPA, Region II	On-Scene Coordinator	Phase I and II
Carlos Huertas	RST 3, Region II	Site Project Manager (Phase I), Site H&S, Site QA/QC, Sample Collection, and Sample Management	Phase I
Danny Strong	Weston, ID/IQ	Site Project Manager (Phase II), Site H&S, Site QA/QC, Sample Collection, and Sample Management	Phase I and II
Lionel Montanez	RST 3, Region II	Sample Management	Phase I and II
Angel Alicea	RST 3, Region II	Sample Collection	Phase I and II
Joseph Bundens	RST 3, Region II	Sample Collection	Phase I and II
Erik Hadwin	Weston, ID/IQ	Sample Collection	Phase II
Sean Gavlas	Weston, ID/IQ	Sample Collection	Phase II

EPA = U.S. Environmental Protection Agency
ID/IQ = Indefinite Delivery/Indefinite Quantity
H&S = Health and Safety
RST 3 = Removal Support Team 3
QA/QC= Quality Control/Quality Assurance

3.0 VALIDATED ANALYTICAL RESULTS DISCUSSION

The contaminants of concern associated with the former operations conducted at the Site include metals, specifically lead. The XRF total lead field screening and validated TAL metal, TCL VOC, TCL SVOC, and TCL PCB laboratory results for all soil samples collected from the advanced on-site soil borings and from the slag piles identified by the EPA OSC located within on-site Structure Nos. 2 (Process Building), 3 (Waste Storage), and 5 (Storage) were compared against the EPA RMLs for Industrial Soil. The XRF total lead field screening and validated

TAL metal laboratory results for all soil samples collected from the area located adjacent to the eastern portion of the Site were compared against the EPA RMLs for Residential Soil. All soil and solid waste sample TCLP metal validated laboratory results were compared against the EPA TCLP Maximum Concentration of Contaminants (MCC) for the Toxicity Characteristic. The EPA RML for lead in industrial soil is 800 mg/kg; the EPA RML for lead in residential soil is 400 mg/kg; and the EPA TCLP MCC for the Toxicity Characteristic value for lead is 5 milligrams per liter (mg/L). All wipe and micro-vac sample TAL metal results were compared against the Site-Specific Action Levels for lead which were formerly established by EPA during the previous Risk Assessment of the Site completed in 2011. The Site-Specific Action Level for wipe samples was established as 40 $\mu g/ft^2$ and the Site-Specific Action Level for micro-vac samples was established as 250 $\mu g/ft^2$. The aqueous and solid waste sample TAL metal results were also compared against the EPA RMLs for industrial Sites for comparison purposes only.

3.1 Phase I Soil Sampling Investigation Validated Analytical Results

Total Lead:

Total lead results documented as part of the XRF field screening activities for soil samples collected from the advanced on-site soil borings ranged from 1 parts per million (ppm) to 102,500 ppm. A total of 256 of the 884 XRF field screening results for total lead for soil samples collected from the advanced on-site soil boring exceeded the EPA RML for Industrial Soil of 800 ppm, including the following: 140 of the 417 soil samples collected from the soil surface borings; 57 of the 286 soil samples collected from the gravel surface borings; 59 of the 147 soil samples collected from the asphalt surface borings; and 10 of the 34 soil samples collected from the drainage ditch borings. Based on the validated analytical results of the soil samples collected from the advanced on-site soil borings which were submitted for TAL metals laboratory confirmation analysis, total lead was detected at concentrations ranging from 6.2 mg/kg to 80,000 mg/kg. For comparison to the XRF field screening results, the mg/kg unit is equivalent to the ppm unit. A total of 119 of the 199 soil samples analyzed by the laboratory contained concentrations of total lead which exceeded 800 mg/kg, including the following: 58 of the 94 soil samples collected from the soil surface borings; 28 of the 58 soil samples collected from the gravel surface borings; 29 of the 40 soil samples collected from the asphalt surface borings; and four of the seven soil samples collected from the drainage ditch borings (refer to Attachment B, Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead and Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data).

For the asphalt surface borings, the majority of the 0 to 1 inch depth interval soil samples (24 of the 26 borings advanced) were collected from soil/sand located on the surface of the asphalt, prior to removing the asphalt for the advancement of the soil boring. All 24 of the samples collected above the asphalt documented XRF field screening results which exceeded the EPA RML for Industrial Soil for total lead. In addition, all 17 of the samples submitted for TAL metals laboratory confirmation analysis indicated total lead concentrations which exceeded the EPA RML. The concentrations of total lead detected in the soil samples collected from above the asphalt of the asphalt surface borings were the highest of all soil samples collected as part of the soil boring program completed at the Site (refer to Attachment B, Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead and Table 1D: On-Site Soil and

Slag Pile Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data).

Based on the XRF field screening results and the validated analytical confirmation results of the soil samples collected from the on-site soil surface, gravel surface, asphalt surface, and drainage ditch borings, 117 of the 142 soil borings contained soil with concentrations of total lead that exceeded the EPA RML of 800 mg/kg, including the following: 56 of the 65 soil surface borings; 32 of the 46 gravel surface borings; 24 of the 26 asphalt surface borings; and all five of the drainage ditch borings. The maximum concentration of lead was detected in soil boring BRC001-AB001 at the 0 to 1 inch depth interval (above the asphalt) with a concentration of 102,500 ppm. The majority of the lead contamination was detected in the upper 2 feet of the soil borings. However, exceedances of the EPA RML were detected in soil samples collected as deep as 6.5 feet bgs. The soil samples which indicated the deepest contamination were collected from the northeast corner of the facility. The horizontal extents of the total lead contamination have been documented as extending to the property boundary in the vast majority of the areas of the Site investigated (refer to Attachment A, Figure 3 for the Phase I Soil Boring Location Map, Attachment B, Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead and Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals, and Attachment F for the Validated Analytical Laboratory Data). Refer to Section 3.1.1 of this report for a detailed discussion of the on-site lithology and its correlation to total lead concentrations in soil.

Elevated concentrations of total lead were also detected in the soil samples collected from the forested area located adjacent to the eastern portion of the Site. Total lead results documented as part of the XRF field screening activities for these soil samples ranged from 1 ppm to 87,100 ppm. A total of 33 of the 77 XRF screening results for total lead for soil samples collected from the area located adjacent to the eastern portion of the Site exceeded the EPA RML for Residential Soil of 400 ppm. Based on the validated analytical results of the soil samples collected from the area located adjacent to the eastern portion of the Site which were submitted for TAL metals laboratory confirmation analysis, total lead was detected at concentrations ranging from 9.3 mg/kg to 73,000 mg/kg. A total of eight of the 11 soil samples submitted for laboratory confirmation analysis contained concentrations of total lead that exceeded 400 mg/kg [refer to Attachment B, Table 1B: Off-Site Soil Sample (Area Adjacent to Eastern Portion of the Site) Validated Analytical Data Summary Table - Total Lead and Table 1E: Area Adjacent to the Eastern Portion of the Site Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data].

Elevated concentration of lead were also detected in the soil samples collected from the slag piles located within on-site Structure No. 2 (Process Building), Structure No. 3 (Waste Storage), and Structure No. 5 (Storage). Total lead results documented as part of the XRF field screening activities for these soil samples ranged from 22,767 ppm to 201,767 ppm. All nine XRF screening results for total lead for soil samples collected from the slag piles exceeded the EPA RML for Industrial Soil of 800 ppm. Based on the validated analytical results of the soil samples collected from slag piles which were submitted for TAL metals laboratory confirmation analysis, total lead was detected at concentrations ranging from 18,903 mg/kg to 100,299 mg/kg. All nine soil samples contained concentrations of total lead that exceeded 800 mg/kg (refer to Attachment B, Table 1C: On-Site Slag Pile Sample Validated Analytical Data Summary Table - Total Lead

and Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data).

TCLP Lead:

Based on the validated analytical results of the soil samples collected from the slag piles located within on-site Structure No. 2 (Process Building), Structure No. 3 (Waste Storage), and Structure No. 5 (Storage) which were submitted for TCLP metals analysis, TCLP lead was detected at concentrations which exceeded the EPA TCLP MCC for the Toxicity Characteristic of 5.0 mg/L in six of the seven submitted samples, with a maximum concentration of 228 mg/L. In addition, TCLP cadmium was detected at concentrations which exceeded the EPA TCLP MCC for the Toxicity Characteristic of 1.0 mg/L in two of the seven submitted samples, with a maximum concentration of 6.70 mg/L. TCLP lead and cadmium exceedances of the EPA TCLP MCC for the Toxicity Characteristic indicates that the material is a RCRA hazardous waste based on the characteristics of toxicity. No other TCLP analytes were detected in the soil samples collected from the slag piles at concentrations exceeding the applicable standard (refer to Attachment B, Table 1F: Validated Analytical Results Summary Table - TCLP Metals and Attachment F for the Validated Analytical Laboratory Data).

Additional TAL Metals:

Based on the validated analytical results of the soil samples collected from the advanced on-site soil borings which were submitted for TAL metals laboratory confirmation analysis, in addition to the documented total lead exceedances of the EPA RML for Industrial Soil, antimony and arsenic were also detected at concentrations which exceeded the EPA RML for Industrial Soil (470 mg/kg and 300 mg/kg, respectively). Antimony was detected at concentrations exceeding the EPA RML for Industrial Soil in 21 of the 199 submitted samples, with a maximum concentration of 4,300 mg/kg, from the following areas of the Site: eight soil samples collected from the soil surface borings; 12 soil samples collected from the asphalt surface borings (10, including one field duplicate, which were collected from above the asphalt and included the maximum concentration detected); and one soil sample collected from the drainage ditch borings. Arsenic was detected at concentrations exceeding the EPA RML for Industrial Soil in eight of the 199 submitted samples, with a maximum concentration of 1,400 mg/kg, from the following areas of the Site: two soil samples collected from the soil surface borings; five soil samples collected from the asphalt surface borings (all of which were collected above the asphalt, including the maximum concentration detected); and one soil sample collected from the drainage ditch borings (refer to Attachment B, Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data). The antimony and arsenic exceedances of the EPA RML for Industrial Soil are co-located within the documented lead contamination in on-site soil.

Based on the validated analytical results of the soil samples collected from forested area located adjacent to the eastern portion of the Site which were submitted for TAL metals laboratory confirmation analysis, in addition to the documented total lead exceedances of the EPA RML for Residential Soil, antimony, arsenic, cadmium, cobalt, and iron were also detected at concentrations which exceeded the applicable EPA RML for Residential Soil (31 mg/kg, 35 mg/kg, 71 mg/kg, 23 mg/kg, and 55,000 mg/kg, respectively). Antimony was detected at concentrations exceeding 31 mg/kg in two of the 11 submitted samples, with a maximum

concentration of 1,400 mg/kg; arsenic was detected at concentrations exceeding 35 mg/kg in two of the 11 submitted samples, with a maximum concentration of 670 mg/kg; cadmium was detected at concentrations exceeding 71 mg/kg in two of the 11 submitted samples, with a maximum concentration of 190 mg/kg; cobalt was detected at a concentration exceeding 23 mg/kg in one of the 11 submitted samples (24 mg/kg); and iron was detected at a concentration exceeding 55,000 mg/kg in one of the 11 submitted samples (66,000 mg/kg) (refer to Attachment B, Table 1E: Area Adjacent to the Eastern Portion of the Site Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data).

Based on the validated analytical results of the soil samples collected from the slag piles located within on-site Structure No. 2 (Process Building), Structure No. 3 (Waste Storage), and Structure No. 5 (Storage) which were submitted for TAL metals laboratory confirmation analysis, in addition to the documented total lead exceedances of the EPA RML for Industrial Soil, arsenic was also detected at concentrations which exceeded the EPA RML for Industrial Soil (300 mg/kg). Arsenic was detected at concentrations exceeding 300 mg/kg in five of the nine submitted samples, with a maximum concentration of 680 mg/kg (refer to Attachment B, Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data).

Organics:

No elevated concentrations of TCL VOCs or PCBs, above the applicable EPA RML, were detected in the soil samples collected from the Site. However, one TCL SVOC (1,1-biphenyl) was detected in one soil sample collected from a gravel soil boring (BRC001-GB025) with a concentration of 4,300,000 micrograms per kilogram (µg/kg) which exceeds the EPA RML for Industrial Soil (200,000 µg/kg). This sample was collected from a depth of 72 to 84 inches bgs in a soil boring advanced in the location of a former drum storage area. In addition, it is important to note that although there were no concentrations of contaminants above the EPA RML for Industrial Soil in the select soil samples collected from the soil surface borings (BRC0001-SB014 and BRC-SB019) advanced in the area of a former aboveground storage tank there was an elevated concentration of one TCL VOC (o-xylene – 1,800,000 µg/kg) in a soil sample collected from the 108 to 120 inch depth interval of soil boring BRC-SB019 (refer to Attachment B, Table 1G: Validated Analytical Results Summary Table - TCL VOCs, Table 1H: Validated Analytical Results Summary Table - TCL SVOCs, Table 1I: Validated Analytical Results Summary Table - TCL PCBs and Attachment F for the Validated Analytical Laboratory Data).

RCRA Characteristics:

Based on the validated analytical results of the nine soil samples collected from the slag piles located within on-site Structure No. 2 (Process Building), Structure No. 3 (Waste Storage), and Structure No. 5 (Storage) which were submitted for RCRA Characteristics laboratory analysis, none of the samples contained reactive sulfide or cyanide at concentrations above the laboratory detection limit. In addition, none of the samples ignited during the ignitability analysis. Furthermore, the pH values of the samples ranged from 5.94 to 9.07 as part of the corrosivity analysis (refer to Attachment B, Table 1J: Validated Analytical Results Summary Table - RCRA Characteristics and Attachment F for the Validated Analytical Laboratory Data).

3.1.1 *On-Site Lithology Correlation to Total Lead Concentrations in Soil*

Near surface Site geology is fairly uniform throughout the Site. The ground surface of the Site is flat with a gentle slope for drainage away from Structure No. 2 (Process Building). The Site consists of multiple surfaces used for numerous functions so based on visual observations the area was split into the categories as described in Section 2.1 of this report.

As part of the Phase I Removal Assessment sampling activities, a total of 142 soil borings were advanced throughout the Site. The soil boring logs indicated the presence of loose to dense silty sands and/or sandy silts (referred to as caliche fill) underlain by stiff to hard clay with silts/sands. The "AB" locations consisted of an approximately 0 to 2 inch thick asphalt/concrete layer at the surface followed by caliche fill. The caliche fill layer varied in depths from 15 to 30 inches bgs before clay was encountered. The "DB" locations had a very thin caliche fill layer followed by the clay layer which was either silty clay or clayey silt. The majority of the "GB" locations had a 6 inch gravelly sand layer but predominantly consisted of a caliche fill layer that varied in depths from 6 to 30 inches bgs before reaching the clayey silt/silty clay layer. The "SB" locations had a diverse range in depths of layers based on the conditions at the surface mentioned previously. While the thickness of the layers may differ the lithology was composed of caliche fill at the surface followed by clayey silt/silty clay which was documented throughout the Site.

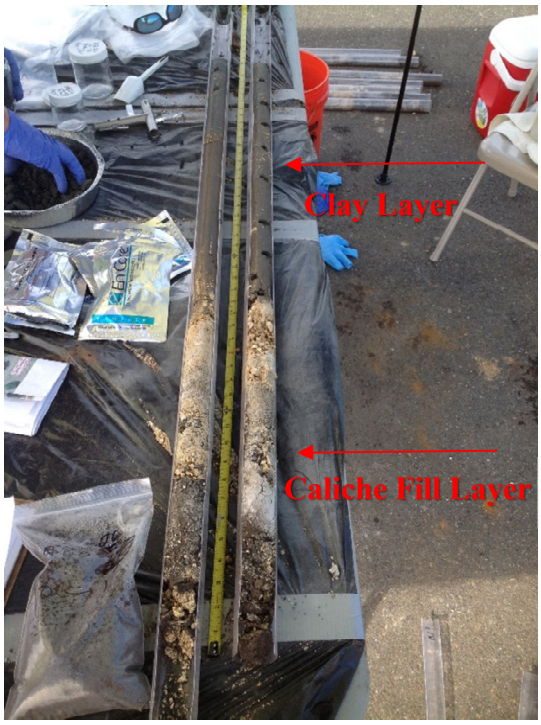
Based on the XRF field screening results and the validated analytical results of the soil samples collected from the "SB", "GB", "AB", and "DB" soil borings, 117 of the 142 soil borings contained soil with concentrations of lead that exceeded the EPA RML for Industrial Soil (800 mg/kg). The majority of the lead contamination was detected in the upper 2 feet of the soil borings. However, exceedances of the EPA RML were detected in soil samples collected as deep as 6.5 feet bgs. The soil samples which indicated the deepest contamination were collected from the northeast corner of the facility.

The majority of the soil samples that exceeded the EPA RML for Industrial Soil for lead were collected from within the caliche fill, above the clay layer. Lead concentrations in the soil appeared to decrease with depth and presence of clay. However at 24 locations (one "AB", two "DB", seven "GB", and 14 "SB") lead concentrations were found above the applicable EPA RML in samples containing clay. In 10 of the locations the samples were collected from a mixed zone where the caliche fill met the clay layer. Therefore, during homogenization of samples possibly more of the caliche fill layer, which generally is where the elevated concentrations of lead were detected, was processed than the clay for the sample. In nine of the locations, clay was present as silty clay or clayey silt and present at the surface which is not consistent with the general near surface Site geology, thus leading to the assumption that the area had been disturbed. At three locations, samples that indicated lead concentrations exceeding 800 mg/kg were present in the clayey silt layer with silt being the predominant component. Finally, at two locations, lead concentrations were found above the EPA RML in silty clay (clay being the major soil type). At both locations the XRF screening result was above the EPA RML but the corresponding samples submitted to the lab were below the EPA RML.

In general, based on the overall near surface geology observed compared with the XRF field screening and laboratory confirmation results, total lead was generally documented at concentrations above the EPA RML for Industrial Soil in the upper zones of the underlying geology (*i.e.,* caliche fill layer), prior to reaching the clay layer. An example of this can be found

on the following soil boring photograph which shows the soil core extracted from asphalt surface soil boing BRC001-AB024. The caliche fill layer can be seen in the upper 20 inches of the core. Below the caliche the core consists of clay. Within this soil boring, the soil samples which were collected from the 0 to 12 inch bgs depth interval contained concentrations of lead which exceeded the EPA RML for Industrial Soil. Further down the core, approaching the caliche fill/clay interface, the concentrations of lead decreased, below the EPA RML for Industrial Soil.

Soil Boring Photograph from Asphalt Surface Soil Boing BRC001-AB024



It appears that the permeability of the caliche fill layer allows for the vertical migration of lead contamination in soil until it reaches the clay layer. The low permeability clay acts as a confining layer which is generally preventing the downward migration of lead contamination in the clay.

3.2 Phase II Multi-Media Sampling Investigation Validated Analytical Results

Wipe Samples:

A total of 120 wipe samples were collected from Structure No. 1 (Administration), Structure No. 1A (Administration), Structure No. 2 (Process Building), and Structure No. 7 [Air Emissions Stacks (Bag House)] (refer to Attachment A, Figure 4 for the Phase II Wipe Sample Location Map).

A total of 26 wipe samples were collected from Structure No. 1 (Administration) from surfaces including walls, floors, office furniture, etc. All 26 wipe samples contained concentrations of total lead which exceeded the formerly established EPA Site-Specific Action Level of 40 $\mu g/ft^2$. The concentrations of total lead ranged from 137 $\mu g/ft^2$ to 121,703 $\mu g/ft^2$, with the maximum concentration being detected in a wipe sample (BRC001-DM01-WP009-01) collected from the

floor of the equipment room located in the northern portion of the building (refer to Attachment A, Figure 4 for the Phase II Wipe Sample Location Map).

A total of three wipe samples were collected from Structure No. 1A (Administration) from surfaces including floors and office furniture. All three wipe samples contained concentrations of total lead which exceeded the formerly established EPA Site-Specific Action Level of 40 $\mu g/ft^2$. The concentrations of total lead ranged from 293 $\mu g/ft^2$ to 6,002 $\mu g/ft^2$, with the maximum concentration being detected in a wipe sample (BRC001-DM01-WP018-01) collected from a desk located in the locker room area of the building (refer to Attachment A, Figure 4 for the Phase II Wipe Sample Location Map).

A total of 84 wipe samples were collected from Structure No. 2 (Process Building) from surfaces including kettles, furnaces, slag collection units, operational equipment, walls, floors, beams, windows, etc. All 84 wipe samples contained concentrations of total lead which exceeded the formerly established EPA Site-Specific Action Level of 40 $\mu g/ft^2$. The concentrations of total lead ranged from 4,357 $\mu g/ft^2$ to 1,105,546 $\mu g/ft^2$, with the maximum concentration being detected in a wipe sample (BRC001-CF01-WP008-01) collected from the south wall located in the area of Furnace No. 2 (refer to Attachment A, Figure 4 for the Phase II Wipe Sample Location Map).

A total of seven wipe samples were collected from Structure No. 7 [Air Emissions Stacks (Bag House)] from surfaces including kettles, hoppers, walls, and floors. All seven wipe samples contained concentrations of total lead which exceeded the formerly established EPA Site-Specific Action Level of 40 $\mu g/ft^2$. The concentrations of total lead ranged from 25,177 $\mu g/ft^2$ to 1,096,256 $\mu g/ft^2$, with the maximum concentration being detected in a wipe sample (BRC001-BB01-WP003-01) collected from the floor of Bag House 1 located within the structure (refer to Attachment A, Figure 4 for the Phase II Wipe Sample Location Map).

Refer to Attachment B, Table 2A: Wipe Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data.

Micro-Vac Samples:

A total of 15 micro-vac samples were collected from Structure No. 1 (Administration) and Structure No. 7 [Air Emissions Stacks (Bag House)] (refer to Attachment A, Figure 5 for the Phase II Micro-Vac Sample Location Map).

A total of 13 micro-vac samples were collected from Structure No. 1 (Administration) from surfaces including office furniture, floor mats, locker room clothes, etc. All 13 micro-vac samples contained concentrations of total lead which exceeded the formerly established EPA Site-Specific Action Level of 250 $\mu g/ft^2$. The concentrations of total lead ranged from 1,970 J+ (estimated value) $\mu g/ft^2$ to 4,821,668 J+ (estimated value) $\mu g/ft^2$, with the maximum concentration being detected in a micro-vac sample (BRC001-DM01-MW008-01) collected from the a floor mat located in back room located in the eastern portion of the structure (refer to Attachment A, Figure 5 for the Phase II Micro-Vac Sample Location Map).

The additional two micro-vac samples were collected from Structure No. 7 [Air Emissions Stacks (Bag House)] from surfaces found within Bag House 1 and Bag House 2 located within

the structure. Both micro-vac samples contained concentrations of total lead which exceeded the formerly established EPA Site-Specific Action Level of 250 µg/ft^2. The concentrations of total lead were 200,671 µg/ft^2 for the sample collected from Bag House 2 and 145,858 µg/ft^2 for the sample collected from Bag House 1 (refer to Attachment A, Figure 5 for the Phase II Micro-Vac Sample Location Map).

Refer to Attachment B, Table 2B: Micro-Vac Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data.

Solid Waste Samples:

A total of 99 solid waste samples, including seven field duplicates, were collected from the on-site sumps, Structure No. 2 (Process Building), Structure No. 4 (Wastewater Treatment Plant), and Structure No. 7 [Air Emissions Stacks (Bag Houses)] (refer to Attachment A, Figure 6 for the Phase II Solid Waste Sample Location Map). The solid waste samples consisted of various materials depending on location, including process waste (accumulated dust), sludge, hopper contents, hopper room concrete chips, furnace contents, kettle contents, and Process Building concrete chips present in each respective area of the facility.

On-Site Sumps:

A total of 11 grab solid waste samples, including one field duplicate, were collected from the bottom of the on-site sumps (Sump Nos. 1 through 10) which consisted of sludge present at the bottom of each respective sump. The sludge samples were compared against the EPA RMLs for industrial Sites for comparison purposes only. All 11 sludge samples contained concentrations of total lead which exceeded the EPA RML for Industrial Soil (800 mg/kg). The concentrations of total lead ranged from 8,530 J (estimated value) mg/kg to 298,000 J (estimated value) mg/kg, with the maximum concentration being detected in a sludge sample (BRC001-SUMP03-SL001-01) collected from Sump No. 3 located adjacent to Structure No. 7 [Air Emissions Stacks (Bag House)] (refer to Attachment A, Figure 6 for the Phase II Solid Waste Sample Location Map). In addition to the documented total lead exceedances of the EPA RML for Industrial Soil, antimony, arsenic, and thallium were also detected at concentrations which exceeded the EPA RML for Industrial Soil (470 mg/kg, 300 mg/kg, and 12 mg/kg, respectively). Antimony was detected at concentrations exceeding 470 mg/kg in eight of the 11 sludge samples collected from the on-site sumps, with a maximum concentration of 6,050 J (estimated value) mg/kg (Sump No. 3); arsenic was detected at concentrations exceeding 300 mg/kg in five of the 11 samples, with a maximum concentration of 1,550 J (estimated value) mg/kg (Sump No. 8); and thallium was detected at a concentration exceeding 12 mg/kg in one of the 11 samples [Sump No. 3 - 15 J (estimated value) mg/kg] (refer to Attachment B, Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data).

Two composite solid waste samples (sludge), including one field duplicate, were also collected from the bottom of the 10 on-site sumps which were analyzed for TCLP metals. TCLP lead was detected at concentrations which exceeded the EPA TCLP MCC for the Toxicity Characteristic of 5.0 mg/L in both samples [10.9 J (estimated value) mg/L and 10.1 J (estimated value) mg/L]. TCLP lead exceedances of the EPA TCLP MCC for the Toxicity Characteristic indicates that the material is a RCRA hazardous waste based on the characteristics of toxicity. No other TCLP

analytes were detected in the sludge samples collected from the on-site sumps at concentrations exceeding the applicable standard (refer to Attachment B, Table 2E: Solid Waste Validated Analytical Results Summary Table - TCLP Metals and Attachment F for the Validated Analytical Laboratory Data).

Structure No. 4 (Wastewater Treatment Plant):

A total of four solid waste samples were collected from Structure No. 4 (Wastewater Treatment Plant) which consisted of sludge from Lagoon Nos. 1 and 2 and Tank 1 and Tank 2 located within the Wastewater Treatment Plant. Composite samples were collected from the two lagoons and grab samples were collected from the two tanks. All four sludge samples contained concentrations of total lead which exceeded the EPA RML for Industrial Soil (800 mg/kg). The concentrations of total lead ranged from 919 J (estimated value) mg/kg to 266,000 J (estimated value) mg/kg, with the maximum concentration being detected in a sludge sample collected from Lagoon No. 2 (refer to Attachment A, Figure 6 for the Phase II Solid Waste Sample Location Map). In addition to the documented total lead exceedances of the EPA RML, antimony, arsenic, cadmium, cobalt, and thallium were also detected at concentrations which exceeded the applicable EPA RML (470 mg/kg, 300 mg/kg, 980 mg/kg, 350 mg/kg, and 12 mg/kg, respectively). Antimony was detected at concentrations exceeding the EPA RML for Industrial Soil in all four sludge samples collected from the Wastewater Treatment Plant, with a maximum concentration of 16,500 J (estimated value) mg/kg (from the sample collected from Tank 2); arsenic was detected at a concentration exceeding 300 mg/kg in one of the four samples [528 J (estimated value) mg/kg from the sample collected from Tank 2]; cadmium was detected at concentrations exceeding 980 mg/kg in three of the four samples, with a maximum concentration of 6,060 J (estimated value) mg/kg (from the sample collected from Tank 2); cobalt was detected at concentrations exceeding 350 mg/kg in two of the four samples, with a maximum concentration of 1,400 J (estimated value) mg/kg (from the sample collected from Tank 2); and thallium was detected at a concentration exceeding 12 mg/kg in one of the four samples [15 J (estimated value) mg/kg from the sample collected from Lagoon No. 2] (refer to Attachment B, Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data).

A total of three composite sludge samples were also collected from Structure No. 4 (Wastewater Treatment Plant) which were analyzed for TCLP metals (one composite sample from each of the two lagoons and one composite sample of the two tanks found within the Wastewater Treatment Plant). TCLP lead was detected at concentrations which exceeded the EPA TCLP MCC for the Toxicity Characteristic of 5.0 mg/L in two of the three samples (collected from Lagoon Nos. 1 and 2) with concentrations ranging from 4.9 J (estimated value) mg/L to 35.1 mg/L. In addition, TCLP cadmium was detected at a concentration which exceeded the EPA TCLP MCC for the Toxicity Characteristic of 1.0 mg/L in one of the three submitted samples [4.4 J (estimated value) mg/L in the sludge sample collected from Tank 1 and Tank 2]. TCLP lead and cadmium exceedances of the EPA TCLP MCC for the Toxicity Characteristic indicates that the material is a RCRA hazardous waste based on the characteristics of toxicity. No other TCLP analytes were detected in the sludge samples collected from the Wastewater Treatment Plant at concentrations exceeding the applicable standard (refer to Attachment B, Table 2E: Solid Waste Validated Analytical Results Summary Table - TCLP Metals and Attachment F for the Validated Analytical Laboratory Data).

Structure No. 2 (Process Building):

A total of 78 solid waste samples, including five field duplicates, were collected from Structure No. 2 (Process Building) which consisted of sludge, process waste (accumulated dust), furnace and kettle contents, and concrete chip samples. Grab process waste (accumulated dust) samples were collected from accumulated dust present within specific areas of concern throughout the structures and composite samples were collected to document contamination across large areas of the facilities, where no accumulated dust was present. The solid waste samples were compared against the EPA RMLs for Industrial Soil for comparison purposes only.

A total of five grab sludge samples were collected from the Process Building which were submitted for TAL metals (three samples) and TCLP metals (two samples) analyses. The samples were collected from the bottom of the battery crushing area trench and the sump located behind Slag Collection Unit No. 2. The concentrations of total lead for the three samples submitted for TAL metals analysis ranged from 61,500 mg/kg to 81,600 mg/kg, all of which exceeded the EPA RML for Industrial Soil (800 mg/kg), with the maximum concentration being detected in the sludge sample collected from the sump located behind Slag Collection Unit No. 2. In addition to the documented total lead exceedances of the applicable EPA RML, antimony, arsenic, and cobalt were also detected at concentrations which exceeded the EPA RML for Industrial Soil (470 mg/kg, 300 mg/kg, and 350 mg/kg, respectively). Elevated concentrations of antimony, above 470 mg/kg, were detected in all three sludge samples submitted for TAL metals analysis with the maximum concentration of 8,920 mg/kg being detected in the sample collected from the sump located behind Slag Collection Unit No. 2; elevated concentrations of arsenic, above 300 mg/kg, were detected in two of the three sludge samples with the maximum concentration of 1,240 mg/kg being detected in the sample collected from the sump located behind Slag Collection Unit No. 2; and an elevated concentration of cobalt, above 350 mg/kg, was detected in one of the sludge samples collected from the sump located behind the Slag Collection Unit No. 2 (385 mg/kg). TCLP lead was detected at a concentration which exceeded the EPA TCLP MCC for the Toxicity Characteristic of 5.0 mg/L in one of the two grab sludge samples (sample collected from the crushing area trench at a concentration of 80.9 mg/L). TCLP lead exceedances of the EPA TCLP MCC for the Toxicity Characteristic indicates that the material is a RCRA hazardous waste based on the characteristics of toxicity. No other TCLP analytes were detected in the sludge samples collected from the Process Building at concentrations exceeding the applicable standard (refer to Attachment B, Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals and Table 2E: Solid Waste Validated Analytical Results Summary Table - TCLP Metals and Attachment F for the Validated Analytical Laboratory Data).

A total of 27 grab process waste (accumulated dust) samples, including four field duplicates, and 18 composite process waste (accumulated dust) samples were collected from the Process Building which were submitted for TAL metals analysis. In addition, 10 grab process waste (accumulated dust) samples and six composite process waste (accumulated dust) samples, including one field duplicate, were collected from the Process Building which were submitted for TCLP metals analysis. The samples were collected from throughout the Process Building [refer to Attachment B, Tables 2C for the specific location within the facility for each process waste (accumulated dust) sample].

The concentrations of total lead for the 27 grab process waste (accumulated dust) samples submitted for TAL metals analysis ranged from 11,800 mg/kg to 241,000 mg/kg, all of which exceeded the EPA RML for Industrial Soil (800 mg/kg), with the maximum concentration being detected in a process waste (accumulated dust) sample collected from the floor between Kettle Nos. 1 and 2. In addition to the documented total lead exceedances of the applicable EPA RML, antimony, arsenic, and cadmium were also detected in the grab process waste (accumulated dust) samples at concentrations which exceeded the EPA RML for Industrial Soil (470 mg/kg, 300 mg/kg, and 980 mg/kg, respectively). Elevated concentrations of antimony, above 470 mg/kg, were detected in 26 of the 27 grab process waste (accumulated dust) samples submitted for TAL metals analysis with the maximum concentration of 33,400 mg/kg being detected in the sample collected from the top of the concrete of Kettle Nos. 2 and 3; elevated concentrations of arsenic, above 300 mg/kg, were detected in 24 of the 27 process waste (accumulated dust) samples with the maximum concentration of 1,610 mg/kg being detected in the sample collected from the top of the concrete of Kettle Nos. 2 and 3; and elevated concentrations of cadmium, above 980 mg/kg, were detected in two of the 27 process waste (accumulated dust) samples with the maximum concentration of 3,870 mg/kg being detected in the sample collected from behind Furnace No. 2. TCLP lead was detected at concentrations which exceeded the EPA TCLP MCC for the Toxicity Characteristic of 5.0 mg/L in seven of the 10 grab process waste (accumulated dust) samples with a maximum concentration of 103 mg/L being detected in the sample collected from the floor of the Kettle No. 6 room. In addition, three of the 10 grab process waste (accumulated dust) samples contained concentrations of TCLP cadmium which exceeded the EPA TCLP MCC for the Toxicity Characteristic of 1.0 mg/L with the maximum concentration of 108 mg/L being detected in the sample collected from behind Furnace No. 2. TCLP lead and cadmium exceedances of the EPA TCLP MCC for the Toxicity Characteristic indicates that the material is a RCRA hazardous waste based on the characteristics of toxicity. No other TCLP analytes were detected in the grab process waste (accumulated dust) samples collected from the Process Building at concentrations exceeding the applicable standard (refer to Attachment B, Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals and Table 2E: Solid Waste Validated Analytical Results Summary Table - TCLP Metals and Attachment F for the Validated Analytical Laboratory Data).

The concentrations of total lead for the 18 composite process waste (accumulated dust) samples submitted for TAL metals analysis ranged from 62,400 mg/kg to 140,000 mg/kg, all of which exceeded the EPA RML for Industrial Soil (800 mg/kg), with the maximum concentration being detected in the process waste (accumulated dust) samples collected from the dirt floor located east of Kettle Nos. 3 and 4 and the crushing area floor (north side). In addition to the documented total lead exceedances of the applicable EPA RML, antimony and arsenic were also detected in the composite process waste (accumulated dust) samples at concentrations which exceeded the EPA RML for Industrial Soil (470 mg/kg and 300 mg/kg, respectively). Elevated concentrations of antimony, above 470 mg/kg, were detected in all 18 composite process waste (accumulated dust) samples submitted for TAL metals analysis with the maximum concentration of 14,900 mg/kg being detected in the sample collected from the floor between Kettle Nos. 1 and 2; and elevated concentrations of arsenic, above 300 mg/kg, were detected in 13 of the 18 composite process waste (accumulated dust) samples with the maximum concentration of 760 mg/kg being detected in the sample collected from the dirt floor located east of Kettle Nos. 3 and 4. TCLP lead was detected at concentrations which exceeded the EPA TCLP MCC for the Toxicity Characteristic of 5.0 mg/L in three of the six composite process waste (accumulated dust) samples with a maximum concentration of 189 mg/L being detected in the sample collected

from the floor of the slag bin storage area. TCLP lead exceedances of the EPA TCLP MCC for the Toxicity Characteristic indicates that the material is a RCRA hazardous waste based on the characteristics of toxicity. No other TCLP analytes were detected in the composite process waste (accumulated dust) samples collected from the Process Building at concentrations exceeding the applicable standard (refer to Attachment B, Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals and Table 2E: Solid Waste Validated Analytical Results Summary Table - TCLP Metals and Attachment F for the Validated Analytical Laboratory Data).

Two grab furnace content samples, consisting of slag, process waste, dust, etc. found within the vessels, were collected from the Process Building which were submitted for TAL metals analysis. The concentrations of total lead for the two furnace content samples were 38,700 mg/kg (Furnace No. 1) and 83,700 mg/kg (Furnace No. 2), both of which exceeded the EPA RML for Industrial Soil (800 mg/kg). In addition to the documented total lead exceedances of the applicable EPA RML, antimony and arsenic were also detected in the grab furnace content samples at concentrations which exceeded the EPA RML for Industrial Soil (470 mg/kg and 300 mg/kg, respectively). Elevated concentrations of antimony, above 470 mg/kg, were detected in both grab furnace content samples submitted for TAL metals analysis with the maximum concentration of 1,090 mg/kg being detected in the sample collected from Furnace No. 2; and elevated concentrations of arsenic, above 300 mg/kg, were detected in one of the two grab furnace content samples (Furnace No. 2) at a concentration of 560 mg/kg (refer to Attachment B, Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data).

A total of four composite kettle content samples, consisting of slag, process waste, dust, etc. found within the vessels, were collected from the Process Building which were submitted for TAL metals (two samples) and TCLP metals (two samples) analyses. The concentrations of total lead for the two kettle content samples were 121,000 mg/kg (Kettle Nos. 1 through 5) and 87,600 mg/kg (Kettle Nos. 6 through 9), both of which exceeded the EPA RML for Industrial Soil (800 mg/kg). In addition to the documented total lead exceedances of the applicable EPA RML, antimony and arsenic were also detected in the composite kettle content samples at concentrations which exceeded the EPA RML for Industrial Soil (470 mg/kg and 300 mg/kg, respectively). Elevated concentrations of antimony, above 470 mg/kg, were detected in both composite kettle content samples submitted for TAL metals analysis with the maximum concentration of 29,900 mg/kg being detected in the sample collected from Kettle Nos. 1 through 5; and elevated concentrations of arsenic, above 300 mg/kg, were detected in both composite kettle content samples with the maximum concentration of 1,390 mg/kg being detected in the sample collected from Kettle Nos. 1 through 5. TCLP lead was detected at concentrations which exceeded the EPA TCLP MCC for the Toxicity Characteristic of 5.0 mg/L in both of the composite kettle content samples with a maximum concentration of 120 mg/L being detected in the sample collected from Kettle Nos. 1 through 5. TCLP lead exceedances of the EPA TCLP MCC for the Toxicity Characteristic indicates that the material is a RCRA hazardous waste based on the characteristics of toxicity. No other TCLP analytes were detected in the composite kettle content samples collected from the Process Building at concentrations exceeding the applicable standard (refer to Attachment B, Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals and Table 2E: Solid Waste Validated Analytical Results Summary Table - TCLP Metals and Attachment F for the Validated Analytical Laboratory Data).

A total of 26 grab concrete chip samples (concrete from walls and floors), including one field duplicate, were collected from the Process Building which were submitted for TAL metals analysis. The concentrations of total lead for the 26 grab concrete chip samples ranged from 408 mg/kg to 53,000 mg/kg, with 24 of the 26 samples exceeding the EPA RML for Industrial Soil (800 mg/kg) and the maximum concentration being detected in a concrete chip sample collected from the Kettle No. 1 bin. In addition to the documented total lead exceedances of the applicable EPA RML, antimony and arsenic were also detected in the concrete chip samples at concentrations which exceeded the EPA RML for Industrial Soil (470 mg/kg and 300 mg/kg, respectively). Elevated concentrations of antimony, above 470 mg/kg, were detected in three of the 26 grab concrete chip samples submitted for TAL metals analysis with the maximum concentration of 50,300 mg/kg being detected in a sample collected from the Kettle No. 1 bin; and an elevated concentration of arsenic, above 300 mg/kg, was detected in one of the 26 concrete chip samples (collected from the Kettle No. 1 bin) at a concentration of 12,100 mg/kg (refer to Attachment B, Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data).

Structure No. 7 [Air Emissions Stacks (Bag Houses)]:

A total of six grab solid waste samples, including one field duplicate, were collected from Structure No. 7 [Air Emissions Stacks (Bag Houses)] which consisted of hopper contents (four samples) and hopper room concrete chips (two samples). The solid waste samples were compared against the EPA RMLs for industrial Sites for comparison purposes only. All four hopper content samples, consisting of process dust from the hoppers, contained concentrations of total lead which exceeded the EPA RML for Industrial Soil (800 mg/kg). The concentrations of total lead ranged from 110,000 mg/kg to 128,000 mg/kg, with the maximum concentration being detected in a hopper content sample collected from the Bag House 2 hopper. Both hopper room concrete chip samples, consisting of concrete chipped from walls and floors, also contained concentrations of total lead which exceeded 800 mg/kg with the hopper room concrete chip sample collected from the Bag House 1 hopper room containing a concentration of total lead of 3,030 mg/kg and the sample collected from the Bag House 2 hopper room containing a concentration of total lead of 110,000 mg/kg. In addition to the documented total lead exceedances of the EPA RML, antimony, arsenic, and cadmium were also detected at concentrations which exceeded the applicable EPA RML (470 mg/kg, 300 mg/kg, and 980 mg/kg, respectively). Antimony was detected at concentrations exceeding the EPA RML for Industrial Soil in five of the six solid waste samples (all four hopper content samples and the concrete chip sample from Bag House 2) collected from Structure No. 7 [Air Emissions Stacks (Bag Houses)], with a maximum concentration of 10,500 mg/kg (hopper content sample collected from the Bag House 2 hopper); arsenic was detected at concentrations exceeding 300 mg/kg in five of the six solid waste samples (all four hopper content samples and the concrete chip sample from Bag House 2), with a maximum concentration of 1,350 mg/kg (hopper room concrete chip sample collected from the Bag House 2 hopper); and cadmium was detected at concentrations exceeding 980 mg/kg in four of the six solid waste samples (hopper contents from both hoppers and the concrete chip sample collected from the Bag House 2 floor), with a maximum concentration of 7,110 mg/kg (hopper room concrete chip sample collected from the Bag House 2 floor) (refer to Attachment B, Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data).

Two grab hopper content dust samples were also collected from Structure No. 7 [Air Emissions Stacks (Bag Houses)] which were analyzed for TCLP metals (one sample from each of the hoppers located in Bag House 1 and Bag House 2). TCLP lead was detected at concentrations which exceeded the EPA TCLP MCC for the Toxicity Characteristic of 5.0 mg/L in both samples [38.9 mg/L (Bag House 1 hopper) and 42.2 mg/L (Bag House 2 hopper)]. In addition, TCLP cadmium was detected at concentrations which exceeded the EPA TCLP MCC for the Toxicity Characteristic of 1.0 mg/L in both samples [34.9 mg/L (Bag House 1 hopper) and 13.9 J (estimated value) mg/L (Bag House 2 hopper)]. TCLP lead and cadmium exceedances of the EPA TCLP MCC for the Toxicity Characteristic indicates that the dust in the bag houses is a RCRA hazardous waste based on the characteristics of toxicity. No other TCLP analytes were detected in the hopper content samples collected from Structure No. 7 [Air Emissions Stacks (Bag Houses)] at concentrations exceeding the applicable standard (refer to Attachment B, Table 2E: Solid Waste Validated Analytical Results Summary Table - TCLP Metals and Attachment F for the Validated Analytical Laboratory Data).

Aqueous Samples:

A total of 16 aqueous samples, including one field duplicate, were collected from the on-site sumps, the Slag Collection Unit No. 2 sump located within Structure No. 2 (Process Building), and Structure No. 4 (Wastewater Treatment Plant) (refer to Attachment A, Figure 7 for the Phase II Wastewater Sample Location Map).

A total of 11 grab aqueous samples, including one field duplicate, were collected from the on-site sumps (Sump Nos. 1 through 10). As part of the on-site sample collection procedures, the pH values for all aqueous samples were recorded utilizing a pH Tester unit and pH test strips. The pH values for the aqueous samples collected from the on-site sumps ranged from 8.09 to 9.19. The aqueous samples were compared against the EPA RMLs for Tap Water for comparison purposes only. All 11 aqueous samples contained concentrations of total lead which exceeded the EPA RML for Tap Water [15 micrograms per liter (µg/L)]. The concentrations of total lead ranged from 189 µg/L to 65,400 µg/L, with the maximum concentration being detected in an aqueous sample collected from Sump No. 3 located adjacent to Structure No. 7 [Air Emissions Stacks (Bag House)] (refer to Attachment A, Figure 7 for the Phase II Wastewater Sample Location Map). In addition to the documented total lead exceedances of the EPA RML, antimony, arsenic, cadmium, and thallium were also detected at concentrations which exceeded the applicable EPA RML for Tap Water (7.8 µg/L, 5.2 µg/L, 9.2 µg/L, and 0.2 µg/L, respectively). Antimony was detected at concentrations exceeding the EPA RML for Tap Water in eight of the 11 aqueous samples collected from the on-site sumps, with a maximum concentration of 866 µg/L (collected from Sump No. 3); arsenic was detected at concentrations exceeding 5.2 µg/L in 10 of the 11 samples, with a maximum concentration of 211 µg/L (collected from Sump No. 6); cadmium was detected at concentrations exceeding 9.2 µg/L in two of the 11 samples, with a maximum concentration of 137 µg/L (collected from Sump No. 3); and thallium was detected at a concentration exceeding 0.2 µg/L in one of the 11 samples (34 µg/L) (collected from Sump No. 3) (refer to Attachment B, Table 2D: Wastewater Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data).

One grab aqueous sample was collected from the Slag Collection Unit No. 2 sump located within Structure No. 2 (Process Building) (refer to Attachment A, Figure 7 for the Phase II Wastewater

Sample Location Map). As part of the on-site sample collection procedures, the pH value for the one aqueous sample was recorded utilizing a pH Tester unit and pH test strips. The pH value for the aqueous sample collected from the Slag Collection Unit No. 2 sump located within Process Building was 7.50. The aqueous sample was compared against the EPA RMLs for Tap Water for comparison purposes only. The one aqueous sample contained a total lead concentration of 4,710 µg/L which exceeded the EPA RML for Tap Water (15 µg/L). In addition to the documented total lead exceedance of the EPA RML, antimony, arsenic, cadmium, manganese, and nickel were also detected at concentrations which exceeded the applicable EPA RML (7.8 µg/L, 5.2 µg/L, 9.2 µg/L, 430 µg/L, and 390 µg/L, respectively). Antimony was detected at a concentration of 555 µg/L, arsenic was detected at a concentration of 36 µg/L, cadmium was detected at a concentration of 68 µg/L, manganese was detected at a concentration of 789 µg/L, and nickel was detected at a concentration of 411 µg/L (refer to Attachment B, Table 2D: Wastewater Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data).

A total of four aqueous samples were collected from Structure No. 4 (Wastewater Treatment Plant). Composite samples were collected from the two lagoons (Lagoon Nos. 1 and 2) and grab samples were collected from the two tanks within the wastewater treatment plant (Tank 1 and Tank 2). As part of the on-site sample collection procedures, the pH values for all aqueous samples were recorded utilizing a pH Tester unit and pH test strips. The pH values for the aqueous samples collected from the Wastewater Treatment Plant were as follows: 8.05 (Lagoon No. 1), 2.12 (Lagoon No. 2), 7.65 (Tank 1), and 7.50 (Tank 2). The aqueous samples were compared against the EPA RMLs for Tap Water for comparison purposes only. Three of the four aqueous samples contained concentrations of total lead which exceeded the EPA RML for Tap Water (15 µg/L). The concentrations of total lead ranged from non-detect (sample collected from Lagoon No. 1) to 3,530 µg/L (sample collected from Lagoon No. 2) (refer to Attachment A, Figure 7 for the Phase II Wastewater Sample Location Map). In addition to the documented total lead exceedances of the EPA RML for Tap Water, the following table summarizes the additional TAL metal exceedances of the EPA RMLs documented in the aqueous samples collected from the Wastewater Treatment Plant:

Additional TAL Metal Exceedances of the EPA RMLs for Tap Water – Wastewater Treatment Plant

TAL Metal	EPA RML for Tap Water (µg/L)	Total Number of Exceedances	Maximum Concentration (µg/L)	Location
Aluminum	20,000	1 of 4	114,000	Lagoon No. 2
Antimony	7.8	4 of 4	4,110	Lagoon No. 2
Arsenic	5.2	4 of 4	799	Lagoon No. 2
Cadmium	9.2	2 of 4	109	Tank 1
Cobalt	6.0	1 of 4	450	Lagoon No. 2
Copper	800	1 of 4	5,450	Lagoon No. 2
Manganese	430	1 of 4	2,590	Lagoon No. 2
Nickel	390	1 of 4	6,660	Lagoon No. 2
Selenium	100	1 of 4	144	Lagoon No. 2
Vanadium	86	1 of 4	293	Lagoon No. 2
Zinc	6,000	1 of 4	12,700	Lagoon No. 2

Refer to Attachment B, Table 2D: Wastewater Validated Analytical Results Summary Table - TAL Metals and Attachment F for the Validated Analytical Laboratory Data.

4.0 CONCLUSION

Based on the XRF field screening results and the validated analytical confirmation results of the soil samples collected from the on-site soil surface, gravel surface, asphalt surface, and drainage ditch borings, 117 of the 142 soil borings contained soil with concentrations of total lead that exceeded the EPA RML for Industrial Soil (800 mg/kg). The maximum concentration of total lead was detected in an asphalt surface soil boring at the 0 to 1 inch depth interval (102,500 ppm). This maximum concentration was detected in a soil sample collected from soil/sand located on the surface of the asphalt, prior to removing the asphalt for the advancement of the soil boring. A total of 24 of the 26 asphalt surface soil borings had the 0 to 1 inch depth interval sampled in this manner. All 24 of the samples collected above the asphalt documented total lead results which exceeded the EPA RML for Industrial Soil. The concentrations of total lead detected in the soil samples collected from above the asphalt were the highest of all soil samples collected as part of the soil boring program completed at the Site.

The majority of the total lead contamination was detected in the upper 2 feet of the soil borings. However, lead exceedances of the EPA RML were detected in soil samples collected as deep as 6.5 feet bgs. The soil samples which indicated the deepest lead contamination were collected from the northeast corner of the facility. In general, based on the overall near surface geology observed compared with the XRF field screening and laboratory confirmation results, total lead was generally documented at concentrations above the EPA RML for Industrial Soil in the caliche fill layer, prior to reaching the underlying clay layer. It appears that the permeability of the caliche fill layer allows for the vertical migration of lead contamination in soil until it reaches the clay layer. The low permeability clay acts as a confining layer which is generally preventing the downward migration of lead contamination in the clay.

In addition to the documented total lead exceedances of the EPA RML for Industrial Soil for the soil samples collected from the advanced on-site soil borings and submitted for TAL metals laboratory analysis, antimony and arsenic were also detected at concentrations which exceeded the EPA RML for Industrial Soil (470 mg/kg and 300 mg/kg, respectively). Antimony was detected at concentrations exceeding the EPA RML for Industrial Soil in 21 of the 199 submitted samples and arsenic was detected at concentrations exceeding the EPA RML in eight of the 199 submitted samples. The antimony and arsenic exceedances of the EPA RML for Industrial Soil are co-located within the documented lead contamination in on-site soil. Furthermore, one TCL SVOC (1,1-biphenyl) was detected in one soil sample collected from a depth of 72 to 84 inches bgs in a soil boring (BRC001-GB025) advanced in the location of a former drum storage area at a concentration which exceeds the EPA RML for Industrial Soil (200,000 µg/kg). In addition, it is important to note that although there were no concentrations of contaminants above the EPA RML for Industrial Soil in the select soil samples collected from the soil surface borings (BRC0001-SB014 and BRC-SB019) advanced in the area of a former aboveground storage tank there was an elevated concentration of one TCL VOC (o-xylene – 1,800,000 µg/kg) in a soil sample collected from the 108 to 120 inch depth interval of soil boring BRC-SB019.

Based on the validated analytical results of the Phase I investigation it was determined that 237,610 square feet (ft^2) of soil on the Site not covered by asphalt or structures may potentially need to be remediated to achieve a cleanup that meets the EPA RMLs for lead, antimony, and arsenic. In addition, the 270,491 ft^2 of soil underlying the asphalt-covered areas of the Site may also need to be remediated to achieve a cleanup that meets the EPA RMLs for lead, antimony,

and arsenic resulting in a total area of 508,101 ft^2. Based on the depth of contamination in soil documented, the total volume to potentially be excavated is estimated to be 13,523 cubic yards (yd^3), not including the asphalt-covered areas, or 29,066 yd^3 if the asphalt-covered areas were to be included (refer to Figure 8: Potential Excavation Area Map). The actual excavation of the area would need to be confirmed through the collection of post-excavation soil samples and field observations.

Elevated concentrations of total lead, above the applicable EPA RML, were also detected in the soil samples collected from the forested area located adjacent to the eastern portion of the Site. A total of 33 of the 77 XRF screening results for total lead and eight of the 11 samples submitted for laboratory confirmation analysis for samples collected from the area located adjacent to the eastern portion of the Site exceeded the EPA RML for Residential Soil of 400 ppm. In addition to the documented total lead exceedances of the EPA RML in this area, antimony, arsenic, cadmium, cobalt, and iron were also detected at concentrations which exceeded the applicable EPA RML for Residential Soil for the samples submitted for TAL metals laboratory analysis (31 mg/kg, 35 mg/kg, 71 mg/kg, 23 mg/kg, and 55,000 mg/kg, respectively). Antimony was detected at concentrations exceeding 31 mg/kg in two of the 11 submitted samples; arsenic was detected at concentrations exceeding 35 mg/kg in two of the 11 submitted samples; cadmium was detected at concentrations exceeding 71 mg/kg in two of the 11 submitted samples; cobalt was detected at a concentration exceeding 23 mg/kg in one of the 11 submitted samples; and iron was detected at a concentration exceeding 55,000 mg/kg in one of the 11 submitted samples.

Elevated concentrations of total lead, above the applicable EPA RML, were also detected in the soil samples collected from the slag piles located within on-site Structure No. 2 (Process Building), Structure No. 3 (Waste Storage), and Structure No. 5 (Storage). All nine XRF screening results for total lead and laboratory confirmation soil samples collected from the slag piles exceeded the EPA RML for Industrial Soil of 800 ppm. In addition to the documented total lead exceedances of the EPA RML for Industrial Soil for the soil samples collected from the slag piles and submitted for TAL metals laboratory analysis, arsenic was also detected at concentrations which exceeded the EPA RML for Industrial Soil (300 mg/kg). Arsenic was detected at concentrations exceeding the EPA RML for Industrial Soil in five of the nine submitted samples. TCLP lead was detected at concentrations which exceeded the EPA TCLP MCC for the Toxicity Characteristic of 5.0 mg/L in six of the seven soil samples collected from the slag piles. In addition, TCLP cadmium was detected at concentrations which exceeded the EPA TCLP MCC for the Toxicity Characteristic of 1.0 mg/L in two of the samples. TCLP lead and cadmium exceedances of the EPA TCLP MCC for the Toxicity Characteristic indicates that the material is a RCRA hazardous waste based on the characteristics of toxicity.

To verify the quality of the XRF field screening data, 21% of the on-site soil boring soil samples, 100% of the on-site slag pile soil samples, and 14% of the soil samples collected from the forested area adjacent to the eastern portion of the Site were submitted for laboratory confirmation TAL metals analysis. Based on the regression analysis of the XRF field screening data compared to the validated laboratory analytical results for total lead, an overall R^2 value of 0.8249 was achieved (0.7817 for the on-site soil boring soil samples, 0.756 for the on-site slag pile soil samples, and 0.937 for the soil samples collected from the forested area adjacent to the eastern portion of the Site). This overall R^2 value represents the proportion of variability in a data set that is accounted for by a statistical model. An R^2 value of 0.8249 indicates that there was good correlation between the XRF field screening and validated laboratory confirmation

results. Refer to Attachment G for Graph Nos. 1 through 3: Comparison of XRF Results and Validated Laboratory Results for Total Lead.

Based on the validated analytical results of the aqueous, solid waste, wipe, and micro-vac samples collected from the 10 sumps located on the facility and Structure Nos. 1, 1A, 2, 4, and 7 as part of the Phase II Removal Assessment of the Site, extensive lead contamination has been documented throughout these areas of the Site which may require future remediation. All of the 120 wipe samples collected from Structure No. 1 (Administration), Structure No. 1A (Administration), Structure No. 2 (Process Building), and Structure No. 7 [Air Emissions Stacks (Bag House)] contained concentrations of total lead which exceeded the formerly established EPA Site-Specific Action Level of 40 $\mu g/ft^2$. All of the 15 micro-vac samples collected from Structure No. 1 (Administration) and Structure No. 7 [Air Emissions Stacks (Bag House)] contained concentrations of total lead which exceeded the formerly established EPA Site-Specific Action Level of 250 $\mu g/ft^2$. A total of 97 of the 99 solid waste samples collected from the on-site sumps, Structure No. 2 (Process Building), Structure No. 4 (Wastewater Treatment Plant), and Structure No. 7 [Air Emissions Stacks (Bag Houses)], which consisted of process waste (accumulated dust), sludge, hopper contents (process dust found within the hoppers), hopper room concrete chips (concrete chips from the walls and floors in the hopper room), furnace and kettle contents (slag, process waste, dust, etc. found within the vessels), and Process Building concrete chips (concrete chips from the walls and floors of the structure), contained concentrations of total lead which exceeded the EPA RML for Industrial Soil (800 mg/kg). The only two solid waste samples that did not contain total lead concentrations exceeding 800 mg/kg were two concrete chip samples collected from the Process Building. A total of 15 of the 16 aqueous samples collected from the on-site sumps, the Slag Collection Unit No. 2 sump located within Structure No. 2 (Process Building), and Structure No. 4 (Wastewater Treatment Plant) contained concentrations of total lead which exceeded the EPA RML for Tap Water (15 µg/L). In addition, TCLP lead and cadmium was detected in the solid waste samples at concentrations which exceeded the EPA TCLP MCC for the Toxicity Characteristic (5.0 mg/L and 1.0 mg/L, respectively). TCLP lead and cadmium exceedances of the EPA TCLP MCC for the Toxicity Characteristic indicates that the sampled material is a RCRA hazardous waste based on the characteristics of toxicity and includes materials present in the following areas of the Site: on-site sumps, Lagoon Nos. 1 and 2 and the two tanks located in the Wastewater Treatment Plant, Bag House 1 and 2 hoppers, and sludge, kettle contents, and process waste (accumulated dust) from locations throughout the Process Building. The contamination documented as part of Phase II of the investigation of the Site included all sampled surfaces (*i.e.,* walls, floors, beams, office furniture, etc.) and machinery (*i.e.*, kettles, furnaces, slag collection units, hoppers, etc.) located within Structure Nos. 1 (Administration), 1A (Administration), 2 (Process Building), and 7 [Air Emissions Stacks (Bag House)], as well as all materials present within the 10 on-sumps and lagoons and tanks present within Structure No. 4 (Wastewater Treatment Plant).

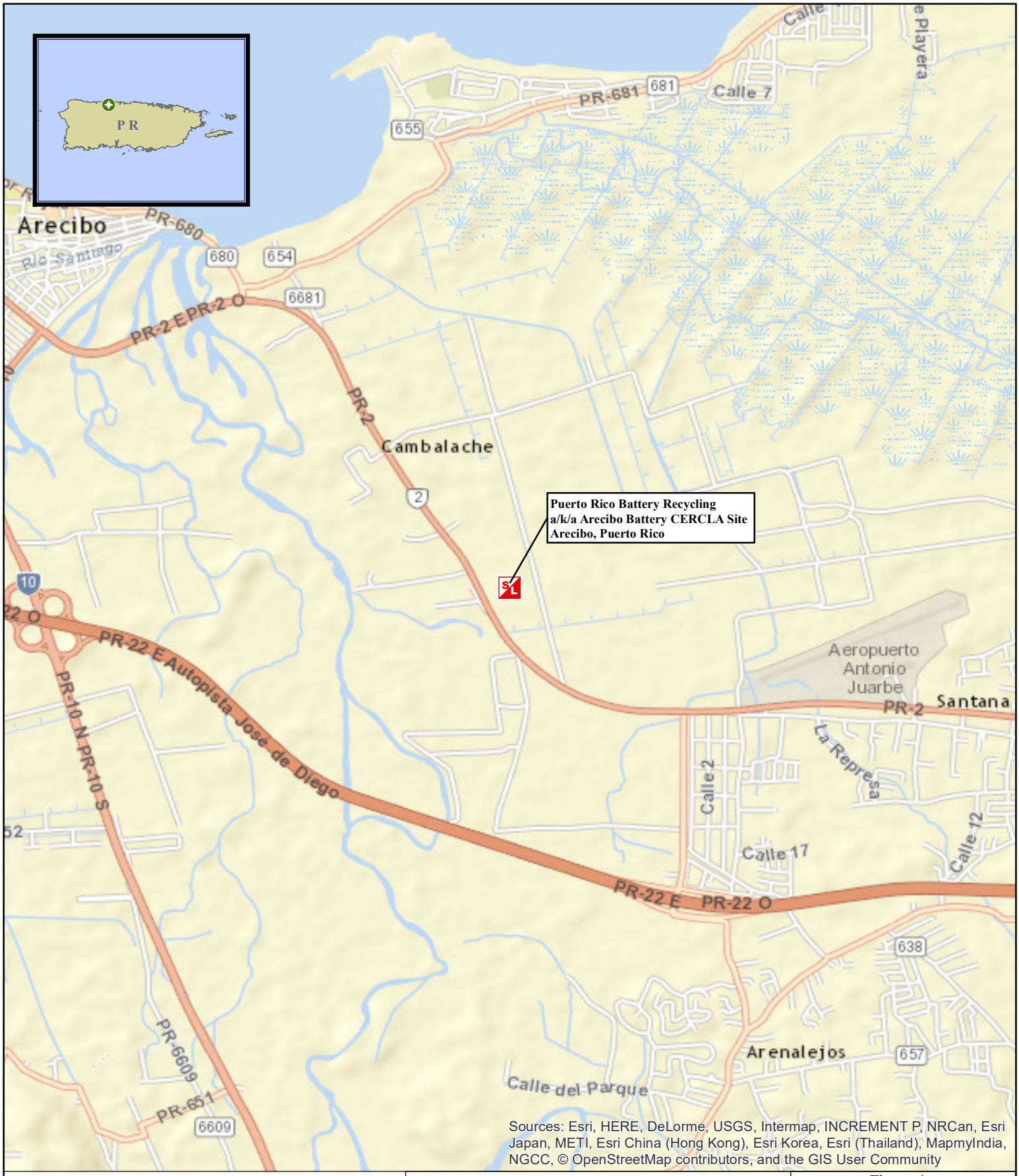
Report prepared by: _____ 6/29/2017
For Hector Rodriguez Date
RST 3 Site Project Manager

Report reviewed by: _____ 6/29/2017
Timothy Benton Date
RST 3 Operations Leader

ATTACHMENT A

Figures

Figure 1: Site Location Map
Figure 2: Site Map
Figure 3: Phase I Soil Boring Location Map
Figure 4: Phase II Wipe Sample Location Map
Figure 5: Phase II Micro-Vac Sample Location Map
Figure 6: Phase II Solid Waste Sample Location Map
Figure 7: Phase II Wastewater Sample Location Map
Figure 8: Potential Excavation Area Map



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Legend

Site Location

0 0.125 0.25 0.5 0.75 1 Miles

N

Weston Solutions, Inc.
Federal East Division

In association with
Scientific and Environmental Associates, Inc.,
Avatar Environmental, LLC, Environmental Compliance Consultants,
On-Site Environmental, Inc., and Sovereign Consulting, Inc.

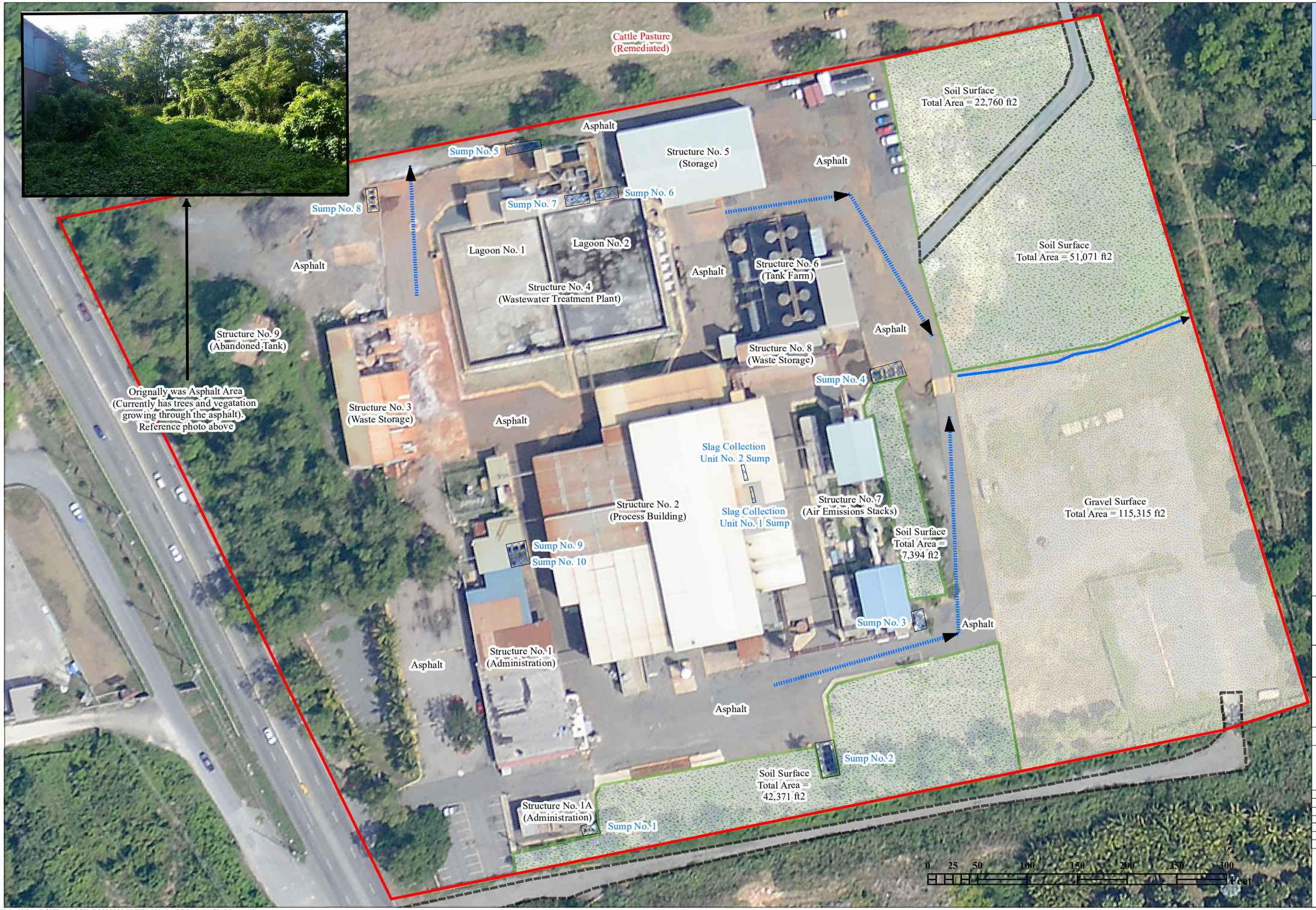
Figure 1
Site Location Map

Puerto Rico Battery Recycling
a/k/a Arecibo Battery CERCLA Site
Arecibo, Puerto Rico

U.S. ENVIRONMENTAL PROTECTION AGENCY
REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DATE MODIFIED: 5/16/2017

GIS ANALYST:	T. BENTON
EPA OSC:	D. ROSOFF
RST SPM:	H. RODRIGUEZ
FILENAME:	SITEMAP.MXD



SCALE

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LEGEND

- Surface Water Flow
- Drainage Channel
- On-Site Sump
- Facility Boundary

Site Surface Features

- Access Road
- Soil Surface Area
- Gravel Surface Area

Figure 2: Site Map

Puerto Rico Battery Recycling
a/k/a Arecibo Battery CERCLA Site
Arecibo, Puerto Rico

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

Weston Solutions, Inc.

In association with Scientific and Environmental Associates, Inc., Avatar Environmental, LLC, Environmental Compliance Consultants, On-Site Environmental, Inc., and Sovereign Consulting, Inc.

GIS ANALYST:	T. BENTON
EPA OSC:	D. ROSOFF
RST 3 SPM:	H. RODRIGUEZ
FILENAME:	Site Map
FIGURE	2
REVISION	2
DATE MODIFIED	6/28/2017

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LEGEND

- Facility Boundary
- Sampled Forested Area
- Surface Water Flow
- Drainage Channel

Soil Boring Location

EPA RML Exceedance (Lead = 800 mg/kg)

- No Exceedance
- Contamination to 0.1 Feet*
- Contamination to 0.5 Feet
- Contamination to 1 Foot
- Contamination to 1.5 Feet
- Contamination to 2 Feet
- Contamination to 2.5 Feet
- Contamination to 3 Feet
- Contamination to 3.5 Feet
- Contamination to 6.5 Feet

Site Surface Features

- Access Road
- Soil Surface Area
- Gravel Surface Area

SCALE

1:540

Notes:

1.) BRC-SB001 nomenclature represents a soil surface boring location. There are a total of 65 soil surface boring locations.
2.) BRC-GB001 nomenclature represents a gravel surface boring location. There are a total of 46 gravel surface boring locations.
3.) The soil surface and gravel surface boring locations were established based on a 50 foot x 50 ft grid system.
4.) BRC-AB001 nomenclature represents a asphalt boring location. There are a total of 26 asphalt boring locations.
5.) The asphalt borings are spread across asphalt areas of the property every 100 ft.
6.) BRC-DB001 nomenclature represents a drainage channel boring location. There are a total of five drainage channel boring locations.
7.) A total of nine slag pile samples were also collected from slag piles located within Structure Nos. 2, 3, and 5. GPS coordinates for these locations were not obtained due to the samples being collected from interior locations. The areas of the facility in which these samples were collected are labeled in red.
8.) A total of 77 off-site soil samples were also collected from the drainage ditch located on the property east of the BRC facility. GPS coordinates for these locations were not obtained due to the forested nature of the area. The area in which these samples were collected is hatched and labeled in blue.
9.) EPA RML exceedances are based on the industrial value for total lead (800 mg/kg).
10.) * = All of the documented contamination to 0.1 feet for the asphalt borings was in soil samples collected from soil/sand located on the surface of the asphalt, prior to removing the asphalt for the advancement of the soil boring.

Figure 3: Phase I Soil Boring Location Map

Puerto Rico Battery Recycling
a/k/a Arecibo Battery CERCLA Site
Arecibo, Puerto Rico

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REMOVAL SUPPORT TEAM 3
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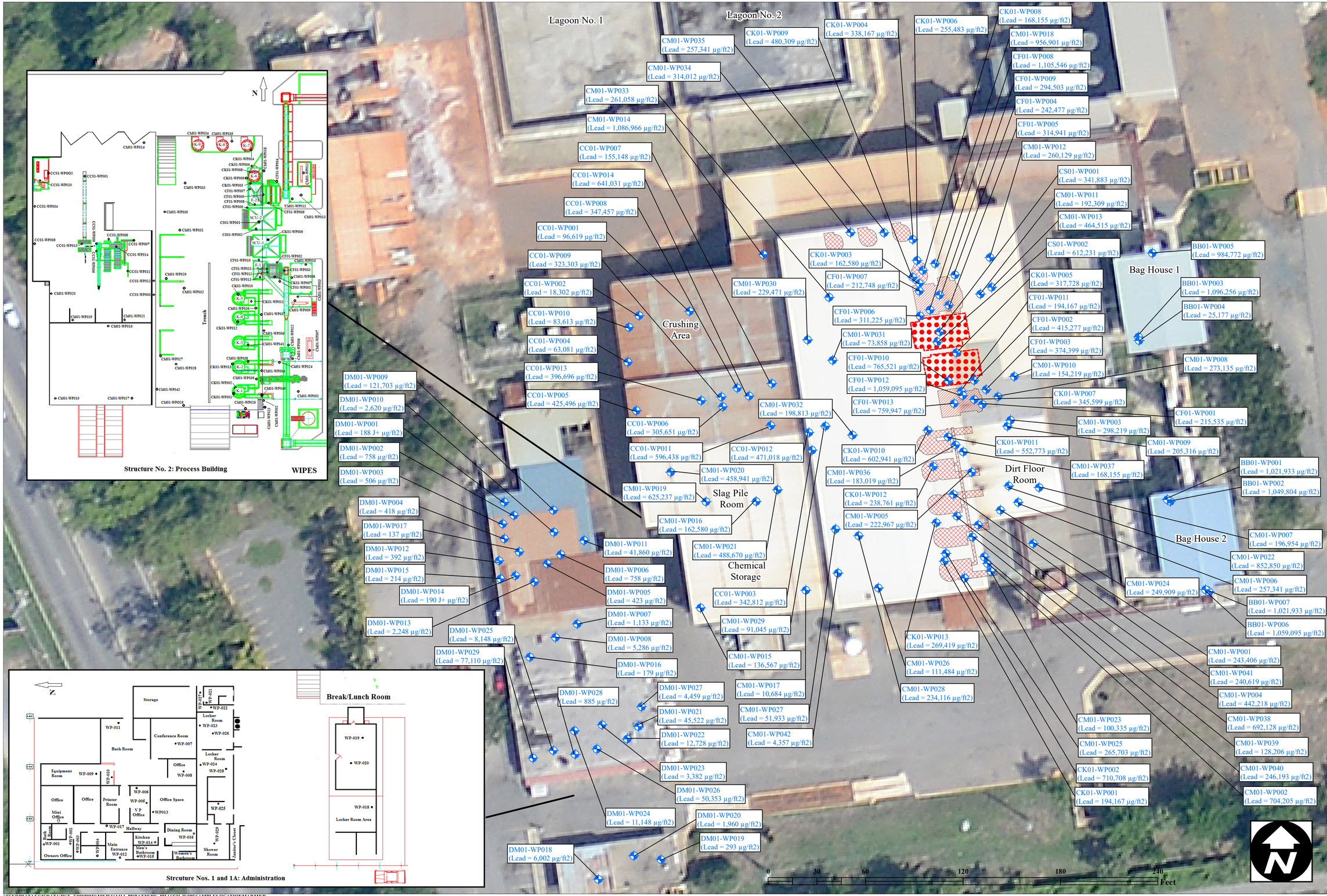
Avatar Environmental, LLC, On-Site Environmental, Inc., and Sovereign Consulting, Inc.

GIS ANALYST:	T. BENTON
EPA OSC:	D. ROSOFF
RST SPM:	H. RODRIGUEZ
PROJECT #:	TO-0007-0021
FIGURE	3
REVISION	3
DATE MODIFIED	6/26/2017

WESTON SOLUTIONS

\\FSED2DATA1\GISDATA\RST_3\00070021\MXD\160727_PRBATTERY_ON-SITEASSESSMENT_SOILSAMPLELOCATIONMAP.MXD



SCALE

1:325

LEGEND

- Wipe Sample Location
- Slag Collection Unit
- Kettle
- Furnace

Notes:

1.) Refer to Table 2A for additional information for the wipe sample locations.
2.) The nine kettles located within Structure No. 2 were given the designations of K-1 through K-9; the two furnaces were given the designations of F-1 and F-2; and the two slag collection units were given the designations of SCU-1 and SCU-2.
3.) A total of 120 wipe samples were collected from Structure Nos. 1, 1A, 2, and 7.
4.) All wipe samples were submitted for TAL metals analysis.
5.) All total lead results are depicted.
6.) All lead results depicted are presented in micrograms per square feet (µg/ft2).
7.) All wipe lead results exceeded the Site-Specific Action Level of 40 µg/ft2.

Figure 4: Phase II Wipe Sample Location Map

Puerto Rico Battery Recycling a/k/a Arecibo Battery CERCLA Site Arecibo, Puerto Rico

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

In Association With
Scientific and Environmental Associates, Inc., Environmental Compliance Consultants, Inc., Avatar Environmental, LLC, On-Site Environmental, Inc., and Sovereign Consulting, Inc.

GIS ANALYST:	T. BENTON
EPA OSC:	D. ROSOFF
RST SPM:	H. RODRIGUEZ
PROJECT #:	TO-0007-0021
FIGURE	4
REVISION	2
DATE MODIFIED	6/28/2017

WESTON SOLUTIONS

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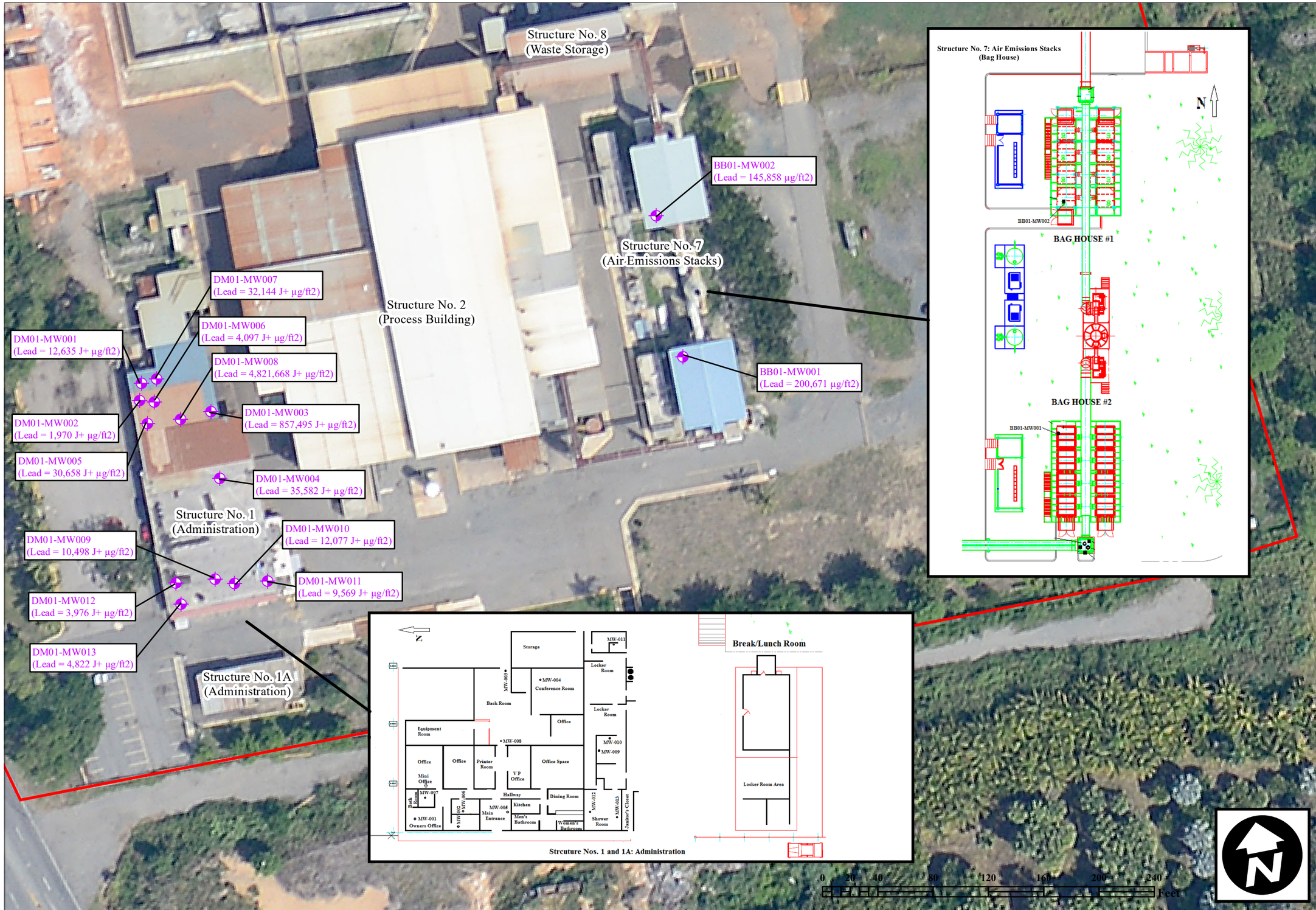

SCALE

1:800

LEGEND

Facility Boundary

Micro-Vac Sampe Location

Notes:
1.) Refer to Table 2B for additional information for the micro-vac sample locations.
2.) Two micro-vac samples were collected from Structure No. 7 and 13 micro-vac samples were collected from Structure No. 1.
3.) All lead results depicted are presented in micrograms per square feet (µg/ft2).
4.) All micro-vac lead results exceeded the Site-Specific Action Level of 250 µg/ft2.

Figure 5: Phase II Micro-Vac Sample Location Map

Puerto Rico Battery Recycling
a/k/a Arecibo Battery CERCLA Site
Arecibo, Puerto Rico

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

Weston Solutions, Inc.

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GIS ANALYST:	T. BENTON
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RST 3 SPM:	H. RODRIGUEZ
FILENAME:	MicrovacLocationMap
FIGURE	5
REVISION	2
DATE MODIFIED	6/16/2017

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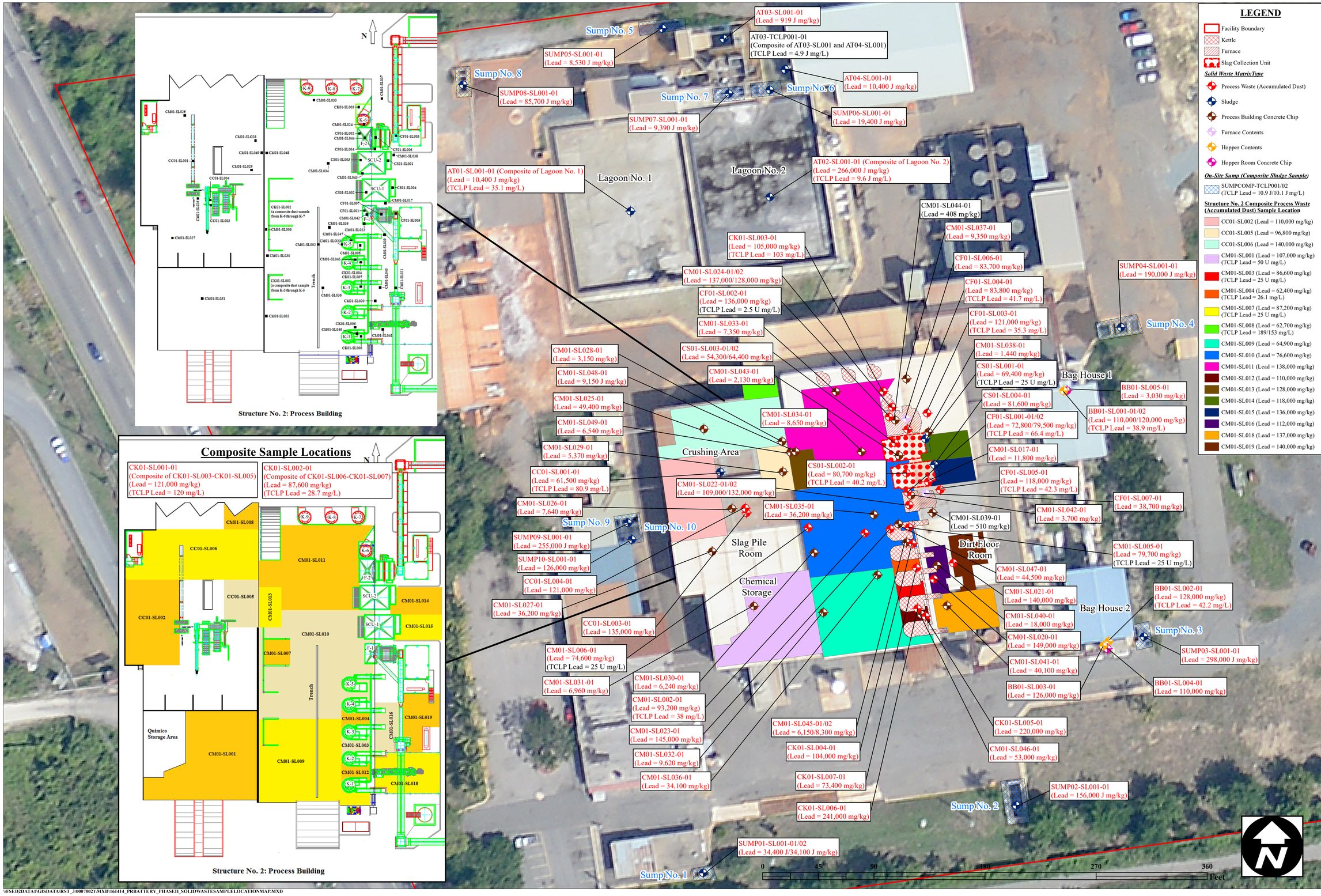

LEGEND

- Facility Boundary
- Kettle
- Furnace
- Slag Collection Unit

Solid Waste MatrixType

- Process Waste (Accumulated Dust)
- Sludge
- Process Building Concrete Chip
- Furnace Contents
- Hopper Contents
- Hopper Room Concrete Chip

On-Site Sump (Composite Sludge Sample)

- SUMPCOMP-TCLP001/02 (TCLP Lead = 10.9 J/10.1 J mg/L)

Structure No. 2 Composite Process Waste (Accumulated Dust) Sample Location

- CC01-SL002 (Lead = 110,000 mg/kg)
- CC01-SL005 (Lead = 96,800 mg/kg)
- CC01-SL006 (Lead = 140,000 mg/kg)
- CM01-SL001 (Lead = 107,000 mg/kg) (TCLP Lead = 50 U mg/L)
- CM01-SL003 (Lead = 86,600 mg/kg) (TCLP Lead = 25 U mg/L)
- CM01-SL004 (Lead = 62,400 mg/kg) (TCLP Lead = 26.1 mg/L)
- CM01-SL007 (Lead = 87,200 mg/kg) (TCLP Lead = 25 U mg/L)
- CM01-SL008 (Lead = 62,700 mg/kg) (TCLP Lead = 189/153 mg/L)
- CM01-SL009 (Lead = 64,900 mg/kg)
- CM01-SL010 (Lead = 76,600 mg/kg)
- CM01-SL011 (Lead = 138,000 mg/kg)
- CM01-SL012 (Lead = 110,000 mg/kg)
- CM01-SL013 (Lead = 128,000 mg/kg)
- CM01-SL014 (Lead = 118,000 mg/kg)
- CM01-SL015 (Lead = 136,000 mg/kg)
- CM01-SL016 (Lead = 112,000 mg/kg)
- CM01-SL018 (Lead = 137,000 mg/kg)
- CM01-SL019 (Lead = 140,000 mg/kg)

OCÉANO ATLÁNTICO

P R

MAR CARIBE

SCALE

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Notes:

1.) Refer to Tables 2C and 2E for additional information for the solid waste sample locations.
2.) The nine kettles located within Structure No. 2 were given the designations of K-1 through K-9; the two furnaces were given the designations of F-1 and F-2; and the two slag collection units were given the designations of SCU-1 and SCU-2.
3.) A total of 99 solid waste samples, including seven field duplicates, were collected from Structure Nos. 2, 4, and 7 and the 10 on-site sumps.
4.) A total of 27 of the solid waste samples, including two field duplicates, were also submitted for TCLP metals analysis.
5.) All solid waste samples were submitted for TAL metals analysis.
6.) All total lead and TCLP lead results are depicted.
7.) All sample locations and results highlighted red indicate concentrations of total and/or TCLP lead above the EPA industrial RML for total lead or TCLP Maximum Contaminant Concentration (MCC) for TCLP lead.
8.) EPA industrial RML for total lead = 800 mg/kg.
9.) TCLP MCC for TCLP lead = 5.0 mg/L.

Figure 6: Phase II Solid Waste Sample Location Map

Puerto Rico Battery Recycling
a/k/a Arecibo Battery CERCLA Site
Arecibo, Puerto Rico

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

In Association With
Scientific and Environmental Associates, Inc.,
Environmental Compliance Consultants, Inc.,
Avatar Environmental, LLC, On-Site Environmental, Inc., and Sovereign Consulting, Inc.

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EPA OSC:	D. ROSOFF
RST SPM:	H. RODRIGUEZ
PROJECT #:	TO-0007-0021
FIGURE	6
REVISION	2
DATE MODIFIED	6/28/2017

WESTON SOLUTIONS

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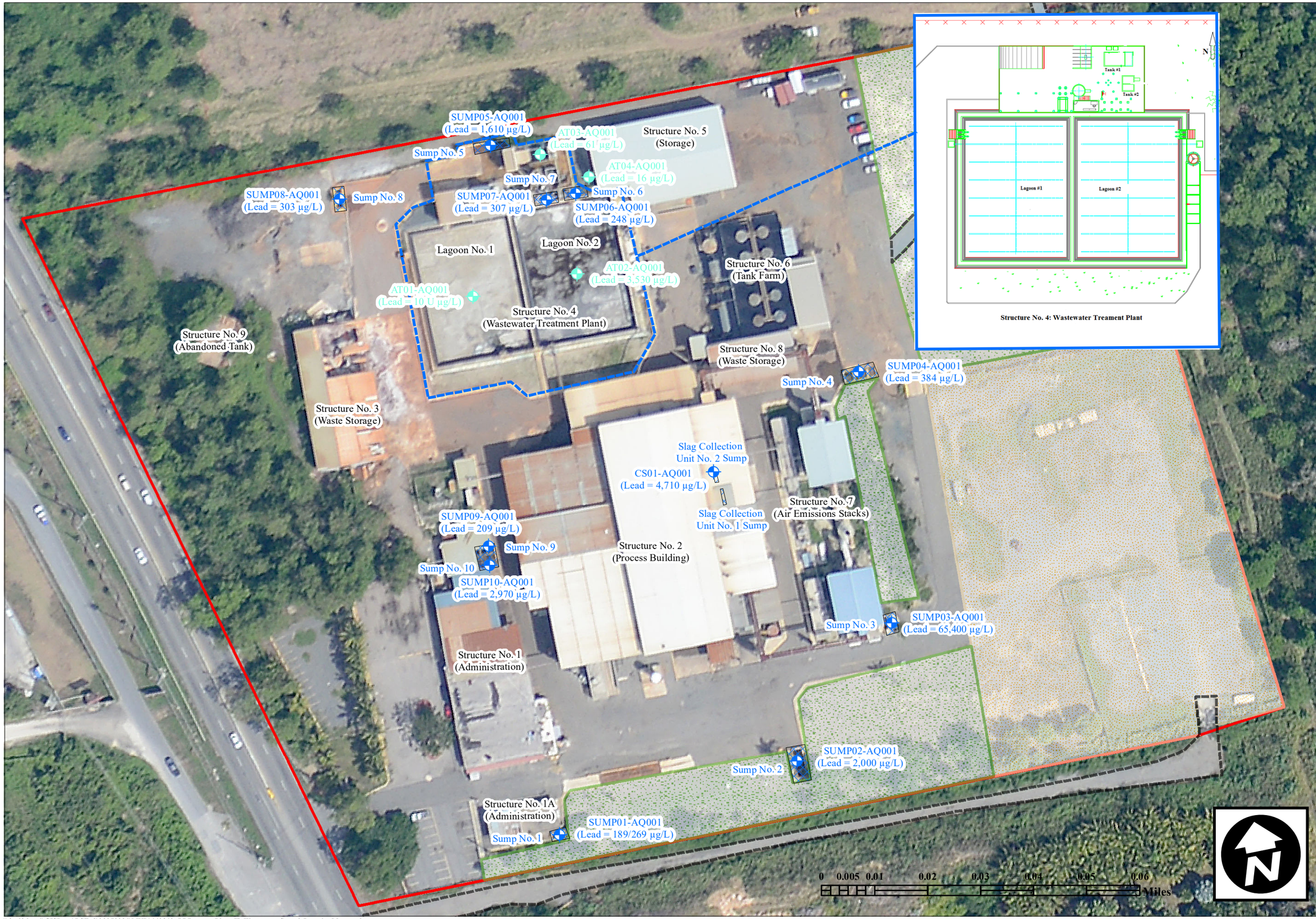

SCALE

1:1,100

LEGEND

Phase II Aqueous Sample Location

- WWTP Aqueous Sample Location
- Sump Aqueous Sample Location
- WWTP Boundary
- On-Site Sump

Site Surface Features

- Access Road
- Soil Surface Area
- Gravel Surface Area
- Facility Boundary

Notes:

1.) Refer to Table 2D for additional information for the wastewater sample locations.
2.) WWTP = Wastewater Treatment Plant.
3.) Four aqueous samples were collected from the Wastewater Treatment Plant, 11 aqueous samples, including one field duplicate, were collected from the 10 exterior on-site sumps, and one aqueous sample was collected from the Slag Collection Unit No. 2 sump located in the Process Building.
4.) All lead results depicted are presented in micrograms per liter (µg/L).

Figure 7: Phase II Wastewater Sample Location Map

Puerto Rico Battery Recycling
a/k/a Arecibo Battery CERCLA Site
Arecibo, Puerto Rico

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

Weston Solutions, Inc.

In association with Scientific and Environmental Associates, Inc., Avatar Environmental, LLC, Environmental Compliance Consultants, On-Site Environmental, Inc., and Sovereign Consulting, Inc.

GIS ANALYST:	T. BENTON
EPA OSC:	D. ROSOFF
RST 3 SPM:	H. RODRIGUEZ
FILENAME:	WastewaterLocationMap
FIGURE	7
REVISION	3
DATE MODIFIED	6/28/2017

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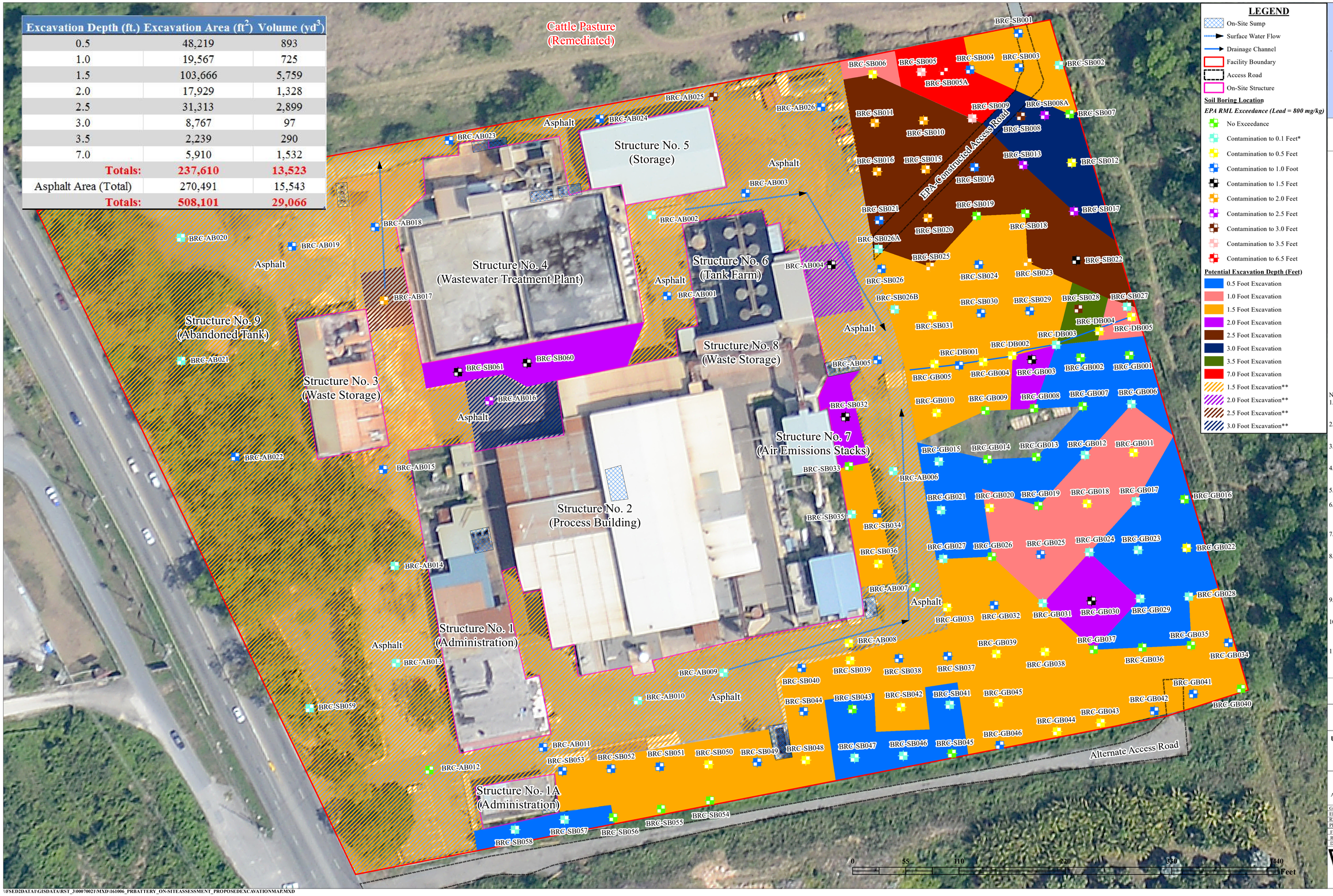
Excavation Depth (ft.)	Excavation Area (ft^2)	Volume (yd^3)
0.5	48,219	893
1.0	19,567	725
1.5	103,666	5,759
2.0	17,929	1,328
2.5	31,313	2,899
3.0	8,767	97
3.5	2,239	290
7.0	5,910	1,532
Totals:	**237,610**	**13,523**
Asphalt Area (Total)	270,491	15,543
Totals:	**508,101**	**29,066**



LEGEND

- On-Site Sump
- Surface Water Flow
- Drainage Channel
- Facility Boundary
- Access Road
- On-Site Structure

Soil Boring Location

EPA RML Exceedance (Lead = 800 mg/kg)

- No Exceedance
- Contamination to 0.1 Feet*
- Contamination to 0.5 Feet
- Contamination to 1.0 Foot
- Contamination to 1.5 Feet
- Contamination to 2.0 Feet
- Contamination to 2.5 Feet
- Contamination to 3.0 Feet
- Contamination to 3.5 Feet
- Contamination to 6.5 Feet

Potential Excavation Depth (Feet)

- 0.5 Foot Excavation
- 1.0 Foot Excavation
- 1.5 Foot Excavation
- 2.0 Foot Excavation
- 2.5 Foot Excavation
- 3.0 Foot Excavation
- 3.5 Foot Excavation
- 7.0 Foot Excavation
- 1.5 Foot Excavation**
- 2.0 Foot Excavation**
- 2.5 Foot Excavation**
- 3.0 Foot Excavation**

SCALE
1:542

Notes:
1.) BRC-SB001 nomenclature represents a soil surface boring location. There are a total of 65 soil surface boring locations.
2.) BRC-GB001 nomenclature represents a gravel surface boring location. There are a total of 46 gravel surface boring locations.
3.) The soil surface and gravel surface boring locations were established based on a 50 foot x 50 ft grid system.
4.) BRC-AB001 nomenclature represents a asphalt boring location. There are a total of 26 asphalt boring locations.
5.) The asphalt borings are spread across asphalt areas of the property every 100 ft.
6.) BRC-DB001 nomenclature represents a drainage channel boring location. There are a total of five drainage channel boring locations.
7.) Proposed excavation extents were determined based on the closest non-exceedance location, per depth interval.
8.) * = All of the documented contamination to 0.1 feet for the asphalt borings was detected in soil samples collected from soil/sand located on the surface of the asphalt, prior to removing the asphalt for the advancement of the soil boring.
9.) ** The asphalt potential excavation areas were included for informational puposes only.
10.) The vertical delineation for Sample Location Nos. AB002, SB005, SB008, SB026A, SB026B, SB060, and SB061 was not achieved.
11.) The actual excavation of the area would need to be confirmed through the collection of post-excavation soil samples and field observations.

Figure 8: Potential Excavation Area Map

Puerto Rico Battery Recycling a/k/a Arecibo Battery CERCLA Site Arecibo, Puerto Rico

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

In Association With
Scientific and Environmental Associates, Inc., Environmental Compliance Consultants, Inc., Avatar Environmental, LLC, On-Site Environmental, Inc., and Sovereign Consulting, Inc.

GIS ANALYST:	T. BENTON
EPA OSC:	D. ROSOFF
RST SPM:	H. RODRIGUEZ
PROJECT #:	TO-0007-0021
FIGURE:	8
REVISION:	1
DATE MODIFIED	6/16/2017

WESTON SOLUTIONS

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ATTACHMENT B

Tables

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Table 1B: Off-Site Soil Sample (Area Adjacent to Eastern Portion of the Site) Validated Analytical Data Summary Table - Total Lead
Table 1C: On-Site Slag Pile Sample Validated Analytical Data Summary Table - Total Lead
Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Table 1E: Area Adjacent to the Eastern Portion of the Site Validated Analytical Results Summary Table - TAL Metals
Table 1F: Validated Analytical Results Summary Table - TCLP Metals
Table 1G: Validated Analytical Results Summary Table - TCL VOCs
Table 1H: Validated Analytical Results Summary Table - TCL SVOCs
Table 1I: Validated Analytical Results Summary Table - TCL PCBs
Table 1J: Validated Analytical Results Summary Table - RCRA Characteristics
Table 2A: Wipe Validated Analytical Results Summary Table - TAL Metals
Table 2B: Micro-Vac Validated Analytical Results Summary Table - TAL Metals
Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals
Table 2D: Wastewater Validated Analytical Results Summary Table - TAL Metals
Table 2E: Solid Waste Validated Analytical Results Summary Table - TCLP Metals

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-AB001-0001-01	BRC001-AB001-0206-01	BRC001-AB001-0612-01	BRC001-AB001-1218-01	BRC001-AB001-1824-01	BRC001-AB002-0001-01	BRC001-AB002-0001-02	BRC001-AB003-0001-01	BRC001-AB003-0206-01	BRC001-AB003-0612-01
Sampling Date:		1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
Sample Depth (in):		0-1	2-6	6-12	12-18	18-24	0-1	0-1	0-1	2-6	6-12
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**102,500**	**6,378**	**1,399**	169	54	**50,567**	**50,567**	**32,227**	**6,046**	**9,155**
Laboratory Lead Results:		**77,000**	N/A	N/A	N/A	N/A	**47,000**	**52,000**	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-AB003-1218-01	BRC001-AB003-1824-01	BRC001-AB003-2430-01	BRC001-AB004-0001-01	BRC001-AB004-0206-01	BRC001-AB004-0612-01	BRC001-AB004-1218-01	BRC001-AB004-1824-01	BRC001-AB004-2430-01	BRC001-AB005-0001-01
Sampling Date:		1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/21/2016
Sample Depth (in):		12-18	18-24	24-30	0-1	2-6	6-12	12-18	18-24	24-30	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	436	21	21	**16,667**	**1,500**	**12,933**	**2,145**	23	19	**70,033**
Laboratory Lead Results:		50	N/A	N/A	**15,000**	N/A	**22,000**	N/A	21	N/A	**70,000**

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-AB005-0306-01	BRC001-AB005-0612-01	BRC001-AB005-1218-01	BRC001-AB005-1824-01	BRC001-AB005-2430-01	BRC001-AB006-0001-01	BRC001-AB006-0206-01	BRC001-AB006-0612-01	BRC001-AB006-1218-01	BRC001-AB006-1824-01
Sampling Date:		1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
Sample Depth (in):		3-6	6-12	12-18	18-24	24-30	0-1	2-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**1,081**	**1,087**	439	24	23	**2,206**	487	257	535	30
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	**2,200**	N/A	N/A	430	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-AB006-2430-01	BRC001-AB007-0106-01	BRC001-AB007-0612-01	BRC001-AB007-1218-01	BRC001-AB007-1824-01	BRC001-AB008-0001-01	BRC001-AB008-0106-01	BRC001-AB008-0612-01	BRC001-AB008-1218-01	BRC001-AB008-1824-01
Sampling Date:		1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
Sample Depth (in):		24-30	1-6	6-12	12-18	18-24	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	27	382	23	14	1	**54,500**	**1,205**	86	82	70
Laboratory Lead Results:		N/A	240	N/A	N/A	N/A	**12,000**	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-AB009-0001-01	BRC001-AB009-0206-01	BRC001-AB009-0612-01	BRC001-AB009-1218-01	BRC001-AB009-1824-01	BRC001-AB010-0001-01	BRC001-AB010-0106-01	BRC001-AB010-0612-01	BRC001-AB010-1218-01	BRC001-AB010-1824-01
Sampling Date:		1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
Sample Depth (in):		0-1	2-6	6-12	12-18	18-24	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**54,900**	281	239	142	118	**17,100**	589	265	105	112
Laboratory Lead Results:		**67,000**	N/A	N/A	N/A	N/A	**21,000**	N/A	N/A	N/A	N/A

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-AB011-0001-01	BRC001-AB011-0001-02	BRC001-AB011-0106-01	BRC001-AB011-0612-01	BRC001-AB011-1218-01	BRC001-AB011-1824-01	BRC001-AB011-2430-01	BRC001-AB012-0106-01	BRC001-AB012-0612-01	BRC001-AB012-1218-01
Sampling Date:		1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
Sample Depth (in):		0-1	0-1	1-6	6-12	12-18	18-24	24-30	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**6,113**	N/A	**1,074**	**5,507**	116	35	32	23	1	1
Laboratory Lead Results:		**4,600**	**5,900**	N/A	**3,300**	N/A	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-AB012-1824-01	BRC001-AB012-2430-01	BRC001-AB012-3036-01	BRC001-AB013-0001-01	BRC001-AB013-0106-01	BRC001-AB013-0612-01	BRC001-AB013-1218-01	BRC001-AB013-1824-01	BRC001-AB013-2430-01	BRC001-AB013-3036-01
Sampling Date:		1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
Sample Depth (in):		18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	26	17	17	**15,000**	289	459	77	24	23	17
Laboratory Lead Results:		N/A	N/A	N/A	**11,000**	N/A	150	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-AB014-0001-01	BRC001-AB014-0106-01	BRC001-AB014-0612-01	BRC001-AB014-1218-01	BRC001-AB014-1824-01	BRC001-AB014-2430-01	BRC001-AB014-3036-01	BRC001-AB015-0001-01	BRC001-AB015-0106-01	BRC001-AB015-0612-01
Sampling Date:		1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/21/2016	1/21/2016	1/21/2016
Sample Depth (in):		0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**17,500**	764	214	41	45	41	78	**32,567**	**42,467**	**11,800**
Laboratory Lead Results:		**14,000**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**40,000**	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-AB015-1218-01	BRC001-AB015-1824-01	BRC001-AB016-0001-01	BRC001-AB016-0206-01	BRC001-AB016-0612-01	BRC001-AB016-1218-01	BRC001-AB016-1824-01	BRC001-AB016-2430-01	BRC001-AB016-3036-01	BRC001-AB017-0001-01
Sampling Date:		1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016
Sample Depth (in):		12-18	18-24	0-1	2-6	6-12	12-18	18-24	24-30	30-36	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	362	29	**38,933**	**1,271**	**8,788**	**10,162**	**10,378**	38	20	**43,867**
Laboratory Lead Results:		77	N/A	**52,000**	N/A	N/A	N/A	**12,000**	**17,000**	N/A	**45,000**

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-AB017-0306-01	BRC001-AB017-0612-01	BRC001-AB017-1218-01	BRC001-AB017-1824-01	BRC001-AB017-2430-01	BRC001-AB017-3036-01	BRC001-AB018-0001-01	BRC001-AB018-0106-01	BRC001-AB018-0612-01	BRC001-AB018-1218-01
Sampling Date:		1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016
Sample Depth (in):		3-6	6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	86	**3,785**	**3,898**	**7,114**	46	25	**42,400**	658	**3,984**	48
Laboratory Lead Results:		N/A	N/A	**4,700**	**1,400**	N/A	N/A	**42,000**	N/A	N/A	N/A

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-AB018-1824-01	BRC001-AB019-0001-01	BRC001-AB019-0001-02	BRC001-AB019-0106-01	BRC001-AB019-0612-01	BRC001-AB019-1218-01	BRC001-AB019-1824-01	BRC001-AB020-0001-01	BRC001-AB020-0106-01	BRC001-AB020-0612-01
Sampling Date:		1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016
Sample Depth (in):		18-24	0-1	0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	31	**18,500**	N/A	**4,889**	**3,342**	300	37	**11,060**	565	463
Laboratory Lead Results:		N/A	**17,000**	**16,000**	N/A	N/A	55	N/A	**12,000**	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-AB020-1218-01	BRC001-AB020-1824-01	BRC001-AB020-2430-01	BRC001-AB021-0001-01	BRC001-AB021-0106-01	BRC001-AB021-0612-01	BRC001-AB021-1218-01	BRC001-AB021-1824-01	BRC001-AB022-0001-01	BRC001-AB022-0106-01
Sampling Date:		1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016
Sample Depth (in):		12-18	18-24	24-30	0-1	1-6	6-12	12-18	18-24	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	578	67	27	**7,622**	797	40	39	32	**1,115**	**1,292**
Laboratory Lead Results:		N/A	13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-AB022-0612-01	BRC001-AB022-1218-01	BRC001-AB022-1824-01	BRC001-AB023-0001-01	BRC001-AB023-0106-01	BRC001-AB023-0612-01	BRC001-AB023-1218-01	BRC001-AB023-1824-01	BRC001-AB024-0001-01	BRC001-AB024-0106-01
Sampling Date:		1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016
Sample Depth (in):		6-12	12-18	18-24	0-1	1-6	6-12	12-18	18-24	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**811**	61	66	**13,700**	193	551	95	35	**25,833**	**3,598**
Laboratory Lead Results:		21	N/A	N/A	N/A	N/A	**1,300**	N/A	N/A	**25,000**	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-AB024-0612-01	BRC001-AB024-1218-01	BRC001-AB024-1824-01	BRC001-AB025-0001-01	BRC001-AB025-0106-01	BRC001-AB025-0612-01	BRC001-AB025-1218-01	BRC001-AB025-1824-01	BRC001-AB025-2430-01	BRC001-AB025-3036-01
Sampling Date:		1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016
Sample Depth (in):		6-12	12-18	18-24	0-1	1-6	6-12	12-18	18-24	24-30	30-36
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**1,140**	36	40	**16,767**	**975**	**1,130**	**10,667**	**5,487**	77	**5,629**
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	N/A	22	N/A	13	10

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-AB025-3642-01	BRC001-AB025-4248-01	BRC001-AB026-0001-01	BRC001-AB026-0106-01	BRC001-AB026-0612-01	BRC001-AB026-1218-01	BRC001-AB026-1824-01	BRC001-DB001-0001-01	BRC001-DB001-0106-01	BRC001-DB001-0612-01
Sampling Date:		1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/14/2016	1/14/2016	1/14/2016
Sample Depth (in):		36-42	42-48	0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	21	20	**3,618**	56	**7,042**	40	27	**5,281**	**13,133**	**1,275**
Laboratory Lead Results:		N/A	N/A	N/A	N/A	**5,500**	93	N/A	N/A	**5,600**	N/A

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-DB001-1218-01	BRC001-DB001-1824-01	BRC001-DB001-2430-01	BRC001-DB001-3036-01	BRC001-DB002-0001-01	BRC001-DB002-0106-01	BRC001-DB002-0612-01	BRC001-DB002-1218-01	BRC001-DB002-1824-01	BRC001-DB002-2430-01
Sampling Date:		1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016
Sample Depth (in):		12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	127	23	17	17	**2,029**	**1,083**	220	27	35	45
Laboratory Lead Results:		N/A	N/A	N/A	N/A	**1,400**	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-DB002-3036-01	BRC001-DB003-0001-01	BRC001-DB003-0106-01	BRC001-DB003-0612-01	BRC001-DB003-1218-01	BRC001-DB003-1824-01	BRC001-DB003-2430-01	BRC001-DB003-3036-01	BRC001-DB004-0001-01	BRC001-DB004-0106-01
Sampling Date:		1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016
Sample Depth (in):		30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	29	**12,233**	502	489	60	22	17	27	**2,397**	**1,931**
Laboratory Lead Results:		N/A	**5,400**	N/A	N/A	120	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-DB004-0612-01	BRC001-DB004-1218-01	BRC001-DB004-1824-01	BRC001-DB004-2430-01	BRC001-DB004-3036-01	BRC001-DB005-0001-01	BRC001-DB005-0106-01	BRC001-DB005-0612-01	BRC001-DB005-1218-01	BRC001-DB005-1824-01
Sampling Date:		1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016
Sample Depth (in):		6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	250	152	194	41	43	**21,633**	**4,806**	579	363	538
Laboratory Lead Results:		460	N/A	N/A	N/A	N/A	**66,000**	N/A	330	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-DB005-2430-01	BRC001-GB001-0001-01	BRC001-GB001-0001-02	BRC001-GB001-0106-01	BRC001-GB001-0612-01	BRC001-GB001-1218-01	BRC001-GB001-1824-01	BRC001-GB001-2430-01	BRC001-GB001-3036-01	BRC001-GB002-0001-01
Sampling Date:		1/14/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016
Sample Depth (in):		24-30	0-1	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	29	306	N/A	26	37	136	24	19	18	713
Laboratory Lead Results:		N/A	330	300	N/A	N/A	N/A	N/A	N/A	N/A	540

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB002-0106-01	BRC001-GB002-0612-01	BRC001-GB002-1218-01	BRC001-GB002-1824-01	BRC001-GB002-2430-01	BRC001-GB002-3036-01	BRC001-GB003-0001-01	BRC001-GB003-0106-01	BRC001-GB003-0612-01	BRC001-GB003-1218-01
Sampling Date:		1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016
Sample Depth (in):		1-6	6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	62	16	212	21	24	25	**3,765**	**3,770**	**1,406**	**1,368**
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**1,700**	N/A

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB003-1824-01	BRC001-GB003-2430-01	BRC001-GB003-3036-01	BRC001-GB004-0001-01	BRC001-GB004-0106-01	BRC001-GB004-0612-01	BRC001-GB004-1218-01	BRC001-GB004-1824-01	BRC001-GB004-2430-01	BRC001-GB004-3036-01
Sampling Date:		1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016
Sample Depth (in):		18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	579	57	304	**940**	**2,769**	602	349	80	52	162
Laboratory Lead Results:		N/A	N/A	N/A	**1,200**	N/A	240	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB005-0001-01	BRC001-GB005-0106-01	BRC001-GB005-0612-01	BRC001-GB005-1218-01	BRC001-GB005-1824-01	BRC001-GB005-2430-01	BRC001-GB005-3036-01	BRC001-GB006-0001-01	BRC001-GB006-0106-01	BRC001-GB006-0612-01
Sampling Date:		1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016
Sample Depth (in):		0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**10,382**	**4,557**	387	152	19	19	17	**978**	607	286
Laboratory Lead Results:		**8,100**	N/A	230	N/A	N/A	N/A	N/A	580	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB006-1218-01	BRC001-GB006-1824-01	BRC001-GB006-2430-01	BRC001-GB006-3036-01	BRC001-GB007-0001-01	BRC001-GB007-0106-01	BRC001-GB007-0612-01	BRC001-GB007-1218-01	BRC001-GB007-1824-01	BRC001-GB007-2430-01
Sampling Date:		1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016
Sample Depth (in):		12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	23	15	24	16	438	188	91	139	25	20
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	120	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB007-3036-01	BRC001-GB008-0001-01	BRC001-GB008-0106-01	BRC001-GB008-0612-01	BRC001-GB008-1218-01	BRC001-GB008-1824-01	BRC001-GB008-2430-01	BRC001-GB008-3036-01	BRC001-GB009-0001-01	BRC001-GB009-0106-01
Sampling Date:		1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016
Sample Depth (in):		30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	17	436	157	1	19	17	18	25	752	28
Laboratory Lead Results:		N/A	230	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB009-0612-01	BRC001-GB009-1218-01	BRC001-GB009-1824-01	BRC001-GB009-2430-01	BRC001-GB009-3036-01	BRC001-GB010-0001-01	BRC001-GB010-0106-01	BRC001-GB010-0612-01	BRC001-GB010-1218-01	BRC001-GB010-1824-01
Sampling Date:		1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016
Sample Depth (in):		6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	42	74	18	17	13	734	**1,018**	199	43	28
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	N/A	770	N/A	N/A	N/A

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB010-2430-01	BRC001-GB010-3036-01	BRC001-GB011-0001-01	BRC001-GB011-0106-01	BRC001-GB011-0612-01	BRC001-GB011-1218-01	BRC001-GB011-1824-01	BRC001-GB011-2430-01	BRC001-GB011-3036-01	BRC001-GB012-0001-01
Sampling Date:		1/15/2016	1/15/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016
Sample Depth (in):		24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	1	1	659	**820**	135	1	1	19	24	**1,772**
Laboratory Lead Results:		N/A	N/A	**2,100**	N/A	N/A	N/A	N/A	N/A	N/A	**830**

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB012-0106-01	BRC001-GB012-0612-01	BRC001-GB012-1218-01	BRC001-GB012-1824-01	BRC001-GB012-2430-01	BRC001-GB012-3036-01	BRC001-GB013-0001-01	BRC001-GB013-0106-01	BRC001-GB013-0612-01	BRC001-GB013-1218-01
Sampling Date:		1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016
Sample Depth (in):		1-6	6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	717	184	72	76	13	21	52	42	19	20
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB013-1824-01	BRC001-GB013-2430-01	BRC001-GB013-3036-01	BRC001-GB014-0001-01	BRC001-GB014-0106-01	BRC001-GB014-0612-01	BRC001-GB014-1218-01	BRC001-GB014-1824-01	BRC001-GB014-2430-01	BRC001-GB014-3036-01
Sampling Date:		1/14/2016	1/14/2016	1/14/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016
Sample Depth (in):		18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	1	17	20	341	332	85	72	37	22	18
Laboratory Lead Results:		N/A	N/A	N/A	N/A	86	51	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB015-0001-01	BRC001-GB015-0106-01	BRC001-GB015-0612-01	BRC001-GB015-1218-01	BRC001-GB015-1824-01	BRC001-GB015-2430-01	BRC001-GB015-3036-01	BRC001-GB016-0001-01	BRC001-GB016-0106-01	BRC001-GB016-0612-01
Sampling Date:		1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016
Sample Depth (in):		0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**1,929**	106	22	14	20	15	15	657	611	534
Laboratory Lead Results:		**900**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	490	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB016-1218-01	BRC001-GB016-1824-01	BRC001-GB016-2430-01	BRC001-GB016-3036-01	BRC001-GB017-0001-01	BRC001-GB017-0106-01	BRC001-GB017-0612-01	BRC001-GB017-1218-01	BRC001-GB017-1824-01	BRC001-GB017-2430-01
Sampling Date:		1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016
Sample Depth (in):		12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	278	53	24	32	**1,589**	427	320	32	1	1
Laboratory Lead Results:		N/A	N/A	N/A	N/A	**1,300**	N/A	320	N/A	N/A	N/A

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB017-3036-01	BRC001-GB018-0001-01	BRC001-GB018-0106-01	BRC001-GB018-0612-01	BRC001-GB018-1218-01	BRC001-GB018-1824-01	BRC001-GB018-2430-01	BRC001-GB018-3036-01	BRC001-GB019-0001-01	BRC001-GB019-0106-01
Sampling Date:		1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016
Sample Depth (in):		30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	21	**2,093**	384	300	37	22	14	19	453	63
Laboratory Lead Results:		N/A	N/A	**1,800**	N/A	N/A	N/A	N/A	N/A	400	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB019-0612-01	BRC001-GB019-1218-01	BRC001-GB019-1824-01	BRC001-GB019-2430-01	BRC001-GB019-3036-01	BRC001-GB020-0001-01	BRC001-GB020-0106-01	BRC001-GB020-0612-01	BRC001-GB020-1218-01	BRC001-GB020-1824-01
Sampling Date:		1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016
Sample Depth (in):		6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	27	12	1	19	19	**5,288**	**1,374**	44	227	21
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	**2,600**	N/A	N/A	130	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB020-2430-01	BRC001-GB020-3036-01	BRC001-GB021-0001-01	BRC001-GB021-0106-01	BRC001-GB021-0612-01	BRC001-GB021-1218-01	BRC001-GB021-1824-01	BRC001-GB021-2430-01	BRC001-GB021-3036-01	BRC001-GB022-0001-01
Sampling Date:		1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/16/2016
Sample Depth (in):		24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	18	19	**2,100**	74	287	68	20	30	16	772
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB022-0106-01	BRC001-GB022-0612-01	BRC001-GB022-1218-01	BRC001-GB022-1824-01	BRC001-GB022-2430-01	BRC001-GB023-0001-01	BRC001-GB023-0106-01	BRC001-GB023-0612-01	BRC001-GB023-1218-01	BRC001-GB023-1824-01
Sampling Date:		1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016
Sample Depth (in):		1-6	6-12	12-18	18-24	24-30	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**973**	272	16	20	1	**843**	157	63	18	1
Laboratory Lead Results:		N/A	150	N/A	N/A	N/A	**2,000**	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB024-0001-01	BRC001-GB024-0106-01	BRC001-GB024-0612-01	BRC001-GB024-1218-01	BRC001-GB024-1824-01	BRC001-GB025-0001-01	BRC001-GB025-0106-01	BRC001-GB025-0612-01	BRC001-GB025-1218-01	BRC001-GB025-1824-01
Sampling Date:		1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016
Sample Depth (in):		0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**4,736**	663	53	23	4	**2,402**	**1,575**	**1,671**	74	115
Laboratory Lead Results:		N/A	480	N/A	N/A	N/A	N/A	N/A	**1,700**	39	N/A

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB025-2430-01	BRC001-GB025-3036-01	BRC001-GB026-0001-01	BRC001-GB026-0106-01	BRC001-GB026-0612-01	BRC001-GB026-1218-01	BRC001-GB026-1824-01	BRC001-GB026-2430-01	BRC001-GB027-0001-01	BRC001-GB027-0106-01
Sampling Date:		1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016
Sample Depth (in):		24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	20	19	715	286	72	25	22	51	**813**	660
Laboratory Lead Results:		N/A	N/A	600	N/A	N/A	N/A	N/A	N/A	430	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB027-0612-01	BRC001-GB027-1218-01	BRC001-GB027-1824-01	BRC001-GB028-0001-01	BRC001-GB028-0106-01	BRC001-GB028-0612-01	BRC001-GB028-1218-01	BRC001-GB028-1824-01	BRC001-GB029-0001-01	BRC001-GB029-0106-01
Sampling Date:		1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016
Sample Depth (in):		6-12	12-18	18-24	0-1	1-6	6-12	12-18	18-24	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	121	75	21	**1,167**	476	225	157	23	**1,151**	605
Laboratory Lead Results:		77	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB029-0612-01	BRC001-GB029-1218-01	BRC001-GB029-1824-01	BRC001-GB030-0001-01	BRC001-GB030-0106-01	BRC001-GB030-0612-01	BRC001-GB030-1218-01	BRC001-GB030-1824-01	BRC001-GB030-2430-01	BRC001-GB030-3036-01
Sampling Date:		1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016
Sample Depth (in):		6-12	12-18	18-24	0-1	1-6	6-12	12-18	18-24	24-30	30-36
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	79	1	8	**9,498**	**2,489**	**2,029**	**909**	26	21	18
Laboratory Lead Results:		59	N/A	N/A	**7,500**	N/A	**830**	N/A	10	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB031-0001-01	BRC001-GB031-0106-01	BRC001-GB031-0612-01	BRC001-GB031-1218-01	BRC001-GB031-1824-01	BRC001-GB032-0001-01	BRC001-GB032-0106-01	BRC001-GB032-0612-01	BRC001-GB032-1218-01	BRC001-GB032-1824-01
Sampling Date:		1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016
Sample Depth (in):		0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**3,377**	740	121	60	53	783	**2,412**	**916**	138	51
Laboratory Lead Results:		**2,600**	N/A	51	N/A	N/A	**1,200**	**1,800**	N/A	19	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB032-2430-01	BRC001-GB033-0001-01	BRC001-GB033-0106-01	BRC001-GB033-0612-01	BRC001-GB033-1218-01	BRC001-GB033-1824-01	BRC001-GB034-0001-01	BRC001-GB034-0106-01	BRC001-GB034-0612-01	BRC001-GB034-1218-01
Sampling Date:		1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016
Sample Depth (in):		24-30	0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	63	**4,043**	**3,443**	217	47	44	745	**1,004**	**857**	72
Laboratory Lead Results:		N/A	**3,100**	N/A	N/A	6.2	N/A	N/A	**1,000**	710	N/A

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB034-1824-01	BRC001-GB034-2430-01	BRC001-GB035-0001-01	BRC001-GB035-0106-01	BRC001-GB035-0612-01	BRC001-GB035-1218-01	BRC001-GB035-1824-01	BRC001-GB036-0001-01	BRC001-GB036-0106-01	BRC001-GB036-0612-01
Sampling Date:		1/16/2016	1/16/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016
Sample Depth (in):		18-24	24-30	0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	46	58	292	305	64	1	1	782	503	109
Laboratory Lead Results:		N/A	N/A	N/A	270	N/A	N/A	N/A	550	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB036-1218-01	BRC001-GB036-1824-01	BRC001-GB037-0001-01	BRC001-GB037-0106-01	BRC001-GB037-0612-01	BRC001-GB037-1218-01	BRC001-GB037-1824-01	BRC001-GB038-0001-01	BRC001-GB038-0106-01	BRC001-GB038-0612-01
Sampling Date:		1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016
Sample Depth (in):		12-18	18-24	0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	1	1	465	80	33	1	1	**1,077**	**932**	294
Laboratory Lead Results:		N/A	N/A	260	47	N/A	N/A	N/A	650	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB038-1218-01	BRC001-GB038-1824-01	BRC001-GB039-0001-01	BRC001-GB039-0106-01	BRC001-GB039-0612-01	BRC001-GB039-1218-01	BRC001-GB039-1824-01	BRC001-GB040-0001-01	BRC001-GB040-0106-01	BRC001-GB040-0612-01
Sampling Date:		1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016
Sample Depth (in):		12-18	18-24	0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	30	24	**2,151**	**2,422**	289	46	4	68	67	29
Laboratory Lead Results:		N/A	N/A	N/A	N/A	270	N/A	N/A	43	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB040-1218-01	BRC001-GB040-1824-01	BRC001-GB041-0001-01	BRC001-GB041-0106-01	BRC001-GB041-0612-01	BRC001-GB041-1218-01	BRC001-GB041-1824-01	BRC001-GB041-2430-01	BRC001-GB042-0001-01	BRC001-GB042-0106-01
Sampling Date:		1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016
Sample Depth (in):		12-18	18-24	0-1	1-6	6-12	12-18	18-24	24-30	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	15	24	**2,193**	**2,359**	**2,236**	66	57	49	**1,425**	**1,029**
Laboratory Lead Results:		N/A	N/A	**2,500**	N/A	N/A	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB042-0612-01	BRC001-GB042-1218-01	BRC001-GB042-1824-01	BRC001-GB042-2430-01	BRC001-GB043-0001-01	BRC001-GB043-0106-01	BRC001-GB043-0612-01	BRC001-GB043-1218-01	BRC001-GB043-1824-01	BRC001-GB043-2430-01
Sampling Date:		1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016
Sample Depth (in):		6-12	12-18	18-24	24-30	0-1	1-6	6-12	12-18	18-24	24-30
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**1,567**	128	67	40	**2,602**	**2,937**	460	41	22	44
Laboratory Lead Results:		**2,200**	N/A	N/A	N/A	N/A	**2,600**	N/A	N/A	N/A	N/A

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB044-0001-01	BRC001-GB044-0106-01	BRC001-GB044-0612-01	BRC001-GB044-1218-01	BRC001-GB044-1824-01	BRC001-GB045-0001-01	BRC001-GB045-0106-01	BRC001-GB045-0612-01	BRC001-GB045-1218-01	BRC001-GB045-1824-01
Sampling Date:		1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016
Sample Depth (in):		0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**34,133**	**6,134**	281	65	44	**14,300**	**10,767**	799	67	60
Laboratory Lead Results:		**33,000**	N/A	N/A	N/A	N/A	**18,000**	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-GB045-2430-01	BRC001-GB046-0001-01	BRC001-GB046-0106-01	BRC001-GB046-0612-01	BRC001-GB046-1218-01	BRC001-GB046-1824-01	BRC001-GB046-2430-01	BRC001-SB001-0001-01	BRC001-SB001-0106-01	BRC001-SB001-0612-01
Sampling Date:		1/18/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/11/2016	1/11/2016	1/11/2016
Sample Depth (in):		24-30	0-1	1-6	6-12	12-18	18-24	24-30	0-1	1-6	6-12
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	47	**1,078**	**2,244**	**4,783**	540	37	69	**3,059**	**9,129**	**8,583**
Laboratory Lead Results:		N/A	N/A	**3,000**	N/A	N/A	N/A	N/A	**2,700**	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB001-1218-01	BRC001-SB001-1824-01	BRC001-SB001-2430-01	BRC001-SB001-3036-01	BRC001-SB002-0001-01	BRC001-SB002-0106-01	BRC001-SB002-0612-01	BRC001-SB002-1218-01	BRC001-SB002-1824-01	BRC001-SB002-2430-01
Sampling Date:		1/11/2016	1/11/2016	1/11/2016	1/11/2016	1/11/2016	1/11/2016	1/11/2016	1/11/2016	1/11/2016	1/11/2016
Sample Depth (in):		12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	578	72	23	24	**1,764**	506	210	45	6	23
Laboratory Lead Results:		N/A	N/A	N/A	N/A	**1,300**	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB002-3036-01	BRC001-SB003-0001-01	BRC001-SB003-0106-01	BRC001-SB003-0612-01	BRC001-SB003-1218-01	BRC001-SB003-1824-01	BRC001-SB003-2430-01	BRC001-SB003-3036-01	BRC001-SB004-0001-01	BRC001-SB004-0106-01
Sampling Date:		1/11/2016	1/11/2016	1/11/2016	1/11/2016	1/11/2016	1/11/2016	1/11/2016	1/11/2016	1/12/2016	1/12/2016
Sample Depth (in):		30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	19	**1,580**	**2,977**	**1,807**	44	17	17	10	**1,104**	508
Laboratory Lead Results:		N/A	N/A	N/A	**3,800**	N/A	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB004-0612-01	BRC001-SB004-1218-01	BRC001-SB004-1824-01	BRC001-SB004-2430-01	BRC001-SB004-3036-01	BRC001-SB005-0001-01	BRC001-SB005-0106-01	BRC001-SB005-0612-01	BRC001-SB005-1218-01	BRC001-SB005-1824-01
Sampling Date:		1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016
Sample Depth (in):		6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**2,718**	29	13	17	13	55	10	22	123	**2,322**
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	58	N/A	N/A	160	**15,000**

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB005-2430-01	BRC001-SB005-3036-01	BRC001-SB005-3642-01	BRC001-SB005A-0001-01	BRC001-SB005A-0106-01	BRC001-SB005A-0612-01	BRC001-SB005A-1218-01	BRC001-SB005A-1824-01	BRC001-SB005A-2430-01	BRC001-SB005A-3036-01
Sampling Date:		1/12/2016	1/12/2016	1/12/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
Sample Depth (in):		24-30	30-36	36-42	0-1	1-6	6-12	12-18	18-24	24-30	30-36
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	574	69	**16,533**	58	28	45	58	**3,414**	618	492
Laboratory Lead Results:		N/A	N/A	**16,000**	N/A	N/A	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB005A-3638-01	BRC001-SB005A-6066-01	BRC001-SB005A-6672-01	BRC001-SB005A-7278-01	BRC001-SB005A-7884-01	BRC001-SB005A-8490-01	BRC001-SB005A-9096-01	BRC001-SB005A-96100-01	BRC001-SB006-0001-01	BRC001-SB006-0106-01
Sampling Date:		1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/12/2016	1/12/2016
Sample Depth (in):		36-38	60-66	66-72	72-78	78-84	84-90	90-96	96-100	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**4,899**	**13,333**	**38,267**	**35,033**	135	54	45	66	**938**	**812**
Laboratory Lead Results:		N/A	**31,000**	**18,000**	**4,000**	N/A	N/A	N/A	N/A	**2,200**	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB006-0612-01	BRC001-SB006-1218-01	BRC001-SB006-1824-01	BRC001-SB006-2430-01	BRC001-SB006-3036-01	BRC001-SB007-0001-01	BRC001-SB007-0106-01	BRC001-SB007-0612-01	BRC001-SB007-1218-01	BRC001-SB007-1824-01
Sampling Date:		1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016
Sample Depth (in):		6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	29	241	42	28	19	265	153	620	34	43
Laboratory Lead Results:		N/A	280	N/A	N/A	N/A	310	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB007-2430-01	BRC001-SB007-3036-01	BRC001-SB008-0001-01	BRC001-SB008-0106-01	BRC001-SB008-0612-01	BRC001-SB008-1218-01	BRC001-SB008-1824-01	BRC001-SB008-2430-01	BRC001-SB008-3036-01	BRC001-SB008A-0001-01
Sampling Date:		1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/19/2016
Sample Depth (in):		24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	20	21	496	72	316	**1,144**	**4,880**	**4,370**	**6,004**	235
Laboratory Lead Results:		N/A	N/A	420	N/A	N/A	N/A	N/A	N/A	N/A	260

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB008A-0106-01	BRC001-SB008A-0612-01	BRC001-SB008A-1218-01	BRC001-SB008A-1824-01	BRC001-SB008A-2430-01	BRC001-SB008A-3036-01	BRC001-SB008A-3642-01	BRC001-SB008A-4248-01	BRC001-SB008A-6066-01	BRC001-SB009-0001-01
Sampling Date:		1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/12/2016
Sample Depth (in):		1-6	6-12	12-18	18-24	24-30	30-36	36-42	42-48	60-66	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	134	54	593	**6,989**	**23,433**	252	17	15	138	**3,032**
Laboratory Lead Results:		N/A	N/A	N/A	N/A	**29,000**	N/A	N/A	N/A	N/A	N/A

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB009-0106-01	BRC001-SB009-0612-01	BRC001-SB009-1218-01	BRC001-SB009-1824-01	BRC001-SB009-2430-01	BRC001-SB009-3036-01	BRC001-SB009-3642-01	BRC001-SB009-4248-01	BRC001-SB010-0001-01	BRC001-SB010-0106-01
Sampling Date:		1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/13/2016	1/13/2016
Sample Depth (in):		1-6	6-12	12-18	18-24	24-30	30-36	36-42	42-48	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**2,303**	24	**2,367**	**4,912**	**3,314**	**9,943**	**3,743**	21	**8,900**	**2,104**
Laboratory Lead Results:		N/A	40	N/A	N/A	N/A	N/A	220	N/A	**10,000**	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB010-0612-01	BRC001-SB010-1218-01	BRC001-SB010-1824-01	BRC001-SB010-2430-01	BRC001-SB010-3036-01	BRC001-SB011-0001-01	BRC001-SB011-0106-01	BRC001-SB011-0612-01	BRC001-SB011-1218-01	BRC001-SB011-1824-01
Sampling Date:		1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016
Sample Depth (in):		6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	398	**5,340**	**1,116**	24	15	**5,570**	**1,113**	35	38	**891**
Laboratory Lead Results:		**1,300**	N/A	N/A	N/A	N/A	**8,100**	N/A	N/A	N/A	**1,400**

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB011-2430-01	BRC001-SB011-3036-01	BRC001-SB012-0001-01	BRC001-SB012-0106-01	BRC001-SB012-0612-01	BRC001-SB012-1218-01	BRC001-SB012-1824-01	BRC001-SB012-2430-01	BRC001-SB012-3036-01	BRC001-SB013-0001-01
Sampling Date:		1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016
Sample Depth (in):		24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	14	13	**2,002**	**2,884**	613	79	22	27	33	586
Laboratory Lead Results:		N/A	N/A	**2,100**	N/A	N/A	48	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB013-0106-01	BRC001-SB013-0612-01	BRC001-SB013-1218-01	BRC001-SB013-1824-01	BRC001-SB013-2430-01	BRC001-SB013-3036-01	BRC001-SB013-3642-01	BRC001-SB013-4248-01	BRC001-SB014-0001-01	BRC001-SB014-0106-01
Sampling Date:		1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016
Sample Depth (in):		1-6	6-12	12-18	18-24	24-30	30-36	36-42	42-48	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	149	**1,621**	**8,984**	**13,967**	**9,034**	497	22	18	68	2
Laboratory Lead Results:		N/A	**1,300**	N/A	N/A	**12,000**	N/A	N/A	11	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB014-0612-01	BRC001-SB014-1218-01	BRC001-SB014-1824-01	BRC001-SB014-2430-01	BRC001-SB014-3036-01	BRC001-SB015-0001-01	BRC001-SB015-0106-01	BRC001-SB015-0612-01	BRC001-SB015-1218-01	BRC001-SB015-1824-01
Sampling Date:		1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016
Sample Depth (in):		6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	751	3	2	2	3	136	190	451	**9,562**	**3,434**
Laboratory Lead Results:		**940**	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**9,500**	**3,300**

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB015-2430-01	BRC001-SB015-3036-01	BRC001-SB016-0001-01	BRC001-SB016-0106-01	BRC001-SB016-0612-01	BRC001-SB016-1218-01	BRC001-SB016-1824-01	BRC001-SB016-2430-01	BRC001-SB016-3036-01	BRC001-SB017-0001-01
Sampling Date:		1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016
Sample Depth (in):		24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	24	15	**5,276**	530	**1,094**	**4,171**	**892**	75	23	**3,691**
Laboratory Lead Results:		N/A	N/A	**4,800**	N/A	N/A	440	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB017-0106-01	BRC001-SB017-0612-01	BRC001-SB017-1218-01	BRC001-SB017-1824-01	BRC001-SB017-2430-01	BRC001-SB017-3036-01	BRC001-SB017-3642-01	BRC001-SB017-4248-01	BRC001-SB018-0001-01	BRC001-SB018-0106-01
Sampling Date:		1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/14/2016	1/14/2016	1/13/2016	1/13/2016
Sample Depth (in):		1-6	6-12	12-18	18-24	24-30	30-36	36-42	42-48	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**1,374**	636	**1,563**	**1,511**	**1,789**	24	19	17	710	157
Laboratory Lead Results:		N/A	**1,100**	N/A	N/A	N/A	N/A	N/A	N/A	490	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB018-0612-01	BRC001-SB018-1218-01	BRC001-SB018-1824-01	BRC001-SB018-2430-01	BRC001-SB018-3036-01	BRC001-SB019-0001-01	BRC001-SB019-0106-01	BRC001-SB019-0612-01	BRC001-SB019-1218-01	BRC001-SB019-1824-01
Sampling Date:		1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016
Sample Depth (in):		6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	242	431	343	681	80	94	24	339	52	13
Laboratory Lead Results:		N/A	N/A	N/A	630	N/A	100	N/A	250	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB019-2430-01	BRC001-SB019-3036-01	BRC001-SB020-0001-01	BRC001-SB020-0106-01	BRC001-SB020-0612-01	BRC001-SB020-1218-01	BRC001-SB020-1824-01	BRC001-SB020-2430-01	BRC001-SB020-3036-01	BRC001-SB021-0001-01
Sampling Date:		1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016
Sample Depth (in):		24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	3	1	**1,599**	188	300	**8,304**	**1,725**	52	52	**4,860**
Laboratory Lead Results:		N/A	N/A	**1,300**	N/A	N/A	**8,900**	N/A	N/A	N/A	**5,100**

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB021-0106-01	BRC001-SB021-0612-01	BRC001-SB021-1218-01	BRC001-SB021-1824-01	BRC001-SB021-2430-01	BRC001-SB021-3036-01	BRC001-SB022-0001-01	BRC001-SB022-0106-01	BRC001-SB022-0612-01	BRC001-SB022-1218-01
Sampling Date:		1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016
Sample Depth (in):		1-6	6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
42											
On-Site XRF Lead Results:	800	**2,268**	**4,680**	420	42	21	16	**5,781**	493	**3,011**	**1,101**
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**2,200**	N/A

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB022-1824-01	BRC001-SB022-2430-01	BRC001-SB022-3036-01	BRC001-SB023-0001-01	BRC001-SB023-0106-01	BRC001-SB023-0612-01	BRC001-SB023-1218-01	BRC001-SB023-1824-01	BRC001-SB023-2430-01	BRC001-SB023-3036-01
Sampling Date:		1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016
Sample Depth (in):		18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	18	30	18	**2,118**	125	167	81	**1,655**	435	20
Laboratory Lead Results:		N/A	N/A	N/A	**2,100**	N/A	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB024-0001-01	BRC001-SB024-0001-02	BRC001-SB024-0106-01	BRC001-SB024-0612-01	BRC001-SB024-1218-01	BRC001-SB024-1824-01	BRC001-SB024-2430-01	BRC001-SB024-3036-01	BRC001-SB025-0001-01	BRC001-SB025-0001-02
Sampling Date:		1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016
Sample Depth (in):		0-1	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**1,268**	N/A	289	**1,118**	575	613	19	19	**1,668**	N/A
Laboratory Lead Results:		**1,100**	**1,300**	N/A	N/A	N/A	520	N/A	N/A	**920**	**1,100**

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB025-0106-01	BRC001-SB025-0612-01	BRC001-SB025-1218-01	BRC001-SB025-1824-01	BRC001-SB025-2430-01	BRC001-SB025-3036-01	BRC001-SB026-0001-01	BRC001-SB026A-0001-01	BRC001-SB026B-0001-01	BRC001-SB026-0106-01
Sampling Date:		1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016
Sample Depth (in):		1-6	6-12	12-18	18-24	24-30	30-36	0-1	0-1	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	98	48	18	**1,063**	219	18	**60,200**	**34,900**	**8,301**	**3,379**
Laboratory Lead Results:		N/A	N/A	N/A	**1,500**	N/A	N/A	**29,000**	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB026-0612-01	BRC001-SB026-1218-01	BRC001-SB026-1824-01	BRC001-SB026-2430-01	BRC001-SB026-3036-01	BRC001-SB027-0001-01	BRC001-SB027-0001-02	BRC001-SB027-0106-01	BRC001-SB027-0612-01	BRC001-SB027-1218-01
Sampling Date:		1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016
Sample Depth (in):		6-12	12-18	18-24	24-30	30-36	0-1	0-1	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**1,560**	140	422	224	20	**7,347**	N/A	786	20	33
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	**43,000**	**3,300**	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB027-1824-01	BRC001-SB027-2430-01	BRC001-SB027-3036-01	BRC001-SB028-0001-01	BRC001-SB028-0106-01	BRC001-SB028-0612-01	BRC001-SB028-1218-01	BRC001-SB028-1824-01	BRC001-SB028-2430-01	BRC001-SB028-3036-01
Sampling Date:		1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016
Sample Depth (in):		18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	91	15	20	**12,867**	**4,169**	**1,340**	366	38	19	**4,722**
Laboratory Lead Results:		N/A	N/A	N/A	**7,600**	N/A	**1,200**	N/A	N/A	N/A	32

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB028-3642-01	BRC001-SB028-4248-01	BRC001-SB029-0001-01	BRC001-SB029-0106-01	BRC001-SB029-0612-01	BRC001-SB029-1218-01	BRC001-SB029-1824-01	BRC001-SB029-2430-01	BRC001-SB029-3036-01	BRC001-SB030-0001-01
Sampling Date:		1/16/2016	1/16/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016
Sample Depth (in):		36-42	42-48	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	1	18	**7,481**	**1,074**	**3,640**	658	236	49	22	597
Laboratory Lead Results:		N/A	N/A	N/A	N/A	**6,600**	N/A	N/A	N/A	N/A	580

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB030-0106-01	BRC001-SB030-0612-01	BRC001-SB030-1218-01	BRC001-SB030-1824-01	BRC001-SB030-2430-01	BRC001-SB030-3036-01	BRC001-SB031-0001-01	BRC001-SB031-0001-02	BRC001-SB031-0106-01	BRC001-SB031-0612-01
Sampling Date:		1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016
Sample Depth (in):		1-6	6-12	12-18	18-24	24-30	30-36	0-1	0-1	1-6	6-12
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	493	**9,482**	688	231	295	31	572	N/A	**1,110**	72
Laboratory Lead Results:		N/A	**820**	N/A	N/A	N/A	N/A	**2,500**	**1,100**	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB031-1218-01	BRC001-SB031-1824-01	BRC001-SB031-2430-01	BRC001-SB031-3036-01	BRC001-SB032-0001-01	BRC001-SB032-0106-01	BRC001-SB032-0612-01	BRC001-SB032-1218-01	BRC001-SB032-1824-01	BRC001-SB032-2430-01
Sampling Date:		1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016
Sample Depth (in):		12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	29	28	24	23	**54,033**	**1,792**	**1,211**	**2,791**	418	120
Laboratory Lead Results:		N/A	N/A	N/A	N/A	**33,000**	N/A	**860**	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB032-3036-01	BRC001-SB033-0001-01	BRC001-SB033-0106-01	BRC001-SB033-0612-01	BRC001-SB033-1218-01	BRC001-SB033-1824-01	BRC001-SB033-2430-01	BRC001-SB033-3036-01	BRC001-SB034-0001-01	BRC001-SB034-0106-01
Sampling Date:		1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016
Sample Depth (in):		30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	43	570	706	23	409	319	49	22	**3,092**	**1,234**
Laboratory Lead Results:		N/A	500	N/A	N/A	300	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB034-0612-01	BRC001-SB034-1218-01	BRC001-SB034-1824-01	BRC001-SB034-2430-01	BRC001-SB035-0001-01	BRC001-SB035-0106-01	BRC001-SB035-0612-01	BRC001-SB035-1218-01	BRC001-SB035-1824-01	BRC001-SB036-0001-01
Sampling Date:		1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016
Sample Depth (in):		6-12	12-18	18-24	24-30	0-1	1-6	6-12	12-18	18-24	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**923**	99	48	16	**1,354**	749	341	95	20	**6,701**
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**7,200**

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB036-0106-01	BRC001-SB036-0612-01	BRC001-SB036-1218-01	BRC001-SB036-1824-01	BRC001-SB037-0001-01	BRC001-SB037-0106-01	BRC001-SB037-0612-01	BRC001-SB037-1218-01	BRC001-SB037-1824-01	BRC001-SB038-0001-01
Sampling Date:		1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016
Sample Depth (in):		1-6	6-12	12-18	18-24	0-1	1-6	6-12	12-18	18-24	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**3,356**	71	25	19	**1,921**	**1,982**	**3,135**	91	2	**5,205**
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	N/A	**2,000**	N/A	N/A	**3,700**

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB038-0106-01	BRC001-SB038-0612-01	BRC001-SB038-1218-01	BRC001-SB038-1824-01	BRC001-SB039-0001-01	BRC001-SB039-0106-01	BRC001-SB039-0612-01	BRC001-SB039-1218-01	BRC001-SB039-1824-01	BRC001-SB040-0001-01
Sampling Date:		1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016
Sample Depth (in):		1-6	6-12	12-18	18-24	0-1	1-6	6-12	12-18	18-24	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**3,431**	**3,730**	93	40	**1,631**	**2,376**	283	11	1	**2,639**
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	**2,400**

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB040-0106-01	BRC001-SB040-0612-01	BRC001-SB040-1218-01	BRC001-SB040-1824-01	BRC001-SB040-2430-01	BRC001-SB041-0001-01	BRC001-SB041-0106-01	BRC001-SB041-0612-01	BRC001-SB041-1218-01	BRC001-SB041-1824-01
Sampling Date:		1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016
Sample Depth (in):		1-6	6-12	12-18	18-24	24-30	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**4,132**	**3,195**	61	177	115	**971**	286	101	17	1
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	**820**	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB042-0001-01	BRC001-SB042-0001-02	BRC001-SB042-0106-01	BRC001-SB042-0612-01	BRC001-SB042-1218-01	BRC001-SB042-1824-01	BRC001-SB043-0001-01	BRC001-SB043-0106-01	BRC001-SB043-0612-01	BRC001-SB043-1218-01
Sampling Date:		1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016
Sample Depth (in):		0-1	0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**1,581**	N/A	**1,512**	381	23	14	739	293	118	32
Laboratory Lead Results:		**1,700**	**1,600**	N/A	170	N/A	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB043-1824-01	BRC001-SB044-0001-01	BRC001-SB044-0106-01	BRC001-SB044-0612-01	BRC001-SB044-1218-01	BRC001-SB044-1824-01	BRC001-SB045-0001-01	BRC001-SB045-0106-01	BRC001-SB045-0612-01	BRC001-SB045-1218-01
Sampling Date:		1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016
Sample Depth (in):		18-24	0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	1	**824**	**1,583**	104	25	22	321	250	54	31
Laboratory Lead Results:		N/A	N/A	N/A	**1,700**	N/A	N/A	280 J	N/A	N/A	N/A

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB045-1824-01	BRC001-SB046-0001-01	BRC001-SB046-0106-01	BRC001-SB046-0612-01	BRC001-SB046-1218-01	BRC001-SB046-1824-01	BRC001-SB047-0001-01	BRC001-SB047-0106-01	BRC001-SB047-0612-01	BRC001-SB047-1218-01
Sampling Date:		1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016
Sample Depth (in):		18-24	0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	23	**901**	297	114	25	17	**1,387**	384	32	35
Laboratory Lead Results:		N/A	790	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB047-1824-01	BRC001-SB048-0001-01	BRC001-SB048-0106-01	BRC001-SB048-0612-01	BRC001-SB048-1218-01	BRC001-SB048-1824-01	BRC001-SB049-0001-01	BRC001-SB049-0106-01	BRC001-SB049-0612-01	BRC001-SB049-1218-01
Sampling Date:		1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
Sample Depth (in):		18-24	0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	21	**1,683**	**816**	106	74	146	**1,802**	**1,911**	**3,673**	343
Laboratory Lead Results:		N/A	**1,200**	N/A	N/A	N/A	400	N/A	N/A	**14,000**	350

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB049-1824-01	BRC001-SB049-2430-01	BRC001-SB050-0001-01	BRC001-SB050-0106-01	BRC001-SB050-0612-01	BRC001-SB050-1218-01	BRC001-SB050-1824-01	BRC001-SB051-0001-01	BRC001-SB051-0106-01	BRC001-SB051-0612-01
Sampling Date:		1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
Sample Depth (in):		18-24	24-30	0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	93	25	**4,248**	**3,231**	340	23	23	**13,800**	**7,529**	**2,162**
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	N/A	N/A	**13,000**	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB051-1218-01	BRC001-SB051-1824-01	BRC001-SB051-2430-01	BRC001-SB052-0001-01	BRC001-SB052-0001-02	BRC001-SB052-0106-01	BRC001-SB052-0612-01	BRC001-SB052-1218-01	BRC001-SB052-1824-01	BRC001-SB052-2430-01
Sampling Date:		1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
Sample Depth (in):		12-18	18-24	24-30	0-1	0-1	1-6	6-12	12-18	18-24	24-30
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	502	59	40	**6,632**	N/A	**3,797**	**1,182**	474	21	19
Laboratory Lead Results:		110	N/A	N/A	**5,300**	**5,500**	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB053-0001-01	BRC001-SB053-0106-01	BRC001-SB053-0612-01	BRC001-SB053-1218-01	BRC001-SB053-1824-01	BRC001-SB053-2430-01	BRC001-SB054-0001-01	BRC001-SB054-0106-01	BRC001-SB054-0612-01	BRC001-SB054-1218-01
Sampling Date:		1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
Sample Depth (in):		0-1	1-6	6-12	12-18	18-24	24-30	0-1	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
2											
On-Site XRF Lead Results:	800	**3,990**	**1,531**	**1,344**	412	113	28	733	488	71	39
Laboratory Lead Results:		**890**	N/A	N/A	N/A	N/A	N/A	560	N/A	N/A	N/A

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1A: On-Site Soil Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 21, 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB054-1824-01	BRC001-SB055-0001-01	BRC001-SB055-0106-01	BRC001-SB055-0612-01	BRC001-SB055-1218-01	BRC001-SB055-1824-01	BRC001-SB056-0001-01	BRC001-SB056-0106-01	BRC001-SB056-0612-01	BRC001-SB056-1218-01
Sampling Date:		1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
Sample Depth (in):		18-24	0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	51	610	418	167	91	116	516	313	366	74
Laboratory Lead Results:		N/A	N/A	N/A	98	N/A	N/A	460	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB056-1824-01	BRC001-SB057-0001-01	BRC001-SB057-0106-01	BRC001-SB057-0612-01	BRC001-SB057-1218-01	BRC001-SB057-1824-01	BRC001-SB058-0001-01	BRC001-SB058-0106-01	BRC001-SB058-0612-01	BRC001-SB058-1218-01
Sampling Date:		1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
Sample Depth (in):		18-24	0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	51	**1,571**	726	428	45	19	**909**	537	753	97
Laboratory Lead Results:		N/A	N/A	N/A	310	N/A	N/A	**860**	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB058-1824-01	BRC001-SB059-0001-01	BRC001-SB059-0106-01	BRC001-SB059-0612-01	BRC001-SB059-1218-01	BRC001-SB059-1824-01	BRC001-SB060-0001-01	BRC001-SB060-0106-01	BRC001-SB060-0612-01	BRC001-SB060-1218-01
Sampling Date:		1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
Sample Depth (in):		18-24	0-1	1-6	6-12	12-18	18-24	0-1	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	18	**1,033**	520	157	98	75	**92,333**	**57,433**	**1,759**	**3,112**
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	N/A	**79,000**	N/A	N/A	**2,800**

RST 3 Sample ID	EPA RML for Industrial Soil[1]	BRC001-SB061-0001-01	BRC001-SB061-0106-01	BRC001-SB061-0612-01	BRC001-SB061-1215-01	RB-01112016	RB-01122016	RB-01132016	RB-01142016	RB-01152016	RB-01182016
Sampling Date:		1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/11/2016	1/12/2016	1/13/2016	1/14/2016	1/15/2016	1/18/2016
Sample Depth (in):		0-1	1-6	6-12	12-15	N/A	N/A	N/A	N/A	N/A	N/A
Sample Matrix:		Soil	Soil	Soil	Soil	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous
On-Site XRF Lead Results:	800	**95,233**	**42,600**	**40,133**	**28,567**	N/A	N/A	N/A	N/A	N/A	N/A
Laboratory Lead Results:		**80,000**	N/A	**28,000**	N/A	8.0 U	8.0 U	8.0 U	8.0 U	8.0 U	8.0 U

RST 3 Sample ID	EPA RML for Industrial Soil[1]	RB-01192016	RB-0120216	RB-01212016	RB-01222016
Sampling Date:		1/19/2016	1/20/2016	1/21/2016	1/22/2016
Sample Depth (in):		N/A	N/A	N/A	N/A
Sample Matrix:		Aqueous	Aqueous	Aqueous	Aqueous
On-Site XRF Lead Results:	800	N/A	N/A	N/A	N/A
Laboratory Lead Results:		8.0 U	8.0 U	8.0 U	8.0 U

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable J - Estimated result U - Non-detected result
[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg). Rinsate blank results presented in micrograms per liter (µg/l)
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1B: Off-Site Soil Sample (Area Adjacent to Eastern Portion of the Site) Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 22 through 25, 2016

RST 3 Sample ID	EPA RML for Residential Soil[1]	BRC001-SBD001-0001-01	BRC001-SBD001-0106-01	BRC001-SBD001-0612-01	BRC001-SBD001-1218-01	BRC001-SBD001-1824-01	BRC001-SBD001-2430-01	BRC001-SBD001-3036-01	BRC001-SBD002-0001-01	BRC001-SBD002-0106-01	BRC001-SBD002-0612-01
Sampling Date:		1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016
Sample Depth (in):		0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	400	349	139	32	23	17	24	1	35	36	34
Laboratory Lead Results:		N/A	N/A	N/A	15 J	N/A	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Residential Soil[1]	BRC001-SBD002-1218-01	BRC001-SBD002-1824-01	BRC001-SBD002-2430-01	BRC001-SBD002-3036-01	BRC001-SBD003-0001-01	BRC001-SBD003-0106-01	BRC001-SBD003-0612-01	BRC001-SBD003-1218-01	BRC001-SBD003-1824-01	BRC001-SBD003-2430-01
Sampling Date:		1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016
Sample Depth (in):		12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	400	19	12	27	19	**4,095**	**2,859**	**1,317**	**1,018**	19	197
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Residential Soil[1]	BRC001-SBD003-3036-01	BRC001-SBD004-0001-01	BRC001-SBD004-0106-01	BRC001-SBD004-0612-01	BRC001-SBD004-1218-01	BRC001-SBD004-1824-01	BRC001-SBD004-2430-01	BRC001-SBD004-3036-01	BRC001-SBD005-0001-01	BRC001-SBD005-0106-01
Sampling Date:		1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/25/2016	1/25/2016
Sample Depth (in):		30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1	1-6
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	400	22	**6,131**	**8,697**	**8,501**	**1,156**	**4,961**	**1,149**	262	**3,010**	**7,003**
Laboratory Lead Results:		N/A	N/A	N/A	**6,200**	**3,200**	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Residential Soil[1]	BRC001-SBD005-0612-01	BRC001-SBD005-1218-01	BRC001-SBD005-1824-01	BRC001-SBD005-2430-01	BRC001-SBD005-3036-01	BRC001-SBD006-0001-01	BRC001-SBD006-0106-01	BRC001-SBD006-0612-01	BRC001-SBD006-1218-01	BRC001-SBD006-1824-01
Sampling Date:		1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016
Sample Depth (in):		6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	400	**2,928**	**4,356**	**4,401**	**697**	**1,806**	**34,133**	**39,100**	**950**	**1,573**	315
Laboratory Lead Results:		N/A	N/A	N/A	**1,100**	N/A	**50,000**	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Residential Soil[1]	BRC001-SBD006-2430-01	BRC001-SBD006-3036-01	BRC001-SBD007-0001-01	BRC001-SBD007-0106-01	BRC001-SBD007-0612-01	BRC001-SBD007-1218-01	BRC001-SBD007-1824-01	BRC001-SBD007-2430-01	BRC001-SBD007-3036-01	BRC001-SBD008-0001-01
Sampling Date:		1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016
Sample Depth (in):		24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36	0-1
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	400	68	51	**2,568**	**2,998**	**3,178**	**3,443**	23	**1,987**	**1,668**	36
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	**2,800**	**2,300**	N/A	N/A	N/A

Notes:

RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency

in - Inches NA - Not Applicable J - Estimated value

[1] EPA Removal Management Levels (RML) for Residential Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.

Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).

Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1B: Off-Site Soil Sample (Area Adjacent to Eastern Portion of the Site) Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 22 through 25, 2016

RST 3 Sample ID	EPA RML for Residential Soil[1]	BRC001-SBD008-0106-01	BRC001-SBD008-0612-01	BRC001-SBD008-1218-01	BRC001-SBD008-1824-01	BRC001-SBD008-2430-01	BRC001-SBD008-3036-01	BRC001-SBD009-0001-01	BRC001-SBD009-0106-01	BRC001-SBD009-0612-01	BRC001-SBD009-1218-01
Sampling Date:		1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016
Sample Depth (in):		1-6	6-12	12-18	18-24	24-30	30-36	0-1	1-6	6-12	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	400	28	16	15	19	16	16	34	16	18	1
Laboratory Lead Results:		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.3

RST 3 Sample ID	EPA RML for Residential Soil[1]	BRC001-SBD009-1824-01	BRC001-SBD009-2430-01	BRC001-SBD009-3036-01	BRC001-SBD010-0001-01	BRC001-SBD010-0106-01	BRC001-SBD010-0612-01	BRC001-SBD010-1218-01	BRC001-SBD010-1824-01	BRC001-SBD010-2430-01	BRC001-SBD010-3036-01
Sampling Date:		1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016
Sample Depth (in):		18-24	24-30	30-36	0-1	1-6	6-12	12-18	18-24	24-30	30-36
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	400	20	1	1	**87,100**	147	41	29	40	45	39
Laboratory Lead Results:		N/A	N/A	N/A	**73,000**	380	N/A	N/A	N/A	N/A	N/A

RST 3 Sample ID	EPA RML for Residential Soil[1]	BRC001-SBD011-0001-01	BRC001-SBD011-0106-01	BRC001-SBD011-0612-01	BRC001-SBD011-1218-01	BRC001-SBD011-1824-01	BRC001-SBD011-2430-01	BRC001-SBD011-3036-01
Sampling Date:		1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016
Sample Depth (in):		0-1	1-6	6-12	12-18	18-24	24-30	30-36
Sample Matrix:		Soil	Soil	Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	400	**738**	**940**	**689**	**648**	85	**504**	155
Laboratory Lead Results:		N/A	N/A	**600**	N/A	N/A	N/A	N/A

Notes:
RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency
in - Inches NA - Not Applicable
[1] EPA Removal Management Levels (RML) for Residential Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1C: On-Site Slag Pile Sample Validated Analytical Data Summary Table - Total Lead
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 22 , 2016

RST 3 Sample ID	EPA RML for Industrial Soil[1]	PRBR-005SW-003	PRBR-006SW-002	PRBR-008SW-001	PRBR-009SW-001	PRBR-010SW-001
Sampling Date:		1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016
Sample Depth (in):		12-18	12-18	12-18	12-18	12-18
Sample Matrix:		Soil	Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**38,833**	**38,167**	**86,600**	**83,033**	**36,067**
Laboratory Lead Results:		**47,930**	**48,635**	**89,150**	**63,010**	**46,105**

RST 3 Sample ID	EPA RML for Industrial Soil[1]	PRBR-011SW-001	PRBR-012SW-001	PRBR-013SW-001	PRBR-014SW-001
Sampling Date:		1/22/2016	1/22/2016	1/22/2016	1/22/2016
Sample Depth (in):		12-18	12-18	12-18	12-18
Sample Matrix:		Soil	Soil	Soil	Soil
On-Site XRF Lead Results:	800	**22,767**	**25,467**	**33,433**	**201,767**
Laboratory Lead Results:		**18,903**	**41,402**	**52,921**	**100,299**

Notes:

RST 3 - Removal Support Team 3 EPA - U.S. Environmental Protection Agency

in - Inches NA - Not Applicable

[1] EPA Removal Management Levels (RML) for Industrial Soil for 10^{-4} Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.

Soil analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).

Result values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-AB001-0001-01**	**BRC001-AB002-0001-01**	**BRC001-AB002-0001-02**	**BRC001-AB003-1218-01**	**BRC001-AB004-0001-01**	**BRC001-AB004-0612-01**	**BRC001-AB004-1824-01**	**BRC001-AB005-0001-01**	**BRC001-AB006-0001-01**	**BRC001-AB006-1218-01**	**BRC001-AB007-0106-01**
	Sample Date	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/21/2016	1/20/2016	1/20/2016	1/20/2016
	Sample Depth	0-1	0-1	0-1	12-18	0-1	6-12	18-24	0-1	0-1	12-18	1-6
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	7,500	7,100	6,200	8,100	16,000	15,000	21,000	12,000	15,000	9,200	8,400
Antimony	470	**1,600**	**1,500**	**1,400**	2.1	320	**630**	1.9 U	**1,900**	34	5.7	3.5
Arsenic	300	190	290	220	22	30	32	3.3	**350**	8.0	9.4	9.4
Barium	220,000	480	940	740	13	130	130	130	840	60	29	15
Beryllium	2,300	0.30 U	0.28 U	0.27 U	0.78	0.48	0.73	0.89	0.39	0.53	0.61	0.57
Cadmium	980	27	33	27	0.47	8.3	8.3	0.53	51	3.6	0.58	0.62
Calcium	NS	51,000	160,000	180,000	200,000	29,000	62,000	21,000	50,000	41,000	200,000	220,000
Chromium	1,800,000	260	240	310	80	200	210	34	120	110	27	28
Cobalt	350	11	11	9.8	4.8	13	14	15	14	16	6.2	5.8
Copper	47,000	450	450	410	48	120	160	120	620	70	46	110
Iron	820,000	90,000	110,000	100,000	23,000	59,000	31,000	30,000	80,000	29,000	16,000	15,000
Lead	800	**77,000**	**47,000**	**52,000**	50	**15,000**	**22,000**	21	**70,000**	**2,200**	430	240
Magnesium	NS	4,200	3,800	3,300	1,600	11,000	10,000	5,800	7,600	22,000	4,100	4,000
Manganese	26,000	520	500	510	190	620	470	750	580	510	320	250
Nickel	22,000	110	100	110	16	64	160	16	120	160	9.9	9.1
Potassium	NS	610	1,200	1,200	310	470	660	1,100	620	380	340	180
Selenium	5,800	17	15	13	1.9 U	2.3	1.7 U	1.9 U	20	1.8 U	1.7 U	1.7 U
Silver	5800	4.3	2.3	2.3	0.47 U	0.56	0.85	0.48 U	2.7	0.44 U	0.43 U	0.43 U
Sodium	NS	2,200	5,600	5,400	300	880	690	510	1,600	420	210	610
Thallium	12	2.0 U	1.9 U	1.8 U	1.9 U	1.8 U	1.7 U	1.9 U	2.1 U	1.8 U	1.7 U	1.7 U
Vanadium	5,800	69	36	31	79	110	110	120	89	99	68	66
Zinc	350,000	540	520	450	44	170	130	86	1,800	67	49	31

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased low
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-AB008-0001-01**	**BRC001-AB009-0001-01**	**BRC001-AB010-0001-01**	**BRC001-AB011-0001-01**	**BRC001-AB011-0001-02**	**BRC001-AB011-0612-01**	**BRC001-AB013-0001-01**	**BRC001-AB013-0612-01**	**BRC001-AB014-0001-01**	**BRC001-AB015-0106-01**	**BRC001-AB015-1218-01**
	Sample Date	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/21/2016	1/21/2016
	Sample Depth	0-1	0-1	0-1	0-1	0-1	6-12	0-1	6-12	0-1	1-6	12-18
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	15,000	17,000	19,000	11,000	15,000	5,900	6,500	5,600	9,100	12,000	13,000
Antimony	470	170	**3,800**	**650**	120	150	38	240	3.3	430	**980**	2.8
Arsenic	300	26	**310**	120	11	19	9.6	35	29	59	210	6.4
Barium	220,000	100	170	330	52	78	28	86	9.4 U	200	450	76
Beryllium	2,300	0.68	0.24 U	0.46	0.29	0.44	0.47	0.42	0.66	0.72	0.40	0.64
Cadmium	980	18	68	19	4.3	7.2	0.46	8.3	0.36	14	36	0.64
Calcium	NS	36,000	19,000	25,000	23,000	28,000	250,000	100,000	230,000	28,000	90,000	150,000
Chromium	1,800,000	60	120	74	28	45	38	89	53	57	170	32
Cobalt	350	13	12	13	7.6	8.6	3.0	5.4	3.1	8.2	12	9.4
Copper	47,000	98	2,200	310	83	120	28	76	35	180	300	70
Iron	820,000	32,000	180,000	91,000	65,000	55,000	10,000	19,000	16,000	34,000	77,000	19,000
Lead	800	**12,000**	**67,000**	**21,000**	**4,600**	**5,900**	**3,300**	**11,000**	150	**14,000**	**40,000**	77
Magnesium	NS	14,000	3,600	7,100	5,700	6,500	2,200	3,500	1,700	4,300	8,700	4,000
Manganese	26,000	610	1,000	700	510	520	170	240	110	410	600	630
Nickel	22,000	100	310	87	28	39	11	37	11	44	160	12
Potassium	NS	730	390	750	450	600	190	450	220	1,100	450	880
Selenium	5,800	2.2	27	8.4	1.7 U	1.6 U	1.9 U	1.7 U	1.9 U	3.2	17	1.9 U
Silver	5800	0.41 U	2.2	0.89	0.42 U	0.41 U	0.47 U	0.43 U	0.47 U	0.43 U	1.7	0.48 U
Sodium	NS	550	920	1,200	480	630	130	360	110	550	4,800	1,700
Thallium	12	1.7 U	1.6 U	1.6 U	1.7 U	1.6 U	1.9 U	1.7 U	1.9 U	1.7 U	1.8 U	1.9 U
Vanadium	5,800	130	57	95	59	80	40	71	68	130	86	64
Zinc	350,000	180	5,000	690	130	250	22	330	18	690	560	52

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated valu
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lo
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-AB016-0001-01**	**BRC001-AB016-1824-01**	**BRC001-AB016-2430-01**	**BRC001-AB017-0001-01**	**BRC001-AB017-1218-01**	**BRC001-AB017-1824-01**	**BRC001-AB018-0001-01**	**BRC001-AB019-0001-01**	**BRC001-AB019-0001-02**	**BRC001-AB019-1218-01**	**BRC001-AB020-0001-01**
	Sample Date	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016
	Sample Depth	0-1	18-24	24-30	0-1	12-18	18-24	0-1	0-1	0-1	12-18	0-1
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	9,900	8,700	9,300	7,800	7,100	10,000	9,100	16,000	16,000	22,000	21,000
Antimony	470	**4,300**	140	130	**4,100**	100	26	**4,100**	**530**	410	2.0 U	220
Arsenic	300	**1,400**	39	21	**960**	42	13	**760**	90	94	2.8	65
Barium	220,000	32	130	110	53	140	83	190	200	200	150	150
Beryllium	2,300	0.26 U	0.52	0.47	0.26 U	0.54	0.47	0.26 U	0.47	0.48	0.82	0.64
Cadmium	980	110	2.0	2.0	84	1.4	0.50	65	12	11	0.69	11
Calcium	NS	24,000	170,000	170,000	35,000	240,000	170,000	72,000 J	40,000	46,000	9,900	31,000
Chromium	1,800,000	110	220	350	560	140	47	500	80	85	35	40
Cobalt	350	25	6.6	7.0	26	5.3	4.7	23	13	13	15	14
Copper	47,000	1,600	390	250	1,400	300	130	1,400	210	210	120	150
Iron	820,000	250,000	28,000	28,000	320,000	26,000	17,000	210,000	50,000	52,000	30,000	51,000
Lead	800	**52,000**	**12,000**	**17,000**	**45,000**	**4,700**	**1,400**	**42,000**	**17,000**	**16,000**	55	**12,000**
Magnesium	NS	3,200	3,100	2,800	2,400	2,600	3,200	3,200	8,400	8,300	5,700	9,600
Manganese	26,000	870	350	450	1,200	310	280	900	530	530	810	600
Nickel	22,000	240	36	32	210	28	13	210	50	45	17	36
Potassium	NS	780	510	500	540	490	510	460	320	350	1,000	710
Selenium	5,800	140	3.0	2.2	85	3.2	1.9 U	48	5.5	4.2	2.0 U	3.6
Silver	5800	3.2	0.91	0.88	2.9	0.58	0.47 U	2.3	0.61	0.64	0.51 U	0.42
Sodium	NS	19,000	1,700	1,200	16,000	3,400	1,800	11,000	1,500	1,500	680	850
Thallium	12	1.7 U	1.9 U	1.8 U	2.2 U	1.8 U	1.9 U	1.7 UJ	1.6 U	1.6 U	2.0 U	1.7 U
Vanadium	5,800	58	54	58	36	40	53	47	100	100	100	140
Zinc	350,000	1,200	980	510	890	140	76	780	300	300	100	180

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram
(mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated valu
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-AB020-1824-01**	**BRC001-AB022-0612-01**	**BRC001-AB023-0612-01**	**BRC001-AB024-0001-01**	**BRC001-AB025-1218-01**	**BRC001-AB025-2430-01**	**BRC001-AB025-3036-01**	**BRC001-AB026-0612-01**	**BRC001-AB026-1218-01**	**BRC001-DB001-0106-01**	**BRC001-DB002-0001-01**
	Sample Date	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/21/2016	1/14/2016	1/14/2016
	Sample Depth	18-24	6-12	6-12	0-1	12-18	24-30	30-36	6-12	12-18	1-6	0-1
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	26,000	20,000	11,000	14,000	22,000	21,000	25,000	3,100	13,000	15,000	12,000
Antimony	470	2.0 U	1.8 U	19	330	2.1 U	2.1 U	2.0 U	86	1.8 U	120	23
Arsenic	300	1.6	4.4	5.6	42	3.2	2.9	3.2	37	8.7	40	11
Barium	220,000	170	160	30	140	190	170	140	120	76	74	34
Beryllium	2,300	0.92	0.89	0.54	0.31	0.90	0.93	0.99	0.41	0.85	0.51	0.54
Cadmium	980	0.64	0.63	9.9	11	0.59	0.62	0.57	1.3	0.61	16	23
Calcium	NS	6,700	5,400	170,000	27,000	18,000	4,900	8,100	300,000	140,000	59,000	95,000
Chromium	1,800,000	36	35	26	250	35	34	35	27	38	16	16
Cobalt	350	15	14	6.7	14	17	17	17	2.6	8.8	12	7.8
Copper	47,000	130	120	42	260	140	130	150	150	65	130	58
Iron	820,000	31,000	33,000 J	15,000	120,000	31,000	31,000	35,000	12,000	24,000	25,000	19,000
Lead	800	13	21	**1,300**	**25,000**	22	13	10	**5,500**	93	**5,600**	**1,400**
Magnesium	NS	6,600	5,900	4,900	11,000	6,000	6,100	6,700	2,600	4,000	8,400	5,800
Manganese	26,000	770	800	270	790	760	960	1,400	140	620	460	350
Nickel	22,000	19	16	19	72	17	17	19	13	14	30	19
Potassium	NS	830	800	290	310	830	860	610	110	1,100	210	300
Selenium	5,800	2.0 U	1.8 U	1.9 U	3.4	2.1 U	2.1 U	2.0 U	4.6	1.8 U	3.3	1.9 U
Silver	5800	0.51 U	0.46 U	0.47 U	1.1	0.52 U	0.53 U	0.50 U	0.47	0.46 U	0.45 U	0.47 U
Sodium	NS	550	890	430	720	1,100	1,300	1,600	320	1,200	470	340
Thallium	12	2.0 U	1.8 U	1.9 U	1.7 U	2.1 U	2.1 U	2.0 U	1.7 U	1.8 U	1.8 U	1.9 U
Vanadium	5,800	110	110	60	94	110	110	110	22	110	98	74
Zinc	350,000	95	88 J	43	300	85	89	91	48	110	140	76

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated valu
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-DB003-0001-01**	**BRC001-DB003-1218-01**	**BRC001-DB004-0612-01**	**BRC001-DB005-0001-01**	**BRC001-DB005-0612-01**	**BRC001-GB001-0001-01**	**BRC001-GB001-0001-02**	**BRC001-GB002-0001-01**	**BRC001-GB003-0612-01**	**BRC001-GB004-0001-01**	**BRC001-GB004-0612-01**
	Sample Date	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016
	Sample Depth	0-1	12-18	6-12	0-1	6-12	0-1	0-1	0-1	6-12	0-1	6-12
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	16,000	7,600	5,600	13,000	6,400	4,600	3,900	2,200	9,400	18,000	14,000
Antimony	470	110	2.0 U	13	**2,900**	14	8.9	3.3	20	21	30	3.2
Arsenic	300	44	9.1	10	**940**	12	12	11	8.3	14	15	3.8
Barium	220,000	59	35	23	610	48	27	26	14	37	29	17
Beryllium	2,300	0.52	0.62	0.55	0.49	0.52	0.48	0.46	0.43	0.59	0.54	0.50
Cadmium	980	25	0.92	3.1	120	1.1	0.47	0.48	0.58	2.3	5.0	0.88
Calcium	NS	55,000	260,000	290,000	43,000	280,000	270,000	270,000	320,000	190,000	35,000	79,000
Chromium	1,800,000	16	34	29	89	33	25	22	20	24	11	14
Cobalt	350	13	3.9	2.9	15	3.3	1.9	1.9	1.7 U	6.3	12	9.4
Copper	47,000	100	20	22	710	19	15	14	9.8	46	91	62
Iron	820,000	26,000	18,000	13,000	77,000	14,000	12,000	11,000	5,700	17,000	25,000	22,000
Lead	800	**5,400**	120	460	**66,000**	330	330	300	540	**1,700**	**1,200**	240
Magnesium	NS	8,800	3,600	2,900	4,800	2,500	2,200	2,100	2,000	4,300	8,700	7,100
Manganese	26,000	460	170	150	430	180	120	110	80	300	480	390
Nickel	22,000	38	9.3	7.9	190	9.4	7.1	6.5	5.0	12	16	9.1
Potassium	NS	240	420	270	450	360	650	620	260	290	250	220
Selenium	5,800	2.8	2.0 U	1.8 U	58	2.0 U	1.7 U	1.7 U	1.7 U	1.8 U	1.5 U	1.7 U
Silver	5800	0.41 U	0.51 U	0.46 U	3.0	0.50 U	0.42 U	0.43 U	0.43 U	0.44 U	0.39 U	0.42 U
Sodium	NS	520	490	290	500	430	130	130	98	340	510	280
Thallium	12	1.7 U	2.0 U	1.8 U	3.0 U	2.0 U	1.7 U	1.7 U	1.7 U	1.8 U	1.5 U	1.7 U
Vanadium	5,800	97	37	27	110	24	20	17	17	64	110	91
Zinc	350,000	140	26	31	1,400	33	30	29	15	60	65	41

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated valu
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lo
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-GB005-0001-01**	**BRC001-GB005-0612-01**	**BRC001-GB006-0001-01**	**BRC001-GB007-0106-01**	**BRC001-GB008-0001-01**	**BRC001-GB010-0106-01**	**BRC001-GB011-0001-01**	**BRC001-GB012-0001-01**	**BRC001-GB014-0106-01**	**BRC001-GB014-0612-01**	**BRC001-GB015-0001-01**
	Sample Date	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/14/2016	1/14/2016	1/15/2016	1/15/2016	1/15/2016
	Sample Depth	0-1	6-12	0-1	1-6	0-1	1-6	0-1	0-1	1-6	6-12	0-1
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	18,000	15,000	4,300	10,000	13,000	9,700	9,900	19,000	10,000	6,700	14,000
Antimony	470	100	5.0	14	1.7 U	24	6.6	56	16	1.8	1.7 U	18
Arsenic	300	38	8.5	19	5.2	7.2	9.8	22	4.4	9.6	9.5	4.5
Barium	220,000	55	92	24	26	16	33	20	33	38	11	18
Beryllium	2,300	0.57	0.87	0.53	0.54	0.52	0.61	0.56	0.69	0.63	0.55	0.52
Cadmium	980	25	0.91	0.61	0.27	0.50	1.3	0.46	1.5	0.50	0.25	2.0
Calcium	NS	40,000	73,000	260,000	170,000	99,000	160,000	150,000	35,000	190,000	250,000	79,000
Chromium	1,800,000	14	150	30	21	15	22	20	13	40	23	8.9
Cobalt	350	13	12	2.8	7.3	8.5	7.6	7.5	13	8.1	4.6	8.8
Copper	47,000	95	120	27	44	70	62	58	85	79	29	63
Iron	820,000	29,000	27,000	12,000	18,000	22,000	17,000	17,000	28,000 J	23,000	12,000	20,000
Lead	800	**8,100**	230	580	120	230	770	**2,100**	**830**	86	51	**900**
Magnesium	NS	9,900	4,200	2,400	5,300	6,400	5,100	5,200	9,500	4,000	3,500	6,700
Manganese	26,000	540	420	210	290	420	360	340	540	380	260	390
Nickel	22,000	30	24	9.2	13	11	11	18	15	17	6.7	9.7
Potassium	NS	240	400	470	270	330	300	210	670	180	130	250
Selenium	5,800	2.9	1.9 U	1.7 U	1.7 U	1.6 U	1.7 U	1.6 U	1.7 U	1.8 U	1.7 U	1.6 U
Silver	5800	0.39 U	0.48 U	0.42 U	0.42 U	0.39 U	0.42 U	0.39 U	0.42 U	0.45 U	0.42 U	0.40 U
Sodium	NS	510	840	91	270	230	290	210	360	280	170	250
Thallium	12	1.6 U	1.9 U	1.7 U	1.7 U	1.6 U	1.7 U	1.6 U	1.7 U	1.8 U	1.7 U	1.6 U
Vanadium	5,800	120	130	37	63	93	77	77	140	81	56	97
Zinc	350,000	130	230	33	31	38	47	48	93	120	27	40

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated valu
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-GB016-0106-01**	**BRC001-GB017-0001-01**	**BRC001-GB017-0612-01**	**BRC001-GB018-0106-01**	**BRC001-GB019-0001-01**	**BRC001-GB020-0001-01**	**BRC001-GB020-1218-01**	**BRC001-GB022-0612-01**	**BRC001-GB023-0001-01**	**BRC001-GB024-0106-01**	**BRC001-GB025-0612-01**
	Sample Date	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/15/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016
	Sample Depth	1-6	0-1	6-12	1-6	0-1	0-1	12-18	6-12	0-1	1-6	6-12
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	7,200	17,000	6,900	14,000	5,900	19,000	6,600	4,800	8,500	9,800	6,200
Antimony	470	4.1	16	3.0	33	14	45	1.7	2.7	21	4.1	9.2
Arsenic	300	12	5.4	12	7.0	62	14	11	15	12	3.7	11
Barium	220,000	48	32	17	43	13	47	41	9.9	52	29	28
Beryllium	2,300	0.59	0.69	0.58	0.62	0.54	0.35	0.67	0.55	0.54	0.62	0.56
Cadmium	980	0.54	1.9	0.34	2.1	0.50	6.8	0.36	0.25 U	3.4	0.40	0.88
Calcium	NS	190,000	61,000	210,000	47,000	260,000	33,000	240,000	300,000	220,000	160,000	230,000
Chromium	1,800,000	38	16	21	56	28	43	48	26	40	15	39
Cobalt	350	5.4	10	5.2	13	4.2	17	5.5	3.4	4.3	8.6	5.1
Copper	47,000	52	70	33	68	49	250	75	28	36	54	46
Iron	820,000	15,000	24,000	12,000	24,000	13,000	120,000	19,000	10,000	15,000	15,000	15,000
Lead	800	490	**1,300**	320	**1,800**	400	**2,600**	130	150	**2,000**	480	**1,700**
Magnesium	NS	2,600	8,500	4,100	15,000	3,000	9,500	2,600	3,300	3,200	5,700	3,900
Manganese	26,000	320	460	270	450	220	1,200	350	230	200	340	230
Nickel	22,000	12	18	8.9	84	7.9	70	14	7.4	13	17	18
Potassium	NS	740	350	210	300	200	270	230	160	950	260	240
Selenium	5,800	1.8 U	1.6 U	1.6 U	1.6 U	1.7 U	2.3	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U
Silver	5800	0.45 U	0.39 U	0.41 U	0.40 U	0.43 U	0.48	0.44 U	0.42 U	0.44 U	0.42 U	0.44 U
Sodium	NS	100	430	160	350	150	420	150	86	150	160	150
Thallium	12	1.8 U	1.6 U	1.6 U	1.6 U	1.7 U	1.6 U	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U
Vanadium	5,800	55	130	64	110	52	130	63	45	38	82	58
Zinc	350,000	100	55	22	53	28	130	67	20	64	37	71

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated valu
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-GB025-1218-01**	**BRC001-GB026-0001-01**	**BRC001-GB027-0001-01**	**BRC001-GB027-0612-01**	**BRC001-GB029-0612-01**	**BRC001-GB030-0001-01**	**BRC001-GB030-0612-01**	**BRC001-GB030-1824-01**	**BRC001-GB031-0001-01**	**BRC001-GB031-0612-01**	**BRC001-GB032-0001-01**
	Sample Date	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016
	Sample Depth	12-18	0-1	0-1	6-12	6-12	0-1	6-12	18-24	0-1	6-12	0-1
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	1,900	18,000	20,000	11,000	9,700	26,000	12,000	1,500	4,800	3,100	7,400
Antimony	470	1.7 U	16	8.6	1.6 U	1.6 U	84	10	1.7 U	33	2.9	20
Arsenic	300	11	3.2	3.7	7.2	12	18	11	3.2	22	18	5.6
Barium	220,000	8.6 U	19	22	12	12	50	22	8.3 U	28	9.7	36
Beryllium	2,300	0.46	0.55	0.63	0.59	0.60	0.73	0.61	0.40	0.53	0.52	0.44
Cadmium	980	0.26 U	0.98	1.1	0.31	0.25	19	2.1	0.25 U	1.6	0.26 U	1.3
Calcium	NS	330,000	36,000	26,000	210,000	250,000	49,000	190,000	350,000	270,000	310,000	23,000
Chromium	1,800,000	21	12	22	19	22	21	26	14	33	26	200
Cobalt	350	1.7 U	12	13	8.1	6.7	15	7.7	1.7 U	3.9	1.8	31
Copper	47,000	11	90	100	46	45	140	63	6.1	44	21	36
Iron	820,000	5,700	25,000	29,000	16,000	15,000	43,000	17,000	2,400	12,000	7,900	22,000
Lead	800	39	600	430	77	59	**7,500**	**830**	10	**2,600**	51	**1,200**
Magnesium	NS	1,800	9,300	9,900	5,300	4,800	12,000	4,800	2,000	2,400	2,000	51,000
Manganese	26,000	140	490	550	330	350	690	320	66	220	160	430
Nickel	22,000	4.8	14	28	8.9	7.6	22	11	3.7	12	6.7	510
Potassium	NS	58	200	280	140	250	400	270	74	440	140	380
Selenium	5,800	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.7 U	1.7 U	1.8 U	1.7 U	1.6 U
Silver	5800	0.43 U	0.39 U	0.40 U	0.41 U	0.41 U	0.41	0.43 U	0.41 U	0.44 U	0.43 U	0.41 U
Sodium	NS	86 U	370	500	320	290	580	940	83 U	100	87	230
Thallium	12	1.7 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 UL	1.7 U	1.7 U	1.8 U	1.7 U	1.6 U
Vanadium	5,800	24	120	140	77	70	150	79	13	47	37	88
Zinc	350,000	7.8	47	53	29	27	95 J	53	5.1	76	14	42

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram
(mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated valu
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-GB032-0106-01**	**BRC001-GB032-1218-01**	**BRC001-GB033-0001-01**	**BRC001-GB033-1218-01**	**BRC001-GB034-0106-01**	**BRC001-GB034-0612-01**	**BRC001-GB035-0106-01**	**BRC001-GB036-0001-01**	**BRC001-GB037-0001-01**	**BRC001-GB037-0106-01**	**BRC001-GB038-0001-01**
	Sample Date	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/16/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016
	Sample Depth	1-6	12-18	0-1	12-18	1-6	6-12	1-6	0-1	0-1	1-6	0-1
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	7,200	19,000	7,300	1,300	13,000	7,300	14,000	20,000	19,000	14,000	4,400
Antimony	470	18	1.9 U	33	1.8 U	13	5.3	3.6	7.9	3.1	1.7 U	6.7
Arsenic	300	13	6.2	8.1	3.2	8.2	13	5.8	3.9	3.3	5.4	17
Barium	220,000	40	110	50	8.9 U	41	37	25	25	25	19	23
Beryllium	2,300	0.52	0.82	0.49	0.40	0.58	0.59	0.65	0.79	0.72	0.64	0.58
Cadmium	980	1.2	0.54	1.3	0.27 U	0.77	0.38	0.49	0.91	0.54	0.26	0.59
Calcium	NS	130,000	120,000	85,000	340,000	120,000	230,000	120,000	50,000	37,000	120,000	250,000
Chromium	1,800,000	91	39	78	17	20	28	14	16	15	14	34
Cobalt	350	13	13	7.6	1.8 U	8.0	5.2	8.7	12	11	7.7	3.4
Copper	47,000	50	100	62	7.3	78	96	69	87	80	59	60
Iron	820,000	17,000	25,000	18,000	2,700	23,000	13,000	21,000	32,000	25,000	19,000	12,000
Lead	800	**1,800**	19	**3,100**	6.2	**1,000**	710	270	550	260	47	650
Magnesium	NS	19,000	5,100	7,100	1,800	5,600	3,000	6,700	10,000	9,000	6,400	2,500
Manganese	26,000	330	810	340	58	430	270	450	590	500	400	250
Nickel	22,000	180	19	61	5.2	13	11	9.8	13	13	9.7	12
Potassium	NS	350	640	370	54	600	320	270	320	280	230	600
Selenium	5,800	1.6 U	1.9 U	1.5 U	1.8 U	1.6 U	1.7 U	1.8 U	1.7 U	1.6 U	1.7 U	1.8 U
Silver	5800	0.41 U	0.46 U	0.38 U	0.45 U	0.40 U	0.42 U	0.45 U	0.42 U	0.39 U	0.42 U	0.46 U
Sodium	NS	210	330	290	130	210	110	240	400	490	370	92 U
Thallium	12	1.6 U	1.9 U	1.5 U	1.8 U	1.6 U	1.7 U	1.8 U	1.7 U	1.6 U	1.7 U	1.8 U
Vanadium	5,800	70	100	89	14	93	54	96	140	130	98	46
Zinc	350,000	47	75	44	7.4	64	80	42	59	90	36	54

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram
(mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated valu
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-GB039-0612-01**	**BRC001-GB040-0001-01**	**BRC001-GB041-0001-01**	**BRC001-GB042-0612-01**	**BRC001-GB043-0106-01**	**BRC001-GB044-0001-01**	**BRC001-GB045-0001-01**	**BRC001-GB046-0106-01**	**BRC001-SB001-0001-01**	**BRC001-SB002-0001-01**	**BRC001-SB003-0612-01**
	Sample Date	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/19/2016	1/11/2016	1/11/2016	1/11/2016
	Sample Depth	6-12	0-1	0-1	6-12	1-6	0-1	0-1	1-6	0-1	0-1	6-12
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	2,900	13,000	17,000	20,000	14,000	15,000	12,000	16,000	11,000	19,000	18,000
Antimony	470	4.2	1.7 U	62	69	72	440	220	50	33	16	24
Arsenic	300	19	4.0	14	13	12	54	41	15	15	9.9	13
Barium	220,000	11	130	76	140	130	140	120	100	75	140	150
Beryllium	2,300	0.50	0.80	0.71	0.86	0.79	0.73	0.60	0.63	0.59	0.79	0.74
Cadmium	980	0.26 U	0.82	13	19	42	190	92	16	5.3	1.5	1.5
Calcium	NS	280,000	51,000	140,000	14,000	35,000	36,000	29,000	32,000	180,000	76,000	120,000
Chromium	1,800,000	27	26	27	35	26	61	35	31	45	44	57
Cobalt	350	1.7	13	12	18	18	23	17	12	8.0	13	14
Copper	47,000	20	79	110	130	93	250	140	100	81	110	130
Iron	820,000	7,900	23,000	24,000	32,000	25,000	24,000	23,000	23,000	19,000	28,000	35,000
Lead	800	270	43	**2,500**	**2,200**	**2,600**	**33,000**	**18,000**	**3,000**	**2,700**	**1,300**	**3,800**
Magnesium	NS	2,400	3,700	7,300	5,800	4,800	5,400	4,300	4,800	3,600	4,700	4,800
Manganese	26,000	170	660	560	1,000	880	410	610	680	390	1,100	980
Nickel	22,000	8.0	14	33	48	90	360	170	49	20	20	30
Potassium	NS	190	1,600	890	1,000	1,000	2,000	1,600	2,200	1,300	1,700	550
Selenium	5,800	1.7 U	1.7 U	2.1	1.9 U	2.7	70	18	2.6	2.0 U	1.9 U	1.9 U
Silver	5800	0.43 U	0.43 U	0.50 U	0.48 U	0.44 U	1.5	0.73	0.65	0.49 U	0.48 U	0.48 U
Sodium	NS	85 U	130	260	250	320	260	330	450	170	170	220
Thallium	12	1.7 U	1.7 U	2.0 U	1.9 U	1.8 U	2.5 U	1.9 U	1.9 U	2.0 U	1.9 U	1.9 U
Vanadium	5,800	33	83	93	110	85	98	76	79	60	95	90
Zinc	350,000	17	97	140	140	180	920	450	160	130	89	89

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated valu
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-SB005-0001-01**	**BRC001-SB005-1218-01**	**BRC001-SB005-1824-01**	**BRC001-SB005-3642-01**	**BRC001-SB005A-6066-01**	**BRC001-SB005A-6672-01**	**BRC001-SB005A-7278-01**	**BRC001-SB006-0001-01**	**BRC001-SB006-1218-01**	**BRC001-SB007-0001-01**	**BRC001-SB008-0001-01**
	Sample Date	1/12/2016	1/12/2016	1/12/2016	1/12/2016	1/20/2016	1/20/2016	1/20/2016	1/12/2016	1/12/2016	1/12/2016	1/12/2016
	Sample Depth	0-1	12-18	18-24	36-42	60-66	66-72	72-78	0-1	12-18	0-1	0-1
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	5,300	5,300	17,000	15,000	6,800	9,700	29,000	2,800	6,000	26,000	6,700
Antimony	470	1.9 U	1.8 U	90	**860**	**500**	**500**	130	37	4.4	4.4	3.8
Arsenic	300	7.5	9.2	27	110	120	170	58	11	8.8	3.9	7.0
Barium	220,000	23	34	230	1,800	420	630	430	25	39	160	34
Beryllium	2,300	0.49	0.53	0.71	0.31 U	0.42	0.40	0.96	0.38	0.56	0.98	0.53
Cadmium	980	0.29 U	0.27 U	3.0	20	13	12	4.0	3.3	0.31	0.85	0.42
Calcium	NS	290,000	320,000	99,000	80,000	190,000	190,000	12,000	300,000	260,000	9,200	220,000
Chromium	1,800,000	30	28	57	190	120	130	59	25	32	42	34
Cobalt	350	1.9 U	1.9	12	9.9	7.9	12	20	3.2	3.4	18	3.2
Copper	47,000	8.6	8.6	170	1,500	480	560	430	26	31	140	21
Iron	820,000	11,000	12,000	35,000	200,000	66,000	87,000	57,000	8,000	14,000	38,000	15,000
Lead	800	58	160	**15,000**	**16,000**	**31,000**	**18,000**	**4,000**	**2,200**	280	310	420
Magnesium	NS	2,100	2,100	4,500	3,100	22,000	5,200	10,000	2,600	2,400	7,000	2,700
Manganese	26,000	89	110	740	960	560	700	1,200	150	210	960	180
Nickel	22,000	6.5	7.0	26	110	73	120	39	18	9.0	21	8.9
Potassium	NS	750	310	580	630	300	430	820	300	300	1,200	740
Selenium	5,800	1.9 U	1.8 U	1.8 U	43	9.0	13	8.8	1.8	1.8 U	2.2 U	1.9 U
Silver	5800	0.48 U	0.45 U	0.68	1.5	1.6	1.0	0.49 U	0.43 U	0.46 U	0.56 U	0.48 U
Sodium	NS	130	140	670	2,600	1,300	1,400	4,300	100	200	200	130
Thallium	12	1.9 U	1.8 U	1.8 U	2.1 U	1.9 U	1.8 U	2.0 U	1.7 U	1.8 U	2.2 U	1.9 U
Vanadium	5,800	20	20	88	45	47	45	110	18	34	120	26
Zinc	350,000	18	16	130	450	420	340	180	28	31	100	34

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated valu
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-SB008A-0001-01**	**BRC001-SB008A-2430-01**	**BRC001-SB009-0612-01**	**BRC001-SB009-3642-01**	**BRC001-SB010-0001-01**	**BRC001-SB010-0612-01**	**BRC001-SB011-0001-01**	**BRC001-SB011-1824-01**	**BRC001-SB012-0001-01**	**BRC001-SB012-1218-01**	**BRC001-SB013-0612-01**
	Sample Date	1/19/2016	1/19/2016	1/12/2016	1/12/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016
	Sample Depth	0-1	24-30	6-12	36-42	0-1	6-12	0-1	18-24	0-1	12-18	6-12
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	6,900	8,300	5,400	23,000	500	4,900	2,100	5,300	18,000	22,000	16,000
Antimony	470	2.3	270	1.9 U	3.2	46	7.4	140	17	26	1.9 U	11
Arsenic	300	7.4	47	6.4	3.7	17	5.5	27	13	11	4.2	12
Barium	220,000	27	110	33	170	27	32	49	41	110	160	110
Beryllium	2,300	0.50	0.55	0.49	0.93	0.39	0.49	0.36	0.53	0.74	0.86	0.77
Cadmium	980	0.27	6.2	0.28 U	1.1	1.4	0.37	9.1	1.4	2.6	0.76	0.79
Calcium	NS	260,000	220,000	270,000	9,800	320,000	270,000	290,000	270,000	67,000	37,000	110,000
Chromium	1,800,000	33	67	37	36	24	38	33	40	120	37	63
Cobalt	350	2.3	5.7	2.1	21	1.8 U	3.9	3.3	3.3	13	17	10
Copper	47,000	12	190	6.7	140	9.7	44	34	45	130	120	100
Iron	820,000	13,000	20,000	13,000	34,000	1,700	10,000	16,000	19,000	30,000	32,000	28,000
Lead	800	260	**29,000**	40	220	**10,000**	**1,300**	**8,100**	**1,400**	**2,100**	48	**1,300**
Magnesium	NS	2,500	2,900	2,500	6,300	1,700	2,200	1,900	2,200	4,900	5,600	4,000
Manganese	26,000	110	350	140	810	30	310	160	310	730	1,100	610
Nickel	22,000	8.1	32	7.6	21	3.8	7.6	29	12	22	17	16
Potassium	NS	620	340	410	1,100	94	260	130	300	1,300	630	520
Selenium	5,800	1.7 U	1.8 U	1.9 U	1.9 U	1.8 U	1.8 U	1.9 U	1.9 U	1.9 U	1.9 U	1.8 U
Silver	5800	0.43 U	1.2	0.46 U	0.48 U	0.52	0.45 U	0.47 U	0.46 U	0.48 U	0.48 U	0.45 U
Sodium	NS	140	1,300	260	1,200	89 U	310	150	320	160	420	2,200
Thallium	12	1.7 U	1.8 U	1.9 U	1.9 U	1.8 U	1.8 U	1.9 U	1.9 U	1.9 U	1.9 U	1.8 U
Vanadium	5,800	22	49	16	110	6.4	28	17	32	93	110	84
Zinc	350,000	24	110	15	110	16	37	50	45	110	82	73

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram
(mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated valu
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-SB013-2430-01**	**BRC001-SB013-4248-01**	**BRC001-SB014-0612-01**	**BRC001-SB015-1218-01**	**BRC001-SB015-1824-01**	**BRC001-SB016-0001-01**	**BRC001-SB016-1218-01**	**BRC001-SB017-0612-01**	**BRC001-SB018-0001-01**	**BRC001-SB018-2430-01**	**BRC001-SB019-0001-01**
	Sample Date	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016
	Sample Depth	24-30	42-48	6-12	12-18	18-24	0-1	12-18	6-12	0-1	24-30	0-1
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	8,000	30,000	4,800	5,700	5,700	2,900	5,000	16,000	6,100	15,000	4,800
Antimony	470	120	2.0 U	12	100	54	110	5.6	13	5.2	9.3	1.9
Arsenic	300	44	1.9	11	55	34	23	11	9.0	7.7	11	9.5
Barium	220,000	240	190	47	160	100	43	33	110	36	110	25
Beryllium	2,300	0.53	1.0	0.49	0.42	0.48	0.40	0.50	0.75	0.47	0.73	0.57
Cadmium	980	3.9	0.59	0.40	2.9	1.3	8.5	0.43	1.4	0.58	0.70	0.27
Calcium	NS	230,000	4,500	290,000	250,000	240,000	310,000	310,000	110,000	260,000	150,000	420,000
Chromium	1,800,000	59	37	30	51	48	26	29	45	36	42	33
Cobalt	350	6.5	20	2.5	7.6	3.7	3.2	2.3	12	2.2	11	1.7 U
Copper	47,000	210	160	29	220	110	36	17	110	16	100	8.0
Iron	820,000	30,000	36,000	14,000	59,000	19,000	13,000	12,000	25,000	14,000	24,000	11,000
Lead	800	**12,000**	11	**940**	**9,500**	**3,300**	**4,800**	440	**1,100**	490	630	100
Magnesium	NS	2,700	6,900	2,300	2,200	2,200	2,600	2,200	4,200	2,500	3,700	2,400
Manganese	26,000	490	1,700	150	370	200	150	160	810	120	710	79
Nickel	22,000	25	21	8.7	30	16	25	8.1	16	8.7	15	7.4
Potassium	NS	380	460	310	310	310	170	300	530	640	470	310
Selenium	5,800	4.1	2.0 U	1.8 U	5.7	2.2	1.9 U	1.9 U	1.8 U	1.7 UJ	1.8 U	1.7 U
Silver	5800	0.80	0.49 U	0.46 U	0.84	0.45 U	0.46 U	0.47 U	0.44 U	0.42 U	0.44 U	0.42 U
Sodium	NS	3,000	5,700	2,300	490	410	230	650	160	130	360	610
Thallium	12	1.8 U	2.0 U	1.8 U	1.8 U	1.8 U	1.9 U	1.9 U	1.8 U	1.7 UJ	1.8 U	1.7 U
Vanadium	5,800	45	110	23	32	34	24	21	81	20	75	19
Zinc	350,000	94	89	23	87	57	64	28	71	51	60	13

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram
(mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated valu
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-SB019-0612-01**	**BRC001-SB020-0001-01**	**BRC001-SB020-1218-01**	**BRC001-SB021-0001-01**	**BRC001-SB022-0612-01**	**BRC001-SB023-0001-01**	**BRC001-SB024-0001-01**	**BRC001-SB024-0001-02**	**BRC001-SB024-1824-01**	**BRC001-SB025-0001-01**	**BRC001-SB025-0001-02**
	Sample Date	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/13/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016
	Sample Depth	6-12	0-1	12-18	0-1	6-12	0-1	0-1	0-1	18-24	0-1	0-1
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	4,500	1,200	4,000	8,700	12,000	7,700	2,800	2,800	6,300	1,000	1,100
Antimony	470	4.3	21	100	73	36	22	34	35	9.9	9.7	10
Arsenic	300	8.6	7.5	38	16	15	11	11	11	14	7.1	7.2
Barium	220,000	28	18	330	39	76	49	22	22	28	11	11
Beryllium	2,300	0.48	0.36	0.32	0.43	0.72	0.52	0.37	0.36	0.53	0.37	0.37
Cadmium	980	0.27 U	1.6	3.3	9.1	1.4	3.4	1.3	1.3	0.59	0.72	0.69
Calcium	NS	320,000	350,000	190,000	220,000	180,000	200,000	320,000	310,000	260,000	340,000	370,000
Chromium	1,800,000	24	24	32	97	59	110	23	22	42	21	21
Cobalt	350	1.8 U	1.7 U	3.9	11	9.0	4.9	1.7 U	1.7 U	4.3	1.7 U	1.7 U
Copper	47,000	13	8.7	180	62	90	40	22	20	46	4.8	5.9
Iron	820,000	10,000	3,200	30,000	27,000	22,000	15,000	9,600	7,900	17,000	3,200	3,600
Lead	800	250	**1,300**	**8,900**	**5,100**	**2,200**	**2,100**	**1,100**	**1,300**	520	**920**	**1,100**
Magnesium	NS	2,000	1,800	1,800	7,800	3,200	3,100	1,700	1,700	2,000	1,400	1,400
Manganese	26,000	89	47	190	360	510	210	93	85	330	26	26
Nickel	22,000	6.2	4.9	15	70	16	46	7.4	6.7	11	3.0	3.2
Potassium	NS	240	140	270	220	510	870	430	450	210	76	75
Selenium	5,800	1.8 U	1.7 U	6.8	1.8 U	1.8 U	1.8 U	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U
Silver	5800	0.44 U	0.43 U	0.85	0.44 U	0.45 U	0.45 U	0.42 U	0.42 U	0.44 U	0.42 U	0.43 U
Sodium	NS	1,500	290	860	670	400	130	130	130	120	690	630
Thallium	12	1.8 U	1.7 U	1.7 U	1.8 U	1.8 U	1.8 U	1.7 U	1.7 U	1.8 U	1.7 U	1.7 U
Vanadium	5,800	18	7.4	27	56	72	37	14	13	44	7.8	8.2
Zinc	350,000	13	57	80	55	79	56	220	200	33	7.2	7.4

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram
(mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
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U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-SB025-1824-01**	**BRC001-SB026-0001-01**	**BRC001-SB027-0001-01**	**BRC001-SB027-0001-02**	**BRC001-SB028-0001-01**	**BRC001-SB028-0612-01**	**BRC001-SB028-3036-01**	**BRC001-SB029-0612-01**	**BRC001-SB030-0001-01**	**BRC001-SB030-0612-01**	**BRC001-SB031-0001-01**
	Sample Date	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016	1/14/2016
	Sample Depth	18-24	0-1	0-1	0-1	0-1	6-12	30-36	6-12	0-1	6-12	0-1
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	5,700	11,000	11,000	8,100	4,100	8,100	27,000	14,000	5,000	22,000	2,500
Antimony	470	17	460	**560**	56	180	18	1.9 U	64	12	7.3	120
Arsenic	300	13	150	150	26	76	12	1.8 L	18	10	6.0	12
Barium	220,000	40	250	270	65	88	53	170	83	33	150	15
Beryllium	2,300	0.47	0.48	0.52	0.53	0.40	0.54	0.92	0.63	0.49	0.86	0.42
Cadmium	980	0.72	24	66	7.3	13	2.0	0.53	2.7	0.97	0.98	1.2
Calcium	NS	260,000	29,000	150,000	250,000	300,000	250,000	6,500	190,000	280,000	38,000	330,000
Chromium	1,800,000	74	98	37	36	25	39	37	61	28	40	23
Cobalt	350	2.8	6.8	8.5	3.3	3.5	4.9	15	7.6	1.9	16	1.7 U
Copper	47,000	45	150	160	26	75	39	140	77	12	120	13
Iron	820,000	19,000	51,000	24,000	18,000	9,700	15,000	35,000	25,000	12,000	32,000	5,900
Lead	800	**1,500**	**29,000**	**43,000**	**3,300**	**7,600**	**1,200**	32	**6,600**	580	**820**	**2,500**
Magnesium	NS	2,300	2,600	4,700	3,100	2,300	2,700	6,800	3,600	2,100	5,400	2,000
Manganese	26,000	170	280	270	160	99	330	920	500	96	800	68
Nickel	22,000	14	46	65	16	19	11	19	17	7.4	18	15
Potassium	NS	400	290	380	610	190	450	450	630	370	640	130
Selenium	5,800	1.8 U	5.8	21	6.8	3.2	1.8 U	1.9 U	1.9 U	1.8 U	1.8 U	1.7 U
Silver	5800	0.45 U	1.1	1.8	0.49 U	0.43 U	0.45 U	0.48 U	0.49	0.45 U	0.45 U	0.42 U
Sodium	NS	420	440	590	380	140	210	600	270	130	560	110
Thallium	12	1.8 U	2.0 U	2.0 U	2.0 U	1.7 U	1.8 U	1.9 UJ	1.9 U	1.8 U	1.8 U	1.7 U
Vanadium	5,800	20	110	69	30	30	35	110	54	17	99	17
Zinc	350,000	37	180	310	47	96	40	79	71	20	83	13

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram
(mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
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U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-SB031-0001-02**	**BRC001-SB032-0001-01**	**BRC001-SB032-0612-01**	**BRC001-SB033-0001-01**	**BRC001-SB033-1218-01**	**BRC001-SB036-0001-01**	**BRC001-SB037-0612-01**	**BRC001-SB038-0001-01**	**BRC001-SB040-0001-01**	**BRC001-SB041-0001-01**	**BRC001-SB042-0001-01**
	Sample Date	1/14/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016
	Sample Depth	0-1	0-1	6-12	0-1	12-18	0-1	6-12	0-1	0-1	0-1	0-1
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	2,500	20,000	2,800	1,300	2,500	3,900	5,300	12,000	17,000	9,500	12,000
Antimony	470	21	**790**	11	5.1	2.8	69	17	48	23	9.5	16
Arsenic	300	12	190	4.9	4.6	7.4	42	9.7	20	10	24	15
Barium	220,000	16	330	14	9.7	14	33	40	82	110	38	57
Beryllium	2,300	0.42	0.71	0.43	0.39	0.46	0.48	0.61	0.78	0.81	0.88	0.77
Cadmium	980	1.3	34	1.8	0.64	0.54	11	0.67	3.8	3.4	0.74	0.99
Calcium	NS	320,000	40,000	310,000	330,000	320,000	250,000	230,000	140,000	68,000	190,000	160,000
Chromium	1,800,000	23	62	19	20	23	27	27	49	34	58	44
Cobalt	350	1.6 U	15	2.0	1.8 U	1.7	2.6	4.8	7.7	11	5.6	7.7
Copper	47,000	11	260	15	5.8	11	26	41	70	91	41	57
Iron	820,000	5,700	49,000	4,700	2,900	5,400	9,700	11,000	23,000	24,000	25,000	21,000
Lead	800	**1,100**	**33,000**	**860**	500	300	**7,200**	**2,000**	**3,700**	**2,400**	**820**	**1,700**
Magnesium	NS	1,700	9,900	2,100	1,400	1,700	1,900	2,400	2,900	4,100	2,600	2,900
Manganese	26,000	63	530	77	48	110	140	210	290	660	260	340
Nickel	22,000	4.7	71	4.5	3.3	4.3	12	9.9	24	17	18	15
Potassium	NS	120	560	86	140	130	230	240	640	1,300	990	1,000
Selenium	5,800	1.6 U	9.8	1.8 U	1.8 U	1.7 U	6.5	1.7 U	1.8 U	1.9 U	1.9 U	1.8 U
Silver	5800	0.41 U	1.1	0.44 U	0.45 U	0.42 U	0.43 U	0.42 U	0.45 U	0.48 U	0.48 U	0.46 U
Sodium	NS	100	930	130	350	120	130	100	220	160	130	120
Thallium	12	1.6 U	1.7 U	1.8 U	1.8 U	1.7 U	1.7 U	1.7 U	1.8 U	1.9 U	1.9 U	1.8 U
Vanadium	5,800	19	130	20	10	22	31	71	78	83	86	71
Zinc	350,000	14	470	15	8.9	18	54	30	77	90	79	96

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated valu
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-SB042-0001-02**	**BRC001-SB042-0612-01**	**BRC001-SB044-0612-01**	**BRC001-SB045-0001-01**	**BRC001-SB046-0001-01**	**BRC001-SB048-0001-01**	**BRC001-SB048-1824-01**	**BRC001-SB049-0612-01**	**BRC001-SB049-1218-01**	**BRC001-SB051-0001-01**	**BRC001-SB051-1218-01**
	Sample Date	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/19/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
	Sample Depth	0-1	6-12	6-12	0-1	0-1	0-1	18-24	6-12	12-18	0-1	12-18
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	11,000	7,800	8,400	10,000	17,000	12,000	27,000	15,000	20,000	15,000	30,000
Antimony	470	17	2.3	24	3.4	9.6	14	1.9	25	4.2	74	2.0 U
Arsenic	300	15	26	18	5.3	22	11	3.2	9.4	5.6	20 L	2.3
Barium	220,000	54	25	32	67	110	110	150	78	110	87	170
Beryllium	2,300	0.71	0.93	0.71	0.55	0.72	0.81	1.0	0.71	0.89	0.88	1.1
Cadmium	980	0.96	0.39	0.76	1.0	2.7	2.9	0.85	1.4	0.89	4.6	1.2
Calcium	NS	180,000	240,000	250,000	140,000	36,000	130,000	18,000	110,000	76,000	160,000	6,900
Chromium	1,800,000	40	57	41	24	57	33	34	39	39	49	37
Cobalt	350	7.1	3.9	4.8	7.3	11	9.2	18	9.2	13	9.2	20
Copper	47,000	54	16	36	56	140	58	130	88	100	140	140
Iron	820,000	20,000	22,000	17,000	18,000	24,000	21,000	34,000	27,000	29,000	26,000	34,000
Lead	800	**1,600**	170	**1,700**	280 J	790	**1,200**	400	**14,000**	350	**13,000**	110
Magnesium	NS	2,900	2,100	2,500	3,400	4,500	3,300	6,400	3,700	4,800	4,300	6,600
Manganese	26,000	380	200	230	520	760	480	1,300	530	810	510	1,400
Nickel	22,000	14	13	12	9.7 J	25	16	19	16	16	31	23
Potassium	NS	910	260	290	1,100	1,600	1,700	840	890	620	990	810
Selenium	5,800	2.0 U	1.8 U	1.8 U	2.0 U	1.8 U	1.9 U	1.9 U	1.9 U	1.9 U	2.1 U	2.0 U
Silver	5800	0.50 U	0.46 U	0.46 U	0.49 U	2.8	0.47 U	0.59	1.3	0.49 U	0.91	0.69
Sodium	NS	110	120	200	130	300	190	800	180	210	160	240
Thallium	12	2.0 U	1.8 U	1.8 U	2.0 UJ	1.8 U	1.9 U	1.9 U	1.9 U	1.9 U	2.1 UJ	2.0 U
Vanadium	5,800	66	72	61	52	75	63	100	72	87	100	110
Zinc	350,000	92	28	52	60	200	71	100	120	99	330	110

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram
(mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated valu
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-SB052-0001-01**	**BRC001-SB052-0001-02**	**BRC001-SB053-0001-01**	**BRC001-SB054-0001-01**	**BRC001-SB055-0612-01**	**BRC001-SB056-0001-01**	**BRC001-SB057-0612-01**	**BRC001-SB058-0001-01**	**BRC001-SB060-0001-01**	**BRC001-SB060-1218-01**	**BRC001-SB061-0001-01**
	Sample Date	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016	1/20/2016
	Sample Depth	0-1	0-1	0-1	0-1	6-12	0-1	6-12	0-1	0-1	12-18	0-1
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	14,000	14,000	25,000	17,000	22,000	15,000	12,000	7,000	8,500	11,000	7,200
Antimony	470	57	48	8.8	5.8	1.8 U	7.4	3.6	7.7	**3,200**	41	**2,900**
Arsenic	300	14	14	4.5	7.1	2.5	8.0	6.0	12	**730**	37	**750**
Barium	220,000	78	79	150	87	140	67	71	30	840	100	700
Beryllium	2,300	0.75	0.76	0.99	0.76	0.88	0.72	0.68	0.61	0.29 U	0.63	0.27 U
Cadmium	980	2.4	2.3	1.1	1.2	0.84	0.96	0.64	0.75	81	1.8	67
Calcium	NS	130,000	130,000	22,000	74,000	8,800	120,000	150,000	260,000	100,000	71,000	58,000
Chromium	1,800,000	790	49	41	32	30	34	28	40	490	340	480
Cobalt	350	10	8.7	15	10	15	8.3	7.6	2.6	22	5.3	25
Copper	47,000	110	100	120	84	100	69	65	19	1,100	250	600
Iron	820,000	28,000	26,000	33,000	25,000	30,000	22,000	19,000	19,000	180,000	42,000	140,000
Lead	800	**5,300**	**5,500**	**890**	560	98	460	310	**860**	**79,000**	**2,800**	**80,000**
Magnesium	NS	3,900	4,000	6,000	4,200	5,400	3,600	3,100	2,600	3,500	2,500	5,800
Manganese	26,000	510	530	930	630	1,000	490	530	160	800	440	710
Nickel	22,000	500	23	20	14	15	13	11	10	250	30	390
Potassium	NS	800	800	900	1,300	940	1,300	700	850	420	460	420
Selenium	5,800	1.8 U	1.8 U	1.9 U	1.9 U	1.8 U	1.8 U	1.9 U	1.9 U	37	3.1	32
Silver	5800	0.56	0.59	0.50	0.47 U	0.50	0.45 U	0.47 U	0.46 U	3.0	0.47 U	4.5
Sodium	NS	170	170	300	160	280	190	200	160	6,300	740	5,300
Thallium	12	1.8 U	1.8 U	1.9 U	1.9 U	1.8 U	1.8 U	1.9 U	1.9 U	1.9 U	1.9 U	1.8 U
Vanadium	5,800	82	80	110	77	95	69	66	36	44	95	48
Zinc	350,000	130	130	100	110	87	82	59	30	630	330	530

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram
(mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated valu
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1D: On-Site Soil and Slag Pile Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 11 through 22, 2016

	RST 3 Sample Number	**BRC001-SB061-0612-01**	**PRBR-005SW-003**	**PRBR-006SW-002**	**PRBR-008SW-001**	**PRBR-009SW-001**	**PRBR-010SW-001**	**PRBR-011SW-001**	**PRBR-012SW-001**	**PRBR-013SW-001**	**PRBR-014SW-001**
	Sample Date	1/20/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016
	Sample Depth	6-12	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18
TAL Metal (mg/kg)	**EPA RML[1]**										
Aluminum	1,100,000	6,400	3,788	2,983	4,537	3,133	3,870	2,336	3,853	3,354	4,667
Antimony	470	**480**	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Arsenic	300	240	**493**	**543**	258	267	**372**	278	**446**	**680**	25 U
Barium	220,000	170	159	146	145	173	180	78.2	126	141	572
Beryllium	2,300	0.53	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U
Cadmium	980	9.4	75	68	87	76.7	48.3	43.2	79.4	72.8	395
Calcium	NS	230,000	19,795	6,880	24,630	30,418	25,230	11,796	9,554	13,965	34,055
Chromium	1,800,000	140	395	339	514	332	959	295	313	267	197
Cobalt	350	6.9	24.5	29.5	27.5	24.8	29.2	11.7	19.1	20.8	12.4
Copper	47,000	200	883	1,071	3,724	1,408	2,551	453	813	989	776
Iron	820,000	29,000	220,550	242,100	206,150	207,282	246,316	136,796	252,402	237,624	84,627
Lead	800	**28,000**	**47,930**	**48,635**	**89,150**	**63,010**	**46,105**	**18,903**	**41,402**	**52,921**	**100,299**
Magnesium	NS	3,600	2,647	1,463	2,264	1,226	3,265	3,628	3,263	1,587	2,953
Manganese	26,000	330	818	821	805	753	1,007	504	900	819	476
Nickel	22,000	97	213	408	322	261	209	91.3	114	147	159
Potassium	NS	410	383	481	491	438	343	251	414	399	394
Selenium	5,800	3.4	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Silver	5800	1.5	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Sodium	NS	1,500	84,600	115,100	97,050	90,194	69,234	174,515	86,275	85,990	31,597
Thallium	12	1.8 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Vanadium	5,800	37	20	17.5	34	23.8	24.9	12.6	22.6	21.3	51.2
Zinc	350,000	98	889	639	1,230	984	1,039	499	558	721	1,137

Notes:
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased low
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1E: Area Adjacent to the Eastern Portion of the Site Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 22 through 25, 2016

	RST 3 Sample Number	**BRC001-SBD001-1218-01**	**BRC001-SBD004-0612-01**	**BRC001-SBD004-1218-01**	**BRC001-SBD005-2430-01**	**BRC001-SBD006-0001-01**	**BRC001-SBD007-1218-01**	**BRC001-SBD007-1824-01**	**BRC001-SBD009-1218-01**	**BRC001-SBD010-0001-01**	**BRC001-SBD010-0106-01**	**BRC001-SBD011-0612-01**
	Sample Date	1/22/2016	1/22/2016	1/22/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016	1/25/2016
	Sample Depth	12-18	6-12	12-18	24-30	0-1	12-18	18-24	12-18	0-1	1-6	6-12
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	77,000	29,000	9,900	15,000	14,000	18,000	16,000	15,000	15,000	20,000	30,000	17,000
Antimony	31	2.0 U	28	14	10	**870**	29	25	1.8 U	**1,400**	7.1	7.9
Arsenic	35	2.7 L	19	10	13	**230**	16	15	2.7	**670**	4.5	6.2
Barium	15,000	210	97	150	95	380	99	90	200	350	230	190
Beryllium	160	1.1	0.78	0.91	0.87	0.89	0.87	0.81	1.2	0.93	1.1	0.97
Cadmium	71	0.95	2.6	1.8	1.5	**190**	2.1	1.9	0.55	**110**	2.0	0.93
Calcium	NS	4,800	150,000	97,000	140,000	55,000	130,000	130,000	4,100	40,000	5,200	34,000
Chromium	NS	36 J	44	38	73	93	88	80	29	97	39	35
Cobalt	23	19	10	14	9.7	**24**	10	9.6	22	17	16	16
Copper	3,100	150	87	91	97	330	120	110	69	300	140	94
Iron	55,000	35,000 J	31,000	27,000	23,000	37,000	24,000	22,000	26,000	**66,000**	33,000	25,000
Lead	400	15 J	**6,200**	**3,200**	**1,100**	**50,000**	**2,800**	**2,300**	9.3	**73,000**	380	**600**
Magnesium	NS	6,900	2,900	3,600	3,700	5,100	3,800	3,800	2,800	4,900	6,500	3,600
Manganese	1,800	1,200	530	760	520	350	520	470	950	340	800	740
Nickel	1,500	22	22	19	20	260	20	19	16	230	23	17
Potassium	NS	480 J	780	1,100	920	840	830	890	430	730	520	950
Selenium	390	2.0 UL	1.9 U	2.0 U	1.9 U	51	1.9 U	1.9 U	1.8 U	58	1.9 U	1.9 U
Silver	390	0.59	0.54	0.52	0.47 U	2.3	0.47	0.47 U	0.44 U	1.7	0.48 U	0.48 U
Sodium	NS	920	130	150	180	440	160	160	250	880	570	190
Thallium	0.78	2.0 U	1.9 U	2.0 U	1.9 U	2.9 U	1.9 U	1.9 U	1.8 U	2.8 U	1.9 U	1.9 U
Vanadium	390	110	87	95	95	110	91	85	110	130	110	90
Zinc	23,000	98	140	130	130	810	140	130	47	890	100	72

Notes:
[1]EPA Removal Management Levels (RML) for Residential Soil for 10-4 Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015.
Soil sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detected
L - Indicates the reported value may be biased low
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1F: Validated Analytical Results Summary Table - TCLP Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 22, 2016

	RST 3 Sample Number	**PRBR-005SW-003**	**PRBR-006SW-002**	**PRBR-008SW-001**	**PRBR-009SW-001**	**PRBR-010SW-001**	**PRBR-011SW-001**	**PRBR-012SW-001**
	Sample Date	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016
	Sample Type	**Bunker Slag**	**Crushing Slag**	**Crushing Slag**	**Crushing Slag**	**Crushing Slag**	**Crystallization Slag**	**Bunker Slag**
	Sample Depth	12-18	12-18	12-18	12-18	12-18	12-18	12-18
TCLP Metal (mg/L)	**EPA TCLP MCC[1]**							
Arsenic	5.0	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Barium	100	0.200	0.05 U	2.22	0.850	0.740	0.05 U	0.05 U
Cadmium	1.0	0.509	0.005 U	**6.70**	0.678	0.166	0.363	**4.73**
Chromium	5.0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U
Lead	5.0	**38.3**	0.090	**228**	**93.5**	**9.24**	**19.5**	**28.9**
Mercury	0.2	0.0003	0.002 U	0.0006	0.0008	0.0002 U	0.0002 U	0.0002 U
Selenium	1.0	0.30 U	0.41	0.30 U	0.30 U	0.37	0.30 U	0.30 U
Silver	5.0	0.02 U	0.02 U	0.02 U	0.076	0.02 U	0.02 U	0.02 U

Notes:
[1]EPA Toxicity Characteristic Leaching Procedure (TCLP) Maximum Concentration of Contaminants (MCC) for the Toxicity Characteristic obtained from Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter I, Part 261, Published July 2011.
Analytical results and EPA TCLP MCCs are presented in milligrams per liter (mg/L).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
U - Indicates the analyte was analyzed for but not detected
Values bolded and highlighted in yellow equal or exceed the respective TCLP MCC.

Table 1F: Validated Analytical Results Summary Table - TCLP Metals
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 22, 2016

	RST 3 Sample Number	**PRBR-013SW-001**	**PRBR-014SW-001**
	Sample Date	1/22/2016	1/22/2016
	Sample Type	**Bunker Slag**	**Dry Sludge**
	Sample Depth	12-18	12-18
TCLP Metal (mg/L)	**EPA TCLP MCC[1]**		
Arsenic	5.0	0.1 U	0.1 U
Barium	100	0.05 U	0.05 U
Cadmium	1.0	**1.76**	**4.73**
Chromium	5.0	0.05 U	0.05 U
Lead	5.0	**18.5**	**91.0**
Mercury	0.2	0.0002 U	0.0002 U
Selenium	1.0	0.30 U	0.30 U
Silver	5.0	0.02 U	0.02 U

Notes:
[1]EPA Toxicity Characteristic Leaching Procedure (TCLP) Maximum Concentration of Contaminants (MCC) for the Toxicity Characteristic obtained from Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter I, Part 261, Published July 2011.
Analytical results and EPA TCLP MCCs are presented in milligrams per liter (mg/L).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
U - Indicates the analyte was analyzed for but not detected
Values bolded and highlighted in yellow equal or exceed the respective TCLP MCC.

Table 1G: Validated Analytical Results Summary Table - TCL VOCs
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 18 and 20, 2016

RST 3 Sample No.	EPA Removal Management Levels (Industrial Soil)[1]	BRC001-GB025-7284-01	BRC001-GB025-96108-01	BRC001-GB025-96108-02	BRC001-GB032-108120-01	BRC001-SB014-3648-01	BRC001-SB014-6072-01	BRC001-SB014-108120-01	BRC001-SB019-108120-01	BRC001-AB001-3040-01	BRC001-AB014-4658-01
CLP Sample No.		BC9J1	BC9J2	BC9J3	BC9J4	BC9J6	BC9J7	BC9J5	BC9J8	BC9K0	BC9K2
Sample Date		1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/20/2016	1/20/2016
Sample Matrix		72-84	96-108	96-108	108-120	36-48	60-72	108-120	108-120	30-40	46-58
VOC (µg/kg)											
Dichlorodifluoromethane	370,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Chloromethane	460,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Vinyl chloride	170,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Bromomethane	30,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Chloroethane	57,000,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Trichlorofluoromethane	350,000,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
1,1-Dichloroethene	1,000,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
1,1,2-Trichloro-1,2,2-trifluoroethane	170,000,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Acetone	670,000,000	15 U	14 U	13 U	12 U	10 U	11 U	12 U	7300 U	12 U	10 U
Carbon disulfide	3,500,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Methyl Acetate	1,200,000,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Methylene chloride	3,200,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
trans-1,2-Dichloroethene	23,000,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Methyl tert-butyl Ether	21,000,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
1,1-Dichloroethane	1,600,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
cis-1,2-Dichloroethene	2,300,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
2-Butanone	190,000,000	15 U	14 U	13 U	12 U	10 U	11 U	12 U	7300 U	12 U	10 U
Bromochloromethane	630,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Chloroform	140,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
1,1,1-Trichloroethane	36,000,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Cyclohexane	27,000,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Carbon tetrachloride	290,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Benzene	420,000	**6.4 J**	**7.0**	**9.2**	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
1,2-Dichloroethane	140,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Trichloroethene	19,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Methylcyclohexane	NS	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
1,2-Dichloropropane	66,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Bromodichloromethane	130,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
cis-1,3-Dichloropropene	NS*	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
4-Methyl-2-pentanone	140,000,000	15 U	14 U	13 U	12 U	10 U	11 U	12 U	7300 U	12 U	10 U
Toluene	47,000,000	**3.8 J**	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
trans-1,3-Dichloropropene	NS*	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
1,1,2-Trichloroethane	6,300	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Tetrachloroethene	390,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
2-Hexanone	1,300,000	15 U	14 U	13 U	12 U	10 U	11 U	12 U	7300 U	12 U	10 U
Dibromochloromethane	3,900,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
1,2-Dibromoethane	16,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Chlorobenzene	1,300,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Ethylbenzene	2,500,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
o-xylene	2,800,000	**5.7 J**	6.8 U	6.7 U	5.9 U	**37**	5.3 U	**940 J**	**1,800,000**	6.2 U	5.2 U
m,p-Xylene (Total Xylenes)	2,500,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	**21**	**12,000**	6.2 U	5.2 U
Styrene	35,000,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Bromoform	8,600,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 UJ	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
Isopropylbenzene	9,900,000	7.3 U	6.8 U	6.7 U	5.9 U	**220**	**180**	**470**	**14,000**	6.2 U	5.2 U
1,1,2,2-Tetrachloroethane	270,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 U	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
1,3-Dichlorobenzene	NS	7.3 U	6.8 U	6.7 U	5.9 U	5.1 UJ	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
1,4-Dichlorobenzene	1,100,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 UJ	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
1,2-Dichlorobenzene	9,300,000	7.3 U	3.3 J	3.4 J	5.9 U	5.1 UJ	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
1,2-Dibromo-3-chloropropane	6,400	7.3 U	6.8 U	6.7 U	5.9 U	5.1 UJ	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
1,2,4-trichlorobenzene	260,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 UJ	5.3 U	5.8 U	3700 U	6.2 U	5.2 U
1,2,3-Trichlorobenzene	930,000	7.3 U	6.8 U	6.7 U	5.9 U	5.1 UJ	5.3 U	5.8 U	3700 U	6.2 U	5.2 U

Notes:
VOCs - Volatile Organic Compounds.
RST 3 - Removal Support Team 3.
CLP - Contract Laboratory Program.
NS - Not specified.
U - Indicates the analyte was not detected.
J - Indicates an estimated value.
*EPA RML for 1,3 Dichloropropene is 310,000
[1] U.S. Environmental Protection Agency (EPA) Removal Management Levels (RMLs) for industrial soil corresponds to a 10^{-4} risk level for carcinogens or a Hazard Quotient (HQ) of 1 for non-carcinogens, May 2016.
All soil analytical result values and EPA RMLs are presented in micrograms per kilogram (µg/kg).
Detected concentrations are in bold font.

Table 1H: Validated Analytical Results Summary Table - TCL SVOCs
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 18 and 20, 2016

RST 3 Sample ID	EPA Removal Management Levels (Industrial Soil)[1]	BRC001-GB025-7284-01	BRC001-GB025-96108-01	BRC001-GB025-96108-02	BRC001-GB032-108120-01	BRC001-SB014-3648-01	BRC001-SB014-6072-01	BRC001-SB014-108120-01	BRC001-SB019-108120-01	BRC001-AB001-3040-01	BRC001-AB014-4658-01
CLP Number		BC9J1	BC9J2	BC9J3	BC9J4	BC9J6	BC9J7	BC9J5	BC9J8	BC9K0	BC9K2
Sample Date		1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/20/2016	1/20/2016
Sample Matrix		72-84	96-108	96-108	108-120	36-48	60-72	108-120	108-120	30-40	46-58
SVOCs (µg/kg)											
1,4-Dioxane	2,400,000	30000 U	89 UJ	91 UJ	89 U	76 U	85 UJ	87 U	87 U	89 U	84 UJ
Benzaldehyde	120,000,000	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
Phenol	250,000,000	150000 U	440 U	450 U	**66 J**	380 U	420 U	430 U	430 U	440 U	410 U
Bis(2-Chloroethyl)ether	100,000	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
2-Chlorophenol	5,800,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
2-Methylphenol	41,000,000	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
2,2-oxybis(1-Chloropropane)	47,000,000	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
Acetophenone	120,000,000	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
4-Methylphenol	82,000,000	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
N-Nitroso-di-n-propylamine	33,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Hexachloroethane	460,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Nitrobenzene	1,300,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Isophorone	160,000,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
2-Nitrophenol	NS	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
2,4-Dimethylphenol	16,000,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Bis(2-Chloroethoxy)methane	2,500,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
2,4-Dichlorophenol	2,500,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Naphthalene	590,000	75000 U	**120 J**	**96 J**	230 U	190 U	220 U	220 U	220 U	230 U	210 U
4-Chloroaniline	1,100,000	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
Hexachlorobutadiene	530,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Caprolactam	400,000,000	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
4-Chloro-3-methylphenol	82,000,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
2-Methylnaphthalene	3,000,000	75000 U	**45 J**	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Hexachlorocyclopentadiene	7,500	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
2,4,6-Trichlorophenol	820,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
2,4,5-Trichlorophenol	82,000,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
1,1-Biphenyl	200,000	**4,300,000**	**78,000**	**76,000**	**130 J**	190 U	220 U	220 U	**83 J**	230 U	210 U
2-Chloronaphthalene	60,000,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
2-Nitroaniline	8,000,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Dimethylphthalate	NS	75000 U	**140 J**	**180 J**	**260**	**240**	**200 J**	**430**	**260**	**190 J**	**140 J**
2,6-Dinitrotoluene	150,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Acenaphthylene	NS	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
3-Nitroaniline	NS	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
Acenaphthene	45,000,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	**45 J**	210 U
2,4-Dinitrophenol	1,600,000	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
4-Nitrophenol	NS	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
Dibenzofuran	1,000,000	**57,000 J**	**820**	**750**	**270**	190 U	220 U	220 U	220 U	230 U	210 U
2,4-Dinitrotoluene	740,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Diethylphthalate	660,000,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Fluorene	30,000,000	75000 U	**62 J**	**56 J**	230 U	**63 J**	220 U	220 U	220 U	230 U	210 U
4-Chlorophenyl-phenylether	NS	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
4-Nitroaniline	3,300,000	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
4,6-Dinitro-2-methylphenol	66,000	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
N-Nitrosodiphenylamine	47,000,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
1,2,4,5-Tetrachlorobenzene	350,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
4-Bromophenyl-phenylether	NS	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Hexachlorobenzene	96,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Atrazine	1,000,000	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
Pentachlorophenol	400,000	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
Phenanthrene	NS	**23,000 J**	**190 J**	**150 J**	230 U	190 U	220 U	220 U	220 U	**230**	210 U
Anthracene	230,000,000	75000 U	**510**	**470**	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Carbazole	NS	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
Di-n-butylphthalate	82,000,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Fluoranthene	30,000,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	**130 J**	210 U
Pyrene	23,000,000	75000 U	**83 J**	**72 J**	230 U	190 U	220 U	220 U	220 U	**130 J**	210 U
Butylbenzylphthalate	120,000,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
3,3-Dichlorobenzidine	510,000	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
Benzo(a)anthracene	290,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Chrysene	29,000,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Bis(2-ethylhexyl)phthalate	16,000,000	**23,000 J**	**210 J**	**150 J**	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Di-n-octyl phthalate	8,200,000	150000 U	440 U	450 U	440 U	380 U	420 U	430 U	430 U	440 U	410 U
Benzo(b)fluoranthene	290,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Benzo(k)fluoranthene	2,900,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Benzo(a)pyrene	29,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Indeno(1,2,3-cd)pyrene	290,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Dibenzo(a,h)anthracene	29,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
Benzo(g,h,i)perylene	NS	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U
2,3,4,6-Tetrachlorophenol	25,000,000	75000 U	230 U	230 U	230 U	190 U	220 U	220 U	220 U	230 U	210 U

Notes:
SVOCs - Semivolatile Organic Compounds.
RST 3 - Removal Support Team 3.
NS - Not specified.
U - Indicates the analyte was not detected.
J - Indicates an estimated value.
[1] U.S. Environmental Protection Agency (EPA) Removal Management Levels (RMLs) for industrial soil corresponds to a 10^{-6} risk level for carcinogens or a Hazard Quotient (HQ) of 1 for non-carcinogens, May 2016.
All soil analytical result values and EPA RMLs are presented in micrograms per kilogram (µg/kg).
Detected concentrations are in bold font.
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 1I: Validated Analytical Results Summary Table - TCL PCBs
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 18 and 20, 2016

	RST 3 Sample Number	**BRC001-GB025-7284-01**	**BRC001-GB025-96108-01**	**BRC001-GB025-96108-02**	**BRC001-GB032-108120-01**	**BRC001-SB014-3648-01**	**BRC001-SB014-6072-01**	**BRC001-SB014-108120-01**	**BRC001-SB019-108120-01**	**BRC001-AB001-3040-01**	**BRC001-AB014-4658-01**
	CLP Number	BC9J1	BC9J2	BC9J3	BC9J4	BC9J6	BC9J7	BC9J5	BC9J8	BC9K0	BC9K2
	Sample Date	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/18/2016	1/20/2016	1/20/2016
	Sample Depth	72-84	96-108	96-108	108-120	36-48	60-72	108-120	108-120	30-40	46-58
PCBs (µg/kg)	**EPA RML[1]**										
Aroclor-1016	51,000	150 U	44 U	45 U	44 U	38 U	42 U	43 U	43 U	44 U	41 U
Aroclor-1221	83,000	150 U	44 U	45 U	44 U	38 U	42 U	43 U	43 U	44 U	41 U
Aroclor-1232	72,000	150 U	44 U	45 U	44 U	38 U	42 U	43 U	43 U	44 U	41 U
Aroclor-1242	95,000	150 U	44 U	45 U	44 U	38 U	42 U	43 U	43 U	44 U	41 U
Aroclor-1248	95,000	150 U	44 U	45 U	44 U	38 U	42 U	43 U	43 U	44 U	41 U
Aroclor-1254	15,000	150 U	44 U	45 U	44 U	38 U	42 U	43 U	43 U	44 U	41 U
Aroclor-1260	99,000	**290**	**11 J**	45 U	44 U	38 U	42 U	43 U	43 U	44 U	41 U
Aroclor-1262	NS	150 U	44 U	45 U	44 U	38 U	42 U	43 U	43 U	44 U	41 U
Aroclor-1268	NS	150 U	44 U	45 U	44 U	38 U	42 U	43 U	43 U	44 U	41 U

Notes:
[1]EPA Removal Management Levels (RMLs) for Industrial Soil for 10-4 Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, November 2015.
Soil sample analytical results and EPA RMLs are presented in micrograms per kilogram (µg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
CLP - Contract Laboratory Program
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detected
NS - Not Specified
Detections are presented in bold font.

Table 1J: Validated Analytical Results Summary Table - RCRA Characteristics
Puerto Rico Battery Recycling Site - Phase I
Arecibo, Puerto Rico
January 22, 2016

RST 3 Sample Number	PRBR-005SW-003	PRBR-006SW-002	PRBR-008SW-001	PRBR-009SW-001	PRBR-010SW-001	PRBR-011SW-001	PRBR-012SW-001	PRBR-013SW-001	PRBR-014SW-001
Sample Date	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016	1/22/2016
Sample Type	Bunker Slag	Crushing Slag	Crushing Slag	Crushing Slag	Crushing Slag	Crystallization Slag	Bunker Slag	Bunker Slag	Dry Sludge
Sample Depth	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18	12-18
RCRA Characteristic									
Reactive Sulfide (mg/kg)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Reactive Cyanide (mg/kg)	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ignitability	DNI	DNI	DNI	DNI	DNI	DNI	DNI	DNI	DNI
Corrosivity (as pH)	5.94	8.14	8.50	8.37	9.07	7.73	6.75	7.63	7.82

Notes:
RST 3 - Removal Support Team 3
RCRA - Resource Conservation and Recovery Act
DNI - Did not ignite
U - Indicates the analyte was analyzed for but not detected

Table 2A: Wipe Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
February 29, 2016 through March 10, 2016

	RST 3 Sample Number	**BRC001-BB01-WP001-01**	**BRC001-BB01-WP002-01**	**BRC001-BB01-WP003-01**	**BRC001-BB01-WP004-01**	**BRC001-BB01-WP005-01**	**BRC001-BB01-WP006-01**	**BRC001-BB01-WP007-01**	**BRC001-CC01-WP001-01**	**BRC001-CC01-WP002-01**	**BRC001-CC01-WP003-01**	**BRC001-CC01-WP004-01**
	CLP Number	**MBCAW1**	**MBCAW2**	**MBCAW3**	**MBCAW4**	**MBCAW5**	**MBCAW6**	**MBCAW7**	**MBCAW9**	**MBCAX0**	**MBCAX1**	**MBCAX2**
	Sample Date	3/3/2016	3/3/2016	3/3/2016	3/3/2016	3/3/2016	3/3/2016	3/3/2016	3/8/2016	3/8/2016	3/9/2016	3/8/2016
	Sample Area (cm^2)	100	100	100	100	100	100	100	100	100	100	100
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 7	Structure No. 7	Structure No. 7	Structure No. 7	Structure No. 7	Structure No. 7	Structure No. 7	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Bag House 2 Floor	Bag House 2 Wall	Bag House 1 Floor	Bag House 1 Wall	Bag House 1 'Kettle	Bag House 2 - Hopper 2	Bag House 2 - Hopper 1	Crusher Conveyer Belt	Control Room Window	Crusher Room Beam	Crusher Room West Wall
TAL Metal ($\mu g/ft^2$)	**EPA Site-Specific Action Level**											
Aluminum	NS	2,415	1,282	13,378	177 J	1,143	3,995	1,254	7,479	246	1,431	152,361
Antimony	NS	17,837	11,334	15,422	213	7,089	48,124	18,952	19,881	681	25,084	517
Arsenic	NS	6,633	6,875	4,757	70	1,542	6,513	4,654	1,533	44	1,533	55
Barium	NS	675	383	2,397	186 U	285	975	629	1,942	186 U	1,133	743 U
Beryllium	NS	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	0.15 J	4.6 U	23 U	4.6 U	23 U	19 U
Cadmium	NS	8,194	35,675	8,110	101	1,747	8,445	2,415	294	11	478	19 U
Calcium	NS	45,151	13,471	57,228	4,645 U	7,581	92,903	42,457	27,128	4,645 U	108,697	19,788
Chromium	NS	124	31	577	19	13	60	27	975	16	80	63
Cobalt	NS	46 U	46 U	118	46 U	46 U	46 U	46 U	232 U	46 U	232 U	186 U
Copper	NS	380	372	1,830	52	217	1,078	281	1,338	74	1,654	93 U
Iron	NS	142,142	126,348	1,486,449	11,984	4,775	22,111	8,510	131,922	3,558	36,697	4,654
Lead	40	**1,021,933**	**1,049,804**	**1,096,256**	**25,177**	**984,772**	**1,059,095**	**1,021,933**	**96,619**	**18,302**	**342,812**	**63,081**
Magnesium	NS	4,645 U	4,645 U	14,121	4,645 U	4,645 U	4,645 U	4,645 U	23,226 U	4,645 U	23,226 U	18,581 U
Manganese	NS	1,347	481	6,968	125	180	363	575	773	21	882	56 U
Nickel	NS	831	314	1,802	37 U	206	2,062	386	1,477	37 U	914	149 U
Potassium	NS	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	6,726	4,645 U	23,226 U	4,645 U	23,226 U	18,581 U
Selenium	NS	384	397	260	33 U	255	833	654	57 J	33 U	113 J	130 U
Silver	NS	18	16	100	9.3 U	9.3 U	14	9.3 U	46 U	9.3 U	127	37 U
Sodium	NS	120,774	10,219	108,697	3,660 J	9,142	133,780	4,413 J	24,155	6,903	37,904	18,581 U
Thallium	NS	64	50	51	23 U	50	98	46	10 J	23 U	22 J	93 U
Vanadium	NS	104	73	213	46 U	120	416	177	232 U	46 U	232 U	186 U
Zinc	NS	17,001	6,903 J	35,117	1,654 J	5,593 J	14,307	5,119 J	9,383	1,078 J	2,945 J	203,458

Notes:

Refer to Figure 4 for the wipe sample locations.

Wipe sample analytical results and EPA Site-Specific Action Level are presented in micrograms per square feet ($\mu g/ft^2$).

RST 3 - Removal Support Team 3

EPA - U.S. Environmental Protection Agency

J - Indicates an estimated value

U - Indicates the analyte was analyzed for but not detected

NS - Not Specified

Values bolded and highlighted in yellow exceed the EPA Site-Specific Action Level.

Table 2A: Wipe Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
February 29, 2016 through March 10, 2016

	RST 3 Sample Number	**BRC001-CC01-WP005-01**	**BRC001-CC01-WP006-01**	**BRC001-CC01-WP007-01**	**BRC001-CC01-WP008-01**	**BRC001-CC01-WP009-01**	**BRC001-CC01-WP010-01**	**BRC001-CC01-WP011-01**	**BRC001-CC01-WP012-01**	**BRC001-CC01-WP013-01**	**BRC001-CC01-WP014-01**	**BRC001-CF01-WP001-01**
	CLP Number	**MBCAX3**	**MBCAX4**	**MBCAX5**	**MBCAX6**	**MBCAX7**	**MBCAX8**	**MBCAX9**	**MBCAY0**	**MBCAY1**	**MBCAY2**	**MBCAY3**
	Sample Date	3/8/2016	3/8/2016	3/8/2016	3/8/2016	3/8/2016	3/8/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/8/2016
	Sample Area (cm^2)	100	100	100	100	100	100	100	100	100	100	100
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Crusher Room West Wall	Side of Crusher Box	Inside Chute	Side of Crusher Box	Top of Crusher Motor	Crusher Control Room Desk	Slag Pile Room Chute	Slag Pile Room Beam	Side of Crusher	Inside Main Chute	Top of Furnace No. 1 Motor
TAL Metal ($\mu g/n^2$)	**EPA Site-Specific Action Level**											
Aluminum	NS	195,096	1,932	257	3,112	10,963	4,106	256	5,286	929 U	9,569	3,502
Antimony	NS	2,304	2,072	1,895	10,498	6,122	2,778	2,954	23,783	9,123	34,374	9,188
Arsenic	NS	114	90	98	626	498	325	181	1,774	427	3,298	1,050
Barium	NS	1,403	1,839	348	929 U	1,208	27,499	1,830	1,505	929 U	1,988	736
Beryllium	NS	4.6 U	4.6 U	4.6 U	23 U	4.6 U	4.6 U	4.6 U	23 U	23 U	23 U	9.3 U
Cadmium	NS	20	124	14	199	159	57	39	1,161	340	817	598
Calcium	NS	42,271	13,564	4,645 U	56,021	67,819	54,720	8,157	70,235	23,226 U	43,664	12,170
Chromium	NS	61	1,133	2,220	2,880	95,690	117	746	75	2,044	360	569
Cobalt	NS	46 U	59	46 U	232 U	1,143	46 U	46 U	232 U	232 U	232 U	93 U
Copper	NS	145	256	124	571	1,970	469	109	811	193	3,512	602
Iron	NS	10,684	3,298	11,799	17,559	512,825	159,793	10,034	58,529	18,766	104,051	69,399
Lead	40	**425,496**	**305,651**	**155,148**	**347,457**	**323,303**	**83,613**	**596,438**	**471,018**	**396,696**	**641,031**	**215,535**
Magnesium	NS	4,645 U	4,645 U	4,645 U	23,226 U	4,645 U	4,645 U	4,645 U	23,226 U	23,226 U	23,226 U	9,290 U
Manganese	NS	83	51	223	985	8,083	340	429	463	455	669	515
Nickel	NS	84	717	440	1,068	56,113	176	865	1,468	455	1,905	910
Potassium	NS	4,645 U	4,645 U	4,645 U	23,226 U	4,645 U	4,645 U	4,645 U	23,226 U	23,226 U	23,226 U	9,290 U
Selenium	NS	11 J	14 J	12 J	47 J	39	17 J	21 J	120 J	23 J	135 J	45 J
Silver	NS	12	43	14	52	9.3 U	9.3 U	26	46 U	135	46 U	19 U
Sodium	NS	7,860	41,342	17,280	40,506	17,744	22,204	6,429	32,702	35,024	93,832	40,599
Thallium	NS	22 J	20 J	5.9 J	20 J	18 J	23 U	22 J	8.3 J	23 J	14 J	6.1 J
Vanadium	NS	46 U	46 U	46 U	232 U	425	46 U	46 U	232 U	232 U	232 U	93 U
Zinc	NS	213,677	4,868 J	1,068 J	15,050	6,262 J	10,777	1,124 J	7,274	1,886 J	38,926	3,818 J

Notes:
Refer to Figure 4 for the wipe sample locations.
Wipe sample analytical results and EPA Site-Specific Action Level are presented in
micrograms per square feet ($\mu g/ft^2$).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detected
NS - Not Specified
Values bolded and highlighted in yellow exceed the EPA Site-Specific Action Level.

Table 2A: Wipe Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
February 29, 2016 through March 10, 2016

	RST 3 Sample Number	**BRC001-CF01-WP002-01**	**BRC001-CF01-WP003-01**	**BRC001-CF01-WP004-01**	**BRC001-CF01-WP005-01**	**BRC001-CF01-WP006-01**	**BRC001-CF01-WP007-01**	**BRC001-CF01-WP008-01**	**BRC001-CF01-WP009-01**	**BRC001-CF01-WP010-01**	**BRC001-CF01-WP011-01**	**BRC001-CF01-WP012-01**
	CLP Number	**MBCAY4**	**MBCAY5**	**MBCAY6**	**MBCAY7**	**MBCAY8**	**MBCAY9**	**MBCAZ0**	**MBCAZ1**	**MBCAZ2**	**MBCAZ3**	**MBCAZ4**
	Sample Date	3/8/2016	3/8/2016	3/8/2016	3/8/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016
	Sample Area (cm^2)	100	100	100	100	100	100	100	100	100	100	100
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Side of Furnace No. 1	Exit Point of Furnace No. 1	Hood Adjacent to Furnace No. 2	Underneath Furnace No. 2	Control Box on Top of Furnace No. 2	Inside Door of Furnace No. 2	South Wall of Furnace No. 2 Room	Front of Furnace No. 2	Metal Adjacent to Furnace No. 1	Inside Furnace No. 1 Door	Inside Door Ring of Furnace No. 1
TAL Metal ($\mu g/ft^2$)	**EPA Site-Specific Action Level**											
Aluminum	NS	4,431	3,800	27,778	17,837	23,040	3,651	53,977	17,837	18,023	2,787 U	197,883
Antimony	NS	35,024	13,657	69,213	16,258	31,494	3,865	38,462	2,025	49,703	3,279	137,497
Arsenic	NS	2,945	1,598	4,961	2,601	2,508	456	2,090	499	4,264	407	5,110
Barium	NS	1,793	1,096	3,605	1,366	2,443	1,858 U	9,290 U	2,787 U	9,290 U	2,787 U	9,290 U
Beryllium	NS	23 U	23 U	46 U	23 U	23 U	46 U	232 U	70 U	232 U	70 U	232 U
Cadmium	NS	781	1,449	1,524	646	985	299	929	8,138	1,338	4,747	401
Calcium	NS	23,226 U	23,226 U	52,119	23,226 U	23,226 U	46,452 U	232,258 U	69,677 U	232,258 U	69,677 U	245,264
Chromium	NS	124	695	365	63	223	93 U	628	288	468	168	11,055
Cobalt	NS	232 U	245	465 U	232 U	232 U	465 U	2,323 U	697 U	2,323 U	697 U	2,323 U
Copper	NS	1,496	1,672	2,518	985	14,028	287	3,874	985	6,866	426	14,028
Iron	NS	61,223	2,647,737	261,058	77,017	235,974	38,276	2,350,447	340,025	842,631	798,037	2,313,286
Lead	40	**415,277**	**374,399**	**242,477**	**314,941**	**311,225**	**212,748**	**1,105,546**	**294,503**	**765,521**	**194,167**	**1,059,095**
Magnesium	NS	23,226 U	23,226 U	46,452 U	23,226 U	23,226 U	46,452 U	232,258 U	69,677 U	232,258 U	69,677 U	232,258 U
Manganese	NS	316	12,635	1,496	526	1,263	171	9,123	2,685	4,413	7,246	8,491
Nickel	NS	3,261	1,524	6,262	1,208	2,313	372 U	2,982	561	3,800	557 U	10,126
Potassium	NS	23,226 U	23,226 U	46,452 U	23,226 U	23,226 U	46,452 U	232,258 U	69,677 U	232,258 U	69,677 U	7,442 J
Selenium	NS	152 J	83 J	220 J	67 J	113 J	156 J	1,626 U	35 J	221 J	42 J	1,626 U
Silver	NS	46 U	46 U	93 U	46 U	46 U	5.9 J	189 J	26 J	69 J	44 J	168 J
Sodium	NS	23,226 U	73,301	76,273	23,226 U	102,193	46,452 U	232,258 U	248,980	232,258 U	69,677 U	1,746,577
Thallium	NS	8.2 J	116 U	232 U	116 U	10 J	232 U	1,161 U	348 U	1,161 U	348 U	1,161 U
Vanadium	NS	232 U	232 U	465 U	232 U	232 U	465 U	2,323 U	697 U	2,323 U	697 U	2,323 U
Zinc	NS	2,425 J	3,893 J	9,253	4,078 J	63,174	2,146 J	2,787 J	3,595 J	60,666	2,146 J	17,559

Notes:

Refer to Figure 4 for the wipe sample locations.

Wipe sample analytical results and EPA Site-Specific Action Level are presented in micrograms per square feet ($\mu g/ft^2$).

RST 3 - Removal Support Team 3

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U - Indicates the analyte was analyzed for but not detected

NS - Not Specified

Values bolded and highlighted in yellow exceed the EPA Site-Specific Action Level.

Table 2A: Wipe Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
February 29, 2016 through March 10, 2016

	RST 3 Sample Number	**BRC001-CF01-WP013-01**	**BRC001-CK01-WP001-01**	**BRC001-CK01-WP002-01**	**BRC001-CK01-WP003-01**	**BRC001-CK01-WP004-01**	**BRC001-CK01-WP005-01**	**BRC001-CK01-WP006-01**	**BRC001-CK01-WP007-01**	**BRC001-CK01-WP008-01**	**BRC001-CK01-WP009-01**	**BRC001-CK01-WP010-01**
	CLP Number	**MBCAZ5**	**MBCAZ6**	**MBCAZ7**	**MBCAZ8**	**MBCAZ9**	**MBCA00**	**MBCA01**	**MBCA02**	**MBCA03**	**MBCA04**	**MBCA05**
	Sample Date	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016
	Sample Area (cm^2)	100	100	100	100	100	100	100	100	100	100	100
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Inside of Trough of Furnace No. 1	Outside of Kettle No. 1	Inside of Kettle No. 1	Top of Kettle No. 6	Outside of Kettle No. 7	Inside of Slag Collection Unit No. 1	North Wall of Kettle No. 6 Room	South Wall of Kettle No. 6 Room	Drive Belt From Kettle No. 6	Kettle No. 6 Outer Door	Kettle No. 5 Inner Door
TAL Metal ($\mu g/ft^2$)	**EPA Site-Specific Action Level**											
Aluminum	NS	9,290 U	3,670	929 U	14,493	11,241	2,787 U	4,227	5,398	2,787 U	5,769	5,741
Antimony	NS	33,259	7,534	287,070	10,405	13,750	331,664	62,431	64,753	21,832	59,179	62,338
Arsenic	NS	1,477	518	22,018	625	985	7,516	5,491	4,980	1,514	2,638	2,573
Barium	NS	9,290 U	929 U	929 U	929 U	929 U	2,787 U	2,787 U	2,787 U	2,787 U	1,068	2,787 U
Beryllium	NS	232 U	23 U	23 U	23 U	23 U	70 U	70 U	70 U	70 U	23 U	70 U
Cadmium	NS	674	59	303	88	160	1,496	957	789	325	478	480
Calcium	NS	232,258 U	23,226 U	23,226 U	23,226 U	23,226 U	69,677 U	69,677 U	69,677 U	69,677 U	23,226 U	69,677 U
Chromium	NS	651	46 U	114	46 U	46 U	291	139 U	139 U	139 U	59	139 U
Cobalt	NS	2,323 U	232 U	232 U	232 U	232 U	697 U	697 U	697 U	697 U	232 U	697 U
Copper	NS	3,010	553	3,521	1,152	1,747	29,357	1,468	2,601	500	2,648	2,629
Iron	NS	1,170,578	20,439	120,774	16,072	22,204	216,464	44,872	52,955	29,357	47,009	47,195
Lead	40	**759,947**	**194,167**	**710,708**	**162,580**	**338,167**	**317,728**	**255,483**	**345,599**	**168,155**	**480,309**	**602,941**
Magnesium	NS	232,258 U	23,226 U	23,226 U	23,226 U	23,226 U	69,677 U	69,677 U	69,677 U	69,677 U	23,226 U	69,677 U
Manganese	NS	5,518	144	724	70	123	1,384	209 U	264	209 U	266	272
Nickel	NS	2,555	463	4,376	653	1,245	19,231	6,299	6,782	570	3,317	3,270
Potassium	NS	232,258 U	23,226 U	23,226 U	23,226 U	23,226 U	69,677 U	69,677 U	69,677 U	69,677 U	23,226 U	69,677 U
Selenium	NS	1,626 U	163 U	163 U	163 U	163 U	488 U	488 U	488 U	488 U	163 U	488 U
Silver	NS	78 J	46 U	46 U	255	46 U	295	139 U	139 U	139 U	75	139 U
Sodium	NS	232,258 U	23,226 U	186,735	76,552	34,746	69,677 U	69,677 U	69,677 U	69,677 U	23,226 U	69,677 U
Thallium	NS	1,161 U	116 U	116 U	116 U	116 U	42 J	348 U	348 U	348 U	20 J	348 U
Vanadium	NS	2,323 U	232 U	232 U	232 U	232 U	697 U	697 U	697 U	697 U	232 U	697 U
Zinc	NS	3,270 J	2,341 J+	985 J+	3,753 J+	5,165 J+	5,156 J+	2,443 J+	4,859 J+	3,976 J+	3,930 J+	3,958 J+

Notes:

Refer to Figure 4 for the wipe sample locations.

Wipe sample analytical results and EPA Site-Specific Action Level are presented in micrograms per square feet ($\mu g/ft^2$).

RST 3 - Removal Support Team 3

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NS - Not Specified

Values bolded and highlighted in yellow exceed the EPA Site-Specific Action Level.

Table 2A: Wipe Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
February 29, 2016 through March 10, 2016

	RST 3 Sample Number	**BRC001-CK01-WP011-01**	**BRC001-CK01-WP012-01**	**BRC001-CK01-WP013-01**	**BRC001-CM01-WP001-01**	**BRC001-CM01-WP002-01**	**BRC001-CM01-WP003-01**	**BRC001-CM01-WP004-01**	**BRC001-CM01-WP005-01**	**BRC001-CM01-WP006-01**	**BRC001-CM01-WP007-01**	**BRC001-CM01-WP008-01**
	CLP Number	**MBCA06**	**MBCA07**	**MBCA08**	**MBCA09**	**MBCA10**	**MBCA11**	**MBCA12**	**MBCA13**	**MBCA14**	**MBCA15**	**MBCA16**
	Sample Date	3/9/2016	3/9/2016	3/9/2016	3/8/2016	3/8/2016	3/8/2016	3/8/2016	3/8/2016	3/8/2016	3/8/2016	3/8/2016
	Sample Area (cm^2)	100	100	100	100	100	100	100	100	100	100	100
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Top of Kettle No. 5 Bin Box	Inside of Kettle No. 4	Outside of Kettle No. 2	Top of Bricks in Storage Room	Top of Desk in Storage Room	Top of Control Box	Top of I Beam Behind Kettle No. 2	Electric Box Behind Kettle Nos. 3 and 4	Beam in Room with Dirt Floor	Tank in Room with Dirt Floor	Floor Leading to Control Room
TAL Metal ($\mu g/ft^2$)	**EPA Site-Specific Action Level**											
Aluminum	NS	37,254	4,998	9,755	13,935	36,790	3,688	6,903	7,219	2,787 U	3,614	6,633
Antimony	NS	320,516	121,703	51,561	20,624	49,424	32,795	129,135	41,899	17,559	16,072	13,006
Arsenic	NS	13,935	1,431	3,707	1,477	3,549	2,350	6,076	3,168	1,384	938	1,003
Barium	NS	2,787 U	2,787 U	2,787 U	2,787 U	3,019	2,787 U	2,787 U	2,787 U	2,787 U	2,787 U	2,787 U
Beryllium	NS	70 U	70 U	70 U	70 U	70 U	70 U	70 U	70 U	70 U	70 U	70 U
Cadmium	NS	2,471	70 U	602	351	711	372	778	536	303	307	449
Calcium	NS	82,312	69,677 U	69,677 U	82,777	69,677 U	69,677 U	69,677 U	69,677 U	69,677 U	69,677 U	69,677 U
Chromium	NS	909	143	229	516	437	139 U	249	139 U	139 U	139 U	165
Cobalt	NS	697 U	697 U	697 U	697 U	697 U	697 U	697 U	697 U	697 U	697 U	697 U
Copper	NS	23,876	2,378	3,614	2,490	4,162	2,415	5,918	2,285	570	772	938
Iron	NS	601,083	223,896	269,419	196,025	1,365,675	59,644	687,483	86,400	24,898	35,024	130,993
Lead	40	**552,773**	**238,761**	**269,419**	**243,406**	**704,205**	**298,219**	**442,218**	**222,967**	**257,341**	**196,954**	**273,135**
Magnesium	NS	69,677 U	69,677 U	69,677 U	69,677 U	69,677 U	69,677 U	69,677 U	69,677 U	69,677 U	69,677 U	69,677 U
Manganese	NS	4,069	857	1,682	1,115	6,958	319	4,506	555	209 U	224	909
Nickel	NS	26,199	3,781	3,242	1,384	3,038	1,970	10,219	2,174	1,310	1,022	795
Potassium	NS	69,677 U	69,677 U	69,677 U	5,899	69,677 U	69,677 U	69,677 U	69,677 U	69,677 U	69,677 U	69,677 U
Selenium	NS	1,208	488 U	488 U	488 U	488 U	488 U	488 U	488 U	488 U	488 U	488 U
Silver	NS	139 U	139 U	139 U	139 U	139 U	139 U	139 U	139 U	139 U	139 U	139 U
Sodium	NS	159,793	94,761	69,677 U	69,677 U	87,422	69,677 U	69,677 U	69,677 U	69,677 U	69,677 U	69,677 U
Thallium	NS	348 U	348 U	348 U	348 U	348 U	348 U	348 U	348 U	348 U	348 U	348 U
Vanadium	NS	697 U	697 U	697 U	697 U	697 U	697 U	697 U	697 U	697 U	697 U	697 U
Zinc	NS	39,948	2,285 J+	17,652	6,262 J+	54,534	27,871	21,089	16,351	2,350 J+	3,187 J+	13,285

Notes:

Refer to Figure 4 for the wipe sample locations.

Wipe sample analytical results and EPA Site-Specific Action Level are presented in micrograms per square feet ($\mu g/ft^2$).

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Values bolded and highlighted in yellow exceed the EPA Site-Specific Action Level.

Table 2A: Wipe Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
February 29, 2016 through March 10, 2016

	RST 3 Sample Number	**BRC001-CM01-WP009-01**	**BRC001-CM01-WP010-01**	**BRC001-CM01-WP011-01**	**BRC001-CM01-WP012-01**	**BRC001-CM01-WP013-01**	**BRC001-CM01-WP014-01**	**BRC001-CM01-WP015-01**	**BRC001-CM01-WP016-01**	**BRC001-CM01-WP017-01**	**BRC001-CM01-WP018-01**	**BRC001-CM01-WP019-01**
	CLP Number	**MBCA17**	**MBCA18**	**MBCA19**	**MBCA20**	**MBCBL1**	**MBCBL2**	**MBCBL3**	**MBCBL4**	**MBCBL5**	**MBCBL6**	**MBCBL7**
	Sample Date	3/8/2016	3/8/2016	3/8/2016	3/8/2016	3/8/2016	3/8/2016	3/8/2016	3/8/2016	3/8/2016	3/8/2016	3/8/2016
	Sample Area (cm^2)	100	100	100	100	100	100	100	100	100	100	100
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Control Panel in Control Room	Top of Blue Pipe in Control Room	Top of Pipe at Bottom of Ramp	Inside Locker in Rear Cage Room	Floor of Control Room 2 Area	Top of Broken Kettle in Crushing Room	Electric Box in Quimico Room	Inside Locker in Quimico Room	I Beam in Quimico Room	Control Box Behind Kettle No. 6	Southwest Wall in Slag Staging Area
TAL Metal ($\mu g/ft^2$)	**EPA Site-Specific Action Level**											
Aluminum	NS	17,187	4,524	4,729	9,235	6,141	107,768	5,091	1,839	261	10,219	37,161
Antimony	NS	47,659	17,652	11,148	6,977	19,417	188,593	6,243	9,755	727	109,626	63,174
Arsenic	NS	3,475	1,524	929	743	1,756	16,444	620	810	33	8,436	3,317
Barium	NS	2,787 U	2,787 U	2,787 U	2,536	1,449	3,149	929 U	929 U	186 U	5,416	1,254
Beryllium	NS	70 U	70 U	70 U	23 U	23 U	23 U	23 U	23 U	4.6 U	23 U	23 U
Cadmium	NS	1,477	562	264	299	635	1,774	117	155	8.3	1,830	957
Calcium	NS	170,013	69,677 U	69,677 U	51,654	23,226 U	106,839	28,893	23,226 U	6,271	50,539	23,226 U
Chromium	NS	346	1,031	139 U	205	188	1,124	61	46 U	9.3 U	406	130
Cobalt	NS	697 U	697 U	697 U	232 U	232 U	232 U	232 U	232 U	128	232 U	232 U
Copper	NS	1,979	2,258	1,551	1,013	1,319	39,763	1,106	645	75	4,515	2,313
Iron	NS	157,935	217,393	58,715	137,497	275,922	2,963,607	37,719	22,390	3,252	236,903	35,582
Lead	40	**205,316**	**154,219**	**192,309**	**260,129**	**464,515**	**1,086,966**	**136,567**	**162,580**	**10,684**	**956,901**	**625,237**
Magnesium	NS	69,677 U	69,677 U	69,677 U	23,226 U	23,226 U	23,226 U	23,226 U	23,226 U	4,645 U	23,226 U	23,226 U
Manganese	NS	915	1,263	344	815	2,443	26,477	304	171	31	1,245	380
Nickel	NS	2,991	1,078	605	1,942	1,626	12,728	352	689	37 U	10,684	1,449
Potassium	NS	69,677 U	1,514	2,100	23,226 U	23,226 U	23,226 U	23,226 U	23,226 U	4,645 U	23,226 U	23,226 U
Selenium	NS	488 U	488 U	488 U	163 U	163 U	321	163 U	163 U	33 U	385	279
Silver	NS	139 U	139 U	139 U	46 U	46 U	281	46 U	46 U	9.3 U	82	399
Sodium	NS	130,993	69,677 U	69,677 U	58,436	68,191	319,586	34,374	23,226 U	8,621	76,645	47,473
Thallium	NS	348 U	348 U	348 U	116 U	116 U	116 U	116 U	116 U	23 U	116 U	116 U
Vanadium	NS	697 U	697 U	697 U	232 U	232 U	232 U	232 U	232 U	46 U	232 U	232 U
Zinc	NS	4,831 J+	9,569	5,073 J+	11,613	13,378	260,129	10,498	3,800 J+	1,152 J+	7,339	60,573

Notes:

Refer to Figure 4 for the wipe sample locations.

Wipe sample analytical results and EPA Site-Specific Action Level are presented in micrograms per square feet ($\mu g/ft^2$).

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Table 2A: Wipe Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
February 29, 2016 through March 10, 2016

	RST 3 Sample Number	**BRC001-CM01-WP020-01**	**BRC001-CM01-WP021-01**	**BRC001-CM01-WP022-01**	**BRC001-CM01-WP023-01**	**BRC001-CM01-WP024-01**	**BRC001-CM01-WP025-01**	**BRC001-CM01-WP026-01**	**BRC001-CM01-WP027-01**	**BRC001-CM01-WP028-01**	**BRC001-CM01-WP029-01**	**BRC001-CM01-WP030-01**
	CLP Number	**MBCBL8**	**MBCBL9**	**MBCBM0**	**MBCBM1**	**MBCBM2**	**MBCBM3**	**MBCBM4**	**MBCBM5**	**MBCBM6**	**MBCBM7**	**MBCBM8**
	Sample Date	3/8/2016	3/8/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016
	Sample Area (cm^2)	100	100	100	100	100	100	100	100	100	100	100
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	West Wall in Slag Staging Area	Southeast Wall in Slag Staging Area	Top of Pipe Behind Kettle No. 3	Plexiglas Case in Storage Area	North Wall in Storage Area	South Wall Adjacent to Kettle No. 1	South Wall of Central Portion of Building	Beam in Southwest Portion of Building	Side of Slag Bin	Side of Stainless Steel Bin	Top of Pump in Central Portion of Building
TAL Metal ($\mu g/ft^2$)	**EPA Site-Specific Action Level**											
Aluminum	NS	1,496	162,580	6,447	600	11,984	1,932	1,050	630	42,457	1,542	11,520
Antimony	NS	22,018	18,116	71,535	7,832	17,280	37,254	5,184	3,122	27,313	1,988	14,772
Arsenic	NS	1,356	717	4,868	450	1,226	1,310	626	270	1,431	211	1,143
Barium	NS	1,143	1,208	1,923	186 U	929 U	929 U	248	186 U	929 U	186 U	975
Beryllium	NS	23 U	23 U	23 U	4.6 U	23 U	23 U	4.6 U	4.6 U	23 U	4.6 U	23 U
Cadmium	NS	372	269	1,059	55	198	67	141	44	239	76	266
Calcium	NS	23,226 U	23,226 U	25,177	2,137 J	23,226 U	23,226 U	11,427	27,778	23,226 U	10,684	46,080
Chromium	NS	510	120	151	18	52	153	37	9.3 U	86	258	150
Cobalt	NS	232 U	232 U	232 U	46 U	232 U	232 U	46 U	46 U	232 U	46 U	232 U
Copper	NS	840	1,384	3,298	360	793 J+	929 J+	377 J+	140 J+	910 J+	269 J+	2,090 J+
Iron	NS	40,970	23,226	71,721	8,807	25,177	20,996	15,608	8,203	133,780	11,334	102,193
Lead	40	**458,941**	**488,670**	**852,850**	**100,335**	**249,909**	**265,703**	**111,484**	**51,933**	**234,116**	**91,045**	**229,471**
Magnesium	NS	23,226 U	23,226 U	23,226 U	4,645 U	23,226 U	23,226 U	4,645 U	4,645 U	23,226 U	4,645 U	23,226 U
Manganese	NS	430	138	394	43	151	109	121	51	597	105	676
Nickel	NS	186 U	870	5,593	598	1,217	2,127	599	188	1,682	221	911
Potassium	NS	23,226 U	23,226 U	23,226 U	4,645 U	23,226 U	23,226 U	4,645 U	4,645 U	23,226 U	4,645 U	23,226 U
Selenium	NS	163 U	163 U	343	33 U	163 U	163 U	49	33 U	163 U	33 U	163 U
Silver	NS	237	46 U	46 U	9.3 U	46 U	46 U	9.3 U	9.3 U	46 U	9.3 U	46 U
Sodium	NS	28,521	81,476	81,569	4,645 U	23,226 UJ	23,226 UJ	10,219 J+	7,367 J+	24,898 J+	18,302 J+	49,146 J+
Thallium	NS	116 U	116 U	116 U	23 U	116 U	116 U	23 U	23 U	116 U	23 U	116 U
Vanadium	NS	232 U	232 U	232 U	46 U	232 U	232 U	46 U	46 U	232 U	46 U	232 U
Zinc	NS	2,211 J+	159,793	7,590	1,059 J+	54,348 J+	3,577 J+	4,097 J+	2,109 J+	1,960 J+	1,524 J+	11,148 J+

Notes:

Refer to Figure 4 for the wipe sample locations.

Wipe sample analytical results and EPA Site-Specific Action Level are presented in micrograms per square feet ($\mu g/ft^2$).

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Table 2A: Wipe Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
February 29, 2016 through March 10, 2016

	RST 3 Sample Number	**BRC001-CM01-WP031-01**	**BRC001-CM01-WP032-01**	**BRC001-CM01-WP033-01**	**BRC001-CM01-WP034-01**	**BRC001-CM01-WP035-01**	**BRC001-CM01-WP036-01**	**BRC001-CM01-WP037-01**	**BRC001-CM01-WP038-01**	**BRC001-CM01-WP039-01**	**BRC001-CM01-WP040-01**	**BRC001-CM01-WP041-01**
	CLP Number	**MBCBM9**	**MBCBN0**	**MBCBN1**	**MBCBN2**	**MBCBN3**	**MBCBN4**	**MBCBN5**	**MBCBN6**	**MBCBN7**	**MBCBN8**	**MBCBN9**
	Sample Date	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016
	Sample Area (cm^2)	100	100	100	100	100	100	100	100	100	100	100
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Wall in Central Portion of Building	Top of Sodium Nitrate Pallet	Side of Battery Handler	Electric Box Between Kettle Nos. 8 and 9	Top of Beam Between Kettle Nos. 7 and 8	Top of Olla No. 1 (Control Box)	Blue Pipe Between Kettle Nos. 4 and 5	Metal Behind Kettle No. 2	Electric Box Between Kettle Nos. 1 and 2	Exhaust Pipe of Kettle No. 1	Exhaust Pipe of Kettle No. 3
TAL Metal ($\mu g/ft^2$)	**EPA Site-Specific Action Level**											
Aluminum	NS	905	11,148	4,357	47,195	4,543	5,416	9,755	43,200	1,468	6,290	11,148
Antimony	NS	3,326	20,624	31,123	176,516	36,046	38,741	12,263	264,774	7,915	27,685	37,068
Arsenic	NS	302	1,524	1,951	19,231	2,230	2,285	938	13,750	2,193	1,765	2,889
Barium	NS	337	1,059	929 U	3,716 U	929 U	1,096	9,755	7,432 U	195	929 U	929 U
Beryllium	NS	4.6 U	23 U	23 U	93 U	23 U	23 U	4.6 U	186 U	4.6 U	23 U	23 U
Cadmium	NS	60	485	192	1,171	209	496	214	2,007	88	229	371
Calcium	NS	7,757	81,011	23,226 U	98,477	23,226 U	32,516	13,006	260,129	7,637	23,226 U	23,226 U
Chromium	NS	38	153	77	585	82	124	46	1,143	35	46 U	66
Cobalt	NS	46 U	232 U	232 U	929 U	232 U	232 U	46 U	1,858 U	46 U	232 U	232 U
Copper	NS	975 J+	1,551 J+	5,184 J+	117,058 J+	1,431 J+	2,889 J+	2,685 J+	20,067 J+	845 J+	2,657 J+	3,753 J+
Iron	NS	13,843	103,122	66,704	501,676	221,109	88,351	49,053	1,244,901	16,908	25,084	60,387
Lead	40	**73,858**	**198,813**	**261,058**	**314,012**	**257,341**	**183,019**	**168,155**	**692,128**	**128,206**	**246,193**	**240,619**
Magnesium	NS	4,645 U	23,226 U	23,226 U	92,903 U	23,226 U	23,226 U	4,645 U	185,806 U	4,645 U	23,226 U	23,226 U
Manganese	NS	118	862	448	2,611	1,068	540	446	6,949	99	156	345
Nickel	NS	225	1,208	1,347	7,516	1,338	2,490	824	11,892	682	2,267	2,388
Potassium	NS	4,645 U	4,645 U	23,226 U	92,903 U	23,226 U	23,226 U	4,645 U	185,806 U	4,645 U	23,226 U	23,226 U
Selenium	NS	33 U	163 U	163 U	650 U	163 U	163 U	40	1,301 U	51	190	166
Silver	NS	9.3 U	46 U	46 U	186 U	46 U	46 U	9.3 U	372 U	9.3 U	46 U	46 U
Sodium	NS	19,695 J+	79,525 J+	42,271 J+	220,180 J+	23,226 UJ	44,222 J+	21,739 J+	185,806 UJ	13,099 J+	27,313 J+	45,801 J+
Thallium	NS	23 U	116 U	116 U	465 U	116 U	116 U	23 U	929 U	23 U	116 U	116 U
Vanadium	NS	46 U	232 U	232 U	929 U	232 U	232 U	46 U	1,858 U	46 U	232 U	232 U
Zinc	NS	5,240 J+	16,537 J+	21,368 J+	436,644 J+	9,941 J+	25,177 J+	3,057 J+	64,939 J+	2,722 J+	8,603 J+	8,854 J+

Notes:

Refer to Figure 4 for the wipe sample locations.

Wipe sample analytical results and EPA Site-Specific Action Level are presented in micrograms per square feet ($\mu g/ft^2$).

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Table 2A: Wipe Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
February 29, 2016 through March 10, 2016

	RST 3 Sample Number	**BRC001-CM01-WP042-01**	**BRC001-CS01-WP001-01**	**BRC001-CS01-WP002-01**	**BRC001-DM01-WP001-01**	**BRC001-DM01-WP002-01**	**BRC001-DM01-WP003-01**	**BRC001-DM01-WP004-01**	**BRC001-DM01-WP005-01**	**BRC001-DM01-WP006-01**	**BRC001-DM01-WP007-01**	**BRC001-DM01-WP008-01**
	CLP Number	**MBCBP0**	**MBCBP3**	**MBCBP4**	**MBCBP5**	**MBCBP6**	**MBCBP7**	**MBCBP8**	**MBCBP9**	**MBCBQ0**	**MBCBQ1**	**MBCBQ2**
	Sample Date	3/9/2016	3/9/2016	3/9/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
	Sample Area (cm^2)	100	100	100	100	100	100	100	100	100	100	100
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1
	Sample Sub-Location	Door Flaps from South Side of Building	Chute in Slag Collection Unit No. 2	South Wall in Slag Collection Unit No. 2	Top of Cabinet in Owners Office	Entry Way to Owners Office	Floor in Secretary's Office	Behind Computer on Secretary's Desk	Chair in Waiting Room	Floor in VPs Office	Conference Room Floor	Keyboard Area on Desk in Computer Office
TAL Metal ($\mu g/ft^2$)	**EPA Site-Specific Action Level**											
Aluminum	NS	200	2,861	53,141	186 U	186 U	186 U	186 U	186 U	186 U	186 U	225
Antimony	NS	307	7,005	62,059	56 U	56 U	56 U	56 U	56 U	56 U	56 U	156
Arsenic	NS	21	1,106	6,503	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	13
Barium	NS	186 U	1,329	779	186 U	186 U	186 U	186 U	186 U	186 U	186 U	186 U
Beryllium	NS	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U
Cadmium	NS	6.6	13,471	1,579	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U
Calcium	NS	4,645 U	7,850	139,355 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U
Chromium	NS	9.3 U	98	994	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	18
Cobalt	NS	46 U	46 U	81	46 U	46 U	46 U	46 U	46 U	46 U	46 U	46 U
Copper	NS	55 J+	1,329 J+	8,872	23 U	23 U	23 U	23 U	23 U	23 U	23 U	40
Iron	NS	1,970	154,219	947,611	216	536	297	242	286	566	688	2,081
Lead	40	**4,357**	**341,883**	**612,231**	**188 J+**	**758**	**506**	**418**	**423**	**758**	**1,133**	**5,286**
Magnesium	NS	4,645 U	4,645 U	139,355 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U
Manganese	NS	17	1,180	3,633	14 U	14 U	14 U	14 U	14 U	14 U	14 U	19
Nickel	NS	37 U	473	5,704	37 U	37 U	37 U	37 U	37 U	37 U	37 U	37 U
Potassium	NS	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U
Selenium	NS	33 U	136	605	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
Silver	NS	9.3 U	9.3 U	85	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U
Sodium	NS	12,356 J+	39,112 J+	459,870	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U
Thallium	NS	23 U	23 U	23 U	23 U	23 U	23 U	23 U	23 U	23 U	23 U	23 U
Vanadium	NS	46 U	46 U	172	46 U	46 U	46 U	46 U	46 U	46 U	46 U	46 U
Zinc	NS	819 J+	2,861 J+	6,670	714	696	706	648	713	713	651	737

Notes:

Refer to Figure 4 for the wipe sample locations.

Wipe sample analytical results and EPA Site-Specific Action Level are presented in micrograms per square feet ($\mu g/ft^2$).

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U - Indicates the analyte was analyzed for but not detected

NS - Not Specified

Values bolded and highlighted in yellow exceed the EPA Site-Specific Action Level.

Table 2A: Wipe Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
February 29, 2016 through March 10, 2016

	RST 3 Sample Number	**BRC001-DM01-WP009-01**	**BRC001-DM01-WP010-01**	**BRC001-DM01-WP011-01**	**BRC001-DM01-WP012-01**	**BRC001-DM01-WP013-01**	**BRC001-DM01-WP014-01**	**BRC001-DM01-WP015-01**	**BRC001-DM01-WP016-01**	**BRC001-DM01-WP017-01**	**BRC001-DM01-WP018-01**	**BRC001-DM01-WP019-01**
	CLP Number	**MBCBQ3**	**MBCBQ4**	**MBCBQ5**	**MBCBQ6**	**MBCBQ7**	**MBCBQ8**	**MBCBQ9**	**MBCBR0**	**MBCBR1**	**MBCBR2**	**MBCBR3**
	Sample Date	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
	Sample Area (cm^2)	100	100	100	100	100	100	100	100	100	100	100
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1A	Structure No. 1A
	Sample Sub-Location	Floor of Equipment Room	Wall in Equipment Room Office	Top of Cabinet in Back Room	Floor in Entry Way	Top of Control Box in Center Office	Top of Refrigerator	Men's Bathroom Floor	Wall in Dinning Room	Wall in Main Hallway	Desk in Locker Room Area	Tables in Dinning Room
TAL Metal ($\mu g/ft^2$)	**EPA Site-Specific Action Level**											
Aluminum	NS	7,023	238	3,800	186 U	448	186 U	186 U	186 U	186 U	1,951	186 U
Antimony	NS	2,666	91	1,384	56 U	74	56 U	56 U	56 U	56 U	231	56 U
Arsenic	NS	263	12	142	9.3 U	9.3	9.3 U	9.3 U	9.3 U	9.3 U	22	9.3 U
Barium	NS	691	186 U	367	186 U	186 U	186 U	186 U	186 U	186 U	8,705	186 U
Beryllium	NS	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U
Cadmium	NS	61	4.6 U	42	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	7.2	4.6 U
Calcium	NS	40,599	4,645 U	18,859	4,645 U	6,531	4,645 U	4,645 U	4,645 U	4,645 U	13,285	4,645 U
Chromium	NS	530	9.3 U	85	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	19	9.3 U
Cobalt	NS	46 U	46 U	46 U	46 U	46 U	46 U	46 U	46 U	46 U	46 U	46 U
Copper	NS	781	36	279	23 U	33	23 U	23 U	23 U	23 U	67 J+	29 J+
Iron	NS	79,339	1,356	19,695	416	1,068	190	190	143	154	38,090	275
Lead	40	**121,703**	**2,620**	**41,806**	**392**	**2,248**	**190 J+**	**214**	**179**	**137**	**6,002**	**293**
Magnesium	NS	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U
Manganese	NS	603	14 U	160	14 U	14 U	14 U	14 U	14 U	14 U	88	14 U
Nickel	NS	535	37 U	103	37 U	37 U	37 U	37 U	37 U	37 U	54	37 U
Potassium	NS	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U
Selenium	NS	4,236	33	111	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
Silver	NS	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U
Sodium	NS	17,187	4,645 U	16,444	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	4,645 U	7,442	4,645 U
Thallium	NS	23 U	23 U	23 U	23 U	23 U	23 U	23 U	23 U	23 U	23 U	23 U
Vanadium	NS	48	46 U	46 U	46 U	46 U	46 U	46 U	46 U	46 U	46 U	46 U
Zinc	NS	3,001	723	1,459	710	759	699	709	621 J+	687 J+	929 J+	1,282 J+

Notes:

Refer to Figure 4 for the wipe sample locations.

Wipe sample analytical results and EPA Site-Specific Action Level are presented in micrograms per square feet ($\mu g/ft^2$).

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Values bolded and highlighted in yellow exceed the EPA Site-Specific Action Level.

Table 2A: Wipe Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
February 29, 2016 through March 10, 2016

	RST 3 Sample Number	**BRC001-DM01-WP020-01**	**BRC001-DM01-WP021-01**	**BRC001-DM01-WP022-01**	**BRC001-DM01-WP023-01**	**BRC001-DM01-WP024-01**	**BRC001-DM01-WP025-01**	**BRC001-DM01-WP026-01**	**BRC001-DM01-WP027-01**	**BRC001-DM01-WP028-01**	**BRC001-DM01-WP029-01**
	CLP Number	**MBCBR4**	**MBCBR5**	**MBCBR6**	**MBCBR7**	**MBCBR8**	**MBCBR9**	**MBCBS0**	**MBCBS1**	**MBCBS2**	**MBCBS3**
	Sample Date	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
	Sample Area (cm^2)	100	100	100	100	100	100	100	100	100	100
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 1A	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1
	Sample Sub-Location	Floor in Dinning Room	Floor in Laundry Room	Wall in Laundry Room	Bench in Dressing Room	Top of Locker No. 15	Door in Clean Clothes Room	Changing Room Floor	Water Fountain	Top of Locker No. 120	Floor of Shower Room
TAL Metal ($\mu g/ft^2$)	**EPA Site-Specific Action Level**										
Aluminum	NS	565	9,662	1,932	606	3,679	3,502	3,679	938	186 U	11,427
Antimony	NS	69	1,412	481	114	471	331	957	166	56 U	1,096
Arsenic	NS	9.3 U	140	43	10	44	39	74	17	9.3 U	72
Barium	NS	186 U	449	186 U	186 U	212	186 U	312	186 U	44,686	605
Beryllium	NS	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U	4.6 U
Cadmium	NS	6.2	40	8.0	4.6 U	15	7.7	20	4.7	4.6 U	36
Calcium	NS	4,645 U	196,954	13,192	5,964	16,537	13,471	42,085	7,469	7,358	191,380
Chromium	NS	9.3 U	111	33	11	43	46	61	11	9.3 U	360
Cobalt	NS	46 U	46 U	46 U	46 U	46 U	46 U	46 U	46 U	46 U	46 U
Copper	NS	41 J+	923	194 J+	45 J+	147 J+	106 J+	223 J+	255 J+	24 J+	713
Iron	NS	2,007	40,692	7,925	2,425	11,148	7,572	16,258	2,954	670	56,485
Lead	40	**1,960**	**45,522**	**12,728**	**3,382**	**11,148**	**8,148**	**50,353**	**4,459**	**885**	**77,110**
Magnesium	NS	4,645 U	10,312	4,645 U	4,645 U	4,645 U	4,645 U	5,714	4,645 U	4,645 U	9,383
Manganese	NS	25	482	80	26	125	115	160	36	14 U	517
Nickel	NS	37 U	271	58	37 U	85	46	71	37 U	37 U	261
Potassium	NS	4,645 U	5,955	4,840	4,645 U	4,645 U	4,645 U	7,665	4,645 U	4,645 U	10,591
Selenium	NS	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U	33 U
Silver	NS	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U	9.3 U
Sodium	NS	4,645 U	64,753	5,268	5,723	15,886	11,892	92,531	6,605	4,645 U	12,170
Thallium	NS	23 U	23 U	23 U	23 U	23 U	23 U	23 U	23 U	23 U	23 U
Vanadium	NS	46 U	186	46 U	46 U	46 U	46 U	155	46 U	46 U	220
Zinc	NS	1,189 J+	2,462 J+	1,124 J+	788 J+	1,133 J+	1,161 J+	2,044 J+	1,431 J+	1,115 J+	2,601 J+

Notes:

Refer to Figure 4 for the wipe sample locations.

Wipe sample analytical results and EPA Site-Specific Action Level are presented in micrograms per square feet ($\mu g/ft^2$).

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NS - Not Specified

Values bolded and highlighted in yellow exceed the EPA Site-Specific Action Level.

Table 2B: Micro-Vac Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
March 3 through 10, 2016

	RST 3 Sample Number	**BRC001-BB01-MW001-01**	**BRC001-BB01-MW002-01**	**BRC001-DM01-MW001-01**	**BRC001-DM01-MW002-01**	**BRC001-DM01-MW003-01**	**BRC001-DM01-MW004-01**	**BRC001-DM01-MW005-01**	**BRC001-DM01-MW006-01**	**BRC001-DM01-MW007-01**	**BRC001-DM01-MW008-01**	**BRC001-DM01-MW009-01**	**BRC001-DM01-MW010-01**
	CLP Number	**MBCAS3**	**MBCAS4**	**MBCAS6**	**MBCAS7**	**MBCAS8**	**MBCAS9**	**MBCAT0**	**MBCAT1**	**MBCAT2**	**MBCAT3**	**MBCAT4**	**MBCAT5**
	Sample Date	3/3/2016	3/3/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016	3/10/2016
	Sample Area (cm^2)	100	100	100	100	100	100	100	100	100	100	100	100
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 7	Structure No. 7	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1	Structure No. 1
	Sample Sub-Location	Bag House 2	Bag House 1	El Jefe Office Chair	Secretary Chair	Rear Door Mat	Conference Room Chair	Waiting Room Chair	Office Chair	Mini Office Chair	Back Room Mat	Locker Room Clothes	Locker Room 'Clean Clothes
TAL Metal ($\mu g/ft^2$)	**EPA Site-Specific Action Level**												
Aluminum	NS	219	288	1,347 J-	512 J-	51,654	1,449 J-	894 J-	373 J-	1,050 J-	510,967	1,078 J-	1,096 J-
Antimony	NS	1,635	1,041	321	56 U	13,378	717	745.08241	154	1,078	24,248	203	200
Arsenic	NS	582	263	40	3.3 J	2,592	81	52	11	63	7,349	34	30
Barium	NS	66 J	128	186 U	186 U	9,290 U	186 U	186 U	186 U	186 U	9,290 U	186 U	186 U
Beryllium	NS	2.3 U	2.3 U	4.6 U	4.6 U	232 U	4.6 U	4.6 U	4.6 U	4.6 U	8.2 J	4.6 U	4.6 U
Cadmium	NS	1,774	713	10	4.6 U	650	21	17	4.6 U	10	6,513	15	13
Calcium	NS	2,555	2,676	11,613	4,915 J	340,025	11,892	8,900	6,336	13,564	4,013,411	9,569	9,207
Chromium	NS	5.8	23	25	9.3 U	1,477	38	22	9.3 U	28	7,581	21	19
Cobalt	NS	0.45 J	1.5 J	46 U	46 U	2,323 U	46 U	46 U	46 U	46 U	2,323 U	46 U	46 U
Copper	NS	53	65	176	56	7,497	150	103	39	120	130,993	246	198
Iron	NS	2,899	8,417	6,299 J+	1,217 J+	589,005 J+	8,928 J+	6,225 J+	1,403 J+	6,206 J+	3,381,671 J+	7,172 J+	6,578 J+
Lead	250	**200,671**	**145,858**	**12,635 J+**	**1,970 J+**	**857,495 J+**	**35,582 J+**	**30,658 J+**	**4,097 J+**	**32,144 J+**	**4,821,668 J+**	**10,498 J+**	**12,077 J+**
Magnesium	NS	164 J	165 J	4,645 U	4,645 U	232,258 U	4,645 U	4,645 U	4,645 U	4,645 U	285,212	4,645 U	4,645 U
Manganese	NS	33	79	90	57	4,571	81	59	16	66	43,107	88	87
Nickel	NS	48	59	67	18 J	3,372	117.057835	78	23 J	63	58,064	108	89
Potassium	NS	4,645 U	4,645 U	4,645 U	4,645 U	232,258 U	4,645 U	4,645 U	4,645 U	4,645 U	232,258 U	4,645 U	4,645 U
Selenium	NS	65	26	14 J	1.2 J	1,626	18 J	143.99972	2.5 J	20 J	2,601	7.2 J	11 J
Silver	NS	4.6 U	1.3 J	1.3 J	4.8 J	465 U	1.2 J	0.86 J	0.48 J	2.2 J	131 J	0.21 J	9.3 U
Sodium	NS	10,591	7,692	4,645 U	4,645 U	232,258 U	7,311	5,927	4,645 U	4,645 U	701,418	4,645 U	4,645 U
Thallium	NS	9.3 J	6.2 J	23 U	23 U	1,161 U	0.88 J	23 U	23 U	23 U	177 J	23 U	23 U
Vanadium	NS	17 J	20 J	46 U	46 U	2,323 U	46 U	46 U	46 U	46 U	1,486	46 U	46 U
Zinc	NS	1,384	975	561 J+	254 J+	17,652 J+	390 J+	386 J+	121 J+	321 J+	201,600 J+	527 J+	459 J+

Notes:
Refer to Figure 5 for the micro-vac sample locations.
Micro-vac sample analytical results and EPA Site-Specific Action Level are presented in micrograms per square feet ($\mu g/ft^2$).
RST 3 - Removal Support Team 3
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Values bolded and highlighted in yellow exceed the EPA Site-Specific Action Level.

Table 2B: Micro-Vac Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
March 3 through 10, 2016

	RST 3 Sample Number	**BRC001-DM01-MW011-01**	**BRC001-DM01-MW012-01**	**BRC001-DM01-MW013-01**
	CLP Number	**MBCAT6**	**MBCAT7**	**MBCAT8**
	Sample Date	3/10/2016	3/10/2016	3/10/2016
	Sample Area (cm^2)	100	100	100
	Sample Collection Type	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Dust
	Sample Location	Structure No. 1	Structure No. 1	Structure No. 1
	Sample Sub-Location	Locker Room 'Suspected Dirty Clothes	Shower Room Towel	Shower Room Curtain
TAL Metal ($\mu g/ft^2$)	**EPA Site-Specific Action Level**			
Aluminum	NS	957 J-	387 J-	525 J-
Antimony	NS	196	82	92
Arsenic	NS	23	9.3	9.3
Barium	NS	186 U	186 U	186 U
Beryllium	NS	4.6 U	4.6 U	4.6 U
Cadmium	NS	10	4.6 U	4.6 U
Calcium	NS	8,185	4,645 U	4,645 U
Chromium	NS	17	9.3 U	17
Cobalt	NS	46 U	46 U	46 U
Copper	NS	149	69	53
Iron	NS	5,639 J+	2,350 J+	3,149 J+
Lead	250	**9,569 J+**	**3,976 J+**	**4,822 J+**
Magnesium	NS	4,645 U	4,645 U	4,645 U
Manganese	NS	59	30	37
Nickel	NS	70	32 J	24 J
Potassium	NS	4,645 U	4,645 U	4,645 U
Selenium	NS	5.8 J	2.9 J	5.9 J
Silver	NS	9.3 U	9.3 U	9.3 U
Sodium	NS	4,645 U	4,645 U	4,645 U
Thallium	NS	23 U	23 U	23 U
Vanadium	NS	46 U	46 U	46 U
Zinc	NS	391 J+	164 J+	126 J+

Notes:

Refer to Figure 5 for the micro-vac sample locations.

Micro-vac sample analytical results and EPA Site-Specific Action Level are presented in micrograms per square feet ($\mu g/ft^2$).

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U - Indicates the analyte was analyzed for but not detected

NS - Not Specified

Values bolded and highlighted in yellow exceed the EPA Site-Specific Action Level.

Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
March 1 through 9, 2016

	RST 3 Sample Number	**BRC001-SUMP01-SL001-01**	**BRC001-SUMP01-SL001-02**	**BRC001-SUMP02-SL001-01**	**BRC001-SUMP03-SL001-01**	**BRC001-SUMP04-SL001-01**	**BRC001-SUMP05-SL001-01**	**BRC001-SUMP06-SL001-01**	**BRC001-SUMP07-SL001-01**	**BRC001-SUMP08-SL001-01**	**BRC001-SUMP09-SL001-01**	**BRC001-SUMP10-SL001-01**
	CLP Number	**MBCAF1**	**MBCAF2**	**MBCAF3**	**MBCAF4**	**MBCAF5**	**MBCAF6**	**MBCAF7**	**MBCAF8**	**MBCAF9**	**MBCAG0**	**MBCAG1**
	Sample Date	3/1/2016	3/1/2016	3/1/2016	3/1/2016	3/1/2016	3/1/2016	3/1/2016	3/1/2016	3/1/2016	3/1/2016	3/1/2016
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Sludge	Sludge	Sludge	Sludge	Sludge	Sludge	Sludge	Sludge	Sludge	Sludge	Sludge
	Sample Location	Sump No. 1	Sump No. 1	Sump No. 2	Sump No. 3	Sump No. 4	Sump No. 5	Sump No. 6	Sump No. 7	Sump No. 8	Sump No. 9	Sump No. 10
	Sample Sub-Location	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	11,600 J	13,100 J	11,500 J	831 J	8,580 J	2,650 J	49,300 J	3,090 J	9,630 J	2,000 J	2,720
Antimony	470	426 J	419 J	**2,970 J**	**6,050 J**	**3,950 J**	**794 J**	**942 J**	378 J	**5,620 J**	**2,780 J**	**1,630**
Arsenic	300	57 J	58 J	**410 J**	**891 J**	**909 J**	130 J	201 J	36 J	**1,550 J**	**317 J**	230
Barium	220,000	162 J	177 J	1,170 J	203 UJ	2,410 J	268 J	224 J	860 J	3,960 J	831 J	819
Beryllium	2,300	1.0 UJ	1.0 UJ	3.0 UJ	5.1 UJ	5.8 UJ	2.5 UJ	1.5 UJ	2.6 UJ	5.6 UJ	2.9 UJ	2.2 U
Cadmium	980	45 J	45 J	104 J	746 J	334 J	269 J	188 J	29 J	142 J	135 J	43
Calcium	NS	40,400 J	40,600 J	47,100 J	5,070 UJ	40,000 J	229,000 J	61,400 J	307,000 J	121,000 J	45,100 J	38,100
Chromium	1,800,000	73 J	81 J	123 J	16 J	136 J	145 J	3,160 J	133 J	111 J	81 J	324
Cobalt	350	17 J	17 J	30 UJ	51 UJ	58 UJ	31 J	35 J	26 UJ	56 UJ	29 UJ	22 U
Copper	47,000	257 J	260 J	1,660 J	224 J	1,620 J	407 J	809 J	72 J	2,970 J	772 J	680
Iron	820,000	29,900 J	31,700 J	91,700 J	5,890 J	134,000 J	25,800 J	88,300 J	25,700 J	191,000 J	40,700 J	78,800
Lead	800	**34,400 J**	**34,100 J**	**156,000 J**	**298,000 J**	**190,000 J**	**8,530 J**	**19,400 J**	**9,390 J**	**85,700 J**	**255,000 J**	**126,000**
Magnesium	NS	6,350 J	7,360 J	5,550 J	5,070 UJ	5,760 UJ	2,520 J	1,770 J	11,800 J	5,560 UJ	2,940 UJ	3,460
Manganese	26,000	580 J	633 J	662 J	90 J	679 J	486 J	842 J	576 J	864 J	235 J	479
Nickel	22,000	152 J+	156 J	243 J	133 J	315 J	414 J	1,070 J	112 J	287 J	165 J	377
Potassium	NS	1,000 UJ	1,000 UJ	2,990 UJ	5,070 UJ	5,760 UJ	2,480 UJ	1,500 UJ	2,620 UJ	5,560 UJ	2,940 UJ	2,180 U
Selenium	5,800	7.0 UJ	7.0 UJ	22 J	96 J	48 J	17 UJ	11 UJ	18 UJ	69 J	28 J	15 U
Silver	5800	2.1 J	2.1 J	8.5 J	10 UJ	13 J	5.0 UJ	4.5 J	5.2 UJ	11 J	9.1 J	6.4
Sodium	NS	2,050 J	2,100 J	2,380 J	1,540 J	4,280 J	1,930 J	13,900 J	2,280 J	24,300 J	1,150 J	3,030
Thallium	12	1.1 J	0.83 J	6.6 J	**15 J**	6.4 J	12.4 UJ	0.5 J	13.1 UJ	27.8 UJ	10 J	3.9
Vanadium	5,800	183 J	171 J	85 J	51 UJ	73 J	25 J	71 J	26 UJ	71 J	138 J	53
Zinc	350,000	1,310 J	1,390 J	1,450 J	2,580 J	2,820 J	673 J	3,220 J	733 J	1,770 J	546 J	729

Notes:
Refer to Figure 6 for the solid waste sample locations.
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
EPA RMLs are provided for comparison purposes only.
Solid waste sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detected
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
March 1 through 9, 2016

	RST 3 Sample Number	**BRC001-AT01-SL001-01**	**BRC001-AT02-SL001-01**	**BRC001-AT03-SL001-01**	**BRC001-AT04-SL001-01**	**BRC001-BB01-SL001-01**	**BRC001-BB01-SL001-02**	**BRC001-BB01-SL002-01**	**BRC001-BB01-SL003-01**	**BRC001-BB01-SL004-01**	**BRC001-BB01-SL005-01**	**BRC001-CC01-SL001-01**
	CLP Number	**MBCAG2**	**MBCAG3**	**MBCAG4**	**MBCAG5**	**MBCAG6**	**MBCAG7**	**MBCAG8**	**MBCAG9**	**MBCAH0**	**MBCAH1**	**MBCAH2**
	Sample Date	3/2/2016	3/2/2016	3/2/2016	3/2/2016	3/3/2016	3/3/2016	3/3/2016	3/3/2016	3/4/2016	3/4/2016	3/2/2016
	Sample Collection Type	Composite	Composite	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Sludge	Sludge	Sludge	Sludge	Hopper Contents	Hopper Contents	Hopper Contents	Hopper Contents	Concrete Chips	Concrete Chips	Sludge
	Sample Location	Structure No. 4	Structure No. 4	Structure No. 4	Structure No. 4	Structure No. 7	Structure No. 7	Structure No. 7	Structure No. 7	Structure No. 7	Structure No. 7	Structure No. 2
	Sample Sub-Location	Lagoon No. 1	Lagoon No. 2	Tank 1 - Water Treatment Building	Tank 2 - Water Treatment Building	Bag House 1 Hopper	Bag House 1 Hopper	Bag House 2 Hopper	Bag House 2 Floor	Bag House 2 Floor	Bag House 1 Walls	Crushing Area Trench
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	6,020 J	416 J	6,500 J	9,690 J	518	539	794	484	1,620	8,350	4,250
Antimony	470	**11,700 J**	**555 J**	**2,930 J**	**16,500 J**	**3,680**	**3,980**	**10,500**	**6,850**	**3,160**	8.3 J	**1,360**
Arsenic	300	246 J	15 J	96 J	**528 J**	**895**	**1,050**	**966**	**1,120**	**1,350**	17	168
Barium	220,000	200 UJ	918 J	315 J	648 J	132 J	140	150	110	211	51	279
Beryllium	2,300	5.0 UJ	0.97 UJ	2.5 UJ	5.0 UJ	2.6 U	3.1 U	2.5 U	2.2 U	2.7 U	1.0 U	3.1 U
Cadmium	980	**4,510 J**	11 J	**1,620 J**	**6,060 J**	**1,710**	**1,640**	**1,560**	893	**7,110**	23	62
Calcium	NS	269,000 J	3,500 J	201,000 J	129,000 J	6,210	6,450	13,500	14,300	125,000	393,000	35,400
Chromium	1,800,000	331 J	9.3 J	364 J	633 J	28	35	15	19	9.2	22	94
Cobalt	350	**658 J**	9.7 UJ	165 J	**1,400 J**	26 UJ	31 U	26 U	22 U	27 U	10 U	31 U
Copper	47,000	1,310 J	41 J	1,040 J	1,890 J	188 J	204	450	238	103	8.7	703
Iron	820,000	17,200 J	802 J	13,400 J	33,100 J	77,200 J	109,000	7,170	13,600	5,540	6,290	173,000
Lead	800	**10,400 J**	**266,000 J**	**919 J**	**10,400 J**	**110,000**	**120,000**	**128,000**	**126,000**	**110,000**	**3,030**	**61,500**
Magnesium	NS	5,000 UJ	966 UJ	4,920 J	5,000 UJ	2,560 U	3,080 U	2,550 U	2,160 U	2,670 U	2,240	3,100 U
Manganese	26,000	5,270 J	12 J	738 J	8,950 J	393 J	583	78	133	164	179	913
Nickel	22,000	8,540 J	22 J	2,410 J	15,300 J	68	78	475	146	236	10	267
Potassium	NS	5,000 UJ	966 UJ	2,500 UJ	5,000 UJ	2,560 UJ	3,080 U	2,550 U	20,600	6,040	8,330	3,100 U
Selenium	5,800	661 J	108 J	146 J	436 J	65 J	73	109	88	120	7.2 U	22 U
Silver	5800	10 UJ	106 J	5.0 UJ	10 UJ	5.1 U	6.2 U	5.1 U	4.3 U	5.3 U	2.0 U	6.2 U
Sodium	NS	2,790 J	3,980 J	12,600 J	19,300 J	31,900	39,700	14,300	58,300	4,630	3,610	3,100 U
Thallium	12	25 UJ	**15 J**	2.5 J	25 UJ	13 U	15 U	13 U	11 U	13 U	5.1 U	16 U
Vanadium	5,800	123 J	9.7 UJ	49 J	161 J	55	57	102	60	27 U	24	31 U
Zinc	350,000	7,750 J	34 J	2,590 J	9,630 J	5,440	5,770	2,530	2,140	3,330	37	6,900

Notes:
Refer to Figure 6 for the solid waste sample locations.
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
EPA RMLs are provided for comparison purposes only.
Solid waste sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detected
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
March 1 through 9, 2016

	RST 3 Sample Number	**BRC001-CC01-SL002-01**	**BRC001-CC01-SL003-01**	**BRC001-CC01-SL004-01**	**BRC001-CC01-SL005-01**	**BRC001-CC01-SL006-01**	**BRC001-CF01-SL001-01**	**BRC001-CF01-SL001-02**	**BRC001-CF01-SL002-01**	**BRC001-CF01-SL003-01**	**BRC001-CF01-SL004-01**	**BRC001-CF01-SL005-01**
	CLP Number	**MBCAH3**	**MBCAH4**	**MBCAH5**	**MBCAH6**	**MBCAH7**	**MBCAH8**	**MBCAH9**	**MBCAJ0**	**MBCAJ1**	**MBCAJ2**	**MBCAJ3**
	Sample Date	3/2/2016	3/2/2016	3/2/2016	3/3/2016	3/3/2016	3/2/2016	3/2/2016	3/2/2016	3/3/2016	3/3/2016	3/3/2016
	Sample Collection Type	Composite	Grab	Grab	Composite	Composite	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Crushing Area	Underneath Crusher	Underneath Crusher	Crushing Area Floor (East Side)	Crushing Area Floor (North Side)	Furnace No. 1	Furnace No. 1	Furnace No. 2	Behind Furnace No. 2	Behind Furnace No. 2	Behind Furnace No. 1
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	2,480	2,590	281	3,090	3,540	5,670	6,070	3,100	5,260	5,170	1,510
Antimony	470	**1,320**	**1,920**	**778**	**3,420**	**2,920**	**4,240**	**4,400**	**9,190**	**1,840**	**4,340**	**1,650**
Arsenic	300	106	219	35	293	252	**473**	**561**	**426**	**973**	**1,000**	**1,100**
Barium	220,000	249	251	98	161	473	569 J	693	553	402	712	166
Beryllium	2,300	2.3 U	1.5 U	0.92 U	2.6 U	2.0 U	3.1 U	3.0 U	1.5 U	1.4 U	3.1 U	1.9 U
Cadmium	980	40	31	21	99	73	154	180	643	**3,870**	235	148
Calcium	NS	14,600	7,570	23,100	137,000	80,700	12,200	14,700	24,600	25,900	7,330	12,600
Chromium	1,800,000	89	42	64	68	74	188	143	124	54	420	20
Cobalt	350	23 U	15 U	9.2 U	26 U	20 U	31 U	30 U	15 U	14 U	31 U	19 U
Copper	47,000	370	362	121	1,490	1,660	3,440	4,020	1,330	1,280	1,200	237
Iron	820,000	129,000	41,000	9,100	96,100	85,900	153,000	174,000	85,800	56,900	196,000	6,830
Lead	800	**111,000**	**135,000**	**121,000**	**96,800**	**140,000**	**72,800**	**79,500**	**136,000**	**121,000**	**83,800**	**118,000**
Magnesium	NS	2,290 U	1,520 U	922 U	2,620 U	1,960 U	3,060 U	3,010 U	1,520 U	1,710	3,110	1,860 U
Manganese	26,000	787	258	42	546	515	629	696	377	403	774	111
Nickel	22,000	119	102	109	327	577	439	554	563	246	542	68
Potassium	NS	2,290 U	1,520 U	922 U	2,620 U	1,960 U	3,060 U	3,010 U	1,520 U	1,410 U	3,060 U	1,860 U
Selenium	5,800	16 U	17	6.5 U	18 U	14 U	21 U	21 U	27	17	62	13 U
Silver	5800	9.5	3.1	17	5.2 U	5.6	6.1 U	6.0 U	9.8	5.3	6.1 U	3.7 U
Sodium	NS	2,290 U	1,520 U	8,230	36,000	18,400	61,200	72,800	37,800	84,100	67,900	39,800
Thallium	12	11 U	7.6 U	4.6 U	13 U	9.8 U	15.3 UJ	15 U	7.6 U	7.1 U	15 U	9.3 U
Vanadium	5,800	9.7 J	6.2 J	1.3 J	15 J	17 J	48	51	26	309	30 J	88
Zinc	350,000	4,540	3,090	224	6,860	3,860	1,450	1,260	1,120	2,180	2,050	3,230

Notes:
Refer to Figure 6 for the solid waste sample locations.
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
EPA RMLs are provided for comparison purposes only.
Solid waste sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detected
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
March 1 through 9, 2016

	RST 3 Sample Number	**BRC001-CF01-SL006-01**	**BRC001-CF01-SL007-01**	**BRC001-CK01-SL001-01**	**BRC001-CK01-SL002-01**	**BRC001-CK01-SL003-01**	**BRC001-CK01-SL004-01**	**BRC001-CK01-SL005-01**	**BRC001-CK01-SL006-01**	**BRC001-CK01-SL007-01**	**BRC001-CM01-SL001-01**	**BRC001-CM01-SL002-01**
	CLP Number	**MBCAJ4**	**MBCAJ5**	**MBCAJ6**	**MBCAJ7**	**MBCAJ8**	**MBCAJ9**	**MBCAK0**	**MBCAK1**	**MBCAK2**	**MBCAK3**	**MBCAK4**
	Sample Date	3/4/2016	3/4/2016	3/2/2016	3/2/2016	3/2/2016	3/4/2016	3/4/2016	3/4/2016	3/4/2016	3/2/2016	3/2/2016
	Sample Collection Type	Grab	Grab	Composite	Composite	Grab	Grab	Grab	Grab	Grab	Composite	Grab
	Sample Matrix	Furnace Contents	Furnace Contents	Kettle Contents	Kettle Contents	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Furnace No. 2	Furnace No. 1	Kettle Nos. 1 through 5	Kettle Nos. 6 through 9	Floor of Kettle No. 6 Room	Kettle No. 4 Floor	Floor of Kettle No. 1	Floor between Kettle Nos. 1 and 2	Floor of Kettle No. 3	Floor of Quimico Room	Center Trench
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	1,800	5,790	1,240	8,080	3,270	1,820	11,000	3,790	1,090	6,680	3,830
Antimony	470	**1,090**	**4,960**	**29,900**	**9,030**	**7,230**	**13,300**	**2,820**	**9,870**	**11,000**	**3,200**	**2,520**
Arsenic	300	**560**	189	**1,390**	**1,040**	**1,160**	**570**	**525**	**474**	**300**	**660**	**341**
Barium	220,000	322	151 U	223	677	433	179	184	145	126	667	535
Beryllium	2,300	1.2 U	3.8 U	2.5 U	1.5 U	1.9 U	1.6 U	2.0 U	1.8 U	1.3 U	0.13 J	2.8 U
Cadmium	980	1.2 U	4.4	41	118	159	106	34	64	37	112	85
Calcium	NS	2,120	10,800	12,400	8,650	13,300	26,600	224,000	27,000	9,850	101,000	65,100
Chromium	1,800,000	92	167	21	108	38	23	64	25	18	168	137
Cobalt	350	12 U	38 U	25 U	15 U	19 U	16 U	20 U	18 U	13 U	35 U	28 U
Copper	47,000	756	267	3,030	6,950	624	1,300	1,250	1,340	1,600	828	2,350
Iron	820,000	25,400	58,500	18,300	130,000	75,800	33,100	21,800	42,300	19,100	130,000	227,000
Lead	800	**83,700**	**38,700**	**121,000**	**87,600**	**105,000**	**104,000**	**220,000**	**241,000**	**73,400**	**107,000**	**93,200**
Magnesium	NS	1,160 U	3,780 U	2,520 U	1,530 U	1,890 U	1,630 U	2,610	1,790 U	1,290 U	3,540 U	2,780 U
Manganese	26,000	102	138	140	482	312	202	182	293	104	786	706
Nickel	22,000	115	186	1,400	895	1,490	1,190	824	1,270	480	366	492
Potassium	NS	1,160 U	3,780 U	2,520 U	1,530 U	1,890 U	1,630 U	1,960 U	1,790 U	1,290 U	3,540 U	2,780 U
Selenium	5,800	8.1 U	27 U	18	25	44	26	14 U	36	9.9	21 J	14 J
Silver	5800	9.0	7.6 U	11	4.5	6.9	11	3.9 U	9.1	9.8	7.1 U	5.6 U
Sodium	NS	42,300	71,000	41,400	59,400	41,900	16,700	15,700	29,900	13,400	21,300	4,450
Thallium	12	5.8 U	19 U	13 U	7.7 U	9.4 U	8.2 U	9.8 U	9.0 U	6.4 U	18 U	14 U
Vanadium	5,800	11 J	22 J	7.3 J	28	17 J	10 J	29	13 J	4.5 J	56	22 J
Zinc	350,000	57	422	621	9,110	1,200	4,350	1,180	3,250	904	9,320	8,140

Notes:
Refer to Figure 6 for the solid waste sample locations.
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
EPA RMLs are provided for comparison purposes only.
Solid waste sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detected
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
March 1 through 9, 2016

	RST 3 Sample Number	**BRC001-CM01-SL003-01**	**BRC001-CM01-SL004-01**	**BRC001-CM01-SL005-01**	**BRC001-CM01-SL006-01**	**BRC001-CM01-SL007-01**	**BRC001-CM01-SL008-01**	**BRC001-CM01-SL009-01**	**BRC001-CM01-SL010-01**	**BRC001-CM01-SL011-01**	**BRC001-CM01-SL012-01**	**BRC001-CM01-SL013-01**
	CLP Number	**MBCAK5**	**MBCAK6**	**MBCAK7**	**MBCAK8**	**MBCAK9**	**MBCAL0**	**MBCAL1**	**MBCAL2**	**MBCAL3**	**MBCAL4**	**MBCAL5**
	Sample Date	3/2/2016	3/2/2016	3/2/2016	3/2/2016	3/2/2016	3/2/2016	3/2/2016	3/3/2016	3/3/2016	3/2/2016	3/3/2016
	Sample Collection Type	Composite	Composite	Grab	Grab	Composite	Composite	Composite	Composite	Composite	Composite	Composite
	Sample Matrix	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Floor between Kettle Nos. 2 and 3	Floor between Kettle Nos. 3 and 4	Floor of Kettle No. 5	Floor of Slag Staging Area	Floor of Slag Staging Area	Floor of Slag Bin Staging Area	South Floor	Center Floor	North Floor	Floor between Kettle Nos. 1 and 2	Center Floor - Area with Motors
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	2,420	1,920	2,220	2,270	2,090	6,250	4,250	5,090	5,100	2,140	6,110
Antimony	470	**9,710**	**6,280**	**3,960**	**9,430**	**4,560**	**5,040**	**6,390**	**4,410**	**7,990**	**14,900**	**4,550**
Arsenic	300	**375**	263	**323**	**823**	223	**483**	**517**	**501**	**461**	**457**	**460**
Barium	220,000	215	217	288	154	285	115	242	416	452	125	331
Beryllium	2,300	0.021 J	0.029 J	0.081 J	2.1 U	0.017 J	0.10 J	0.037 J	0.061 J	1.5 U	1.1 U	3.6 U
Cadmium	980	63	44	71	57	82	53	148	109	70	41	60
Calcium	NS	29,200	16,400	16,900	23,200	50,200	54,700	54,600	69,600	116,000	29,000	143,000
Chromium	1,800,000	37	108	51	145	102	261	163	161	118	28	170
Cobalt	350	9.9 U	8.2 U	22 U	21 U	14 U	19 U	13	13 U	15 U	11 U	36 U
Copper	47,000	1,390	1,180	1,090	2,700	2,600	1,590	1,390	991	1,580	1,010	6,160
Iron	820,000	36,800	32,700	26,600	46,400	61,900	115,000	215,000	159,000	166,000	47,900	115,000
Lead	800	**86,600**	**62,400**	**79,700**	**74,600**	**87,200**	**62,700**	**64,900**	**76,600**	**138,000**	**111,000**	**128,000**
Magnesium	NS	1,270	824 U	2,150 U	2,140 U	1,440 U	2,040	1,640	2,260	1,670	1,060 U	3,630 U
Manganese	26,000	199	197	194	243	226	622	862	695	828	246	635
Nickel	22,000	745	813	383	505	1,130	375	647	471	385	1,150	369
Potassium	NS	990 U	824 U	2,150 U	2,140 U	1,440 U	1,880 U	2,080	2,190	1,490 U	1,060 U	3,630 U
Selenium	5,800	17	11	20	12 J	7.2 J	15	13	17	3.7	29	8.0
Silver	5800	12	14	6.4	5.1	17	3.8 U	13	2.6 U	3.0 U	14	7.3 U
Sodium	NS	17,800	12,600	14,800	116,000	32,400	47,000	26,500	20,100	20,000	6,440	36,700
Thallium	12	5.0 U	4.1 U	11 U	11 U	7.2 U	9.4 U	4.4 U	6.5 U	7.5 U	5.3 U	18 U
Vanadium	5,800	8.9 J	3.3 J	82	9.9 J	13 J	23	29	30	20	11 U	36 U
Zinc	350,000	1,710	740	5,870	6,580	1,190	4,210	10,100	12,900	18,300	2,140	13,300

Notes:
Refer to Figure 6 for the solid waste sample locations.
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
EPA RMLs are provided for comparison purposes only.
Solid waste sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detected
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
March 1 through 9, 2016

	RST 3 Sample Number	**BRC001-CM01-SL014-01**	**BRC001-CM01-SL015-01**	**BRC001-CM01-SL016-01**	**BRC001-CM01-SL017-01**	**BRC001-CM01-SL018-01**	**BRC001-CM01-SL019-01**	**BRC001-CM01-SL020-01**	**BRC001-CM01-SL021-01**	**BRC001-CM01-SL022-01**	**BRC001-CM01-SL022-02**	**BRC001-CM01-SL023-01**
	CLP Number	**MBCAL6**	**MBCAL7**	**MBCAL8**	**MBCAL9**	**MBCAM0**	**MBCAM1**	**MBCAM2**	**MBCAM3**	**MBCAM4**	**MBCAM5**	**MBCAM6**
	Sample Date	3/3/2016	3/3/2016	3/3/2016	3/3/2016	3/3/2016	3/4/2016	3/4/2016	3/4/2016	3/4/2016	3/4/2016	3/4/2016
	Sample Collection Type	Composite	Composite	Composite	Grab	Composite	Composite	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Floor Behind Slag Collection Area	Floor Behind Slag Collection Unit No. 1	Floor Behind Kettle Nos. 3 and 4	Floor Behind Slag Room 1	Floor of Sealage Room	Dirt Floor - East of Kettle Nos. 3 and 4	Top of Concrete - Kettle Nos. 2 and 3	Vault in Dirt Floor Room	Trough from Furnace No. 1 to Kettle No. 5	Trough from Furnace No. 1 to Kettle No. 5	Trough from Furnace No. 2 to Kettle No. 6
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	11,300	5,710	4,370	2,720	6,580	3,640	3,220	3,000	6,470	5,530	4,560
Antimony	470	**2,170**	**4,310**	**11,400**	207	**6,140**	**7,080**	**33,400**	**7,040**	**14,800**	**15,100**	**8,560**
Arsenic	300	**407**	**480**	**734**	86	**465**	**760**	**1,610**	**1,100**	**1,360**	**1,050**	**853**
Barium	220,000	464	406	454	93 U	333	322	287	178	194 J	275	359
Beryllium	2,300	2.4 U	3.2 U	1.9 U	2.3 U	2.9 U	1.5 U	2.5 U	2.5 U	3.9 U	3.3 U	1.5 U
Cadmium	980	284	260	196	29	112	429	201	**1,250**	80	73	380
Calcium	NS	77,800	147,000	71,200	164,000	55,800	124,000	45,300	88,000	12,500	10,700	26,400
Chromium	1,800,000	154	126	74	46	134	78	43	99	424	414	146
Cobalt	350	24 U	32 U	19 U	23 U	29 U	15 U	25 U	77	39 UJ	34	15 U
Copper	47,000	628	532	1,070	80	843	666	1,330	666	5,670	4,530	975
Iron	820,000	203,000	94,200	81,000	11,200	160,000	41,500	66,400	90,800	222,000	187,000	79,100
Lead	800	**118,000**	**136,000**	**112,000**	**11,800**	**137,000**	**140,000**	**149,000**	**140,000**	**109,000**	**132,000**	**145,000**
Magnesium	NS	2,440 U	3,760	3,270	2,340 U	2,850 U	8,460	2,480 U	3,580	3,930 U	3,370	3,480
Manganese	26,000	1,560	821	522	94	1,030	362	459	1,730	922	814	482
Nickel	22,000	500	488	1,100	36	592	716	1,410	1,860	709 J	1,310 J	977
Potassium	NS	2,440 U	3,170 U	1,850 U	2,990	2,850 U	1,510 U	3,630	2,510 U	3,930 U	3,270 U	1,510 U
Selenium	5,800	10	18	27	9.4	21	30	67	197	18	17	40
Silver	5800	4.9 U	6.3 U	8.6	4.7 U	6.7	4.8	6.4	5.0 U	7.9 U	6.5 U	11
Sodium	NS	33,300	41,400	12,900	181,000	7,720	24,400	15,300	23,500	89,900	80,100	42,700
Thallium	12	12 U	16 U	9.3 U	12 U	14 U	7.5 U	12 U	13 U	19.6 UJ	16 U	7.6 U
Vanadium	5,800	39	35	25	23 U	32	38	28	71	40	33	34
Zinc	350,000	3,730	2,410	2,990	211	10,200	1,460	5,270	4,820	1,100	856	1,550

Notes:
Refer to Figure 6 for the solid waste sample locations.
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
EPA RMLs are provided for comparison purposes only.
Solid waste sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detected
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
March 1 through 9, 2016

	RST 3 Sample Number	**BRC001-CM01-SL024-01**	**BRC001-CM01-SL024-02**	**BRC001-CM01-SL025-01**	**BRC001-CM01-SL026-01**	**BRC001-CM01-SL027-01**	**BRC001-CM01-SL028-01**	**BRC001-CM01-SL029-01**	**BRC001-CM01-SL030-01**	**BRC001-CM01-SL031-01**	**BRC001-CM01-SL032-01**	**BRC001-CM01-SL033-01**
	CLP Number	**MBCAM7**	**MBCAM8**	**MBCAM9**	**MBCAN0**	**MBCAN1**	**MBCAN2**	**MBCAN3**	**MBCAN4**	**MBCAN5**	**MBCAN6**	**MBCAN7**
	Sample Date	3/4/2016	3/4/2016	3/7/2016	3/7/2016	3/7/2016	3/7/2016	3/7/2016	3/7/2016	3/7/2016	3/7/2016	3/7/2016
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Dust	Dust	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Trough from Furnace No. 2 to Kettle No. 6	Trough from Furnace No. 2 to Kettle No. 6	North Floor of Crushing Room	Floor Behind Crusher	Floor of Slag Pile Room	Northeast Floor of Crushing Room	Southeast Floor of Crushing Room	Floor of Entryway to Slag Pile Room	Floor of Chemical Storage Area	Southwest Corner Floor	North Floor
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	6,570	5,520	1,170	3,650	6,380	5,150	1,640	5,180	6,870	6,610	5,440
Antimony	470	**3,980**	**5,820**	**564**	23	225	35	320	56	35	89	80
Arsenic	300	**719**	**785**	60	3.5 U	30	13	19	49	16	29	28
Barium	220,000	587 J	461	155	69 U	171	38	34	67 U	73	63	35
Beryllium	2,300	2.8 U	4.2 U	0.55 U	1.7 U	0.55 U	0.51 U	0.51 U	1.7 U	1.5 U	0.47 U	0.49 U
Cadmium	980	119 J	233 J	13	15	8.5	5.3	28	4.9	15	3.8	10
Calcium	NS	9,900 J	8,570	236,000	366,000	316,000	388,000	269,000	386,000	373,000	326,000	380,000
Chromium	1,800,000	651	437	21	26	38	23	13	19	23	18	27
Cobalt	350	28 U	42 U	5.5 U	17 U	5.5 U	5.1 U	5.1 U	17 U	15 U	4.7 U	4.9 U
Copper	47,000	2,510	2,040	216	48	276	114	49	204	76	85	215
Iron	820,000	212,000	164,000	6,540	5,080	13,500	4,450	2,980	5,470	6,190	8,480	5,410
Lead	800	**137,000**	**128,000**	**49,400**	**7,640**	**36,200**	**3,150**	**5,370**	**6,240**	**6,960**	**9,620**	**7,350**
Magnesium	NS	2,810 U	4,220 U	708	2,500	4,010	2,740	878	2,440	3,400	2,460	1,700
Manganese	26,000	897	683	52	92	209	74	55	94	161	122	84
Nickel	22,000	323 J	403	44	57	123	13	86	19	16	16	12
Potassium	NS	2,810 U	4,220 U	657	1,730 U	919	507 U	505 U	1,670 U	2,010	3,510	1,310
Selenium	5,800	28	30	3.8 U	12 U	3.8 U	3.5 U	4.5	12 U	11 U	3.3 U	3.4 U
Silver	5800	5.6 U	8.4 U	1.2	3.5 U	1.1 U	1.0 U	1.0 U	3.3 U	3.0 U	0.95 U	0.97 U
Sodium	NS	70,900	53,000	2,260	1,730 U	2,640	7,130	1,810	17,800	12,200	5,310	11,400
Thallium	12	R	21 U	2.7 U	8.7 U	2.7 U	2.5 U	2.5 U	8.3 U	7.6 U	2.4 U	2.4 U
Vanadium	5,800	38	42 U	7.3	17 U	18	13	8.1	17 U	17	21	16
Zinc	350,000	1,470	1,740	211	214	97	132	232	102	206	146	99

Notes:
Refer to Figure 6 for the solid waste sample locations.
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
EPA RMLs are provided for comparison purposes only.
Solid waste sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detected
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
March 1 through 9, 2016

	RST 3 Sample Number	**BRC001-CM01-SL034-01**	**BRC001-CM01-SL035-01**	**BRC001-CM01-SL036-01**	**BRC001-CM01-SL037-01**	**BRC001-CM01-SL038-01**	**BRC001-CM01-SL039-01**	**BRC001-CM01-SL040-01**	**BRC001-CM01-SL041-01**	**BRC001-CM01-SL042-01**	**BRC001-CM01-SL043-01**	**BRC001-CM01-SL044-01**
	CLP Number	**MBCAN8**	**MBCAN9**	**MBCAP0**	**MBCAP1**	**MBCAP2**	**MBCAP3**	**MBCAP4**	**MBCAP5**	**MBCAP6**	**MBCAP7**	**MBCAP8**
	Sample Date	3/7/2016	3/7/2016	3/7/2016	3/7/2016	3/7/2016	3/7/2016	3/7/2016	3/7/2016	3/7/2016	3/7/2016	3/7/2016
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Center Floor	Center Floor	Center Floor	East Floor	East Floor	East Floor	East Floor	Floor of Storage Room	Floor Behind Furnace No. 1	Wall of Slag Room No. 2	Floor of Furnace No. 2
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	3,760	5,640	5,420	5,040	6,520	6,400	6,940	6,800	5,480	8,120	5,110
Antimony	470	101	308	383	84	16	11	307	445	60	15	7.2
Arsenic	300	37	70	59	26	15	28	102	136	48	18	18
Barium	220,000	46	139	105	71	50	40	90	123	42 U	66	36
Beryllium	2,300	0.49 U	0.51 U	0.44 U	0.50 U	0.52 U	0.42 U	0.45 U	0.49 U	1.0 U	0.49 U	0.47 U
Cadmium	980	26	13	11	14	7.9	2.9	19	19	2.3	2.8	2.9
Calcium	NS	390,000	285,000	321,000	376,000	379,000	273,000	300,000	302,000	287,000	345,000	345,000
Chromium	1,800,000	21	37	23	36	25	23	18	28	19	30	22
Cobalt	350	4.9 U	5.1 U	4.4 U	5.0 U	5.2 U	4.2 U	4.5 U	4.9 U	10 U	4.9 U	4.7 U
Copper	47,000	89	312	209	43	23	202	59	98	82	21	100
Iron	820,000	4,480	11,400	8,990	6,250	5,130	5,740	6,700	9,030	5,930	7,720	3,270
Lead	800	**8,650**	**36,200**	**34,100**	**9,350**	**1,440**	510	**18,000**	**40,100**	**3,700**	**2,130**	408
Magnesium	NS	1,490	2,330	2,620	2,540	3,160	1,850	2,520	2,580	2,210	1,990	1,750
Manganese	26,000	76	128	133	122	98	94	141	180	92	132	62
Nickel	22,000	15	42	35	32	13	9.5	67	97	8.3 U	13	4.5
Potassium	NS	1,370	6,510	5,170	4,350	4,560	2,000	4,390	3,180	1,040 U	5,350	1,250
Selenium	5,800	3.5 U	3.5 U	3.1 U	3.5 U	3.6 U	2.9 U	3.1 U	6.7	7.3 U	3.4 U	3.3 U
Silver	5800	0.99 U	1.0 U	0.88 U	0.99 U	1.0 U	0.84 U	0.89 U	0.98 U	2.1 U	0.97 U	0.95 U
Sodium	NS	9,390	12,300	8,940	9,890	10,500	11,400	7,120	7,370	18,200	6,710	9,220
Thallium	12	2.5 U	2.5 U	2.2 U	2.5 U	2.6 U	2.1 U	2.2 U	2.5 U	5.2 U	2.4 U	2.4 U
Vanadium	5,800	12	23	17	14	22	12	19	19	18	25	12
Zinc	350,000	243	368	261	59	24	12	122	197	47	21	11

Notes:
Refer to Figure 6 for the solid waste sample locations.
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
EPA RMLs are provided for comparison purposes only.
Solid waste sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detected
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 2C: Solid Waste Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
March 1 through 9, 2016

	RST 3 Sample Number	**BRC001-CM01-SL045-01**	**BRC001-CM01-SL045-02**	**BRC001-CM01-SL046-01**	**BRC001-CM01-SL047-01**	**BRC001-CM01-SL048-01**	**BRC001-CM01-SL049-01**	**BRC001-CS01-SL001-01**	**BRC001-CS01-SL002-01**	**BRC001-CS01-SL003-01**	**BRC001-CS01-SL003-02**	**BRC001-CS01-SL004-01**
	CLP Number	**MBCAP9**	**MBCAQ0**	**MBCAQ6**	**MBCAQ7**	**MBCAQ8**	**MBCAQ9**	**MBCAQ1**	**MBCAQ2**	**MBCAQ3**	**MBCAQ4**	**MBCAQ5**
	Sample Date	3/7/2016	3/7/2016	3/9/2016	3/9/2016	3/9/2016	3/9/2016	3/1/2016	3/2/2016	3/3/2016	3/3/2016	3/3/2016
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips	Concrete Chips	Sludge	Dust	Dust	Dust	Sludge
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Ramp Leading out of East Side of Building	Ramp Leading out of East Side of Building	Kettle No. 1 Bin	Kettle No. 5 Bin	Center Area West Wall, Next to Pumps	East Wall of Crusher Room	Sump Behind Slag Collection Unit No. 2	Floor of Slag Collection Unit No. 1	Floor of Slag Collection Units	Floor of Slag Collection Units	Sump Behind Slag Collection Unit No. 1
TAL Metal (mg/kg)	**EPA RML[1]**											
Aluminum	1,100,000	4,540	5,630	287	1,090	3,770	2,270	3,960	5,250	5,710	5,530	2,820
Antimony	470	121 J	139	**50,300**	**7,060**	26 J-	55	**2,650**	**6,700**	**1,690**	**1,850**	**8,920**
Arsenic	300	14 J	16	**12,100**	270	27	26	**423**	**1,090**	**989 J**	**778**	**1,240**
Barium	220,000	61 U	96 U	70	41 U	40	30	387	68	64 UJ	60 U	87 U
Beryllium	2,300	0.12 J	2.4 U	1.5 U	1.0 U	0.099 J	0.043 J	4.1 U	1.5 U	1.6 U	1.5 U	2.2 U
Cadmium	980	9.7 J	14	105	119	3.5 J-	34	877	119	61	60	806
Calcium	NS	316,000	342,000	1,510 U	3,200	369,000 J	230,000	201,000	29,900	11,800	12,100	72,600
Chromium	1,800,000	26	31	20	51	16 J	25	131	344	392	524	91
Cobalt	350	15 U	24 U	18	10 U	5.1 U	5.0 U	**385**	26	36	26	158
Copper	47,000	87	117	19,000	3,930	32	44	472	1,740	1,600	1,550	1,090
Iron	820,000	5,220	6,070	72,900	29,900	3,270	4,600	72,000	227,000	295,000	298,000	69,500
Lead	800	**6,150**	**8,300**	**53,000**	**44,500**	**9,150 J**	**6,540**	**69,400**	**80,700**	**54,300**	**64,400**	**81,600**
Magnesium	NS	1,840	2,390 U	1,510 U	1,020 U	1,860 J	957	6,390	2,650	1,590 U	7,450	4,230
Manganese	26,000	96 J	121	159	142	63	27	16,700	1,100	1,390	1,420	4,300
Nickel	22,000	15 J	21	3,670	2,110	6.3	44	4,490	425	515 J	326	2,290
Potassium	NS	1,520 U	2,390 U	1,510 U	1,020 U	516	1,450	4,080 U	1,500 U	1,590 U	1,690 U	4,670
Selenium	5,800	11 U	17 U	1,310	34	3.5 U	4.5	114	34	59	59	131
Silver	5800	3.0 U	4.8 U	5.0	11	1.0 U	1.0 U	8.2 U	3.0 U	3.2 U	3.0 U	6.2
Sodium	NS	5,590	7,530	31,200	19,900	14,100	2,510	5,600	63,200	77,500	85,300	73,800
Thallium	12	7.6 U	12 U	7.5 U	5.1 U	2.5 U	2.5 U	20 U	7.5 U	8.0 U	7.5 U	11 U
Vanadium	5,800	15 J	24 U	2.8 J	2.1 J	11	7.8	60	32	33	32	44
Zinc	350,000	75	92	137	272	44	86	2,850	1,940	1,730	1,810	1,980

Notes:
Refer to Figure 6 for the solid waste sample locations.
[1]EPA Removal Management Levels (RML) for Industrial Soil for 10-4 Risk Level for Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
EPA RMLs are provided for comparison purposes only.
Solid waste sample analytical results and EPA RMLs are presented in milligrams per kilogram (mg/kg).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detected
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 2D: Wastewater Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
February 29, 2016 through March 1, 2016

	RST 3 Sample Number	**BRC001-AT01-AQ001-01**	**BRC001-AT02-AQ001-01**	**BRC001-AT03-AQ001-01**	**BRC001-AT04-AQ001-01**	**BRC001-SUMP01-AQ001-01**	**BRC001-SUMP01-AQ001-02**	**BRC001-SUMP02-AQ001-01**	**BRC001-SUMP03-AQ001-01**	**BRC001-SUMP04-AQ001-01**	**BRC001-SUMP05-AQ001-01**	**BRC001-SUMP06-AQ001-01**
	CLP Number	**MBCAD1**	**MBCAD2**	**MBCAD3**	**MBCAD4**	**MBCAD5**	**MBCAD6**	**MBCAD7**	**MBCAD8**	**MBCAD9**	**MBCAE0**	**MBCAE1**
	Sample Date	3/1/2016	3/1/2016	3/1/2016	3/1/2016	2/29/2016	2/29/2016	2/29/2016	2/29/2016	2/29/2016	3/1/2016	3/1/2016
	Sample Collection Type	Composite	Composite	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous
	Sample Location	Structure No. 4	Structure No. 4	Structure No. 4	Structure No. 4	Sump No. 1	Sump No. 1	Sump No. 2	Sump No. 3	Sump No. 4	Sump No. 5	Sump No. 6
	Sample Sub-Location	Lagoon No. 1	Lagoon No. 2	Tank 1 - Water Treatment Building	Tank 2 - Water Treatment Building	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
	Recorded pH	8.05	2.12	7.65	7.50	9.17	9.17	8.34	8.78	9.07	8.37	8.33
TAL Metal (µg/L)	**EPA RML[1]**											
Aluminum	20,000	200 U	**114,000**	377	200 U	200 U	200 U	639	200 U	200 U	401	271
Antimony	7.8	**1,190**	**4,110**	**425**	**268**	60 U	60 U	**133**	**866**	**97**	**225**	**167**
Arsenic	5.2	**46**	**799**	**25**	**90**	**19**	**17**	**17**	**117**	10 U	**122**	**211**
Barium	3,800	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U	200 U
Beryllium	25	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cadmium	9.2	**14**	100 U	**109**	5.0 U	5.0 U	5.0 U	5.0 U	**137**	6.1	**27**	5.3
Calcium	NS	225,000	400,000	494,000	136,000	45,700	45,100	17,200	181,000	16,900	110,000	285,000
Chromium	22,000	10 U	2,130	21	10 U	10 U	10 U	10 U	10 U	10 U	13	61
Cobalt	6.0	3.0	**450**	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Copper	800	25 U	**5,450**	53	25 U	25 U	25 U	25 U	25	25 U	74	37
Iron	NS	100 U	187,000	614	169	361	447	1,480	1,840	234	5,090	1,330
Lead	15	10 U	**3,530**	**61**	**16**	**189**	**269**	**2,000**	**65,400**	**384**	**1,610**	**248**
Magnesium	NS	28,100	73,500	68,300	6,200	5,000 U	5,000 U	5,000 U	7,980	5,000 U	5,000 U	13,900
Manganese	430	122	**2,590**	157	241	151	157	93	30	35	200	340
Nickel	390	175	**6,660**	182	47	40 U	40 U	40 U	40 U	40 U	51	68
Potassium	NS	6,980	41,800	42,800	11,200	12,000	11,900	2,370	110,000	2,950	9,520	37,300
Selenium	100	71	**144**	35 U	35 U	35 U	35 U	35 U	35 U	35 U	35 U	35 U
Silver	94	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Sodium	NS	346,000	855,000	1,070,000	964,000	228,000	220,000	24,300	652,000	62,700	615,000	2,020,000
Thallium	0.2	25 U	25 U	25 U	25 U	25 U	25 U	25 U	**34**	25 U	25 U	25 U
Vanadium	86	50 U	**293**	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U
Zinc	6,000	60 U	**12,700**	142	60 U	60 U	60 U	60 U	804	72	110	322

Notes:
Refer to Figure 7 for the wastewater sample locations.
[1]EPA Removal Management Levels (RML) for tap water for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016
EPA RMLs are provided for comparison purposes only.
Wastewater sample analytical results are presented in micrograms per literµg/L).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased low
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 2D: Wastewater Validated Analytical Results Summary Table - TAL Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
February 29, 2016 through March 1, 2016

	RST 3 Sample Number	**BRC001-SUMP07-AQ001-01**	**BRC001-SUMP08-AQ001-01**	**BRC001-SUMP09-AQ001-01**	**BRC001-SUMP10-AQ001-01**	**BRC001-CS01-AQ001-01**
	CLP Number	**MBCAE2**	**MBCAE3**	**MBCAE4**	**MBCAE5**	**MBCAE6**
	Sample Date	3/1/2016	3/1/2016	3/1/2016	3/1/2016	3/1/2016
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab
	Sample Matrix	Aqueous	Aqueous	Aqueous	Aqueous	Aqueous
	Sample Location	Sump No. 7	Sump No. 8	Sump No. 9	Sump No. 10	Structure No. 2
	Sample Sub-Location	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Slag Collection Unit No. 2 Sump
	Recorded pH	9.10	8.71	9.19	8.09	7.50
TAL Metal (µg/L)	**EPA RML[1]**					
Aluminum	20,000	529	200 U	200 U	200 U	204
Antimony	7.8	**125**	**230**	60 U	**128**	**555**
Arsenic	5.2	**57**	**90**	**14**	**26**	**36**
Barium	3,800	200 U	200 U	200 U	200 U	200 U
Beryllium	25	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Cadmium	9.2	5.0 U	5.0 U	5.0 U	5.0 U	**68**
Calcium	NS	83,500	114,000	87,900	22,800	472,000
Chromium	22,000	17	10 U	10 U	10 U	10 U
Cobalt	6.0	50 U	50 U	50 U	50 U	50 U
Copper	800	42	32	25 U	44	37
Iron	NS	457	660	582	1,380	2,520
Lead	15	**307**	**303**	**209**	**2,970**	**4,710**
Magnesium	NS	5,000 U	5,000 U	32,000	18,300	128,000
Manganese	430	27	32	77	40	**789**
Nickel	390	40	40 U	40 U	40 U	**411**
Potassium	NS	22,500	5,320	42,000	11,900	53,300
Selenium	100	35 U	57	35 U	35 U	35 U
Silver	94	10 U	10 U	10 U	10 U	10 U
Sodium	NS	826,000	709,000	134,000	171,000	2,060,000
Thallium	0.2	25 U	25 U	25 U	25 U	25 U
Vanadium	86	50 U	50 U	50 U	50 U	50 U
Zinc	6,000	76	60 U	60 U	321	323

Notes:
Refer to Figure 7 for the wastewater sample locations.
[1]EPA Removal Management Levels (RML) for tap water for 10-4 Risk Level fo
Carcinogens or a Hazard Quotient (HQ) of 1 for Non-Carcinogens, May 2016.
EPA RMLs are provided for comparison purposes only.
Wastewater sample analytical results are presented in micrograms per liter µg/L).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Indicates an estimated value
U - Indicates the analyte was analyzed for but not detecte
L - Indicates the reported value may be biased lov
NS - Not Specified
Values highlighted in yellow equal or exceed the respective EPA RML.

Table 2E: Solid Waste Validated Analytical Results Summary Table - TCLP Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
March 1 through 9, 2016

	RST 3 Sample Number	**BRC001-SUMPCOMP-TCLP001-01**	**BRC001-SUMPCOMP-TCLP001-02**	**BRC001-AT01-TCLP001-01**	**BRC001-AT02-TCLP001-01**	**BRC001-AT03-TCLP001-01**	**BRC001-BB01-TCLP001-01**	**BRC001-BB01-TCLP002-01**
	CLP Number	**MBCBS4**	**MBCBS5**	**MBCBS6**	**MBCBS7**	**MBCBS8**	**MBCBS9**	**MBCBT0**
	Sample Date	3/1/2016	3/1/2016	3/2/2016	3/2/2016	3/2/2016	3/3/2016	3/3/2016
	Sample Collection Type	Composite	Composite	Composite	Composite	Composite	Grab	Grab
	Sample Matrix	Sludge	Sludge	Sludge	Sludge	Sludge	Hopper Contents	Hopper Contents
	Sample Location	Sump Nos. 1 through 10	Sump Nos. 1 through 10	Structure No. 4	Structure No. 4	Structure No. 4	Structure No. 7	Structure No. 7
	Sample Sub-Location	Not Applicable	Not Applicable	Lagoon No. 1	Lagoon No. 2	Tanks 1 and 2 - Water Treatment Building	Bag House 1 Hopper	Bag House 2 Hopper
TCLP Metal (mg/L)	**EPA TCLP MCC[1]**							
Arsenic	5.0	0.034 J	0.036 J	0.12 J	0.025 J	0.05 J	0.021 J	0.025 J
Barium	100	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cadmium	1.0	0.16 J	0.18 J	0.31 J	0.26 J	**4.4 J**	**34.9**	**13.9 J**
Chromium	5.0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	25 U	0.05 U
Lead	5.0	**10.9 J**	**10.1 J**	**35.1**	**9.6 J**	4.9 J	**38.9**	**42.2**
Mercury	0.2	0.000089 J	0.00027	0.00018 J	0.000062 J	0.000065 J	0.00013 J	0.00013 J
Selenium	1.0	5 U	5 U	5 U	0.0082 J	0.027 J	0.12 J	0.16 J
Silver	5.0	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U

Notes:
Refer to Figure 6 for the solid waste sample locations.
[1]EPA Toxicity Characteristic Leaching Procedure (TCLP) Maximum Contaminan
Concentrations (MCC) obtained from Code of Federal Regulations (CFR), Title 40,
Chapter I, Subchapter I, Part 261, Published July 2011.
Analytical results and EPA TCLP MCCs are presented in milligrams per liter (mg/L).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Estimated result
U - Indicates the analyte was analyzed for but not detected
Values bolded and highlighted in yellow equal or exceed the respective TCLP MCC

Table 2E: Solid Waste Validated Analytical Results Summary Table - TCLP Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
March 1 through 9, 2016

	RST 3 Sample Number	**BRC001-CC01-TCLP001-01**	**BRC001-CF01-TCLP001-01**	**BRC001-CF01-TCLP002-01**	**BRC001-CF01-TCLP003-01**	**BRC001-CF01-TCLP004-01**	**BRC001-CF01-TCLP005-01**	**BRC001-CK01-TCLP001-01**
	CLP Number	**MBCBT1**	**MBCBT2**	**MBCBT3**	**MBCBT4**	**MBCBT5**	**MBCBT6**	**MBCBT7**
	Sample Date	3/2/2016	3/2/2016	3/2/2016	3/3/2016	3/3/2016	3/4/2016	3/2/2016
	Sample Collection Type	Grab	Grab	Grab	Grab	Grab	Grab	Composite
	Sample Matrix	Sludge	Dust	Dust	Dust	Dust	Dust	Kettle Contents
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Crushing Area Trench	Furnace No. 1	Furnace No. 2	Behind Furnace No. 2	Behind Furnace No. 2	Behind Furnace No. 1	Kettle Nos. 1 through 5
TCLP Metal (mg/L)	**EPA TCLP MCC[1]**							
Arsenic	5.0	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Barium	100	500 U	500 U	500 U	500 U	500 U	500 U	500 U
Cadmium	1.0	5 U	5 U	10.5	**108**	**5.3**	5 U	5 U
Chromium	5.0	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Lead	5.0	**80.9**	**66.4**	2.5 U	**35.3**	**41.7**	**42.3**	**120**
Mercury	0.2	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Selenium	1.0	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Silver	5.0	25 U	25 U	25 U	25 U	25 U	25 U	25 U

Notes:
Refer to Figure 6 for the solid waste sample locations.
[1]EPA Toxicity Characteristic Leaching Procedure (TCLP) Maximum Contaminan
Concentrations (MCC) obtained from Code of Federal Regulations (CFR), Title 40,
Chapter I, Subchapter I, Part 261, Published July 2011.
Analytical results and EPA TCLP MCCs are presented in milligrams per liter (mg/L).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Estimated result
U - Indicates the analyte was analyzed for but not detected
Values bolded and highlighted in yellow equal or exceed the respective TCLP MCC

Table 2E: Solid Waste Validated Analytical Results Summary Table - TCLP Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
March 1 through 9, 2016

	RST 3 Sample Number	**BRC001-CK01-TCLP002-01**	**BRC001-CK01-TCLP003-01**	**BRC001-CM01-TCLP001-01**	**BRC001-CM01-TCLP002-01**	**BRC001-CM01-TCLP003-01**	**BRC001-CM01-TCLP004-01**	**BRC001-CM01-TCLP005-01**
	CLP Number	**MBCBT8**	**MBCBT9**	**MBCBW0**	**MBCBW1**	**MBCBW2**	**MBCBW3**	**MBCBW4**
	Sample Date	3/3/2016	3/4/2016	3/4/2016	3/4/2016	3/7/2016	3/7/2016	3/7/2016
	Sample Collection Type	Composite	Grab	Composite	Grab	Composite	Composite	Grab
	Sample Matrix	Kettle Contents	Dust	Dust	Dust	Dust	Dust	Dust
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Kettle Nos. 6 through 9	Floor of Kettle No. 6 Room	Floor of Quimico Room	Center Trench	Floor between Kettle Nos. 2 and 3	Floor between Kettle Nos. 3 and 4	Floor of Kettle No. 5
TCLP Metal (mg/L)	**EPA TCLP MCC[1]**							
Arsenic	5.0	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Barium	100	500 U	500 U	500 U	500 U	500 U	500 U	500 U
Cadmium	1.0	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Chromium	5.0	25 U	25 U	25 U	25 U	25 U	25 U	25 U
Lead	5.0	**28.7**	**103**	50 U	**38**	25 U	**26.1**	25 U
Mercury	0.2	0.0014	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.00024
Selenium	1.0	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Silver	5.0	25 U	25 U	25 U	25 U	25 U	25 U	25 U

Notes:
Refer to Figure 6 for the solid waste sample locations.
[1]EPA Toxicity Characteristic Leaching Procedure (TCLP) Maximum Contaminan
Concentrations (MCC) obtained from Code of Federal Regulations (CFR), Title 40,
Chapter I, Subchapter I, Part 261, Published July 2011.
Analytical results and EPA TCLP MCCs are presented in milligrams per liter (mg/L).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Estimated result
U - Indicates the analyte was analyzed for but not detected
Values bolded and highlighted in yellow equal or exceed the respective TCLP MCC

Table 2E: Solid Waste Validated Analytical Results Summary Table - TCLP Metals
Puerto Rico Battery Recycling Site - Phase II
Arecibo, Puerto Rico
March 1 through 9, 2016

	RST 3 Sample Number	**BRC001-CM01-TCLP006-01**	**BRC001-CM01-TCLP007-01**	**BRC001-CM01-TCLP008-01**	**BRC001-CM01-TCLP008-02**	**BRC001-CS01-TCLP001-01**	**BRC001-CS01-TCLP002-01**
	CLP Number	**MBCBW5**	**MBCBW6**	**MBCBW9**	**MBCBX0**	**MBCBW7**	**MBCBW8**
	Sample Date	3/7/2016	3/7/2016	3/9/2016	3/9/2016	3/2/2016	3/3/2016
	Sample Collection Type	Grab	Composite	Composite	Composite	Grab	Grab
	Sample Matrix	Dust	Dust	Dust	Dust	Sludge	Dust
	Sample Location	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2	Structure No. 2
	Sample Sub-Location	Floor of Slag Staging Area	Floor of Slag Staging Area	Floor of Slag Bin Staging Area	Floor of Slag Bin Staging Area	Sump Behind Slag Collection Unit No. 2	Floor of Slag Collection Unit No. 1
TCLP Metal (mg/L)	**EPA TCLP MCC[1]**						
Arsenic	5.0	25 U	25 U	25 U	25 U	25 U	25 U
Barium	100	500 U	500 U	500 UJ	500 U	500 U	500 U
Cadmium	1.0	5 U	5 U	5 U	5 U	5 U	**16.2**
Chromium	5.0	25 U	25 U	25 U	25 U	25 U	25 U
Lead	5.0	25 U	25 U	**189**	**153**	25 U	**40.2**
Mercury	0.2	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0013	0.0002 U
Selenium	1.0	5 U	5 U	5 U	5 U	5 U	5 U
Silver	5.0	25 U	25 U	25 U	25 U	25 U	25 U

Notes:
Refer to Figure 6 for the solid waste sample locations.
[1]EPA Toxicity Characteristic Leaching Procedure (TCLP) Maximum Contaminan Concentrations (MCC) obtained from Code of Federal Regulations (CFR), Title 40, Chapter I, Subchapter I, Part 261, Published July 2011.
Analytical results and EPA TCLP MCCs are presented in milligrams per liter (mg/L).
RST 3 - Removal Support Team 3
EPA - U.S. Environmental Protection Agency
J - Estimated result
U - Indicates the analyte was analyzed for but not detected
Values bolded and highlighted in yellow equal or exceed the respective TCLP MCC

ATTACHMENT C

Photographic Documentation Log

Photographic Documentation Log
Puerto Rico Battery Recycling a/k/a Arecibo Battery CERCLA Site
January, February, and March 2016

Photograph 1: View of the on-site Process Building with a soil boring being advanced in the foreground as part of the Phase I investigation of the Site.

Photograph 2: View of a core being processed as part of the Phase I investigation of the Site.

Photograph 3: View of a core being processed as part of the Phase I investigation of the Site.

Photograph 4: View of baking station for soil sample preparation prior to collecting XRF readings to determine lead levels in soil.

Photograph 5: View of bagging station for soil sample preparation prior to collecting XRF readings to determine lead levels in soil.

Photograph 6: View of the RST 3 team sampling slag pile in the Storage Building.

Photograph 7: View of the RST 3 team collecting soil samples at the Waste Storage Building.

Photograph 8: View of the on-site Bag House.

Photograph 9: View of the on-site Bag House.

Photograph 10: View of the battery receiving and crushing area in the on-site Process Building.

Photograph 11: View of kettles and furnaces inside the on-site Process Building.

Photograph 12: View of one of the on-site sumps.

Photograph 13: View of an RST 3 team member collecting a aqueous sample from one of the on-site sumps using a coliwasa.

Photograph 14: View of an RST 3 team member collecting a solid waste sample (sludge) from one of the on-site sumps.

Photograph 15: View of an RST 3 team member using mesh to separate wastewater from solid waste to collect a solid waste sample (sludge) from one of the on-site sumps.

Photograph 16: View of an RST 3 team member using an extended pole with a collection cup at the end to collect an aqueous sample from Lagoon No.1 at the Waterwater Treatment Plant.

Photograph 17: View of an RST 3 team member using an extended pole with a collection cup attached at the end to pour into a bucket with a mesh on top to separate wastewater from solid waste to collect solid waste sample (sludge) from Lagoon No. 1 at the Waterwater Treatment Plant.

Photograph 18: View of RST 3 team members entering the Process Building to continue multi-media sampling on Site.

Photograph 19: View of trench in the on-site Process Building.

Photograph 20: View of Furnace No. 1 located in the on-site Process Building.

Photograph 21: View of an RST 3 team member collecting a solid waste sample [process waste (accumulated dust)] in the Process Building.

Photograph 22: View of a solid waste sample [process waste (accumulated dust)] collected from the Process Building.

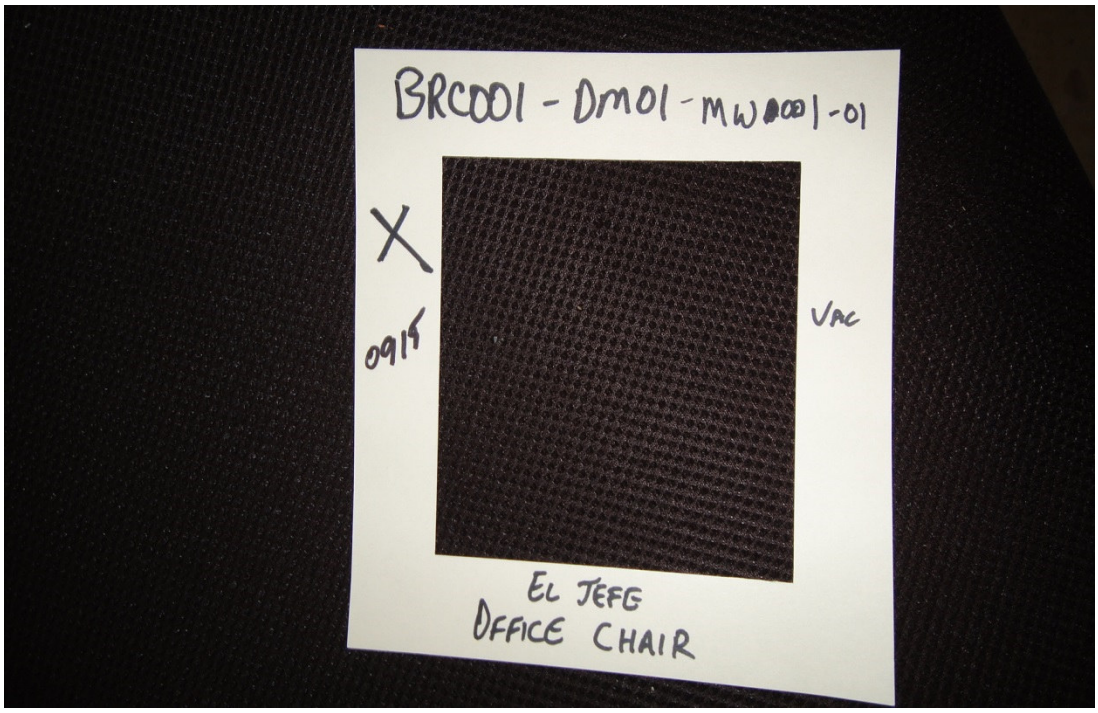
Photograph 23: View of a micor-vac sample being collected within the Administation building.

Photograph 24: View of a solid waste sample (hopper contents) being collected from a hopper within the Bag House.

Photograph 25: View of RST 3 collecting a solid waste sample (hopper chip) from a wall within the Bag House.

Photograph 26: View of the battery crushing area in the on-site Process Building.

Photograph 27: View of solid waste sample jars collected for TCLP analysis from the Process Building.



Photograph 28: View of a micro-vac sample collected from a chair in the owners office within the Administration building.

Photograph 29: View of a wipe sample collected from the floor in the employee's shower room within the Administration building.

Photograph 30: View of a wipe sample collected from a table in the employees' dinning room within the Administration building.

Photograph 31: View of a wipe sample collected from an office wall in the back area of the Administration building.

Photograph 32: View of a wipe sample collected from the floor in the conference room within the Administration building.

ATTACHMENT D

Geoprobe® Soil Boring Logs

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB001

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	102,500	77,000	BRC001-AB001-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	6,378		BRC001-AB001-0206-01	Silty SAND with trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, dark gray.	
	1,399		BRC001-AB001-0612-01		
12	169		BRC001-AB001-1218-01		1
	54		BRC001-AB001-1824-01		
24				Silty CLAY with trace sand, very fine-grained, medium, dry, olive gray.	2
36					3
				Clayey SILT with trace sand, very fine-grained, dry, olive gray.	
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery Arecibo, Puerto Rico		BORING LOCATION: **BRC001-AB002**
WESTON SOLUTIONS REMOVAL SUPPORT TEAM 3 CONTRACT # EP-S2-14-01	DRILLING CONTRACTOR: On-Site Environmental, Inc.	DRILLER: Simon Ojeda
	DRILLING METHOD: Macro-Core	DRILLING DATE: 1/20/2016
	DRILLING EQUIPMENT: Geoprobe	LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL			GEOLOGICAL DESCRIPTION	DEPTH (Feet)
	XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID		
0	50,567/50,567	47,000/52,000	BRC001-AB002-0001-01/02	Concrete refusal. No samples collected.	0
12					1
24					2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB003

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	32,227		BRC001-AB003-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	6,046		BRC001-AB003-0206-01	Silty SAND with trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, dark gray.	
	9,155		BRC001-AB003-0612-01		
12	436	50	BRC001-AB003-1218-01		1
	21		BRC001-AB003-1824-01		
24	21		BRC001-AB003-2430-01	Clayey SILT with trace sand, very fine-grained, dry redish-brown.	2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB004

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	16,667	15,000	BRC001-AB004-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	1,500		BRC001-AB004-0206-01	Silty SAND with trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, dark gray.	
	12,933	22,000	BRC001-AB004-0612-01		
12	2,145		BRC001-AB004-1218-01		1
	23	21	BRC001-AB004-1824-01		
24	19		BRC001-AB004-2430-01		2
				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB005

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/21/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	70,033	70,000	BRC001-AB005-0001-01	Concrete. Collected XRF sample from sand on surface of asphalt.	0
	1,081		BRC001-AB005-0306-01	Silty SAND with trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, dark gray.	
	1,087		BRC001-AB005-0612-01		
12	439		BRC001-AB005-1218-01		1
	24		BRC001-AB005-1824-01		
24	23		BRC001-AB005-2430-01	Clayey SILT with trace sand, very fine-grained, dry redish-brown.	2
36					3
				Silty CLAY with trace sand, very fine-grained, stiff, dry, brown.	
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB006

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	2,206	2,200	BRC001-AB006-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	487		BRC001-AB006-0206-01	Silty SAND with trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, dark gray.	
	257		BRC001-AB006-0612-01		
12	535	430	BRC001-AB006-1218-01		1
	30		BRC001-AB006-1824-01		
24	27		BRC001-AB006-2430-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray.	2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB007

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0				Asphalt. Did not collect XRF sample.	0
	382	240	BRC001-AB007-0106-01		
	23		BRC001-AB007-0612-01		
12				Silty SAND with trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, redish-brown.	1
	14		BRC001-AB007-1218-01		
	1		BRC001-AB007-1824-01		
24					2
36				Silty CLAY with trace sand, very fine-grained, stiff, dry, brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB008

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	54,500	12,000	BRC001-AB008-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	1,205		BRC001-AB008-0106-01		
	86		BRC001-AB008-0612-01		
12	82		BRC001-AB008-1218-01		1
	70		BRC001-AB008-1824-01	Silty SAND with trace organics and little clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, light brown.	
24					2
36					3
48				Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB009

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	54,900	67,000	BRC001-AB009-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	281		BRC001-AB009-0206-01	Silty SAND with trace organics and trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, gray to white.	
	239		BRC001-AB009-0612-01		
12	142		BRC001-AB009-1218-01		1
	118		BRC001-AB009-1824-01		
24					2
				Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray.	
36					3
48				Clayey SILT with trace sand, very fine-grained, dry, brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB010

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	17,100	21,000	BRC001-AB010-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	589		BRC001-AB010-0106-01		
	265		BRC001-AB010-0612-01		
12	105		BRC001-AB010-1218-01	Silty SAND with trace organics and trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, redish-brown.	1
	112		BRC001-AB010-1824-01		
24					2
36				Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray to brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB011

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	6,113	4600 / 5900	BRC001-AB011-0001-01/02	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	1,074		BRC001-AB011-0106-01	Silty SAND with trace organics and trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, white to tan.	
	5,507	3,300	BRC001-AB011-0612-01		
12	116		BRC001-AB011-1218-01		1
	35		BRC001-AB011-1824-01		
24	32		BRC001-AB011-2430-01		2
36				Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB012

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0				Asphalt. No 0-1" collected.	0
	23		BRC001-AB012-0106-01	Silty SAND with trace organics and trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, tan.	
	1		BRC001-AB012-0612-01		
12	1		BRC001-AB012-1218-01		1
	26		BRC001-AB012-1824-01		
24	17		BRC001-AB012-2430-01		2
	17		BRC001-AB012-3036-01		
36				Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray to brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB013

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	15,000	11,000	BRC001-AB013-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	289		BRC001-AB013-0106-01	Silty SAND with trace organics and some rock fragments (caliche, fill), very fine to fine-grained, dry, grayish brown.	
	459	150	BRC001-AB013-0612-01		
12	77		BRC001-AB013-1218-01		1
	24		BRC001-AB013-1824-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray to brown.	
24	23		BRC001-AB013-2430-01		2
	17		BRC001-AB013-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB014

WESTON SOLUTIONS
REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	17,500	14,000	BRC001-AB014-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	764		BRC001-AB014-0106-01	Silty SAND with trace organics and some rock fragments (caliche, fill), very fine to fine-grained, dry, grayish brown.	
	214		BRC001-AB014-0612-01		
12	41		BRC001-AB014-1218-01		1
	45		BRC001-AB014-1824-01	Clayey SILT with trace sand and trace organics, very fine-grained, dry, brown.	
24	41		BRC001-AB014-2430-01		2
	78		BRC001-AB014-3036-01		
36					3
48				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB015

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	32,567		BRC001-AB015-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	42,467	40,000	BRC001-AB015-0106-01	Silty SAND with trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, gray.	
	11,800		BRC001-AB015-0612-01		
12	362	77	BRC001-AB015-1218-01		1
	29		BRC001-AB015-1824-01	Silty CLAY with trace sand, very fine-grained, medium, dry, redish-brown.	
24					2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB016

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/21/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	38,933	52,000	BRC001-AB016-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	1,271		BRC001-AB016-0206-01	Silty SAND with trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, dark gray.	
	8,788		BRC001-AB016-0612-01		
12	10,162		BRC001-AB016-1218-01		1
	10,378	12,000	BRC001-AB016-1824-01		
24	38	17,000	BRC001-AB016-2430-01		2
	20		BRC001-AB016-3036-01		
36				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB017

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/21/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	43,867	45,000	BRC001-AB017-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	86		BRC001-AB017-0306-01	Silty SAND with trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, dark gray.	
	3,785		BRC001-AB017-0612-01		
12	3,898	4,700	BRC001-AB017-1218-01		1
	7,114	1,400	BRC001-AB017-1824-01		
24	46		BRC001-AB017-2430-01	Silty CLAY with trace sand, very fine-grained, medium, dry, brown. Concrete refusal at 43".	2
	25		BRC001-AB017-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB018

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/21/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	42,400	42,000	BRC001-AB018-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	658		BRC001-AB018-0106-01	Silty SAND with trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, dark gray to tan.	
	3,984		BRC001-AB018-0612-01		
12	48		BRC001-AB018-1218-01		1
	31		BRC001-AB018-1824-01		
24					2
36				Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray.	3
48					4
				Clayey SILT with trace sand, very fine-grained, dry redish-brown.	
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB019

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/21/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	18,500	17000 / 16000	BRC001-AB019-0001-01/02	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	4,889		BRC001-AB019-0106-01	Silty SAND with trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, dark gray.	
	3,342		BRC001-AB019-0612-01		
12	300	55	BRC001-AB019-1218-01		1
	37		BRC001-AB019-1824-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray.	
24					2
36				Clayey SILT with trace sand, very fine-grained, dry redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB020

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/21/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	11,060	12,000	BRC001-AB020-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	565		BRC001-AB020-0106-01	Silty SAND with trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, dark gray.	
	463		BRC001-AB020-0612-01		
12	578		BRC001-AB020-1218-01		1
	67	13	BRC001-AB020-1824-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, brown.	
24	27		BRC001-AB020-2430-01		2
36					3
48				Clayey SILT with trace sand, very fine-grained, dry redish-brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB021

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/21/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	7,622		BRC001-AB021-0001-01	Concrete. Collected XRF sample from sand on surface of asphalt.	0
	797		BRC001-AB021-0106-01	Silty SAND with some rock fragments (fill), very fine to fine-grained, dry, gray.	
	40		BRC001-AB021-0612-01		
12	39		BRC001-AB021-1218-01		1
	32		BRC001-AB021-1824-01		
24				Sandy SILT, very fine-grained, dry, reddish brown.	2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB022

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/21/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,115		BRC001-AB022-0001-01	Silty SAND with little rock fragments, very fine to fine-grained, dry, brown.	0
	1,292		BRC001-AB022-0106-01		
	811	21	BRC001-AB022-0612-01	Sandy SILT, fine-grained, dry, reddish brown.	
12	61		BRC001-AB022-1218-01		1
	66		BRC001-AB022-1824-01		
24					2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB023

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/21/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	13,700		BRC001-AB023-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	193		BRC001-AB023-0106-01	Silty SAND with trace clay and trace organics and some rock fragments (caliche, fill), very fine to fine-grained, dry, dark gray.	
	551	1,300	BRC001-AB023-0612-01		
12	95		BRC001-AB023-1218-01		1
	35		BRC001-AB023-1824-01		
24					2
				Silty CLAY with trace sand, very fine-grained, stiff, dry, brown.	
36					3
48				Clayey SILT with trace sand, very fine-grained, dry redish-brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB024

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/21/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	25,833	25,000	BRC001-AB024-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	3,598		BRC001-AB024-0106-01	Silty SAND with trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, gray.	
	1,140		BRC001-AB024-0612-01		
12	36		BRC001-AB024-1218-01		1
	40		BRC001-AB024-1824-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, brown.	
24					2
36					3
48				Clayey SILT with trace sand, very fine-grained, dry, olive gray, solvent odor.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION: **BRC001-AB025**

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/21/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	16,767		BRC001-AB025-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	975		BRC001-AB025-0106-01	Silty SAND with some rock fragments (caliche, fill), very fine to fine-grained, dry, dark gray.	
	1,130		BRC001-AB025-0612-01		
12	10,667	22	BRC001-AB025-1218-01		1
	5,487		BRC001-AB025-1824-01	Silty CLAY with trace sand, very fine-grained, medium, dry, olive gray.	
24	77	13	BRC001-AB025-2430-01		2
	5,629	10	BRC001-AB025-3036-01		
36	21		BRC001-AB025-3642-01		3
	20		BRC001-AB025-4248-01	Clayey SILT with trace sand, very fine-grained, dry redish-brown.	
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-AB026

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/21/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	3,618		BRC001-AB026-0001-01	Asphalt. Collected XRF sample from sand on surface of asphalt.	0
	56		BRC001-AB026-0106-01	Silty SAND with trace clay and some rock fragments (caliche, fill), very fine to fine-grained, dry, tan to white.	
	7,042	5,500	BRC001-AB026-0612-01		
12	40	93	BRC001-AB026-1218-01		1
	27		BRC001-AB026-1824-01		
24				Silty CLAY with trace sand, very fine-grained, medium, dry, olive gray.	2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-DB001

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	5,281		BRC001-DB001-0001-01	Silty SAND with trace organics and little clay, and little gravel (fill - disturbed soil), fine-grained, slightly moist, very dark brown.	0
	13,133	5,600	BRC001-DB001-0106-01		
	1,275		BRC001-DB001-0612-01		
12					1
	127		BRC001-DB001-1218-01	Silty CLAY with trace sand, very fine-grained, medium, slightly moist, redish-brown.	
	23		BRC001-DB001-1824-01		
24					2
	17		BRC001-DB001-2430-01		
	17		BRC001-DB001-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-DB002

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	2,029	1,400	BRC001-DB002-0001-01	Clayey SILT with trace sand and organics and little gravel (fill - disturbed soil), very fine-grained, moist, dark brown.	0
	1,083		BRC001-DB002-0106-01		
	220		BRC001-DB002-0612-01	Clayey SILT with trace sand little rock fragments, very fine-grained, slightly moist, brownish yellow.	
12	27		BRC001-DB002-1218-01		1
	35		BRC001-DB002-1824-01		
24	45		BRC001-DB002-2430-01		2
	29		BRC001-DB002-3036-01		
36					3
				Silty CLAY with trace sand, very fine-grained, soft, slightly moist, olive grey.	
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-DB003

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	12,233	5,400	BRC001-DB003-0001-01	Silty SAND with organics and some rock fragments and little gravel, fine-grained, dry, dark brown.	0
	502		BRC001-DB003-0106-01		
	489		BRC001-DB003-0612-01	Silty CLAY with trace sand (decreasing with depth) , very fine-grained, stiff, dry, yellowish brown.	
12	60	120	BRC001-DB003-1218-01		1
	22		BRC001-DB003-1824-01		
24	17		BRC001-DB003-2430-01	Silty CLAY, very fine-grained, soft, moist, yellow.	2
	27		BRC001-DB003-3036-01	Silty CLAY with trace sand, very fine-grained, stiff, slightly moist, very dark grey.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-DB004

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	2,397		BRC001-DB004-0001-01	Silty SAND with organics and some rock fragments including gravel, fine-grained, dry, very dark grey.	0
	1,931		BRC001-DB004-0106-01		
	250	460	BRC001-DB004-0612-01		
12	152		BRC001-DB004-1218-01	Silty SAND with trace organics and trace clay and some rock fragments, very fine to fine-grained, dry, yellowish brown.	1
	194		BRC001-DB004-1824-01	Silty CLAY with trace sand, very fine-grained, medium, dry - moist, reddish-brown.	
24	41		BRC001-DB004-2430-01		2
	43		BRC001-DB004-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-DB005

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	21,633	66,000	BRC001-DB005-0001-01	Silty SAND with organics and little rock fragments, fine-grained, dry, dark brown.	0
	4,806		BRC001-DB005-0106-01		
	579	330	BRC001-DB005-0612-01	Silty CLAY with trace sand and trace organics and trace rock fragments, very fine-grained, medium, dry, yellowish brown.	
12	363		BRC001-DB005-1218-01		1
	538		BRC001-DB005-1824-01		
24	29		BRC001-DB005-2430-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB001

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	306	330 / 300	BRC001-GB001-0001-01/02	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, yellowish brown.	0
	26		BRC001-GB001-0106-01		
	37		BRC001-GB001-0612-01		
12					1
	136		BRC001-GB001-1218-01	Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	
	24		BRC001-GB001-1824-01		
24					2
	19		BRC001-GB001-2430-01		
	18		BRC001-GB001-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB002

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	713	540	BRC001-GB002-0001-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, yellowish brown.	0
	62		BRC001-GB002-0106-01		
	16		BRC001-GB002-0612-01		
12	212		BRC001-GB002-1218-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	1
	21		BRC001-GB002-1824-01		
24	24		BRC001-GB002-2430-01		2
	25		BRC001-GB002-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB003

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	3,765		BRC001-GB003-0001-01	Silty SAND with organics and some rock fragments and gravel, fine-grained, dry, redish-brown.	0
	3,770		BRC001-GB003-0106-01		
	1,406	1,700	BRC001-GB003-0612-01		
12	1,368		BRC001-GB003-1218-01		1
	579		BRC001-GB003-1824-01	Silty CLAY with trace sand and little gravel, very fine-grained, stiff, slightly moist, brownish yellow.	
24	57		BRC001-GB003-2430-01		2
	304		BRC001-GB003-3036-01		
36					3
				Clayey SILT with trace sand and some gravel, very fine-grained, dry brownish yellow.	
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB004

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	940	1,200	BRC001-GB004-0001-01	Silty SAND with organics and some rock fragments and gravel, fine-grained, dry, redish-brown.	0
	2,769		BRC001-GB004-0106-01		
	602	240	BRC001-GB004-0612-01		
12	349		BRC001-GB004-1218-01	Silty CLAY with trace sand and little gravel, very fine-grained, medium, slightly moist, brownish yellow.	1
	80		BRC001-GB004-1824-01		
24	52		BRC001-GB004-2430-01		2
	162		BRC001-GB004-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB005

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	10,382	8,100	BRC001-GB005-0001-01	Silty SAND with organics and some rock fragments, fine-grained, moist, black.	0
	4,557		BRC001-GB005-0106-01		
	387	230	BRC001-GB005-0612-01	Silty CLAY with trace sand and some rock fragments, very fine-grained, stiff, slightly moist, olive grey.	
12	152		BRC001-GB005-1218-01		1
	19		BRC001-GB005-1824-01		
24	19		BRC001-GB005-2430-01		2
	17		BRC001-GB005-3036-01		
36				CLAY, with some silt, stiff to medium, moist, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB006

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	978	580	BRC001-GB006-0001-01	Silty SAND with little organics and rock fragments (caliche), fine-grained, dry, redish-brown.	0
	607		BRC001-GB006-0106-01		
	286		BRC001-GB006-0612-01		
12	23		BRC001-GB006-1218-01		1
	15		BRC001-GB006-1824-01	Clayey SILT with trace sand and trace organics, very fine-grained, dry redish-brown.	
24	24		BRC001-GB006-2430-01		2
	16		BRC001-GB006-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB007

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,772		BRC001-GB007-0001-01	Silty SAND with some organics and some rock fragments (caliche) and gravel, fine-grained, dry, brownish yellow.	0
	188	120	BRC001-GB007-0106-01		
	91		BRC001-GB007-0612-01		
12	139		BRC001-GB007-1218-01		1
	25		BRC001-GB007-1824-01		
24	20		BRC001-GB007-2430-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	2
	17		BRC001-GB007-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB008

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	436	230	BRC001-GB008-0001-01	Silty SAND with trace organics and some rock fragments(caliche), fine-grained, dry, brownish yellow.	0
	157		BRC001-GB008-0106-01		
	1		BRC001-GB008-0612-01		
12	19		BRC001-GB008-1218-01		1
	17		BRC001-GB008-1824-01		
24	18		BRC001-GB008-2430-01		2
	25		BRC001-GB008-3036-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB009

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	752		BRC001-GB009-0001-01	Silty SAND with trace organics and some rock fragments (caliche), very fine to fine-grained, dry, brownish yellow.	0
	28		BRC001-GB009-0106-01		
	42		BRC001-GB009-0612-01		
12	74		BRC001-GB009-1218-01		1
	18		BRC001-GB009-1824-01	Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	
24	17		BRC001-GB009-2430-01		2
	13		BRC001-GB009-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB010

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	734		BRC001-GB010-0001-01	Silty SAND with trace organics and rock fragments (caliche, asphalt), very fine to fine-grained, dry, grayish brown.	0
	1,018	770	BRC001-GB010-0106-01		
	199		BRC001-GB010-0612-01		
12	43		BRC001-GB010-1218-01		1
	28		BRC001-GB010-1824-01		
24	1		BRC001-GB010-2430-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	2
	1		BRC001-GB010-3036-01		
36					3
48				Clayey SILT with trace organics, very fine-grained, soft, dry, redish-brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB011

WESTON SOLUTIONS
REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.	DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core	DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe	LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	659	2,100	BRC001-GB011-0001-01	Asphalt at surface. Silty SAND with trace organics and rock fragments (caliche), very fine to fine-grained, dry, redish-brown.	0
	820		BRC001-GB011-0106-01		
	135		BRC001-GB011-0612-01		
12	1		BRC001-GB011-1218-01		1
	1		BRC001-GB011-1824-01		
24	19		BRC001-GB011-2430-01	Silty CLAY with trace sand and trace organics, very fine-grained, stiff, dry, redish-brown.	2
	24		BRC001-GB011-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB012

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,772	830	BRC001-GB012-0001-01	Silty SAND with organics and rock fragments, very fine to fine-grained, dry, black.	0
	717		BRC001-GB012-0106-01		
	184		BRC001-GB012-0612-01		
12	72		BRC001-GB012-1218-01		1
	76		BRC001-GB012-1824-01	Silty SAND with little clay, trace organics and some rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, brownish yellow.	
24	13		BRC001-GB012-2430-01		2
	21		BRC001-GB012-3036-01		
36				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB013

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	52		BRC001-GB013-0001-01	Silty SAND with trace organics and some rock fragments (caliche- disturbed soil), very fine to fine-grained, dry, yellowish brown.	0
	42		BRC001-GB013-0106-01		
	19		BRC001-GB013-0612-01		
12	20		BRC001-GB013-1218-01		1
	1		BRC001-GB013-1824-01		
24	17		BRC001-GB013-2430-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	2
	20		BRC001-GB013-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB014

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	341		BRC001-GB014-0001-01	Silty SAND with trace organics and little clay and rock fragments, (caliche- disturbed soil) very fine to fine-grained, dry, brownish yellow.	0
	332	86	BRC001-GB014-0106-01		
	85	51	BRC001-GB014-0612-01		
12	72		BRC001-GB014-1218-01		1
	37		BRC001-GB014-1824-01		
24	22		BRC001-GB014-2430-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	2
	18		BRC001-GB014-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB015

WESTON SOLUTIONS
REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,929	900	BRC001-GB015-0001-01	Silty SAND with trace organics and rock fragments (caliche-disturbed soil), very fine to fine-grained, dry, brownish yellow.	0
	106		BRC001-GB015-0106-01		
	22		BRC001-GB015-0612-01	Silty CLAY with trace sand and trace organics, very fine-grained, stiff, dry, redish-brown.	
12	14		BRC001-GB015-1218-01		1
	20		BRC001-GB015-1824-01		
24	15		BRC001-GB015-2430-01		2
	15		BRC001-GB015-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB016

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	657		BRC001-GB016-0001-01	Silty SAND with some organics and some rock fragments, very fine to fine-grained, dry, brown.	0
	611	490	BRC001-GB016-0106-01		
	534		BRC001-GB016-0612-01		
12	278		BRC001-GB016-1218-01		1
	53		BRC001-GB016-1824-01		
24	24		BRC001-GB016-2430-01	Clayey SILT with trace sand, very fine-grained, dry redish-brown.	2
	32		BRC001-GB016-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB017

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,589	1,300	BRC001-GB017-0001-01	Gravelly SAND, fine-grained, dry, black.	0
	427		BRC001-GB017-0106-01		
	320	320	BRC001-GB017-0612-01		
12	32		BRC001-GB017-1218-01	Silty SAND with trace organics and rock fragments (caliche), very fine to fine-grained, dry, yellowish brown.	1
	1		BRC001-GB017-1824-01		
24	1		BRC001-GB017-2430-01		2
	21		BRC001-GB017-3036-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB018

WESTON SOLUTIONS
REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	2,093		BRC001-GB018-0001-01	Gravelly SAND with some silt, very fine to fine-grained, dry, dark gray.	0
	384	1,800	BRC001-GB018-0106-01		
	300		BRC001-GB018-0612-01	Silty SAND with trace organics and some rock fragments (caliche), very fine to fine-grained, dry, brownish yellow.	
12	37		BRC001-GB018-1218-01		1
	22		BRC001-GB018-1824-01		
24	14		BRC001-GB018-2430-01	Clayey SILT with trace sand, very fine-grained, dry redish-brown.	2
	19		BRC001-GB018-3036-01		
36					3
48				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB019

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	453	400	BRC001-GB019-0001-01	Silty SAND with trace organics and some rock fragments (caliche), very fine to fine-grained, dry, tan to white.	0
	63		BRC001-GB019-0106-01		
	27		BRC001-GB019-0612-01		
12	12		BRC001-GB019-1218-01		1
	1		BRC001-GB019-1824-01		
24	19		BRC001-GB019-2430-01	Clayey SILT with trace sand and trace organics, very fine-grained, dry redish-brown.	2
	19		BRC001-GB019-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB020

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	5,288	2,600	BRC001-GB020-0001-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, dark gray.	0
	1,374		BRC001-GB020-0106-01		
	44		BRC001-GB020-0612-01	Silty SAND with trace organics and little clay and rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, brownish yellow.	
12	227	130	BRC001-GB020-1218-01		1
	21		BRC001-GB020-1824-01		
24	18		BRC001-GB020-2430-01		2
	19		BRC001-GB020-3036-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB021

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/15/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	2,100		BRC001-GB021-0001-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, dark gray.	0
	74		BRC001-GB021-0106-01		
	287		BRC001-GB021-0612-01	Silty SAND with trace organics and little clay and some rock fragments (disturbed soil), very fine to fine-grained, dry, redish-brown.	
12	68		BRC001-GB021-1218-01		1
	20		BRC001-GB021-1824-01	Clayey SILT with trace sand and trace rock fragments, very fine-grained, dry redish-brown.	
24	30		BRC001-GB021-2430-01		2
	16		BRC001-GB021-3036-01		
36					3
48				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB022

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/16/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	772		BRC001-GB022-0001-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, dark gray.	0
	973		BRC001-GB022-0106-01		
	272	150	BRC001-GB022-0612-01	Silty SAND with trace organics and rock fragments (caliche), very fine to fine-grained, dry, brownish yellow.	
12	16		BRC001-GB022-1218-01		1
	20		BRC001-GB022-1824-01		
24	1		BRC001-GB022-2430-01		2
36				Clayey SILT with trace sand and trace organics, very fine-grained, dry redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB023

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/16/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	843	2,000	BRC001-GB023-0001-01	Silty SAND with trace organics and rock fragments, very fine to fine-grained, dry, dark gray.	0
	157		BRC001-GB023-0106-01		
	63		BRC001-GB023-0612-01		
12	18		BRC001-GB023-1218-01	Silty SAND with trace organics and trace clay and rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, brownish yellow.	1
	1		BRC001-GB023-1824-01		
24					2
36				Silty CLAY with trace sand, very fine-grained, medium, dry, olive gray.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB024

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/16/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	4,736		BRC001-GB024-0001-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, dark gray.	0
	663	480	BRC001-GB024-0106-01		
	53		BRC001-GB024-0612-01	Silty SAND with trace organics and little clay and rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, brownish yellow.	
12	23		BRC001-GB024-1218-01		1
	4		BRC001-GB024-1824-01		
24					2
36				Silty CLAY with trace sand, very fine-grained, medium, dry, olive gray.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB025

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/16/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	2,402		BRC001-GB025-0001-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, dark gray.	0
	1,575		BRC001-GB025-0106-01		
	1,671	1,700	BRC001-GB025-0612-01		
12	74	39	BRC001-GB025-1218-01	Silty SAND with trace organics and little clay and rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, yellowish brown.	1
	115		BRC001-GB025-1824-01		
24	20		BRC001-GB025-2430-01		2
	19		BRC001-GB025-3036-01	Silty CLAY with trace sand and trace organics, very fine-grained, medium, slightly moist, strong unknown odor - chemical or solvent.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB026

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/16/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	715	600	BRC001-GB026-0001-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, dark gray.	0
	286		BRC001-GB026-0106-01		
	72		BRC001-GB026-0612-01	Silty SAND with trace organics and little clay and rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, brownish yellow.	
12	25		BRC001-GB026-1218-01		1
	22		BRC001-GB026-1824-01	Silty CLAY with trace sand and trace organics, very fine-grained, medium, dry, olive gray.	
24	51		BRC001-GB026-2430-01		2
36					3
48				Silty CLAY, very fine-grained, stiff, dry, brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB027

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/16/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	813	430	BRC001-GB027-0001-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, dark gray.	0
	660		BRC001-GB027-0106-01		
	121	77	BRC001-GB027-0612-01	Silty SAND with trace organics and little clay, and rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, redish-brown.	
12	75		BRC001-GB027-1218-01		1
	21		BRC001-GB027-1824-01		
24					2
				Silty CLAY with trace sand, very fine-grained, stiff, medium, redish-brown.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB028

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/16/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,167		BRC001-GB028-0001-01	Silty SAND with trace organics and rock fragments, very fine to fine-grained, dry, dark gray.	0
	476		BRC001-GB028-0106-01		
	225		BRC001-GB028-0612-01	Silty SAND with trace organics and little clay and rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, redish-brown.	
12	157		BRC001-GB028-1218-01		1
	23		BRC001-GB028-1824-01		
24					2
				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB029

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/16/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,151		BRC001-GB029-0001-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, gray.	0
	605		BRC001-GB029-0106-01		
	79	59	BRC001-GB029-0612-01	Silty SAND with trace organics and some rock fragments (caliche), very fine to fine-grained, dry, redish-brown.	
12	1		BRC001-GB029-1218-01		1
	8		BRC001-GB029-1824-01	Clayey SILT with trace sand, very fine-grained, dry redish-brown.	
24					2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB030

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/16/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	9,498	7,500	BRC001-GB030-0001-01	Gravelly SAND with some silt and trace organics, very fine to fine-grained, dry, dark gray.	0
	2,489		BRC001-GB030-0106-01		
	2,029	830	BRC001-GB030-0612-01	Silty SAND with trace organics and rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, redish-brown.	
12	909		BRC001-GB030-1218-01		1
	26	10	BRC001-GB030-1824-01		
24	21		BRC001-GB030-2430-01		2
	18		BRC001-GB030-3036-01	Silty CLAY with trace sand and trace organics, very fine-grained, stiff, dry, redish-brown.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB031

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/16/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	3,377	2,600	BRC001-GB031-0001-01	Silty SAND with trace organics and little rock fragments, very fine to fine-grained, dry, brown.	0
	740		BRC001-GB031-0106-01		
	121	51	BRC001-GB031-0612-01	Silty SAND with trace organics and little clay and rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, redish-brown.	
12	60		BRC001-GB031-1218-01		1
	53		BRC001-GB031-1824-01		
24					2
36				Clayey SILT with trace sand and trace organics, very fine-grained, dry redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB032

WESTON SOLUTIONS
REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/16/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	783	1,200	BRC001-GB032-0001-01	Silty SAND with trace organics and rock fragments, very fine to fine-grained, dry, dark brown.	0
	2,412	1,800	BRC001-GB032-0106-01		
	916		BRC001-GB032-0612-01	Silty SAND with trace organics and little clay and rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, redish-brown.	
12	138	19	BRC001-GB032-1218-01		1
	51		BRC001-GB032-1824-01	Silty CLAY with trace sand and trace organics, very fine-grained, stiff, dry, olive gray, unknown odor- solvent or chemical beginning at 42" to TD.	
24	63		BRC001-GB032-2430-01		2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB033

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/16/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	4,043	3,100	BRC001-GB033-0001-01	Gravelly SAND with some silt, dry, dark gray.	0
	3,443		BRC001-GB033-0106-01		
	217		BRC001-GB033-0612-01	Silty SAND with rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, tan to white.	
12	47	6.2	BRC001-GB033-1218-01		1
	44		BRC001-GB033-1824-01		
24					2
				Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB034

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/16/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	745		BRC001-GB034-0001-01	Silty SAND with trace organics and rock fragments, very fine to fine-grained, dry, dark brown.	0
	1,004	1,000	BRC001-GB034-0106-01		
	857	710	BRC001-GB034-0612-01	Silty SAND with trace organics and trace clay, and rock fragments (caliche), very fine to fine-grained, dry, tan to white.	
12	72		BRC001-GB034-1218-01		1
	46		BRC001-GB034-1824-01		
24	58		BRC001-GB034-2430-01		2
36				Clayey SILT with trace sand, very fine-grained, dry redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB035

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/18/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	292		BRC001-GB035-0001-01	Gravelly SAND with some silt and trace organics, fine-grained, dry, dark gray.	0
	305	270	BRC001-GB035-0106-01		
	64		BRC001-GB035-0612-01	Silty SAND with trace organics and some clay and rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, Yellowish-orange.	
12	1		BRC001-GB035-1218-01		1
	1		BRC001-GB035-1824-01		
24				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB036

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/18/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	782	550	BRC001-GB036-0001-01		0
	503		BRC001-GB036-0106-01	Gravelly SAND with some silt, very fine to fine-grained, dry, gray.	
	109		BRC001-GB036-0612-01		
12					1
	1		BRC001-GB036-1218-01		
	1		BRC001-GB036-1824-01	Silty SAND with little clay, and rock fragments (caliche), very fine to fine-grained, dry, white to tan.	
24					2
				Silty CLAY with trace sand and trace organics, very fine-grained, stiff, dry, redish-brown.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB037

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/18/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	465	260	BRC001-GB037-0001-01	Gravelly SAND with some silt and trace organic material, fine-grained, dry, dark gray.	0
	80	47	BRC001-GB037-0106-01		
	33		BRC001-GB037-0612-01	Silty SAND with trace organics and some clay and rock fragments (caliche, disturbed soil), very fine to fine-grained, dry to slightly moist, yellowish brown.	
12	1		BRC001-GB037-1218-01		1
	1		BRC001-GB037-1824-01		
24					2
36				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB038

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/18/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,077	650	BRC001-GB038-0001-01	Silty SAND with some organics and little rock fragments, very fine to fine-grained, dry, brown.	0
	932		BRC001-GB038-0106-01		
	294		BRC001-GB038-0612-01	Silty SAND with trace organics and trace clay and rock fragments (caliche), very fine to fine-grained, dry, tan to white.	
12	30		BRC001-GB038-1218-01		1
	24		BRC001-GB038-1824-01	Clayey SILT with trace sand and trace organics, very fine-grained, dry redish-brown.	
24					2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB039

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/18/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	2,151		BRC001-GB039-0001-01	Silty SAND with some organics and trace rock fragments, very fine to fine-grained, dry, brown.	0
	2,422		BRC001-GB039-0106-01		
	289	270	BRC001-GB039-0612-01	Silty SAND with trace organics and trace clay and some rock fragments (caliche), very fine to fine-grained, dry, redish-brown.	
12					1
	46		BRC001-GB039-1218-01		
	4		BRC001-GB039-1824-01		
24					2
				Clayey SILT with trace sand and trace organics, very fine-grained, dry redish-brown.	
36					3
48					4
				Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray.	
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB040

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/18/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	68	43	BRC001-GB040-0001-01	Silty SAND with some organics and trace rock fragments, very fine to fine-grained, dry, brown.	0
	67		BRC001-GB040-0106-01		
	29		BRC001-GB040-0612-01	Clayey SILT with trace sand and trace rock fragments, very fine-grained, dry, brown.	
12					1
	15		BRC001-GB040-1218-01	Silty SAND with some rock fragments (caliche), very fine to fine-grained, dry, redish-brown.	
	24		BRC001-GB040-1824-01		
24					2
				Clayey SILT with trace sand, very fine-grained, dry redish-brown.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB041

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/18/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	2,193	2,500	BRC001-GB041-0001-01	Clayey SILT with trace sand and trace gravel, very fine-grained, dry, dark brown.	0
	2,359		BRC001-GB041-0106-01		
	2,236		BRC001-GB041-0612-01	Clayey SILT with trace sand and trace organics, very fine-grained, dry, redish-brown.	
12	66		BRC001-GB041-1218-01		1
	57		BRC001-GB041-1824-01		
24	49		BRC001-GB041-2430-01		2
36				Silty CLAY with trace sand, very fine-grained, stiff, dry, brown.	3
48					4
				Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB042

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/18/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,425		BRC001-GB042-0001-01	Clayey SILT with trace sand and trace organics and trace gravel, very fine-grained, dry, dark brown.	0
	1,029		BRC001-GB042-0106-01		
	1,567	2,200	BRC001-GB042-0612-01		
12	128		BRC001-GB042-1218-01		1
	67		BRC001-GB042-1824-01		
24	40		BRC001-GB042-2430-01	Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	2
36					3
48				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB043

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/18/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	2,602		BRC001-GB043-0001-01	Silty SAND with some organics and trace gravel, very fine to fine-grained, dry, dark brown.	0
	2,937	2,600	BRC001-GB043-0106-01		
	460		BRC001-GB043-0612-01	Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	
12	41		BRC001-GB043-1218-01		1
	22		BRC001-GB043-1824-01		
24	44		BRC001-GB043-2430-01		2
36					3
48				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB044

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/18/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	34,133	33,000	BRC001-GB044-0001-01	SAND and organic material with some silt, fine-grained, dry, black.	0
	6,134		BRC001-GB044-0106-01		
	281		BRC001-GB044-0612-01		
12	65		BRC001-GB044-1218-01		1
	44		BRC001-GB044-1824-01		
24				Clayey SILT with trace sand and trace organics, very fine-grained, dry, redish-brown.	2
36					3
				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB045

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/18/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	14,300	18,000	BRC001-GB045-0001-01	SAND with organic material with some silt, fine-grained, dry, very dark brown.	0
	10,767		BRC001-GB045-0106-01		
	799		BRC001-GB045-0612-01	Clayey SILT with trace sand and some silt, very fine-grained, dry, redish-brown.	
12	67		BRC001-GB045-1218-01		1
	60		BRC001-GB045-1824-01		
24	47		BRC001-GB045-2430-01		2
36					3
				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-GB046

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/18/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,078		BRC001-GB046-0001-01	Silty SAND with organic material and trace gravel, fine-grained, dry, very dark brown.	0
	2,244	3,000	BRC001-GB046-0106-01		
	4,783		BRC001-GB046-0612-01		
12	540		BRC001-GB046-1218-01	Clayey SILT with trace sand and trace organics, very fine-grained, dry, redish-brown.	1
	37		BRC001-GB046-1824-01		
24	69		BRC001-GB046-2430-01		2
36					3
48				Silty SAND, very fine to fine-grained, dry, redish-brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT:

Puerto Rico Battery

Arecibo, Puerto Rico

BORING LOCATION:

BRC001-SB001

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.

DRILLER: Simon Ojeda

DRILLING METHOD: Macro-Core

DRILLING DATE: 1/11/2016

DRILLING EQUIPMENT: Geoprobe

LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	3,059	2,700	BRC001-SB001-0001-01	Silty CLAY with trace organic fine inter bedded fill, dry, redish-brown.	0
	9,129		BRC001-SB001-0106-01		
	8,583		BRC001-SB001-0612-01		
12	578		BRC001-SB001-1218-01		1
	72		BRC001-SB001-1824-01		
24	23		BRC001-SB001-2430-01		2
	24		BRC001-SB001-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB002

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/11/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,764	1,300	BRC001-SB002-0001-01	Silty CLAY with trace organic fine inter bedded fill, dry, redish-brown.	0
	506		BRC001-SB002-0106-01		
	210		BRC001-SB002-0612-01		
12	45		BRC001-SB002-1218-01		1
	6		BRC001-SB002-1824-01		
24	23		BRC001-SB002-2430-01		2
	19		BRC001-SB002-3036-01		
36				Clayey SAND, very fine to fine-grained, medium to stiff, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB003

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/11/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,580		BRC001-SB003-0001-01	Silty CLAY with trace organic fines with interbedded fill, dry, redish-brown.	0
	2,977		BRC001-SB003-0106-01		
	1,807	3,800	BRC001-SB003-0612-01		
12	44		BRC001-SB003-1218-01	Clayey SILT with trace sand, very fine-grained, stiff, redish-brown. @ 42" color to yellowish brown.	1
	17		BRC001-SB003-1824-01		
24	17		BRC001-SB003-2430-01		2
	10		BRC001-SB003-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB004

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/12/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,104		BRC001-SB004-0001-01	Silty SAND with trace organic fines and interbedded fill, dry, redish-brown.	0
	508		BRC001-SB004-0106-01		
	2,718		BRC001-SB004-0612-01		
12	29		BRC001-SB004-1218-01	Clayey SILT, trace sand, very fine-grained, stiff, dry.	1
	13		BRC001-SB004-1824-01		
24	17		BRC001-SB004-2430-01		2
	13		BRC001-SB004-3036-01		
36					3
48				Sandy SILT with trace clay, very fine to fine-grained, stiff, dry.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB005

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/12/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	55	58	BRC001-SB005-0001-01	Silty sand with trace clay interbedded with rock fragments- FILL, dry, redish-brown.	0
	10		BRC001-SB005-0106-01		
	22		BRC001-SB005-0612-01		
12	123	160	BRC001-SB005-1218-01		1
	2,322	15,000	BRC001-SB005-1824-01		
24	574		BRC001-SB005-2430-01		2
	69		BRC001-SB005-3036-01		
36	16,533	16,000	BRC001-SB005-3642-01		3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB006

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/12/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	938	2,200	BRC001-SB006-0001-01	Silty SAND with trace clay and some rubble, dry, yellowish brown.	0
	812		BRC001-SB006-0106-01		
	29		BRC001-SB006-0612-01		
12	241	280	BRC001-SB006-1218-01		1
	42		BRC001-SB006-1824-01		
24	28		BRC001-SB006-2430-01		2
	19		BRC001-SB006-3036-01	Silty CLAY with trace sand, very fine-grained, dry, yellowish brown.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB007

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/12/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	265	310	BRC001-SB007-0001-01	Silty CLAY with organic fine and trace gravel - FILL, dry, dark brown.	0
	153		BRC001-SB007-0106-01		
	620		BRC001-SB007-0612-01		
12	34		BRC001-SB007-1218-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	1
	43		BRC001-SB007-1824-01		
24	20		BRC001-SB007-2430-01		2
	21		BRC001-SB007-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB008

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/12/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	496	420	BRC001-SB008-0001-01	Silty SAND with trace clay and some rock fragments, fine to very fine-grained, dry, yellowish brown.	0
	72		BRC001-SB008-0106-01		
	316		BRC001-SB008-0612-01		
12	1,144		BRC001-SB008-1218-01		1
	4,880		BRC001-SB008-1824-01		
24	4,370		BRC001-SB008-2430-01		2
	6,004		BRC001-SB008-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB009

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/12/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	3,032		BRC001-SB009-0001-01	Silty SAND with trace clay, trace organics, and some rock fragments, fine to very fine-grained, dry, yellowish brown.	0
	2,303		BRC001-SB009-0106-01		
	24	40	BRC001-SB009-0612-01		
12	2,367		BRC001-SB009-1218-01		1
	4,912		BRC001-SB009-1824-01		
24	3,314		BRC001-SB009-2430-01		2
	9,943		BRC001-SB009-3036-01		
36	3,743	220	BRC001-SB009-3642-01		3
	21		BRC001-SB009-4248-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB010

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/13/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	8,900	10,000	BRC001-SB010-0001-01	Silty SAND with trace clay and some rock fragments, fine to very fine-grained, dry, yellowish brown.	0
	2,104		BRC001-SB010-0106-01		
	398	1,300	BRC001-SB010-0612-01		
12	5,340		BRC001-SB010-1218-01		1
	1,116		BRC001-SB010-1824-01		
24	24		BRC001-SB010-2430-01		2
	15		BRC001-SB010-3036-01		
36				Clayey SILT with trace sand, very fine-grained, stiff, dry, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB011

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/13/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	5,570	8,100	BRC001-SB011-0001-01	Silty SAND with trace clay and some rock fragments, very fine to fine-grained, dry, yellowish brown.	0
	1,113		BRC001-SB011-0106-01		
	35		BRC001-SB011-0612-01		
12	38		BRC001-SB011-1218-01		1
	891	1,400	BRC001-SB011-1824-01		
24	14		BRC001-SB011-2430-01		2
	13		BRC001-SB011-3036-01		
36				Silty CLAY with trace sand, very fine-grained, medium, dry, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB012

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/13/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	2,002	2,100	BRC001-SB012-0001-01	Clayey SILT with trace sand and trace organics, some rock fragments, very fine-grained, dry, redish-brown.	0
	2,884		BRC001-SB012-0106-01		
	613		BRC001-SB012-0612-01		
12	79	48	BRC001-SB012-1218-01		1
	22		BRC001-SB012-1824-01		
24	27		BRC001-SB012-2430-01	Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	2
	33		BRC001-SB012-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB013

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/13/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	586		BRC001-SB013-0001-01	Clayey SILT with trace sand and trace organics, some rock fragments, very fine-grained, dry, yellowish brown.	0
	149		BRC001-SB013-0106-01		
	1,621	1,300	BRC001-SB013-0612-01		
12	8,984		BRC001-SB013-1218-01		1
	13,967		BRC001-SB013-1824-01		
24	9,034	12,000	BRC001-SB013-2430-01		2
	497		BRC001-SB013-3036-01		
36	22		BRC001-SB013-3642-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	3
	18		BRC001-SB013-4248-01		
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB014

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/13/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	68		BRC001-SB014-0001-01	Silty SAND with little rock fragments, very fine to fine-grained, dry, brownish yellow.	0
	2		BRC001-SB014-0106-01		
	751	940	BRC001-SB014-0612-01		
12	3		BRC001-SB014-1218-01		1
	2		BRC001-SB014-1824-01		
24	2		BRC001-SB014-2430-01	Silty SAND with some rock fragments, very fine to fine-grained, dry, light gray, hydrocarbon odor. Caliche. Former AST location.	2
	3		BRC001-SB014-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB015

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/13/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	136		BRC001-SB015-0001-01	Silty SAND with some rock fragments, very fine to fine-grained, dry, brownish yellow.	0
	190		BRC001-SB015-0106-01		
	451		BRC001-SB015-0612-01		
12	9,562	9,500	BRC001-SB015-1218-01		1
	3,434	3,300	BRC001-SB015-1824-01		
24	24		BRC001-SB015-2430-01		2
	15		BRC001-SB015-3036-01		
36					3
48				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB016

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/13/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	5,276	4,800	BRC001-SB016-0001-01	Silty SAND with trace clay and some rock fragments, very fine to fine-grained, dry, brownish yellow.	0
	530		BRC001-SB016-0106-01		
	1,094		BRC001-SB016-0612-01		
12	4,171	440	BRC001-SB016-1218-01		1
	892		BRC001-SB016-1824-01		
24	75		BRC001-SB016-2430-01		2
	23		BRC001-SB016-3036-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB017

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/13/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	3,691		BRC001-SB017-0001-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, redish-brown.	0
	1,374		BRC001-SB017-0106-01		
	636	1,100	BRC001-SB017-0612-01		
12	1,563		BRC001-SB017-1218-01		1
	1,511		BRC001-SB017-1824-01	Crushed rock, dry, light gray.	
24	1,789		BRC001-SB017-2430-01		2
	24		BRC001-SB017-3036-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	
36	19		BRC001-SB017-3642-01		3
	17		BRC001-SB017-4248-01		
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB018

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/13/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	710	490	BRC001-SB018-0001-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, redish-brown.	0
	157		BRC001-SB018-0106-01		
	242		BRC001-SB018-0612-01		
12	431		BRC001-SB018-1218-01		1
	343		BRC001-SB018-1824-01		
24	681	630	BRC001-SB018-2430-01		2
	80		BRC001-SB018-3036-01		
36				Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB019

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/13/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	94	100	BRC001-SB019-0001-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, brownish yellow, hydrocarbon odor.	0
	24		BRC001-SB019-0106-01		
	339	250	BRC001-SB019-0612-01		
12	52		BRC001-SB019-1218-01		1
	13		BRC001-SB019-1824-01		
24	3		BRC001-SB019-2430-01		2
	1		BRC001-SB019-3036-01		
36					3
				Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray. No odor.	
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB020

WESTON SOLUTIONS
REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/13/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,599	1,300	BRC001-SB020-0001-01	Silty SAND with some rock fragments (fill), very fine to fine-grained, dry, brownish yellow.	0
	188		BRC001-SB020-0106-01		
	300		BRC001-SB020-0612-01		
12	8,304	8,900	BRC001-SB020-1218-01		1
	1,725		BRC001-SB020-1824-01		
24	52		BRC001-SB020-2430-01		2
	52		BRC001-SB020-3036-01		
36				SAND, fine to medium-grained, dry, dark gray, hydrocarbon odor.	3
				Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray. No odor.	
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB021

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/13/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	4,860	5,100	BRC001-SB021-0001-01	Silty SAND with trace organics and some rock fragments (fill), very fine to fine-grained, dry, brownish yellow.	0
	2,268		BRC001-SB021-0106-01		
	4,680		BRC001-SB021-0612-01		
12	420		BRC001-SB021-1218-01		1
	42		BRC001-SB021-1824-01		
24	21		BRC001-SB021-2430-01		2
	16		BRC001-SB021-3036-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB022

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/13/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	5,781		BRC001-SB022-0001-01	Clayey SILT with trace sand and some rock fragments, very fine-grained, dry, redish-brown.	0
	493		BRC001-SB022-0106-01		
	3,011	2,200	BRC001-SB022-0612-01		
12	1,101		BRC001-SB022-1218-01		1
	18		BRC001-SB022-1824-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	
24	30		BRC001-SB022-2430-01	Sandy SILT with trace organics, fine to very fine-grained, dry, redish-brown.	2
	18		BRC001-SB022-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB023

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/13/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	2,118	2,100	BRC001-SB023-0001-01	Clayey SILT with trace sand and organics, and some rock fragments, very fine-grained, dry redish-brown.	0
	125		BRC001-SB023-0106-01		
	167		BRC001-SB023-0612-01		
12	81		BRC001-SB023-1218-01		1
	1,655		BRC001-SB023-1824-01		
24	435		BRC001-SB023-2430-01		2
	20		BRC001-SB023-3036-01	Sandy SILT with trace organic material, very fine-grained, dry, redish-brown.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB024

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,268	1100 / 1300	BRC001-SB024-0001-01/02	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, brownish yellow.	0
	289		BRC001-SB024-0106-01		
	1,118		BRC001-SB024-0612-01		
12	575		BRC001-SB024-1218-01		1
	613	520	BRC001-SB024-1824-01		
24	19		BRC001-SB024-2430-01		2
	19		BRC001-SB024-3036-01		
36				Sandy SILT with trace clay, very fine-grained, dry, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB025

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,668	920/1,100	BRC001-SB025-0001-01/02	Silty SAND with trace organics and some rock fragments (caliche), very fine to fine-grained, dry, brownish yellow.	0
	98		BRC001-SB025-0106-01		
	48		BRC001-SB025-0612-01		
12	18		BRC001-SB025-1218-01		1
	1,063	1,500	BRC001-SB025-1824-01		
24	219		BRC001-SB025-2430-01		2
	18		BRC001-SB025-3036-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, olive gray.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB026

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	60,200	29,000	BRC001-SB026-0001-01	Silty CLAY with trace sand, very fine-grained, soft, dry, redish-brown.	0
	3,379		BRC001-SB026-0106-01		
	1,560		BRC001-SB026-0612-01		
12	140		BRC001-SB026-1218-01	Silty SAND with some clay and little rock fragments, very fine to fine-grained, dry, brownish yellow.	1
	422		BRC001-SB026-1824-01		
24	224		BRC001-SB026-2430-01		2
	20		BRC001-SB026-3036-01		
36				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB027

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	7,347	43000 / 3300	BRC001-SB027-0001-01/02	Clayey SILT with trace sand and some organics and gravel, very fine-grained, dry, brownish yellow.	0
	786		BRC001-SB027-0106-01		
	20		BRC001-SB027-0612-01		
12	33		BRC001-SB027-1218-01		1
	91		BRC001-SB027-1824-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	
24	15		BRC001-SB027-2430-01		2
	20		BRC001-SB027-3036-01		
36					3
48				Clayey SAND, very fine to fine-grained, soft, moist, redish-brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB028

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	12,867	7,600	BRC001-SB028-0001-01	Silty SAND with some organics and some rock fragments, very fine to fine-grained, dry, brownish yellow.	0
	4,169		BRC001-SB028-0106-01		
	1,340	1,200	BRC001-SB028-0612-01		
12	366		BRC001-SB028-1218-01		1
	38		BRC001-SB028-1824-01	Silty CLAY with trace sand and trace gravel, very fine-grained, stiff, dry, redish-brown.	
24	19		BRC001-SB028-2430-01		2
	4,722	32	BRC001-SB028-3036-01	Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	
36	1		BRC001-SB028-3642-01		3
	18		BRC001-SB028-4248-01		
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB029

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	7,481		BRC001-SB029-0001-01	Silty SAND with some organics and some rock fragments, very fine to fine-grained, dry, brownish yellow.	0
	1,074		BRC001-SB029-0106-01		
	3,640	6,600	BRC001-SB029-0612-01		
12	658		BRC001-SB029-1218-01		1
	236		BRC001-SB029-1824-01		
24	49		BRC001-SB029-2430-01	Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	2
	22		BRC001-SB029-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB030

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	597	580	BRC001-SB030-0001-01	Silty SAND with trace organics and some gravel, very fine to fine-grained, dry, brownish yellow.	0
	493		BRC001-SB030-0106-01		
	9,482	820	BRC001-SB030-0612-01		
12	688		BRC001-SB030-1218-01	Silty CLAY with trace sand and trace organics and trace gravel, very fine-grained, stiff, dry, redish-brown.	1
	231		BRC001-SB030-1824-01		
24	295		BRC001-SB030-2430-01		2
	31		BRC001-SB030-3036-01		
36				Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB031

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/14/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	572	2,500/1,100	BRC001-SB031-0001-01/02	Silty SAND with trace organics and little clay and some rock fragments, very fine to fine-grained, dry, brownish yellow.	0
	1,110		BRC001-SB031-0106-01		
	72		BRC001-SB031-0612-01	Clayey SILT with trace sand and trace organics, very fine-grained, dry, redish-brown.	
12	29		BRC001-SB031-1218-01		1
	28		BRC001-SB031-1824-01		
24	24		BRC001-SB031-2430-01		2
	23		BRC001-SB031-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB032

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	54,033	33,000	BRC001-SB032-0001-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, black.	0
	1,792		BRC001-SB032-0106-01		
	1,211	860	BRC001-SB032-0612-01	Silty SAND with trace organics and little clay, and rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, tan.	
12	2,791		BRC001-SB032-1218-01		1
	418		BRC001-SB032-1824-01		
24	120		BRC001-SB032-2430-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	2
	43		BRC001-SB032-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB033

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	570	500	BRC001-SB033-0001-01	Silty SAND with trace organics and trace clay, and rock fragments (caliche), very fine to fine-grained, dry, brownish tan.	0
	706		BRC001-SB033-0106-01		
	23		BRC001-SB033-0612-01		
12	409	300	BRC001-SB033-1218-01		1
	319		BRC001-SB033-1824-01		
24	49		BRC001-SB033-2430-01	Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	2
	20		BRC001-SB033-3036-01		
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB034

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	3,092		BRC001-SB034-0001-01	Gravelly SAND with some silt, very fine to fine-grained, dry, black.	0
	1,234		BRC001-SB034-0106-01		
	923		BRC001-SB034-0612-01		
12	99		BRC001-SB034-1218-01	Silty SAND with trace organics and some clay, and rock fragments (disturbed soil), very fine to fine-grained, dry, light brown.	1
	48		BRC001-SB034-1824-01		
24	16		BRC001-SB034-2430-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB035

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,354		BRC001-SB035-0001-01	Silty SAND with organics and little rock fragments, very fine to fine-grained, dry, dark.	0
	749		BRC001-SB035-0106-01	Silty SAND with trace organics and rock fragments (caliche), very fine to fine-grained, dry, tan.	
	341		BRC001-SB035-0612-01		
12	95		BRC001-SB035-1218-01	Silty SAND with trace organics and little clay and some rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, redish-brown.	1
	20		BRC001-SB035-1824-01		
24					2
36				Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB036

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	6,701	7,200	BRC001-SB036-0001-01	Silty SAND with trace organics and rock fragments, very fine to fine-grained, dry, brown.	0
	3,356		BRC001-SB036-0106-01		
	71		BRC001-SB036-0612-01	Silty SAND with some clay and some rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, redish-brown.	
12	25		BRC001-SB036-1218-01		1
	19		BRC001-SB036-1824-01		
24					2
36				Clayey SILT with trace sand and trace organics, very fine-grained, dry, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB037

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,921		BRC001-SB037-0001-01	Silty SAND with trace organics and rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, redish-brown.	0
	1,982		BRC001-SB037-0106-01		
	3,135	2,000	BRC001-SB037-0612-01		
12	91		BRC001-SB037-1218-01		1
	2		BRC001-SB037-1824-01		
24					2
36				Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB038

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/18/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	5,205	3,700	BRC001-SB038-0001-01	Silty SAND with trace organics and some lay and rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, redish-brown.	0
	3,431		BRC001-SB038-0106-01		
	3,730		BRC001-SB038-0612-01		
12	93		BRC001-SB038-1218-01		1
	40		BRC001-SB038-1824-01		
24					2
36					3
48				Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB039

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,631		BRC001-SB039-0001-01	Silty SAND with some organic material, very fine to fine-grained, dry, brown.	0
	2,376		BRC001-SB039-0106-01		
	283		BRC001-SB039-0612-01	Silty SAND with trace organics and little clay and some rock fragments, very fine to fine-grained, dry, white to tan.	
12					1
	11		BRC001-SB039-1218-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, redish-brown.	
	1		BRC001-SB039-1824-01		
24					2
36					3
48				Silty CLAY with trace sand and trace organics, very fine-grained, stiff, dry, redish-brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB040

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	2,639	2,400	BRC001-SB040-0001-01	Silty SAND with some organic material, very fine to fine-grained, dry, dark brown.	0
	4,132		BRC001-SB040-0106-01		
	3,195		BRC001-SB040-0612-01	Silty SAND with trace organics and some rock fragments (caliche), very fine to fine-grained, dry, redish-brown.	
12	61		BRC001-SB040-1218-01		1
	177		BRC001-SB040-1824-01		
24	115		BRC001-SB040-2430-01		2
36				Clayey SILT with trace sand, very fine-grained, dry, brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB041

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	971	820	BRC001-SB041-0001-01	Silty SAND with organic material, very fine to fine-grained, dry, brown.	0
	286		BRC001-SB041-0106-01		
	101		BRC001-SB041-0612-01	Silty SAND with trace organics and some rock fragments (caliche), very fine to fine-grained, dry, redish-brown.	
12	17		BRC001-SB041-1218-01		1
	1		BRC001-SB041-1824-01		
24				Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB042

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,581	1700 / 1600	BRC001-SB042-0001-01/02	Silty SAND with some organic material and rock fragments, very fine to fine-grained, dry, dark brown.	0
	1,512		BRC001-SB042-0106-01		
	381	170	BRC001-SB042-0612-01	Silty SAND with little clay and trace organics and some rock fragments (caliche, disturbed soil), very fine to fine-grained, dry, redish-brown.	
12	23		BRC001-SB042-1218-01		1
	14		BRC001-SB042-1824-01		
24				Clayey SILT with trace sand and trace organics, very fine-grained, dry, brown.	2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB043

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	739		BRC001-SB043-0001-01	Silty SAND with organic material and little gravel, very fine to fine-grained, dry, brown.	0
	293		BRC001-SB043-0106-01	GRAVEL, crushed, dry, white.	
	118		BRC001-SB043-0612-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, redish-brown.	
12	32		BRC001-SB043-1218-01		1
	1		BRC001-SB043-1824-01		
24					2
36				Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB044

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	824		BRC001-SB044-0001-01	Silty SAND with some organic material and trace gravel,very fine to fine-grained, dry, brown.	0
	1,583		BRC001-SB044-0106-01		
	104	1,700	BRC001-SB044-0612-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, light brown.	
12	25		BRC001-SB044-1218-01		1
	22		BRC001-SB044-1824-01	Silty SAND with trace organics and little rock fragments, very fine to fine-grained, dry, redish-brown.	
24					2
36				Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB045

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	321	280 J	BRC001-SB045-0001-01	Silty SAND with some organics and little rock fragments, very fine to fine-grained, dry, brown.	0
	250		BRC001-SB045-0106-01		
	54		BRC001-SB045-0612-01	Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	
12	31		BRC001-SB045-1218-01		1
	23		BRC001-SB045-1824-01		
24					2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB046

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	901	790	BRC001-SB046-0001-01	Silty SAND with some organics and little rock fragments, very fine to fine-grained, dry, brown.	0
	297		BRC001-SB046-0106-01		
	114		BRC001-SB046-0612-01		
12	25		BRC001-SB046-1218-01	Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	1
	17		BRC001-SB046-1824-01		
24					2
36				Silty SAND, very fine-grained, dry, reddish brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB047

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,387		BRC001-SB047-0001-01	Silty SAND with some organics and little rock fragments, very fine to fine-grained, dry, brown to reddish-brown.	0
	384		BRC001-SB047-0106-01		
	32		BRC001-SB047-0612-01		
12	35		BRC001-SB047-1218-01	Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	1
	21		BRC001-SB047-1824-01		
24					2
36					3
48				Silty SAND, very fine-grained, dry, reddish-brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB048

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,683	1,200	BRC001-SB048-0001-01	Silty SAND with little organics and little rock fragments, very fine to fine-grained, dry, brown.	0
	816		BRC001-SB048-0106-01		
	106		BRC001-SB048-0612-01	Silty SAND with trace organics and little rock fragments, very fine to fine-grained, dry, redish-brown.	
12	74		BRC001-SB048-1218-01		1
	146	400	BRC001-SB048-1824-01	Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	
24					2
				GRAVEL, coarse, dry, white.	
36				Clayey SILT with trace sand and trace organics, very fine-grained, dry, redish-brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB049

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/19/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,802		BRC001-SB049-0001-01	Silty SAND with some organics and trace rock fragments, very fine to fine-grained, dry, dark brown.	0
	1,911		BRC001-SB049-0106-01		
	3,673	14,000	BRC001-SB049-0612-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, brown.	
12	343	350	BRC001-SB049-1218-01		1
	93		BRC001-SB049-1824-01	Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	
24	25		BRC001-SB049-2430-01		2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB050

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	4,248		BRC001-SB050-0001-01	Silty SAND with some rock fragments, very fine to fine-grained, dry, dark brown.	0
	3,231		BRC001-SB050-0106-01		
	340		BRC001-SB050-0612-01	Silty SAND with trace organics and some rock fragments (caliche), very fine to fine-grained, dry, tan.	
12					1
	23		BRC001-SB050-1218-01	Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	
	23		BRC001-SB050-1824-01		
24					2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB051

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	13,800	13,000	BRC001-SB051-0001-01	Silty SAND with trace organics and little rock fragments, very fine to fine-grained, dry, brown.	0
	7,529		BRC001-SB051-0106-01		
	2,162		BRC001-SB051-0612-01	Clayey SILT with trace sand, very fine-grained, dry, redish-brown.	
12	502	110	BRC001-SB051-1218-01		1
	59		BRC001-SB051-1824-01		
24	40		BRC001-SB051-2430-01		2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB052

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	6,632	5300 / 5500	BRC001-SB052-0001-01/02	Silty SAND with trace organics and little rock fragments, very fine to fine-grained, dry, brown.	0
	3,797		BRC001-SB052-0106-01		
	1,182		BRC001-SB052-0612-01	Silty SAND with trace organics and rock fragments (caliche, fill), very fine to fine-grained, dry, white.	
12	474		BRC001-SB052-1218-01	Sandy SILT with trace organic material, very fine to fine-grained, dry, brown.	1
	21		BRC001-SB052-1824-01		
24	19		BRC001-SB052-2430-01		2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB053

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	3,990	890	BRC001-SB053-0001-01	Silty SAND with trace organics and little rock fragments, very fine to fine-grained, dry, brown.	0
	1,531		BRC001-SB053-0106-01		
	1,344		BRC001-SB053-0612-01		
12	412		BRC001-SB053-1218-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, redish-brown.	1
	113		BRC001-SB053-1824-01	Sandy SILT with trace organic material, very fine to fine-grained, dry, reddish brown.	
24	28		BRC001-SB053-2430-01		2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB054

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	733	560	BRC001-SB054-0001-01	Silty SAND with trace organics and little rock fragments, very fine to fine-grained, dry, brown.	0
	488		BRC001-SB054-0106-01		
	71		BRC001-SB054-0612-01	Silty SAND with trace organics and trace clay, very fine to fine-grained, dry, redish-brown.	
12					1
	39		BRC001-SB054-1218-01		
	51		BRC001-SB054-1824-01		
24					2
36					3
				Sandy SILT, very fine-grained, dry, reddish brown.	
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB055

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	610		BRC001-SB055-0001-01	Silty SAND with trace organics and little rock fragments, very fine to fine-grained, dry, brown.	0
	418		BRC001-SB055-0106-01		
	167	98	BRC001-SB055-0612-01		
12	91		BRC001-SB055-1218-01		1
	116		BRC001-SB055-1824-01		
24				Silty SAND with trace organics and trace clay, very fine to fine-grained, dry, redish-brown.	2
36					3
48				Sandy SILT, very fine-grained, dry, reddish brown.	4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB056

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	516	460	BRC001-SB056-0001-01		0
	313		BRC001-SB056-0106-01	Silty SAND with trace organics and little rock fragments, very fine to fine-grained, dry, brown.	
	366		BRC001-SB056-0612-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, grayish brown.	
12					1
	74		BRC001-SB056-1218-01		
	51		BRC001-SB056-1824-01		
24					2
				Sandy SILT with trace organic material, very fine to fine-grained, dry, reddish brown.	
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB057

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,571		BRC001-SB057-0001-01	Silty SAND with trace organics and little rock fragments, very fine to fine-grained, dry, brown.	0
	726		BRC001-SB057-0106-01		
	428	310	BRC001-SB057-0612-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, grayish brown.	
12	45		BRC001-SB057-1218-01		1
	19		BRC001-SB057-1824-01	Sandy SILT with trace organic material, very fine to fine-grained, dry, reddish brown.	
24					2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB058

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	909	860	BRC001-SB058-0001-01	Silty SAND with trace organics and little rock fragments, very fine to fine-grained, dry, reddish brown.	0
	537		BRC001-SB058-0106-01		
	753		BRC001-SB058-0612-01	Silty SAND with trace organics and some rock fragments, very fine to fine-grained, dry, grayish brown.	
12	97		BRC001-SB058-1218-01		1
	18		BRC001-SB058-1824-01		
24					2
36				Sandy SILT with trace organic material, very fine to fine-grained, dry, reddish brown.	3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB059

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	1,033		BRC001-SB059-0001-01	Silty SAND with some organics and some rock fragments, very fine to fine-grained, dry, brown.	0
	520		BRC001-SB059-0106-01		
	157		BRC001-SB059-0612-01		
12	98		BRC001-SB059-1218-01		1
	75		BRC001-SB059-1824-01		
24				Clayey SILT with trace sand and trace organics, very fine-grained, dry, redish-brown.	2
36					3
48					4
60				Silty CLAY with trace sand, very fine-grained, stiff, dry, redish-brown.	5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB060

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	92,333	79,000	BRC001-SB060-0001-01	Silty SAND with little organics, and some gravel (fill), very fine to fine-grained, dry, reddish brown.	0
	57,433		BRC001-SB060-0106-01		
	1,759		BRC001-SB060-0612-01	Sandy CLAY with trace rock fragments, fine-grained, slightly moist, reddish brown.	
12	3,112	2,800	BRC001-SB060-1218-01		1
				Concrete refusal.	
24					2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

PROJECT: Puerto Rico Battery
Arecibo, Puerto Rico

BORING LOCATION:
BRC001-SB061

REMOVAL SUPPORT TEAM 3
CONTRACT # EP-S2-14-01

DRILLING CONTRACTOR: On-Site Environmental, Inc.
DRILLER: Simon Ojeda
DRILLING METHOD: Macro-Core
DRILLING DATE: 1/20/2016
DRILLING EQUIPMENT: Geoprobe
LOGGED BY: Daniel Strong/Angel Alicea

DEPTH (Inches)	FIELD SCREENING AND ANALYTICAL: XRF Reading (ppm)	Analytical Result (mg/kg)	Sample ID	GEOLOGICAL DESCRIPTION	DEPTH (Feet)
0	95,233	80,000	BRC001-SB061-0001-01	Silty SAND with trace clay and little organics, and some rock fragments (fill), very fine to fine-grained, dry, reddish brown.	0
	42,600		BRC001-SB061-0106-01		
	40,133	28,000	BRC001-SB061-0612-01		
12	28,567		BRC001-SB061-1215-01		1
24					2
36					3
48					4
60					5

ppm - parts per million; mg/kg - milligrams per kilograms

TDD: 0007-0021

ATTACHMENT E

Chain of Custody Records

USEPA CLP COC (LAB COPY)

DateShipped: 1/18/2016
CarrierName: FedEx
AirbillNo: 8012 2170 0012

CHAIN OF CUSTODY RECORD

Case #: 45919
Cooler #: 1

No: 2-011816-133838-0001

Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-GB025-7284-01	BC9J1	Soil/ RST 3	Grab	Encores(21)	1018 (0 C) (3)	BRC001-GB025	01/18/2016 09:50	
BRC001-GB025-96108-01	BC9J2	Soil/ RST 3	Grab	Encores(21)	1022 (0 C) (3)	BRC001-GB025	01/18/2016 10:00	
BRC001-GB025-96108-02	BC9J3	Soil/ RST 3	Grab	Encores(21)	1030 (0 C) (3)	BRC001-GB025	01/18/2016 10:00	
BRC001-GB032-108120-01	BC9J4	Soil/ RST 3	Grab	Encores(21)	1026 (0 C) (3)	BRC001-GB025	01/18/2016 09:20	
BRC001-SB014-108120-01	BC9J5	Soil/ RST 3	Grab	Encores(21)	1010 (0 C) (3)	BRC001-SB014	01/18/2016 11:35	
BRC001-SB014-3648-01	BC9J6	Soil/ RST 3	Grab	Encores(21)	1002 (0 C) (3)	BRC001-SB014	01/18/2016 11:25	
BRC001-SB014-6072-01	BC9J7	Soil/ RST 3	Grab	Encores(21)	1006 (0 C) (3)	BRC001-SB014	01/18/2016 11:30	
BRC001-SB019-108120-01	BC9J8	Soil/ RST 3	Grab	Encores(21)	1014 (0 C) (3)	BRC001-SB019	01/18/2016 10:50	
RB-01182016	BC9J9	Water/ RST 3	Grab	VOA(21)	1034 (HCl) (3)	RB-01182016	01/18/2016 14:00	

Special Instructions: 21 days TAT,

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: Encores=CLP Volatiles, VOA=CLP VOCs

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Leonel Montes (WESTON)	1-18-16 16:00			

USEPA CLP COC (LAB COPY)

DateShipped: 1/18/2016
CarrierName: FedEx
AirbillNo: 8012 2170 0012

CHAIN OF CUSTODY RECORD

Case #: 45919
Cooler #: 2

No: 2-011816-142028-0002

Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-GB025-7284-01	BC9J1	Soil/ RST 3	Grab	ARO(21), SVOA(21), Moist(21)	1016 (0 C), 1017 (0 C), 1019 (0 C) (3)	BRC001-GB025	01/18/2016 09:50	
BRC001-GB025-96108-01	BC9J2	Soil/ RST 3	Grab	ARO(21), SVOA(21), Moist(21)	1020 (0 C), 1021 (0 C), 1023 (0 C) (3)	BRC001-GB025	01/18/2016 10:00	
BRC001-GB025-96108-02	BC9J3	Soil/ RST 3	Grab	ARO(21), SVOA(21), Moist(21)	1028 (0 C), 1029 (0 C), 1031 (0 C) (3)	BRC001-GB025	01/18/2016 10:00	
BRC001-GB032-108120-01	BC9J4	Soil/ RST 3	Grab	ARO(21), SVOA(21), Moist(21)	1024 (0 C), 1025 (0 C), 1027 (0 C) (4)	BRC001-GB025	01/18/2016 09:20	
BRC001-SB014-108120-01	BC9J5	Soil/ RST 3	Grab	ARO(21), SVOA(21), Moist(21)	1008 (0 C), 1009 (0 C), 1011 (0 C) (3)	BRC001-SB014	01/18/2016 11:35	
BRC001-SB014-3648-01	BC9J6	Soil/ RST 3	Grab	ARO(21), SVOA(21), Moist(21)	1000 (0 C), 1001 (0 C), 1003 (0 C) (3)	BRC001-SB014	01/18/2016 11:25	
BRC001-SB014-6072-01	BC9J7	Soil/ RST 3	Grab	ARO(21), SVOA(21), Moist(21)	1004 (0 C), 1005 (0 C), 1007 (0 C) (3)	BRC001-SB014	01/18/2016 11:30	
BRC001-SB019-108120-01	BC9J8	Soil/ RST 3	Grab	ARO(21), SVOA(21), Moist(21)	1012 (0 C), 1013 (0 C), 1015 (0 C) (3)	BRC001-SB019	01/18/2016 10:50	
RB-01182016	BC9J9	Water/ RST 3	Grab	ARO(21), SVOA(21)	1032 (4 C), 1033 (4 C) (4)	RB-01182016	01/18/2016 14:00	

Sample(s) to be used for Lab QC: BRC001-GB032-108120-01 Tag 1024 - Special Instructions: 21 Days TAT.

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: ARO=CLP Aroclors, SVOA=CLP Semivolatiles, Moist=CLP Percent Moisture

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Lionel Montero (WESTON)	1-18-16 16:00			

USEPA
DateShipped: 1/19/2016
CarrierName: FedEx
AirbillNo: 8012 2170 0045

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-011916-144748-0003
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-DB001-0106-01	BRC001-DB001	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-DB002-0001-01	BRC001-DB002	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-DB003-0001-01	BRC001-DB003	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-DB003-1218-01	BRC001-DB003	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-DB004-0612-01	BRC001-DB004	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-DB005-0001-01	BRC001-DB005	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-DB005-0612-01	BRC001-DB005	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-GB001-0001-01	BRC001-GB001	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB001-0001-02	BRC001-GB001	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB002-0001-01	BRC001-GB002	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Luis Montes (WESTON)	1-19-16 16:00			

USEPA
DateShipped: 1/19/2016
CarrierName: FedEx
AirbillNo: 8012 2170 0045

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-011916-144748-0003
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-GB003-0612-01	BRC001-GB003	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB004-0001-01	BRC001-GB004	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB004-0612-01	BRC001-GB004	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB005-0001-01	BRC001-GB005	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB005-0612-01	BRC001-GB005	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB006-0001-01	BRC001-GB006	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB007-0106-01	BRC001-GB007	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB008-0001-01	BRC001-GB008	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB010-0106-01	BRC001-GB010	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB011-0001-01	BRC001-GB011	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Leonid Montes (WESTON)	1-19-16 16:00			

USEPA
DateShipped: 1/19/2016
CarrierName: FedEx
AirbillNo: 8012 2170 0045

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-011916-144748-0003
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-GB012-0001-01	BRC001-GB012	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-GB014-0106-01	BRC001-GB014	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB014-0612-01	BRC001-GB014	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB015-0001-01	BRC001-GB015	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB016-0106-01	BRC001-GB016	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB017-0001-01	BRC001-GB017	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB017-0612-01	BRC001-GB017	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB018-0106-01	BRC001-GB018	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB019-0001-01	BRC001-GB019	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB020-0001-01	BRC001-GB020	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L. Montero (WESTON)	1-19-16 16:00			

USEPA
DateShipped: 1/19/2016
CarrierName: FedEx
AirbillNo: 8012 2170 0045

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-011916-144748-0003
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-GB020-1218-01	BRC001-GB020	TAL METALS	Soil	1/15/2016	1	8 oz Jar	4 C	N
	BRC001-GB022-0612-01	BRC001-GB022	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB023-0001-01	BRC001-GB023	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB024-0106-01	BRC001-GB024	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB025-0612-01	BRC001-GB025	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB025-1218-01	BRC001-GB025	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB026-0001-01	BRC001-GB026	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB027-0001-01	BRC001-GB027	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB027-0612-01	BRC001-GB027	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB029-0612-01	BRC001-GB029	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montberg (WESTON)	1-19-16 16:00			

USEPA
DateShipped: 1/19/2016
CarrierName: FedEx
AirbillNo: 8012 2170 0045

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-011916-144748-0003
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-GB030-0001-01	BRC001-GB030	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB030-0612-01	BRC001-GB030	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB030-1824-01	BRC001-GB030	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB031-0001-01	BRC001-GB031	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB031-0612-01	BRC001-GB031	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB032-0001-01	BRC001-GB032	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB032-0106-01	BRC001-GB032	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB032-1218-01	BRC001-GB032	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB033-0001-01	BRC001-GB033	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB033-1218-01	BRC001-GB033	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.	SAMPLES TRANSFERRED FROM
	CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L. Montes (WESTON)	1-19-16 16:00			

USEPA
DateShipped: 1/19/2016
CarrierName: FedEx
AirbillNo: 8012 2170 0045

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-011916-144748-0003
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-GB034-0106-01	BRC001-GB034	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-GB034-0612-01	BRC001-GB034	TAL METALS	Soil	1/16/2016	1	8 oz Jar	4 C	N
	BRC001-SB001-0001-01	BRC001-SB001	TAL METALS	Soil	1/11/2016	1	8 oz Jar	4 C	N
	BRC001-SB002-0001-01	BRC001-SB002	TAL METALS	Soil	1/11/2016	1	8 oz Jar	4 C	N
	BRC001-SB003-0612-01	BRC001-SB003	TAL METALS	Soil	1/11/2016	1	8 oz Jar	4 C	N
	BRC001-SB005-0001-01	BRC001-SB005	TAL METALS	Soil	1/12/2016	1	8 oz Jar	4 C	N
	BRC001-SB005-1218-01	BRC001-SB005	TAL METALS	Soil	1/12/2016	1	8 oz Jar	4 C	N
	BRC001-SB005-1824-01	BRC001-SB005	TAL METALS	Soil	1/12/2016	1	8 oz Jar	4 C	N
	BRC001-SB005-3642-01	BRC001-SB005	TAL METALS	Soil	1/12/2016	1	8 oz Jar	4 C	N
	BRC001-SB006-0001-01	BRC001-SB006	TAL METALS	Soil	1/12/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montero (WESTON)	1-19-16 16:00			

USEPA
DateShipped: 1/19/2016
CarrierName: FedEx
AirbillNo: 8012 2170 0045

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-011916-144748-0003
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-SB006-1218-01	BRC001-SB006	TAL METALS	Soil	1/12/2016	1	8 oz Jar	4 C	N
	BRC001-SB007-0001-01	BRC001-SB007	TAL METALS	Soil	1/12/2016	1	8 oz Jar	4 C	N
	BRC001-SB008-0001-01	BRC001-SB008	TAL METALS	Soil	1/12/2016	1	8 oz Jar	4 C	N
	BRC001-SB009-0612-01	BRC001-SB009	TAL METALS	Soil	1/12/2016	1	8 oz Jar	4 C	N
	BRC001-SB009-3642-01	BRC001-SB009	TAL METALS	Soil	1/12/2016	1	8 oz Jar	4 C	N
	BRC001-SB010-0001-01	BRC001-SB010	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB010-0612-01	BRC001-SB010	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB011-0001-01	BRC001-SB011	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB011-1824-01	BRC001-SB011	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB012-0001-01	BRC001-SB012	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.	**SAMPLES TRANSFERRED FROM**
	CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	S Montine (WESTON)	1-19-16 16:00			

USEPA
DateShipped: 1/19/2016
CarrierName: FedEx
AirbillNo: 8012 2170 0045

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-011916-144748-0003
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-SB012-1218-01	BRC001-SB012	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB013-0612-01	BRC001-SB013	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB013-2430-01	BRC001-SB013	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB013-4248-01	BRC001-SB013	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB014-0612-01	BRC001-SB014	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB015-1218-01	BRC001-SB015	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB015-1824-01	BRC001-SB015	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB016-0001-01	BRC001-SB016	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB016-1218-01	BRC001-SB016	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB017-0612-01	BRC001-SB017	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montero (WESTON)	1-19-16 16:00			

USEPA
DateShipped: 1/19/2016
CarrierName: FedEx
AirbillNo: 8012 2170 0045

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-011916-144748-0003
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-SB018-0001-01	BRC001-SB018	TAL METALS	Soil	1/13/2016	2	8 oz Jar	4 C	Y
	BRC001-SB018-2430-01	BRC001-SB018	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB019-0001-01	BRC001-SB019	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB019-0612-01	BRC001-SB019	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB020-0001-01	BRC001-SB020	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB020-1218-01	BRC001-SB020	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB021-0001-01	BRC001-SB021	TAL METALS	Soil	1/13/2016	2	8 oz Jar	4 C	Y
	BRC001-SB022-0612-01	BRC001-SB022	TAL METALS	Soil	1/13/2016	1	8 oz Jar	4 C	N
	BRC001-SB023-0001-01	BRC001-SB023	TAL METALS	Soil	1/13/2016	2	8 oz Jar	4 C	Y
	BRC001-SB024-0001-01	BRC001-SB024	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montero (WESTON)	1-19-16 16:00			

USEPA
DateShipped: 1/19/2016
CarrierName: FedEx
AirbillNo: 8012 2170 0045

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-011916-144748-0003
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-SB024-0001-02	BRC001-SB024	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-SB024-1824-01	BRC001-SB024	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-SB025-0001-01	BRC001-SB025	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-SB025-0001-02	BRC001-SB025	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-SB025-1824-01	BRC001-SB025	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-SB026-0001-01	BRC001-SB026	TAL METALS	Soil	1/14/2016	2	8 oz Jar	4 C	Y
	BRC001-SB027-0001-01	BRC001-SB027	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-SB027-0001-02	BRC001-SB027	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-SB028-0001-01	BRC001-SB028	TAL METALS	Soil	1/14/2016	2	8 oz Jar	4 C	Y
	BRC001-SB028-0612-01	BRC001-SB028	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montes	1-19-16 16:00			

USEPA
DateShipped: 1/19/2016
CarrierName: FedEx
AirbillNo: 8012 2170 0045

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-011916-144748-0003
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-SB028-3036-01	BRC001-SB028	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-SB029-0612-01	BRC001-SB029	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-SB030-0001-01	BRC001-SB030	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-SB030-0612-01	BRC001-SB030	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-SB031-0001-01	BRC001-SB031	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	BRC001-SB031-0001-02	BRC001-SB031	TAL METALS	Soil	1/14/2016	1	8 oz Jar	4 C	N
	RB-01112016	RB-01112016	TAL METALS	Water	1/11/2016	1	1 L poly	HNO3 pH<2	N
	RB-01122016	RB-01122016	TAL METALS	Water	1/12/2016	1	1 L poly	HNO3 pH<2	N
	RB-01132016	RB-01132016	TAL METALS	Water	1/13/2016	1	1 L poly	HNO3 pH<2	N
	RB-01142016	RB-01142016	TAL METALS	Water	1/14/2016	1	1 L poly	HNO3 pH<2	N
	RB-01152016	RB-01152016	TAL METALS	Water	1/15/2016	1	1 L poly	HNO3 pH<2	N
	RB-01182016	RB-01182016	TAL METALS	Water	1/18/2016	1	1 L poly	HNO3 pH<2	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montes (WESTON)	1-19-16 16:00			

USEPA CLP COC (LAB COPY)

DateShipped: 1/20/2016
CarrierName: FedEx
AirbillNo: 8012 2170 0090

CHAIN OF CUSTODY RECORD

Case #: 45919
Cooler #: 1

No: 2-012016-104422-0004

Lab: Chemtech Consulting Group
Lab Contact: Divya Mehta
Lab Phone: 908-789-8900

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-AB001-3040-01	BC9K0	Soil/ RST 3	Grab	ARO(21), SVOA(21), Encores(21), Moist(21)	1035 (0 C), 1036 (0 C), 1037 (0 C), 1038 (0 C) (6)	BRC001-AB001	01/20/2016 11:13	
RB-01202016	BC9K1	Water/ RST 3	Grab	ARO(21), SVOA(21), VOA(21)	1039 (4 C), 1040 (4 C), 1041 (HCl) (7)	RB-01202016	01/20/2016 13:00	
BRC001-AB014-4658-01	BC9K2	Soil/ RST 3	Grab	ARO(21), SVOA(21), Encores(21), Moist(21)	1042 (0 C), 1043 (0 C), 1044 (0 C), 1045 (0 C) (6)	BRC001-AB014	01/20/2016 14:55	

Special Instructions: 21 days TAT.

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: ARO=CLP Aroclors, SVOA=CLP Semivolatiles, Encores=CLP Volatiles, Moist=CLP Percent Moisture, VOA=CLP VOCs

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	S Montes (WESTON)	1-20-16 16:00			

USEPA
DateShipped: 1/25/2016
CarrierName: FedEx
AirbillNo: 8064 1604 5201 0425

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-012216-091443-0005
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-AB001-0001-01	BRC001-AB001	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB002-0001-01	BRC001-AB002	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB002-0001-02	BRC001-AB002	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB003-1218-01	BRC001-AB003	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB004-0001-01	BRC001-AB004	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB004-0612-01	BRC001-AB004	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB004-1824-01	BRC001-AB004	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB005-0001-01	BRC001-AB005	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB006-0001-01	BRC001-AB005	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB006-1218-01	BRC001-AB006	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Wonten (WESTON)	1-25-16 16:00			

USEPA
DateShipped: 1/25/2016
CarrierName: FedEx
AirbillNo: 8064 1604 5201 0425

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-012216-091443-0005
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-AB007-0106-01	BRC001-AB007	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB008-0001-01	BRC001-AB008	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB009-0001-01	BRC001-AB009	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB010-0001-01	BRC001-AB010	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB011-0001-01	BRC001-AB011	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB011-0001-02	BRC001-AB011	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB011-0612-01	BRC001-AB011	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB013-0001-01	BRC001-AB013	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB013-0612-01	BRC001-AB013	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-AB014-0001-01	BRC001-AB014	TAL METALS	Soil	1/20/2016	2	8 oz Jar	4 C	Y

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montero (WESTON)	1-25-16 16:00			

USEPA
DateShipped: 1/25/2016
CarrierName: FedEx
AirbillNo: 8064 1604 5201 0425

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-012216-091443-0005
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-AB015-0106-01	BRC001-AB015	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB015-1218-01	BRC001-AB015	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB016-0001-01	BRC001-AB016	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB016-1824-01	BRC001-AB016	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB016-2430-01	BRC001-AB016	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB017-0001-01	BRC001-AB017	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB017-1218-01	BRC001-AB017	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB017-1824-01	BRC001-AB017	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB018-0001-01	BRC001-AB018	TAL METALS	Soil	1/21/2016	2	8 oz Jar	4 C	Y
	BRC001-AB019-0001-01	BRC001-AB019	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.	SAMPLES TRANSFERRED FROM
	CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	S Montoya (WESTON	1-25-16 16:00			

USEPA
DateShipped: 1/25/2016
CarrierName: FedEx
AirbillNo: 8064 1604 5201 0425

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-012216-091443-0005
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-AB019-0001-02	BRC001-AB019	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB019-1218-01	BRC001-AB019	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB020-0001-01	BRC001-AB020	TAL METALS	Soil	1/21/2016	2	8 oz Jar	4 C	Y
	BRC001-AB020-1824-01	BRC001-AB020	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB022-0612-01	BRC001-AB022	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB023-0612-01	BRC001-AB023	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB024-0001-01	BRC001-AB024	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB025-1218-01	BRC001-AB025	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB025-2430-01	BRC001-AB025	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB025-3036-01	BRC001-AB025	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	S Montes (WESTON)	1-25-16 16:00			

USEPA
DateShipped: 1/25/2016
CarrierName: FedEx
AirbillNo: 8064 1604 5201 0425

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-012216-091443-0005
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-AB026-0612-01	BRC001-AB026	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-AB026-1218-01	BRC001-AB026	TAL METALS	Soil	1/21/2016	1	8 oz Jar	4 C	N
	BRC001-GB035-0106-01	BRC001-GB035	TAL METALS	Soil	1/18/2016	1	8 oz Jar	4 C	N
	BRC001-GB036-0001-01	BRC001-GB036	TAL METALS	Soil	1/18/2016	1	8 oz Jar	4 C	N
	BRC001-GB037-0001-01	BRC001-GB037	TAL METALS	Soil	1/18/2016	1	8 oz Jar	4 C	N
	BRC001-GB037-0106-01	BRC001-GB037	TAL METALS	Soil	1/18/2016	1	8 oz Jar	4 C	N
	BRC001-GB038-0001-01	BRC001-GB038	TAL METALS	Soil	1/18/2016	1	8 oz Jar	4 C	N
	BRC001-GB039-0612-01	BRC001-GB039	TAL METALS	Soil	1/18/2016	1	8 oz Jar	4 C	N
	BRC001-GB040-0001-01	BRC001-GB040	TAL METALS	Soil	1/18/2016	1	8 oz Jar	4 C	N
	BRC001-GB041-0001-01	BRC001-GB041	TAL METALS	Soil	1/18/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montero (WESTON)	1-25-16 16.00			

USEPA
DateShipped: 1/25/2016
CarrierName: FedEx
AirbillNo: 8064 1604 5201 0425

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-012216-091443-0005
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-GB042-0612-01	BRC001-GB042	TAL METALS	Soil	1/18/2016	1	8 oz Jar	4 C	N
	BRC001-GB043-0106-01	BRC001-GB043	TAL METALS	Soil	1/18/2016	1	8 oz Jar	4 C	N
	BRC001-GB044-0001-01	BRC001-GB044	TAL METALS	Soil	1/18/2016	1	8 oz Jar	4 C	N
	BRC001-GB045-0001-01	BRC001-GB045	TAL METALS	Soil	1/18/2016	1	8 oz Jar	4 C	N
	BRC001-GB046-0106-01	BRC001-GB046	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB005A-6066-01	BRC001-SB005	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB005A-6672-01	BRC001-SB005	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB005A-7278-01	BRC001-SB005	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB008A-0001-01	BRC001-SB008	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB008A-2430-01	BRC001-SB008	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montero (WESTON)	1-25-16 1600			

USEPA
DateShipped: 1/25/2016
CarrierName: FedEx
AirbillNo: 8064 1604 5201 0425

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-012216-091443-0005
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-SB032-0001-01	BRC001-SB032	TAL METALS	Soil	1/18/2016	1	8 oz Jar	4 C	N
	BRC001-SB032-0612-01	BRC001-SB032	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB033-0001-01	BRC001-SB033	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB033-1218-01	BRC001-SB033	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB036-0001-01	BRC001-SB036	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB037-0612-01	BRC001-SB037	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB038-0001-01	BRC001-SB038	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB040-0001-01	BRC001-SB040	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB041-0001-01	BRC001-SB041	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB042-0001-01	BRC001-SB042	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montero (WESTON)	1-25-16 16:00			

USEPA
DateShipped: 1/25/2016
CarrierName: FedEx
AirbillNo: 8064 1604 5201 0425

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-012216-091443-0005
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-SB042-0001-02	BRC001-SB042	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB042-0612-01	BRC001-SB042	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB044-0612-01	BRC001-SB044	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB045-0001-01	BRC001-SB045	TAL METALS	Soil	1/19/2016	2	8 oz Jar	4 C	Y
	BRC001-SB046-0001-01	BRC001-SB046	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB048-0001-01	BRC001-SB048	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB048-1824-01	BRC001-SB048	TAL METALS	Soil	1/19/2016	1	8 oz Jar	4 C	N
	BRC001-SB049-0612-01	BRC001-SB049	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB049-1218-01	BRC001-SB049	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB051-0001-01	BRC001-SB051	TAL METALS	Soil	1/20/2016	2	8 oz Jar	4 C	Y

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	J Montery (WESTON)	1-25-16 16:00			

USEPA
DateShipped: 1/25/2016
CarrierName: FedEx
AirbillNo: 8064 1604 5201 0425

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-012216-091443-0005
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-SB051-1218-01	BRC001-SB051	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB052-0001-01	BRC001-SB052	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB052-0001-02	BRC001-SB052	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB053-0001-01	BRC001-SB053	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB054-0001-01	BRC001-SB054	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB055-0612-01	BRC001-SB055	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB056-0001-01	BRC001-SB056	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB057-0612-01	BRC001-SB057	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB058-0001-01	BRC001-SB058	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB060-0001-01	BRC001-SB060	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	S Montero (WESRON)	1-25-16 16:00			

USEPA
DateShipped: 1/25/2016
CarrierName: FedEx
AirbillNo: 8064 1604 5201 0425

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-012216-091443-0005
Puerto Rico Battery Company
Lab: DESA
Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Numb Cont	Container	Preservative	Lab QC
	BRC001-SB060-1218-01	BRC001-SB060	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB061-0001-01	BRC001-SB061	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	BRC001-SB061-0612-01	BRC001-SB061	TAL METALS	Soil	1/20/2016	1	8 oz Jar	4 C	N
	RB-01192016	RB-01192016	TAL METALS	Water	1/19/2016	1	1 L poly	HNO3 pH<2	N
	RB-01202016	RB-01202016	TAL METALS	Water	1/20/2016	1	1 L poly	HNO3 pH<2	N
	RB-01212016	RB-01212016	TAL METALS	Water	1/21/2016	1	1 L poly	HNO3 pH<2	N
	RB-01222016	RB-01222016	TAL METALS	Water	1/22/2016	1	1 L poly	HNO3 pH<2	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montero (WESTON)	1-25-16 16:00			

USEPA

DateShipped: 1/28/2016

CarrierName: FedEx

AirbillNo: 8064 1604 5197

CHAIN OF CUSTODY RECORD

Site #: 0006-0122

Contact Name: Carlos Huertas

Contact Phone: (787) 354-2489

No: 2-012716-163407-0006

RFP #: 45919 Puerto Rico Battery Company

Lab: DESA

Lab Phone: (732) 321-4431

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Lab QC
	BRC001-SBD001-1218-01	BRC001-SBD001	TAL METALS	Soil	1/22/2016	13:12	1	8 oz Jar	4 C	
	BRC001-SBD004-0612-01	BRC001-SBD004	TAL METALS	Soil	1/22/2016	14:38	1	8 oz Jar	4 C	
	BRC001-SBD004-1218-01	BRC001-SBD004	TAL METALS	Soil	1/22/2016	14:42	1	8 oz Jar	4 C	
	BRC001-SBD005-2430-01	BRC001-SBD005	TAL METALS	Soil	1/25/2016	08:20	1	8 oz Jar	4 C	
	BRC001-SBD006-0001-01	BRC001-SBD006	TAL METLAS	Soil	1/25/2016	08:30	1	8 oz Jar	4 C	
	BRC001-SBD007-1218-01	BRC001-SBD007	TAL METALS	Soil	1/25/2016	09:12	1	8 oz Jar	4 C	
	BRC001-SBD007-1824-01	BRC001-SBD007	TAL METALS	Soil	1/25/2016	09:16	1	8 oz Jar	4 C	
	BRC001-SBD009-1218-01	BRC001-SBD009	TAL METALS	Soil	1/25/2016	10:12	1	8 oz Jar	4 C	
	BRC001-SBD010-0001-01	BRC001-SBD010	TAL METALS	Soil	1/25/2016	10:30	1	8 oz Jar	4 C	
	BRC001-SBD010-0106-01	BRC001-SBD010	TAL METALS	Soil	1/25/2016	10:34	1	8 oz Jar	4 C	
	BRC001-SBD011-0612-01	BRC001-SBD011	TAL METLAS	Soil	1/25/2016	11:08	1	8 oz Jar	4 C	
	RB-01222016	RB-01222016	TAL METALS	Water	1/22/2016	15:00	1	1 L poly	HNO3 pH<2	N
	RB-01252016	RB-01252016	TAL METALS	Water	1/25/2016	13:00	1	1 L poly	HNO3 pH<2	N

Special Instructions: 21 Days TAT.

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
All transfer	Carlos L. Huertas (CO-RST3)	1-28-16 / 0932			

USEPA
DateShipped: 1/26/2016
CarrierName: Hand Delivered
AirbillNo: N/A

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-012616-120109-0001
RFP # 357 A
Lab: EQ Laboratory
Lab Phone: (787) 288-6420

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Lab QC
	PRBR-006SW-002	SLAG PILE - PROCESS	TCLP Metals + Hg	Soil	1/22/2016	09:00	1	8 oz Jar	4 C	N
	PRBR-006SW-002	SLAG PILE - PROCESS	TAL Metals + Hg	Soil	1/22/2016	09:00	1	8 oz. Jar	4 C	
	PRBR-006SW-002	SLAG PILE - PROCESS	RCRA Characteristics	Soil	1/22/2016	09:00	1	8 oz. Jar	4 C	
	PRBR-008SW-001	SLAG PILE - CRUSHING	TCLP Metals + Hg	Soil	1/22/2016	08:11	1	8 oz Jar	4 C	
	PRBR-008SW-001	SLAG PILE - CRUSHING	TAL Metals + Hg	Soil	1/22/2016	08:11	1	8 oz. Jar	4 C	
	PRBR-008SW-001	SLAG PILE - CRUSHING	RCRA Characteristics	Soil	1/22/2016	08:11	1	8 oz. Jar	4 C	
	PRBR-009SW-001	SLAG PILE - CRUSHING	TCLP Metals + Hg	Soil	1/22/2016	08:18	1	8 oz Jar	4 C	
	PRBR-009SW-001	SLAG PILE - CRUSHING	TAL Metals + Hg	Soil	1/22/2016	08:18	1	8 oz. Jar	4 C	
	PRBR-009SW-001	SLAG PILE - CRUSHING	RCRA Characteristics	Soil	1/22/2016	08:18	1	8 oz. Jar	4 C	
	PRBR-010SW-001	SLAG PILE - CRUSHING	TCLP Metals + Hg	Soil	1/22/2016	08:25	1	8 oz Jar	4 C	
	PRBR-010SW-001	SLAG PILE - CRUSHING	TAL Metals + Hg	Soil	1/22/2016	08:25	1	8 oz. Jar	4 C	
	PRBR-010SW-001	SLAG PILE - CRUSHING	RCRA Characteristics	Soil	1/22/2016	08:25	1	8 oz. Jar	4 C	
	PRBR-011SW-001	SLAG PILE - CRYSTALLIZATION	TCLP Metals + Hg	Soil	1/22/2016	09:15	1	8 oz Jar	4 C	
	PRBR-011SW-001	SLAG PILE - CRYSTALLIZATION	TAL Metals + Hg	Soil	1/22/2016	09:15	1	8 oz. Jar	4 C	
	PRBR-011SW-001	SLAG PILE - CRYSTALLIZATION	RCRA Characteristics	Soil	1/22/2016	09:15	1	8 oz. Jar	4 C	
	PRBR-012SW-001	SLAG PILE - FROM BUNKER	TCLP Metals + Hg	Soil	1/22/2016	10:40	1	8 oz Jar	4 C	
	PRBR-012SW-001	SLAG PILE - FROM BUNKER	TAL Metals + Hg	Soil	1/22/2016	10:40	1	8 oz. Jar	4 C	
	PRBR-012SW-001	SLAG PILE - FROM BUNKER	RCRA Characteristics	Soil	1/22/2016	10:40	1	8 oz. Jar	4 C	
	PRBR-013SW-001	SLAG PILE - FROM BUNKER	TCLP Metals + Hg	Soil	1/22/2016	10:55	1	8 oz Jar	4 C	N

Special Instructions:

SAMPLES TRANSFERRED FROM
CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
All transfers	Carlos L. Huertas (RSB)	1-26-15 (1300)	[illegible]	01/26/16 14:44	

USEPA
DateShipped: 1/26/2016
CarrierName: Hand Delivered
AirbillNo: N/A

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-012616-120109-0001
RFP # 357 A
Lab: EQ Laboratory
Lab Phone: (787) 288-6420

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Lab QC
	PRBR-013SW-001	SLAG PILE - FROM BUNKER	TAL Metals + Hg	Soil	1/22/2016	10:55	1	8 oz. Jar	4 C	N
	PRBR-013SW-001	SLAG PILE - FROM BUNKER	RCRA Characteristics	Soil	1/22/2016	10:55	1	8 oz. Jar	4 C	
	PRBR-014SW-001	DRY SLUDGE	TCLP Metals + Hg	Soil	1/22/2016	10:45	1	8 oz Jar	4 C	
	PRBR-014SW-001	DRY SLUDGE	TAL Metals + Hg	Soil	1/22/2016	10:45	1	8 oz. Jar	4 C	
	PRBR-014SW-001	DRY SLUDGE	RCRA Characteristics	Soil	1/22/2016	10:45	1	8 oz. Jar	4 C	
	PRBR-005SW-003	SLAG PILE - BUNKER	TCLP Metals + Hg	Soil	1/22/2016	08:40	1	8 oz Jar	4 C	
	PRBR-005SW-003	SLAG PILE - BUNKER	TAL Metals + Hg	Soil	1/22/2016	08:40	1	8 oz. Jar	4 C	
	PRBR-005SW-003	SLAG PILE - BUNKER	RCRA Characteristics	Soil	1/22/2016	08:40	1	8 oz. Jar	4 C	
										N

Special Instructions:	SAMPLES TRANSFERRED FROM
	CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
All transfer	Carlos L. Huertas (CLH) - RST3	1-26-15 (1300)	[signature]	01/26/16 1444	

USEPA CLP COC (LAB COPY)
DateShipped: 3/3/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6910

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030216-093507-0006
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-AT01-AQ001-01	MBCAD1	Waste Water/ RST 3	Grab	TAL Metals(21)	1139 (HNO3) (1)	BRC001-AT01-Lagoon 01	03/01/2016 16:00	
BRC001-AT02-AQ001-01	MBCAD2	Waste Water/ RST 3	Grab	TAL Metals(21)	1140 (HNO3) (1)	BRC001-AT02-Lagoon 02	03/01/2016 15:55	
BRC001-AT03-AQ001-01	MBCAD3	Waste Water/ RST 3	Grab	TAL Metals(21)	1141 (HNO3) (1)	BRC001-AT02-Tank 01	03/01/2016 16:20	
BRC001-AT04-AQ001-01	MBCAD4	Waste Water/ RST 3	Grab	TAL Metals(21)	1142 (HNO3) (1)	BRC001-AT04-Tank 02	03/01/2016 16:15	
BRC001-SUMP01-AQ001-01	MBCAD5	Waste Water/ RST 3	Grab	TAL Metals(21)	1143 (HNO3) (3)	BRC001-SUMPPUMP-01	02/29/2016 14:55	
BRC001-SUMP01-AQ001-02	MBCAD6	Waste Water/ RST 3	Grab	TAL Metals(21)	1144 (HNO3) (1)	BRC001-SUMPPUMP-01	02/29/2016 14:55	
BRC001-SUMP02-AQ001-01	MBCAD7	Waste Water/ RST 3	Grab	TAL Metals(21)	1145 (HNO3) (1)	BRC001-SUMPPUMP-02	02/29/2016 15:15	
BRC001-SUMP03-AQ001-01	MBCAD8	Waste Water/ RST 3	Grab	TAL Metals(21)	1146 (HNO3) (1)	BRC001-SUMPPUMP-03	02/29/2016 15:30	

Sample(s) to be used for Lab QC: BRC001-SUMP01-AQ001-01 Tag 1143	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: TAL Metals=CLP TAL Metals	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	D. Montay WESTON	3-3-16 16:00			

USEPA CLP COC (LAB COPY)

DateShipped: 3/3/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6910

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030216-093507-0006

Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-SUMP04-AQ001-01	MBCAD9	Waste Water/ RST 3	Grab	TAL Metals(21)	1147 (HNO3) (1)	BRC001-SUMPPUMP-04	02/29/2016 15:45	
BRC001-SUMP05-AQ001-01	MBCAE0	Waste Water/ RST 3	Grab	TAL Metals(21)	1148 (HNO3) (1)	BRC001-SUMPPUMP-05	03/01/2016 09:15	
BRC001-SUMP06-AQ001-01	MBCAE1	Waste Water/ RST 3	Grab	TAL Metals(21)	1149 (HNO3) (1)	BRC001-SUMPPUMP-06	03/01/2016 09:20	
BRC001-SUMP07-AQ001-01	MBCAE2	Waste Water/ RST 3	Grab	TAL Metals(21)	1150 (HNO3) (1)	BRC001-SUMPPUMP-07	03/01/2016 09:30	

Lionel Montano

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montano (WESTON)	3-3-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/3/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6910

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030216-180523-0007
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-SUMP08-AQ001-01	MBCAE3	Waste Water/ RST 3	Grab	TAL Metals(21)	1151 (HNO3) (1)	BRC001-SUMPPUMP-08	03/01/2016 09:40	
BRC001-SUMP09-AQ001-01	MBCAE4	Waste Water/ RST 3	Grab	TAL Metals(21)	1152 (HNO3) (1)	BRC001-SUMPPUMP-09	03/01/2016 09:50	
BRC001-SUMP10-AQ001-01	MBCAE5	Waste Water/ RST 3	Grab	TAL Metals(21)	1153 (HNO3) (1)	BRC001-SUMPPUMP-10	03/01/2016 10:00	
BRC001-CS01-AQ001-01	MBCAE6	Waste Water/ RST 3	Grab	TAL Metals(21)	1154 (HNO3) (1)	BRC001-CS01	03/01/2016 16:05	
BRC001-SUMP01-SL001-01	MBCAF1	Solid Waste/ RST 3	Grab	TAL Metals(21)	1155 (4 C) (2)	BRC001-SUMPPUMP-01	03/01/2016 09:10	
BRC001-SUMP01-SL001-02	MBCAF2	Solid Waste/ RST 3	Grab	TAL Metals(21)	1156 (4 C) (1)	BRC001-SUMPPUMP-01	03/01/2016 09:10	
BRC001-SUMP02-SL001-01	MBCAF3	Solid Waste/ RST 3	Grab	TAL Metals(21)	1157 (4 C) (1)	BRC001-SUMPPUMP-02	03/01/2016 10:55	

Sample(s) to be used for Lab QC: BRC001-SUMP01-SL001-01 Tag 1155	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: TAL Metals=CLP TAL Metals	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montez (WESTON)	3-3-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/3/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6910

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030216-180523-0007
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-SUMP03-SL001-01	MBCAF4	Solid Waste/ RST 3	Grab	TAL Metals(21)	1158 (4 C) (1)	BRC001-SUMPPUMP-03	03/01/2016 11:10	
BRC001-SUMP04-SL001-01	MBCAF5	Solid Waste/ RST 3	Grab	TAL Metals(21)	1159 (4 C) (1)	BRC001-SUMPPUMP-04	03/01/2016 13:15	
BRC001-SUMP05-SL001-01	MBCAF6	Solid Waste/ RST 3	Grab	TAL Metals(21)	1160 (4 C) (1)	BRC001-SUMPPUMP-05	03/01/2016 13:30	
BRC001-SUMP06-SL001-01	MBCAF7	Solid Waste/ RST 3	Grab	TAL Metals(21)	1161 (4 C) (1)	BRC001-SUMPPUMP-06	03/01/2016 13:38	
BRC001-SUMP07-SL001-01	MBCAF8	Solid Waste/ RST 3	Grab	TAL Metals(21)	1162 (4 C) (1)	BRC001-SUMPPUMP-07	03/01/2016 13:45	
BRC001-SUMP08-SL001-01	MBCAF9	Solid Waste/ RST 3	Grab	TAL Metals(21)	1163 (4 C) (1)	BRC001-SUMPPUMP-08	03/01/2016 13:50	
BRC001-SUMP09-SL001-01	MBCAG0	Solid Waste/ RST 3	Grab	TAL Metals(21)	1164 (4 C) (1)	BRC001-SUMPPUMP-09	03/01/2016 14:05	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montey (WESTON)	3-3-16 16.00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/3/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6910

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030216-180523-0007
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-SUMP10-SL001-01	MBCAG1	Solid Waste/ RST 3	Grab	TAL Metals(21)	1165 (4 C) (1)	BRC001-SUMPPUMP-10	03/01/2016 14:20	
BRC001-AT01-SL001-01	MBCAG2	Solid Waste/ RST 3	Grab	TAL Metals(21)	1166 (4 C) (1)	BRC001-AT01-Lagoon 01	03/02/2016 09:55	
BRC001-AT02-SL001-01	MBCAG3	Solid Waste/ RST 3	Grab	TAL Metals(21)	1167 (4 C) (1)	BRC001-AT01-Lagoon 02	03/02/2016 10:10	
BRC001-AT03-SL001-01	MBCAG4	Solid Waste/ RST 3	Grab	TAL Metals(21)	1168 (4 C) (1)	BRC001-AT01-Tank 01	03/02/2016 10:40	
BRC001-AT04-SL001-01	MBCAG5	Solid Waste/ RST 3	Grab	TAL Metals(21)	1169 (4 C) (1)	BRC001-AT01-Tank 02	03/02/2016 10:50	
BRC001-SUMPCOMP-TCLP001-01	MBCBS4	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1170 (4 C) (2)	BRC001-BR01	03/01/2016 16:15	
BRC001-SUMPCOMP-TCLP001-02	MBCBS5	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1171 (4 C) (1)	BRC001-BR01	03/01/2016 16:15	
BRC001-AT01-TCLP001-01	MBCBS6	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1172 (4 C) (1)	BRC001-AT01-Lagoon 01	03/02/2016 12:50	
BRC001-AT02-TCLP001-01	MBCBS7	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1173 (4 C) (1)	BRC001-AT01-Lagoon 02	03/02/2016 13:10	

Sample(s) to be used for Lab QC: BRC001-SUMPCOMP-TCLP001-01 Tag 1170	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: TAL Metals=CLP TAL Metals, TCLP Metals=CLP TCLP MetAls	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	S Montag (WESTON)	3-3-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/3/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6910

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030216-180523-0007
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-AT03-TCLP001-01	MBCBS8	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1174 (4 C) (1)	BRC001-AT01-Tank 01 & 02	03/02/2016 11:00	

Special Instructions:

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals, TCLP Metals=CLP TCLP MetAls

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montey (WESTON)	3-3-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/7/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6976

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030616-101549-0008
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-BM01-WP001-01	MBCAW1	Wipe/ RST 3	Discrete	TAL Metals(21)	1197 (4 C) (1)	BRC001-BB01	03/03/2016 11:00	
BRC001-BM01-WP002-01	MBCAW2	Wipe/ RST 3	Discrete	TAL Metals(21)	1198 (4 C) (1)	BRC001-BB01	03/03/2016 11:05	
BRC001-BM01-WP003-01	MBCAW3	Wipe/ RST 3	Discrete	TAL Metals(21)	1199 (4 C) (1)	BRC001-BB01	03/03/2016 11:25	
BRC001-BM01-WP004-01	MBCAW4	Wipe/ RST 3	Discrete	TAL Metals(21)	1200 (4 C) (1)	BRC001-BB01	03/03/2016 11:30	
BRC001-BM01-WP005-01	MBCAW5	Wipe/ RST 3	Discrete	TAL Metals(21)	1201 (4 C) (1)	BRC001-BB01	03/03/2016 11:35	
BRC001-BM01-WP006-01	MBCAW6	Wipe/ RST 3	Discrete	TAL Metals(21)	1202 (4 C) (1)	BRC001-BB01	03/03/2016 12:00	
BRC001-BM01-WP007-01	MBCAW7	Wipe/ RST 3	Discrete	TAL Metals(21)	1203 (4 C) (1)	BRC001-BB01	03/03/2016 12:15	
WP001-20160303-FB	MBCAW8	Wipe/ RST 3	Discrete	TAL Metals(21)	1214 (4 C) (1)	WP001-20160303-FB	03/03/2016 16:59	

Special Instructions:

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	S Montana (WESTON)	3-8-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/7/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6976

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030716-093611-0009
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-BB01-SL001-01	MBCAG6	Solid Waste/ RST 3	Grab	TAL Metals(21)	1172 (4 C) (2)	BRC001-BB01	03/03/2016 11:40	
BRC001-BB01-SL001-02	MBCAG7	Solid Waste/ RST 3	Grab	TAL Metals(21)	1173 (4 C) (1)	BRC001-BB01	03/03/2016 11:40	
BRC001-BB01-SL002-01	MBCAG8	Solid Waste/ RST 3	Grab	TAL Metals(21)	1174 (4 C) (1)	BRC001-BB01	03/03/2016 11:55	
BRC001-BB01-SL003-01	MBCAG9	Solid Waste/ RST 3	Grab	TAL Metals(21)	1175 (4 C) (1)	BRC001-BB01	03/03/2016 12:05	
BRC001-BB01-SL004-01	MBCAH0	Solid Waste/ RST 3	Grab	TAL Metals(21)	1215 (4 C) (1)	BRC001-BB01	03/04/2016 14:05	
BRC001-BB01-SL005-01	MBCAH1	Solid Waste/ RST 3	Grab	TAL Metals(21)	1216 (4 C) (1)	BRC001-BB01	03/04/2016 14:55	
BRC001-BB01-MW001-01	MBCAS3	Solid Waste/ RST 3	Grab	TAL Metals(21)	1217 (4 C) (1)	BRC001-BB01	03/03/2016 11:10	
BRC001-BB01-MW002-01	MBCAS4	Solid Waste/ RST 3	Grab	TAL Metals(21)	1218 (4 C) (1)	BRC001-BB01	03/03/2016 11:20	
MW001-20160303-FB	MBCAS5	Solid Waste/ RST 3	Grab	TAL Metals(21)	1219 (4 C) (1)	BRC001-BB01	03/04/2016 17:02	
BRC001-BB01-TCLP001-01	MBCBS9	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1170 (4 C) (1)	BRC001-BB01	03/03/2016 11:40	

Sample(s) to be used for Lab QC: BRC001-BB01-SL001-01 Tag 1172

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals, TCLP Metals=CLP TCLP Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	S Montey (WESTON)	3-7-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/7/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6976

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030716-093611-0009
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-BB01-TCLP002-01	MBCBT0	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1171 (4 C) (1)	BRC001-BB01	03/03/2016 12:05	

Special Instructions:

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals, TCLP Metals=CLP TCLP Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montany (WESTON)	3-7-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/8/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6965

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030816-092434-0010
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CC01-SL001-01	MBCAH2	Solid Waste/ RST 3	Grab	TAL Metals(21)	1220 (4 C) (1)	BRC001-CC01	03/02/2016 16:07	
BRC001-CC01-SL002-01	MBCAH3	Solid Waste/ RST 3	Grab	TAL Metals(21)	1221 (4 C) (1)	BRC001-CC01	03/02/2016 16:15	
BRC001-CC01-SL003-01	MBCAH4	Solid Waste/ RST 3	Grab	TAL Metals(21)	1222 (4 C) (1)	BRC001-CC01	03/02/2016 16:23	
BRC001-CC01-SL004-01	MBCAH5	Solid Waste/ RST 3	Grab	TAL Metals(21)	1223 (4 C) (1)	BRC001-CC01	03/02/2016 16:28	
BRC001-CC01-SL005-01	MBCAH6	Solid Waste/ RST 3	Grab	TAL Metals(21)	1224 (4 C) (1)	BRC001-CC01	03/03/2016 14:50	
BRC001-CC01-SL006-01	MBCAH7	Solid Waste/ RST 3	Grab	TAL Metals(21)	1225 (4 C) (1)	BRC001-CC01	03/03/2016 14:55	
BRC001-CF01-SL001-01	MBCAH8	Solid Waste/ RST 3	Grab	TAL Metals(21)	1226 (4 C) (2)	BRC001-CF01	03/02/2016 14:20	
BRC001-CF01-SL001-02	MBCAH9	Solid Waste/ RST 3	Grab	TAL Metals(21)	1227 (4 C) (1)	BRC001-CF01	03/02/2016 14:20	
BRC001-CF01-SL002-01	MBCAJ0	Solid Waste/ RST 3	Grab	TAL Metals(21)	1228 (4 C) (1)	BRC001-CF01	03/02/2016 15:50	
BRC001-CF01-SL003-01	MBCAJ1	Solid Waste/ RST 3	Grab	TAL Metals(21)	1229 (4 C) (1)	BRC001-CF01	03/03/2016 15:10	

Sample(s) to be used for Lab QC: BRC001-CF01-SL001-01 Tag 1226

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	S Montery (WESRON)	3-8-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/8/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6965

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030816-092434-0010
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CF01-SL004-01	MBCAJ2	Solid Waste/ RST 3	Composite	TAL Metals(21)	1230 (4 C) (1)	BRC001-CF01	03/03/2016 15:15	
BRC001-CF01-SL005-01	MBCAJ3	Solid Waste/ RST 3	Grab	TAL Metals(21)	1231 (4 C) (1)	BRC001-CF01	03/03/2016 16:25	
BRC001-CF01-SL006-01	MBCAJ4	Solid Waste/ RST 3	Grab	TAL Metals(21)	1232 (4 C) (1)	BRC001-CF01	03/04/2016 10:40	
BRC001-CF01-SL007-01	MBCAJ5	Solid Waste/ RST 3	Composite	TAL Metals(21)	1233 (4 C) (1)	BRC001-CF01	03/04/2016 10:55	
BRC001-CK01-SL001-01	MBCAJ6	Solid Waste/ RST 3	Composite	TAL Metals(21)	1234 (4 C) (1)	BRC001-CK01	03/02/2016 16:30	
BRC001-CK01-SL002-01	MBCAJ7	Solid Waste/ RST 3	Grab	TAL Metals(21)	1235 (4 C) (1)	BRC001-CK01	03/02/2016 09:28	
BRC001-CK01-SL003-01	MBCAJ8	Solid Waste/ RST 3	Grab	TAL Metals(21)	1236 (4 C) (1)	BRC001-CK01	03/02/2016 09:34	
BRC001-CK01-SL004-01	MBCAJ9	Solid Waste/ RST 3	Composite	TAL Metals(21)	1237 (4 C) (1)	BRC001-CK01	03/04/2016 09:50	
BRC001-CK01-SL005-01	MBCAK0	Solid Waste/ RST 3	Grab	TAL Metals(21)	1238 (4 C) (1)	BRC001-CK01	03/04/2016 09:54	
BRC001-CK01-SL006-01	MBCAK1	Solid Waste/ RST 3	Grab	TAL Metals(21)	1239 (4 C) (1)	BRC001-CK01	03/04/2016 09:56	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	S Montay (WESTON)	3-8-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/8/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6965

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030816-092434-0010
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CK01-SL007-01	MBCAK2	Solid Waste/ RST 3	Grab	TAL Metals(21)	1240 (4 C) (1)	BRC001-CK01	03/04/2016 10:16	
BRC001-CM01-SL001-01	MBCAK3	Solid Waste/ RST 3	Grab	TAL Metals(21)	1241 (4 C) (1)	BRC001-CM01	03/02/2016 13:50	
BRC001-CM01-SL002-01	MBCAK4	Solid Waste/ RST 3	Grab	TAL Metals(21)	1242 (4 C) (1)	BRC001-CM01	03/02/2016 13:57	
BRC001-CM01-SL003-01	MBCAK5	Solid Waste/ RST 3	Grab	TAL Metals(21)	1243 (4 C) (1)	BRC001-CM01	03/02/2016 14:00	
BRC001-CM01-SL004-01	MBCAK6	Solid Waste/ RST 3	Grab	TAL Metals(21)	1244 (4 C) (1)	BRC001-CM01	03/02/2016 14:00	
BRC001-CM01-SL005-01	MBCAK7	Solid Waste/ RST 3	Grab	TAL Metals(21)	1245 (4 C) (1)	BRC001-CM01	03/02/2016 14:10	
BRC001-CM01-SL006-01	MBCAK8	Solid Waste/ RST 3	Grab	TAL Metals(21)	1246 (4 C) (1)	BRC001-CM01	03/02/2016 14:35	
BRC001-CM01-SL007-01	MBCAK9	Solid Waste/ RST 3	Grab	TAL Metals(21)	1247 (4 C) (1)	BRC001-CM01	03/02/2016 15:40	
BRC001-CM01-SL008-01	MBCAL0	Solid Waste/ RST 3	Grab	TAL Metals(21)	1248 (4 C) (1)	BRC001-CM01	03/02/2016 16:00	
BRC001-CM01-SL009-01	MBCAL1	Solid Waste/ RST 3	Composite	TAL Metals(21)	1249 (4 C) (1)	BRC001-CM01	03/02/2016 09:15	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: TAL Metals=CLP TAL Metals	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	S Montey (WESTON)	3-8-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/8/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6965

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030816-092434-0010
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CM01-SL010-01	MBCAL2	Solid Waste/ RST 3	Grab	TAL Metals(21)	1250 (4 C) (1)	BRC001-CM01	03/03/2016 14:40	

Special Instructions:

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montey (Weston)	3-8-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/8/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6965

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030816-093115-0011
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CM01-SL011-01	MBCAL3	Solid Waste/ RST 3	Grab	TAL Metals(21)	1251 (4 C) (1)	BRC001-CM01	03/03/2016 15:00	
BRC001-CM01-SL012-01	MBCAL4	Solid Waste/ RST 3	Composite	TAL Metals(21)	1252 (4 C) (1)	BRC001-CM01	03/02/2016 09:08	
BRC001-CM01-SL013-01	MBCAL5	Solid Waste/ RST 3	Composite	TAL Metals(21)	1253 (4 C) (1)	BRC001-CM01	03/03/2016 14:45	
BRC001-CM01-SL014-01	MBCAL6	Solid Waste/ RST 3	Composite	TAL Metals(21)	1254 (4 C) (1)	BRC001-CM01	03/03/2016 16:00	
BRC001-CM01-SL015-01	MBCAL7	Solid Waste/ RST 3	Grab	TAL Metals(21)	1255 (4 C) (1)	BRC001-CM01	03/03/2016 16:05	
BRC001-CM01-SL016-01	MBCAL8	Solid Waste/ RST 3	Composite	TAL Metals(21)	1256 (4 C) (1)	BRC001-CM01	03/03/2016 16:10	
BRC001-CM01-SL017-01	MBCAL9	Solid Waste/ RST 3	Grab	TAL Metals(21)	1257 (4 C) (1)	BRC001-CM01	03/03/2016 16:15	
BRC001-CM01-SL018-01	MBCAM0	Solid Waste/ RST 3	Grab	TAL Metals(21)	1258 (4 C) (1)	BRC001-CM01	03/03/2016 16:30	
BRC001-CM01-SL019-01	MBCAM1	Solid Waste/ RST 3	Composite	TAL Metals(21)	1259 (4 C) (1)	BRC001-CM01	03/04/2016 09:40	
BRC001-CM01-SL020-01	MBCAM2	Solid Waste/ RST 3	Grab	TAL Metals(21)	1260 (4 C) (1)	BRC001-CM01	03/04/2016 09:45	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montag (WESTON)	3-8-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/8/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6965

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030816-093115-0011
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CM01-SL021-01	MBCAM3	Solid Waste/ RST 3	Grab	TAL Metals(21)	1261 (4 C) (1)	BRC001-CM01	03/04/2016 10:10	
BRC001-CM01-SL022-01	MBCAM4	Solid Waste/ RST 3	Grab	TAL Metals(21)	1262 (4 C) (2)	BRC001-CM01	03/04/2016 10:12	
BRC001-CM01-SL022-02	MBCAM5	Solid Waste/ RST 3	Grab	TAL Metals(21)	1263 (4 C) (1)	BRC001-CM01	03/04/2016 10:12	
BRC001-CM01-SL023-01	MBCAM6	Solid Waste/ RST 3	Composite	TAL Metals(21)	1264 (4 C) (1)	BRC001-CM01	03/04/2016 10:20	
BRC001-CM01-SL024-01	MBCAM7	Solid Waste/ RST 3	Grab	TAL Metals(21)	1265 (4 C) (2)	BRC001-CM01	03/04/2016 10:28	
BRC001-CM01-SL024-02	MBCAM8	Solid Waste/ RST 3	Grab	TAL Metals(21)	1266 (4 C) (1)	BRC001-CM01	03/04/2016 10:28	
BRC001-CM01-SL025-01	MBCAM9	Solid Waste/ RST 3	Grab	TAL Metals(21)	1267 (4 C) (1)	BRC001-CM01	03/07/2016 09:25	
BRC001-CM01-SL026-01	MBCAN0	Solid Waste/ RST 3	Grab	TAL Metals(21)	1268 (4 C) (1)	BRC001-CM01	03/07/2016 09:30	
BRC001-CM01-SL027-01	MBCAN1	Solid Waste/ RST 3	Grab	TAL Metals(21)	1269 (4 C) (1)	BRC001-CM01	03/07/2016 09:33	
BRC001-CM01-SL028-01	MBCAN2	Solid Waste/ RST 3	Grab	TAL Metals(21)	1270 (4 C) (1)	BRC001-CM01	03/07/2016 09:56	

Sample(s) to be used for Lab QC: BRC001-CM01-SL022-01 Tag 1262, BRC001-CM01-SL024-01 Tag 1265	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: TAL Metals=CLP TAL Metals	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	(WESTON)	3-8-16 16:00			

USEPA CLP COC (LAB COPY)

DateShipped: 3/8/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6965

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030816-093115-0011

Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CM01-SL029-01	MBCAN3	Solid Waste/ RST 3	Grab	TAL Metals(21)	1271 (4 C) (1)	BRC001-CM01	03/07/2016 10:00	
BRC001-CM01-SL030-01	MBCAN4	Solid Waste/ RST 3	Grab	TAL Metals(21)	1272 (4 C) (1)	BRC001-CM01	03/07/2016 10:05	
BRC001-CM01-SL031-01	MBCAN5	Solid Waste/ RST 3	Grab	TAL Metals(21)	1273 (4 C) (1)	BRC001-CM01	03/07/2016 11:07	
BRC001-CM01-SL032-01	MBCAN6	Solid Waste/ RST 3	Grab	TAL Metals(21)	1274 (4 C) (1)	BRC001-CM01	03/07/2016 11:17	
BRC001-CM01-SL033-01	MBCAN7	Solid Waste/ RST 3	Grab	TAL Metals(21)	1275 (4 C) (1)	BRC001-CM01	03/07/2016 11:29	
BRC001-CM01-SL034-01	MBCAN8	Solid Waste/ RST 3	Grab	TAL Metals(21)	1276 (4 C) (1)	BRC001-CM01	03/07/2016 11:40	
BRC001-CM01-SL035-01	MBCAN9	Solid Waste/ RST 3	Grab	TAL Metals(21)	1277 (4 C) (1)	BRC001-CM01	03/07/2016 11:50	
BRC001-CM01-SL036-01	MBCAP0	Solid Waste/ RST 3	Grab	TAL Metals(21)	1278 (4 C) (1)	BRC001-CM01	03/07/2016 14:10	
BRC001-CM01-SL037-01	MBCAP1	Solid Waste/ RST 3	Grab	TAL Metals(21)	1279 (4 C) (1)	BRC001-CM01	03/07/2016 14:17	
BRC001-CM01-SL038-01	MBCAP2	Solid Waste/ RST 3	Grab	TAL Metals(21)	1280 (4 C) (1)	BRC001-CM01	03/07/2016 14:24	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: TAL Metals=CLP TAL Metals	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montay (WESTON)	3-8-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/9/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6932

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030916-075454-0012
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CM01-SL039-01	MBCAP3	Solid Waste/ RST 3	Grab	TAL Metals(21)	1281 (4 C) (1)	BRC001-CM01	03/07/2016 14:35	
BRC001-CM01-SL040-01	MBCAP4	Solid Waste/ RST 3	Grab	TAL Metals(21)	1282 (4 C) (1)	BRC001-CM01	03/07/2016 14:42	
BRC001-CM01-SL041-01	MBCAP5	Solid Waste/ RST 3	Grab	TAL Metals(21)	1283 (4 C) (1)	BRC001-CM01	03/07/2016 14:50	
BRC001-CM01-SL042-01	MBCAP6	Solid Waste/ RST 3	Grab	TAL Metals(21)	1302 (4 C) (1)	BRC001-CM01	03/07/2016 16:00	
BRC001-CM01-SL043-01	MBCAP7	Solid Waste/ RST 3	Grab	TAL Metals(21)	1303 (4 C) (1)	BRC001-CM01	03/07/2016 16:15	
BRC001-CM01-SL044-01	MBCAP8	Solid Waste/ RST 3	Grab	TAL Metals(21)	1304 (4 C) (1)	BRC001-CM01	03/07/2016 16:38	
BRC001-CM01-SL045-01	MBCAP9	Solid Waste/ RST 3	Grab	TAL Metals(21)	1305 (4 C) (2)	BRC001-CM01	03/07/2016 16:55	
BRC001-CM01-SL045-02	MBCAQ0	Solid Waste/ RST 3	Grab	TAL Metals(21)	1306 (4 C) (1)	BRC001-CM01	03/07/2016 16:55	
BRC001-CS01-SL001-01	MBCAQ1	Solid Waste/ RST 3	Grab	TAL Metals(21)	1307 (4 C) (1)	BRC001-CS01	03/01/2016 16:15	
BRC001-CS01-SL002-01	MBCAQ2	Solid Waste/ RST 3	Grab	TAL Metals(21)	1308 (4 C) (1)	BRC001-CS01	03/02/2016 14:25	

Sample(s) to be used for Lab QC: BRC001-CM01-SL045-01 Tag 1305, BRC001-CS01-SL003-01 Tag 1309	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: TAL Metals=CLP TAL Metals	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	D Montony WESTON	3-9-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/9/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6932

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030916-075454-0012
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CS01-SL003-01	MBCAQ3	Solid Waste/ RST 3	Grab	TAL Metals(21)	1309 (4 C) (2)	BR0C01-CS01	03/03/2016 14:35	
BRC001-CS01-SL003-02	MBCAQ4	Solid Waste/ RST 3	Grab	TAL Metals(21)	1310 (4 C) (1)	BRC001-CS01	03/03/2016 14:35	
BRC001-CS01-SL004-01	MBCAQ5	Solid Waste/ RST 3	Grab	TAL Metals(21)	1311 (4 C) (1)	BRC001-CS01	03/03/2016 15:55	
BRC001-CC01-TCLP001-01	MBCBT1	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1284 (4 C) (1)	BRC001-CC01	03/02/2016 16:07	
BRC001-CF01-TCLP001-01	MBCBT2	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1285 (4 C) (1)	BRC001-CF01	03/02/2016 14:20	
BRC001-CF01-TCLP002-01	MBCBT3	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1286 (4 C) (1)	BRC001-CF01	03/02/2016 15:50	
BRC001-CF01-TCLP003-01	MBCBT4	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1287 (4 C) (1)	BRC001-CF01	03/03/2016 15:10	
BRC001-CF01-TCLP004-01	MBCBT5	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1288 (4 C) (1)	BRC001-CF01	03/03/2016 16:25	
BRC001-CF01-TCLP005-01	MBCBT6	Solid Waste/ RST 3	Grab	TCLP Metals(21)	1289 (4 C) (1)	BRC001-CF01	03/04/2016 10:40	
BRC001-CK01-TCLP001-01	MBCBT7	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1290 (4 C) (1)	BRC001-CK01	03/02/2016 16:30	

Sample(s) to be used for Lab QC: BRC001-CS01-SL003-01 Tag 1309	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: TAL Metals=CLP TAL Metals, TCLP Metals=CLP TCLP Metals	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	D Montay (WESTON)	3-9-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/9/2016
CarrierName: FedEx
AirbillNo: 8012 2169 6932

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-030916-075454-0012
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CK01-TCLP002-01	MBCBT8	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1291 (4 C) (1)	BRC001-CK01	03/03/2016 09:28	
BRC001-CK01-TCLP003-01	MBCBT9	Solid Waste/ RST 3	Grab	TCLP Metals(21)	1292 (4 C) (1)	BRC001-CK01	03/04/2016 09:59	
BRC001-CM01-TCLP001-01	MBCBW0	Solid Waste/ RST 3	Grab	TCLP Metals(21)	1293 (4 C) (1)	BRC001-CM01	03/04/2016 10:28	
BRC001-CM01-TCLP002-01	MBCBW1	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1294 (4 C) (1)	BRC001-CM01	03/04/2016 10:35	
BRC001-CM01-TCLP003-01	MBCBW2	Solid Waste/ RST 3	Grab	TCLP Metals(21)	1295 (4 C) (1)	BRC001-CM01	03/07/2016 09:56	
BRC001-CM01-TCLP004-01	MBCBW3	Solid Waste/ RST 3	Grab	TCLP Metals(21)	1296 (4 C) (1)	BRC001-CM01	03/07/2016 14:50	
BRC001-CM01-TCLP005-01	MBCBW4	Solid Waste/ RST 3	Grab	TCLP Metals(21)	1297 (4 C) (1)	BRC001-CM01	03/07/2016 16:00	
BRC001-CM01-TCLP006-01	MBCBW5	Solid Waste/ RST 3	Grab	TCLP Metals(21)	1298 (4 C) (1)	BRC001-CM01	03/07/2016 16:15	
BRC001-CM01-TCLP007-01	MBCBW6	Solid Waste/ RST 3	Grab	TCLP Metals(21)	1299 (4 C) (1)	BRC001-CM01	03/07/2016 16:38	
BRC001-CS01-TCLP001-01	MBCBW7	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1300 (4 C) (1)	BRC001-CS01	03/02/2016 14:25	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals, TCLP Metals=CLP TCLP Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montany (WESTON)	3-9-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/9/2016
CarrierName:
AirbillNo: 8012 2169 6932

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #:

No: 2-030916-134644-0013
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CM01-SL046-01	MBCAQ6	Solid Waste/ RST 3	Grab	TAL Metals(21)	1341 (4 C) (1)	BRC001-CM01	03/09/2016 08:38	
BRC001-CM01-SL047-01	MBCAQ7	Solid Waste/ RST 3	Grab	TAL Metals(21)	1342 (4 C) (1)	BRC001-CM01	03/09/2016 08:40	
BRC001-CC01-WP001-01	MBCAW9	Wipes/ RST 3	Discrete	TAL Metals(21)	1312 (4 C) (1)	BRC001-CC01	03/08/2016 11:12	
BRC001-CC01-WP002-01	MBCAX0	Wipes/ RST 3	Discrete	TAL Metals(21)	1313 (4 C) (1)	BRC001-CC01	03/08/2016 11:13	
BRC001-CC01-WP003-01	MBCAX1	Wipes/ RST 3	Discrete	TAL Metals(21)	1321 (4 C) (1)	BRC001-CC01	03/09/2016 09:12	
BRC001-CC01-WP004-01	MBCAX2	Wipes/ RST 3	Discrete	TAL Metals(21)	1314 (4 C) (1)	BRC001-CC01	03/08/2016 11:15	
BRC001-CC01-WP005-01	MBCAX3	Wipes/ RST 3	Discrete	TAL Metals(21)	1315 (4 C) (1)	BRC001-CC01	03/08/2016 11:16	
BRC001-CC01-WP006-01	MBCAX4	Wipes/ RST 3	Discrete	TAL Metals(21)	1316 (4 C) (1)	BRC001-CC01	03/08/2016 11:19	
BRC001-CC01-WP007-01	MBCAX5	Wipes/ RST 3	Discrete	TAL Metals(21)	1317 (4 C) (1)	BRC001-CC01	03/08/2016 11:25	
BRC001-CC01-WP008-01	MBCAX6	Wipes/ RST 3	Discrete	TAL Metals(21)	1318 (4 C) (1)	BRC001-CC01	03/08/2016 11:26	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	S Montey WESTON	3-9-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/9/2016
CarrierName:
AirbillNo: 8012 2169 6932

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #:

No: 2-030916-134644-0013
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CC01-WP009-01	MBCAX7	Wipes/ RST 3	Discrete	TAL Metals(21)	1319 (4 C) (1)	BRC001-CC01	03/08/2016 11:27	
BRC001-CC01-WP010-01	MBCAX8	Wipes/ RST 3	Discrete	TAL Metals(21)	1320 (4 C) (1)	BRC001-CC01	03/08/2016 11:30	
BRC001-CC01-WP011-01	MBCAX9	Wipes/ RST 3	Discrete	TAL Metals(21)	1322 (4 C) (1)	BRC001-CC01	03/09/2016 09:15	
BRC001-CC01-WP012-01	MBCAY0	Wipes/ RST 3	Discrete	TAL Metals(21)	1323 (4 C) (1)	BRC001-CC01	03/09/2016 09:17	
BRC001-CC01-WP013-01	MBCAY1	Wipes/ RST 3	Discrete	TAL Metals(21)	1324 (4 C) (1)	BRC001-CC01	03/09/2016 09:25	
BRC001-CC01-WP014-01	MBCAY2	Wipes/ RST 3	Discrete	TAL Metals(21)	1325 (4 C) (1)	BRC001-CC01	03/09/2016 09:27	
BRC001-CF01-WP001-01	MBCAY3	Wipes/ RST 3	Discrete	TAL Metals(21)	1326 (4 C) (1)	BRC001-CF01	03/08/2016 10:45	
BRC001-CF01-WP002-01	MBCAY4	Wipes/ RST 3	Discrete	TAL Metals(21)	1327 (4 C) (1)	BRC001-CF01	03/08/2016 10:47	
BRC001-CF01-WP003-01	MBCAY5	Wipes/ RST 3	Discrete	TAL Metals(21)	1328 (4 C) (1)	BRC001-CF01	03/08/2016 10:48	
BRC001-CF01-WP004-01	MBCAY6	Wipes/ RST 3	Discrete	TAL Metals(21)	1329 (4 C) (1)	BRC001-CF01	03/08/2016 10:59	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature] (WESTON)	3/9/16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/9/2016
CarrierName:
AirbillNo: 8012 2169 6932

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #:

No: 2-030916-134644-0013
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CF01-WP005-01	MBCAY7	Wipes/ RST 3	Discrete	TAL Metals(21)	1330 (4 C) (1)	BRC001-CF01	03/08/2016 11:01	
BRC001-CF01-WP006-01	MBCAY8	Wipes/ RST 3	Discrete	TAL Metals(21)	1331 (4 C) (1)	BRC001-CF01	03/09/2016 10:09	
BRC001-CF01-WP007-01	MBCAY9	Wipes/ RST 3	Discrete	TAL Metals(21)	1332 (4 C) (1)	BRC001-CF01	03/09/2016 10:10	
BRC001-CF01-WP008-01	MBCAZ0	Wipes/ RST 3	Discrete	TAL Metals(21)	1333 (4 C) (1)	BRC001-CF01	03/09/2016 10:11	
BRC001-CF01-WP009-01	MBCAZ1	Wipes/ RST 3	Discrete	TAL Metals(21)	1334 (4 C) (1)	BRC001-CF01	03/09/2016 10:12	
BRC001-CF01-WP010-01	MBCAZ2	Wipes/ RST 3	Discrete	TAL Metals(21)	1335 (4 C) (1)	BRC001-CF01	03/09/2016 10:15	
BRC001-CF01-WP011-01	MBCAZ3	Wipes/ RST 3	Discrete	TAL Metals(21)	1336 (4 C) (1)	BRC001-CF01	03/09/2016 10:16	
BRC001-CF01-WP012-01	MBCAZ4	Wipes/ RST 3	Discrete	TAL Metals(21)	1337 (4 C) (1)	BRC001-CF01	03/09/2016 10:17	
BRC001-CF01-WP013-01	MBCAZ5	Wipes/ RST 3	Discrete	TAL Metals(21)	1338 (4 C) (1)	BRC001-CF01	03/09/2016 10:19	
WP001-20160308-FB	MBCBP1	Wipe/ RST 3	Discrete	TAL Metals(21)	1344 (4 C) (1)	WP001-20160308-FB	03/03/2016 13:00	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: TAL Metals=CLP TAL Metals	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montey WESTON	3-9-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/9/2016
CarrierName:
AirbillNo: 8012 2169 6932

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #:

No: 2-030916-134644-0013
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
WP001-20160309-FB	MBCBP2	Wipe/ RST 3	Discrete	TAL Metals(21)	1343 (4 C) (1)	WP001-20160309-FB	03/03/2016 14:50	
BRC001-CS01-TCLP002-01	MBCBW8	Solid Waste/ RST 3	Composite	TCLP Metals(21)	1301 (4 C) (1)	BRC001-CS01	03/03/2016 15:55	
BRC001-CM01-TCLP008-01	MBCBW9	Solid Waste/ RST 3	Grab	TCLP Metals(21)	1339 (4 C) (2)	BRC001-CM01	03/09/2016 08:40	
BRC001-CM01-TCLP008-02	MBCBX0	Solid Waste/ RST 3	Grab	TCLP Metals(21)	1340 (4 C) (1)	BRC001-CM01	03/09/2016 08:40	

Sample(s) to be used for Lab QC: BRC001-CM01-TCLP008-01 Tag 1339

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals, TCLP Metals=CLP TCLP Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montes WESTON	3-9-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/10/2016
CarrierName: FedEx
AirbillNo: 8064 1604 6344

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-031016-082818-0014
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CK01-WP005-01	MBCA00	Wipes/ RST 3	Discrete	TAL Metals(21)	1349 (4 C) (1)	BRC001-CK01	03/09/2016 09:56	
BRC001-CK01-WP006-01	MBCA01	Wipes/ RST 3	Discrete	TAL Metals(21)	1350 (4 C) (1)	BRC001-CK01	03/09/2016 10:00	
BRC001-CK01-WP007-01	MBCA02	Wipes/ RST 3	Discrete	TAL Metals(21)	1351 (4 C) (1)	BRC001-CK01	03/09/2016 10:02	
BRC001-CK01-WP008-01	MBCA03	Wipes/ RST 3	Discrete	TAL Metals(21)	1352 (4 C) (1)	BRC001-CK01	03/09/2016 10:06	
BRC001-CK01-WP009-01	MBCA04	Wipes/ RST 3	Discrete	TAL Metals(21)	1353 (4 C) (1)	BRC001-CK01	03/09/2016 10:08	
BRC001-CK01-WP010-01	MBCA05	Wipes/ RST 3	Discrete	TAL Metals(21)	1354 (4 C) (1)	BRC001-CK01	03/09/2016 10:21	
BRC001-CK01-WP011-01	MBCA06	Wipes/ RST 3	Discrete	TAL Metals(21)	1355 (4 C) (1)	BRC001-CK01	03/09/2016 10:23	
BRC001-CK01-WP012-01	MBCA07	Wipes/ RST 3	Discrete	TAL Metals(21)	1356 (4 C) (1)	BRC001-CK01	03/09/2016 10:28	
BRC001-CK01-WP013-01	MBCA08	Wipes/ RST 3	Discrete	TAL Metals(21)	1357 (4 C) (1)	BRC001-CK01	03/09/2016 10:32	
BRC001-CM01-WP001-01	MBCA09	Wipes/ RST 3	Discrete	TAL Metals(21)	1358 (4 C) (1)	BRC001-CM01	03/08/2016 10:32	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: TAL Metals=CLP TAL Metals	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	S Montery (LWESTON)	3-10-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/10/2016
CarrierName: FedEx
AirbillNo: 8064 1604 6344

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-031016-082818-0014
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CM01-WP002-01	MBCA10	Wipes/ RST 3	Discrete	TAL Metals(21)	1359 (4 C) (1)	BRC001-CM01	03/08/2016 10:34	
BRC001-CM01-WP003-01	MBCA11	Wipes/ RST 3	Discrete	TAL Metals(21)	1360 (4 C) (1)	BRC001-CM01	03/08/2016 10:36	
BRC001-CM01-WP004-01	MBCA12	Wipes/ RST 3	Discrete	TAL Metals(21)	1361 (4 C) (1)	BRC001-CM01	03/08/2016 10:42	
BRC001-CM01-WP005-01	MBCA13	Wipes/ RST 3	Discrete	TAL Metals(21)	1362 (4 C) (1)	BRC001-CM01	03/08/2016 10:39	
BRC001-CM01-WP006-01	MBCA14	Wipes/ RST 3	Discrete	TAL Metals(21)	1363 (4 C) (1)	BRC001-CM01	03/08/2016 10:43	
BRC001-CM01-WP007-01	MBCA15	Wipes/ RST 3	Discrete	TAL Metals(21)	1364 (4 C) (1)	BRC001-CM01	03/08/2016 10:44	
BRC001-CM01-WP008-01	MBCA16	Wipes/ RST 3	Discrete	TAL Metals(21)	1365 (4 C) (1)	BRC001-CM01	03/08/2016 10:50	
BRC001-CM01-WP009-01	MBCA17	Wipes/ RST 3	Discrete	TAL Metals(21)	1366 (4 C) (1)	BRC001-CM01	03/08/2016 10:51	
BRC001-CM01-WP010-01	MBCA18	Wipes/ RST 3	Discrete	TAL Metals(21)	1367 (4 C) (1)	BRC001-CM01	03/08/2016 10:52	
BRC001-CM01-WP011-01	MBCA19	Wipes/ RST 3	Discrete	TAL Metals(21)	1368 (4 C) (1)	BRC001-CM01	03/08/2016 10:55	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: TAL Metals=CLP TAL Metals	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	(WESTON)	3-10-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/10/2016
CarrierName: FedEx
AirbillNo: 8064 1604 6344

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-031016-082818-0014
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CM01-WP012-01	MBCA20	Wipes/ RST 3	Discrete	TAL Metals(21)	1369 (4 C) (1)	BRC001-CM01	03/08/2016 10:56	
BRC001-CK01-WP001-01	MBCAZ6	Wipes/ RST 3	Discrete	TAL Metals(21)	1345 (4 C) (1)	BRC001-CK01	03/09/2016 09:02	
BRC001-CK01-WP002-01	MBCAZ7	Wipes/ RST 3	Discrete	TAL Metals(21)	1346 (4 C) (1)	BRC001-CK01	03/09/2016 09:03	
BRC001-CK01-WP003-01	MBCAZ8	Wipes/ RST 3	Discrete	TAL Metals(21)	1347 (4 C) (1)	BRC001-CK01	03/09/2016 09:45	
BRC001-CK01-WP004-01	MBCAZ9	Wipes/ RST 3	Discrete	TAL Metals(21)	1348 (4 C) (1)	BRC001-CK01	03/09/2016 09:54	
BRC001-CM01-WP013-01	MBCBL1	Wipes/ RST 3	Discrete	TAL Metals(21)	1370 (4 C) (1)	BRC001-CM01	03/08/2016 11:05	
BRC001-CM01-WP014-01	MBCBL2	Wipes/ RST 3	Discrete	TAL Metals(21)	1371 (4 C) (1)	BRC001-CM01	03/08/2016 11:10	
BRC001-CM01-WP015-01	MBCBL3	Wipes/ RST 3	Discrete	TAL Metals(21)	1372 (4 C) (1)	BRC001-CM01	03/08/2016 11:31	
BRC001-CM01-WP016-01	MBCBL4	Wipes/ RST 3	Discrete	TAL Metals(21)	1373 (4 C) (1)	BRC001-CM01	03/08/2016 11:34	
BRC001-CM01-WP017-01	MBCBL5	Wipes/ RST 3	Discrete	TAL Metals(21)	1374 (4 C) (1)	BRC001-CM01	03/08/2016 11:40	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: TAL Metals=CLP TAL Metals	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montey (WESTON)	3-10-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/10/2016
CarrierName: FedEx
AirbillNo: 8064 1604 6344

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-031016-082818-0014
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CM01-WP018-01	MBCBL6	Wipes/ RST 3	Discrete	TAL Metals(21)	1375 (4 C) (1)	BRC001-CM01	03/08/2016 11:03	
BRC001-CM01-WP019-01	MBCBL7	Wipes/ RST 3	Discrete	TAL Metals(21)	1376 (4 C) (1)	BRC001-CM01	03/08/2016 14:10	
BRC001-CM01-WP020-01	MBCBL8	Wipes/ RST 3	Discrete	TAL Metals(21)	1377 (4 C) (1)	BRC001-CM01	03/08/2016 14:18	
BRC001-CM01-WP021-01	MBCBL9	Wipes/ RST 3	Discrete	TAL Metals(21)	1378 (4 C) (1)	BRC001-CM01	03/08/2016 14:01	
BRC001-CM01-WP022-01	MBCBM0	Wipes/ RST 3	Discrete	TAL Metals(21)	1379 (4 C) (1)	BRC001-CM01	03/09/2016 08:45	
BRC001-CM01-WP023-01	MBCBM1	Wipes/ RST 3	Discrete	TAL Metals(21)	1380 (4 C) (1)	BRC001-CM01	03/09/2016 08:54	

Leonel Montes

Special Instructions:

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montes (WESTON)	3-10-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/10/2016
CarrierName: FedEx
AirbillNo: 8064 1604 6344

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-031016-112454-0015
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CM01-WP024-01	MBCBM2	Wipes/ RST 3	Discrete	TAL Metals(21)	1381 (4 C) (1)	BRC001-CM01	03/09/2016 08:56	
BRC001-CM01-WP025-01	MBCBM3	Wipes/ RST 3	Discrete	TAL Metals(21)	1382 (4 C) (1)	BRC001-CM01	03/09/2016 09:00	
BRC001-CM01-WP026-01	MBCBM4	Wipes/ RST 3	Discrete	TAL Metals(21)	1383 (4 C) (1)	BRC001-CM01	03/09/2016 09:05	
BRC001-CM01-WP027-01	MBCBM5	Wipes/ RST 3	Discrete	TAL Metals(21)	1384 (4 C) (1)	BRC001-CM01	03/09/2016 09:07	
BRC001-CM01-WP028-01	MBCBM6	Wipes/ RST 3	Discrete	TAL Metals(21)	1385 (4 C) (1)	BRC001-CM01	03/09/2016 09:08	
BRC001-CM01-WP029-01	MBCBM7	Wipes/ RST 3	Discrete	TAL Metals(21)	1386 (4 C) (1)	BRC001-CM01	03/09/2016 09:10	
BRC001-CM01-WP030-01	MBCBM8	Wipes/ RST 3	Discrete	TAL Metals(21)	1387 (4 C) (1)	BRC001-CM01	03/09/2016 09:30	
BRC001-CM01-WP031-01	MBCBM9	Wipes/ RST 3	Discrete	TAL Metals(21)	1388 (4 C) (1)	BRC001-CM01	03/09/2016 09:32	
BRC001-CM01-WP032-01	MBCBN0	Wipes/ RST 3	Discrete	TAL Metals(21)	1389 (4 C) (1)	BRC001-CM01	03/09/2016 09:35	
BRC001-CM01-WP033-01	MBCBN1	Wipes/ RST 3	Discrete	TAL Metals(21)	1390 (4 C) (1)	BRC001-CM01	03/09/2016 09:42	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montey (WBSRON)	3-10-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/10/2016
CarrierName: FedEx
AirbillNo: 8064 1604 6344

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-031016-112454-0015
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CM01-WP034-01	MBCBN2	Wipes/ RST 3	Discrete	TAL Metals(21)	1391 (4 C) (1)	BRC001-CM01	03/09/2016 09:48	
BRC001-CM01-WP035-01	MBCBN3	Wipes/ RST 3	Discrete	TAL Metals(21)	1392 (4 C) (1)	BRC001-CM01	03/09/2016 09:50	
BRC001-CM01-WP036-01	MBCBN4	Wipes/ RST 3	Discrete	TAL Metals(21)	1393 (4 C) (1)	BRC001-CM01	03/09/2016 10:25	
BRC001-CM01-WP037-01	MBCBN5	Wipes/ RST 3	Discrete	TAL Metals(21)	1394 (4 C) (1)	BRC001-CM01	03/09/2016 10:26	
BRC001-CM01-WP038-01	MBCBN6	Wipes/ RST 3	Discrete	TAL Metals(21)	1395 (4 C) (1)	BRC001-CM01	03/09/2016 10:30	
BRC001-CM01-WP039-01	MBCBN7	Wipes/ RST 3	Discrete	TAL Metals(21)	1396 (4 C) (1)	BRC001-CM01	03/09/2016 10:34	
BRC001-CM01-WP040-01	MBCBN8	Wipes/ RST 3	Discrete	TAL Metals(21)	1397 (4 C) (1)	BRC001-CM01	03/09/2016 10:37	
BRC001-CM01-WP041-01	MBCBN9	Wipes/ RST 3	Discrete	TAL Metals(21)	1398 (4 C) (1)	BRC001-CM01	03/09/2016 10:40	
BRC001-CM01-WP042-01	MBCBP0	Wipes/ RST 3	Discrete	TAL Metals(21)	1399 (4 C) (1)	BRC001-CM01	03/09/2016 10:45	
BRC001-CS01-WP001-01	MBCBP3	Wipes/ RST 3	Discrete	TAL Metals(21)	1402 (4 C) (1)	BRC001-CS01	03/09/2016 10:13	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	J Montey (WESTON)	3-10-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/10/2016
CarrierName: FedEx
AirbillNo: 8064 1604 6344

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-031016-112454-0015
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-CS01-WP002-01	MBCBP4	Wipes/ RST 3	Discrete	TAL Metals(21)	1403 (4 C) (1)	BRC001-CS01	03/09/2016 10:14	
BRC001-DM01-WP001-01	MBCBP5	Wipes/ RST 3	Discrete	TAL Metals(21)	1404 (4 C) (1)	BRC001-DM01	03/10/2016 10:42	
BRC001-DM01-WP002-01	MBCBP6	Wipes/ RST 3	Discrete	TAL Metals(21)	1405 (4 C) (1)	BRC001-DM01	03/10/2016 09:18	
BRC001-DM01-WP003-01	MBCBP7	Wipes/ RST 3	Discrete	TAL Metals(21)	1406 (4 C) (1)	BRC001-DM01	03/10/2016 09:22	
BRC001-DM01-WP004-01	MBCBP8	Wipes/ RST 3	Discrete	TAL Metals(21)	1407 (4 C) (1)	BRC001-DM01	03/10/2016 09:25	
BRC001-DM01-WP005-01	MBCBP9	Wipes/ RST 3	Discrete	TAL Metals(21)	1408 (4 C) (1)	BRC001-DM01	03/10/2016 10:12	
BRC001-DM01-WP006-01	MBCBQ0	Wipes/ RST 3	Discrete	TAL Metals(21)	1409 (4 C) (1)	BRC001-DM01	03/10/2016 10:17	
BRC001-DM01-WP007-01	MBCBQ1	Wipes/ RST 3	Discrete	TAL Metals(21)	1410 (4 C) (1)	BRC001-DM01	03/10/2016 10:26	
BRC001-DM01-WP008-01	MBCBQ2	Wipes/ RST 3	Discrete	TAL Metals(21)	1411 (4 C) (1)	BRC001-DM01	03/10/2016 10:37	
BRC001-DM01-WP009-01	MBCBQ3	Wipes/ RST 3	Discrete	TAL Metals(21)	1412 (4 C) (1)	BRC001-DM01	03/10/2016 10:36	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montez (WESTON)	3-10-16 16:00			

USEPA CLP COC (LAB COPY)
DateShipped: 3/10/2016
CarrierName: FedEx
AirbillNo: 8064 1604 6344

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-031016-112454-0015
Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-DM01-WP010-01	MBCBQ4	Wipes/ RST 3	Discrete	TAL Metals(21)	1413 (4 C) (1)	BRC001-DM01	03/10/2016 10:33	
BRC001-DM01-WP011-01	MBCBQ5	Wipes/ RST 3	Discrete	TAL Metals(21)	1414 (4 C) (1)	BRC001-DM01	03/10/2016 10:33	
BRC001-DM01-WP012-01	MBCBQ6	Wipes/ RST 3	Discrete	TAL Metals(21)	1415 (4 C) (1)	BRC001-DM01	03/10/2016 10:44	
BRC001-DM01-WP013-01	MBCBQ7	Wipes/ RST 3	Discrete	TAL Metals(21)	1416 (4 C) (1)	BRC001-DM01	03/10/2016 10:05	
BRC001-DM01-WP014-01	MBCBQ8	Wipes/ RST 3	Discrete	TAL Metals(21)	1417 (4 C) (1)	BRC001-DM01	03/10/2016 10:06	
BRC001-DM01-WP015-01	MBCBQ9	Wipes/ RST 3	Discrete	TAL Metals(21)	1418 (4 C) (1)	BRC001-DM01	03/10/2016 09:49	

Special Instructions:

Shipment for Case Complete? N
Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montana (WESTON)	3-10-16 16:00			

USEPA CLP COC (LAB COPY)

DateShipped: 3/10/2016
CarrierName: FedEx
AirbillNo: 8064 1604 6344

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-031016-131459-0016

Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-DM01-MW001-01	MBCAS6	Dust/Filter/ RST 3	Grab	TAL Metals(21)	1434 (4 C) (1)	BRC001-DM01	03/10/2016 09:15	
BRC001-DM01-MW002-01	MBCAS7	Dust/Filter/ RST 3	Grab	TAL Metals(21)	1435 (4 C) (1)	BRC001-DM01	03/10/2016 09:20	
BRC001-DM01-MW003-01	MBCAS8	Dust/Filter/ RST 3	Grab	TAL Metals(21)	1436 (4 C) (1)	BRC001-DM01	03/10/2016 09:39	
BRC001-DM01-MW004-01	MBCAS9	Dust/Filter/ RST 3	Grab	TAL Metals(21)	1437 (4 C) (1)	BRC001-DM01	03/10/2016 09:30	
BRC001-DM01-MW005-01	MBCAT0	Dust/Filter/ RST 3	Grab	TAL Metals(21)	1438 (4 C) (1)	BRC001-DM01	03/10/2016 10:22	
BRC001-DM01-MW006-01	MBCAT1	Dust/Filter/ RST 3	Grab	TAL Metals(21)	1439 (4 C) (1)	BRC001-DM01	03/10/2016 10:04	
BRC001-DM01-MW007-01	MBCAT2	Dust/Filter/ RST 3	Grab	TAL Metals(21)	1440 (4 C) (1)	BRC001-DM01	03/10/2016 09:57	
BRC001-DM01-MW008-01	MBCAT3	Dust/Filter/ RST 3	Grab	TAL Metals(21)	1441 (4 C) (1)	BRC001-DM01	03/10/2016 09:48	
BRC001-DM01-MW009-01	MBCAT4	Dust/Filter/ RST 3	Grab	TAL Metals(21)	1442 (4 C) (1)	BRC001-DM01	03/10/2016 11:46	
BRC001-DM01-MW010-01	MBCAT5	Dust/Filter/ RST 3	Grab	TAL Metals(21)	1443 (4 C) (1)	BRC001-DM01	03/10/2016 11:44	

Special Instructions: Use MA2594.1 for samples collected using the FF1 M3 Filter (Dust)	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: TAL Metals=CLP TAL Metals	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montez (WESTON)	3-10-16 16:00			

USEPA CLP COC (LAB COPY)

DateShipped: 3/10/2016
CarrierName: FedEx
AirbillNo: 8064 1604 6344

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-031016-131459-0016

Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-DM01-MW011-01	MBCAT6	Dust/Filter/ RST 3	Grab	TAL Metals(21)	1444 (4 C) (1)	BRC001-DM01	03/10/2016 11:54	
BRC001-DM01-MW012-01	MBCAT7	Dust/Filter/ RST 3	Grab	TAL Metals(21)	1445 (4 C) (1)	BRC001-DM01	03/10/2016 11:41	
BRC001-DM01-MW013-01	MBCAT8	Dust/Filter/ RST 3	Grab	TAL Metals(21)	1446 (4 C) (1)	BRC001-DM01	03/10/2016 11:38	
MW001-20160310-FB	MBCAT9	Dust/Filter/ RST 3	Grab	TAL Metals(21)	1447 (4 C) (1)	MW001-20160310-FB	03/10/2016 13:31	

Special Instructions: Use MA2594.1 for samples collected using the FF1 M3 Filter (Dust)

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montiel (WESTON)	3-10-16 16:00			

USEPA CLP COC (LAB COPY)

DateShipped: 3/10/2016
CarrierName: FedEx
AirbillNo: 8064 1604 6344

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-031016-140617-0017

Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
WP001-20160310-FB	MBCAF0	Wipes/ RST 3	Discrete	TAL Metals(21)	1433 (4 C) (1)	FBWP001-20160310	03/10/2016 13:30	
BRC001-CM01-SL048-01	MBCAQ8	Solid Waste/ RST 3	Grab	TAL Metals(21)	1400 (4 C) (1)	BRC001-CM01	03/09/2016 14:00	
BRC001-CM01-SL049-01	MBCAQ9	Solid Waste/ RST 3	Grab	TAL Metals(21)	1401 (4 C) (1)	BRC001-CM01	03/09/2016 14:20	
BRC001-DM01-WP016-01	MBCBR0	Wipes/ RST 3	Discrete	TAL Metals(21)	1419 (4 C) (1)	BRC001-DM01	03/10/2016 09:53	
BRC001-DM01-WP017-01	MBCBR1	Wipes/ RST 3	Discrete	TAL Metals(21)	1420 (4 C) (1)	BRC001-DM01	03/10/2016 09:36	
BRC001-DM01-WP018-01	MBCBR2	Wipes/ RST 3	Discrete	TAL Metals(21)	1421 (4 C) (1)	BRC001-DM01	03/10/2016 12:01	
BRC001-DM01-WP019-01	MBCBR3	Wipes/ RST 3	Discrete	TAL Metals(21)	1422 (4 C) (1)	BRC001-DM01	03/10/2016 11:20	
BRC001-DM01-WP020-01	MBCBR4	Wipes/ RST 3	Discrete	TAL Metals(21)	1423 (4 C) (1)	BRC001-DM01	03/10/2016 11:23	
BRC001-DM01-WP021-01	MBCBR5	Wipes/ RST 3	Discrete	TAL Metals(21)	1424 (4 C) (1)	BRC001-DM01	03/10/2016 11:24	
BRC001-DM01-WP022-01	MBCBR6	Wipes/ RST 3	Discrete	TAL Metals(21)	1425 (4 C) (1)	BRC001-DM01	03/10/2016 11:28	

Special Instructions:	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montey (WESTON)	3-10-16 16:00			

USEPA CLP COC (LAB COPY)

DateShipped: 3/10/2016
CarrierName: FedEx
AirbillNo: 8064 1604 6344

CHAIN OF CUSTODY RECORD

Case #: 46023
Cooler #: 1

No: 2-031016-140617-0017

Lab: Bonner Analytical Testing Company
Lab Contact: Chris Bonner
Lab Phone: 601-264-2854

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
BRC001-DM01-WP023-01	MBCBR7	Wipes/ RST 3	Discrete	TAL Metals(21)	1426 (4 C) (1)	BRC001-DM01	03/10/2016 11:36	
BRC001-DM01-WP024-01	MBCBR8	Wipes/ RST 3	Discrete	TAL Metals(21)	1427 (4 C) (1)	BRC001-DM01	03/10/2016 11:31	
BRC001-DM01-WP025-01	MBCBR9	Wipes/ RST 3	Discrete	TAL Metals(21)	1428 (4 C) (1)	BRC001-DM01	03/10/2016 11:27	
BRC001-DM01-WP026-01	MBCBS0	Wipes/ RST 3	Discrete	TAL Metals(21)	1429 (4 C) (1)	BRC001-DM01	03/10/2016 11:32	
BRC001-DM01-WP027-01	MBCBS1	Wipes/ RST 3	Discrete	TAL Metals(21)	1430 (4 C) (1)	BRC001-DM01	03/10/2016 11:40	
BRC001-DM01-WP028-01	MBCBS2	Wipes/ RST 3	Discrete	TAL Metals(21)	1431 (4 C) (1)	BRC001-DM01	03/10/2016 11:34	
BRC001-DM01-WP029-01	MBCBS3	Wipes/ RST 3	Discrete	TAL Metals(21)	1432 (4 C) (1)	BRC001-DM01	03/10/2016 11:41	

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: TAL Metals=CLP TAL Metals

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	L Montey (USEPA)	3-10-16 16:00			

ATTACHMENT F

Validated Analytical Laboratory Data (On Disk)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory
2890 Woodbridge Avenue
Edison , New Jersey 08837
732-906-6886 Phone
732-906-6165 Fax

March 01, 2016

Smita Sumbaly
Weston Solutions Inc.
205 Campus Drive
Edison, NJ 08837

RE: Puerto Rico Battery - 1601010

Enclosed are the results of analyses for samples received by the laboratory between 1/20/2016 and 1/29/2016. The signature below reflects the laboratory's approval of the reported results. If you have any questions concerning this report, please refer to Project Number 1601010 and contact the laboratory.

Sincerely,

John R. Bourbon
Chief, DESA/LB

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Project Narrative:

The National Environmental Laboratory Accreditation Conference Institute (TNI) is a voluntary environmental laboratory accreditation association of State and Federal agencies. TNI established and promoted a National Environmental Laboratory Accreditation Program (NELAP) that provides a uniform set of standards for the generation of environmental data that are of known and defensible quality. The EPA Region 2 Laboratory is NELAP accredited. The Laboratory tests that are accredited have met all the requirements established under the TNI Standards.

Condition Comments

None

Comment(s):

The "Sample Analysis Date and Time" is included in the results section for any analyte with a prescribed holding time of 72 hours or less.

Data Qualifier(s):

U- The analyte was not detected at or above the Reporting Limit.
J- The identification of the analyte is acceptable; the reported value is an estimate.
K- The identification of the analyte is acceptable; the reported value may be biased high.
L- The identification of the analyte is acceptable; the reported value may be biased low.
NJ- There is presumptive evidence that the analyte is present; the analyte is reported as a tentative identification. The reported value is an estimate.

Reporting Limit(s):

The Laboratory was able to achieve the appropriate limits for each analyte requested.

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SUMMARY REPORT FOR SAMPLES

Field ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRC001-DB001-0106-01	1601010-01	Solid	01/14/2016 09:35	01/20/2016 12:30
BRC001-DB002-0001-01	1601010-02	Solid	01/14/2016 10:34	01/20/2016 12:30
BRC001-DB003-0001-01	1601010-03	Solid	01/14/2016 10:55	01/20/2016 12:30
BRC001-DB003-1218-01	1601010-04	Solid	01/14/2016 11:08	01/20/2016 12:30
BRC001-DB004-0612-01	1601010-05	Solid	01/14/2016 11:35	01/20/2016 12:30
BRC001-DB005-0001-01	1601010-06	Solid	01/14/2016 12:00	01/20/2016 12:30
BRC001-DB005-0612-01	1601010-07	Solid	01/14/2016 12:09	01/20/2016 12:30
BRC001-GB001-0001-01	1601010-08	Solid	01/15/2016 07:56	01/20/2016 12:30
BRC001-GB001-0001-02	1601010-09	Solid	01/15/2016 07:56	01/20/2016 12:30
BRC001-GB002-0001-01	1601010-10	Solid	01/15/2016 08:30	01/20/2016 12:30
BRC001-GB003-0612-01	1601010-11	Solid	01/15/2016 09:22	01/20/2016 12:30
BRC001-GB004-0001-01	1601010-12	Solid	01/15/2016 08:40	01/20/2016 12:30
BRC001-GB004-0612-01	1601010-13	Solid	01/15/2016 08:50	01/20/2016 12:30
BRC001-GB005-0001-01	1601010-14	Solid	01/15/2016 10:00	01/20/2016 12:30
BRC001-GB005-0612-01	1601010-15	Solid	01/15/2016 10:10	01/20/2016 12:30
BRC001-GB006-0001-01	1601010-16	Solid	01/15/2016 10:31	01/20/2016 12:30
BRC001-GB007-0106-01	1601010-17	Solid	01/15/2016 09:09	01/20/2016 12:30
BRC001-GB008-0001-01	1601010-18	Solid	01/15/2016 10:21	01/20/2016 12:30
BRC001-GB010-0106-01	1601010-19	Solid	01/15/2016 10:56	01/20/2016 12:30
BRC001-GB011-0001-01	1601010-20	Solid	01/14/2016 16:20	01/20/2016 12:30
BRC001-GB012-0001-01	1601010-21	Solid	01/14/2016 16:59	01/20/2016 12:30
BRC001-GB014-0106-01	1601010-22	Solid	01/15/2016 11:19	01/20/2016 12:30
BRC001-GB014-0612-01	1601010-23	Solid	01/15/2016 11:24	01/20/2016 12:30
BRC001-GB015-0001-01	1601010-24	Solid	01/15/2016 12:48	01/20/2016 12:30
BRC001-GB016-0106-01	1601010-25	Solid	01/15/2016 13:42	01/20/2016 12:30
BRC001-GB017-0001-01	1601010-26	Solid	01/15/2016 14:14	01/20/2016 12:30
BRC001-GB017-0612-01	1601010-27	Solid	01/15/2016 14:22	01/20/2016 12:30
BRC001-GB018-0106-01	1601010-28	Solid	01/15/2016 12:51	01/20/2016 12:30

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Field ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRC001-GB019-0001-01	1601010-29	Solid	01/15/2016 15:18	01/20/2016 12:30
BRC001-GB020-0001-01	1601010-30	Solid	01/15/2016 15:53	01/20/2016 12:30
BRC001-GB020-1218-01	1601010-31	Solid	01/15/2016 16:05	01/20/2016 12:30
BRC001-GB022-0612-01	1601010-32	Solid	01/16/2016 09:24	01/20/2016 12:30
BRC001-GB023-0001-01	1601010-33	Solid	01/16/2016 09:38	01/20/2016 12:30
BRC001-GB024-0106-01	1601010-34	Solid	01/16/2016 10:04	01/20/2016 12:30
BRC001-GB025-0612-01	1601010-35	Solid	01/16/2016 10:33	01/20/2016 12:30
BRC001-GB025-1218-01	1601010-36	Solid	01/16/2016 10:37	01/20/2016 12:30
BRC001-GB026-0001-01	1601010-37	Solid	01/16/2016 10:53	01/20/2016 12:30
BRC001-GB027-0001-01	1601010-38	Solid	01/16/2016 11:20	01/20/2016 12:30
BRC001-GB027-0612-01	1601010-39	Solid	01/16/2016 11:28	01/20/2016 12:30
BRC001-GB029-0612-01	1601010-40	Solid	01/16/2016 14:09	01/20/2016 12:30
BRC001-GB030-0001-01	1601010-41	Solid	01/16/2016 14:18	01/20/2016 12:30
BRC001-GB030-0612-01	1601010-42	Solid	01/16/2016 14:26	01/20/2016 12:30
BRC001-GB030-1824-01	1601010-43	Solid	01/16/2016 14:34	01/20/2016 12:30
BRC001-GB031-0001-01	1601010-44	Solid	01/16/2016 15:07	01/20/2016 12:30
BRC001-GB031-0612-01	1601010-45	Solid	01/16/2016 15:15	01/20/2016 12:30
BRC001-GB032-0001-01	1601010-46	Solid	01/16/2016 15:25	01/20/2016 12:30
BRC001-GB032-0106-01	1601010-47	Solid	01/16/2016 15:29	01/20/2016 12:30
BRC001-GB032-1218-01	1601010-48	Solid	01/16/2016 15:37	01/20/2016 12:30
BRC001-GB033-0001-01	1601010-49	Solid	01/16/2016 15:50	01/20/2016 12:30
BRC001-GB033-1218-01	1601010-50	Solid	01/16/2016 16:02	01/20/2016 12:30
BRC001-GB034-0106-01	1601010-51	Solid	01/16/2016 16:12	01/20/2016 12:30
BRC001-GB034-0612-01	1601010-52	Solid	01/16/2016 16:16	01/20/2016 12:30
BRC001-SB001-0001-01	1601010-53	Solid	01/11/2016 15:51	01/20/2016 12:30
BRC001-SB002-0001-01	1601010-54	Solid	01/11/2016 15:48	01/20/2016 12:30
BRC001-SB003-0612-01	1601010-55	Solid	01/11/2016 16:05	01/20/2016 12:30
BRC001-SB005-0001-01	1601010-56	Solid	01/12/2016 09:00	01/20/2016 12:30
BRC001-SB005-1218-01	1601010-57	Solid	01/12/2016 09:14	01/20/2016 12:30

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Field ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRC001-SB005-1824-01	1601010-58	Solid	01/12/2016 09:20	01/20/2016 12:30
BRC001-SB005-3642-01	1601010-59	Solid	01/12/2016 14:14	01/20/2016 12:30
BRC001-SB006-0001-01	1601010-60	Solid	01/12/2016 15:51	01/20/2016 12:30
BRC001-SB006-1218-01	1601010-61	Solid	01/12/2016 15:07	01/20/2016 12:30
BRC001-SB007-0001-01	1601010-62	Solid	01/12/2016 13:44	01/20/2016 12:30
BRC001-SB008-0001-01	1601010-63	Solid	01/12/2016 12:41	01/20/2016 12:30
BRC001-SB009-0612-01	1601010-64	Solid	01/12/2016 15:43	01/20/2016 12:30
BRC001-SB009-3642-01	1601010-65	Solid	01/12/2016 15:43	01/20/2016 12:30
BRC001-SB010-0001-01	1601010-66	Solid	01/13/2016 16:21	01/20/2016 12:30
BRC001-SB010-0612-01	1601010-67	Solid	01/13/2016 16:31	01/20/2016 12:30
BRC001-SB011-0001-01	1601010-68	Solid	01/13/2016 17:10	01/20/2016 12:30
BRC001-SB011-1824-01	1601010-69	Solid	01/13/2016 17:32	01/20/2016 12:30
BRC001-SB012-0001-01	1601010-70	Solid	01/13/2016 08:14	01/20/2016 12:30
BRC001-SB012-1218-01	1601010-71	Solid	01/13/2016 08:27	01/20/2016 12:30
BRC001-SB013-0612-01	1601010-72	Solid	01/13/2016 08:52	01/20/2016 12:30
BRC001-SB013-2430-01	1601010-73	Solid	01/13/2016 09:07	01/20/2016 12:30
BRC001-SB013-4248-01	1601010-74	Solid	01/13/2016 09:12	01/20/2016 12:30
BRC001-SB014-0612-01	1601010-75	Solid	01/13/2016 07:50	01/20/2016 12:30
BRC001-SB015-1218-01	1601010-76	Solid	01/13/2016 09:30	01/20/2016 12:30
BRC001-SB015-1824-01	1601010-77	Solid	01/13/2016 09:35	01/20/2016 12:30
BRC001-SB016-0001-01	1601010-78	Solid	01/13/2016 10:00	01/20/2016 12:30
BRC001-SB016-1218-01	1601010-79	Solid	01/13/2016 10:18	01/20/2016 12:30
BRC001-SB017-0612-01	1601010-80	Solid	01/13/2016 14:12	01/20/2016 12:30
BRC001-SB018-0001-01	1601010-81	Solid	01/13/2016 11:18	01/20/2016 12:30
BRC001-SB018-2430-01	1601010-82	Solid	01/13/2016 11:42	01/20/2016 12:30
BRC001-SB019-0001-01	1601010-83	Solid	01/13/2016 15:37	01/20/2016 12:30
BRC001-SB019-0612-01	1601010-84	Solid	01/13/2016 15:45	01/20/2016 12:30
BRC001-SB020-0001-01	1601010-85	Solid	01/13/2016 13:30	01/20/2016 12:30

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Field ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRC001-SB020-1218-01	1601010-86	Solid	01/13/2016 13:46	01/20/2016 12:30
BRC001-SB021-0001-01	1601010-87	Solid	01/13/2016 16:05	01/20/2016 12:30
BRC001-SB022-0612-01	1601010-88	Solid	01/13/2016 16:54	01/20/2016 12:30
BRC001-SB023-0001-01	1601010-89	Solid	01/13/2016 17:17	01/20/2016 12:30
BRC001-SB024-0001-01	1601010-90	Solid	01/14/2016 07:47	01/20/2016 12:30
BRC001-SB024-0001-02	1601010-91	Solid	01/14/2016 07:47	01/20/2016 12:30
BRC001-SB024-1824-01	1601010-92	Solid	01/14/2016 08:04	01/20/2016 12:30
BRC001-SB025-0001-01	1601010-93	Solid	01/14/2016 08:45	01/20/2016 12:30
BRC001-SB025-0001-02	1601010-94	Solid	01/14/2016 08:45	01/20/2016 12:30
BRC001-SB025-1824-01	1601010-95	Solid	01/14/2016 09:04	01/20/2016 12:30
BRC001-SB026-0001-01	1601010-96	Solid	01/14/2016 12:49	01/20/2016 12:30
BRC001-SB027-0001-01	1601010-97	Solid	01/14/2016 13:30	01/20/2016 12:30
BRC001-SB027-0001-02	1601010-98	Solid	01/14/2016 13:30	01/20/2016 12:30
BRC001-SB028-0001-01	1601010-99	Solid	01/14/2016 15:16	01/20/2016 12:30
BRC001-SB028-0612-01	1601010-AA	Solid	01/14/2016 15:37	01/20/2016 12:30
BRC001-SB028-3036-01	1601010-AB	Solid	01/14/2016 15:55	01/20/2016 12:30
BRC001-SB029-0612-01	1601010-AC	Solid	01/14/2016 08:24	01/20/2016 12:30
BRC001-SB030-0001-01	1601010-AD	Solid	01/14/2016 14:04	01/20/2016 12:30
BRC001-SB030-0612-01	1601010-AE	Solid	01/14/2016 14:12	01/20/2016 12:30
BRC001-SB031-0001-01	1601010-AF	Solid	01/14/2016 14:40	01/20/2016 12:30
BRC001-SB031-0001-02	1601010-AG	Solid	01/14/2016 14:40	01/20/2016 12:30
RB-01112016	1601010-AH	Aqueous	01/11/2016 18:00	01/20/2016 12:30
RB-01122016	1601010-AI	Aqueous	01/11/2016 18:00	01/20/2016 12:30
RB-01132016	1601010-AJ	Aqueous	01/11/2016 18:00	01/20/2016 12:30
RB-01142016	1601010-AK	Aqueous	01/11/2016 18:00	01/20/2016 12:30
RB-01152016	1601010-AL	Aqueous	01/11/2016 18:00	01/20/2016 12:30
RB-01182016	1601010-AM	Aqueous	01/18/2016 14:00	01/20/2016 12:30
RB-011816	1601035-01	Aqueous	01/18/2016 00:01	01/26/2016 17:00
BRC001-AB001-0001-01	1601035-02	Solid	01/20/2016 17:45	01/26/2016 17:00

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Field ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRC001-AB002-0001-01	1601035-03	Solid	01/20/2016 20:05	01/26/2016 17:00
BRC001-AB002-0001-02	1601035-04	Solid	01/20/2016 20:05	01/26/2016 17:00
BRC001-AB003-1218-01	1601035-05	Solid	01/20/2016 19:12	01/26/2016 17:00
BRC001-AB004-0001-01	1601035-06	Solid	01/20/2016 19:20	01/26/2016 17:00
BRC001-AB004-0612-01	1601035-07	Solid	01/20/2016 19:28	01/26/2016 17:00
BRC001-AB004-1824-01	1601035-08	Solid	01/20/2016 19:36	01/26/2016 17:00
BRC001-AB005-0001-01	1601035-09	Solid	01/21/2016 07:20	01/26/2016 17:00
BRC001-AB006-0001-01	1601035-10	Solid	01/20/2016 18:54	01/26/2016 17:00
BRC001-AB006-1218-01	1601035-11	Solid	01/20/2016 19:06	01/26/2016 17:00
BRC001-AB007-0106-01	1601035-12	Solid	01/20/2016 16:40	01/26/2016 17:00
BRC001-AB008-0001-01	1601035-13	Solid	01/20/2016 15:50	01/26/2016 17:00
BRC001-AB009-0001-01	1601035-14	Solid	01/20/2016 15:20	01/26/2016 17:00
BRC001-AB010-0001-01	1601035-15	Solid	01/20/2016 14:58	01/26/2016 17:00
BRC001-AB011-0001-01	1601035-16	Solid	01/20/2016 17:20	01/26/2016 17:00
BRC001-AB011-0001-02	1601035-17	Solid	01/20/2016 17:20	01/26/2016 17:00
BRC001-AB011-0612-01	1601035-18	Solid	01/20/2016 17:28	01/26/2016 17:00
BRC001-AB013-0001-01	1601035-19	Solid	01/20/2016 13:45	01/26/2016 17:00
BRC001-AB013-0612-01	1601035-20	Solid	01/20/2016 13:53	01/26/2016 17:00
BRC001-AB014-0001-01	1601035-21	Solid	01/20/2016 14:13	01/26/2016 17:00
BRC001-AB015-0106-01	1601035-22	Solid	01/21/2016 10:44	01/26/2016 17:00
BRC001-AB015-1218-01	1601035-23	Solid	01/21/2016 10:53	01/26/2016 17:00
BRC001-AB016-0001-01	1601035-24	Solid	01/21/2016 11:05	01/26/2016 17:00
BRC001-AB016-1824-01	1601035-25	Solid	01/21/2016 11:21	01/26/2016 17:00
BRC001-AB016-2430-01	1601035-26	Solid	01/21/2016 11:25	01/26/2016 17:00
BRC001-AB017-0001-01	1601035-27	Solid	01/21/2016 14:05	01/26/2016 17:00
BRC001-AB017-1218-01	1601035-28	Solid	01/21/2016 14:17	01/26/2016 17:00
BRC001-AB017-1824-01	1601035-29	Solid	01/21/2016 14:21	01/26/2016 17:00
BRC001-AB018-0001-01	1601035-30	Solid	01/21/2016 13:43	01/26/2016 17:00

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Field ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRC001-AB019-0001-01	1601035-31	Solid	01/21/2016 10:20	01/26/2016 17:00
BRC001-AB019-0001-02	1601035-32	Solid	01/21/2016 10:20	01/26/2016 17:00
BRC001-AB019-1218-01	1601035-33	Solid	01/21/2016 10:32	01/26/2016 17:00
BRC001-AB020-0001-01	1601035-34	Solid	01/21/2016 11:25	01/26/2016 17:00
BRC001-AB020-1824-01	1601035-35	Solid	01/21/2016 11:41	01/26/2016 17:00
BRC001-AB022-0612-01	1601035-36	Solid	01/21/2016 08:15	01/26/2016 17:00
BRC001-AB023-0612-01	1601035-37	Solid	01/21/2016 09:22	01/26/2016 17:00
BRC001-AB024-0001-01	1601035-38	Solid	01/21/2016 09:35	01/26/2016 17:00
BRC001-AB025-1218-01	1601035-39	Solid	01/21/2016 08:37	01/26/2016 17:00
BRC001-AB025-2430-01	1601035-40	Solid	01/21/2016 08:45	01/26/2016 17:00
BRC001-AB025-3036-01	1601035-41	Solid	01/21/2016 08:49	01/26/2016 17:00
BRC001-AB026-0612-01	1601035-42	Solid	01/21/2016 09:01	01/26/2016 17:00
BRC001-AB026-1218-01	1601035-43	Solid	01/21/2016 09:05	01/26/2016 17:00
BRC001-GB035-0106-01	1601035-44	Solid	01/18/2016 10:04	01/26/2016 17:00
BRC001-GB036-0001-01	1601035-45	Solid	01/18/2016 10:20	01/26/2016 17:00
BRC001-GB037-0001-01	1601035-46	Solid	01/18/2016 10:45	01/26/2016 17:00
BRC001-GB037-0106-01	1601035-47	Solid	01/18/2016 10:49	01/26/2016 17:00
BRC001-GB038-0001-01	1601035-48	Solid	01/18/2016 11:10	01/26/2016 17:00
BRC001-GB039-0612-01	1601035-49	Solid	01/18/2016 11:43	01/26/2016 17:00
BRC001-GB040-0001-01	1601035-50	Solid	01/18/2016 11:51	01/26/2016 17:00
BRC001-GB041-0001-01	1601035-51	Solid	01/18/2016 12:13	01/26/2016 17:00
BRC001-GB042-0612-01	1601035-52	Solid	01/18/2016 17:29	01/26/2016 17:00
BRC001-GB043-0106-01	1601035-53	Solid	01/18/2016 18:10	01/26/2016 17:00
BRC001-GB044-0001-01	1601035-54	Solid	01/18/2016 17:44	01/26/2016 17:00
BRC001-GB045-0001-01	1601035-55	Solid	01/18/2016 16:55	01/26/2016 17:00
BRC001-GB046-0106-01	1601035-56	Solid	01/19/2016 07:34	01/26/2016 17:00
BRC001-SB005A-6066-01	1601035-57	Solid	01/20/2016 08:32	01/26/2016 17:00
BRC001-SB005A-6672-01	1601035-58	Solid	01/20/2016 08:36	01/26/2016 17:00
BRC001-SB005A-7278-01	1601035-59	Solid	01/20/2016 08:40	01/26/2016 17:00

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Field ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRC001-SB008A-0001-01	1601035-60	Solid	01/19/2016 17:41	01/26/2016 17:00
BRC001-SB008A-2430-01	1601035-61	Solid	01/19/2016 18:01	01/26/2016 17:00
BRC001-SB032-0001-01	1601035-62	Solid	01/18/2016 08:30	01/26/2016 17:00
BRC001-SB032-0612-01	1601035-63	Solid	01/19/2016 08:38	01/26/2016 17:00
BRC001-SB033-0001-01	1601035-64	Solid	01/19/2016 09:31	01/26/2016 17:00
BRC001-SB033-1218-01	1601035-65	Solid	01/19/2016 09:43	01/26/2016 17:00
BRC001-SB036-0001-01	1601035-66	Solid	01/19/2016 10:50	01/26/2016 17:00
BRC001-SB037-0612-01	1601035-67	Solid	01/19/2016 11:42	01/26/2016 17:00
BRC001-SB038-0001-01	1601035-68	Solid	01/19/2016 11:08	01/26/2016 17:00
BRC001-SB040-0001-01	1601035-69	Solid	01/19/2016 12:45	01/26/2016 17:00
BRC001-SB041-0001-01	1601035-70	Solid	01/19/2016 11:52	01/26/2016 17:00
BRC001-SB042-0001-01	1601035-71	Solid	01/19/2016 13:10	01/26/2016 17:00
BRC001-SB042-0001-02	1601035-72	Solid	01/19/2016 13:10	01/26/2016 17:00
BRC001-SB042-0612-01	1601035-73	Solid	01/19/2016 13:18	01/26/2016 17:00
BRC001-SB044-0612-01	1601035-74	Solid	01/19/2016 15:53	01/26/2016 17:00
BRC001-SB045-0001-01	1601035-75	Solid	01/19/2016 15:02	01/26/2016 17:00
BRC001-SB046-0001-01	1601035-76	Solid	01/19/2016 16:20	01/26/2016 17:00
BRC001-SB048-0001-01	1601035-77	Solid	01/19/2016 17:16	01/26/2016 17:00
BRC001-SB048-1824-01	1601035-78	Solid	01/19/2016 17:32	01/26/2016 17:00
BRC001-SB049-0612-01	1601035-79	Solid	01/20/2016 07:14	01/26/2016 17:00
BRC001-SB049-1218-01	1601035-80	Solid	01/20/2016 07:18	01/26/2016 17:00
BRC001-SB051-0001-01	1601035-81	Solid	01/20/2016 09:00	01/26/2016 17:00
BRC001-SB051-1218-01	1601035-82	Solid	01/20/2016 09:12	01/26/2016 17:00
BRC001-SB052-0001-01	1601035-83	Solid	01/20/2016 09:25	01/26/2016 17:00
BRC001-SB052-0001-02	1601035-84	Solid	01/20/2016 09:25	01/26/2016 17:00
BRC001-SB053-0001-01	1601035-85	Solid	01/20/2016 09:50	01/26/2016 17:00
BRC001-SB054-0001-01	1601035-86	Solid	01/20/2016 12:00	01/26/2016 17:00
BRC001-SB055-0612-01	1601035-87	Solid	01/20/2016 14:49	01/26/2016 17:00

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Project: Puerto Rico Battery - 1601010

Project Number: 1601010

SUMMARY REPORT FOR SAMPLES

Field ID	Laboratory ID	Matrix	Date Sampled	Date Received
BRC001-SB056-0001-01	1601035-88	Solid	01/20/2016 10:30	01/26/2016 17:00
BRC001-SB057-0612-01	1601035-89	Solid	01/20/2016 10:59	01/26/2016 17:00
BRC001-SB058-0001-01	1601035-90	Solid	01/20/2016 11:12	01/26/2016 17:00
BRC001-SB060-0001-01	1601035-91	Solid	01/20/2016 17:45	01/26/2016 17:00
BRC001-SB060-1218-01	1601035-92	Solid	01/20/2016 17:58	01/26/2016 17:00
BRC001-SB061-0001-01	1601035-93	Solid	01/20/2016 06:15	01/26/2016 17:00
BRC001-SB061-0612-01	1601035-94	Solid	01/20/2016 06:23	01/26/2016 17:00
RB-01192016	1601035-95	Aqueous	01/19/2016 18:00	01/26/2016 17:00
RB-01202016	1601035-96	Aqueous	01/20/2016 13:00	01/26/2016 17:00
RB-01212016	1601035-97	Aqueous	01/21/2016 18:00	01/26/2016 17:00
BRC001-SBD001-1218-01	1601038-01	Solid	01/22/2016 13:12	01/29/2016 11:35
BRC001-SBD004-0612-01	1601038-02	Solid	01/22/2016 14:38	01/29/2016 11:35
BRC001-SBD004-1218-01	1601038-03	Solid	01/22/2016 14:42	01/29/2016 11:35
BRC001-SBD005-2430-01	1601038-04	Solid	01/25/2016 08:20	01/29/2016 11:35
BRC001-SBD006-0001-01	1601038-05	Solid	01/25/2016 08:30	01/29/2016 11:35
BRC001-SBD007-1218-01	1601038-06	Solid	01/25/2016 09:12	01/29/2016 11:35
BRC001-SBD007-1824-01	1601038-07	Solid	01/25/2016 09:16	01/29/2016 11:35
BRC001-SBD009-1218-01	1601038-08	Solid	01/25/2016 10:12	01/29/2016 11:35
BRC001-SBD010-0001-01	1601038-09	Solid	01/25/2016 10:30	01/29/2016 11:35
BRC001-SBD010-0106-01	1601038-10	Solid	01/25/2016 10:34	01/29/2016 11:35
BRC001-SBD011-0612-01	1601038-11	Solid	01/25/2016 11:08	01/29/2016 11:35
RB-01222016	1601038-12	Aqueous	01/22/2016 15:00	01/29/2016 11:35
RB-01252016	1601038-13	Aqueous	01/25/2016 13:00	01/29/2016 11:35

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Project: Puerto Rico Battery - 1601010

Project Number: 1601010

SUMMARY REPORT FOR METHODS

Analysis	Method	Certification	Matrix
E-Metals ICP TAL	EPA 200.7 SOP C-109 Rev3.3	NELAP	Aqueous
E-Metals ICP TAL	EPA 200.7 SOP C-109 Rev3.3	NELAP	Solid

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Project: Puerto Rico Battery - 1601010

Project Number: 1601010

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-DB001-0106-01				Sample ID: 1601010-01	
Metals ICP					
Aluminum	15000		8.9	mg/kg dry	
Antimony	120		1.8	mg/kg dry	
Arsenic	40		0.71	mg/kg dry	
Barium	74		8.9	mg/kg dry	
Beryllium	0.51		0.27	mg/kg dry	
Cadmium	16		0.27	mg/kg dry	
Calcium	59000		45	mg/kg dry	
Chromium	16		0.45	mg/kg dry	
Cobalt	12		1.8	mg/kg dry	
Copper	130		0.89	mg/kg dry	
Iron	25000		4.5	mg/kg dry	
Lead	5600		0.71	mg/kg dry	
Magnesium	8400		45	mg/kg dry	
Manganese	460		0.45	mg/kg dry	
Nickel	30		1.8	mg/kg dry	
Potassium	210		45	mg/kg dry	
Selenium	3.3		1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	470		89	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	98		1.8	mg/kg dry	
Zinc	140		1.8	mg/kg dry	
Field ID: BRC001-DB002-0001-01				Sample ID: 1601010-02	
Metals ICP					
Aluminum	12000		9.3	mg/kg dry	

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Project Number: 1601010

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-DB002-0001-01				Sample ID: 1601010-02	
Metals ICP					
Antimony	23		1.9	mg/kg dry	
Arsenic	11		0.74	mg/kg dry	
Barium	34		9.3	mg/kg dry	
Beryllium	0.54		0.28	mg/kg dry	
Cadmium	23		0.28	mg/kg dry	
Calcium	95000		230	mg/kg dry	
Chromium	16		0.47	mg/kg dry	
Cobalt	7.8		1.9	mg/kg dry	
Copper	58		0.93	mg/kg dry	
Iron	19000		4.7	mg/kg dry	
Lead	1400		0.74	mg/kg dry	
Magnesium	5800		47	mg/kg dry	
Manganese	350		0.47	mg/kg dry	
Nickel	19		1.9	mg/kg dry	
Potassium	300		47	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.47	mg/kg dry	
Sodium	340		93	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	74		1.9	mg/kg dry	
Zinc	76		1.9	mg/kg dry	
Field ID: BRC001-DB003-0001-01				Sample ID: 1601010-03	
Metals ICP					
Aluminum	16000		8.3	mg/kg dry	
Antimony	110		1.7	mg/kg dry	

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Project Number: 1601010

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-DB003-0001-01				Sample ID: 1601010-03	
Metals ICP					
Arsenic	44		0.66	mg/kg dry	
Barium	59		8.3	mg/kg dry	
Beryllium	0.52		0.25	mg/kg dry	
Cadmium	25		0.25	mg/kg dry	
Calcium	55000		41	mg/kg dry	
Chromium	16		0.41	mg/kg dry	
Cobalt	13		1.7	mg/kg dry	
Copper	100		0.83	mg/kg dry	
Iron	26000		4.1	mg/kg dry	
Lead	5400		0.66	mg/kg dry	
Magnesium	8800		41	mg/kg dry	
Manganese	460		0.41	mg/kg dry	
Nickel	38		1.7	mg/kg dry	
Potassium	240		41	mg/kg dry	
Selenium	2.8		1.7	mg/kg dry	
Silver	---	U	0.41	mg/kg dry	
Sodium	520		83	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	97		1.7	mg/kg dry	
Zinc	140		1.7	mg/kg dry	
Field ID: BRC001-DB003-1218-01				Sample ID: 1601010-04	
Metals ICP					
Aluminum	7600		10	mg/kg dry	
Antimony	---	U	2.0	mg/kg dry	
Arsenic	9.1		0.81	mg/kg dry	

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Project Number: 1601010

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-DB003-1218-01				Sample ID: 1601010-04	
Metals ICP					
Barium	35		10	mg/kg dry	
Beryllium	0.62		0.31	mg/kg dry	
Cadmium	0.92		0.31	mg/kg dry	
Calcium	260000		510	mg/kg dry	
Chromium	34		0.51	mg/kg dry	
Cobalt	3.9		2.0	mg/kg dry	
Copper	20		1.0	mg/kg dry	
Iron	18000		5.1	mg/kg dry	
Lead	120		0.81	mg/kg dry	
Magnesium	3600		51	mg/kg dry	
Manganese	170		0.51	mg/kg dry	
Nickel	9.3		2.0	mg/kg dry	
Potassium	420		51	mg/kg dry	
Selenium	---	U	2.0	mg/kg dry	
Silver	---	U	0.51	mg/kg dry	
Sodium	490		100	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	37		2.0	mg/kg dry	
Zinc	26		2.0	mg/kg dry	
Field ID: BRC001-DB004-0612-01				Sample ID: 1601010-05	
Metals ICP					
Aluminum	5600		9.2	mg/kg dry	
Antimony	13		1.8	mg/kg dry	
Arsenic	10		0.74	mg/kg dry	
Barium	23		9.2	mg/kg dry	

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Project Number: 1601010

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-DB004-0612-01				Sample ID: 1601010-05	
Metals ICP					
Beryllium	0.55		0.28	mg/kg dry	
Cadmium	3.1		0.28	mg/kg dry	
Calcium	290000		460	mg/kg dry	
Chromium	29		0.46	mg/kg dry	
Cobalt	2.9		1.8	mg/kg dry	
Copper	22		0.92	mg/kg dry	
Iron	13000		4.6	mg/kg dry	
Lead	460		0.74	mg/kg dry	
Magnesium	2900		46	mg/kg dry	
Manganese	150		0.46	mg/kg dry	
Nickel	7.9		1.8	mg/kg dry	
Potassium	270		46	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.46	mg/kg dry	
Sodium	290		92	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	27		1.8	mg/kg dry	
Zinc	31		1.8	mg/kg dry	
Field ID: BRC001-DB005-0001-01				Sample ID: 1601010-06	
Metals ICP					
Aluminum	13000		15	mg/kg dry	
Antimony	2900		3.0	mg/kg dry	
Arsenic	940		1.2	mg/kg dry	
Barium	610		15	mg/kg dry	
Beryllium	0.49		0.44	mg/kg dry	

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Project Number: 1601010

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-DB005-0001-01				Sample ID: 1601010-06	
Metals ICP					
Cadmium	120		0.44	mg/kg dry	
Calcium	43000		74	mg/kg dry	
Chromium	89		0.74	mg/kg dry	
Cobalt	15		3.0	mg/kg dry	
Copper	710		1.5	mg/kg dry	
Iron	77000		74	mg/kg dry	
Lead	66000		12	mg/kg dry	
Magnesium	4800		74	mg/kg dry	
Manganese	430		0.74	mg/kg dry	
Nickel	190		3.0	mg/kg dry	
Potassium	450		74	mg/kg dry	
Selenium	58		3.0	mg/kg dry	
Silver	3.0		0.74	mg/kg dry	
Sodium	500		150	mg/kg dry	
Thallium	---	U	3.0	mg/kg dry	
Vanadium	110		3.0	mg/kg dry	
Zinc	1400		3.0	mg/kg dry	
Field ID: BRC001-DB005-0612-01				Sample ID: 1601010-07	
Metals ICP					
Aluminum	6400		10	mg/kg dry	
Antimony	14		2.0	mg/kg dry	
Arsenic	12		0.81	mg/kg dry	
Barium	48		10	mg/kg dry	
Beryllium	0.52		0.30	mg/kg dry	
Cadmium	1.1		0.30	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-DB005-0612-01				Sample ID: 1601010-07	
Metals ICP					
Calcium	280000		500	mg/kg dry	
Chromium	33		0.50	mg/kg dry	
Cobalt	3.3		2.0	mg/kg dry	
Copper	19		1.0	mg/kg dry	
Iron	14000		5.0	mg/kg dry	
Lead	330		0.81	mg/kg dry	
Magnesium	2500		50	mg/kg dry	
Manganese	180		0.50	mg/kg dry	
Nickel	9.4		2.0	mg/kg dry	
Potassium	360		50	mg/kg dry	
Selenium	---	U	2.0	mg/kg dry	
Silver	---	U	0.50	mg/kg dry	
Sodium	430		100	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	24		2.0	mg/kg dry	
Zinc	33		2.0	mg/kg dry	
Field ID: BRC001-GB001-0001-01				Sample ID: 1601010-08	
Metals ICP					
Aluminum	4600		8.4	mg/kg dry	
Antimony	8.9		1.7	mg/kg dry	
Arsenic	12		0.67	mg/kg dry	
Barium	27		8.4	mg/kg dry	
Beryllium	0.48		0.25	mg/kg dry	
Cadmium	0.47		0.25	mg/kg dry	
Calcium	270000		420	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB001-0001-01				Sample ID: 1601010-08	
Metals ICP					
Chromium	25		0.42	mg/kg dry	
Cobalt	1.9		1.7	mg/kg dry	
Copper	15		0.84	mg/kg dry	
Iron	12000		4.2	mg/kg dry	
Lead	330		0.67	mg/kg dry	
Magnesium	2200		42	mg/kg dry	
Manganese	120		0.42	mg/kg dry	
Nickel	7.1		1.7	mg/kg dry	
Potassium	650		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	130		84	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	20		1.7	mg/kg dry	
Zinc	30		1.7	mg/kg dry	
Field ID: BRC001-GB001-0001-02				Sample ID: 1601010-09	
Metals ICP					
Aluminum	3900		8.5	mg/kg dry	
Antimony	3.3		1.7	mg/kg dry	
Arsenic	11		0.68	mg/kg dry	
Barium	26		8.5	mg/kg dry	
Beryllium	0.46		0.26	mg/kg dry	
Cadmium	0.48		0.26	mg/kg dry	
Calcium	270000		430	mg/kg dry	
Chromium	22		0.43	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB001-0001-02				Sample ID: 1601010-09	
Metals ICP					
Cobalt	1.9		1.7	mg/kg dry	
Copper	14		0.85	mg/kg dry	
Iron	11000		4.3	mg/kg dry	
Lead	300		0.68	mg/kg dry	
Magnesium	2100		43	mg/kg dry	
Manganese	110		0.43	mg/kg dry	
Nickel	6.5		1.7	mg/kg dry	
Potassium	620		43	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	130		85	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	17		1.7	mg/kg dry	
Zinc	29		1.7	mg/kg dry	
Field ID: BRC001-GB002-0001-01				Sample ID: 1601010-10	
Metals ICP					
Aluminum	2200		8.6	mg/kg dry	
Antimony	20		1.7	mg/kg dry	
Arsenic	8.3		0.69	mg/kg dry	
Barium	14		8.6	mg/kg dry	
Beryllium	0.43		0.26	mg/kg dry	
Cadmium	0.58		0.26	mg/kg dry	
Calcium	320000		430	mg/kg dry	
Chromium	20		0.43	mg/kg dry	
Cobalt	---	U	1.7	mg/kg dry	
Copper	9.8		0.86	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB002-0001-01				Sample ID: 1601010-10	
Metals ICP					
Iron	5700		4.3	mg/kg dry	
Lead	540		0.69	mg/kg dry	
Magnesium	2000		43	mg/kg dry	
Manganese	80		0.43	mg/kg dry	
Nickel	5.0		1.7	mg/kg dry	
Potassium	260		43	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	98		86	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	17		1.7	mg/kg dry	
Zinc	15		1.7	mg/kg dry	
Field ID: BRC001-GB003-0612-01				Sample ID: 1601010-11	
Metals ICP					
Aluminum	9400		8.8	mg/kg dry	
Antimony	21		1.8	mg/kg dry	
Arsenic	14		0.70	mg/kg dry	
Barium	37		8.8	mg/kg dry	
Beryllium	0.59		0.26	mg/kg dry	
Cadmium	2.3		0.26	mg/kg dry	
Calcium	190000		440	mg/kg dry	
Chromium	24		0.44	mg/kg dry	
Cobalt	6.3		1.8	mg/kg dry	
Copper	46		0.88	mg/kg dry	
Iron	17000		4.4	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB003-0612-01				Sample ID: 1601010-11	
Metals ICP					
Lead	1700		0.70	mg/kg dry	
Magnesium	4300		44	mg/kg dry	
Manganese	300		0.44	mg/kg dry	
Nickel	12		1.8	mg/kg dry	
Potassium	290		44	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.44	mg/kg dry	
Sodium	340		88	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	64		1.8	mg/kg dry	
Zinc	60		1.8	mg/kg dry	
Field ID: BRC001-GB004-0001-01				Sample ID: 1601010-12	
Metals ICP					
Aluminum	18000		7.7	mg/kg dry	
Antimony	30		1.5	mg/kg dry	
Arsenic	15		0.62	mg/kg dry	
Barium	29		7.7	mg/kg dry	
Beryllium	0.54		0.23	mg/kg dry	
Cadmium	5.0		0.23	mg/kg dry	
Calcium	35000		39	mg/kg dry	
Chromium	11		0.39	mg/kg dry	
Cobalt	12		1.5	mg/kg dry	
Copper	91		0.77	mg/kg dry	
Iron	25000		3.9	mg/kg dry	
Lead	1200		0.62	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB004-0001-01				Sample ID: 1601010-12	
Metals ICP					
Magnesium	8700		39	mg/kg dry	
Manganese	480		0.39	mg/kg dry	
Nickel	16		1.5	mg/kg dry	
Potassium	250		39	mg/kg dry	
Selenium	---	U	1.5	mg/kg dry	
Silver	---	U	0.39	mg/kg dry	
Sodium	510		77	mg/kg dry	
Thallium	---	U	1.5	mg/kg dry	
Vanadium	110		1.5	mg/kg dry	
Zinc	65		1.5	mg/kg dry	
Field ID: BRC001-GB004-0612-01				Sample ID: 1601010-13	
Metals ICP					
Aluminum	14000		8.5	mg/kg dry	
Antimony	3.2		1.7	mg/kg dry	
Arsenic	3.8		0.68	mg/kg dry	
Barium	17		8.5	mg/kg dry	
Beryllium	0.50		0.25	mg/kg dry	
Cadmium	0.88		0.25	mg/kg dry	
Calcium	79000		420	mg/kg dry	
Chromium	14		0.42	mg/kg dry	
Cobalt	9.4		1.7	mg/kg dry	
Copper	62		0.85	mg/kg dry	
Iron	22000		4.2	mg/kg dry	
Lead	240		0.68	mg/kg dry	
Magnesium	7100		42	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB004-0612-01				Sample ID: 1601010-13	
Metals ICP					
Manganese	390		0.42	mg/kg dry	
Nickel	9.1		1.7	mg/kg dry	
Potassium	220		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	280		85	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	91		1.7	mg/kg dry	
Zinc	41		1.7	mg/kg dry	
Field ID: BRC001-GB005-0001-01				Sample ID: 1601010-14	
Metals ICP					
Aluminum	18000		7.8	mg/kg dry	
Antimony	100		1.6	mg/kg dry	
Arsenic	38		0.62	mg/kg dry	
Barium	55		7.8	mg/kg dry	
Beryllium	0.57		0.23	mg/kg dry	
Cadmium	25		0.23	mg/kg dry	
Calcium	40000		39	mg/kg dry	
Chromium	14		0.39	mg/kg dry	
Cobalt	13		1.6	mg/kg dry	
Copper	95		0.78	mg/kg dry	
Iron	29000		3.9	mg/kg dry	
Lead	8100		3.1	mg/kg dry	
Magnesium	9900		39	mg/kg dry	
Manganese	540		0.39	mg/kg dry	

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Field ID: BRC001-GB005-0001-01				Sample ID: 1601010-14	
Metals ICP					
Nickel	30		1.6	mg/kg dry	
Potassium	240		39	mg/kg dry	
Selenium	2.9		1.6	mg/kg dry	
Silver	---	U	0.39	mg/kg dry	
Sodium	510		78	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	120		1.6	mg/kg dry	
Zinc	130		1.6	mg/kg dry	
Field ID: BRC001-GB005-0612-01				Sample ID: 1601010-15	
Metals ICP					
Aluminum	15000		9.5	mg/kg dry	
Antimony	5.0		1.9	mg/kg dry	
Arsenic	8.5		0.76	mg/kg dry	
Barium	92		9.5	mg/kg dry	
Beryllium	0.87		0.29	mg/kg dry	
Cadmium	0.91		0.29	mg/kg dry	
Calcium	73000		48	mg/kg dry	
Chromium	150		0.48	mg/kg dry	
Cobalt	12		1.9	mg/kg dry	
Copper	120		0.95	mg/kg dry	
Iron	27000		4.8	mg/kg dry	
Lead	230		0.76	mg/kg dry	
Magnesium	4200		48	mg/kg dry	
Manganese	420		0.48	mg/kg dry	
Nickel	24		1.9	mg/kg dry	

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Field ID: BRC001-GB005-0612-01				Sample ID: 1601010-15	
Metals ICP					
Potassium	400		48	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.48	mg/kg dry	
Sodium	840		95	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	130		1.9	mg/kg dry	
Zinc	230		1.9	mg/kg dry	
Field ID: BRC001-GB006-0001-01				Sample ID: 1601010-16	
Metals ICP					
Aluminum	4300		8.3	mg/kg dry	
Antimony	14		1.7	mg/kg dry	
Arsenic	19		0.67	mg/kg dry	
Barium	24		8.3	mg/kg dry	
Beryllium	0.53		0.25	mg/kg dry	
Cadmium	0.61		0.25	mg/kg dry	
Calcium	260000		420	mg/kg dry	
Chromium	30		0.42	mg/kg dry	
Cobalt	2.8		1.7	mg/kg dry	
Copper	27		0.83	mg/kg dry	
Iron	12000		4.2	mg/kg dry	
Lead	580		0.67	mg/kg dry	
Magnesium	2400		42	mg/kg dry	
Manganese	210		0.42	mg/kg dry	
Nickel	9.2		1.7	mg/kg dry	
Potassium	470		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	

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Field ID: BRC001-GB006-0001-01				Sample ID: 1601010-16	
Metals ICP					
Silver	---	U	0.42	mg/kg dry	
Sodium	91		83	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	37		1.7	mg/kg dry	
Zinc	33		1.7	mg/kg dry	
Field ID: BRC001-GB007-0106-01				Sample ID: 1601010-17	
Metals ICP					
Aluminum	10000		8.4	mg/kg dry	
Antimony	---	U	1.7	mg/kg dry	
Arsenic	5.2		0.67	mg/kg dry	
Barium	26		8.4	mg/kg dry	
Beryllium	0.54		0.25	mg/kg dry	
Cadmium	0.27		0.25	mg/kg dry	
Calcium	170000		420	mg/kg dry	
Chromium	21		0.42	mg/kg dry	
Cobalt	7.3		1.7	mg/kg dry	
Copper	44		0.84	mg/kg dry	
Iron	18000		4.2	mg/kg dry	
Lead	120		0.67	mg/kg dry	
Magnesium	5300		42	mg/kg dry	
Manganese	290		0.42	mg/kg dry	
Nickel	13		1.7	mg/kg dry	
Potassium	270		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	270		84	mg/kg dry	

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Field ID: BRC001-GB007-0106-01				Sample ID: 1601010-17	
Metals ICP					
Thallium	---	U	1.7	mg/kg dry	
Vanadium	63		1.7	mg/kg dry	
Zinc	31		1.7	mg/kg dry	
Field ID: BRC001-GB008-0001-01				Sample ID: 1601010-18	
Metals ICP					
Aluminum	13000		7.8	mg/kg dry	
Antimony	24		1.6	mg/kg dry	
Arsenic	7.2		0.62	mg/kg dry	
Barium	16		7.8	mg/kg dry	
Beryllium	0.52		0.23	mg/kg dry	
Cadmium	0.50		0.23	mg/kg dry	
Calcium	99000		390	mg/kg dry	
Chromium	15		0.39	mg/kg dry	
Cobalt	8.5		1.6	mg/kg dry	
Copper	70		0.78	mg/kg dry	
Iron	22000		3.9	mg/kg dry	
Lead	230		0.62	mg/kg dry	
Magnesium	6400		39	mg/kg dry	
Manganese	420		0.39	mg/kg dry	
Nickel	11		1.6	mg/kg dry	
Potassium	330		39	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.39	mg/kg dry	
Sodium	230		78	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	93		1.6	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB008-0001-01				Sample ID: 1601010-18	
Metals ICP					
Zinc	38		1.6	mg/kg dry	
Field ID: BRC001-GB010-0106-01				Sample ID: 1601010-19	
Metals ICP					
Aluminum	9700		8.5	mg/kg dry	
Antimony	6.6		1.7	mg/kg dry	
Arsenic	9.8		0.68	mg/kg dry	
Barium	33		8.5	mg/kg dry	
Beryllium	0.61		0.25	mg/kg dry	
Cadmium	1.3		0.25	mg/kg dry	
Calcium	160000		420	mg/kg dry	
Chromium	22		0.42	mg/kg dry	
Cobalt	7.6		1.7	mg/kg dry	
Copper	62		0.85	mg/kg dry	
Iron	17000		4.2	mg/kg dry	
Lead	770		0.68	mg/kg dry	
Magnesium	5100		42	mg/kg dry	
Manganese	360		0.42	mg/kg dry	
Nickel	11		1.7	mg/kg dry	
Potassium	300		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	290		85	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	77		1.7	mg/kg dry	
Zinc	47		1.7	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB011-0001-01				Sample ID: 1601010-20	
Metals ICP					
Aluminum	9900		7.9	mg/kg dry	
Antimony	56		1.6	mg/kg dry	
Arsenic	22		0.63	mg/kg dry	
Barium	20		7.9	mg/kg dry	
Beryllium	0.56		0.24	mg/kg dry	
Cadmium	0.46		0.24	mg/kg dry	
Calcium	150000		390	mg/kg dry	
Chromium	20		0.39	mg/kg dry	
Cobalt	7.5		1.6	mg/kg dry	
Copper	58		0.79	mg/kg dry	
Iron	17000		3.9	mg/kg dry	
Lead	2100		0.63	mg/kg dry	
Magnesium	5200		39	mg/kg dry	
Manganese	340		0.39	mg/kg dry	
Nickel	18		1.6	mg/kg dry	
Potassium	210		39	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.39	mg/kg dry	
Sodium	210		79	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	77		1.6	mg/kg dry	
Zinc	48		1.6	mg/kg dry	
Field ID: BRC001-GB012-0001-01				Sample ID: 1601010-21	
Metals ICP					
Aluminum	19000		8.3	mg/kg dry	

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Field ID: BRC001-GB012-0001-01				Sample ID: 1601010-21	
Metals ICP					
Antimony	16		1.7	mg/kg dry	
Arsenic	4.4		0.66	mg/kg dry	
Barium	33		8.3	mg/kg dry	
Beryllium	0.69		0.25	mg/kg dry	
Cadmium	1.5		0.25	mg/kg dry	
Calcium	35000		42	mg/kg dry	
Chromium	13		0.42	mg/kg dry	
Cobalt	13		1.7	mg/kg dry	
Copper	85		0.83	mg/kg dry	
Iron	28000	J	4.2	mg/kg dry	
Lead	830		0.66	mg/kg dry	
Magnesium	9500		42	mg/kg dry	
Manganese	540		0.42	mg/kg dry	
Nickel	15		1.7	mg/kg dry	
Potassium	670		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	360		83	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	140		1.7	mg/kg dry	
Zinc	93		1.7	mg/kg dry	
Field ID: BRC001-GB014-0106-01				Sample ID: 1601010-22	
Metals ICP					
Aluminum	10000		9.1	mg/kg dry	
Antimony	1.8		1.8	mg/kg dry	

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Field ID: BRC001-GB014-0106-01				Sample ID: 1601010-22	
Metals ICP					
Arsenic	9.6		0.73	mg/kg dry	
Barium	38		9.1	mg/kg dry	
Beryllium	0.63		0.27	mg/kg dry	
Cadmium	0.50		0.27	mg/kg dry	
Calcium	190000		450	mg/kg dry	
Chromium	40		0.45	mg/kg dry	
Cobalt	8.1		1.8	mg/kg dry	
Copper	79		0.91	mg/kg dry	
Iron	23000		4.5	mg/kg dry	
Lead	86		0.73	mg/kg dry	
Magnesium	4000		45	mg/kg dry	
Manganese	380		0.45	mg/kg dry	
Nickel	17		1.8	mg/kg dry	
Potassium	180		45	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	280		91	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	81		1.8	mg/kg dry	
Zinc	120		1.8	mg/kg dry	
Field ID: BRC001-GB014-0612-01				Sample ID: 1601010-23	
Metals ICP					
Aluminum	6700		8.3	mg/kg dry	
Antimony	---	U	1.7	mg/kg dry	
Arsenic	9.5		0.67	mg/kg dry	
Barium	11		8.3	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB014-0612-01				Sample ID: 1601010-23	
Metals ICP					
Beryllium	0.55		0.25	mg/kg dry	
Cadmium	0.25		0.25	mg/kg dry	
Calcium	250000		420	mg/kg dry	
Chromium	23		0.42	mg/kg dry	
Cobalt	4.6		1.7	mg/kg dry	
Copper	29		0.83	mg/kg dry	
Iron	12000		4.2	mg/kg dry	
Lead	51		0.67	mg/kg dry	
Magnesium	3500		42	mg/kg dry	
Manganese	260		0.42	mg/kg dry	
Nickel	6.7		1.7	mg/kg dry	
Potassium	130		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	170		83	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	56		1.7	mg/kg dry	
Zinc	27		1.7	mg/kg dry	
Field ID: BRC001-GB015-0001-01				Sample ID: 1601010-24	
Metals ICP					
Aluminum	14000		8.0	mg/kg dry	
Antimony	18		1.6	mg/kg dry	
Arsenic	4.5		0.64	mg/kg dry	
Barium	18		8.0	mg/kg dry	
Beryllium	0.52		0.24	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB015-0001-01				Sample ID: 1601010-24	
Metals ICP					
Cadmium	2.0		0.24	mg/kg dry	
Calcium	79000		200	mg/kg dry	
Chromium	8.9		0.40	mg/kg dry	
Cobalt	8.8		1.6	mg/kg dry	
Copper	63		0.80	mg/kg dry	
Iron	20000		4.0	mg/kg dry	
Lead	900		0.64	mg/kg dry	
Magnesium	6700		40	mg/kg dry	
Manganese	390		0.40	mg/kg dry	
Nickel	9.7		1.6	mg/kg dry	
Potassium	250		40	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.40	mg/kg dry	
Sodium	250		80	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	97		1.6	mg/kg dry	
Zinc	40		1.6	mg/kg dry	
Field ID: BRC001-GB016-0106-01				Sample ID: 1601010-25	
Metals ICP					
Aluminum	7200		9.1	mg/kg dry	
Antimony	4.1		1.8	mg/kg dry	
Arsenic	12		0.72	mg/kg dry	
Barium	48		9.1	mg/kg dry	
Beryllium	0.59		0.27	mg/kg dry	
Cadmium	0.54		0.27	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB016-0106-01				Sample ID: 1601010-25	
Metals ICP					
Calcium	190000		450	mg/kg dry	
Chromium	38		0.45	mg/kg dry	
Cobalt	5.4		1.8	mg/kg dry	
Copper	52		0.91	mg/kg dry	
Iron	15000		4.5	mg/kg dry	
Lead	490		0.72	mg/kg dry	
Magnesium	2600		45	mg/kg dry	
Manganese	320		0.45	mg/kg dry	
Nickel	12		1.8	mg/kg dry	
Potassium	740		45	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	100		91	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	55		1.8	mg/kg dry	
Zinc	100		1.8	mg/kg dry	
Field ID: BRC001-GB017-0001-01				Sample ID: 1601010-26	
Metals ICP					
Aluminum	17000		7.8	mg/kg dry	
Antimony	16		1.6	mg/kg dry	
Arsenic	5.4		0.63	mg/kg dry	
Barium	32		7.8	mg/kg dry	
Beryllium	0.69		0.23	mg/kg dry	
Cadmium	1.9		0.23	mg/kg dry	
Calcium	61000		39	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB017-0001-01				Sample ID: 1601010-26	
Metals ICP					
Chromium	16		0.39	mg/kg dry	
Cobalt	10		1.6	mg/kg dry	
Copper	70		0.78	mg/kg dry	
Iron	24000		3.9	mg/kg dry	
Lead	1300		0.63	mg/kg dry	
Magnesium	8500		39	mg/kg dry	
Manganese	460		0.39	mg/kg dry	
Nickel	18		1.6	mg/kg dry	
Potassium	350		39	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.39	mg/kg dry	
Sodium	430		78	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	130		1.6	mg/kg dry	
Zinc	55		1.6	mg/kg dry	
Field ID: BRC001-GB017-0612-01				Sample ID: 1601010-27	
Metals ICP					
Aluminum	6900		8.1	mg/kg dry	
Antimony	3.0		1.6	mg/kg dry	
Arsenic	12		0.65	mg/kg dry	
Barium	17		8.1	mg/kg dry	
Beryllium	0.58		0.24	mg/kg dry	
Cadmium	0.34		0.24	mg/kg dry	
Calcium	210000		410	mg/kg dry	
Chromium	21		0.41	mg/kg dry	

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Field ID: BRC001-GB017-0612-01				Sample ID: 1601010-27	
Metals ICP					
Cobalt	5.2		1.6	mg/kg dry	
Copper	33		0.81	mg/kg dry	
Iron	12000		4.1	mg/kg dry	
Lead	320		0.65	mg/kg dry	
Magnesium	4100		41	mg/kg dry	
Manganese	270		0.41	mg/kg dry	
Nickel	8.9		1.6	mg/kg dry	
Potassium	210		41	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.41	mg/kg dry	
Sodium	160		81	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	64		1.6	mg/kg dry	
Zinc	22		1.6	mg/kg dry	
Field ID: BRC001-GB018-0106-01				Sample ID: 1601010-28	
Metals ICP					
Aluminum	14000		8.0	mg/kg dry	
Antimony	33		1.6	mg/kg dry	
Arsenic	7.0		0.64	mg/kg dry	
Barium	43		8.0	mg/kg dry	
Beryllium	0.62		0.24	mg/kg dry	
Cadmium	2.1		0.24	mg/kg dry	
Calcium	47000		40	mg/kg dry	
Chromium	56		0.40	mg/kg dry	
Cobalt	13		1.6	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB018-0106-01				Sample ID: 1601010-28	
Metals ICP					
Copper	68		0.80	mg/kg dry	
Iron	24000		4.0	mg/kg dry	
Lead	1800		0.64	mg/kg dry	
Magnesium	15000		40	mg/kg dry	
Manganese	450		0.40	mg/kg dry	
Nickel	84		1.6	mg/kg dry	
Potassium	300		40	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.40	mg/kg dry	
Sodium	350		80	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	110		1.6	mg/kg dry	
Zinc	53		1.6	mg/kg dry	
Field ID: BRC001-GB019-0001-01				Sample ID: 1601010-29	
Metals ICP					
Aluminum	5900		8.6	mg/kg dry	
Antimony	14		1.7	mg/kg dry	
Arsenic	62		0.69	mg/kg dry	
Barium	13		8.6	mg/kg dry	
Beryllium	0.54		0.26	mg/kg dry	
Cadmium	0.50		0.26	mg/kg dry	
Calcium	260000		430	mg/kg dry	
Chromium	28		0.43	mg/kg dry	
Cobalt	4.2		1.7	mg/kg dry	
Copper	49		0.86	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB019-0001-01				Sample ID: 1601010-29	
Metals ICP					
Iron	13000		4.3	mg/kg dry	
Lead	400		0.69	mg/kg dry	
Magnesium	3000		43	mg/kg dry	
Manganese	220		0.43	mg/kg dry	
Nickel	7.9		1.7	mg/kg dry	
Potassium	200		43	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	150		86	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	52		1.7	mg/kg dry	
Zinc	28		1.7	mg/kg dry	
Field ID: BRC001-GB020-0001-01				Sample ID: 1601010-30	
Metals ICP					
Aluminum	19000		8.1	mg/kg dry	
Antimony	45		1.6	mg/kg dry	
Arsenic	14		0.65	mg/kg dry	
Barium	47		8.1	mg/kg dry	
Beryllium	0.35		0.24	mg/kg dry	
Cadmium	6.8		0.24	mg/kg dry	
Calcium	33000		41	mg/kg dry	
Chromium	43		0.41	mg/kg dry	
Cobalt	17		1.6	mg/kg dry	
Copper	250		0.81	mg/kg dry	
Iron	120000		41	mg/kg dry	

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Field ID: BRC001-GB020-0001-01				Sample ID: 1601010-30	
Metals ICP					
Lead	2600		0.65	mg/kg dry	
Magnesium	9500		41	mg/kg dry	
Manganese	1200		0.41	mg/kg dry	
Nickel	70		1.6	mg/kg dry	
Potassium	270		41	mg/kg dry	
Selenium	2.3		1.6	mg/kg dry	
Silver	0.48		0.41	mg/kg dry	
Sodium	420		81	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	130		1.6	mg/kg dry	
Zinc	130		1.6	mg/kg dry	
Field ID: BRC001-GB020-1218-01				Sample ID: 1601010-31	
Metals ICP					
Aluminum	6600		8.7	mg/kg dry	
Antimony	1.7		1.7	mg/kg dry	
Arsenic	11		0.70	mg/kg dry	
Barium	41		8.7	mg/kg dry	
Beryllium	0.67		0.26	mg/kg dry	
Cadmium	0.36		0.26	mg/kg dry	
Calcium	240000		440	mg/kg dry	
Chromium	48		0.44	mg/kg dry	
Cobalt	5.5		1.7	mg/kg dry	
Copper	75		0.87	mg/kg dry	
Iron	19000		4.4	mg/kg dry	
Lead	130		0.70	mg/kg dry	

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Field ID: BRC001-GB020-1218-01				Sample ID: 1601010-31	
Metals ICP					
Magnesium	2600		44	mg/kg dry	
Manganese	350		0.44	mg/kg dry	
Nickel	14		1.7	mg/kg dry	
Potassium	230		44	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.44	mg/kg dry	
Sodium	150		87	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	63		1.7	mg/kg dry	
Zinc	67		1.7	mg/kg dry	
Field ID: BRC001-GB022-0612-01				Sample ID: 1601010-32	
Metals ICP					
Aluminum	4800		8.4	mg/kg dry	
Antimony	2.7		1.7	mg/kg dry	
Arsenic	15		0.68	mg/kg dry	
Barium	9.9		8.4	mg/kg dry	
Beryllium	0.55		0.25	mg/kg dry	
Cadmium	---	U	0.25	mg/kg dry	
Calcium	300000		420	mg/kg dry	
Chromium	26		0.42	mg/kg dry	
Cobalt	3.4		1.7	mg/kg dry	
Copper	28		0.84	mg/kg dry	
Iron	10000		4.2	mg/kg dry	
Lead	150		0.68	mg/kg dry	
Magnesium	3300		42	mg/kg dry	
Manganese	230		0.42	mg/kg dry	

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Field ID: BRC001-GB022-0612-01				Sample ID: 1601010-32	
Metals ICP					
Nickel	7.4		1.7	mg/kg dry	
Potassium	160		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	86		84	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	45		1.7	mg/kg dry	
Zinc	20		1.7	mg/kg dry	
Field ID: BRC001-GB023-0001-01				Sample ID: 1601010-33	
Metals ICP					
Aluminum	8500		8.7	mg/kg dry	
Antimony	21		1.7	mg/kg dry	
Arsenic	12		0.70	mg/kg dry	
Barium	52		8.7	mg/kg dry	
Beryllium	0.54		0.26	mg/kg dry	
Cadmium	3.4		0.26	mg/kg dry	
Calcium	220000		440	mg/kg dry	
Chromium	40		0.44	mg/kg dry	
Cobalt	4.3		1.7	mg/kg dry	
Copper	36		0.87	mg/kg dry	
Iron	15000		4.4	mg/kg dry	
Lead	2000		0.70	mg/kg dry	
Magnesium	3200		44	mg/kg dry	
Manganese	200		0.44	mg/kg dry	
Nickel	13		1.7	mg/kg dry	

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Field ID: BRC001-GB023-0001-01				Sample ID: 1601010-33	
Metals ICP					
Potassium	950		44	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.44	mg/kg dry	
Sodium	150		87	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	38		1.7	mg/kg dry	
Zinc	64		1.7	mg/kg dry	
Field ID: BRC001-GB024-0106-01				Sample ID: 1601010-34	
Metals ICP					
Aluminum	9800		8.3	mg/kg dry	
Antimony	4.1		1.7	mg/kg dry	
Arsenic	3.7		0.67	mg/kg dry	
Barium	29		8.3	mg/kg dry	
Beryllium	0.62		0.25	mg/kg dry	
Cadmium	0.40		0.25	mg/kg dry	
Calcium	160000		420	mg/kg dry	
Chromium	15		0.42	mg/kg dry	
Cobalt	8.6		1.7	mg/kg dry	
Copper	54		0.83	mg/kg dry	
Iron	15000		4.2	mg/kg dry	
Lead	480		0.67	mg/kg dry	
Magnesium	5700		42	mg/kg dry	
Manganese	340		0.42	mg/kg dry	
Nickel	17		1.7	mg/kg dry	
Potassium	260		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB024-0106-01				Sample ID: 1601010-34	
Metals ICP					
Silver	---	U	0.42	mg/kg dry	
Sodium	160		83	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	82		1.7	mg/kg dry	
Zinc	37		1.7	mg/kg dry	
Field ID: BRC001-GB025-0612-01				Sample ID: 1601010-35	
Metals ICP					
Aluminum	6200		8.8	mg/kg dry	
Antimony	9.2		1.8	mg/kg dry	
Arsenic	11		0.71	mg/kg dry	
Barium	28		8.8	mg/kg dry	
Beryllium	0.56		0.27	mg/kg dry	
Cadmium	0.88		0.27	mg/kg dry	
Calcium	230000		440	mg/kg dry	
Chromium	39		0.44	mg/kg dry	
Cobalt	5.1		1.8	mg/kg dry	
Copper	46		0.88	mg/kg dry	
Iron	15000		4.4	mg/kg dry	
Lead	1700		0.71	mg/kg dry	
Magnesium	3900		44	mg/kg dry	
Manganese	230		0.44	mg/kg dry	
Nickel	18		1.8	mg/kg dry	
Potassium	240		44	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.44	mg/kg dry	
Sodium	150		88	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB025-0612-01				Sample ID: 1601010-35	
Metals ICP					
Thallium	---	U	1.8	mg/kg dry	
Vanadium	58		1.8	mg/kg dry	
Zinc	71		1.8	mg/kg dry	
Field ID: BRC001-GB025-1218-01				Sample ID: 1601010-36	
Metals ICP					
Aluminum	1900		8.6	mg/kg dry	
Antimony	---	U	1.7	mg/kg dry	
Arsenic	11		0.69	mg/kg dry	
Barium	---	U	8.6	mg/kg dry	
Beryllium	0.46		0.26	mg/kg dry	
Cadmium	---	U	0.26	mg/kg dry	
Calcium	330000		430	mg/kg dry	
Chromium	21		0.43	mg/kg dry	
Cobalt	---	U	1.7	mg/kg dry	
Copper	11		0.86	mg/kg dry	
Iron	5700		4.3	mg/kg dry	
Lead	39		0.69	mg/kg dry	
Magnesium	1800		43	mg/kg dry	
Manganese	140		0.43	mg/kg dry	
Nickel	4.8		1.7	mg/kg dry	
Potassium	58		43	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	---	U	86	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	24		1.7	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB025-1218-01				Sample ID: 1601010-36	
Metals ICP					
Zinc	7.8		1.7	mg/kg dry	
Field ID: BRC001-GB026-0001-01				Sample ID: 1601010-37	
Metals ICP					
Aluminum	18000		7.9	mg/kg dry	
Antimony	16		1.6	mg/kg dry	
Arsenic	3.2		0.63	mg/kg dry	
Barium	19		7.9	mg/kg dry	
Beryllium	0.55		0.24	mg/kg dry	
Cadmium	0.98		0.24	mg/kg dry	
Calcium	36000		39	mg/kg dry	
Chromium	12		0.39	mg/kg dry	
Cobalt	12		1.6	mg/kg dry	
Copper	90		0.79	mg/kg dry	
Iron	25000		3.9	mg/kg dry	
Lead	600		0.63	mg/kg dry	
Magnesium	9300		39	mg/kg dry	
Manganese	490		0.39	mg/kg dry	
Nickel	14		1.6	mg/kg dry	
Potassium	200		39	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.39	mg/kg dry	
Sodium	370		79	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Tin	4.9		0.79	mg/kg dry	
Vanadium	120		1.6	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB026-0001-01				Sample ID: 1601010-37	
Metals ICP					
Zinc	47		1.6	mg/kg dry	
Field ID: BRC001-GB027-0001-01				Sample ID: 1601010-38	
Metals ICP					
Aluminum	20000		8.0	mg/kg dry	
Antimony	8.6		1.6	mg/kg dry	
Arsenic	3.7		0.64	mg/kg dry	
Barium	22		8.0	mg/kg dry	
Beryllium	0.63		0.24	mg/kg dry	
Cadmium	1.1		0.24	mg/kg dry	
Calcium	26000		40	mg/kg dry	
Chromium	22		0.40	mg/kg dry	
Cobalt	13		1.6	mg/kg dry	
Copper	100		0.80	mg/kg dry	
Iron	29000		4.0	mg/kg dry	
Lead	430		0.64	mg/kg dry	
Magnesium	9900		40	mg/kg dry	
Manganese	550		0.40	mg/kg dry	
Nickel	28		1.6	mg/kg dry	
Potassium	280		40	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.40	mg/kg dry	
Sodium	500		80	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	140		1.6	mg/kg dry	
Zinc	53		1.6	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB027-0612-01				Sample ID: 1601010-39	
Metals ICP					
Aluminum	11000		8.2	mg/kg dry	
Antimony	---	U	1.6	mg/kg dry	
Arsenic	7.2		0.65	mg/kg dry	
Barium	12		8.2	mg/kg dry	
Beryllium	0.59		0.24	mg/kg dry	
Cadmium	0.31		0.24	mg/kg dry	
Calcium	210000		410	mg/kg dry	
Chromium	19		0.41	mg/kg dry	
Cobalt	8.1		1.6	mg/kg dry	
Copper	46		0.82	mg/kg dry	
Iron	16000		4.1	mg/kg dry	
Lead	77		0.65	mg/kg dry	
Magnesium	5300		41	mg/kg dry	
Manganese	330		0.41	mg/kg dry	
Nickel	8.9		1.6	mg/kg dry	
Potassium	140		41	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.41	mg/kg dry	
Sodium	320		82	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	77		1.6	mg/kg dry	
Zinc	29		1.6	mg/kg dry	
Field ID: BRC001-GB029-0612-01				Sample ID: 1601010-40	
Metals ICP					
Aluminum	9700		8.2	mg/kg dry	
Antimony	---	U	1.6	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB029-0612-01				Sample ID: 1601010-40	
Metals ICP					
Arsenic	12		0.65	mg/kg dry	
Barium	12		8.2	mg/kg dry	
Beryllium	0.60		0.25	mg/kg dry	
Cadmium	0.25		0.25	mg/kg dry	
Calcium	250000		410	mg/kg dry	
Chromium	22		0.41	mg/kg dry	
Cobalt	6.7		1.6	mg/kg dry	
Copper	45		0.82	mg/kg dry	
Iron	15000		4.1	mg/kg dry	
Lead	59		0.65	mg/kg dry	
Magnesium	4800		41	mg/kg dry	
Manganese	350		0.41	mg/kg dry	
Nickel	7.6		1.6	mg/kg dry	
Potassium	250		41	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.41	mg/kg dry	
Sodium	290		82	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	70		1.6	mg/kg dry	
Zinc	27		1.6	mg/kg dry	
Field ID: BRC001-GB030-0001-01				Sample ID: 1601010-41	
Metals ICP					
Aluminum	26000		8.0	mg/kg dry	
Antimony	84		1.6	mg/kg dry	
Arsenic	18		0.64	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB030-0001-01				Sample ID: 1601010-41	
Metals ICP					
Barium	50		8.0	mg/kg dry	
Beryllium	0.73		0.24	mg/kg dry	
Cadmium	19		0.24	mg/kg dry	
Calcium	49000		40	mg/kg dry	
Chromium	21		0.40	mg/kg dry	
Cobalt	15		1.6	mg/kg dry	
Copper	140		0.80	mg/kg dry	
Iron	43000		20	mg/kg dry	
Lead	7500		3.2	mg/kg dry	
Magnesium	12000		40	mg/kg dry	
Manganese	690		0.40	mg/kg dry	
Nickel	22		1.6	mg/kg dry	
Potassium	400		40	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	0.41		0.40	mg/kg dry	
Sodium	580		80	mg/kg dry	
Thallium	---	U L	1.6	mg/kg dry	
Vanadium	150		1.6	mg/kg dry	
Zinc	95	J	1.6	mg/kg dry	
Field ID: BRC001-GB030-0612-01				Sample ID: 1601010-42	
Metals ICP					
Aluminum	12000		8.7	mg/kg dry	
Antimony	10		1.7	mg/kg dry	
Arsenic	11		0.69	mg/kg dry	
Barium	22		8.7	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB030-0612-01				Sample ID: 1601010-42	
Metals ICP					
Beryllium	0.61		0.26	mg/kg dry	
Cadmium	2.1		0.26	mg/kg dry	
Calcium	190000		430	mg/kg dry	
Chromium	26		0.43	mg/kg dry	
Cobalt	7.7		1.7	mg/kg dry	
Copper	63		0.87	mg/kg dry	
Iron	17000		4.3	mg/kg dry	
Lead	830		0.69	mg/kg dry	
Magnesium	4800		43	mg/kg dry	
Manganese	320		0.43	mg/kg dry	
Nickel	11		1.7	mg/kg dry	
Potassium	270		43	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	940		87	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Tin	7.6		0.87	mg/kg dry	
Vanadium	79		1.7	mg/kg dry	
Zinc	53		1.7	mg/kg dry	
Field ID: BRC001-GB030-1824-01				Sample ID: 1601010-43	
Metals ICP					
Aluminum	1500		8.3	mg/kg dry	
Antimony	---	U	1.7	mg/kg dry	
Arsenic	3.2		0.66	mg/kg dry	
Barium	---	U	8.3	mg/kg dry	
Beryllium	0.40		0.25	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB030-1824-01				Sample ID: 1601010-43	
Metals ICP					
Cadmium	---	U	0.25	mg/kg dry	
Calcium	350000		410	mg/kg dry	
Chromium	14		0.41	mg/kg dry	
Cobalt	---	U	1.7	mg/kg dry	
Copper	6.1		0.83	mg/kg dry	
Iron	2400		4.1	mg/kg dry	
Lead	10		0.66	mg/kg dry	
Magnesium	2000		41	mg/kg dry	
Manganese	66		0.41	mg/kg dry	
Nickel	3.7		1.7	mg/kg dry	
Potassium	74		41	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.41	mg/kg dry	
Sodium	---	U	83	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	13		1.7	mg/kg dry	
Zinc	5.1		1.7	mg/kg dry	
Field ID: BRC001-GB031-0001-01				Sample ID: 1601010-44	
Metals ICP					
Aluminum	4800		8.9	mg/kg dry	
Antimony	33		1.8	mg/kg dry	
Arsenic	22		0.71	mg/kg dry	
Barium	28		8.9	mg/kg dry	
Beryllium	0.53		0.27	mg/kg dry	
Cadmium	1.6		0.27	mg/kg dry	
Calcium	270000		440	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB031-0001-01				Sample ID: 1601010-44	
Metals ICP					
Chromium	33		0.44	mg/kg dry	
Cobalt	3.9		1.8	mg/kg dry	
Copper	44		0.89	mg/kg dry	
Iron	12000		4.4	mg/kg dry	
Lead	2600		0.71	mg/kg dry	
Magnesium	2400		44	mg/kg dry	
Manganese	220		0.44	mg/kg dry	
Nickel	12		1.8	mg/kg dry	
Potassium	440		44	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.44	mg/kg dry	
Sodium	100		89	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	47		1.8	mg/kg dry	
Zinc	76		1.8	mg/kg dry	
Field ID: BRC001-GB031-0612-01				Sample ID: 1601010-45	
Metals ICP					
Aluminum	3100		8.7	mg/kg dry	
Antimony	2.9		1.7	mg/kg dry	
Arsenic	18		0.70	mg/kg dry	
Barium	9.7		8.7	mg/kg dry	
Beryllium	0.52		0.26	mg/kg dry	
Cadmium	---	U	0.26	mg/kg dry	
Calcium	310000		430	mg/kg dry	
Chromium	26		0.43	mg/kg dry	
Cobalt	1.8		1.7	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB031-0612-01				Sample ID: 1601010-45	
Metals ICP					
Copper	21		0.87	mg/kg dry	
Iron	7900		4.3	mg/kg dry	
Lead	51		0.70	mg/kg dry	
Magnesium	2000		43	mg/kg dry	
Manganese	160		0.43	mg/kg dry	
Nickel	6.7		1.7	mg/kg dry	
Potassium	140		43	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	87		87	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	37		1.7	mg/kg dry	
Zinc	14		1.7	mg/kg dry	
Field ID: BRC001-GB032-0001-01				Sample ID: 1601010-46	
Metals ICP					
Aluminum	7400		8.2	mg/kg dry	
Antimony	20		1.6	mg/kg dry	
Arsenic	5.6		0.65	mg/kg dry	
Barium	36		8.2	mg/kg dry	
Beryllium	0.44		0.25	mg/kg dry	
Cadmium	1.3		0.25	mg/kg dry	
Calcium	23000		41	mg/kg dry	
Chromium	200		0.41	mg/kg dry	
Cobalt	31		1.6	mg/kg dry	
Copper	36		0.82	mg/kg dry	

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Field ID: BRC001-GB032-0001-01				Sample ID: 1601010-46	
Metals ICP					
Iron	22000		4.1	mg/kg dry	
Lead	1200		0.65	mg/kg dry	
Magnesium	51000		41	mg/kg dry	
Manganese	430		0.41	mg/kg dry	
Nickel	510		1.6	mg/kg dry	
Potassium	380		41	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.41	mg/kg dry	
Sodium	230		82	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	88		1.6	mg/kg dry	
Zinc	42		1.6	mg/kg dry	
Field ID: BRC001-GB032-0106-01				Sample ID: 1601010-47	
Metals ICP					
Aluminum	7200		8.2	mg/kg dry	
Antimony	18		1.6	mg/kg dry	
Arsenic	13		0.66	mg/kg dry	
Barium	40		8.2	mg/kg dry	
Beryllium	0.52		0.25	mg/kg dry	
Cadmium	1.2		0.25	mg/kg dry	
Calcium	130000		410	mg/kg dry	
Chromium	91		0.41	mg/kg dry	
Cobalt	13		1.6	mg/kg dry	
Copper	50		0.82	mg/kg dry	
Iron	17000		4.1	mg/kg dry	

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Field ID: BRC001-GB032-0106-01				Sample ID: 1601010-47	
Metals ICP					
Lead	1800		0.66	mg/kg dry	
Magnesium	19000		41	mg/kg dry	
Manganese	330		0.41	mg/kg dry	
Nickel	180		1.6	mg/kg dry	
Potassium	350		41	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.41	mg/kg dry	
Sodium	210		82	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	70		1.6	mg/kg dry	
Zinc	47		1.6	mg/kg dry	
Field ID: BRC001-GB032-1218-01				Sample ID: 1601010-48	
Metals ICP					
Aluminum	19000		9.3	mg/kg dry	
Antimony	---	U	1.9	mg/kg dry	
Arsenic	6.2		0.74	mg/kg dry	
Barium	110		9.3	mg/kg dry	
Beryllium	0.82		0.28	mg/kg dry	
Cadmium	0.54		0.28	mg/kg dry	
Calcium	120000		460	mg/kg dry	
Chromium	39		0.46	mg/kg dry	
Cobalt	13		1.9	mg/kg dry	
Copper	100		0.93	mg/kg dry	
Iron	25000		4.6	mg/kg dry	
Lead	19		0.74	mg/kg dry	
Magnesium	5100		46	mg/kg dry	

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Field ID: BRC001-GB032-1218-01				Sample ID: 1601010-48	
Metals ICP					
Manganese	810		0.46	mg/kg dry	
Nickel	19		1.9	mg/kg dry	
Potassium	640		46	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.46	mg/kg dry	
Sodium	330		93	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	100		1.9	mg/kg dry	
Zinc	75		1.9	mg/kg dry	
Field ID: BRC001-GB033-0001-01				Sample ID: 1601010-49	
Metals ICP					
Aluminum	7300		7.6	mg/kg dry	
Antimony	33		1.5	mg/kg dry	
Arsenic	8.1		0.61	mg/kg dry	
Barium	50		7.6	mg/kg dry	
Beryllium	0.49		0.23	mg/kg dry	
Cadmium	1.3		0.23	mg/kg dry	
Calcium	85000		380	mg/kg dry	
Chromium	78		0.38	mg/kg dry	
Cobalt	7.6		1.5	mg/kg dry	
Copper	62		0.76	mg/kg dry	
Iron	18000		3.8	mg/kg dry	
Lead	3100		0.61	mg/kg dry	
Magnesium	7100		38	mg/kg dry	
Manganese	340		0.38	mg/kg dry	

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Field ID: BRC001-GB033-0001-01				Sample ID: 1601010-49	
Metals ICP					
Nickel	61		1.5	mg/kg dry	
Potassium	370		38	mg/kg dry	
Selenium	---	U	1.5	mg/kg dry	
Silver	---	U	0.38	mg/kg dry	
Sodium	290		76	mg/kg dry	
Thallium	---	U	1.5	mg/kg dry	
Vanadium	89		1.5	mg/kg dry	
Zinc	44		1.5	mg/kg dry	
Field ID: BRC001-GB033-1218-01				Sample ID: 1601010-50	
Metals ICP					
Aluminum	1300		8.9	mg/kg dry	
Antimony	---	U	1.8	mg/kg dry	
Arsenic	3.2		0.71	mg/kg dry	
Barium	---	U	8.9	mg/kg dry	
Beryllium	0.40		0.27	mg/kg dry	
Cadmium	---	U	0.27	mg/kg dry	
Calcium	340000		450	mg/kg dry	
Chromium	17		0.45	mg/kg dry	
Cobalt	---	U	1.8	mg/kg dry	
Copper	7.3		0.89	mg/kg dry	
Iron	2700		4.5	mg/kg dry	
Lead	6.2		0.71	mg/kg dry	
Magnesium	1800		45	mg/kg dry	
Manganese	58		0.45	mg/kg dry	
Nickel	5.2		1.8	mg/kg dry	
Potassium	54		45	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB033-1218-01				Sample ID: 1601010-50	
Metals ICP					
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	130		89	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	14		1.8	mg/kg dry	
Zinc	7.4		1.8	mg/kg dry	
Field ID: BRC001-GB034-0106-01				Sample ID: 1601010-51	
Metals ICP					
Aluminum	13000		8.0	mg/kg dry	
Antimony	13		1.6	mg/kg dry	
Arsenic	8.2		0.64	mg/kg dry	
Barium	41		8.0	mg/kg dry	
Beryllium	0.58		0.24	mg/kg dry	
Cadmium	0.77		0.24	mg/kg dry	
Calcium	120000		400	mg/kg dry	
Chromium	20		0.40	mg/kg dry	
Cobalt	8.0		1.6	mg/kg dry	
Copper	78		0.80	mg/kg dry	
Iron	23000		4.0	mg/kg dry	
Lead	1000		0.64	mg/kg dry	
Magnesium	5600		40	mg/kg dry	
Manganese	430		0.40	mg/kg dry	
Nickel	13		1.6	mg/kg dry	
Potassium	600		40	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.40	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB034-0106-01				Sample ID: 1601010-51	
Metals ICP					
Sodium	210		80	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	93		1.6	mg/kg dry	
Zinc	64		1.6	mg/kg dry	
Field ID: BRC001-GB034-0612-01				Sample ID: 1601010-52	
Metals ICP					
Aluminum	7300		8.5	mg/kg dry	
Antimony	5.3		1.7	mg/kg dry	
Arsenic	13		0.68	mg/kg dry	
Barium	37		8.5	mg/kg dry	
Beryllium	0.59		0.25	mg/kg dry	
Cadmium	0.38		0.25	mg/kg dry	
Calcium	230000		420	mg/kg dry	
Chromium	28		0.42	mg/kg dry	
Cobalt	5.2		1.7	mg/kg dry	
Copper	96		0.85	mg/kg dry	
Iron	13000		4.2	mg/kg dry	
Lead	710		0.68	mg/kg dry	
Magnesium	3000		42	mg/kg dry	
Manganese	270		0.42	mg/kg dry	
Nickel	11		1.7	mg/kg dry	
Potassium	320		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	110		85	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB034-0612-01				Sample ID: 1601010-52	
Metals ICP					
Vanadium	54		1.7	mg/kg dry	
Zinc	80		1.7	mg/kg dry	
Field ID: BRC001-SB001-0001-01				Sample ID: 1601010-53	
Metals ICP					
Aluminum	11000		9.8	mg/kg dry	
Antimony	33		2.0	mg/kg dry	
Arsenic	15		0.79	mg/kg dry	
Barium	75		9.8	mg/kg dry	
Beryllium	0.59		0.30	mg/kg dry	
Cadmium	5.3		0.30	mg/kg dry	
Calcium	180000		490	mg/kg dry	
Chromium	45		0.49	mg/kg dry	
Cobalt	8.0		2.0	mg/kg dry	
Copper	81		0.98	mg/kg dry	
Iron	19000		4.9	mg/kg dry	
Lead	2700		0.79	mg/kg dry	
Magnesium	3600		49	mg/kg dry	
Manganese	390		0.49	mg/kg dry	
Nickel	20		2.0	mg/kg dry	
Potassium	1300		49	mg/kg dry	
Selenium	---	U	2.0	mg/kg dry	
Silver	---	U	0.49	mg/kg dry	
Sodium	170		98	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	60		2.0	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB001-0001-01				Sample ID: 1601010-53	
Metals ICP					
Zinc	130		2.0	mg/kg dry	
Field ID: BRC001-SB002-0001-01				Sample ID: 1601010-54	
Metals ICP					
Aluminum	19000		9.6	mg/kg dry	
Antimony	16		1.9	mg/kg dry	
Arsenic	9.9		0.77	mg/kg dry	
Barium	140		9.6	mg/kg dry	
Beryllium	0.79		0.29	mg/kg dry	
Cadmium	1.5		0.29	mg/kg dry	
Calcium	76000		48	mg/kg dry	
Chromium	44		0.48	mg/kg dry	
Cobalt	13		1.9	mg/kg dry	
Copper	110		0.96	mg/kg dry	
Iron	28000		4.8	mg/kg dry	
Lead	1300		0.77	mg/kg dry	
Magnesium	4700		48	mg/kg dry	
Manganese	1100		0.48	mg/kg dry	
Nickel	20		1.9	mg/kg dry	
Potassium	1700		48	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.48	mg/kg dry	
Sodium	170		96	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	95		1.9	mg/kg dry	
Zinc	89		1.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB003-0612-01				Sample ID: 1601010-55	
Metals ICP					
Aluminum	18000		9.6	mg/kg dry	
Antimony	24		1.9	mg/kg dry	
Arsenic	13		0.77	mg/kg dry	
Barium	150		9.6	mg/kg dry	
Beryllium	0.74		0.29	mg/kg dry	
Cadmium	1.5		0.29	mg/kg dry	
Calcium	120000		480	mg/kg dry	
Chromium	57		0.48	mg/kg dry	
Cobalt	14		1.9	mg/kg dry	
Copper	130		0.96	mg/kg dry	
Iron	35000		4.8	mg/kg dry	
Lead	3800		0.77	mg/kg dry	
Magnesium	4800		48	mg/kg dry	
Manganese	980		0.48	mg/kg dry	
Nickel	30		1.9	mg/kg dry	
Potassium	550		48	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.48	mg/kg dry	
Sodium	220		96	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	90		1.9	mg/kg dry	
Zinc	89		1.9	mg/kg dry	
Field ID: BRC001-SB005-0001-01				Sample ID: 1601010-56	
Metals ICP					
Aluminum	5300		9.6	mg/kg dry	
Antimony	---	U	1.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB005-0001-01				Sample ID: 1601010-56	
Metals ICP					
Arsenic	7.5		0.77	mg/kg dry	
Barium	23		9.6	mg/kg dry	
Beryllium	0.49		0.29	mg/kg dry	
Cadmium	---	U	0.29	mg/kg dry	
Calcium	290000		480	mg/kg dry	
Chromium	30		0.48	mg/kg dry	
Cobalt	---	U	1.9	mg/kg dry	
Copper	8.6		0.96	mg/kg dry	
Iron	11000		4.8	mg/kg dry	
Lead	58		0.77	mg/kg dry	
Magnesium	2100		48	mg/kg dry	
Manganese	89		0.48	mg/kg dry	
Nickel	6.5		1.9	mg/kg dry	
Potassium	750		48	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.48	mg/kg dry	
Sodium	130		96	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	20		1.9	mg/kg dry	
Zinc	18		1.9	mg/kg dry	
Field ID: BRC001-SB005-1218-01				Sample ID: 1601010-57	
Metals ICP					
Aluminum	5300		8.9	mg/kg dry	
Antimony	---	U	1.8	mg/kg dry	
Arsenic	9.2		0.71	mg/kg dry	
Barium	34		8.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB005-1218-01				Sample ID: 1601010-57	
Metals ICP					
Beryllium	0.53		0.27	mg/kg dry	
Cadmium	---	U	0.27	mg/kg dry	
Calcium	320000		450	mg/kg dry	
Chromium	28		0.45	mg/kg dry	
Cobalt	1.9		1.8	mg/kg dry	
Copper	8.6		0.89	mg/kg dry	
Iron	12000		4.5	mg/kg dry	
Lead	160		0.71	mg/kg dry	
Magnesium	2100		45	mg/kg dry	
Manganese	110		0.45	mg/kg dry	
Nickel	7.0		1.8	mg/kg dry	
Potassium	310		45	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	140		89	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	20		1.8	mg/kg dry	
Zinc	16		1.8	mg/kg dry	
Field ID: BRC001-SB005-1824-01				Sample ID: 1601010-58	
Metals ICP					
Aluminum	17000		9.1	mg/kg dry	
Antimony	90		1.8	mg/kg dry	
Arsenic	27		0.73	mg/kg dry	
Barium	230		9.1	mg/kg dry	
Beryllium	0.71		0.27	mg/kg dry	
Cadmium	3.0		0.27	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB005-1824-01				Sample ID: 1601010-58	
Metals ICP					
Calcium	99000		230	mg/kg dry	
Chromium	57		0.46	mg/kg dry	
Cobalt	12		1.8	mg/kg dry	
Copper	170		0.91	mg/kg dry	
Iron	35000		4.6	mg/kg dry	
Lead	15000		3.7	mg/kg dry	
Magnesium	4500		46	mg/kg dry	
Manganese	740		0.46	mg/kg dry	
Nickel	26		1.8	mg/kg dry	
Potassium	580		46	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	0.68		0.46	mg/kg dry	
Sodium	670		91	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	88		1.8	mg/kg dry	
Zinc	130		1.8	mg/kg dry	
Field ID: BRC001-SB005-3642-01				Sample ID: 1601010-59	
Metals ICP					
Aluminum	15000		10	mg/kg dry	
Antimony	860		2.1	mg/kg dry	
Arsenic	110		0.83	mg/kg dry	
Barium	1800		10	mg/kg dry	
Beryllium	---	U	0.31	mg/kg dry	
Cadmium	20		0.31	mg/kg dry	
Calcium	80000		52	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB005-3642-01				Sample ID: 1601010-59	
Metals ICP					
Chromium	190		0.52	mg/kg dry	
Cobalt	9.9		2.1	mg/kg dry	
Copper	1500		1.0	mg/kg dry	
Iron	200000		52	mg/kg dry	
Lead	16000		8.3	mg/kg dry	
Magnesium	3100		52	mg/kg dry	
Manganese	960		0.52	mg/kg dry	
Nickel	110		2.1	mg/kg dry	
Potassium	630		52	mg/kg dry	
Selenium	43		2.1	mg/kg dry	
Silver	1.5		0.52	mg/kg dry	
Sodium	2600		100	mg/kg dry	
Thallium	---	U	2.1	mg/kg dry	
Vanadium	45		2.1	mg/kg dry	
Zinc	450		2.1	mg/kg dry	
Field ID: BRC001-SB006-0001-01				Sample ID: 1601010-60	
Metals ICP					
Aluminum	2800		8.6	mg/kg dry	
Antimony	37		1.7	mg/kg dry	
Arsenic	11		0.69	mg/kg dry	
Barium	25		8.6	mg/kg dry	
Beryllium	0.38		0.26	mg/kg dry	
Cadmium	3.3		0.26	mg/kg dry	
Calcium	300000		430	mg/kg dry	
Chromium	25		0.43	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB006-0001-01				Sample ID: 1601010-60	
Metals ICP					
Cobalt	3.2		1.7	mg/kg dry	
Copper	26		0.86	mg/kg dry	
Iron	8000		4.3	mg/kg dry	
Lead	2200		0.69	mg/kg dry	
Magnesium	2600		43	mg/kg dry	
Manganese	150		0.43	mg/kg dry	
Nickel	18		1.7	mg/kg dry	
Potassium	300		43	mg/kg dry	
Selenium	1.8		1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	100		86	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	18		1.7	mg/kg dry	
Zinc	28		1.7	mg/kg dry	
Field ID: BRC001-SB006-1218-01				Sample ID: 1601010-61	
Metals ICP					
Aluminum	6000		9.2	mg/kg dry	
Antimony	4.4		1.8	mg/kg dry	
Arsenic	8.8		0.73	mg/kg dry	
Barium	39		9.2	mg/kg dry	
Beryllium	0.56		0.28	mg/kg dry	
Cadmium	0.31		0.28	mg/kg dry	
Calcium	260000		230	mg/kg dry	
Chromium	32		0.46	mg/kg dry	
Cobalt	3.4		1.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB006-1218-01				Sample ID: 1601010-61	
Metals ICP					
Copper	31		0.92	mg/kg dry	
Iron	14000		4.6	mg/kg dry	
Lead	280		0.73	mg/kg dry	
Magnesium	2400		46	mg/kg dry	
Manganese	210		0.46	mg/kg dry	
Nickel	9.0		1.8	mg/kg dry	
Potassium	300		46	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.46	mg/kg dry	
Sodium	200		92	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	34		1.8	mg/kg dry	
Zinc	31		1.8	mg/kg dry	
Field ID: BRC001-SB007-0001-01				Sample ID: 1601010-62	
Metals ICP					
Aluminum	26000		11	mg/kg dry	
Antimony	4.4		2.2	mg/kg dry	
Arsenic	3.9		0.90	mg/kg dry	
Barium	160		11	mg/kg dry	
Beryllium	0.98		0.34	mg/kg dry	
Cadmium	0.85		0.34	mg/kg dry	
Calcium	9200		56	mg/kg dry	
Chromium	42		0.56	mg/kg dry	
Cobalt	18		2.2	mg/kg dry	
Copper	140		1.1	mg/kg dry	

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Field ID: BRC001-SB007-0001-01				Sample ID: 1601010-62	
Metals ICP					
Iron	38000		5.6	mg/kg dry	
Lead	310		0.90	mg/kg dry	
Magnesium	7000		56	mg/kg dry	
Manganese	960		0.56	mg/kg dry	
Nickel	21		2.2	mg/kg dry	
Potassium	1200		56	mg/kg dry	
Selenium	---	U	2.2	mg/kg dry	
Silver	---	U	0.56	mg/kg dry	
Sodium	200		110	mg/kg dry	
Thallium	---	U	2.2	mg/kg dry	
Vanadium	120		2.2	mg/kg dry	
Zinc	100		2.2	mg/kg dry	
Field ID: BRC001-SB008-0001-01				Sample ID: 1601010-63	
Metals ICP					
Aluminum	6700		9.5	mg/kg dry	
Antimony	3.8		1.9	mg/kg dry	
Arsenic	7.0		0.76	mg/kg dry	
Barium	34		9.5	mg/kg dry	
Beryllium	0.53		0.29	mg/kg dry	
Cadmium	0.42		0.29	mg/kg dry	
Calcium	220000		480	mg/kg dry	
Chromium	34		0.48	mg/kg dry	
Cobalt	3.2		1.9	mg/kg dry	
Copper	21		0.95	mg/kg dry	
Iron	15000		4.8	mg/kg dry	

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Field ID: BRC001-SB008-0001-01				Sample ID: 1601010-63	
Metals ICP					
Lead	420		0.76	mg/kg dry	
Magnesium	2700		48	mg/kg dry	
Manganese	180		0.48	mg/kg dry	
Nickel	8.9		1.9	mg/kg dry	
Potassium	740		48	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.48	mg/kg dry	
Sodium	130		95	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	26		1.9	mg/kg dry	
Zinc	34		1.9	mg/kg dry	
Field ID: BRC001-SB009-0612-01				Sample ID: 1601010-64	
Metals ICP					
Aluminum	5400		9.3	mg/kg dry	
Antimony	---	U	1.9	mg/kg dry	
Arsenic	6.4		0.74	mg/kg dry	
Barium	33		9.3	mg/kg dry	
Beryllium	0.49		0.28	mg/kg dry	
Cadmium	---	U	0.28	mg/kg dry	
Calcium	270000		460	mg/kg dry	
Chromium	37		0.46	mg/kg dry	
Cobalt	2.1		1.9	mg/kg dry	
Copper	6.7		0.93	mg/kg dry	
Iron	13000		4.6	mg/kg dry	
Lead	40		0.74	mg/kg dry	
Magnesium	2500		46	mg/kg dry	

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Field ID: BRC001-SB009-0612-01				Sample ID: 1601010-64	
Metals ICP					
Manganese	140		0.46	mg/kg dry	
Nickel	7.6		1.9	mg/kg dry	
Potassium	410		46	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.46	mg/kg dry	
Sodium	260		93	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	16		1.9	mg/kg dry	
Zinc	15		1.9	mg/kg dry	
Field ID: BRC001-SB009-3642-01				Sample ID: 1601010-65	
Metals ICP					
Aluminum	23000		9.7	mg/kg dry	
Antimony	3.2		1.9	mg/kg dry	
Arsenic	3.7		0.77	mg/kg dry	
Barium	170		9.7	mg/kg dry	
Beryllium	0.93		0.29	mg/kg dry	
Cadmium	1.1		0.29	mg/kg dry	
Calcium	9800		48	mg/kg dry	
Chromium	36		0.48	mg/kg dry	
Cobalt	21		1.9	mg/kg dry	
Copper	140		0.97	mg/kg dry	
Iron	34000		4.8	mg/kg dry	
Lead	220		0.77	mg/kg dry	
Magnesium	6300		48	mg/kg dry	
Manganese	810		0.48	mg/kg dry	

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Field ID: BRC001-SB009-3642-01				Sample ID: 1601010-65	
Metals ICP					
Nickel	21		1.9	mg/kg dry	
Potassium	1100		48	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.48	mg/kg dry	
Sodium	1200		97	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	110		1.9	mg/kg dry	
Zinc	110		1.9	mg/kg dry	
Field ID: BRC001-SB010-0001-01				Sample ID: 1601010-66	
Metals ICP					
Aluminum	500		8.9	mg/kg dry	
Antimony	46		1.8	mg/kg dry	
Arsenic	17		0.72	mg/kg dry	
Barium	27		8.9	mg/kg dry	
Beryllium	0.39		0.27	mg/kg dry	
Cadmium	1.4		0.27	mg/kg dry	
Calcium	320000		450	mg/kg dry	
Chromium	24		0.45	mg/kg dry	
Cobalt	---	U	1.8	mg/kg dry	
Copper	9.7		0.89	mg/kg dry	
Iron	1700		4.5	mg/kg dry	
Lead	10000		7.2	mg/kg dry	
Magnesium	1700		45	mg/kg dry	
Manganese	30		0.45	mg/kg dry	
Nickel	3.8		1.8	mg/kg dry	
Potassium	94		45	mg/kg dry	

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Field ID: BRC001-SB010-0001-01				Sample ID: 1601010-66	
Metals ICP					
Selenium	---	U	1.8	mg/kg dry	
Silver	0.52		0.45	mg/kg dry	
Sodium	---	U	89	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	6.4		1.8	mg/kg dry	
Zinc	16		1.8	mg/kg dry	
Field ID: BRC001-SB010-0612-01				Sample ID: 1601010-67	
Metals ICP					
Aluminum	4900		9.0	mg/kg dry	
Antimony	7.4		1.8	mg/kg dry	
Arsenic	5.5		0.72	mg/kg dry	
Barium	32		9.0	mg/kg dry	
Beryllium	0.49		0.27	mg/kg dry	
Cadmium	0.37		0.27	mg/kg dry	
Calcium	270000		450	mg/kg dry	
Chromium	38		0.45	mg/kg dry	
Cobalt	3.9		1.8	mg/kg dry	
Copper	44		0.90	mg/kg dry	
Iron	10000		4.5	mg/kg dry	
Lead	1300		0.72	mg/kg dry	
Magnesium	2200		45	mg/kg dry	
Manganese	310		0.45	mg/kg dry	
Nickel	7.6		1.8	mg/kg dry	
Potassium	260		45	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB010-0612-01				Sample ID: 1601010-67	
Metals ICP					
Sodium	310		90	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	28		1.8	mg/kg dry	
Zinc	37		1.8	mg/kg dry	
Field ID: BRC001-SB011-0001-01				Sample ID: 1601010-68	
Metals ICP					
Aluminum	2100		9.3	mg/kg dry	
Antimony	140		1.9	mg/kg dry	
Arsenic	27		0.75	mg/kg dry	
Barium	49		9.3	mg/kg dry	
Beryllium	0.36		0.28	mg/kg dry	
Cadmium	9.1		0.28	mg/kg dry	
Calcium	290000		470	mg/kg dry	
Chromium	33		0.47	mg/kg dry	
Cobalt	3.3		1.9	mg/kg dry	
Copper	34		0.93	mg/kg dry	
Iron	16000		4.7	mg/kg dry	
Lead	8100		7.5	mg/kg dry	
Magnesium	1900		47	mg/kg dry	
Manganese	160		0.47	mg/kg dry	
Nickel	29		1.9	mg/kg dry	
Potassium	130		47	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.47	mg/kg dry	
Sodium	150		93	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB011-0001-01				Sample ID: 1601010-68	
Metals ICP					
Vanadium	17		1.9	mg/kg dry	
Zinc	50		1.9	mg/kg dry	
Field ID: BRC001-SB011-1824-01				Sample ID: 1601010-69	
Metals ICP					
Aluminum	5300		9.3	mg/kg dry	
Antimony	17		1.9	mg/kg dry	
Arsenic	13		0.74	mg/kg dry	
Barium	41		9.3	mg/kg dry	
Beryllium	0.53		0.28	mg/kg dry	
Cadmium	1.4		0.28	mg/kg dry	
Calcium	270000		460	mg/kg dry	
Chromium	40		0.46	mg/kg dry	
Cobalt	3.3		1.9	mg/kg dry	
Copper	45		0.93	mg/kg dry	
Iron	19000		4.6	mg/kg dry	
Lead	1400		0.74	mg/kg dry	
Magnesium	2200		46	mg/kg dry	
Manganese	310		0.46	mg/kg dry	
Nickel	12		1.9	mg/kg dry	
Potassium	300		46	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.46	mg/kg dry	
Sodium	320		93	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	32		1.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB011-1824-01				Sample ID: 1601010-69	
Metals ICP					
Zinc	45		1.9	mg/kg dry	
Field ID: BRC001-SB012-0001-01				Sample ID: 1601010-70	
Metals ICP					
Aluminum	18000		9.6	mg/kg dry	
Antimony	26		1.9	mg/kg dry	
Arsenic	11		0.77	mg/kg dry	
Barium	110		9.6	mg/kg dry	
Beryllium	0.74		0.29	mg/kg dry	
Cadmium	2.6		0.29	mg/kg dry	
Calcium	67000		48	mg/kg dry	
Chromium	120		0.48	mg/kg dry	
Cobalt	13		1.9	mg/kg dry	
Copper	130		0.96	mg/kg dry	
Iron	30000		4.8	mg/kg dry	
Lead	2100		0.77	mg/kg dry	
Magnesium	4900		48	mg/kg dry	
Manganese	730		0.48	mg/kg dry	
Nickel	22		1.9	mg/kg dry	
Potassium	1300		48	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.48	mg/kg dry	
Sodium	160		96	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	93		1.9	mg/kg dry	
Zinc	110		1.9	mg/kg dry	

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Field ID: BRC001-SB012-1218-01				Sample ID: 1601010-71	
Metals ICP					
Aluminum	22000		9.6	mg/kg dry	
Antimony	---	U	1.9	mg/kg dry	
Arsenic	4.2		0.77	mg/kg dry	
Barium	160		9.6	mg/kg dry	
Beryllium	0.86		0.29	mg/kg dry	
Cadmium	0.76		0.29	mg/kg dry	
Calcium	37000		48	mg/kg dry	
Chromium	37		0.48	mg/kg dry	
Cobalt	17		1.9	mg/kg dry	
Copper	120		0.96	mg/kg dry	
Iron	32000		4.8	mg/kg dry	
Lead	48		0.77	mg/kg dry	
Magnesium	5600		48	mg/kg dry	
Manganese	1100		0.48	mg/kg dry	
Nickel	17		1.9	mg/kg dry	
Potassium	630		48	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.48	mg/kg dry	
Sodium	420		96	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	110		1.9	mg/kg dry	
Zinc	82		1.9	mg/kg dry	
Field ID: BRC001-SB013-0612-01				Sample ID: 1601010-72	
Metals ICP					
Aluminum	16000		8.9	mg/kg dry	
Antimony	11		1.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB013-0612-01				Sample ID: 1601010-72	
Metals ICP					
Arsenic	12		0.72	mg/kg dry	
Barium	110		8.9	mg/kg dry	
Beryllium	0.77		0.27	mg/kg dry	
Cadmium	0.79		0.27	mg/kg dry	
Calcium	110000		450	mg/kg dry	
Chromium	63		0.45	mg/kg dry	
Cobalt	10		1.8	mg/kg dry	
Copper	100		0.89	mg/kg dry	
Iron	28000		4.5	mg/kg dry	
Lead	1300		0.72	mg/kg dry	
Magnesium	4000		45	mg/kg dry	
Manganese	610		0.45	mg/kg dry	
Nickel	16		1.8	mg/kg dry	
Potassium	520		45	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	2200		89	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	84		1.8	mg/kg dry	
Zinc	73		1.8	mg/kg dry	
Field ID: BRC001-SB013-2430-01				Sample ID: 1601010-73	
Metals ICP					
Aluminum	8000		9.2	mg/kg dry	
Antimony	120		1.8	mg/kg dry	
Arsenic	44		0.74	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB013-2430-01				Sample ID: 1601010-73	
Metals ICP					
Barium	240		9.2	mg/kg dry	
Beryllium	0.53		0.28	mg/kg dry	
Cadmium	3.9		0.28	mg/kg dry	
Calcium	230000		460	mg/kg dry	
Chromium	59		0.46	mg/kg dry	
Cobalt	6.5		1.8	mg/kg dry	
Copper	210		0.92	mg/kg dry	
Iron	30000		4.6	mg/kg dry	
Lead	12000		7.4	mg/kg dry	
Magnesium	2700		46	mg/kg dry	
Manganese	490		0.46	mg/kg dry	
Nickel	25		1.8	mg/kg dry	
Potassium	380		46	mg/kg dry	
Selenium	4.1		1.8	mg/kg dry	
Silver	0.80		0.46	mg/kg dry	
Sodium	3000		92	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	45		1.8	mg/kg dry	
Zinc	94		1.8	mg/kg dry	
Field ID: BRC001-SB013-4248-01				Sample ID: 1601010-74	
Metals ICP					
Aluminum	30000		9.8	mg/kg dry	
Antimony	---	U	2.0	mg/kg dry	
Arsenic	1.9		0.78	mg/kg dry	
Barium	190		9.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB013-4248-01				Sample ID: 1601010-74	
Metals ICP					
Beryllium	1.0		0.29	mg/kg dry	
Cadmium	0.59		0.29	mg/kg dry	
Calcium	4500		49	mg/kg dry	
Chromium	37		0.49	mg/kg dry	
Cobalt	20		2.0	mg/kg dry	
Copper	160		0.98	mg/kg dry	
Iron	36000		4.9	mg/kg dry	
Lead	11		0.78	mg/kg dry	
Magnesium	6900		49	mg/kg dry	
Manganese	1700		0.49	mg/kg dry	
Nickel	21		2.0	mg/kg dry	
Potassium	460		49	mg/kg dry	
Selenium	---	U	2.0	mg/kg dry	
Silver	---	U	0.49	mg/kg dry	
Sodium	5700		98	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	110		2.0	mg/kg dry	
Zinc	89		2.0	mg/kg dry	
Field ID: BRC001-SB014-0612-01				Sample ID: 1601010-75	
Metals ICP					
Aluminum	4800		9.2	mg/kg dry	
Antimony	12		1.8	mg/kg dry	
Arsenic	11		0.74	mg/kg dry	
Barium	47		9.2	mg/kg dry	
Beryllium	0.49		0.28	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB014-0612-01				Sample ID: 1601010-75	
Metals ICP					
Cadmium	0.40		0.28	mg/kg dry	
Calcium	290000		460	mg/kg dry	
Chromium	30		0.46	mg/kg dry	
Cobalt	2.5		1.8	mg/kg dry	
Copper	29		0.92	mg/kg dry	
Iron	14000		4.6	mg/kg dry	
Lead	940		0.74	mg/kg dry	
Magnesium	2300		46	mg/kg dry	
Manganese	150		0.46	mg/kg dry	
Nickel	8.7		1.8	mg/kg dry	
Potassium	310		46	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.46	mg/kg dry	
Sodium	2300		92	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	23		1.8	mg/kg dry	
Zinc	23		1.8	mg/kg dry	
Field ID: BRC001-SB015-1218-01				Sample ID: 1601010-76	
Metals ICP					
Aluminum	5700		8.8	mg/kg dry	
Antimony	100		1.8	mg/kg dry	
Arsenic	55		0.70	mg/kg dry	
Barium	160		8.8	mg/kg dry	
Beryllium	0.42		0.26	mg/kg dry	
Cadmium	2.9		0.26	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB015-1218-01				Sample ID: 1601010-76	
Metals ICP					
Calcium	250000		440	mg/kg dry	
Chromium	51		0.44	mg/kg dry	
Cobalt	7.6		1.8	mg/kg dry	
Copper	220		0.88	mg/kg dry	
Iron	59000		44	mg/kg dry	
Lead	9500		7.0	mg/kg dry	
Magnesium	2200		44	mg/kg dry	
Manganese	370		0.44	mg/kg dry	
Nickel	30		1.8	mg/kg dry	
Potassium	310		44	mg/kg dry	
Selenium	5.7		1.8	mg/kg dry	
Silver	0.84		0.44	mg/kg dry	
Sodium	490		88	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	32		1.8	mg/kg dry	
Zinc	87		1.8	mg/kg dry	
Field ID: BRC001-SB015-1824-01				Sample ID: 1601010-77	
Metals ICP					
Aluminum	5700		9.1	mg/kg dry	
Antimony	54		1.8	mg/kg dry	
Arsenic	34		0.73	mg/kg dry	
Barium	100		9.1	mg/kg dry	
Beryllium	0.48		0.27	mg/kg dry	
Cadmium	1.3		0.27	mg/kg dry	
Calcium	240000		450	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB015-1824-01				Sample ID: 1601010-77	
Metals ICP					
Chromium	48		0.45	mg/kg dry	
Cobalt	3.7		1.8	mg/kg dry	
Copper	110		0.91	mg/kg dry	
Iron	19000		4.5	mg/kg dry	
Lead	3300		0.73	mg/kg dry	
Magnesium	2200		45	mg/kg dry	
Manganese	200		0.45	mg/kg dry	
Nickel	16		1.8	mg/kg dry	
Potassium	310		45	mg/kg dry	
Selenium	2.2		1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	410		91	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	34		1.8	mg/kg dry	
Zinc	57		1.8	mg/kg dry	
Field ID: BRC001-SB016-0001-01				Sample ID: 1601010-78	
Metals ICP					
Aluminum	2900		9.3	mg/kg dry	
Antimony	110		1.9	mg/kg dry	
Arsenic	23		0.74	mg/kg dry	
Barium	43		9.3	mg/kg dry	
Beryllium	0.40		0.28	mg/kg dry	
Cadmium	8.5		0.28	mg/kg dry	
Calcium	310000		460	mg/kg dry	
Chromium	26		0.46	mg/kg dry	

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Field ID: BRC001-SB016-0001-01				Sample ID: 1601010-78	
Metals ICP					
Cobalt	3.2		1.9	mg/kg dry	
Copper	36		0.93	mg/kg dry	
Iron	13000		4.6	mg/kg dry	
Lead	4800		0.74	mg/kg dry	
Magnesium	2600		46	mg/kg dry	
Manganese	150		0.46	mg/kg dry	
Nickel	25		1.9	mg/kg dry	
Potassium	170		46	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.46	mg/kg dry	
Sodium	230		93	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	24		1.9	mg/kg dry	
Zinc	64		1.9	mg/kg dry	
Field ID: BRC001-SB016-1218-01				Sample ID: 1601010-79	
Metals ICP					
Aluminum	5000		9.3	mg/kg dry	
Antimony	5.6		1.9	mg/kg dry	
Arsenic	11		0.75	mg/kg dry	
Barium	33		9.3	mg/kg dry	
Beryllium	0.50		0.28	mg/kg dry	
Cadmium	0.43		0.28	mg/kg dry	
Calcium	310000		470	mg/kg dry	
Chromium	29		0.47	mg/kg dry	
Cobalt	2.3		1.9	mg/kg dry	

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Field ID: BRC001-SB016-1218-01				Sample ID: 1601010-79	
Metals ICP					
Copper	17		0.93	mg/kg dry	
Iron	12000		4.7	mg/kg dry	
Lead	440		0.75	mg/kg dry	
Magnesium	2200		47	mg/kg dry	
Manganese	160		0.47	mg/kg dry	
Nickel	8.1		1.9	mg/kg dry	
Potassium	300		47	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.47	mg/kg dry	
Sodium	650		93	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	21		1.9	mg/kg dry	
Zinc	28		1.9	mg/kg dry	
Field ID: BRC001-SB017-0612-01				Sample ID: 1601010-80	
Metals ICP					
Aluminum	16000		8.8	mg/kg dry	
Antimony	13		1.8	mg/kg dry	
Arsenic	9.0		0.70	mg/kg dry	
Barium	110		8.8	mg/kg dry	
Beryllium	0.75		0.26	mg/kg dry	
Cadmium	1.4		0.26	mg/kg dry	
Calcium	110000		440	mg/kg dry	
Chromium	45		0.44	mg/kg dry	
Cobalt	12		1.8	mg/kg dry	
Copper	110		0.88	mg/kg dry	

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Field ID: BRC001-SB017-0612-01				Sample ID: 1601010-80	
Metals ICP					
Iron	25000		4.4	mg/kg dry	
Lead	1100		0.70	mg/kg dry	
Magnesium	4200		44	mg/kg dry	
Manganese	810		0.44	mg/kg dry	
Nickel	16		1.8	mg/kg dry	
Potassium	530		44	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.44	mg/kg dry	
Sodium	160		88	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	81		1.8	mg/kg dry	
Zinc	71		1.8	mg/kg dry	
Field ID: BRC001-SB018-0001-01				Sample ID: 1601010-81	
Metals ICP					
Aluminum	6100		8.5	mg/kg dry	
Antimony	5.2		1.7	mg/kg dry	
Arsenic	7.7		0.68	mg/kg dry	
Barium	36		8.5	mg/kg dry	
Beryllium	0.47		0.25	mg/kg dry	
Cadmium	0.58		0.25	mg/kg dry	
Calcium	260000		210	mg/kg dry	
Chromium	36		0.42	mg/kg dry	
Cobalt	2.2		1.7	mg/kg dry	
Copper	16		0.85	mg/kg dry	
Iron	14000		4.2	mg/kg dry	

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Field ID: BRC001-SB018-0001-01				Sample ID: 1601010-81	
Metals ICP					
Lead	490		0.68	mg/kg dry	
Magnesium	2500		42	mg/kg dry	
Manganese	120		0.42	mg/kg dry	
Nickel	8.7		1.7	mg/kg dry	
Potassium	640		42	mg/kg dry	
Selenium	---	U J	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	130		85	mg/kg dry	
Thallium	---	U J	1.7	mg/kg dry	
Vanadium	20		1.7	mg/kg dry	
Zinc	51		1.7	mg/kg dry	
Field ID: BRC001-SB018-2430-01				Sample ID: 1601010-82	
Metals ICP					
Aluminum	15000		8.9	mg/kg dry	
Antimony	9.3		1.8	mg/kg dry	
Arsenic	11		0.71	mg/kg dry	
Barium	110		8.9	mg/kg dry	
Beryllium	0.73		0.27	mg/kg dry	
Cadmium	0.70		0.27	mg/kg dry	
Calcium	150000		440	mg/kg dry	
Chromium	42		0.44	mg/kg dry	
Cobalt	11		1.8	mg/kg dry	
Copper	100		0.89	mg/kg dry	
Iron	24000		4.4	mg/kg dry	
Lead	630		0.71	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB018-2430-01				Sample ID: 1601010-82	
Metals ICP					
Magnesium	3700		44	mg/kg dry	
Manganese	710		0.44	mg/kg dry	
Nickel	15		1.8	mg/kg dry	
Potassium	470		44	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.44	mg/kg dry	
Sodium	360		89	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	75		1.8	mg/kg dry	
Zinc	60		1.8	mg/kg dry	
Field ID: BRC001-SB019-0001-01				Sample ID: 1601010-83	
Metals ICP					
Aluminum	4800		8.4	mg/kg dry	
Antimony	1.9		1.7	mg/kg dry	
Arsenic	9.5		0.68	mg/kg dry	
Barium	25		8.4	mg/kg dry	
Beryllium	0.57		0.25	mg/kg dry	
Cadmium	0.27		0.25	mg/kg dry	
Calcium	420000		420	mg/kg dry	
Chromium	33		0.42	mg/kg dry	
Cobalt	---	U	1.7	mg/kg dry	
Copper	8.0		0.84	mg/kg dry	
Iron	11000		4.2	mg/kg dry	
Lead	100		0.68	mg/kg dry	
Magnesium	2400		42	mg/kg dry	
Manganese	79		0.42	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB019-0001-01				Sample ID: 1601010-83	
Metals ICP					
Nickel	7.4		1.7	mg/kg dry	
Potassium	310		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	610		84	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	19		1.7	mg/kg dry	
Zinc	13		1.7	mg/kg dry	
Field ID: BRC001-SB019-0612-01				Sample ID: 1601010-84	
Metals ICP					
Aluminum	4500		8.9	mg/kg dry	
Antimony	4.3		1.8	mg/kg dry	
Arsenic	8.6		0.71	mg/kg dry	
Barium	28		8.9	mg/kg dry	
Beryllium	0.48		0.27	mg/kg dry	
Cadmium	---	U	0.27	mg/kg dry	
Calcium	320000		440	mg/kg dry	
Chromium	24		0.44	mg/kg dry	
Cobalt	---	U	1.8	mg/kg dry	
Copper	13		0.89	mg/kg dry	
Iron	10000		4.4	mg/kg dry	
Lead	250		0.71	mg/kg dry	
Magnesium	2000		44	mg/kg dry	
Manganese	89		0.44	mg/kg dry	
Nickel	6.2		1.8	mg/kg dry	
Potassium	240		44	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB019-0612-01				Sample ID: 1601010-84	
Metals ICP					
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.44	mg/kg dry	
Sodium	1500		89	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	18		1.8	mg/kg dry	
Zinc	13		1.8	mg/kg dry	
Field ID: BRC001-SB020-0001-01				Sample ID: 1601010-85	
Metals ICP					
Aluminum	1200		8.6	mg/kg dry	
Antimony	21		1.7	mg/kg dry	
Arsenic	7.5		0.69	mg/kg dry	
Barium	18		8.6	mg/kg dry	
Beryllium	0.36		0.26	mg/kg dry	
Cadmium	1.6		0.26	mg/kg dry	
Calcium	350000		430	mg/kg dry	
Chromium	24		0.43	mg/kg dry	
Cobalt	---	U	1.7	mg/kg dry	
Copper	8.7		0.86	mg/kg dry	
Iron	3200		4.3	mg/kg dry	
Lead	1300		0.69	mg/kg dry	
Magnesium	1800		43	mg/kg dry	
Manganese	47		0.43	mg/kg dry	
Nickel	4.9		1.7	mg/kg dry	
Potassium	140		43	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB020-0001-01				Sample ID: 1601010-85	
Metals ICP					
Sodium	290		86	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	7.4		1.7	mg/kg dry	
Zinc	57		1.7	mg/kg dry	
Field ID: BRC001-SB020-1218-01				Sample ID: 1601010-86	
Metals ICP					
Aluminum	4000		8.3	mg/kg dry	
Antimony	100		1.7	mg/kg dry	
Arsenic	38		0.66	mg/kg dry	
Barium	330		8.3	mg/kg dry	
Beryllium	0.32		0.25	mg/kg dry	
Cadmium	3.3		0.25	mg/kg dry	
Calcium	190000		410	mg/kg dry	
Chromium	32		0.41	mg/kg dry	
Cobalt	3.9		1.7	mg/kg dry	
Copper	180		0.83	mg/kg dry	
Iron	30000		4.1	mg/kg dry	
Lead	8900		6.6	mg/kg dry	
Magnesium	1800		41	mg/kg dry	
Manganese	190		0.41	mg/kg dry	
Nickel	15		1.7	mg/kg dry	
Potassium	270		41	mg/kg dry	
Selenium	6.8		1.7	mg/kg dry	
Silver	0.85		0.41	mg/kg dry	
Sodium	860		83	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB020-1218-01				Sample ID: 1601010-86	
Metals ICP					
Thallium	---	U	1.7	mg/kg dry	
Vanadium	27		1.7	mg/kg dry	
Zinc	80		1.7	mg/kg dry	
Field ID: BRC001-SB021-0001-01				Sample ID: 1601010-87	
Metals ICP					
Aluminum	8700		8.9	mg/kg dry	
Antimony	73		1.8	mg/kg dry	
Arsenic	16		0.71	mg/kg dry	
Barium	39		8.9	mg/kg dry	
Beryllium	0.43		0.27	mg/kg dry	
Cadmium	9.1		0.27	mg/kg dry	
Calcium	220000		440	mg/kg dry	
Chromium	97		0.44	mg/kg dry	
Cobalt	11		1.8	mg/kg dry	
Copper	62		0.89	mg/kg dry	
Iron	27000		4.4	mg/kg dry	
Lead	5100		0.71	mg/kg dry	
Magnesium	7800		44	mg/kg dry	
Manganese	360		0.44	mg/kg dry	
Nickel	70		1.8	mg/kg dry	
Potassium	220		44	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.44	mg/kg dry	
Sodium	670		89	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	56		1.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB021-0001-01				Sample ID: 1601010-87	
Metals ICP					
Zinc	55		1.8	mg/kg dry	
Field ID: BRC001-SB022-0612-01				Sample ID: 1601010-88	
Metals ICP					
Aluminum	12000		9.1	mg/kg dry	
Antimony	36		1.8	mg/kg dry	
Arsenic	15		0.73	mg/kg dry	
Barium	76		9.1	mg/kg dry	
Beryllium	0.72		0.27	mg/kg dry	
Cadmium	1.4		0.27	mg/kg dry	
Calcium	180000		450	mg/kg dry	
Chromium	59		0.45	mg/kg dry	
Cobalt	9.0		1.8	mg/kg dry	
Copper	90		0.91	mg/kg dry	
Iron	22000		4.5	mg/kg dry	
Lead	2200		0.73	mg/kg dry	
Magnesium	3200		45	mg/kg dry	
Manganese	510		0.45	mg/kg dry	
Nickel	16		1.8	mg/kg dry	
Potassium	510		45	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	400		91	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	72		1.8	mg/kg dry	
Zinc	79		1.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB023-0001-01				Sample ID: 1601010-89	
Metals ICP					
Aluminum	7700		9.0	mg/kg dry	
Antimony	22		1.8	mg/kg dry	
Arsenic	11		0.72	mg/kg dry	
Barium	49		9.0	mg/kg dry	
Beryllium	0.52		0.27	mg/kg dry	
Cadmium	3.4		0.27	mg/kg dry	
Calcium	200000		450	mg/kg dry	
Chromium	110		0.45	mg/kg dry	
Cobalt	4.9		1.8	mg/kg dry	
Copper	40		0.90	mg/kg dry	
Iron	15000		4.5	mg/kg dry	
Lead	2100		0.72	mg/kg dry	
Magnesium	3100		45	mg/kg dry	
Manganese	210		0.45	mg/kg dry	
Nickel	46		1.8	mg/kg dry	
Potassium	870		45	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	130		90	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	37		1.8	mg/kg dry	
Zinc	56		1.8	mg/kg dry	
Field ID: BRC001-SB024-0001-01				Sample ID: 1601010-90	
Metals ICP					
Aluminum	2800		8.4	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB024-0001-01				Sample ID: 1601010-90	
Metals ICP					
Antimony	34		1.7	mg/kg dry	
Arsenic	11		0.68	mg/kg dry	
Barium	22		8.4	mg/kg dry	
Beryllium	0.37		0.25	mg/kg dry	
Cadmium	1.3		0.25	mg/kg dry	
Calcium	320000		420	mg/kg dry	
Chromium	23		0.42	mg/kg dry	
Cobalt	---	U	1.7	mg/kg dry	
Copper	22		0.84	mg/kg dry	
Iron	9600		4.2	mg/kg dry	
Lead	1100		0.68	mg/kg dry	
Magnesium	1700		42	mg/kg dry	
Manganese	93		0.42	mg/kg dry	
Nickel	7.4		1.7	mg/kg dry	
Potassium	430		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	130		84	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	14		1.7	mg/kg dry	
Zinc	220		1.7	mg/kg dry	
Field ID: BRC001-SB024-0001-02				Sample ID: 1601010-91	
Metals ICP					
Aluminum	2800		8.5	mg/kg dry	
Antimony	35		1.7	mg/kg dry	
Arsenic	11		0.68	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB024-0001-02				Sample ID: 1601010-91	
Metals ICP					
Barium	22		8.5	mg/kg dry	
Beryllium	0.36		0.25	mg/kg dry	
Cadmium	1.3		0.25	mg/kg dry	
Calcium	310000		420	mg/kg dry	
Chromium	22		0.42	mg/kg dry	
Cobalt	---	U	1.7	mg/kg dry	
Copper	20		0.85	mg/kg dry	
Iron	7900		4.2	mg/kg dry	
Lead	1300		0.68	mg/kg dry	
Magnesium	1700		42	mg/kg dry	
Manganese	85		0.42	mg/kg dry	
Nickel	6.7		1.7	mg/kg dry	
Potassium	450		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	130		85	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	13		1.7	mg/kg dry	
Zinc	200		1.7	mg/kg dry	
Field ID: BRC001-SB024-1824-01				Sample ID: 1601010-92	
Metals ICP					
Aluminum	6300		8.8	mg/kg dry	
Antimony	9.9		1.8	mg/kg dry	
Arsenic	14		0.70	mg/kg dry	
Barium	28		8.8	mg/kg dry	
Beryllium	0.53		0.26	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB024-1824-01				Sample ID: 1601010-92	
Metals ICP					
Cadmium	0.59		0.26	mg/kg dry	
Calcium	260000		440	mg/kg dry	
Chromium	42		0.44	mg/kg dry	
Cobalt	4.3		1.8	mg/kg dry	
Copper	46		0.88	mg/kg dry	
Iron	17000		4.4	mg/kg dry	
Lead	520		0.70	mg/kg dry	
Magnesium	2000		44	mg/kg dry	
Manganese	330		0.44	mg/kg dry	
Nickel	11		1.8	mg/kg dry	
Potassium	210		44	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.44	mg/kg dry	
Sodium	120		88	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	44		1.8	mg/kg dry	
Zinc	33		1.8	mg/kg dry	
Field ID: BRC001-SB025-0001-01				Sample ID: 1601010-93	
Metals ICP					
Aluminum	1000		8.5	mg/kg dry	
Antimony	9.7		1.7	mg/kg dry	
Arsenic	7.1		0.68	mg/kg dry	
Barium	11		8.5	mg/kg dry	
Beryllium	0.37		0.25	mg/kg dry	
Cadmium	0.72		0.25	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB025-0001-01				Sample ID: 1601010-93	
Metals ICP					
Calcium	340000		420	mg/kg dry	
Chromium	21		0.42	mg/kg dry	
Cobalt	---	U	1.7	mg/kg dry	
Copper	4.8		0.85	mg/kg dry	
Iron	3200		4.2	mg/kg dry	
Lead	920		0.68	mg/kg dry	
Magnesium	1400		42	mg/kg dry	
Manganese	26		0.42	mg/kg dry	
Nickel	3.0		1.7	mg/kg dry	
Potassium	76		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	690		85	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	7.8		1.7	mg/kg dry	
Zinc	7.2		1.7	mg/kg dry	
Field ID: BRC001-SB025-0001-02				Sample ID: 1601010-94	
Metals ICP					
Aluminum	1100		8.6	mg/kg dry	
Antimony	10		1.7	mg/kg dry	
Arsenic	7.2		0.69	mg/kg dry	
Barium	11		8.6	mg/kg dry	
Beryllium	0.37		0.26	mg/kg dry	
Cadmium	0.69		0.26	mg/kg dry	
Calcium	370000		430	mg/kg dry	
Chromium	21		0.43	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB025-0001-02				Sample ID: 1601010-94	
Metals ICP					
Cobalt	---	U	1.7	mg/kg dry	
Copper	5.9		0.86	mg/kg dry	
Iron	3600		4.3	mg/kg dry	
Lead	1100		0.69	mg/kg dry	
Magnesium	1400		43	mg/kg dry	
Manganese	26		0.43	mg/kg dry	
Nickel	3.2		1.7	mg/kg dry	
Potassium	75		43	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	630		86	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	8.2		1.7	mg/kg dry	
Zinc	7.4		1.7	mg/kg dry	
Field ID: BRC001-SB025-1824-01				Sample ID: 1601010-95	
Metals ICP					
Aluminum	5700		9.1	mg/kg dry	
Antimony	17		1.8	mg/kg dry	
Arsenic	13		0.72	mg/kg dry	
Barium	40		9.1	mg/kg dry	
Beryllium	0.47		0.27	mg/kg dry	
Cadmium	0.72		0.27	mg/kg dry	
Calcium	260000		450	mg/kg dry	
Chromium	74		0.45	mg/kg dry	
Cobalt	2.8		1.8	mg/kg dry	
Copper	45		0.91	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB025-1824-01				Sample ID: 1601010-95	
Metals ICP					
Iron	19000		4.5	mg/kg dry	
Lead	1500		0.72	mg/kg dry	
Magnesium	2300		45	mg/kg dry	
Manganese	170		0.45	mg/kg dry	
Nickel	14		1.8	mg/kg dry	
Potassium	400		45	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	420		91	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	20		1.8	mg/kg dry	
Zinc	37		1.8	mg/kg dry	
Field ID: BRC001-SB026-0001-01				Sample ID: 1601010-96	
Metals ICP					
Aluminum	11000		9.8	mg/kg dry	
Antimony	460		2.0	mg/kg dry	
Arsenic	150		0.78	mg/kg dry	
Barium	250		9.8	mg/kg dry	
Beryllium	0.48		0.29	mg/kg dry	
Cadmium	24		0.29	mg/kg dry	
Calcium	29000		49	mg/kg dry	
Chromium	98		0.49	mg/kg dry	
Cobalt	6.8		2.0	mg/kg dry	
Copper	150		0.98	mg/kg dry	
Iron	51000		49	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB026-0001-01				Sample ID: 1601010-96	
Metals ICP					
Lead	29000		7.8	mg/kg dry	
Magnesium	2600		49	mg/kg dry	
Manganese	280		0.49	mg/kg dry	
Nickel	46		2.0	mg/kg dry	
Potassium	290		49	mg/kg dry	
Selenium	5.8		2.0	mg/kg dry	
Silver	1.1		0.49	mg/kg dry	
Sodium	440		98	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	110		2.0	mg/kg dry	
Zinc	180		2.0	mg/kg dry	
Field ID: BRC001-SB027-0001-01				Sample ID: 1601010-97	
Metals ICP					
Aluminum	11000		9.9	mg/kg dry	
Antimony	560		2.0	mg/kg dry	
Arsenic	150		0.79	mg/kg dry	
Barium	270		9.9	mg/kg dry	
Beryllium	0.52		0.30	mg/kg dry	
Cadmium	66		0.30	mg/kg dry	
Calcium	150000		500	mg/kg dry	
Chromium	37		0.50	mg/kg dry	
Cobalt	8.5		2.0	mg/kg dry	
Copper	160		0.99	mg/kg dry	
Iron	24000		5.0	mg/kg dry	
Lead	43000		7.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB027-0001-01				Sample ID: 1601010-97	
Metals ICP					
Magnesium	4700		50	mg/kg dry	
Manganese	270		0.50	mg/kg dry	
Nickel	65		2.0	mg/kg dry	
Potassium	380		50	mg/kg dry	
Selenium	21		2.0	mg/kg dry	
Silver	1.8		0.50	mg/kg dry	
Sodium	590		99	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	69		2.0	mg/kg dry	
Zinc	310		2.0	mg/kg dry	
Field ID: BRC001-SB027-0001-02				Sample ID: 1601010-98	
Metals ICP					
Aluminum	8100		9.9	mg/kg dry	
Antimony	56		2.0	mg/kg dry	
Arsenic	26		0.79	mg/kg dry	
Barium	65		9.9	mg/kg dry	
Beryllium	0.53		0.30	mg/kg dry	
Cadmium	7.3		0.30	mg/kg dry	
Calcium	250000		490	mg/kg dry	
Chromium	36		0.49	mg/kg dry	
Cobalt	3.3		2.0	mg/kg dry	
Copper	26		0.99	mg/kg dry	
Iron	18000		4.9	mg/kg dry	
Lead	3300		0.79	mg/kg dry	
Magnesium	3100		49	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB027-0001-02				Sample ID: 1601010-98	
Metals ICP					
Manganese	160		0.49	mg/kg dry	
Nickel	16		2.0	mg/kg dry	
Potassium	610		49	mg/kg dry	
Selenium	6.8		2.0	mg/kg dry	
Silver	---	U	0.49	mg/kg dry	
Sodium	380		99	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	30		2.0	mg/kg dry	
Zinc	47		2.0	mg/kg dry	
Field ID: BRC001-SB028-0001-01				Sample ID: 1601010-99	
Metals ICP					
Aluminum	4100		8.6	mg/kg dry	
Antimony	180		1.7	mg/kg dry	
Arsenic	76		0.68	mg/kg dry	
Barium	88		8.6	mg/kg dry	
Beryllium	0.40		0.26	mg/kg dry	
Cadmium	13		0.26	mg/kg dry	
Calcium	300000		430	mg/kg dry	
Chromium	25		0.43	mg/kg dry	
Cobalt	3.5		1.7	mg/kg dry	
Copper	75		0.86	mg/kg dry	
Iron	9700		4.3	mg/kg dry	
Lead	7600		6.8	mg/kg dry	
Magnesium	2300		43	mg/kg dry	
Manganese	99		0.43	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB028-0001-01				Sample ID: 1601010-99	
Metals ICP					
Nickel	19		1.7	mg/kg dry	
Potassium	190		43	mg/kg dry	
Selenium	3.2		1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	140		86	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	30		1.7	mg/kg dry	
Zinc	96		1.7	mg/kg dry	
Field ID: BRC001-SB028-0612-01				Sample ID: 1601010-AA	
Metals ICP					
Aluminum	8100		9.0	mg/kg dry	
Antimony	18		1.8	mg/kg dry	
Arsenic	12		0.72	mg/kg dry	
Barium	53		9.0	mg/kg dry	
Beryllium	0.54		0.27	mg/kg dry	
Cadmium	2.0		0.27	mg/kg dry	
Calcium	250000		450	mg/kg dry	
Chromium	39		0.45	mg/kg dry	
Cobalt	4.9		1.8	mg/kg dry	
Copper	39		0.90	mg/kg dry	
Iron	15000		4.5	mg/kg dry	
Lead	1200		0.72	mg/kg dry	
Magnesium	2700		45	mg/kg dry	
Manganese	330		0.45	mg/kg dry	
Nickel	11		1.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB028-0612-01				Sample ID: 1601010-AA	
Metals ICP					
Potassium	450		45	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	210		90	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	35		1.8	mg/kg dry	
Zinc	40		1.8	mg/kg dry	
Field ID: BRC001-SB028-3036-01				Sample ID: 1601010-AB	
Metals ICP					
Aluminum	27000		9.6	mg/kg dry	
Antimony	---	U	1.9	mg/kg dry	
Arsenic	1.8	L	0.77	mg/kg dry	
Barium	170		9.6	mg/kg dry	
Beryllium	0.92		0.29	mg/kg dry	
Cadmium	0.53		0.29	mg/kg dry	
Calcium	6500		48	mg/kg dry	
Chromium	37		0.48	mg/kg dry	
Cobalt	15		1.9	mg/kg dry	
Copper	140		0.96	mg/kg dry	
Iron	35000		4.8	mg/kg dry	
Lead	32		0.77	mg/kg dry	
Magnesium	6800		48	mg/kg dry	
Manganese	920		0.48	mg/kg dry	
Nickel	19		1.9	mg/kg dry	
Potassium	450		48	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB028-3036-01				Sample ID: 1601010-AB	
Metals ICP					
Silver	---	U	0.48	mg/kg dry	
Sodium	600		96	mg/kg dry	
Thallium	---	U J	1.9	mg/kg dry	
Vanadium	110		1.9	mg/kg dry	
Zinc	79		1.9	mg/kg dry	
Field ID: BRC001-SB029-0612-01				Sample ID: 1601010-AC	
Metals ICP					
Aluminum	14000		9.4	mg/kg dry	
Antimony	64		1.9	mg/kg dry	
Arsenic	18		0.75	mg/kg dry	
Barium	83		9.4	mg/kg dry	
Beryllium	0.63		0.28	mg/kg dry	
Cadmium	2.7		0.28	mg/kg dry	
Calcium	190000		470	mg/kg dry	
Chromium	61		0.47	mg/kg dry	
Cobalt	7.6		1.9	mg/kg dry	
Copper	77		0.94	mg/kg dry	
Iron	25000		4.7	mg/kg dry	
Lead	6600		0.75	mg/kg dry	
Magnesium	3600		47	mg/kg dry	
Manganese	500		0.47	mg/kg dry	
Nickel	17		1.9	mg/kg dry	
Potassium	630		47	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	0.49		0.47	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB029-0612-01				Sample ID: 1601010-AC	
Metals ICP					
Sodium	270		94	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	54		1.9	mg/kg dry	
Zinc	71		1.9	mg/kg dry	
Field ID: BRC001-SB030-0001-01				Sample ID: 1601010-AD	
Metals ICP					
Aluminum	5000		9.1	mg/kg dry	
Antimony	12		1.8	mg/kg dry	
Arsenic	10		0.73	mg/kg dry	
Barium	33		9.1	mg/kg dry	
Beryllium	0.49		0.27	mg/kg dry	
Cadmium	0.97		0.27	mg/kg dry	
Calcium	280000		450	mg/kg dry	
Chromium	28		0.45	mg/kg dry	
Cobalt	1.9		1.8	mg/kg dry	
Copper	12		0.91	mg/kg dry	
Iron	12000		4.5	mg/kg dry	
Lead	580		0.73	mg/kg dry	
Magnesium	2100		45	mg/kg dry	
Manganese	96		0.45	mg/kg dry	
Nickel	7.4		1.8	mg/kg dry	
Potassium	370		45	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	130		91	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB030-0001-01				Sample ID: 1601010-AD	
Metals ICP					
Vanadium	17		1.8	mg/kg dry	
Zinc	20		1.8	mg/kg dry	
Field ID: BRC001-SB030-0612-01				Sample ID: 1601010-AE	
Metals ICP					
Aluminum	22000		9.0	mg/kg dry	
Antimony	7.3		1.8	mg/kg dry	
Arsenic	6.0		0.72	mg/kg dry	
Barium	150		9.0	mg/kg dry	
Beryllium	0.86		0.27	mg/kg dry	
Cadmium	0.98		0.27	mg/kg dry	
Calcium	38000		45	mg/kg dry	
Chromium	40		0.45	mg/kg dry	
Cobalt	16		1.8	mg/kg dry	
Copper	120		0.90	mg/kg dry	
Iron	32000		4.5	mg/kg dry	
Lead	820		0.72	mg/kg dry	
Magnesium	5400		45	mg/kg dry	
Manganese	800		0.45	mg/kg dry	
Nickel	18		1.8	mg/kg dry	
Potassium	640		45	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	560		90	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	99		1.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB030-0612-01				Sample ID: 1601010-AE	
Metals ICP					
Zinc	83		1.8	mg/kg dry	
Field ID: BRC001-SB031-0001-01				Sample ID: 1601010-AF	
Metals ICP					
Aluminum	2500		8.4	mg/kg dry	
Antimony	120		1.7	mg/kg dry	
Arsenic	12		0.67	mg/kg dry	
Barium	15		8.4	mg/kg dry	
Beryllium	0.42		0.25	mg/kg dry	
Cadmium	1.2		0.25	mg/kg dry	
Calcium	330000		420	mg/kg dry	
Chromium	23		0.42	mg/kg dry	
Cobalt	---	U	1.7	mg/kg dry	
Copper	13		0.84	mg/kg dry	
Iron	5900		4.2	mg/kg dry	
Lead	2500		0.67	mg/kg dry	
Magnesium	2000		42	mg/kg dry	
Manganese	68		0.42	mg/kg dry	
Nickel	15		1.7	mg/kg dry	
Potassium	130		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	110		84	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	17		1.7	mg/kg dry	
Zinc	13		1.7	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB031-0001-02				Sample ID: 1601010-AG	
Metals ICP					
Aluminum	2500		8.2	mg/kg dry	
Antimony	21		1.6	mg/kg dry	
Arsenic	12		0.66	mg/kg dry	
Barium	16		8.2	mg/kg dry	
Beryllium	0.42		0.25	mg/kg dry	
Cadmium	1.3		0.25	mg/kg dry	
Calcium	320000		410	mg/kg dry	
Chromium	23		0.41	mg/kg dry	
Cobalt	---	U	1.6	mg/kg dry	
Copper	11		0.82	mg/kg dry	
Iron	5700		4.1	mg/kg dry	
Lead	1100		0.66	mg/kg dry	
Magnesium	1700		41	mg/kg dry	
Manganese	63		0.41	mg/kg dry	
Nickel	4.7		1.6	mg/kg dry	
Potassium	120		41	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.41	mg/kg dry	
Sodium	100		82	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	19		1.6	mg/kg dry	
Zinc	14		1.6	mg/kg dry	
Field ID: RB-01112016				Sample ID: 1601010-AH	
Metals ICP					
Aluminum	---	U	100	ug/L	
Antimony	---	U	20	ug/L	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: RB-01112016				Sample ID: 1601010-AH	
Metals ICP					
Arsenic	---	U	8.0	ug/L	
Barium	---	U	100	ug/L	
Beryllium	---	U	3.0	ug/L	
Cadmium	---	U	3.0	ug/L	
Calcium	---	U	500	ug/L	
Chromium	---	U	5.0	ug/L	
Cobalt	---	U	20	ug/L	
Copper	---	U	10	ug/L	
Iron	---	U	50	ug/L	
Lead	---	U	8.0	ug/L	
Magnesium	---	U	500	ug/L	
Manganese	---	U	5.0	ug/L	
Nickel	---	U	20	ug/L	
Potassium	---	U	500	ug/L	
Selenium	---	U	20	ug/L	
Silver	---	U	5.0	ug/L	
Sodium	---	U	1000	ug/L	
Thallium	---	U	20	ug/L	
Vanadium	---	U	20	ug/L	
Zinc	---	U	20	ug/L	
Field ID: RB-01122016				Sample ID: 1601010-AI	
Metals ICP					
Aluminum	---	U	100	ug/L	
Antimony	---	U	20	ug/L	
Arsenic	---	U	8.0	ug/L	
Barium	---	U	100	ug/L	
Beryllium	---	U	3.0	ug/L	
Cadmium	---	U	3.0	ug/L	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: RB-01122016				Sample ID: 1601010-AI	
Metals ICP					
Calcium	---	U	500	ug/L	
Chromium	---	U	5.0	ug/L	
Cobalt	---	U	20	ug/L	
Copper	---	U	10	ug/L	
Iron	---	U	50	ug/L	
Lead	---	U	8.0	ug/L	
Magnesium	---	U	500	ug/L	
Manganese	---	U	5.0	ug/L	
Nickel	---	U	20	ug/L	
Potassium	---	U	500	ug/L	
Selenium	---	U	20	ug/L	
Silver	---	U	5.0	ug/L	
Sodium	---	U	1000	ug/L	
Thallium	---	U	20	ug/L	
Vanadium	---	U	20	ug/L	
Zinc	---	U	20	ug/L	
Field ID: RB-01132016				Sample ID: 1601010-AJ	
Metals ICP					
Aluminum	---	U	100	ug/L	
Antimony	---	U	20	ug/L	
Arsenic	---	U	8.0	ug/L	
Barium	---	U	100	ug/L	
Beryllium	---	U	3.0	ug/L	
Cadmium	---	U	3.0	ug/L	
Calcium	---	U	500	ug/L	
Chromium	---	U	5.0	ug/L	
Cobalt	---	U	20	ug/L	
Copper	---	U	10	ug/L	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: RB-01132016				Sample ID: 1601010-AJ	
Metals ICP					
Iron	---	U	50	ug/L	
Lead	---	U	8.0	ug/L	
Magnesium	---	U	500	ug/L	
Manganese	---	U	5.0	ug/L	
Nickel	---	U	20	ug/L	
Potassium	---	U	500	ug/L	
Selenium	---	U	20	ug/L	
Silver	---	U	5.0	ug/L	
Sodium	---	U	1000	ug/L	
Thallium	---	U	20	ug/L	
Vanadium	---	U	20	ug/L	
Zinc	---	U	20	ug/L	
Field ID: RB-01142016				Sample ID: 1601010-AK	
Metals ICP					
Aluminum	---	U	100	ug/L	
Antimony	---	U	20	ug/L	
Arsenic	---	U	8.0	ug/L	
Barium	---	U	100	ug/L	
Beryllium	---	U	3.0	ug/L	
Cadmium	---	U	3.0	ug/L	
Calcium	---	U	500	ug/L	
Chromium	---	U	5.0	ug/L	
Cobalt	---	U	20	ug/L	
Copper	---	U	10	ug/L	
Iron	---	U	50	ug/L	
Lead	---	U	8.0	ug/L	
Magnesium	---	U	500	ug/L	
Manganese	---	U	5.0	ug/L	

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Field ID: RB-01142016				Sample ID: 1601010-AK	
Metals ICP					
Nickel	---	U	20	ug/L	
Potassium	---	U	500	ug/L	
Selenium	---	U	20	ug/L	
Silver	---	U	5.0	ug/L	
Sodium	---	U	1000	ug/L	
Thallium	---	U	20	ug/L	
Vanadium	---	U	20	ug/L	
Zinc	---	U	20	ug/L	
Field ID: RB-01152016				Sample ID: 1601010-AL	
Metals ICP					
Aluminum	---	U	100	ug/L	
Antimony	---	U	20	ug/L	
Arsenic	---	U	8.0	ug/L	
Barium	---	U	100	ug/L	
Beryllium	---	U	3.0	ug/L	
Cadmium	---	U	3.0	ug/L	
Calcium	---	U	500	ug/L	
Chromium	---	U	5.0	ug/L	
Cobalt	---	U	20	ug/L	
Copper	---	U	10	ug/L	
Iron	---	U	50	ug/L	
Lead	---	U	8.0	ug/L	
Magnesium	---	U	500	ug/L	
Manganese	---	U	5.0	ug/L	
Nickel	---	U	20	ug/L	
Potassium	---	U	500	ug/L	
Selenium	---	U	20	ug/L	
Silver	---	U	5.0	ug/L	

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Field ID: RB-01152016				Sample ID: 1601010-AL	
Metals ICP					
Sodium	---	U	1000	ug/L	
Thallium	---	U	20	ug/L	
Vanadium	---	U	20	ug/L	
Zinc	---	U	20	ug/L	
Field ID: RB-01182016				Sample ID: 1601010-AM	
Metals ICP					
Aluminum	---	U	100	ug/L	
Antimony	---	U	20	ug/L	
Arsenic	---	U	8.0	ug/L	
Barium	---	U	100	ug/L	
Beryllium	---	U	3.0	ug/L	
Cadmium	---	U	3.0	ug/L	
Calcium	---	U	500	ug/L	
Chromium	---	U	5.0	ug/L	
Cobalt	---	U	20	ug/L	
Copper	---	U	10	ug/L	
Iron	---	U	50	ug/L	
Lead	---	U	8.0	ug/L	
Magnesium	---	U	500	ug/L	
Manganese	---	U	5.0	ug/L	
Nickel	---	U	20	ug/L	
Potassium	---	U	500	ug/L	
Selenium	---	U	20	ug/L	
Silver	---	U	5.0	ug/L	
Sodium	---	U	1000	ug/L	
Thallium	---	U	20	ug/L	
Vanadium	---	U	20	ug/L	
Zinc	---	U	20	ug/L	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: RB-011816				Sample ID: 1601035-01	
Metals ICP					
Aluminum	---	U	100	ug/L	
Antimony	---	U	20	ug/L	
Arsenic	---	U	8.0	ug/L	
Barium	---	U	100	ug/L	
Beryllium	---	U	3.0	ug/L	
Cadmium	---	U	3.0	ug/L	
Calcium	---	U	500	ug/L	
Chromium	---	U	5.0	ug/L	
Cobalt	---	U	20	ug/L	
Copper	---	U	10	ug/L	
Iron	---	U	50	ug/L	
Lead	---	U	8.0	ug/L	
Magnesium	---	U	500	ug/L	
Manganese	---	U	5.0	ug/L	
Nickel	---	U	20	ug/L	
Potassium	---	U	500	ug/L	
Selenium	---	U	20	ug/L	
Silver	---	U	5.0	ug/L	
Sodium	1400		1000	ug/L	
Thallium	---	U	20	ug/L	
Vanadium	---	U	20	ug/L	
Zinc	---	U	20	ug/L	
Field ID: BRC001-AB001-0001-01				Sample ID: 1601035-02	
Metals ICP					
Aluminum	7500		9.9	mg/kg dry	
Antimony	1600		2.0	mg/kg dry	
Arsenic	190		0.79	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB001-0001-01				Sample ID: 1601035-02	
Metals ICP					
Barium	480		9.9	mg/kg dry	
Beryllium	---	U	0.30	mg/kg dry	
Cadmium	27		0.30	mg/kg dry	
Calcium	51000		50	mg/kg dry	
Chromium	260		0.50	mg/kg dry	
Cobalt	11		2.0	mg/kg dry	
Copper	450		0.99	mg/kg dry	
Iron	90000		50	mg/kg dry	
Lead	77000		16	mg/kg dry	
Magnesium	4200		50	mg/kg dry	
Manganese	520		0.50	mg/kg dry	
Nickel	110		2.0	mg/kg dry	
Potassium	610		50	mg/kg dry	
Selenium	17		2.0	mg/kg dry	
Silver	4.3		0.50	mg/kg dry	
Sodium	2200		99	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	69		2.0	mg/kg dry	
Zinc	540		2.0	mg/kg dry	
Field ID: BRC001-AB002-0001-01				Sample ID: 1601035-03	
Metals ICP					
Aluminum	7100		9.4	mg/kg dry	
Antimony	1500		1.9	mg/kg dry	
Arsenic	290		0.75	mg/kg dry	
Barium	940		9.4	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB002-0001-01				Sample ID: 1601035-03	
Metals ICP					
Beryllium	---	U	0.28	mg/kg dry	
Cadmium	33		0.28	mg/kg dry	
Calcium	160000		470	mg/kg dry	
Chromium	240		0.47	mg/kg dry	
Cobalt	11		1.9	mg/kg dry	
Copper	450		0.94	mg/kg dry	
Iron	110000		47	mg/kg dry	
Lead	47000		7.5	mg/kg dry	
Magnesium	3800		47	mg/kg dry	
Manganese	500		0.47	mg/kg dry	
Nickel	100		1.9	mg/kg dry	
Potassium	1200		47	mg/kg dry	
Selenium	15		1.9	mg/kg dry	
Silver	2.3		0.47	mg/kg dry	
Sodium	5600		94	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	36		1.9	mg/kg dry	
Zinc	520		1.9	mg/kg dry	
Field ID: BRC001-AB002-0001-02				Sample ID: 1601035-04	
Metals ICP					
Aluminum	6200		9.2	mg/kg dry	
Antimony	1400		1.8	mg/kg dry	
Arsenic	220		0.73	mg/kg dry	
Barium	740		9.2	mg/kg dry	
Beryllium	---	U	0.27	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB002-0001-02				Sample ID: 1601035-04	
Metals ICP					
Cadmium	27		0.27	mg/kg dry	
Calcium	180000		460	mg/kg dry	
Chromium	310		0.46	mg/kg dry	
Cobalt	9.8		1.8	mg/kg dry	
Copper	410		0.92	mg/kg dry	
Iron	100000		46	mg/kg dry	
Lead	52000		7.3	mg/kg dry	
Magnesium	3300		46	mg/kg dry	
Manganese	510		0.46	mg/kg dry	
Nickel	110		1.8	mg/kg dry	
Potassium	1200		46	mg/kg dry	
Selenium	13		1.8	mg/kg dry	
Silver	2.3		0.46	mg/kg dry	
Sodium	5400		92	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	31		1.8	mg/kg dry	
Zinc	450		1.8	mg/kg dry	
Field ID: BRC001-AB003-1218-01				Sample ID: 1601035-05	
Metals ICP					
Aluminum	8100		9.4	mg/kg dry	
Antimony	2.1		1.9	mg/kg dry	
Arsenic	22		0.75	mg/kg dry	
Barium	13		9.4	mg/kg dry	
Beryllium	0.78		0.28	mg/kg dry	
Cadmium	0.47		0.28	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB003-1218-01				Sample ID: 1601035-05	
Metals ICP					
Calcium	200000		470	mg/kg dry	
Chromium	80		0.47	mg/kg dry	
Cobalt	4.8		1.9	mg/kg dry	
Copper	48		0.94	mg/kg dry	
Iron	23000		4.7	mg/kg dry	
Lead	50		0.75	mg/kg dry	
Magnesium	1600		47	mg/kg dry	
Manganese	190		0.47	mg/kg dry	
Nickel	16		1.9	mg/kg dry	
Potassium	310		47	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.47	mg/kg dry	
Sodium	300		94	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	79		1.9	mg/kg dry	
Zinc	44		1.9	mg/kg dry	
Field ID: BRC001-AB004-0001-01				Sample ID: 1601035-06	
Metals ICP					
Aluminum	16000		8.8	mg/kg dry	
Antimony	320		1.8	mg/kg dry	
Arsenic	30		0.71	mg/kg dry	
Barium	130		8.8	mg/kg dry	
Beryllium	0.48		0.27	mg/kg dry	
Cadmium	8.3		0.27	mg/kg dry	
Calcium	29000		44	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB004-0001-01				Sample ID: 1601035-06	
Metals ICP					
Chromium	200		0.44	mg/kg dry	
Cobalt	13		1.8	mg/kg dry	
Copper	120		0.88	mg/kg dry	
Iron	59000		44	mg/kg dry	
Lead	15000		7.1	mg/kg dry	
Magnesium	11000		44	mg/kg dry	
Manganese	620		0.44	mg/kg dry	
Nickel	64		1.8	mg/kg dry	
Potassium	470		44	mg/kg dry	
Selenium	2.3		1.8	mg/kg dry	
Silver	0.56		0.44	mg/kg dry	
Sodium	880		88	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	110		1.8	mg/kg dry	
Zinc	170		1.8	mg/kg dry	
Field ID: BRC001-AB004-0612-01				Sample ID: 1601035-07	
Metals ICP					
Aluminum	15000		8.5	mg/kg dry	
Antimony	630		1.7	mg/kg dry	
Arsenic	32		0.68	mg/kg dry	
Barium	130		8.5	mg/kg dry	
Beryllium	0.73		0.26	mg/kg dry	
Cadmium	8.3		0.26	mg/kg dry	
Calcium	62000		43	mg/kg dry	
Chromium	210		0.43	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB004-0612-01				Sample ID: 1601035-07	
Metals ICP					
Cobalt	14		1.7	mg/kg dry	
Copper	160		0.85	mg/kg dry	
Iron	31000		4.3	mg/kg dry	
Lead	22000		6.8	mg/kg dry	
Magnesium	10000		43	mg/kg dry	
Manganese	470		0.43	mg/kg dry	
Nickel	160		1.7	mg/kg dry	
Potassium	660		43	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	0.85		0.43	mg/kg dry	
Sodium	690		85	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	110		1.7	mg/kg dry	
Zinc	130		1.7	mg/kg dry	
Field ID: BRC001-AB004-1824-01				Sample ID: 1601035-08	
Metals ICP					
Aluminum	21000		9.7	mg/kg dry	
Antimony	---	U	1.9	mg/kg dry	
Arsenic	3.3		0.77	mg/kg dry	
Barium	130		9.7	mg/kg dry	
Beryllium	0.89		0.29	mg/kg dry	
Cadmium	0.53		0.29	mg/kg dry	
Calcium	21000		48	mg/kg dry	
Chromium	34		0.48	mg/kg dry	
Cobalt	15		1.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB004-1824-01				Sample ID: 1601035-08	
Metals ICP					
Copper	120		0.97	mg/kg dry	
Iron	30000		4.8	mg/kg dry	
Lead	21		0.77	mg/kg dry	
Magnesium	5800		48	mg/kg dry	
Manganese	750		0.48	mg/kg dry	
Nickel	16		1.9	mg/kg dry	
Potassium	1100		48	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.48	mg/kg dry	
Sodium	510		97	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	120		1.9	mg/kg dry	
Zinc	86		1.9	mg/kg dry	
Field ID: BRC001-AB005-0001-01				Sample ID: 1601035-09	
Metals ICP					
Aluminum	12000		11	mg/kg dry	
Antimony	1900		2.1	mg/kg dry	
Arsenic	350		0.85	mg/kg dry	
Barium	840		11	mg/kg dry	
Beryllium	0.39		0.32	mg/kg dry	
Cadmium	51		0.32	mg/kg dry	
Calcium	50000		53	mg/kg dry	
Chromium	120		0.53	mg/kg dry	
Cobalt	14		2.1	mg/kg dry	
Copper	620		1.1	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB005-0001-01				Sample ID: 1601035-09	
Metals ICP					
Iron	80000		53	mg/kg dry	
Lead	70000		8.5	mg/kg dry	
Magnesium	7600		53	mg/kg dry	
Manganese	580		0.53	mg/kg dry	
Nickel	120		2.1	mg/kg dry	
Potassium	620		53	mg/kg dry	
Selenium	20		2.1	mg/kg dry	
Silver	2.7		0.53	mg/kg dry	
Sodium	1600		110	mg/kg dry	
Thallium	---	U	2.1	mg/kg dry	
Vanadium	89		2.1	mg/kg dry	
Zinc	1800		2.1	mg/kg dry	
Field ID: BRC001-AB006-0001-01				Sample ID: 1601035-10	
Metals ICP					
Aluminum	15000		8.9	mg/kg dry	
Antimony	34		1.8	mg/kg dry	
Arsenic	8.0		0.71	mg/kg dry	
Barium	60		8.9	mg/kg dry	
Beryllium	0.53		0.27	mg/kg dry	
Cadmium	3.6		0.27	mg/kg dry	
Calcium	41000		44	mg/kg dry	
Chromium	110		0.44	mg/kg dry	
Cobalt	16		1.8	mg/kg dry	
Copper	70		0.89	mg/kg dry	
Iron	29000		4.4	mg/kg dry	

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Field ID: BRC001-AB006-0001-01				Sample ID: 1601035-10	
Metals ICP					
Lead	2200		0.71	mg/kg dry	
Magnesium	22000		44	mg/kg dry	
Manganese	510		0.44	mg/kg dry	
Nickel	160		1.8	mg/kg dry	
Potassium	380		44	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.44	mg/kg dry	
Sodium	420		89	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	99		1.8	mg/kg dry	
Zinc	67		1.8	mg/kg dry	
Field ID: BRC001-AB006-1218-01				Sample ID: 1601035-11	
Metals ICP					
Aluminum	9200		8.6	mg/kg dry	
Antimony	5.7		1.7	mg/kg dry	
Arsenic	9.4		0.69	mg/kg dry	
Barium	29		8.6	mg/kg dry	
Beryllium	0.61		0.26	mg/kg dry	
Cadmium	0.58		0.26	mg/kg dry	
Calcium	200000		430	mg/kg dry	
Chromium	27		0.43	mg/kg dry	
Cobalt	6.2		1.7	mg/kg dry	
Copper	46		0.86	mg/kg dry	
Iron	16000		4.3	mg/kg dry	
Lead	430		0.69	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB006-1218-01				Sample ID: 1601035-11	
Metals ICP					
Magnesium	4100		43	mg/kg dry	
Manganese	320		0.43	mg/kg dry	
Nickel	9.9		1.7	mg/kg dry	
Potassium	340		43	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	210		86	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	68		1.7	mg/kg dry	
Zinc	49		1.7	mg/kg dry	
Field ID: BRC001-AB007-0106-01				Sample ID: 1601035-12	
Metals ICP					
Aluminum	8400		8.7	mg/kg dry	
Antimony	3.5		1.7	mg/kg dry	
Arsenic	9.4		0.69	mg/kg dry	
Barium	15		8.7	mg/kg dry	
Beryllium	0.57		0.26	mg/kg dry	
Cadmium	0.62		0.26	mg/kg dry	
Calcium	220000		430	mg/kg dry	
Chromium	28		0.43	mg/kg dry	
Cobalt	5.8		1.7	mg/kg dry	
Copper	110		0.87	mg/kg dry	
Iron	15000		4.3	mg/kg dry	
Lead	240		0.69	mg/kg dry	
Magnesium	4000		43	mg/kg dry	

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Field ID: BRC001-AB007-0106-01				Sample ID: 1601035-12	
Metals ICP					
Manganese	250		0.43	mg/kg dry	
Nickel	9.1		1.7	mg/kg dry	
Potassium	180		43	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	610		87	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	66		1.7	mg/kg dry	
Zinc	31		1.7	mg/kg dry	
Field ID: BRC001-AB008-0001-01				Sample ID: 1601035-13	
Metals ICP					
Aluminum	15000		8.3	mg/kg dry	
Antimony	170		1.7	mg/kg dry	
Arsenic	26		0.66	mg/kg dry	
Barium	100		8.3	mg/kg dry	
Beryllium	0.68		0.25	mg/kg dry	
Cadmium	18		0.25	mg/kg dry	
Calcium	36000		41	mg/kg dry	
Chromium	60		0.41	mg/kg dry	
Cobalt	13		1.7	mg/kg dry	
Copper	98		0.83	mg/kg dry	
Iron	32000		4.1	mg/kg dry	
Lead	12000		6.6	mg/kg dry	
Magnesium	14000		41	mg/kg dry	
Manganese	610		0.41	mg/kg dry	

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Field ID: BRC001-AB008-0001-01				Sample ID: 1601035-13	
Metals ICP					
Nickel	100		1.7	mg/kg dry	
Potassium	730		41	mg/kg dry	
Selenium	2.2		1.7	mg/kg dry	
Silver	---	U	0.41	mg/kg dry	
Sodium	550		83	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	130		1.7	mg/kg dry	
Zinc	180		1.7	mg/kg dry	
Field ID: BRC001-AB009-0001-01				Sample ID: 1601035-14	
Metals ICP					
Aluminum	17000		7.9	mg/kg dry	
Antimony	3800		1.6	mg/kg dry	
Arsenic	310		0.63	mg/kg dry	
Barium	170		7.9	mg/kg dry	
Beryllium	---	U	0.24	mg/kg dry	
Cadmium	68		0.24	mg/kg dry	
Calcium	19000		40	mg/kg dry	
Chromium	120		0.40	mg/kg dry	
Cobalt	12		1.6	mg/kg dry	
Copper	2200		0.79	mg/kg dry	
Iron	180000		40	mg/kg dry	
Lead	67000		13	mg/kg dry	
Magnesium	3600		40	mg/kg dry	
Manganese	1000		0.40	mg/kg dry	
Nickel	310		1.6	mg/kg dry	

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Field ID: BRC001-AB009-0001-01				Sample ID: 1601035-14	
Metals ICP					
Potassium	390		40	mg/kg dry	
Selenium	27		1.6	mg/kg dry	
Silver	2.2		0.40	mg/kg dry	
Sodium	920		79	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	57		1.6	mg/kg dry	
Zinc	5000		1.6	mg/kg dry	
Field ID: BRC001-AB010-0001-01				Sample ID: 1601035-15	
Metals ICP					
Aluminum	19000		8.1	mg/kg dry	
Antimony	650		1.6	mg/kg dry	
Arsenic	120		0.65	mg/kg dry	
Barium	330		8.1	mg/kg dry	
Beryllium	0.46		0.24	mg/kg dry	
Cadmium	19		0.24	mg/kg dry	
Calcium	25000		41	mg/kg dry	
Chromium	74		0.41	mg/kg dry	
Cobalt	13		1.6	mg/kg dry	
Copper	310		0.81	mg/kg dry	
Iron	91000		41	mg/kg dry	
Lead	21000		6.5	mg/kg dry	
Magnesium	7100		41	mg/kg dry	
Manganese	700		0.41	mg/kg dry	
Nickel	87		1.6	mg/kg dry	
Potassium	750		41	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB010-0001-01				Sample ID: 1601035-15	
Metals ICP					
Selenium	8.4		1.6	mg/kg dry	
Silver	0.89		0.41	mg/kg dry	
Sodium	1200		81	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	95		1.6	mg/kg dry	
Zinc	690		1.6	mg/kg dry	
Field ID: BRC001-AB011-0001-01				Sample ID: 1601035-16	
Metals ICP					
Aluminum	11000		8.4	mg/kg dry	
Antimony	120		1.7	mg/kg dry	
Arsenic	11		0.68	mg/kg dry	
Barium	52		8.4	mg/kg dry	
Beryllium	0.29		0.25	mg/kg dry	
Cadmium	4.3		0.25	mg/kg dry	
Calcium	23000		42	mg/kg dry	
Chromium	28		0.42	mg/kg dry	
Cobalt	7.6		1.7	mg/kg dry	
Copper	83		0.84	mg/kg dry	
Iron	65000		42	mg/kg dry	
Lead	4600		0.68	mg/kg dry	
Magnesium	5700		42	mg/kg dry	
Manganese	510		0.42	mg/kg dry	
Nickel	28		1.7	mg/kg dry	
Potassium	450		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	

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Field ID: BRC001-AB011-0001-01				Sample ID: 1601035-16	
Metals ICP					
Silver	---	U	0.42	mg/kg dry	
Sodium	480		84	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	59		1.7	mg/kg dry	
Zinc	130		1.7	mg/kg dry	
Field ID: BRC001-AB011-0001-02				Sample ID: 1601035-17	
Metals ICP					
Aluminum	15000		8.2	mg/kg dry	
Antimony	150		1.6	mg/kg dry	
Arsenic	19		0.65	mg/kg dry	
Barium	78		8.2	mg/kg dry	
Beryllium	0.44		0.25	mg/kg dry	
Cadmium	7.2		0.25	mg/kg dry	
Calcium	28000		41	mg/kg dry	
Chromium	45		0.41	mg/kg dry	
Cobalt	8.6		1.6	mg/kg dry	
Copper	120		0.82	mg/kg dry	
Iron	55000		41	mg/kg dry	
Lead	5900		0.65	mg/kg dry	
Magnesium	6500		41	mg/kg dry	
Manganese	520		0.41	mg/kg dry	
Nickel	39		1.6	mg/kg dry	
Potassium	600		41	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.41	mg/kg dry	
Sodium	630		82	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB011-0001-02				Sample ID: 1601035-17	
Metals ICP					
Thallium	---	U	1.6	mg/kg dry	
Vanadium	80		1.6	mg/kg dry	
Zinc	250		1.6	mg/kg dry	
Field ID: BRC001-AB011-0612-01				Sample ID: 1601035-18	
Metals ICP					
Aluminum	5900		9.4	mg/kg dry	
Antimony	38		1.9	mg/kg dry	
Arsenic	9.6		0.75	mg/kg dry	
Barium	28		9.4	mg/kg dry	
Beryllium	0.47		0.28	mg/kg dry	
Cadmium	0.46		0.28	mg/kg dry	
Calcium	250000		470	mg/kg dry	
Chromium	38		0.47	mg/kg dry	
Cobalt	3.0		1.9	mg/kg dry	
Copper	28		0.94	mg/kg dry	
Iron	10000		4.7	mg/kg dry	
Lead	3300		0.75	mg/kg dry	
Magnesium	2200		47	mg/kg dry	
Manganese	170		0.47	mg/kg dry	
Nickel	11		1.9	mg/kg dry	
Potassium	190		47	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.47	mg/kg dry	
Sodium	130		94	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	40		1.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB011-0612-01				Sample ID: 1601035-18	
Metals ICP					
Zinc	22		1.9	mg/kg dry	
Field ID: BRC001-AB013-0001-01				Sample ID: 1601035-19	
Metals ICP					
Aluminum	6500		8.6	mg/kg dry	
Antimony	240		1.7	mg/kg dry	
Arsenic	35		0.69	mg/kg dry	
Barium	86		8.6	mg/kg dry	
Beryllium	0.42		0.26	mg/kg dry	
Cadmium	8.3		0.26	mg/kg dry	
Calcium	100000		430	mg/kg dry	
Chromium	89		0.43	mg/kg dry	
Cobalt	5.4		1.7	mg/kg dry	
Copper	76		0.86	mg/kg dry	
Iron	19000		4.3	mg/kg dry	
Lead	11000		6.9	mg/kg dry	
Magnesium	3500		43	mg/kg dry	
Manganese	240		0.43	mg/kg dry	
Nickel	37		1.7	mg/kg dry	
Potassium	450		43	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	360		86	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	71		1.7	mg/kg dry	
Zinc	330		1.7	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB013-0612-01				Sample ID: 1601035-20	
Metals ICP					
Aluminum	5600		9.4	mg/kg dry	
Antimony	3.3		1.9	mg/kg dry	
Arsenic	29		0.75	mg/kg dry	
Barium	---	U	9.4	mg/kg dry	
Beryllium	0.66		0.28	mg/kg dry	
Cadmium	0.36		0.28	mg/kg dry	
Calcium	230000		470	mg/kg dry	
Chromium	53		0.47	mg/kg dry	
Cobalt	3.1		1.9	mg/kg dry	
Copper	35		0.94	mg/kg dry	
Iron	16000		4.7	mg/kg dry	
Lead	150		0.75	mg/kg dry	
Magnesium	1700		47	mg/kg dry	
Manganese	110		0.47	mg/kg dry	
Nickel	11		1.9	mg/kg dry	
Potassium	220		47	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.47	mg/kg dry	
Sodium	110		94	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	68		1.9	mg/kg dry	
Zinc	18		1.9	mg/kg dry	
Field ID: BRC001-AB014-0001-01				Sample ID: 1601035-21	
Metals ICP					
Aluminum	9100		8.7	mg/kg dry	
Antimony	430		1.7	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB014-0001-01				Sample ID: 1601035-21	
Metals ICP					
Arsenic	59		0.70	mg/kg dry	
Barium	200		8.7	mg/kg dry	
Beryllium	0.72		0.26	mg/kg dry	
Cadmium	14		0.26	mg/kg dry	
Calcium	28000		43	mg/kg dry	
Chromium	57		0.43	mg/kg dry	
Cobalt	8.2		1.7	mg/kg dry	
Copper	180		0.87	mg/kg dry	
Iron	34000		4.3	mg/kg dry	
Lead	14000		7.0	mg/kg dry	
Magnesium	4300		43	mg/kg dry	
Manganese	410		0.43	mg/kg dry	
Nickel	44		1.7	mg/kg dry	
Potassium	1100		43	mg/kg dry	
Selenium	3.2		1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	550		87	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	130		1.7	mg/kg dry	
Zinc	690		1.7	mg/kg dry	
Field ID: BRC001-AB015-0106-01				Sample ID: 1601035-22	
Metals ICP					
Aluminum	12000		9.0	mg/kg dry	
Antimony	980		1.8	mg/kg dry	
Arsenic	210		0.72	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB015-0106-01				Sample ID: 1601035-22	
Metals ICP					
Barium	450		9.0	mg/kg dry	
Beryllium	0.40		0.27	mg/kg dry	
Cadmium	36		0.27	mg/kg dry	
Calcium	90000		450	mg/kg dry	
Chromium	170		0.45	mg/kg dry	
Cobalt	12		1.8	mg/kg dry	
Copper	300		0.90	mg/kg dry	
Iron	77000		45	mg/kg dry	
Lead	40000		7.2	mg/kg dry	
Magnesium	8700		45	mg/kg dry	
Manganese	600		0.45	mg/kg dry	
Nickel	160		1.8	mg/kg dry	
Potassium	450		45	mg/kg dry	
Selenium	17		1.8	mg/kg dry	
Silver	1.7		0.45	mg/kg dry	
Sodium	4800		90	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	86		1.8	mg/kg dry	
Zinc	560		1.8	mg/kg dry	
Field ID: BRC001-AB015-1218-01				Sample ID: 1601035-23	
Metals ICP					
Aluminum	13000		9.6	mg/kg dry	
Antimony	2.8		1.9	mg/kg dry	
Arsenic	6.4		0.77	mg/kg dry	
Barium	76		9.6	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB015-1218-01				Sample ID: 1601035-23	
Metals ICP					
Beryllium	0.64		0.29	mg/kg dry	
Cadmium	0.64		0.29	mg/kg dry	
Calcium	150000		480	mg/kg dry	
Chromium	32		0.48	mg/kg dry	
Cobalt	9.4		1.9	mg/kg dry	
Copper	70		0.96	mg/kg dry	
Iron	19000		4.8	mg/kg dry	
Lead	77		0.77	mg/kg dry	
Magnesium	4000		48	mg/kg dry	
Manganese	630		0.48	mg/kg dry	
Nickel	12		1.9	mg/kg dry	
Potassium	880		48	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.48	mg/kg dry	
Sodium	1700		96	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	64		1.9	mg/kg dry	
Zinc	52		1.9	mg/kg dry	
Field ID: BRC001-AB016-0001-01				Sample ID: 1601035-24	
Metals ICP					
Aluminum	9900		8.5	mg/kg dry	
Antimony	4300		1.7	mg/kg dry	
Arsenic	1400		0.68	mg/kg dry	
Barium	32		8.5	mg/kg dry	
Beryllium	---	U	0.26	mg/kg dry	
Cadmium	110		0.26	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB016-0001-01				Sample ID: 1601035-24	
Metals ICP					
Calcium	24000		43	mg/kg dry	
Chromium	110		0.43	mg/kg dry	
Cobalt	25		1.7	mg/kg dry	
Copper	1600		0.85	mg/kg dry	
Iron	250000		43	mg/kg dry	
Lead	52000		6.8	mg/kg dry	
Magnesium	3200		43	mg/kg dry	
Manganese	870		0.43	mg/kg dry	
Nickel	240		1.7	mg/kg dry	
Potassium	780		43	mg/kg dry	
Selenium	140		1.7	mg/kg dry	
Silver	3.2		0.43	mg/kg dry	
Sodium	19000		85	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	58		1.7	mg/kg dry	
Zinc	1200		1.7	mg/kg dry	
Field ID: BRC001-AB016-1824-01				Sample ID: 1601035-25	
Metals ICP					
Aluminum	8700		9.4	mg/kg dry	
Antimony	140		1.9	mg/kg dry	
Arsenic	39		0.75	mg/kg dry	
Barium	130		9.4	mg/kg dry	
Beryllium	0.52		0.28	mg/kg dry	
Cadmium	2.0		0.28	mg/kg dry	
Calcium	170000		470	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB016-1824-01				Sample ID: 1601035-25	
Metals ICP					
Chromium	220		0.47	mg/kg dry	
Cobalt	6.6		1.9	mg/kg dry	
Copper	390		0.94	mg/kg dry	
Iron	28000		4.7	mg/kg dry	
Lead	12000		7.5	mg/kg dry	
Magnesium	3100		47	mg/kg dry	
Manganese	350		0.47	mg/kg dry	
Nickel	36		1.9	mg/kg dry	
Potassium	510		47	mg/kg dry	
Selenium	3.0		1.9	mg/kg dry	
Silver	0.91		0.47	mg/kg dry	
Sodium	1700		94	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	54		1.9	mg/kg dry	
Zinc	980		1.9	mg/kg dry	
Field ID: BRC001-AB016-2430-01				Sample ID: 1601035-26	
Metals ICP					
Aluminum	9300		8.8	mg/kg dry	
Antimony	130		1.8	mg/kg dry	
Arsenic	21		0.71	mg/kg dry	
Barium	110		8.8	mg/kg dry	
Beryllium	0.47		0.26	mg/kg dry	
Cadmium	2.0		0.26	mg/kg dry	
Calcium	170000		440	mg/kg dry	
Chromium	350		0.44	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB016-2430-01				Sample ID: 1601035-26	
Metals ICP					
Cobalt	7.0		1.8	mg/kg dry	
Copper	250		0.88	mg/kg dry	
Iron	28000		4.4	mg/kg dry	
Lead	17000		7.1	mg/kg dry	
Magnesium	2800		44	mg/kg dry	
Manganese	450		0.44	mg/kg dry	
Nickel	32		1.8	mg/kg dry	
Potassium	500		44	mg/kg dry	
Selenium	2.2		1.8	mg/kg dry	
Silver	0.88		0.44	mg/kg dry	
Sodium	1200		88	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	58		1.8	mg/kg dry	
Zinc	510		1.8	mg/kg dry	
Field ID: BRC001-AB017-0001-01				Sample ID: 1601035-27	
Metals ICP					
Aluminum	7800		8.7	mg/kg dry	
Antimony	4100		1.7	mg/kg dry	
Arsenic	960		0.70	mg/kg dry	
Barium	53		8.7	mg/kg dry	
Beryllium	---	U	0.26	mg/kg dry	
Cadmium	84		0.26	mg/kg dry	
Calcium	35000		43	mg/kg dry	
Chromium	560		0.43	mg/kg dry	
Cobalt	26		1.7	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB017-0001-01				Sample ID: 1601035-27	
Metals ICP					
Copper	1400		0.87	mg/kg dry	
Iron	320000		43	mg/kg dry	
Lead	45000		7.0	mg/kg dry	
Magnesium	2400		43	mg/kg dry	
Manganese	1200		0.43	mg/kg dry	
Nickel	210		1.7	mg/kg dry	
Potassium	540		43	mg/kg dry	
Selenium	85		1.7	mg/kg dry	
Silver	2.9		0.43	mg/kg dry	
Sodium	16000		87	mg/kg dry	
Thallium	---	U	2.2	mg/kg dry	
Vanadium	36		1.7	mg/kg dry	
Zinc	890		1.7	mg/kg dry	
Field ID: BRC001-AB017-1218-01				Sample ID: 1601035-28	
Metals ICP					
Aluminum	7100		8.8	mg/kg dry	
Antimony	100		1.8	mg/kg dry	
Arsenic	42		0.71	mg/kg dry	
Barium	140		8.8	mg/kg dry	
Beryllium	0.54		0.27	mg/kg dry	
Cadmium	1.4		0.27	mg/kg dry	
Calcium	240000		440	mg/kg dry	
Chromium	140		0.44	mg/kg dry	
Cobalt	5.3		1.8	mg/kg dry	
Copper	300		0.88	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB017-1218-01				Sample ID: 1601035-28	
Metals ICP					
Iron	26000		4.4	mg/kg dry	
Lead	4700		0.71	mg/kg dry	
Magnesium	2600		44	mg/kg dry	
Manganese	310		0.44	mg/kg dry	
Nickel	28		1.8	mg/kg dry	
Potassium	490		44	mg/kg dry	
Selenium	3.2		1.8	mg/kg dry	
Silver	0.58		0.44	mg/kg dry	
Sodium	3400		88	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	40		1.8	mg/kg dry	
Zinc	140		1.8	mg/kg dry	
Field ID: BRC001-AB017-1824-01				Sample ID: 1601035-29	
Metals ICP					
Aluminum	10000		9.5	mg/kg dry	
Antimony	26		1.9	mg/kg dry	
Arsenic	13		0.76	mg/kg dry	
Barium	83		9.5	mg/kg dry	
Beryllium	0.47		0.28	mg/kg dry	
Cadmium	0.50		0.28	mg/kg dry	
Calcium	170000		470	mg/kg dry	
Chromium	47		0.47	mg/kg dry	
Cobalt	4.7		1.9	mg/kg dry	
Copper	130		0.95	mg/kg dry	
Iron	17000		4.7	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB017-1824-01				Sample ID: 1601035-29	
Metals ICP					
Lead	1400		0.76	mg/kg dry	
Magnesium	3200		47	mg/kg dry	
Manganese	280		0.47	mg/kg dry	
Nickel	13		1.9	mg/kg dry	
Potassium	510		47	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.47	mg/kg dry	
Sodium	1800		95	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	53		1.9	mg/kg dry	
Zinc	76		1.9	mg/kg dry	
Field ID: BRC001-AB018-0001-01				Sample ID: 1601035-30	
Metals ICP					
Aluminum	9100		8.6	mg/kg dry	
Antimony	4100		1.7	mg/kg dry	
Arsenic	760		0.69	mg/kg dry	
Barium	190		8.6	mg/kg dry	
Beryllium	---	U	0.26	mg/kg dry	
Cadmium	65		0.26	mg/kg dry	
Calcium	72000	J	43	mg/kg dry	
Chromium	500		0.43	mg/kg dry	
Cobalt	23		1.7	mg/kg dry	
Copper	1400		0.86	mg/kg dry	
Iron	210000		86	mg/kg dry	
Lead	42000		14	mg/kg dry	
Magnesium	3200		43	mg/kg dry	

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Field ID: BRC001-AB018-0001-01				Sample ID: 1601035-30	
Metals ICP					
Manganese	900		0.43	mg/kg dry	
Nickel	210		1.7	mg/kg dry	
Potassium	460		43	mg/kg dry	
Selenium	48		1.7	mg/kg dry	
Silver	2.3		0.43	mg/kg dry	
Sodium	11000		86	mg/kg dry	
Thallium	---	U J	1.7	mg/kg dry	
Vanadium	47		1.7	mg/kg dry	
Zinc	780		1.7	mg/kg dry	
Field ID: BRC001-AB019-0001-01				Sample ID: 1601035-31	
Metals ICP					
Aluminum	16000		7.9	mg/kg dry	
Antimony	530		1.6	mg/kg dry	
Arsenic	90		0.63	mg/kg dry	
Barium	200		7.9	mg/kg dry	
Beryllium	0.47		0.24	mg/kg dry	
Cadmium	12		0.24	mg/kg dry	
Calcium	40000		39	mg/kg dry	
Chromium	80		0.39	mg/kg dry	
Cobalt	13		1.6	mg/kg dry	
Copper	210		0.79	mg/kg dry	
Iron	50000		39	mg/kg dry	
Lead	17000		6.3	mg/kg dry	
Magnesium	8400		39	mg/kg dry	
Manganese	530		0.39	mg/kg dry	

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Field ID: BRC001-AB019-0001-01				Sample ID: 1601035-31	
Metals ICP					
Nickel	50		1.6	mg/kg dry	
Potassium	320		39	mg/kg dry	
Selenium	5.5		1.6	mg/kg dry	
Silver	0.61		0.39	mg/kg dry	
Sodium	1500		79	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	100		1.6	mg/kg dry	
Zinc	300		1.6	mg/kg dry	
Field ID: BRC001-AB019-0001-02				Sample ID: 1601035-32	
Metals ICP					
Aluminum	16000		7.9	mg/kg dry	
Antimony	410		1.6	mg/kg dry	
Arsenic	94		0.63	mg/kg dry	
Barium	200		7.9	mg/kg dry	
Beryllium	0.48		0.24	mg/kg dry	
Cadmium	11		0.24	mg/kg dry	
Calcium	46000		39	mg/kg dry	
Chromium	85		0.39	mg/kg dry	
Cobalt	13		1.6	mg/kg dry	
Copper	210		0.79	mg/kg dry	
Iron	52000		39	mg/kg dry	
Lead	16000		6.3	mg/kg dry	
Magnesium	8300		39	mg/kg dry	
Manganese	530		0.39	mg/kg dry	
Nickel	45		1.6	mg/kg dry	

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Field ID: BRC001-AB019-0001-02				Sample ID: 1601035-32	
Metals ICP					
Potassium	350		39	mg/kg dry	
Selenium	4.2		1.6	mg/kg dry	
Silver	0.64		0.39	mg/kg dry	
Sodium	1500		79	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	100		1.6	mg/kg dry	
Zinc	300		1.6	mg/kg dry	
Field ID: BRC001-AB019-1218-01				Sample ID: 1601035-33	
Metals ICP					
Aluminum	22000		10	mg/kg dry	
Antimony	---	U	2.0	mg/kg dry	
Arsenic	2.8		0.82	mg/kg dry	
Barium	150		10	mg/kg dry	
Beryllium	0.82		0.31	mg/kg dry	
Cadmium	0.69		0.31	mg/kg dry	
Calcium	9900		51	mg/kg dry	
Chromium	35		0.51	mg/kg dry	
Cobalt	15		2.0	mg/kg dry	
Copper	120		1.0	mg/kg dry	
Iron	30000		5.1	mg/kg dry	
Lead	55		0.82	mg/kg dry	
Magnesium	5700		51	mg/kg dry	
Manganese	810		0.51	mg/kg dry	
Nickel	17		2.0	mg/kg dry	
Potassium	1000		51	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB019-1218-01				Sample ID: 1601035-33	
Metals ICP					
Selenium	---	U	2.0	mg/kg dry	
Silver	---	U	0.51	mg/kg dry	
Sodium	680		100	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	100		2.0	mg/kg dry	
Zinc	100		2.0	mg/kg dry	
Field ID: BRC001-AB020-0001-01				Sample ID: 1601035-34	
Metals ICP					
Aluminum	21000		8.5	mg/kg dry	
Antimony	220		1.7	mg/kg dry	
Arsenic	65		0.68	mg/kg dry	
Barium	150		8.5	mg/kg dry	
Beryllium	0.64		0.25	mg/kg dry	
Cadmium	11		0.25	mg/kg dry	
Calcium	31000		42	mg/kg dry	
Chromium	40		0.42	mg/kg dry	
Cobalt	14		1.7	mg/kg dry	
Copper	150		0.85	mg/kg dry	
Iron	51000		42	mg/kg dry	
Lead	12000		6.8	mg/kg dry	
Magnesium	9600		42	mg/kg dry	
Manganese	600		0.42	mg/kg dry	
Nickel	36		1.7	mg/kg dry	
Potassium	710		42	mg/kg dry	
Selenium	3.6		1.7	mg/kg dry	

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Field ID: BRC001-AB020-0001-01				Sample ID: 1601035-34	
Metals ICP					
Silver	0.42		0.42	mg/kg dry	
Sodium	850		85	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	140		1.7	mg/kg dry	
Zinc	180		1.7	mg/kg dry	
Field ID: BRC001-AB020-1824-01				Sample ID: 1601035-35	
Metals ICP					
Aluminum	26000		10	mg/kg dry	
Antimony	---	U	2.0	mg/kg dry	
Arsenic	1.6		0.81	mg/kg dry	
Barium	170		10	mg/kg dry	
Beryllium	0.92		0.31	mg/kg dry	
Cadmium	0.64		0.31	mg/kg dry	
Calcium	6700		51	mg/kg dry	
Chromium	36		0.51	mg/kg dry	
Cobalt	15		2.0	mg/kg dry	
Copper	130		1.0	mg/kg dry	
Iron	31000		5.1	mg/kg dry	
Lead	13		0.81	mg/kg dry	
Magnesium	6600		51	mg/kg dry	
Manganese	770		0.51	mg/kg dry	
Nickel	19		2.0	mg/kg dry	
Potassium	830		51	mg/kg dry	
Selenium	---	U	2.0	mg/kg dry	
Silver	---	U	0.51	mg/kg dry	
Sodium	550		100	mg/kg dry	

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Field ID: BRC001-AB020-1824-01				Sample ID: 1601035-35	
Metals ICP					
Thallium	---	U	2.0	mg/kg dry	
Vanadium	110		2.0	mg/kg dry	
Zinc	95		2.0	mg/kg dry	
Field ID: BRC001-AB022-0612-01				Sample ID: 1601035-36	
Metals ICP					
Aluminum	20000		9.2	mg/kg dry	
Antimony	---	U	1.8	mg/kg dry	
Arsenic	4.4		0.74	mg/kg dry	
Barium	160		9.2	mg/kg dry	
Beryllium	0.89		0.28	mg/kg dry	
Cadmium	0.63		0.28	mg/kg dry	
Calcium	5400		46	mg/kg dry	
Chromium	35		0.46	mg/kg dry	
Cobalt	14		1.8	mg/kg dry	
Copper	120		0.92	mg/kg dry	
Iron	33000	J	4.6	mg/kg dry	
Lead	21		0.74	mg/kg dry	
Magnesium	5900		46	mg/kg dry	
Manganese	800		0.46	mg/kg dry	
Nickel	16		1.8	mg/kg dry	
Potassium	800		46	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.46	mg/kg dry	
Sodium	890		92	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	110		1.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB022-0612-01				Sample ID: 1601035-36	
Metals ICP					
Zinc	88	J	1.8	mg/kg dry	
Field ID: BRC001-AB023-0612-01				Sample ID: 1601035-37	
Metals ICP					
Aluminum	11000		9.3	mg/kg dry	
Antimony	19		1.9	mg/kg dry	
Arsenic	5.6		0.75	mg/kg dry	
Barium	30		9.3	mg/kg dry	
Beryllium	0.54		0.28	mg/kg dry	
Cadmium	9.9		0.28	mg/kg dry	
Calcium	170000		470	mg/kg dry	
Chromium	26		0.47	mg/kg dry	
Cobalt	6.7		1.9	mg/kg dry	
Copper	42		0.93	mg/kg dry	
Iron	15000		4.7	mg/kg dry	
Lead	1300		0.75	mg/kg dry	
Magnesium	4900		47	mg/kg dry	
Manganese	270		0.47	mg/kg dry	
Nickel	19		1.9	mg/kg dry	
Potassium	290		47	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.47	mg/kg dry	
Sodium	430		93	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	60		1.9	mg/kg dry	
Zinc	43		1.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB024-0001-01				Sample ID: 1601035-38	
Metals ICP					
Aluminum	14000		8.6	mg/kg dry	
Antimony	330		1.7	mg/kg dry	
Arsenic	42		0.69	mg/kg dry	
Barium	140		8.6	mg/kg dry	
Beryllium	0.31		0.26	mg/kg dry	
Cadmium	11		0.26	mg/kg dry	
Calcium	27000		43	mg/kg dry	
Chromium	250		0.43	mg/kg dry	
Cobalt	14		1.7	mg/kg dry	
Copper	260		0.86	mg/kg dry	
Iron	120000		43	mg/kg dry	
Lead	25000		6.9	mg/kg dry	
Magnesium	11000		43	mg/kg dry	
Manganese	790		0.43	mg/kg dry	
Nickel	72		1.7	mg/kg dry	
Potassium	310		43	mg/kg dry	
Selenium	3.4		1.7	mg/kg dry	
Silver	1.1		0.43	mg/kg dry	
Sodium	720		86	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	94		1.7	mg/kg dry	
Zinc	300		1.7	mg/kg dry	
Field ID: BRC001-AB025-1218-01				Sample ID: 1601035-39	
Metals ICP					
Aluminum	22000		10	mg/kg dry	

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Field ID: BRC001-AB025-1218-01				Sample ID: 1601035-39	
Metals ICP					
Antimony	---	U	2.1	mg/kg dry	
Arsenic	3.2		0.84	mg/kg dry	
Barium	190		10	mg/kg dry	
Beryllium	0.90		0.31	mg/kg dry	
Cadmium	0.59		0.31	mg/kg dry	
Calcium	18000		52	mg/kg dry	
Chromium	35		0.52	mg/kg dry	
Cobalt	17		2.1	mg/kg dry	
Copper	140		1.0	mg/kg dry	
Iron	31000		5.2	mg/kg dry	
Lead	22		0.84	mg/kg dry	
Magnesium	6000		52	mg/kg dry	
Manganese	760		0.52	mg/kg dry	
Nickel	17		2.1	mg/kg dry	
Potassium	830		52	mg/kg dry	
Selenium	---	U	2.1	mg/kg dry	
Silver	---	U	0.52	mg/kg dry	
Sodium	1100		100	mg/kg dry	
Thallium	---	U	2.1	mg/kg dry	
Vanadium	110		2.1	mg/kg dry	
Zinc	85		2.1	mg/kg dry	
Field ID: BRC001-AB025-2430-01				Sample ID: 1601035-40	
Metals ICP					
Aluminum	21000		11	mg/kg dry	
Antimony	---	U	2.1	mg/kg dry	
Arsenic	2.9		0.85	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB025-2430-01				Sample ID: 1601035-40	
Metals ICP					
Barium	170		11	mg/kg dry	
Beryllium	0.93		0.32	mg/kg dry	
Cadmium	0.62		0.32	mg/kg dry	
Calcium	4900		53	mg/kg dry	
Chromium	34		0.53	mg/kg dry	
Cobalt	17		2.1	mg/kg dry	
Copper	130		1.1	mg/kg dry	
Iron	31000		5.3	mg/kg dry	
Lead	13		0.85	mg/kg dry	
Magnesium	6100		53	mg/kg dry	
Manganese	960		0.53	mg/kg dry	
Nickel	17		2.1	mg/kg dry	
Potassium	860		53	mg/kg dry	
Selenium	---	U	2.1	mg/kg dry	
Silver	---	U	0.53	mg/kg dry	
Sodium	1300		110	mg/kg dry	
Thallium	---	U	2.1	mg/kg dry	
Vanadium	110		2.1	mg/kg dry	
Zinc	89		2.1	mg/kg dry	
Field ID: BRC001-AB025-3036-01				Sample ID: 1601035-41	
Metals ICP					
Aluminum	25000		9.9	mg/kg dry	
Antimony	---	U	2.0	mg/kg dry	
Arsenic	3.2		0.80	mg/kg dry	
Barium	140		9.9	mg/kg dry	
Beryllium	0.99		0.30	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB025-3036-01				Sample ID: 1601035-41	
Metals ICP					
Cadmium	0.57		0.30	mg/kg dry	
Calcium	8100		50	mg/kg dry	
Chromium	35		0.50	mg/kg dry	
Cobalt	17		2.0	mg/kg dry	
Copper	150		0.99	mg/kg dry	
Iron	35000		5.0	mg/kg dry	
Lead	10		0.80	mg/kg dry	
Magnesium	6700		50	mg/kg dry	
Manganese	1400		0.50	mg/kg dry	
Nickel	19		2.0	mg/kg dry	
Potassium	610		50	mg/kg dry	
Selenium	---	U	2.0	mg/kg dry	
Silver	---	U	0.50	mg/kg dry	
Sodium	1600		99	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	110		2.0	mg/kg dry	
Zinc	91		2.0	mg/kg dry	
Field ID: BRC001-AB026-0612-01				Sample ID: 1601035-42	
Metals ICP					
Aluminum	3100		8.6	mg/kg dry	
Antimony	86		1.7	mg/kg dry	
Arsenic	37		0.69	mg/kg dry	
Barium	120		8.6	mg/kg dry	
Beryllium	0.41		0.26	mg/kg dry	
Cadmium	1.3		0.26	mg/kg dry	

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Field ID: BRC001-AB026-0612-01				Sample ID: 1601035-42	
Metals ICP					
Calcium	300000		430	mg/kg dry	
Chromium	27		0.43	mg/kg dry	
Cobalt	2.6		1.7	mg/kg dry	
Copper	150		0.86	mg/kg dry	
Iron	12000		4.3	mg/kg dry	
Lead	5500		0.69	mg/kg dry	
Magnesium	2600		43	mg/kg dry	
Manganese	140		0.43	mg/kg dry	
Nickel	13		1.7	mg/kg dry	
Potassium	110		43	mg/kg dry	
Selenium	4.6		1.7	mg/kg dry	
Silver	0.47		0.43	mg/kg dry	
Sodium	320		86	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	22		1.7	mg/kg dry	
Zinc	48		1.7	mg/kg dry	
Field ID: BRC001-AB026-1218-01				Sample ID: 1601035-43	
Metals ICP					
Aluminum	13000		9.2	mg/kg dry	
Antimony	---	U	1.8	mg/kg dry	
Arsenic	8.7		0.74	mg/kg dry	
Barium	76		9.2	mg/kg dry	
Beryllium	0.85		0.28	mg/kg dry	
Cadmium	0.61		0.28	mg/kg dry	
Calcium	140000		460	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-AB026-1218-01				Sample ID: 1601035-43	
Metals ICP					
Chromium	38		0.46	mg/kg dry	
Cobalt	8.8		1.8	mg/kg dry	
Copper	65		0.92	mg/kg dry	
Iron	24000		4.6	mg/kg dry	
Lead	93		0.74	mg/kg dry	
Magnesium	4000		46	mg/kg dry	
Manganese	620		0.46	mg/kg dry	
Nickel	14		1.8	mg/kg dry	
Potassium	1100		46	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.46	mg/kg dry	
Sodium	1200		92	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	110		1.8	mg/kg dry	
Zinc	110		1.8	mg/kg dry	
Field ID: BRC001-GB035-0106-01				Sample ID: 1601035-44	
Metals ICP					
Aluminum	14000		9.0	mg/kg dry	
Antimony	3.6		1.8	mg/kg dry	
Arsenic	5.8		0.72	mg/kg dry	
Barium	25		9.0	mg/kg dry	
Beryllium	0.65		0.27	mg/kg dry	
Cadmium	0.49		0.27	mg/kg dry	
Calcium	120000		450	mg/kg dry	
Chromium	14		0.45	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB035-0106-01				Sample ID: 1601035-44	
Metals ICP					
Cobalt	8.7		1.8	mg/kg dry	
Copper	69		0.90	mg/kg dry	
Iron	21000		4.5	mg/kg dry	
Lead	270		0.72	mg/kg dry	
Magnesium	6700		45	mg/kg dry	
Manganese	450		0.45	mg/kg dry	
Nickel	9.8		1.8	mg/kg dry	
Potassium	270		45	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	240		90	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	96		1.8	mg/kg dry	
Zinc	42		1.8	mg/kg dry	
Field ID: BRC001-GB036-0001-01				Sample ID: 1601035-45	
Metals ICP					
Aluminum	20000		8.4	mg/kg dry	
Antimony	7.9		1.7	mg/kg dry	
Arsenic	3.9		0.67	mg/kg dry	
Barium	25		8.4	mg/kg dry	
Beryllium	0.79		0.25	mg/kg dry	
Cadmium	0.91		0.25	mg/kg dry	
Calcium	50000		42	mg/kg dry	
Chromium	16		0.42	mg/kg dry	
Cobalt	12		1.7	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB036-0001-01				Sample ID: 1601035-45	
Metals ICP					
Copper	87		0.84	mg/kg dry	
Iron	32000		4.2	mg/kg dry	
Lead	550		0.67	mg/kg dry	
Magnesium	10000		42	mg/kg dry	
Manganese	590		0.42	mg/kg dry	
Nickel	13		1.7	mg/kg dry	
Potassium	320		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	400		84	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	140		1.7	mg/kg dry	
Zinc	59		1.7	mg/kg dry	
Field ID: BRC001-GB037-0001-01				Sample ID: 1601035-46	
Metals ICP					
Aluminum	19000		7.9	mg/kg dry	
Antimony	3.1		1.6	mg/kg dry	
Arsenic	3.3		0.63	mg/kg dry	
Barium	25		7.9	mg/kg dry	
Beryllium	0.72		0.24	mg/kg dry	
Cadmium	0.54		0.24	mg/kg dry	
Calcium	37000		39	mg/kg dry	
Chromium	15		0.39	mg/kg dry	
Cobalt	11		1.6	mg/kg dry	
Copper	80		0.79	mg/kg dry	

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Field ID: BRC001-GB037-0001-01				Sample ID: 1601035-46	
Metals ICP					
Iron	25000		3.9	mg/kg dry	
Lead	260		0.63	mg/kg dry	
Magnesium	9000		39	mg/kg dry	
Manganese	500		0.39	mg/kg dry	
Nickel	13		1.6	mg/kg dry	
Potassium	280		39	mg/kg dry	
Selenium	---	U	1.6	mg/kg dry	
Silver	---	U	0.39	mg/kg dry	
Sodium	490		79	mg/kg dry	
Thallium	---	U	1.6	mg/kg dry	
Vanadium	130		1.6	mg/kg dry	
Zinc	90		1.6	mg/kg dry	
Field ID: BRC001-GB037-0106-01				Sample ID: 1601035-47	
Metals ICP					
Aluminum	14000		8.3	mg/kg dry	
Antimony	---	U	1.7	mg/kg dry	
Arsenic	5.4		0.67	mg/kg dry	
Barium	19		8.3	mg/kg dry	
Beryllium	0.64		0.25	mg/kg dry	
Cadmium	0.26		0.25	mg/kg dry	
Calcium	120000		420	mg/kg dry	
Chromium	14		0.42	mg/kg dry	
Cobalt	7.7		1.7	mg/kg dry	
Copper	59		0.83	mg/kg dry	
Iron	19000		4.2	mg/kg dry	
Lead	47		0.67	mg/kg dry	

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Field ID: BRC001-GB037-0106-01				Sample ID: 1601035-47	
Metals ICP					
Magnesium	6400		42	mg/kg dry	
Manganese	400		0.42	mg/kg dry	
Nickel	9.7		1.7	mg/kg dry	
Potassium	230		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	370		83	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	98		1.7	mg/kg dry	
Zinc	36		1.7	mg/kg dry	
Field ID: BRC001-GB038-0001-01				Sample ID: 1601035-48	
Metals ICP					
Aluminum	4400		9.2	mg/kg dry	
Antimony	6.7		1.8	mg/kg dry	
Arsenic	17		0.73	mg/kg dry	
Barium	23		9.2	mg/kg dry	
Beryllium	0.58		0.27	mg/kg dry	
Cadmium	0.59		0.27	mg/kg dry	
Calcium	250000		460	mg/kg dry	
Chromium	34		0.46	mg/kg dry	
Cobalt	3.4		1.8	mg/kg dry	
Copper	60		0.92	mg/kg dry	
Iron	12000		4.6	mg/kg dry	
Lead	650		0.73	mg/kg dry	
Magnesium	2500		46	mg/kg dry	

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Field ID: BRC001-GB038-0001-01				Sample ID: 1601035-48	
Metals ICP					
Manganese	250		0.46	mg/kg dry	
Nickel	12		1.8	mg/kg dry	
Potassium	600		46	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.46	mg/kg dry	
Sodium	---	U	92	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	46		1.8	mg/kg dry	
Zinc	54		1.8	mg/kg dry	
Field ID: BRC001-GB039-0612-01				Sample ID: 1601035-49	
Metals ICP					
Aluminum	2900		8.5	mg/kg dry	
Antimony	4.2		1.7	mg/kg dry	
Arsenic	19		0.68	mg/kg dry	
Barium	11		8.5	mg/kg dry	
Beryllium	0.50		0.26	mg/kg dry	
Cadmium	---	U	0.26	mg/kg dry	
Calcium	280000		430	mg/kg dry	
Chromium	27		0.43	mg/kg dry	
Cobalt	1.7		1.7	mg/kg dry	
Copper	20		0.85	mg/kg dry	
Iron	7900		4.3	mg/kg dry	
Lead	270		0.68	mg/kg dry	
Magnesium	2400		43	mg/kg dry	
Manganese	170		0.43	mg/kg dry	
Nickel	8.0		1.7	mg/kg dry	

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Field ID: BRC001-GB039-0612-01				Sample ID: 1601035-49	
Metals ICP					
Potassium	190		43	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	---	U	85	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	33		1.7	mg/kg dry	
Zinc	17		1.7	mg/kg dry	
Field ID: BRC001-GB040-0001-01				Sample ID: 1601035-50	
Metals ICP					
Aluminum	13000		8.7	mg/kg dry	
Antimony	---	U	1.7	mg/kg dry	
Arsenic	4.0		0.70	mg/kg dry	
Barium	130		8.7	mg/kg dry	
Beryllium	0.80		0.26	mg/kg dry	
Cadmium	0.82		0.26	mg/kg dry	
Calcium	51000		43	mg/kg dry	
Chromium	26		0.43	mg/kg dry	
Cobalt	13		1.7	mg/kg dry	
Copper	79		0.87	mg/kg dry	
Iron	23000		4.3	mg/kg dry	
Lead	43		0.70	mg/kg dry	
Magnesium	3700		43	mg/kg dry	
Manganese	660		0.43	mg/kg dry	
Nickel	14		1.7	mg/kg dry	
Potassium	1600		43	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	

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Field ID: BRC001-GB040-0001-01				Sample ID: 1601035-50	
Metals ICP					
Silver	---	U	0.43	mg/kg dry	
Sodium	130		87	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	83		1.7	mg/kg dry	
Zinc	97		1.7	mg/kg dry	
Field ID: BRC001-GB041-0001-01				Sample ID: 1601035-51	
Metals ICP					
Aluminum	17000		10	mg/kg dry	
Antimony	62		2.0	mg/kg dry	
Arsenic	14		0.80	mg/kg dry	
Barium	76		10	mg/kg dry	
Beryllium	0.71		0.30	mg/kg dry	
Cadmium	13		0.30	mg/kg dry	
Calcium	140000		500	mg/kg dry	
Chromium	27		0.50	mg/kg dry	
Cobalt	12		2.0	mg/kg dry	
Copper	110		1.0	mg/kg dry	
Iron	24000		5.0	mg/kg dry	
Lead	2500		0.80	mg/kg dry	
Magnesium	7300		50	mg/kg dry	
Manganese	560		0.50	mg/kg dry	
Nickel	33		2.0	mg/kg dry	
Potassium	890		50	mg/kg dry	
Selenium	2.1		2.0	mg/kg dry	
Silver	---	U	0.50	mg/kg dry	

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Field ID: BRC001-GB041-0001-01				Sample ID: 1601035-51	
Metals ICP					
Sodium	260		100	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	93		2.0	mg/kg dry	
Zinc	140		2.0	mg/kg dry	
Field ID: BRC001-GB042-0612-01				Sample ID: 1601035-52	
Metals ICP					
Aluminum	20000		9.5	mg/kg dry	
Antimony	69		1.9	mg/kg dry	
Arsenic	13		0.76	mg/kg dry	
Barium	140		9.5	mg/kg dry	
Beryllium	0.86		0.29	mg/kg dry	
Cadmium	19		0.29	mg/kg dry	
Calcium	14000		48	mg/kg dry	
Chromium	35		0.48	mg/kg dry	
Cobalt	18		1.9	mg/kg dry	
Copper	130		0.95	mg/kg dry	
Iron	32000		4.8	mg/kg dry	
Lead	2200		0.76	mg/kg dry	
Magnesium	5800		48	mg/kg dry	
Manganese	1000		0.48	mg/kg dry	
Nickel	48		1.9	mg/kg dry	
Potassium	1000		48	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.48	mg/kg dry	
Sodium	250		95	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB042-0612-01				Sample ID: 1601035-52	
Metals ICP					
Vanadium	110		1.9	mg/kg dry	
Zinc	140		1.9	mg/kg dry	
Field ID: BRC001-GB043-0106-01				Sample ID: 1601035-53	
Metals ICP					
Aluminum	14000		8.8	mg/kg dry	
Antimony	72		1.8	mg/kg dry	
Arsenic	12		0.71	mg/kg dry	
Barium	130		8.8	mg/kg dry	
Beryllium	0.79		0.26	mg/kg dry	
Cadmium	42		0.26	mg/kg dry	
Calcium	35000		44	mg/kg dry	
Chromium	26		0.44	mg/kg dry	
Cobalt	18		1.8	mg/kg dry	
Copper	93		0.88	mg/kg dry	
Iron	25000		4.4	mg/kg dry	
Lead	2600		0.71	mg/kg dry	
Magnesium	4800		44	mg/kg dry	
Manganese	880		0.44	mg/kg dry	
Nickel	90		1.8	mg/kg dry	
Potassium	1000		44	mg/kg dry	
Selenium	2.7		1.8	mg/kg dry	
Silver	---	U	0.44	mg/kg dry	
Sodium	320		88	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	85		1.8	mg/kg dry	

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Field ID: BRC001-GB043-0106-01				Sample ID: 1601035-53	
Metals ICP					
Zinc	180		1.8	mg/kg dry	
Field ID: BRC001-GB044-0001-01				Sample ID: 1601035-54	
Metals ICP					
Aluminum	15000		13	mg/kg dry	
Antimony	440		2.5	mg/kg dry	
Arsenic	54		1.0	mg/kg dry	
Barium	140		13	mg/kg dry	
Beryllium	0.73		0.38	mg/kg dry	
Cadmium	190		0.38	mg/kg dry	
Calcium	36000		63	mg/kg dry	
Chromium	61		0.63	mg/kg dry	
Cobalt	23		2.5	mg/kg dry	
Copper	250		1.3	mg/kg dry	
Iron	24000		6.3	mg/kg dry	
Lead	33000		10	mg/kg dry	
Magnesium	5400		63	mg/kg dry	
Manganese	410		0.63	mg/kg dry	
Nickel	360		2.5	mg/kg dry	
Potassium	2000		63	mg/kg dry	
Selenium	70		2.5	mg/kg dry	
Silver	1.5		0.63	mg/kg dry	
Sodium	260		130	mg/kg dry	
Thallium	---	U	2.5	mg/kg dry	
Vanadium	98		2.5	mg/kg dry	
Zinc	920		2.5	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB045-0001-01				Sample ID: 1601035-55	
Metals ICP					
Aluminum	12000		9.6	mg/kg dry	
Antimony	220		1.9	mg/kg dry	
Arsenic	41		0.77	mg/kg dry	
Barium	120		9.6	mg/kg dry	
Beryllium	0.60		0.29	mg/kg dry	
Cadmium	92		0.29	mg/kg dry	
Calcium	29000		48	mg/kg dry	
Chromium	35		0.48	mg/kg dry	
Cobalt	17		1.9	mg/kg dry	
Copper	140		0.96	mg/kg dry	
Iron	23000		4.8	mg/kg dry	
Lead	18000		7.7	mg/kg dry	
Magnesium	4300		48	mg/kg dry	
Manganese	610		0.48	mg/kg dry	
Nickel	170		1.9	mg/kg dry	
Potassium	1600		48	mg/kg dry	
Selenium	18		1.9	mg/kg dry	
Silver	0.73		0.48	mg/kg dry	
Sodium	330		96	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	76		1.9	mg/kg dry	
Zinc	450		1.9	mg/kg dry	
Field ID: BRC001-GB046-0106-01				Sample ID: 1601035-56	
Metals ICP					
Aluminum	16000		9.7	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-GB046-0106-01				Sample ID: 1601035-56	
Metals ICP					
Antimony	50		1.9	mg/kg dry	
Arsenic	15		0.78	mg/kg dry	
Barium	100		9.7	mg/kg dry	
Beryllium	0.63		0.29	mg/kg dry	
Cadmium	16		0.29	mg/kg dry	
Calcium	32000		49	mg/kg dry	
Chromium	31		0.49	mg/kg dry	
Cobalt	12		1.9	mg/kg dry	
Copper	100		0.97	mg/kg dry	
Iron	23000		4.9	mg/kg dry	
Lead	3000		0.78	mg/kg dry	
Magnesium	4800		49	mg/kg dry	
Manganese	680		0.49	mg/kg dry	
Nickel	49		1.9	mg/kg dry	
Potassium	2200		49	mg/kg dry	
Selenium	2.6		1.9	mg/kg dry	
Silver	0.65		0.49	mg/kg dry	
Sodium	450		97	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	79		1.9	mg/kg dry	
Zinc	160		1.9	mg/kg dry	
Field ID: BRC001-SB005A-6066-01				Sample ID: 1601035-57	
Metals ICP					
Aluminum	6800		9.3	mg/kg dry	
Antimony	500		1.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB005A-6066-01				Sample ID: 1601035-57	
Metals ICP					
Arsenic	120		0.75	mg/kg dry	
Barium	420		9.3	mg/kg dry	
Beryllium	0.42		0.28	mg/kg dry	
Cadmium	13		0.28	mg/kg dry	
Calcium	190000		470	mg/kg dry	
Chromium	120		0.47	mg/kg dry	
Cobalt	7.9		1.9	mg/kg dry	
Copper	480		0.93	mg/kg dry	
Iron	66000		47	mg/kg dry	
Lead	31000		7.5	mg/kg dry	
Magnesium	22000		47	mg/kg dry	
Manganese	560		0.47	mg/kg dry	
Nickel	73		1.9	mg/kg dry	
Potassium	300		47	mg/kg dry	
Selenium	9.0		1.9	mg/kg dry	
Silver	1.6		0.47	mg/kg dry	
Sodium	1300		93	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	47		1.9	mg/kg dry	
Zinc	420		1.9	mg/kg dry	
Field ID: BRC001-SB005A-6672-01				Sample ID: 1601035-58	
Metals ICP					
Aluminum	9700		8.9	mg/kg dry	
Antimony	500		1.8	mg/kg dry	
Arsenic	170		0.71	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB005A-6672-01				Sample ID: 1601035-58	
Metals ICP					
Barium	630		8.9	mg/kg dry	
Beryllium	0.40		0.27	mg/kg dry	
Cadmium	12		0.27	mg/kg dry	
Calcium	190000		440	mg/kg dry	
Chromium	130		0.44	mg/kg dry	
Cobalt	12		1.8	mg/kg dry	
Copper	560		0.89	mg/kg dry	
Iron	87000		44	mg/kg dry	
Lead	18000		7.1	mg/kg dry	
Magnesium	5200		44	mg/kg dry	
Manganese	700		0.44	mg/kg dry	
Nickel	120		1.8	mg/kg dry	
Potassium	430		44	mg/kg dry	
Selenium	13		1.8	mg/kg dry	
Silver	1.0		0.44	mg/kg dry	
Sodium	1400		89	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	45		1.8	mg/kg dry	
Zinc	340		1.8	mg/kg dry	
Field ID: BRC001-SB005A-7278-01				Sample ID: 1601035-59	
Metals ICP					
Aluminum	29000		9.8	mg/kg dry	
Antimony	130		2.0	mg/kg dry	
Arsenic	58		0.78	mg/kg dry	
Barium	430		9.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB005A-7278-01				Sample ID: 1601035-59	
Metals ICP					
Beryllium	0.96		0.29	mg/kg dry	
Cadmium	4.0		0.29	mg/kg dry	
Calcium	12000		49	mg/kg dry	
Chromium	59		0.49	mg/kg dry	
Cobalt	20		2.0	mg/kg dry	
Copper	430		0.98	mg/kg dry	
Iron	57000		49	mg/kg dry	
Lead	4000		0.78	mg/kg dry	
Magnesium	10000		49	mg/kg dry	
Manganese	1200		0.49	mg/kg dry	
Nickel	39		2.0	mg/kg dry	
Potassium	820		49	mg/kg dry	
Selenium	8.8		2.0	mg/kg dry	
Silver	---	U	0.49	mg/kg dry	
Sodium	4300		98	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	110		2.0	mg/kg dry	
Zinc	180		2.0	mg/kg dry	
Field ID: BRC001-SB008A-0001-01				Sample ID: 1601035-60	
Metals ICP					
Aluminum	6900		8.7	mg/kg dry	
Antimony	2.3		1.7	mg/kg dry	
Arsenic	7.4		0.70	mg/kg dry	
Barium	27		8.7	mg/kg dry	
Beryllium	0.50		0.26	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB008A-0001-01				Sample ID: 1601035-60	
Metals ICP					
Cadmium	0.27		0.26	mg/kg dry	
Calcium	260000		430	mg/kg dry	
Chromium	33		0.43	mg/kg dry	
Cobalt	2.3		1.7	mg/kg dry	
Copper	12		0.87	mg/kg dry	
Iron	13000		4.3	mg/kg dry	
Lead	260		0.70	mg/kg dry	
Magnesium	2500		43	mg/kg dry	
Manganese	110		0.43	mg/kg dry	
Nickel	8.1		1.7	mg/kg dry	
Potassium	620		43	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	140		87	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	22		1.7	mg/kg dry	
Zinc	24		1.7	mg/kg dry	
Field ID: BRC001-SB008A-2430-01				Sample ID: 1601035-61	
Metals ICP					
Aluminum	8300		9.2	mg/kg dry	
Antimony	270		1.8	mg/kg dry	
Arsenic	47		0.73	mg/kg dry	
Barium	110		9.2	mg/kg dry	
Beryllium	0.55		0.28	mg/kg dry	
Cadmium	6.2		0.28	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB008A-2430-01				Sample ID: 1601035-61	
Metals ICP					
Calcium	220000		460	mg/kg dry	
Chromium	67		0.46	mg/kg dry	
Cobalt	5.7		1.8	mg/kg dry	
Copper	190		0.92	mg/kg dry	
Iron	20000		4.6	mg/kg dry	
Lead	29000		7.3	mg/kg dry	
Magnesium	2900		46	mg/kg dry	
Manganese	350		0.46	mg/kg dry	
Nickel	32		1.8	mg/kg dry	
Potassium	340		46	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	1.2		0.46	mg/kg dry	
Sodium	1300		92	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	49		1.8	mg/kg dry	
Zinc	110		1.8	mg/kg dry	
Field ID: BRC001-SB032-0001-01				Sample ID: 1601035-62	
Metals ICP					
Aluminum	20000		8.3	mg/kg dry	
Antimony	790		1.7	mg/kg dry	
Arsenic	190		0.67	mg/kg dry	
Barium	330		8.3	mg/kg dry	
Beryllium	0.71		0.25	mg/kg dry	
Cadmium	34		0.25	mg/kg dry	
Calcium	40000		42	mg/kg dry	

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Field ID: BRC001-SB032-0001-01				Sample ID: 1601035-62	
Metals ICP					
Chromium	62		0.42	mg/kg dry	
Cobalt	15		1.7	mg/kg dry	
Copper	260		0.83	mg/kg dry	
Iron	49000		42	mg/kg dry	
Lead	33000		6.7	mg/kg dry	
Magnesium	9900		42	mg/kg dry	
Manganese	530		0.42	mg/kg dry	
Nickel	71		1.7	mg/kg dry	
Potassium	560		42	mg/kg dry	
Selenium	9.8		1.7	mg/kg dry	
Silver	1.1		0.42	mg/kg dry	
Sodium	930		83	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	130		1.7	mg/kg dry	
Zinc	470		1.7	mg/kg dry	
Field ID: BRC001-SB032-0612-01				Sample ID: 1601035-63	
Metals ICP					
Aluminum	2800		8.9	mg/kg dry	
Antimony	11		1.8	mg/kg dry	
Arsenic	4.9		0.71	mg/kg dry	
Barium	14		8.9	mg/kg dry	
Beryllium	0.43		0.27	mg/kg dry	
Cadmium	1.8		0.27	mg/kg dry	
Calcium	310000		440	mg/kg dry	
Chromium	19		0.44	mg/kg dry	

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Field ID: BRC001-SB032-0612-01				Sample ID: 1601035-63	
Metals ICP					
Cobalt	2.0		1.8	mg/kg dry	
Copper	15		0.89	mg/kg dry	
Iron	4700		4.4	mg/kg dry	
Lead	860		0.71	mg/kg dry	
Magnesium	2100		44	mg/kg dry	
Manganese	77		0.44	mg/kg dry	
Nickel	4.5		1.8	mg/kg dry	
Potassium	86		44	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.44	mg/kg dry	
Sodium	130		89	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	20		1.8	mg/kg dry	
Zinc	15		1.8	mg/kg dry	
Field ID: BRC001-SB033-0001-01				Sample ID: 1601035-64	
Metals ICP					
Aluminum	1300		8.9	mg/kg dry	
Antimony	5.1		1.8	mg/kg dry	
Arsenic	4.6		0.72	mg/kg dry	
Barium	9.7		8.9	mg/kg dry	
Beryllium	0.39		0.27	mg/kg dry	
Cadmium	0.64		0.27	mg/kg dry	
Calcium	330000		450	mg/kg dry	
Chromium	20		0.45	mg/kg dry	
Cobalt	---	U	1.8	mg/kg dry	
Copper	5.8		0.89	mg/kg dry	

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Field ID: BRC001-SB033-0001-01				Sample ID: 1601035-64	
Metals ICP					
Iron	2900		4.5	mg/kg dry	
Lead	500		0.72	mg/kg dry	
Magnesium	1400		45	mg/kg dry	
Manganese	48		0.45	mg/kg dry	
Nickel	3.3		1.8	mg/kg dry	
Potassium	140		45	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	350		89	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	10		1.8	mg/kg dry	
Zinc	8.9		1.8	mg/kg dry	
Field ID: BRC001-SB033-1218-01				Sample ID: 1601035-65	
Metals ICP					
Aluminum	2500		8.4	mg/kg dry	
Antimony	2.8		1.7	mg/kg dry	
Arsenic	7.4		0.67	mg/kg dry	
Barium	14		8.4	mg/kg dry	
Beryllium	0.46		0.25	mg/kg dry	
Cadmium	0.54		0.25	mg/kg dry	
Calcium	320000		420	mg/kg dry	
Chromium	23		0.42	mg/kg dry	
Cobalt	1.7		1.7	mg/kg dry	
Copper	11		0.84	mg/kg dry	
Iron	5400		4.2	mg/kg dry	

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Field ID: BRC001-SB033-1218-01				Sample ID: 1601035-65	
Metals ICP					
Lead	300		0.67	mg/kg dry	
Magnesium	1700		42	mg/kg dry	
Manganese	110		0.42	mg/kg dry	
Nickel	4.3		1.7	mg/kg dry	
Potassium	130		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	120		84	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	22		1.7	mg/kg dry	
Zinc	18		1.7	mg/kg dry	
Field ID: BRC001-SB036-0001-01				Sample ID: 1601035-66	
Metals ICP					
Aluminum	3900		8.7	mg/kg dry	
Antimony	69		1.7	mg/kg dry	
Arsenic	42		0.69	mg/kg dry	
Barium	33		8.7	mg/kg dry	
Beryllium	0.48		0.26	mg/kg dry	
Cadmium	11		0.26	mg/kg dry	
Calcium	250000		430	mg/kg dry	
Chromium	27		0.43	mg/kg dry	
Cobalt	2.6		1.7	mg/kg dry	
Copper	26		0.87	mg/kg dry	
Iron	9700		4.3	mg/kg dry	
Lead	7200		6.9	mg/kg dry	

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Field ID: BRC001-SB036-0001-01				Sample ID: 1601035-66	
Metals ICP					
Magnesium	1900		43	mg/kg dry	
Manganese	140		0.43	mg/kg dry	
Nickel	12		1.7	mg/kg dry	
Potassium	230		43	mg/kg dry	
Selenium	6.5		1.7	mg/kg dry	
Silver	---	U	0.43	mg/kg dry	
Sodium	130		87	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	31		1.7	mg/kg dry	
Zinc	54		1.7	mg/kg dry	
Field ID: BRC001-SB037-0612-01				Sample ID: 1601035-67	
Metals ICP					
Aluminum	5300		8.5	mg/kg dry	
Antimony	17		1.7	mg/kg dry	
Arsenic	9.7		0.68	mg/kg dry	
Barium	40		8.5	mg/kg dry	
Beryllium	0.61		0.25	mg/kg dry	
Cadmium	0.67		0.25	mg/kg dry	
Calcium	230000		420	mg/kg dry	
Chromium	27		0.42	mg/kg dry	
Cobalt	4.8		1.7	mg/kg dry	
Copper	41		0.85	mg/kg dry	
Iron	11000		4.2	mg/kg dry	
Lead	2000		0.68	mg/kg dry	
Magnesium	2400		42	mg/kg dry	

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Field ID: BRC001-SB037-0612-01				Sample ID: 1601035-67	
Metals ICP					
Manganese	210		0.42	mg/kg dry	
Nickel	9.9		1.7	mg/kg dry	
Potassium	240		42	mg/kg dry	
Selenium	---	U	1.7	mg/kg dry	
Silver	---	U	0.42	mg/kg dry	
Sodium	100		85	mg/kg dry	
Thallium	---	U	1.7	mg/kg dry	
Vanadium	71		1.7	mg/kg dry	
Zinc	30		1.7	mg/kg dry	
Field ID: BRC001-SB038-0001-01				Sample ID: 1601035-68	
Metals ICP					
Aluminum	12000		9.1	mg/kg dry	
Antimony	48		1.8	mg/kg dry	
Arsenic	20		0.73	mg/kg dry	
Barium	82		9.1	mg/kg dry	
Beryllium	0.78		0.27	mg/kg dry	
Cadmium	3.8		0.27	mg/kg dry	
Calcium	140000		450	mg/kg dry	
Chromium	49		0.45	mg/kg dry	
Cobalt	7.7		1.8	mg/kg dry	
Copper	70		0.91	mg/kg dry	
Iron	23000		4.5	mg/kg dry	
Lead	3700		0.73	mg/kg dry	
Magnesium	2900		45	mg/kg dry	
Manganese	290		0.45	mg/kg dry	

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Field ID: BRC001-SB038-0001-01				Sample ID: 1601035-68	
Metals ICP					
Nickel	24		1.8	mg/kg dry	
Potassium	640		45	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	220		91	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	78		1.8	mg/kg dry	
Zinc	77		1.8	mg/kg dry	
Field ID: BRC001-SB040-0001-01				Sample ID: 1601035-69	
Metals ICP					
Aluminum	17000		9.5	mg/kg dry	
Antimony	23		1.9	mg/kg dry	
Arsenic	10		0.76	mg/kg dry	
Barium	110		9.5	mg/kg dry	
Beryllium	0.81		0.29	mg/kg dry	
Cadmium	3.4		0.29	mg/kg dry	
Calcium	68000		48	mg/kg dry	
Chromium	34		0.48	mg/kg dry	
Cobalt	11		1.9	mg/kg dry	
Copper	91		0.95	mg/kg dry	
Iron	24000		4.8	mg/kg dry	
Lead	2400		0.76	mg/kg dry	
Magnesium	4100		48	mg/kg dry	
Manganese	660		0.48	mg/kg dry	
Nickel	17		1.9	mg/kg dry	

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Field ID: BRC001-SB040-0001-01				Sample ID: 1601035-69	
Metals ICP					
Potassium	1300		48	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.48	mg/kg dry	
Sodium	160		95	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	83		1.9	mg/kg dry	
Zinc	90		1.9	mg/kg dry	
Field ID: BRC001-SB041-0001-01				Sample ID: 1601035-70	
Metals ICP					
Aluminum	9500		9.6	mg/kg dry	
Antimony	9.5		1.9	mg/kg dry	
Arsenic	24		0.77	mg/kg dry	
Barium	38		9.6	mg/kg dry	
Beryllium	0.88		0.29	mg/kg dry	
Cadmium	0.74		0.29	mg/kg dry	
Calcium	190000		480	mg/kg dry	
Chromium	58		0.48	mg/kg dry	
Cobalt	5.6		1.9	mg/kg dry	
Copper	41		0.96	mg/kg dry	
Iron	25000		4.8	mg/kg dry	
Lead	820		0.77	mg/kg dry	
Magnesium	2600		48	mg/kg dry	
Manganese	260		0.48	mg/kg dry	
Nickel	18		1.9	mg/kg dry	
Potassium	990		48	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB041-0001-01				Sample ID: 1601035-70	
Metals ICP					
Silver	---	U	0.48	mg/kg dry	
Sodium	130		96	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	86		1.9	mg/kg dry	
Zinc	79		1.9	mg/kg dry	
Field ID: BRC001-SB042-0001-01				Sample ID: 1601035-71	
Metals ICP					
Aluminum	12000		9.2	mg/kg dry	
Antimony	16		1.8	mg/kg dry	
Arsenic	15		0.74	mg/kg dry	
Barium	57		9.2	mg/kg dry	
Beryllium	0.77		0.28	mg/kg dry	
Cadmium	0.99		0.28	mg/kg dry	
Calcium	160000		460	mg/kg dry	
Chromium	44		0.46	mg/kg dry	
Cobalt	7.7		1.8	mg/kg dry	
Copper	57		0.92	mg/kg dry	
Iron	21000		4.6	mg/kg dry	
Lead	1700		0.74	mg/kg dry	
Magnesium	2900		46	mg/kg dry	
Manganese	340		0.46	mg/kg dry	
Nickel	15		1.8	mg/kg dry	
Potassium	1000		46	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.46	mg/kg dry	
Sodium	120		92	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB042-0001-01				Sample ID: 1601035-71	
Metals ICP					
Thallium	---	U	1.8	mg/kg dry	
Vanadium	71		1.8	mg/kg dry	
Zinc	96		1.8	mg/kg dry	
Field ID: BRC001-SB042-0001-02				Sample ID: 1601035-72	
Metals ICP					
Aluminum	11000		10	mg/kg dry	
Antimony	17		2.0	mg/kg dry	
Arsenic	15		0.80	mg/kg dry	
Barium	54		10	mg/kg dry	
Beryllium	0.71		0.30	mg/kg dry	
Cadmium	0.96		0.30	mg/kg dry	
Calcium	180000		500	mg/kg dry	
Chromium	40		0.50	mg/kg dry	
Cobalt	7.1		2.0	mg/kg dry	
Copper	54		1.0	mg/kg dry	
Iron	20000		5.0	mg/kg dry	
Lead	1600		0.80	mg/kg dry	
Magnesium	2900		50	mg/kg dry	
Manganese	380		0.50	mg/kg dry	
Nickel	14		2.0	mg/kg dry	
Potassium	910		50	mg/kg dry	
Selenium	---	U	2.0	mg/kg dry	
Silver	---	U	0.50	mg/kg dry	
Sodium	110		100	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	66		2.0	mg/kg dry	

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Field ID: BRC001-SB042-0001-02				Sample ID: 1601035-72	
Metals ICP					
Zinc	92		2.0	mg/kg dry	
Field ID: BRC001-SB042-0612-01				Sample ID: 1601035-73	
Metals ICP					
Aluminum	7800		9.1	mg/kg dry	
Antimony	2.3		1.8	mg/kg dry	
Arsenic	26		0.73	mg/kg dry	
Barium	25		9.1	mg/kg dry	
Beryllium	0.93		0.27	mg/kg dry	
Cadmium	0.39		0.27	mg/kg dry	
Calcium	240000		460	mg/kg dry	
Chromium	57		0.46	mg/kg dry	
Cobalt	3.9		1.8	mg/kg dry	
Copper	16		0.91	mg/kg dry	
Iron	22000		4.6	mg/kg dry	
Lead	170		0.73	mg/kg dry	
Magnesium	2100		46	mg/kg dry	
Manganese	200		0.46	mg/kg dry	
Nickel	13		1.8	mg/kg dry	
Potassium	260		46	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.46	mg/kg dry	
Sodium	120		91	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	72		1.8	mg/kg dry	
Zinc	28		1.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB044-0612-01				Sample ID: 1601035-74	
Metals ICP					
Aluminum	8400		9.1	mg/kg dry	
Antimony	24		1.8	mg/kg dry	
Arsenic	18		0.73	mg/kg dry	
Barium	32		9.1	mg/kg dry	
Beryllium	0.71		0.27	mg/kg dry	
Cadmium	0.76		0.27	mg/kg dry	
Calcium	250000		460	mg/kg dry	
Chromium	41		0.46	mg/kg dry	
Cobalt	4.8		1.8	mg/kg dry	
Copper	36		0.91	mg/kg dry	
Iron	17000		4.6	mg/kg dry	
Lead	1700		0.73	mg/kg dry	
Magnesium	2500		46	mg/kg dry	
Manganese	230		0.46	mg/kg dry	
Nickel	12		1.8	mg/kg dry	
Potassium	290		46	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.46	mg/kg dry	
Sodium	200		91	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	61		1.8	mg/kg dry	
Zinc	52		1.8	mg/kg dry	
Field ID: BRC001-SB045-0001-01				Sample ID: 1601035-75	
Metals ICP					
Aluminum	10000		9.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB045-0001-01				Sample ID: 1601035-75	
Metals ICP					
Antimony	3.4		2.0	mg/kg dry	
Arsenic	5.3		0.78	mg/kg dry	
Barium	67		9.8	mg/kg dry	
Beryllium	0.55		0.29	mg/kg dry	
Cadmium	1.0		0.29	mg/kg dry	
Calcium	140000		240	mg/kg dry	
Chromium	24		0.49	mg/kg dry	
Cobalt	7.3		2.0	mg/kg dry	
Copper	56		0.98	mg/kg dry	
Iron	18000		4.9	mg/kg dry	
Lead	280	J	0.78	mg/kg dry	
Magnesium	3400		49	mg/kg dry	
Manganese	520		0.49	mg/kg dry	
Nickel	9.7	J	2.0	mg/kg dry	
Potassium	1100		49	mg/kg dry	
Selenium	---	U	2.0	mg/kg dry	
Silver	---	U	0.49	mg/kg dry	
Sodium	130		98	mg/kg dry	
Thallium	---	U J	2.0	mg/kg dry	
Vanadium	52		2.0	mg/kg dry	
Zinc	60		2.0	mg/kg dry	
Field ID: BRC001-SB046-0001-01				Sample ID: 1601035-76	
Metals ICP					
Aluminum	17000		9.1	mg/kg dry	
Antimony	9.6		1.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB046-0001-01				Sample ID: 1601035-76	
Metals ICP					
Arsenic	22		0.73	mg/kg dry	
Barium	110		9.1	mg/kg dry	
Beryllium	0.72		0.27	mg/kg dry	
Cadmium	2.7		0.27	mg/kg dry	
Calcium	36000		46	mg/kg dry	
Chromium	57		0.46	mg/kg dry	
Cobalt	11		1.8	mg/kg dry	
Copper	140		0.91	mg/kg dry	
Iron	24000		4.6	mg/kg dry	
Lead	790		1.5	mg/kg dry	
Magnesium	4500		46	mg/kg dry	
Manganese	760		0.46	mg/kg dry	
Nickel	25		1.8	mg/kg dry	
Potassium	1600		91	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	2.8		0.46	mg/kg dry	
Sodium	300		91	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	75		1.8	mg/kg dry	
Zinc	200		1.8	mg/kg dry	
Field ID: BRC001-SB048-0001-01				Sample ID: 1601035-77	
Metals ICP					
Aluminum	12000		9.4	mg/kg dry	
Antimony	14		1.9	mg/kg dry	
Arsenic	11		0.75	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB048-0001-01				Sample ID: 1601035-77	
Metals ICP					
Barium	110		9.4	mg/kg dry	
Beryllium	0.81		0.28	mg/kg dry	
Cadmium	2.9		0.28	mg/kg dry	
Calcium	130000		470	mg/kg dry	
Chromium	33		0.47	mg/kg dry	
Cobalt	9.2		1.9	mg/kg dry	
Copper	58		0.94	mg/kg dry	
Iron	21000		4.7	mg/kg dry	
Lead	1200		1.5	mg/kg dry	
Magnesium	3300		47	mg/kg dry	
Manganese	480		0.47	mg/kg dry	
Nickel	16		1.9	mg/kg dry	
Potassium	1700		94	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.47	mg/kg dry	
Sodium	190		94	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	63		1.9	mg/kg dry	
Zinc	71		1.9	mg/kg dry	
Field ID: BRC001-SB048-1824-01				Sample ID: 1601035-78	
Metals ICP					
Aluminum	27000		9.4	mg/kg dry	
Antimony	1.9		1.9	mg/kg dry	
Arsenic	3.2		0.75	mg/kg dry	
Barium	150		9.4	mg/kg dry	

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Field ID: BRC001-SB048-1824-01				Sample ID: 1601035-78	
Metals ICP					
Beryllium	1.0		0.28	mg/kg dry	
Cadmium	0.85		0.28	mg/kg dry	
Calcium	18000		47	mg/kg dry	
Chromium	34		0.47	mg/kg dry	
Cobalt	18		1.9	mg/kg dry	
Copper	130		0.94	mg/kg dry	
Iron	34000		4.7	mg/kg dry	
Lead	400		1.5	mg/kg dry	
Magnesium	6400		47	mg/kg dry	
Manganese	1300		0.47	mg/kg dry	
Nickel	19		1.9	mg/kg dry	
Potassium	840		94	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	0.59		0.47	mg/kg dry	
Sodium	800		94	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	100		1.9	mg/kg dry	
Zinc	100		1.9	mg/kg dry	
Field ID: BRC001-SB049-0612-01				Sample ID: 1601035-79	
Metals ICP					
Aluminum	15000		9.5	mg/kg dry	
Antimony	25		1.9	mg/kg dry	
Arsenic	9.4		0.76	mg/kg dry	
Barium	78		9.5	mg/kg dry	
Beryllium	0.71		0.28	mg/kg dry	

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Field ID: BRC001-SB049-0612-01				Sample ID: 1601035-79	
Metals ICP					
Cadmium	1.4		0.28	mg/kg dry	
Calcium	110000		470	mg/kg dry	
Chromium	39		0.47	mg/kg dry	
Cobalt	9.2		1.9	mg/kg dry	
Copper	88		0.95	mg/kg dry	
Iron	27000		4.7	mg/kg dry	
Lead	14000		15	mg/kg dry	
Magnesium	3700		47	mg/kg dry	
Manganese	530		0.47	mg/kg dry	
Nickel	16		1.9	mg/kg dry	
Potassium	890		95	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	1.3		0.47	mg/kg dry	
Sodium	180		95	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	72		1.9	mg/kg dry	
Zinc	120		1.9	mg/kg dry	
Field ID: BRC001-SB049-1218-01				Sample ID: 1601035-80	
Metals ICP					
Aluminum	20000		9.7	mg/kg dry	
Antimony	4.2		1.9	mg/kg dry	
Arsenic	5.6		0.78	mg/kg dry	
Barium	110		9.7	mg/kg dry	
Beryllium	0.89		0.29	mg/kg dry	
Cadmium	0.89		0.29	mg/kg dry	

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Field ID: BRC001-SB049-1218-01				Sample ID: 1601035-80	
Metals ICP					
Calcium	76000		49	mg/kg dry	
Chromium	39		0.49	mg/kg dry	
Cobalt	13		1.9	mg/kg dry	
Copper	100		0.97	mg/kg dry	
Iron	29000		4.9	mg/kg dry	
Lead	350		1.6	mg/kg dry	
Magnesium	4800		49	mg/kg dry	
Manganese	810		0.49	mg/kg dry	
Nickel	16		1.9	mg/kg dry	
Potassium	620		97	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.49	mg/kg dry	
Sodium	210		97	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	87		1.9	mg/kg dry	
Zinc	99		1.9	mg/kg dry	
Field ID: BRC001-SB051-0001-01				Sample ID: 1601035-81	
Metals ICP					
Aluminum	15000		10	mg/kg dry	
Antimony	74		2.1	mg/kg dry	
Arsenic	20	L	0.84	mg/kg dry	
Barium	87		10	mg/kg dry	
Beryllium	0.88		0.31	mg/kg dry	
Cadmium	4.6		0.31	mg/kg dry	
Calcium	160000		260	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB051-0001-01				Sample ID: 1601035-81	
Metals ICP					
Chromium	49		0.52	mg/kg dry	
Cobalt	9.2		2.1	mg/kg dry	
Copper	140		1.0	mg/kg dry	
Iron	26000		5.2	mg/kg dry	
Lead	13000		8.4	mg/kg dry	
Magnesium	4300		52	mg/kg dry	
Manganese	510		0.52	mg/kg dry	
Nickel	31		2.1	mg/kg dry	
Potassium	990		100	mg/kg dry	
Selenium	---	U	2.1	mg/kg dry	
Silver	0.91		0.52	mg/kg dry	
Sodium	160		100	mg/kg dry	
Thallium	---	U J	2.1	mg/kg dry	
Vanadium	100		2.1	mg/kg dry	
Zinc	330		2.1	mg/kg dry	
Field ID: BRC001-SB051-1218-01				Sample ID: 1601035-82	
Metals ICP					
Aluminum	30000		10	mg/kg dry	
Antimony	---	U	2.0	mg/kg dry	
Arsenic	2.3		0.80	mg/kg dry	
Barium	170		10	mg/kg dry	
Beryllium	1.1		0.30	mg/kg dry	
Cadmium	1.2		0.30	mg/kg dry	
Calcium	6900		50	mg/kg dry	
Chromium	37		0.50	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB051-1218-01				Sample ID: 1601035-82	
Metals ICP					
Cobalt	20		2.0	mg/kg dry	
Copper	140		1.0	mg/kg dry	
Iron	34000		5.0	mg/kg dry	
Lead	110		1.6	mg/kg dry	
Magnesium	6600		50	mg/kg dry	
Manganese	1400		0.50	mg/kg dry	
Nickel	23		2.0	mg/kg dry	
Potassium	810		100	mg/kg dry	
Selenium	---	U	2.0	mg/kg dry	
Silver	0.69		0.50	mg/kg dry	
Sodium	240		100	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	110		2.0	mg/kg dry	
Zinc	110		2.0	mg/kg dry	
Field ID: BRC001-SB052-0001-01				Sample ID: 1601035-83	
Metals ICP					
Aluminum	14000		9.1	mg/kg dry	
Antimony	57		1.8	mg/kg dry	
Arsenic	14		0.73	mg/kg dry	
Barium	78		9.1	mg/kg dry	
Beryllium	0.75		0.27	mg/kg dry	
Cadmium	2.4		0.27	mg/kg dry	
Calcium	130000		450	mg/kg dry	
Chromium	790		0.45	mg/kg dry	
Cobalt	10		1.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB052-0001-01				Sample ID: 1601035-83	
Metals ICP					
Copper	110		0.91	mg/kg dry	
Iron	28000		4.5	mg/kg dry	
Lead	5300		1.5	mg/kg dry	
Magnesium	3900		45	mg/kg dry	
Manganese	510		0.45	mg/kg dry	
Nickel	500		1.8	mg/kg dry	
Potassium	800		91	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	0.56		0.45	mg/kg dry	
Sodium	170		91	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	82		1.8	mg/kg dry	
Zinc	130		1.8	mg/kg dry	
Field ID: BRC001-SB052-0001-02				Sample ID: 1601035-84	
Metals ICP					
Aluminum	14000		9.2	mg/kg dry	
Antimony	48		1.8	mg/kg dry	
Arsenic	14		0.73	mg/kg dry	
Barium	79		9.2	mg/kg dry	
Beryllium	0.76		0.28	mg/kg dry	
Cadmium	2.3		0.28	mg/kg dry	
Calcium	130000		460	mg/kg dry	
Chromium	49		0.46	mg/kg dry	
Cobalt	8.7		1.8	mg/kg dry	
Copper	100		0.92	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB052-0001-02				Sample ID: 1601035-84	
Metals ICP					
Iron	26000		4.6	mg/kg dry	
Lead	5500		1.5	mg/kg dry	
Magnesium	4000		46	mg/kg dry	
Manganese	530		0.46	mg/kg dry	
Nickel	23		1.8	mg/kg dry	
Potassium	800		92	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	0.59		0.46	mg/kg dry	
Sodium	170		92	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	80		1.8	mg/kg dry	
Zinc	130		1.8	mg/kg dry	
Field ID: BRC001-SB053-0001-01				Sample ID: 1601035-85	
Metals ICP					
Aluminum	25000		9.5	mg/kg dry	
Antimony	8.8		1.9	mg/kg dry	
Arsenic	4.5		0.76	mg/kg dry	
Barium	150		9.5	mg/kg dry	
Beryllium	0.99		0.28	mg/kg dry	
Cadmium	1.1		0.28	mg/kg dry	
Calcium	22000		47	mg/kg dry	
Chromium	41		0.47	mg/kg dry	
Cobalt	15		1.9	mg/kg dry	
Copper	120		0.95	mg/kg dry	
Iron	33000		4.7	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB053-0001-01				Sample ID: 1601035-85	
Metals ICP					
Lead	890		1.5	mg/kg dry	
Magnesium	6000		47	mg/kg dry	
Manganese	930		0.47	mg/kg dry	
Nickel	20		1.9	mg/kg dry	
Potassium	900		95	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	0.50		0.47	mg/kg dry	
Sodium	300		95	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	110		1.9	mg/kg dry	
Zinc	100		1.9	mg/kg dry	
Field ID: BRC001-SB054-0001-01				Sample ID: 1601035-86	
Metals ICP					
Aluminum	17000		9.3	mg/kg dry	
Antimony	5.8		1.9	mg/kg dry	
Arsenic	7.1		0.75	mg/kg dry	
Barium	87		9.3	mg/kg dry	
Beryllium	0.76		0.28	mg/kg dry	
Cadmium	1.2		0.28	mg/kg dry	
Calcium	74000		47	mg/kg dry	
Chromium	32		0.47	mg/kg dry	
Cobalt	10		1.9	mg/kg dry	
Copper	84		0.93	mg/kg dry	
Iron	25000		4.7	mg/kg dry	
Lead	560		1.5	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB054-0001-01				Sample ID: 1601035-86	
Metals ICP					
Magnesium	4200		47	mg/kg dry	
Manganese	630		0.47	mg/kg dry	
Nickel	14		1.9	mg/kg dry	
Potassium	1300		93	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.47	mg/kg dry	
Sodium	160		93	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	77		1.9	mg/kg dry	
Zinc	110		1.9	mg/kg dry	
Field ID: BRC001-SB055-0612-01				Sample ID: 1601035-87	
Metals ICP					
Aluminum	22000		9.0	mg/kg dry	
Antimony	---	U	1.8	mg/kg dry	
Arsenic	2.5		0.72	mg/kg dry	
Barium	140		9.0	mg/kg dry	
Beryllium	0.88		0.27	mg/kg dry	
Cadmium	0.84		0.27	mg/kg dry	
Calcium	8800		45	mg/kg dry	
Chromium	30		0.45	mg/kg dry	
Cobalt	15		1.8	mg/kg dry	
Copper	100		0.90	mg/kg dry	
Iron	30000		4.5	mg/kg dry	
Lead	98		1.4	mg/kg dry	
Magnesium	5400		45	mg/kg dry	
Manganese	1000		0.45	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB055-0612-01				Sample ID: 1601035-87	
Metals ICP					
Nickel	15		1.8	mg/kg dry	
Potassium	940		90	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	0.50		0.45	mg/kg dry	
Sodium	280		90	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	95		1.8	mg/kg dry	
Zinc	87		1.8	mg/kg dry	
Field ID: BRC001-SB056-0001-01				Sample ID: 1601035-88	
Metals ICP					
Aluminum	15000		9.0	mg/kg dry	
Antimony	7.4		1.8	mg/kg dry	
Arsenic	8.0		0.72	mg/kg dry	
Barium	67		9.0	mg/kg dry	
Beryllium	0.72		0.27	mg/kg dry	
Cadmium	0.96		0.27	mg/kg dry	
Calcium	120000		450	mg/kg dry	
Chromium	34		0.45	mg/kg dry	
Cobalt	8.3		1.8	mg/kg dry	
Copper	69		0.90	mg/kg dry	
Iron	22000		4.5	mg/kg dry	
Lead	460		1.4	mg/kg dry	
Magnesium	3600		45	mg/kg dry	
Manganese	490		0.45	mg/kg dry	
Nickel	13		1.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB056-0001-01				Sample ID: 1601035-88	
Metals ICP					
Potassium	1300		90	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.45	mg/kg dry	
Sodium	190		90	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	69		1.8	mg/kg dry	
Zinc	82		1.8	mg/kg dry	
Field ID: BRC001-SB057-0612-01				Sample ID: 1601035-89	
Metals ICP					
Aluminum	12000		9.5	mg/kg dry	
Antimony	3.6		1.9	mg/kg dry	
Arsenic	6.0		0.76	mg/kg dry	
Barium	71		9.5	mg/kg dry	
Beryllium	0.68		0.28	mg/kg dry	
Cadmium	0.64		0.28	mg/kg dry	
Calcium	150000		470	mg/kg dry	
Chromium	28		0.47	mg/kg dry	
Cobalt	7.6		1.9	mg/kg dry	
Copper	65		0.95	mg/kg dry	
Iron	19000		4.7	mg/kg dry	
Lead	310		1.5	mg/kg dry	
Magnesium	3100		47	mg/kg dry	
Manganese	530		0.47	mg/kg dry	
Nickel	11		1.9	mg/kg dry	
Potassium	700		95	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB057-0612-01				Sample ID: 1601035-89	
Metals ICP					
Silver	---	U	0.47	mg/kg dry	
Sodium	200		95	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	66		1.9	mg/kg dry	
Zinc	59		1.9	mg/kg dry	
Field ID: BRC001-SB058-0001-01				Sample ID: 1601035-90	
Metals ICP					
Aluminum	7000		9.3	mg/kg dry	
Antimony	7.7		1.9	mg/kg dry	
Arsenic	12		0.74	mg/kg dry	
Barium	30		9.3	mg/kg dry	
Beryllium	0.61		0.28	mg/kg dry	
Cadmium	0.75		0.28	mg/kg dry	
Calcium	260000		460	mg/kg dry	
Chromium	40		0.46	mg/kg dry	
Cobalt	2.6		1.9	mg/kg dry	
Copper	19		0.93	mg/kg dry	
Iron	19000		4.6	mg/kg dry	
Lead	860		1.5	mg/kg dry	
Magnesium	2600		46	mg/kg dry	
Manganese	160		0.46	mg/kg dry	
Nickel	10		1.9	mg/kg dry	
Potassium	850		93	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.46	mg/kg dry	
Sodium	160		93	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB058-0001-01				Sample ID: 1601035-90	
Metals ICP					
Thallium	---	U	1.9	mg/kg dry	
Vanadium	36		1.9	mg/kg dry	
Zinc	30		1.9	mg/kg dry	
Field ID: BRC001-SB060-0001-01				Sample ID: 1601035-91	
Metals ICP					
Aluminum	8500		9.7	mg/kg dry	
Antimony	3200		1.9	mg/kg dry	
Arsenic	730		0.78	mg/kg dry	
Barium	840		9.7	mg/kg dry	
Beryllium	---	U	0.29	mg/kg dry	
Cadmium	81		0.29	mg/kg dry	
Calcium	100000		490	mg/kg dry	
Chromium	490		0.49	mg/kg dry	
Cobalt	22		1.9	mg/kg dry	
Copper	1100		0.97	mg/kg dry	
Iron	180000		49	mg/kg dry	
Lead	79000		31	mg/kg dry	
Magnesium	3500		49	mg/kg dry	
Manganese	800		0.49	mg/kg dry	
Nickel	250		1.9	mg/kg dry	
Potassium	420		97	mg/kg dry	
Selenium	37		1.9	mg/kg dry	
Silver	3.0		0.49	mg/kg dry	
Sodium	6300		97	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB060-0001-01				Sample ID: 1601035-91	
Metals ICP					
Vanadium	44		1.9	mg/kg dry	
Zinc	630		1.9	mg/kg dry	
Field ID: BRC001-SB060-1218-01				Sample ID: 1601035-92	
Metals ICP					
Aluminum	11000		9.4	mg/kg dry	
Antimony	41		1.9	mg/kg dry	
Arsenic	37		0.75	mg/kg dry	
Barium	100		9.4	mg/kg dry	
Beryllium	0.63		0.28	mg/kg dry	
Cadmium	1.8		0.28	mg/kg dry	
Calcium	71000		47	mg/kg dry	
Chromium	340		0.47	mg/kg dry	
Cobalt	5.3		1.9	mg/kg dry	
Copper	250		0.94	mg/kg dry	
Iron	42000		47	mg/kg dry	
Lead	2800		1.5	mg/kg dry	
Magnesium	2500		47	mg/kg dry	
Manganese	440		0.47	mg/kg dry	
Nickel	30		1.9	mg/kg dry	
Potassium	460		94	mg/kg dry	
Selenium	3.1		1.9	mg/kg dry	
Silver	---	U	0.47	mg/kg dry	
Sodium	740		94	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	95		1.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB060-1218-01				Sample ID: 1601035-92	
Metals ICP					
Zinc	330		1.9	mg/kg dry	
Field ID: BRC001-SB061-0001-01				Sample ID: 1601035-93	
Metals ICP					
Aluminum	7200		9.0	mg/kg dry	
Antimony	2900		1.8	mg/kg dry	
Arsenic	750		0.72	mg/kg dry	
Barium	700		9.0	mg/kg dry	
Beryllium	---	U	0.27	mg/kg dry	
Cadmium	67		0.27	mg/kg dry	
Calcium	58000		45	mg/kg dry	
Chromium	480		0.45	mg/kg dry	
Cobalt	25		1.8	mg/kg dry	
Copper	600		0.90	mg/kg dry	
Iron	140000		45	mg/kg dry	
Lead	80000		29	mg/kg dry	
Magnesium	5800		45	mg/kg dry	
Manganese	710		0.45	mg/kg dry	
Nickel	390		1.8	mg/kg dry	
Potassium	420		90	mg/kg dry	
Selenium	32		1.8	mg/kg dry	
Silver	4.5		0.45	mg/kg dry	
Sodium	5300		90	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	48		1.8	mg/kg dry	
Zinc	530		1.8	mg/kg dry	

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Project: Puerto Rico Battery - 1601010

Project Number: 1601010

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SB061-0612-01				Sample ID: 1601035-94	
Metals ICP					
Aluminum	6400		9.1	mg/kg dry	
Antimony	480		1.8	mg/kg dry	
Arsenic	240		0.73	mg/kg dry	
Barium	170		9.1	mg/kg dry	
Beryllium	0.53		0.27	mg/kg dry	
Cadmium	9.4		0.27	mg/kg dry	
Calcium	230000		450	mg/kg dry	
Chromium	140		0.45	mg/kg dry	
Cobalt	6.9		1.8	mg/kg dry	
Copper	200		0.91	mg/kg dry	
Iron	29000		4.5	mg/kg dry	
Lead	28000		15	mg/kg dry	
Magnesium	3600		45	mg/kg dry	
Manganese	330		0.45	mg/kg dry	
Nickel	97		1.8	mg/kg dry	
Potassium	410		91	mg/kg dry	
Selenium	3.4		1.8	mg/kg dry	
Silver	1.5		0.45	mg/kg dry	
Sodium	1500		91	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	
Vanadium	37		1.8	mg/kg dry	
Zinc	98		1.8	mg/kg dry	
Field ID: RB-01192016				Sample ID: 1601035-95	
Metals ICP					
Aluminum	---	U	100	ug/L	

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Project: Puerto Rico Battery - 1601010

Project Number: 1601010

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: RB-01192016				Sample ID: 1601035-95	
Metals ICP					
Antimony	---	U	20	ug/L	
Arsenic	---	U	8.0	ug/L	
Barium	---	U	100	ug/L	
Beryllium	---	U	3.0	ug/L	
Cadmium	---	U	3.0	ug/L	
Calcium	---	U	500	ug/L	
Chromium	---	U	5.0	ug/L	
Cobalt	---	U	20	ug/L	
Copper	---	U	10	ug/L	
Iron	---	U	50	ug/L	
Lead	---	U	8.0	ug/L	
Magnesium	---	U	500	ug/L	
Manganese	---	U	5.0	ug/L	
Nickel	---	U	20	ug/L	
Potassium	---	U	500	ug/L	
Selenium	---	U	20	ug/L	
Silver	---	U	5.0	ug/L	
Sodium	---	U	1000	ug/L	
Thallium	---	U	20	ug/L	
Vanadium	---	U	20	ug/L	
Zinc	---	U	20	ug/L	
Field ID: RB-01202016				Sample ID: 1601035-96	
Metals ICP					
Aluminum	---	U	100	ug/L	
Antimony	---	U	20	ug/L	
Arsenic	---	U	8.0	ug/L	
Barium	---	U	100	ug/L	
Beryllium	---	U	3.0	ug/L	

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Project: Puerto Rico Battery - 1601010

Project Number: 1601010

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: RB-01202016				Sample ID: 1601035-96	
Metals ICP					
Cadmium	---	U	3.0	ug/L	
Calcium	---	U	500	ug/L	
Chromium	---	U	5.0	ug/L	
Cobalt	---	U	20	ug/L	
Copper	---	U	10	ug/L	
Iron	---	U	50	ug/L	
Lead	---	U	8.0	ug/L	
Magnesium	---	U	500	ug/L	
Manganese	---	U	5.0	ug/L	
Nickel	---	U	20	ug/L	
Potassium	---	U	500	ug/L	
Selenium	---	U	20	ug/L	
Silver	---	U	5.0	ug/L	
Sodium	---	U	1000	ug/L	
Thallium	---	U	20	ug/L	
Vanadium	---	U	20	ug/L	
Zinc	---	U	20	ug/L	
Field ID: RB-01212016				Sample ID: 1601035-97	
Metals ICP					
Aluminum	---	U	100	ug/L	
Antimony	---	U	20	ug/L	
Arsenic	---	U	8.0	ug/L	
Barium	---	U	100	ug/L	
Beryllium	---	U	3.0	ug/L	
Cadmium	---	U	3.0	ug/L	
Calcium	---	U	500	ug/L	
Chromium	---	U	5.0	ug/L	
Cobalt	---	U	20	ug/L	

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Project Number: 1601010

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: RB-01212016				Sample ID: 1601035-97	
Metals ICP					
Copper	---	U	10	ug/L	
Iron	---	U	50	ug/L	
Lead	---	U	8.0	ug/L	
Magnesium	---	U	500	ug/L	
Manganese	---	U	5.0	ug/L	
Nickel	---	U	20	ug/L	
Potassium	---	U	500	ug/L	
Selenium	---	U	20	ug/L	
Silver	---	U	5.0	ug/L	
Sodium	1500		1000	ug/L	
Thallium	---	U	20	ug/L	
Vanadium	---	U	20	ug/L	
Zinc	---	U	20	ug/L	
Field ID: BRC001-SBD001-1218-01				Sample ID: 1601038-01	
Metals ICP					
Aluminum	29000		10	mg/kg dry	
Antimony	---	U	2.0	mg/kg dry	
Arsenic	2.7	L	0.80	mg/kg dry	
Barium	210		10	mg/kg dry	
Beryllium	1.1		0.30	mg/kg dry	
Cadmium	0.95		0.30	mg/kg dry	
Calcium	4800		50	mg/kg dry	
Chromium	36	J	0.50	mg/kg dry	
Cobalt	19		2.0	mg/kg dry	
Copper	150		1.0	mg/kg dry	
Iron	35000	J	5.0	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SBD001-1218-01				Sample ID: 1601038-01	
Metals ICP					
Lead	15	J	1.6	mg/kg dry	
Magnesium	6900		50	mg/kg dry	
Manganese	1200		0.50	mg/kg dry	
Nickel	22		2.0	mg/kg dry	
Potassium	480	J	100	mg/kg dry	
Selenium	---	U L	2.0	mg/kg dry	
Silver	0.59		0.50	mg/kg dry	
Sodium	920		100	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	110		2.0	mg/kg dry	
Zinc	98		2.0	mg/kg dry	
Field ID: BRC001-SBD004-0612-01				Sample ID: 1601038-02	
Metals ICP					
Aluminum	9900		9.7	mg/kg dry	
Antimony	28		1.9	mg/kg dry	
Arsenic	19		0.77	mg/kg dry	
Barium	97		9.7	mg/kg dry	
Beryllium	0.78		0.29	mg/kg dry	
Cadmium	2.6		0.29	mg/kg dry	
Calcium	150000		480	mg/kg dry	
Chromium	44		0.48	mg/kg dry	
Cobalt	10		1.9	mg/kg dry	
Copper	87		0.97	mg/kg dry	
Iron	31000		4.8	mg/kg dry	
Lead	6200		1.5	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SBD004-0612-01				Sample ID: 1601038-02	
Metals ICP					
Magnesium	2900		48	mg/kg dry	
Manganese	530		0.48	mg/kg dry	
Nickel	22		1.9	mg/kg dry	
Potassium	780		97	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	0.54		0.48	mg/kg dry	
Sodium	130		97	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	87		1.9	mg/kg dry	
Zinc	140		1.9	mg/kg dry	
Field ID: BRC001-SBD004-1218-01				Sample ID: 1601038-03	
Metals ICP					
Aluminum	15000		9.9	mg/kg dry	
Antimony	14		2.0	mg/kg dry	
Arsenic	10		0.79	mg/kg dry	
Barium	150		9.9	mg/kg dry	
Beryllium	0.91		0.30	mg/kg dry	
Cadmium	1.8		0.30	mg/kg dry	
Calcium	97000		490	mg/kg dry	
Chromium	38		0.49	mg/kg dry	
Cobalt	14		2.0	mg/kg dry	
Copper	91		0.99	mg/kg dry	
Iron	27000		4.9	mg/kg dry	
Lead	3200		1.6	mg/kg dry	
Magnesium	3600		49	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SBD004-1218-01				Sample ID: 1601038-03	
Metals ICP					
Manganese	760		0.49	mg/kg dry	
Nickel	19		2.0	mg/kg dry	
Potassium	1100		99	mg/kg dry	
Selenium	---	U	2.0	mg/kg dry	
Silver	0.52		0.49	mg/kg dry	
Sodium	150		99	mg/kg dry	
Thallium	---	U	2.0	mg/kg dry	
Vanadium	95		2.0	mg/kg dry	
Zinc	130		2.0	mg/kg dry	
Field ID: BRC001-SBD005-2430-01				Sample ID: 1601038-04	
Metals ICP					
Aluminum	14000		9.4	mg/kg dry	
Antimony	10		1.9	mg/kg dry	
Arsenic	13		0.75	mg/kg dry	
Barium	95		9.4	mg/kg dry	
Beryllium	0.87		0.28	mg/kg dry	
Cadmium	1.5		0.28	mg/kg dry	
Calcium	140000		470	mg/kg dry	
Chromium	73		0.47	mg/kg dry	
Cobalt	9.7		1.9	mg/kg dry	
Copper	97		0.94	mg/kg dry	
Iron	23000		4.7	mg/kg dry	
Lead	1100		1.5	mg/kg dry	
Magnesium	3700		47	mg/kg dry	
Manganese	520		0.47	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SBD005-2430-01				Sample ID: 1601038-04	
Metals ICP					
Nickel	20		1.9	mg/kg dry	
Potassium	920		94	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.47	mg/kg dry	
Sodium	180		94	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	95		1.9	mg/kg dry	
Zinc	130		1.9	mg/kg dry	
Field ID: BRC001-SBD006-0001-01				Sample ID: 1601038-05	
Metals ICP					
Aluminum	18000		15	mg/kg dry	
Antimony	870		2.9	mg/kg dry	
Arsenic	230		1.2	mg/kg dry	
Barium	380		15	mg/kg dry	
Beryllium	0.89		0.44	mg/kg dry	
Cadmium	190		0.44	mg/kg dry	
Calcium	55000		73	mg/kg dry	
Chromium	93		0.73	mg/kg dry	
Cobalt	24		2.9	mg/kg dry	
Copper	330		1.5	mg/kg dry	
Iron	37000		7.3	mg/kg dry	
Lead	50000		23	mg/kg dry	
Magnesium	5100		73	mg/kg dry	
Manganese	350		0.73	mg/kg dry	
Nickel	260		2.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SBD006-0001-01				Sample ID: 1601038-05	
Metals ICP					
Potassium	840		150	mg/kg dry	
Selenium	51		2.9	mg/kg dry	
Silver	2.3		0.73	mg/kg dry	
Sodium	440		150	mg/kg dry	
Thallium	---	U	2.9	mg/kg dry	
Vanadium	110		2.9	mg/kg dry	
Zinc	810		2.9	mg/kg dry	
Field ID: BRC001-SBD007-1218-01				Sample ID: 1601038-06	
Metals ICP					
Aluminum	16000		9.4	mg/kg dry	
Antimony	29		1.9	mg/kg dry	
Arsenic	16		0.75	mg/kg dry	
Barium	99		9.4	mg/kg dry	
Beryllium	0.87		0.28	mg/kg dry	
Cadmium	2.1		0.28	mg/kg dry	
Calcium	130000		470	mg/kg dry	
Chromium	88		0.47	mg/kg dry	
Cobalt	10		1.9	mg/kg dry	
Copper	120		0.94	mg/kg dry	
Iron	24000		4.7	mg/kg dry	
Lead	2800		1.5	mg/kg dry	
Magnesium	3800		47	mg/kg dry	
Manganese	520		0.47	mg/kg dry	
Nickel	20		1.9	mg/kg dry	
Potassium	830		94	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SBD007-1218-01				Sample ID: 1601038-06	
Metals ICP					
Selenium	---	U	1.9	mg/kg dry	
Silver	0.47		0.47	mg/kg dry	
Sodium	160		94	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	91		1.9	mg/kg dry	
Zinc	140		1.9	mg/kg dry	
Field ID: BRC001-SBD007-1824-01				Sample ID: 1601038-07	
Metals ICP					
Aluminum	15000		9.4	mg/kg dry	
Antimony	25		1.9	mg/kg dry	
Arsenic	15		0.75	mg/kg dry	
Barium	90		9.4	mg/kg dry	
Beryllium	0.81		0.28	mg/kg dry	
Cadmium	1.9		0.28	mg/kg dry	
Calcium	130000		470	mg/kg dry	
Chromium	80		0.47	mg/kg dry	
Cobalt	9.6		1.9	mg/kg dry	
Copper	110		0.94	mg/kg dry	
Iron	22000		4.7	mg/kg dry	
Lead	2300		1.5	mg/kg dry	
Magnesium	3800		47	mg/kg dry	
Manganese	470		0.47	mg/kg dry	
Nickel	19		1.9	mg/kg dry	
Potassium	890		94	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.47	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SBD007-1824-01				Sample ID: 1601038-07	
Metals ICP					
Sodium	160		94	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	85		1.9	mg/kg dry	
Zinc	130		1.9	mg/kg dry	
Field ID: BRC001-SBD009-1218-01				Sample ID: 1601038-08	
Metals ICP					
Aluminum	15000		8.8	mg/kg dry	
Antimony	---	U	1.8	mg/kg dry	
Arsenic	2.7		0.71	mg/kg dry	
Barium	200		8.8	mg/kg dry	
Beryllium	1.2		0.27	mg/kg dry	
Cadmium	0.55		0.27	mg/kg dry	
Calcium	4100		44	mg/kg dry	
Chromium	29		0.44	mg/kg dry	
Cobalt	22		1.8	mg/kg dry	
Copper	69		0.88	mg/kg dry	
Iron	26000		4.4	mg/kg dry	
Lead	9.3		1.4	mg/kg dry	
Magnesium	2800		44	mg/kg dry	
Manganese	950		0.44	mg/kg dry	
Nickel	16		1.8	mg/kg dry	
Potassium	430		88	mg/kg dry	
Selenium	---	U	1.8	mg/kg dry	
Silver	---	U	0.44	mg/kg dry	
Sodium	250		88	mg/kg dry	
Thallium	---	U	1.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SBD009-1218-01				Sample ID: 1601038-08	
Metals ICP					
Vanadium	110		1.8	mg/kg dry	
Zinc	47		1.8	mg/kg dry	
Field ID: BRC001-SBD010-0001-01				Sample ID: 1601038-09	
Metals ICP					
Aluminum	20000		14	mg/kg dry	
Antimony	1400		2.8	mg/kg dry	
Arsenic	670		1.1	mg/kg dry	
Barium	350		14	mg/kg dry	
Beryllium	0.93		0.42	mg/kg dry	
Cadmium	110		0.42	mg/kg dry	
Calcium	40000		70	mg/kg dry	
Chromium	97		0.70	mg/kg dry	
Cobalt	17		2.8	mg/kg dry	
Copper	300		1.4	mg/kg dry	
Iron	66000		70	mg/kg dry	
Lead	73000		22	mg/kg dry	
Magnesium	4900		70	mg/kg dry	
Manganese	340		0.70	mg/kg dry	
Nickel	230		2.8	mg/kg dry	
Potassium	730		140	mg/kg dry	
Selenium	58		2.8	mg/kg dry	
Silver	1.7		0.70	mg/kg dry	
Sodium	880		140	mg/kg dry	
Thallium	---	U	2.8	mg/kg dry	
Vanadium	130		2.8	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SBD010-0001-01				Sample ID: 1601038-09	
Metals ICP					
Zinc	890		2.8	mg/kg dry	
Field ID: BRC001-SBD010-0106-01				Sample ID: 1601038-10	
Metals ICP					
Aluminum	30000		9.6	mg/kg dry	
Antimony	7.1		1.9	mg/kg dry	
Arsenic	4.5		0.76	mg/kg dry	
Barium	230		9.6	mg/kg dry	
Beryllium	1.1		0.29	mg/kg dry	
Cadmium	2.0		0.29	mg/kg dry	
Calcium	5200		48	mg/kg dry	
Chromium	39		0.48	mg/kg dry	
Cobalt	16		1.9	mg/kg dry	
Copper	140		0.96	mg/kg dry	
Iron	33000		4.8	mg/kg dry	
Lead	380		1.5	mg/kg dry	
Magnesium	6500		48	mg/kg dry	
Manganese	800		0.48	mg/kg dry	
Nickel	23		1.9	mg/kg dry	
Potassium	520		96	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.48	mg/kg dry	
Sodium	570		96	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	110		1.9	mg/kg dry	
Zinc	100		1.9	mg/kg dry	

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Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: BRC001-SBD011-0612-01				Sample ID: 1601038-11	
Metals ICP					
Aluminum	17000		9.6	mg/kg dry	
Antimony	7.9		1.9	mg/kg dry	
Arsenic	6.2		0.77	mg/kg dry	
Barium	190		9.6	mg/kg dry	
Beryllium	0.97		0.29	mg/kg dry	
Cadmium	0.93		0.29	mg/kg dry	
Calcium	34000		48	mg/kg dry	
Chromium	35		0.48	mg/kg dry	
Cobalt	16		1.9	mg/kg dry	
Copper	94		0.96	mg/kg dry	
Iron	25000		4.8	mg/kg dry	
Lead	600		1.5	mg/kg dry	
Magnesium	3600		48	mg/kg dry	
Manganese	740		0.48	mg/kg dry	
Nickel	17		1.9	mg/kg dry	
Potassium	950		96	mg/kg dry	
Selenium	---	U	1.9	mg/kg dry	
Silver	---	U	0.48	mg/kg dry	
Sodium	190		96	mg/kg dry	
Thallium	---	U	1.9	mg/kg dry	
Vanadium	90		1.9	mg/kg dry	
Zinc	72		1.9	mg/kg dry	
Field ID: RB-01222016				Sample ID: 1601038-12	
Metals ICP					
Aluminum	---	U	100	ug/L	
Antimony	---	U	20	ug/L	

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Project Number: 1601010

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: RB-01222016				Sample ID: 1601038-12	
Metals ICP					
Arsenic	---	U	8.0	ug/L	
Barium	---	U	100	ug/L	
Beryllium	---	U	3.0	ug/L	
Cadmium	---	U	3.0	ug/L	
Calcium	---	U	500	ug/L	
Chromium	---	U	5.0	ug/L	
Cobalt	---	U	20	ug/L	
Copper	---	U	10	ug/L	
Iron	---	U	50	ug/L	
Lead	---	U	8.0	ug/L	
Magnesium	---	U	500	ug/L	
Manganese	---	U	5.0	ug/L	
Nickel	---	U	20	ug/L	
Potassium	---	U	500	ug/L	
Selenium	---	U	20	ug/L	
Silver	---	U	5.0	ug/L	
Sodium	---	U	1000	ug/L	
Thallium	---	U	20	ug/L	
Vanadium	---	U	20	ug/L	
Zinc	---	U	20	ug/L	
Field ID: RB-01252016				Sample ID: 1601038-13	
Metals ICP					
Aluminum	---	U	100	ug/L	
Antimony	---	U	20	ug/L	
Arsenic	---	U	8.0	ug/L	
Barium	---	U	100	ug/L	
Beryllium	---	U	3.0	ug/L	
Cadmium	---	U	3.0	ug/L	

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 2 Laboratory

Final Report

Project: Puerto Rico Battery - 1601010

Project Number: 1601010

Analyte	Result	Qualifier	Reporting Limit	Units	Date and Time of Analysis*
Field ID: RB-01252016				Sample ID: 1601038-13	
Metals ICP					
Calcium	---	U	500	ug/L	
Chromium	---	U	5.0	ug/L	
Cobalt	---	U	20	ug/L	
Copper	---	U	10	ug/L	
Iron	---	U	50	ug/L	
Lead	---	U	8.0	ug/L	
Magnesium	---	U	500	ug/L	
Manganese	---	U	5.0	ug/L	
Nickel	---	U	20	ug/L	
Potassium	---	U	500	ug/L	
Selenium	---	U	20	ug/L	
Silver	---	U	5.0	ug/L	
Sodium	---	U	1000	ug/L	
Thallium	---	U	20	ug/L	
Vanadium	---	U	20	ug/L	
Zinc	---	U	20	ug/L	

EXECUTIVE NARRATIVE

Case No. : 45919
Site: Puerto Rico Battery Recycling
Number of Samples: BC9J1
Analysis: VOA, BNA, PCB

SDG No.: BC9J1
Laboratory: Chemtech
Sampling dates: 01/18/16-01/20/16
Validation SOP: HW-33A (Rev 0), HW-35A (Rev 0), HW-37A (Rev 0)

QAPP:
Contractor: Weston Solutions
Reference: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:
Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
The following samples have analytes that have been qualified "J", "J+" or "J-".
VOA: BC9J6
BNA: BC9K1, BC9J9, BC9J2, BC9J3, BC9J7, BC9K2

Minor Findings:
None.

COMMENTS: The QAPP did not specify the PALs for this site

Reviewer Name(s): Archana Mirle

Approver's Signature: **Date: 02/29/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: VOA

The current SOP HW-33A (Revision 0) July 2015, USEPA Region II for the evaluation of Volatile organic data generated through Statement of Work SOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report. Tentatively Identified Compounds (TICs) for VOA organic fraction is not validated.

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". The non-detects (sample quantitation limits) will be flagged as estimated, "J", or unusable, "R", if the holding times are grossly exceeded. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. DEUTERATED MONITORING COMPOUNDS (DMC's)

All samples are spiked with DMC compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured DMC recovery limits were outside Table 6 of the SOP HW-33A (Revision 0) qualifications were applied as per Table 7 SOP HW-33A (Revision 0) to all the samples and analytes as shown below.

No problems were found for this criterion.

3. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD):

MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data. Qualifications were applied to the samples and analytes as shown below.

Not applicable.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on

the amount of contamination present in the QA blanks, the analytes are qualified as per Table 5 of SOP HW-33A (Rev 0).

A) Method blank contamination:

No qualification required due to method blank contamination.

B) Field or rinse blank contamination:

The following volatile sample have contaminant analyte concentrations reported less than 2x the CRQL. The associated rinse blank has contaminant analyte concentration less than 2x the CRQL. Detected compounds are qualified U. Non-detected compounds are not qualified. Sample concentrations have been reported at the CRQL.

Acetone BC9J1, BC9J2, BC9J3, BC9J6, BC9J7, BC9K2

C) Trip blank contamination for VOA aqueous samples:

Not applicable.

D) Storage Blank associated with VOA samples only:

No problems were found for this criterion.

E) Tentatively Identified Compounds:

Tentatively Identified Compounds (TICs) for VOA organic fractions are not validated.

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for volatile organics is (BFB) Bromofluorobenzene. If the mass calibration is in error, all associated data will be classified as unusable "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. All analytes for initial and continuing calibration should meet the minimum RRF criteria as listed in Table 2 of SOP HW 33A (Rev 0). If RRF is less than minimum RRF as specified in Table 2 for all target analytes, use professional judgment and all detects in the sample will be qualified as "J+" or "R". All non-detects for that compound will be rejected "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance.

Percent RSD must be less than maximum %RSD in Table 2 of SOP HW 33A (Rev 0) for all target analytes. For the opening or closing CCV %D must be within the inclusive opening or closing maximum %D limits as listed in Table 2 of SOP HW 33A (Rev 0) for all Target compounds. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and Non-detects are flagged "UJ" for %D values outside criteria only. If %RSD exceeds QC criteria, detects may be qualified as "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

The following samples are associated with an initial calibration percent relative standard deviation (%RSD) outside criteria. Detects are qualified as estimated J. Non-detects are not qualified.

1,1-Dichloroethane BC9J5ME, BC9J6ME, BC9J8, BC9J9, BC9K1, BC9J8DL, VBLK15, VBLK16, VBLK18, VBLK19, VHBLK02

7. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must be in the range as specified in Table 9 of SOP HW 33A (Rev 0) of the associated continuing calibration internal standard area. The retention time of the internal standards must be within the range as specified in Table 9 of SOP HW 33A (Rev 0). If the area count is greater than, all positive results quantitated using that IS are qualified as estimated "J-", and non-detects are not qualified. If the area count is less than the associated standard, all positive results for compounds quantitated with that IS are qualified as estimated "J+" and all non-detects are qualified "R".

If an internal standard retention time were not met as specified in Table 9 of SOP HW 33A (Rev 0), the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction. Qualifications were applied to the samples and analytes as shown below. Qualifications were applied to the samples and analytes as shown below.

The following samples have internal standard area response greater than or equal to expanded minimum criteria and less than primary minimum criteria. Detects are qualified as estimated J+. Non-detects are qualified as estimated UJ.

1,4-Dichlorobenzene-d4 BC9J6
1,3-Dichlorobenzene, 1,4-Dichlorobenzene, 1,2-Dichlorobenzene, 1,2-Dibromo-3-chloropropane, 1,2,4-Trichlorobenzene, 1,2,3-Trichlorobenzene, Bromoform

8. FIELD DUPLICATES:

No problems were found for this criterion.

9. COMPOUND IDENTIFICATION:

Target compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within a window of 0.06 RRT units of the standard compound and have ion spectra which has a ratio of the primary and secondary m/z intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

10. CONTRACT PROBLEMS NON-COMPLIANCE:

Percent relative standard deviation fell outside the contractual criteria in the initial calibration for 1,1-Dichloroethane.

11. FIELD DOCUMENTATION:

No problems were identified.

12. OTHER PROBLEMS:

Sample # BC9J5
o-xylene has been qualified J as the value is over the calibration range, value reported in the dilution run is less than CRQL and has not been used.

13. DILUTIONS, RE-EXTRACTIONS & REANALYSIS:

Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.

ANALYSIS: BNA

The current SOP HW-35A (Revision 0) July 2015, USEPA Region II for the evaluation of Semi-Volatile organic data generated through Statement of Work SOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report. Tentatively Identified Compounds (TICs) for BNA organic fraction is not validated.

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded, qualifications will be applied as per SOP HW-35A (Rev 0).

No problems were found for this criterion.

2. DEUTERATED MONITORING COMPOUNDS (DMCs)

All samples are spiked with DMC compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured DMC recovery limits were outside Table 6 of SOP HW-35A (Revision 0), qualifications were applied as per Table 7 of SOP HW-35A (Revision 0) to all the samples and analytes as shown below.

The following samples have DMC/surrogate percent recoveries less than the primary minimum criteria. Detects are qualified as estimated J-. Non-detects are qualified as estimated UJ.

4-Chloroaniline-d4 BC9J9, BC9K1

4-chloroaniline, Hexachlorocyclopentadiene

1,4-Dioxane-d8 BC9K1, BC9J9, BC9J2, BC9J3, BC9J7, BC9K2

1,4-Dioxane

3. MATRIX SPIKE/MATRIX SPIKE DUPLICATES (MS/MSD):

MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data. Qualifications were applied to the samples and analytes as shown below.

Not applicable.

4. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, trip, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Trip blanks measure cross-contamination of samples during shipment. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the amount of contamination present in the QA blanks, the analytes are qualified as per Table 5 of SOP HW-35A (Rev 0).

A) Method blank contamination:

No problems were found for this criterion.

B) Field or rinse blank contamination:

No problems were found for this criterion.

C) Tentatively Identified Compounds:

Tentatively Identified Compounds (TICs) for BNA organic fraction are not validated.

5. MASS SPECTROMETER TUNING:

Tuning and performance criteria are established to ensure adequate mass resolution, proper identification of compounds and to some degree, sufficient instrument sensitivity. These criteria are not sample specific. Instrument performance is determined using standard materials. Therefore, these criteria should be met in all circumstances. The tuning standard for Semi-volatiles is Decafluorotriphenyl-phosphine (DFTPP). If the mass calibration is in error, all associated data will be classified as unusable "R".

No problems were found for this criterion.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Response Factor GC/MS:

The response factor measures the instrument's response to specific chemical compounds. All analytes for initial and continuing calibration should meet the minimum RRF criteria as listed in Table 2 of SOP HW 35A (Rev 0). If RRF is less than minimum RRF as specified in Table 2 for all target analytes, use professional judgment and all detects in the sample will be qualified as "J+" or "R". All non-detects for that compound will be rejected "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Relative Standard Deviation (%RSD) and Percent Difference (%D):

Percent RSD is calculated from the initial calibration and is used to indicate the stability of the specific compound response factor over increasing concentration. Percent D compares the response factor of the continuing calibration check to the mean response factor (RRF) from the initial calibration. Percent D is a measure of the instrument's daily performance.

Percent RSD must be less than maximum %RSD in Table 2 of SOP HW 35A (Rev 0) for all target analytes. For the opening or closing CCV %D must be within the inclusive opening or closing maximum %D limits as listed in Table 2 of SOP HW 35A (Rev 0) for all Target compounds. A value outside of these limits indicates potential detection and quantitation errors. For these reasons, all positive results are flagged as estimated, "J" and Non-detects are flagged "UJ" for %D values outside criteria only. If %RSD exceeds QC criteria, detects may be qualified as "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

The following analytes in the sample shown were qualified for %RSD and %D:

No problems were found for this criterion.

7. INTERNAL STANDARDS PERFORMANCE GC/MS:

Internal standards (IS) performance criteria ensure that the GC/MS sensitivity and response are stable during every experimental run. The internal standard area count must be in the range as specified in Table 10 of SOP HW 35A (Rev 0) of the associated continuing calibration internal standard area. The retention time of the internal standards must be within the range as specified in Table 10 of SOP HW 35A (Rev 0). If the area count is greater than, all positive results quantitated using that IS are qualified as estimated "J-", and non-detects are not qualified. If the area count is less than the associated standard, all positive results for compounds quantitated with that IS are qualified as estimated "J+" and all non-detects are qualified "R".

If an internal standard retention time were not met as specified in Table 10 of SOP HW 35A (Rev 0), the reviewer will use professional judgment to determine either partial or total rejection of the data for that sample fraction. Qualifications were applied to the samples and analytes as shown below. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

8. FIELD DUPLICATES:

No problems were found for this criterion.

9. COMPOUND IDENTIFICATION:

A) Semi-Volatile Fractions:

TCL compounds are identified on the GC/MS by using the analyte's relative retention time (RRT) and by comparison to the ion spectra obtained from known standards. For the results to be a positive hit, the sample peak must be within 0.06 RRT units of the standard compound and have ion spectra which have a ratio of the primary and secondary m/e intensities within 20% of that in the standard compound. For the tentatively identified compounds (TIC) the ion spectra must match accurately. In the cases where there is not an adequate ion spectrum match, the laboratory may have provided false positive identifications. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

10. CONTRACT PROBLEMS NON-COMPLIANCE:

None.

11. FIELD DOCUMENTATION:

No problems were identified.

12. OTHER PROBLEMS:

None.

13. DILUTIONS, RE-EXTRACTIONS and REANALYSIS:

Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.

ANALYSIS: PCB

The current SOP HW-37A (Revision 0) July 2015, USEPA Region II for the evaluation of PCB data generated through Statement of Work SOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME:

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time is exceeded, the data may not be valid. Those analytes detected in the samples whose holding time has been exceeded will be qualified as estimated, "J". Use professional judgment to qualify the non-detects (sample quantitation limits), if the holding times are grossly exceeded. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. SURROGATES:

All samples are spiked with surrogate compounds prior to sample preparation to evaluate overall laboratory performance and efficiency of the analytical technique. If the measured surrogate recovery were outside Table 5 of the SOP HW-37A (Revision 0), qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. MATRIX SPIKE/MATRIX SPIKE DUPLICATE (MS/MSD):

MS/MSD data are generated to determine the long-term precision and accuracy of the analytical method in various matrices. The MS/MSD data may be used in conjunction with other QC criteria for additional qualification of data. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

4. Laboratory Control Samples (LCS):

LCS data provides information on the accuracy of the analytical method and laboratory performance. If LCS recoveries fell outside of the acceptable limits, qualifications were applied to the associated samples and compounds as shown below.

5. BLANK CONTAMINATION:

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Depending on the concentration of the analyte in the blank, the analytes are qualified as non-detects U. Qualifications were applied to the samples and analytes as shown below.

A) Method blank contamination:

No problems were found for this criterion.

B) Field or rinse blank contamination:

No problems were found for this criterion.

6. CALIBRATION:

Satisfactory instrument calibration is established to ensure that the instrument is capable of producing acceptable quantitative data. An initial calibration

demonstrates that the instrument is capable of giving acceptable performance at the beginning of an experimental sequence. The continuing calibration checks document that the instrument is giving satisfactory daily performance.

A) Percent Relative Standard Deviation (%RSD):

For the PCB fraction, if %RSD exceeds 20% for all analytes and the two surrogates, qualify all associated positive results "J" and use professional judgment to qualify non-detects. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) Percent Difference (%D):

For opening CCV, or closing CCV that is used as an opening CCV for the next 12-hour period, if %D exceeds 25% for analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ".

For closing CCV, if %D exceeds 50% for all analytes and the two surrogates, qualify all associated positive results "J" and non-detects "UJ". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

7. FIELD DUPLICATES:

No problems were found for this criterion.

8. COMPOUND IDENTIFICATION:

A) PCB Fraction:

The retention times of reported compounds must fall within the calculated retention time windows for the two chromatographic columns and a GC/MS confirmation is required if the concentration exceeds 10ng/ml in the final sample extract. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. CONTRACT PROBLEMS NON-COMPLIANCE:

None.

10. FIELD DOCUMENTATION:

No problems were identified.

11. OTHER PROBLEMS:

None.

12. DILUTIONS, RE-EXTRACTIONS & RE-ANALYSIS:

Samples may be re-analyzed for dilution, re-extraction and for other QC reasons. In such cases, the best result values are used. See summary report and EDD for applicable samples and analytes.

Sample Summary Report

Case No:	45919	Contract:	EPW14030	SDG No:	BC9J1	Lab Code:	CHM

Sample Number:	ABLK19	Method:	Aroclors	Matrix:	Water	MA Number:	
Sample Location:		pH:	6	Sample Date:		Sample Time:	
% Moisture :				% Solids :	0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1221	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1232	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1242	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1248	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1254	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1260	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1262	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1268	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: ABLK23	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM
Aroclor-1221	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM
Aroclor-1232	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM
Aroclor-1242	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM
Aroclor-1248	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM
Aroclor-1254	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM
Aroclor-1260	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM
Aroclor-1262	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM
Aroclor-1268	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: ABLK84	Method: Aroclors	Matrix: Water	MA Number:
Sample Location:	pH: 6	Sample Date:	Sample Time:
% Moisture :		% Solids : 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1221	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1232	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1242	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1248	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1254	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1260	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1262	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1268	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: ALCS19	Method: Aroclors	Matrix: Water	MA Number:
Sample Location:	pH: 6	Sample Date:	Sample Time:
% Moisture :		% Solids : 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Spike	1.3		ug/L	1.3		1.0	Yes	S3VEM
Aroclor-1221	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1232	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1242	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1248	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1254	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1260	Spike	1.2		ug/L	1.2		1.0	Yes	S3VEM
Aroclor-1262	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1268	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: ALCS23	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Spike	42		ug/kg	42		1.0	Yes	S3VEM
Aroclor-1221	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM
Aroclor-1232	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM
Aroclor-1242	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM
Aroclor-1248	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM
Aroclor-1254	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM
Aroclor-1260	Spike	41		ug/kg	41		1.0	Yes	S3VEM
Aroclor-1262	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM
Aroclor-1268	Target	33	U	ug/kg	33	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: ALCS84	Method: Aroclors	Matrix: Water	MA Number:
Sample Location:	pH: 6	Sample Date:	Sample Time:
% Moisture :		% Solids : 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Spike	1.2		ug/L	1.2		1.0	Yes	S3VEM
Aroclor-1221	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1232	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1242	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1248	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1254	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1260	Spike	1.1		ug/L	1.1		1.0	Yes	S3VEM
Aroclor-1262	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1268	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J1	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: BRC001-GB025	pH:	Sample Date: 01/18/2016	Sample Time: 09:50:00
% Moisture :		% Solids : 64.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	30000	U	ug/kg	30000	U	10.0	Yes	S3VEM
Benzaldehyde	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
Phenol	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
2-Chlorophenol	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
2-Methylphenol	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
Acetophenone	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
4-Methylphenol	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Hexachloroethane	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Nitrobenzene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Isophorone	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
2-Nitrophenol	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
2,4-Dimethylphenol	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
2,4-Dichlorophenol	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Naphthalene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
4-Chloroaniline	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
Hexachlorobutadiene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Caprolactam	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
2-Methylnaphthalene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
1,1-Biphenyl	Target	4337000		ug/kg	4300000	D	100.0	Yes	S3VEM
2-Chloronaphthalene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
2-Nitroaniline	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Dimethylphthalate	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
3-Nitroaniline	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
Acenaphthene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
2,4-Dinitrophenol	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
4-Nitrophenol	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
Dibenzofuran	Target	57000	J	ug/kg	57000	J	10.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Diethylphthalate	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Fluorene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
4-Nitroaniline	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Hexachlorobenzene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Atrazine	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
Pentachlorophenol	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
Phenanthrene	Target	23000	J	ug/kg	23000	J	10.0	Yes	S3VEM
Anthracene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Carbazole	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
Di-n-butylphthalate	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Fluoranthene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Pyrene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Butylbenzylphthalate	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
Benzo(a)anthracene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Chrysene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	23000	J	ug/kg	23000	J	10.0	Yes	S3VEM
Di-n-octyl phthalate	Target	150000	U	ug/kg	150000	U	10.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Benzo(a)pyrene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	75000	U	ug/kg	75000	U	10.0	Yes	S3VEM
Ethyl 3,7,11,15-tetramethyl-2-hexa	TIC	84000	J	ug/kg	84000	J	10.0	Yes	NV
1,1-Biphenyl, 2,2-diphenoxy-	TIC	46000	J	ug/kg	46000	J	10.0	Yes	NV
Total Alkanes	TIC	450000		ug/kg	450000		10.0	Yes	NV
Cyclopropanecarboxamide, N-benzoyl	TIC	35000	J	ug/kg	35000	J	10.0	Yes	NV
1,1-Biphenyl, 2-phenoxy-	TIC	45000	J	ug/kg	45000	J	10.0	Yes	NV
1,1-Biphenyl, 4-phenoxy-	TIC	32000	J	ug/kg	32000	J	10.0	Yes	NV
Cyclopenta-2,4-dienone, 2-methyl-3	TIC	44000	J	ug/kg	44000	J	10.0	Yes	NV
Propanamide, N-[4-[3-(4-dimethylam	TIC	48000	J	ug/kg	48000	J	10.0	Yes	NV
Diphenyl ether	TIC	7400000	J	ug/kg	7400000	J	10.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9J1	Method:	Aroclors	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-GB025	pH:		Sample Date:	01/18/2016	Sample Time:	09:50:00
% Moisture :				% Solids :	64.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	150	U	ug/kg	150	U	1.0	Yes	S3VEM
Aroclor-1221	Target	150	U	ug/kg	150	U	1.0	Yes	S3VEM
Aroclor-1232	Target	150	U	ug/kg	150	U	1.0	Yes	S3VEM
Aroclor-1242	Target	150	U	ug/kg	150	U	1.0	Yes	S3VEM
Aroclor-1248	Target	150	U	ug/kg	150	U	1.0	Yes	S3VEM
Aroclor-1254	Target	150	U	ug/kg	150	U	1.0	Yes	S3VEM
Aroclor-1260	Target	290		ug/kg	290		1.0	Yes	S3VEM
Aroclor-1262	Target	150	U	ug/kg	150	U	1.0	Yes	S3VEM
Aroclor-1268	Target	150	U	ug/kg	150	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J1	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location: BRC001-GB025	pH:	Sample Date: 01/18/2016	Sample Time: 09:50:00
% Moisture :		% Solids : 64.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Chloromethane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Vinyl chloride	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Bromomethane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Chloroethane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Acetone	Target	15	U	ug/kg	8.0	J	1.0	Yes	S3VEM
Carbon disulfide	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Methyl Acetate	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Methylene chloride	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
2-Butanone	Target	15	U	ug/kg	15	U	1.0	Yes	S3VEM
Bromochloromethane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Chloroform	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Cyclohexane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Benzene	Target	6.4	J	ug/kg	6.4	J	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Trichloroethene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	15	U	ug/kg	15	U	1.0	Yes	S3VEM
Toluene	Target	3.8	J	ug/kg	3.8	J	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
2-Hexanone	Target	15	U	ug/kg	15	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Chlorobenzene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Ethylbenzene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
o-xylene	Target	5.7	J	ug/kg	5.7	J	1.0	Yes	S3VEM
m,p-Xylene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Styrene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Bromoform	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	7.3	U	ug/kg	7.3	U	1.0	Yes	S3VEM
Biphenyl	TIC	8.5	J	ug/kg	8.5	J	1.0	Yes	NV
Total Alkanes	TIC			ug/kg			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J2	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: BRC001-GB025	pH:	Sample Date: 01/18/2016	Sample Time: 10:00:00
% Moisture :		% Solids : 74.9	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	89	UJ	ug/kg	89	U	1.0	Yes	S3VEM
Benzaldehyde	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Phenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Methylphenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Acetophenone	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
4-Methylphenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Hexachloroethane	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Nitrobenzene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Isophorone	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Naphthalene	Target	120	J	ug/kg	120	J	1.0	Yes	S3VEM
4-Chloroaniline	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Caprolactam	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	45	J	ug/kg	45	J	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	78000		ug/kg	78000	D	30.0	Yes	S3VEM
2-Chloronaphthalene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	140	J	ug/kg	140	J	1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Acenaphthene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Dibenzofuran	Target	820		ug/kg	820		1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Diethylphthalate	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Fluorene	Target	62	J	ug/kg	62	J	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Atrazine	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Phenanthrene	Target	190	J	ug/kg	190	J	1.0	Yes	S3VEM
Anthracene	Target	510		ug/kg	510		1.0	Yes	S3VEM
Carbazole	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Fluoranthene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Pyrene	Target	83	J	ug/kg	83	J	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Chrysene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	210	J	ug/kg	210	J	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Dibenzothiophene, 4-methyl-	TIC	100	J	ug/kg	100	J	1.0	Yes	NV
Cyclohexane, butyl-	TIC	94	J	ug/kg	94	J	1.0	Yes	NV
Benzophenone	TIC	140	J	ug/kg	140	J	1.0	Yes	NV
Muco-inositol tri-methaneboronate	TIC	100	J	ug/kg	100	J	1.0	Yes	NV
Phenanthrene, 1-methyl-	TIC	160	J	ug/kg	160	J	1.0	Yes	NV
n-Nonylcyclohexane	TIC	100	J	ug/kg	100	J	1.0	Yes	NV
Dibenzothiophene, 3-methyl-	TIC	190	J	ug/kg	190	J	1.0	Yes	NV
Naphthalene, 2,3,6-trimethyl-	TIC	95	J	ug/kg	95	J	1.0	Yes	NV
Total Alkanes	TIC	5200		ug/kg	5200		1.0	Yes	NV
unknown-02	TIC	110	J	ug/kg	110	J	1.0	Yes	NV
Diphenyl ether	TIC	55000	J	ug/kg	55000	J	1.0	Yes	NV
1,1-Biphenyl, 2-phenoxy-	TIC	580	J	ug/kg	580	J	1.0	Yes	NV
Naphthalene, 2,7-dimethyl-	TIC	91	J	ug/kg	91	J	1.0	Yes	NV
unknown-01	TIC	120	J	ug/kg	120	J	1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9J2	Method:	Aroclors	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-GB025	pH:		Sample Date:	01/18/2016	Sample Time:	10:00:00
% Moisture :				% Solids :	74.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1221	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1232	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1242	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1248	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1254	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1260	Target	11	J	ug/kg	11	J	1.0	Yes	S3VEM
Aroclor-1262	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1268	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9J2	Method:	Volatile Organics	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-GB025	pH:		Sample Date:	01/18/2016	Sample Time:	10:00:00
% Moisture :				% Solids :	74.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Chloromethane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Vinyl chloride	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Bromomethane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Chloroethane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Acetone	Target	14	U	ug/kg	5.1	J	1.0	Yes	S3VEM
Carbon disulfide	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Methyl Acetate	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Methylene chloride	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
2-Butanone	Target	14	U	ug/kg	14	U	1.0	Yes	S3VEM
Bromochloromethane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Chloroform	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Cyclohexane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Benzene	Target	7.0		ug/kg	7.0		1.0	Yes	S3VEM
1,2-Dichloroethane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Trichloroethene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	14	U	ug/kg	14	U	1.0	Yes	S3VEM
Toluene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
2-Hexanone	Target	14	U	ug/kg	14	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Chlorobenzene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Ethylbenzene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
o-xylene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
m,p-Xylene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Styrene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Bromoform	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	3.3	J	ug/kg	3.3	J	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	6.8	U	ug/kg	6.8	U	1.0	Yes	S3VEM
Biphenyl	TIC	30	J	ug/kg	30	J	1.0	Yes	NV
Total Alkanes	TIC			ug/kg			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J3	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: BRC001-GB025	pH:	Sample Date: 01/18/2016	Sample Time: 10:00:00
% Moisture :		% Solids : 73	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	91	UJ	ug/kg	91	U	1.0	Yes	S3VEM
Benzaldehyde	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
Phenol	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Methylphenol	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
Acetophenone	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
4-Methylphenol	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Hexachloroethane	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Nitrobenzene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Isophorone	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Naphthalene	Target	96	J	ug/kg	96	J	1.0	Yes	S3VEM
4-Chloroaniline	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Caprolactam	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	76000		ug/kg	76000	D	30.0	Yes	S3VEM
2-Chloronaphthalene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	180	J	ug/kg	180	J	1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
Acenaphthene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
Dibenzofuran	Target	750		ug/kg	750		1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Diethylphthalate	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Fluorene	Target	56	J	ug/kg	56	J	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Atrazine	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
Phenanthrene	Target	150	J	ug/kg	150	J	1.0	Yes	S3VEM
Anthracene	Target	470		ug/kg	470		1.0	Yes	S3VEM
Carbazole	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Fluoranthene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Pyrene	Target	72	J	ug/kg	72	J	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Chrysene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	150	J	ug/kg	150	J	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	450	U	ug/kg	450	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Bromo dodecane	TIC	91	J	ug/kg	91	J	1.0	Yes	NV
Benzophenone	TIC	110	J	ug/kg	110	J	1.0	Yes	NV
1,1-Biphenyl, 2-phenoxy-	TIC	480	J	ug/kg	480	J	1.0	Yes	NV
unknown-01	TIC	110	J	ug/kg	110	J	1.0	Yes	NV
Total Alkanes	TIC	4300		ug/kg	4300		1.0	Yes	NV
Diphenyl ether	TIC	55000	J	ug/kg	55000	J	1.0	Yes	NV
Phenanthrene, 2-methyl-	TIC	150	J	ug/kg	150	J	1.0	Yes	NV
Dibenzothiophene, 4-methyl-	TIC	160	J	ug/kg	160	J	1.0	Yes	NV
Phenanthrene, 1-methyl-	TIC	180	J	ug/kg	180	J	1.0	Yes	NV
[1,1:3,1-Terphenyl]-2-ol	TIC	320	J	ug/kg	320	J	1.0	Yes	NV
unknown-02	TIC	240	J	ug/kg	240	J	1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9J3	Method:	Volatile Organics	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-GB025	pH:		Sample Date:	01/18/2016	Sample Time:	10:00:00
% Moisture :				% Solids :	73		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Chloromethane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Vinyl chloride	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Bromomethane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Chloroethane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Acetone	Target	13	U	ug/kg	6.0	J	1.0	Yes	S3VEM
Carbon disulfide	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Methyl Acetate	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Methylene chloride	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
2-Butanone	Target	13	U	ug/kg	13	U	1.0	Yes	S3VEM
Bromochloromethane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Chloroform	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Cyclohexane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Benzene	Target	9.2		ug/kg	9.2		1.0	Yes	S3VEM
1,2-Dichloroethane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Trichloroethene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	13	U	ug/kg	13	U	1.0	Yes	S3VEM
Toluene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
2-Hexanone	Target	13	U	ug/kg	13	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Chlorobenzene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Ethylbenzene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
o-xylene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
m,p-Xylene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Styrene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Bromoform	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	3.4	J	ug/kg	3.4	J	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	6.7	U	ug/kg	6.7	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/kg			1.0	Yes	NV
Biphenyl	TIC	52	J	ug/kg	52	J	1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9J3	Method:	Aroclors	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-GB025	pH:		Sample Date:	01/18/2016	Sample Time:	10:00:00
% Moisture :				% Solids :	73		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	45	U	ug/kg	45	U	1.0	Yes	S3VEM
Aroclor-1221	Target	45	U	ug/kg	45	U	1.0	Yes	S3VEM
Aroclor-1232	Target	45	U	ug/kg	45	U	1.0	Yes	S3VEM
Aroclor-1242	Target	45	U	ug/kg	45	U	1.0	Yes	S3VEM
Aroclor-1248	Target	45	U	ug/kg	45	U	1.0	Yes	S3VEM
Aroclor-1254	Target	45	U	ug/kg	45	U	1.0	Yes	S3VEM
Aroclor-1260	Target	45	U	ug/kg	45	U	1.0	Yes	S3VEM
Aroclor-1262	Target	45	U	ug/kg	45	U	1.0	Yes	S3VEM
Aroclor-1268	Target	45	U	ug/kg	45	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J4	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location: BRC001-GB025	pH:	Sample Date: 01/18/2016	Sample Time: 09:20:00
% Moisture :		% Solids : 75.3	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Chloromethane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Vinyl chloride	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Bromomethane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Chloroethane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Acetone	Target	12	U	ug/kg	12	U	1.0	Yes	S3VEM
Carbon disulfide	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Methyl Acetate	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Methylene chloride	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
2-Butanone	Target	12	U	ug/kg	12	U	1.0	Yes	S3VEM
Bromochloromethane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Chloroform	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Cyclohexane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Benzene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Trichloroethene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	12	U	ug/kg	12	U	1.0	Yes	S3VEM
Toluene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
2-Hexanone	Target	12	U	ug/kg	12	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Chlorobenzene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Ethylbenzene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
o-xylene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
m,p-Xylene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Styrene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Bromoform	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	5.9	U	ug/kg	5.9	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/kg			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J4	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: BRC001-GB025	pH:	Sample Date: 01/18/2016	Sample Time: 09:20:00
% Moisture :		% Solids : 75.3	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	89	U	ug/kg	89	U	1.0	Yes	S3VEM
Benzaldehyde	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Phenol	Target	66	J	ug/kg	66	J	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Methylphenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Acetophenone	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
4-Methylphenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Hexachloroethane	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Nitrobenzene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Isophorone	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Naphthalene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
4-Chloroaniline	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Caprolactam	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	130	J	ug/kg	130	J	1.0	Yes	S3VEM
2-Chloronaphthalene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	260		ug/kg	260		1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Acenaphthene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Dibenzofuran	Target	270		ug/kg	270		1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Diethylphthalate	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Fluorene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Atrazine	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Phenanthrene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Anthracene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Carbazole	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Fluoranthene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Pyrene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Chrysene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Total Alkanes	TIC	1200		ug/kg	1200		1.0	Yes	NV
Diphenyl ether	TIC	33000	J	ug/kg	33000	J	1.0	Yes	NV
1,1-Biphenyl, 2-phenoxy-	TIC	200	J	ug/kg	200	J	1.0	Yes	NV
Phthalimidine	TIC	130	J	ug/kg	130	J	1.0	Yes	NV
Phenol, 4-phenoxy-	TIC	130	J	ug/kg	130	J	1.0	Yes	NV
Nonahexacontanoic acid	TIC	130	J	ug/kg	130	J	1.0	Yes	NV
Anthracene, 9-methyl-	TIC	130	J	ug/kg	130	J	1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9J4	Method:	Aroclors	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-GB025	pH:		Sample Date:	01/18/2016	Sample Time:	09:20:00
% Moisture :				% Solids :	75.3		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1221	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1232	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1242	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1248	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1254	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1260	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1262	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1268	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J4MS	Method: Aroclors	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 01/18/2016	Sample Time: 09:20:00
% Moisture :		% Solids : 75.3	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Spike	170		ug/kg	170		1.0	Yes	S3VEM
Aroclor-1221	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1232	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1242	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1248	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1254	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1260	Spike	150		ug/kg	150		1.0	Yes	S3VEM
Aroclor-1262	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1268	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9J4MSD	Method:	Aroclors	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:	01/18/2016	Sample Time:	09:20:00
% Moisture :				% Solids :	75.3		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Spike	170		ug/kg	170		1.0	Yes	S3VEM
Aroclor-1221	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1232	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1242	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1248	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1254	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1260	Spike	150		ug/kg	150		1.0	Yes	S3VEM
Aroclor-1262	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1268	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J5	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location: BRC001-SB014	pH:	Sample Date: 01/18/2016	Sample Time: 11:35:00
% Moisture :		% Solids : 76.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Chloromethane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Vinyl chloride	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Bromomethane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Chloroethane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Acetone	Target	12	U	ug/kg	12	U	1.0	Yes	S3VEM
Carbon disulfide	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Methyl Acetate	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Methylene chloride	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
2-Butanone	Target	12	U	ug/kg	12	U	1.0	Yes	S3VEM
Bromochloromethane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Chloroform	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Cyclohexane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Benzene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Trichloroethene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	12	U	ug/kg	12	U	1.0	Yes	S3VEM
Toluene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
2-Hexanone	Target	12	U	ug/kg	12	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Chlorobenzene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Ethylbenzene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
o-xylene	Target	940	J	ug/kg	940	E	1.0	Yes	S3VEM
m,p-Xylene	Target	21		ug/kg	21		1.0	Yes	S3VEM
Styrene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Bromoform	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	470		ug/kg	470	E	1.0	No	S3VEM
1,1,2,2-Tetrachloroethane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	5.8	U	ug/kg	5.8	U	1.0	Yes	S3VEM
Benzene, 1-ethyl-4-methyl-	TIC	4.9	J	ug/kg	4.9	J	1.0	Yes	NV
Total Alkanes	TIC	6.8		ug/kg	6.8		1.0	Yes	NV
unknown-01	TIC	3.2	J	ug/kg	3.2	J	1.0	Yes	NV
Benzene, propyl-	TIC	68	J	ug/kg	68	J	1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J5	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: BRC001-SB014	pH:	Sample Date: 01/18/2016	Sample Time: 11:35:00
% Moisture :		% Solids : 76.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	87	U	ug/kg	87	U	1.0	Yes	S3VEM
Benzaldehyde	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Phenol	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2-Methylphenol	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Acetophenone	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
4-Methylphenol	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Hexachloroethane	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Nitrobenzene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Isophorone	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Naphthalene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
4-Chloroaniline	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Caprolactam	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2-Chloronaphthalene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	430		ug/kg	430		1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Acenaphthene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Dibenzofuran	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Diethylphthalate	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Fluorene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Atrazine	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Phenanthrene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Anthracene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Carbazole	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Fluoranthene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Pyrene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Chrysene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Benzene, 1,3-dimethyl-	TIC	2000	J	ug/kg	2000	J	1.0	Yes	NV
Benzene, (1-methylethyl)-	TIC	370	J	ug/kg	370	J	1.0	Yes	NV
Total Alkanes	TIC	310		ug/kg	310		1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9J5	Method:	Aroclors	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-SB014	pH:		Sample Date:	01/18/2016	Sample Time:	11:35:00
% Moisture :				% Solids :	76.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1221	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1232	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1242	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1248	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1254	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1260	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1262	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1268	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J5ME	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 76.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Chloromethane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Vinyl chloride	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Bromomethane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Chloroethane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Trichlorofluoromethane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
1,1-Dichloroethene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Acetone	Target	780	U	ug/kg	780	U	1.0	No	S3VEM
Carbon disulfide	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Methyl Acetate	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Methylene chloride	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
trans-1,2-Dichloroethene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Methyl tert-butyl Ether	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
1,1-Dichloroethane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
cis-1,2-Dichloroethene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
2-Butanone	Target	780	U	ug/kg	780	U	1.0	No	S3VEM
Bromochloromethane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Chloroform	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
1,1,1-Trichloroethane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Cyclohexane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Carbon tetrachloride	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Benzene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
1,2-Dichloroethane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Trichloroethene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Methylcyclohexane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
1,2-Dichloropropane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Bromodichloromethane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
cis-1,3-Dichloropropene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
4-Methyl-2-pentanone	Target	780	U	ug/kg	780	U	1.0	No	S3VEM
Toluene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
1,1,2-Trichloroethane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Tetrachloroethene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
2-Hexanone	Target	780	U	ug/kg	780	U	1.0	No	S3VEM
Dibromochloromethane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
1,2-Dibromoethane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Chlorobenzene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Ethylbenzene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
o-xylene	Target	110	J	ug/kg	110	J	1.0	No	S3VEM
m,p-Xylene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Styrene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Bromoform	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Isopropylbenzene	Target	540		ug/kg	540		1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
1,3-Dichlorobenzene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
1,4-Dichlorobenzene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
1,2-Dichlorobenzene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
1,2-Dibromo-3-chloropropane	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
1,2,4-trichlorobenzene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
1,2,3-Trichlorobenzene	Target	390	U	ug/kg	390	U	1.0	No	S3VEM
Benzene, propyl-	TIC	78	J	ug/kg	78	J	1.0	No	NV
Total Alkanes	TIC			ug/kg			1.0	No	NV
Furan, tetrahydro-2-methyl-	TIC	89	J	ug/kg	89	J	1.0	No	NV
Furan, 2-butyltetrahydro-	TIC	61	J	ug/kg	61	J	1.0	No	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9J6	Method:	Aroclors	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-SB014	pH:		Sample Date:	01/18/2016	Sample Time:	11:25:00
% Moisture :				% Solids :	87.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	38	U	ug/kg	38	U	1.0	Yes	S3VEM
Aroclor-1221	Target	38	U	ug/kg	38	U	1.0	Yes	S3VEM
Aroclor-1232	Target	38	U	ug/kg	38	U	1.0	Yes	S3VEM
Aroclor-1242	Target	38	U	ug/kg	38	U	1.0	Yes	S3VEM
Aroclor-1248	Target	38	U	ug/kg	38	U	1.0	Yes	S3VEM
Aroclor-1254	Target	38	U	ug/kg	38	U	1.0	Yes	S3VEM
Aroclor-1260	Target	38	U	ug/kg	38	U	1.0	Yes	S3VEM
Aroclor-1262	Target	38	U	ug/kg	38	U	1.0	Yes	S3VEM
Aroclor-1268	Target	38	U	ug/kg	38	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J6	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: BRC001-SB014	pH:	Sample Date: 01/18/2016	Sample Time: 11:25:00
% Moisture :		% Solids : 87.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	76	U	ug/kg	76	U	1.0	Yes	S3VEM
Benzaldehyde	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
Phenol	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
2-Methylphenol	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
Acetophenone	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
4-Methylphenol	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Hexachloroethane	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Nitrobenzene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Isophorone	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Naphthalene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
4-Chloroaniline	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Caprolactam	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
2-Chloronaphthalene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	240		ug/kg	240		1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
Acenaphthene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
Dibenzofuran	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Diethylphthalate	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Fluorene	Target	63	J	ug/kg	63	J	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Atrazine	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
Phenanthrene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Anthracene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Carbazole	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Fluoranthene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Pyrene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Chrysene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	380	U	ug/kg	380	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	190	U	ug/kg	190	U	1.0	Yes	S3VEM
unknown-07	TIC	330	J	ug/kg	330	J	1.0	Yes	NV
unknown-06	TIC	320	J	ug/kg	320	J	1.0	Yes	NV
unknown-04	TIC	190	J	ug/kg	190	J	1.0	Yes	NV
unknown-01	TIC	410	J	ug/kg	410	J	1.0	Yes	NV
Naphthalene, 1,6,7-trimethyl-	TIC	240	J	ug/kg	240	J	1.0	Yes	NV
unknown-03	TIC	80	J	ug/kg	80	J	1.0	Yes	NV
unknown-05	TIC	150	J	ug/kg	150	J	1.0	Yes	NV
unknown-02	TIC	240	J	ug/kg	240	J	1.0	Yes	NV
Total Alkanes	TIC	6600		ug/kg	6600		1.0	Yes	NV
Naphthalene, 2,3,6-trimethyl-	TIC	340	J	ug/kg	340	J	1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J6	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location: BRC001-SB014	pH:	Sample Date: 01/18/2016	Sample Time: 11:25:00
% Moisture :		% Solids : 87.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Chloromethane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Vinyl chloride	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Bromomethane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Chloroethane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Acetone	Target	10	U	ug/kg	17		1.0	Yes	S3VEM
Carbon disulfide	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Methyl Acetate	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Methylene chloride	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
2-Butanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Bromochloromethane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Chloroform	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Cyclohexane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Benzene	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Trichloroethene	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Toluene	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
2-Hexanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Chlorobenzene	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Ethylbenzene	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
o-xylene	Target	37		ug/kg	37		1.0	Yes	S3VEM
m,p-Xylene	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Styrene	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
Bromoform	Target	5.1	UJ	ug/kg	5.1	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	220		ug/kg	220	E	1.0	No	S3VEM
1,1,2,2-Tetrachloroethane	Target	5.1	U	ug/kg	5.1	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	5.1	UJ	ug/kg	5.1	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	5.1	UJ	ug/kg	5.1	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	5.1	UJ	ug/kg	5.1	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	5.1	UJ	ug/kg	5.1	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	5.1	UJ	ug/kg	5.1	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	5.1	UJ	ug/kg	5.1	U	1.0	Yes	S3VEM
Total Alkanes	TIC	3100		ug/kg	3100		1.0	Yes	NV
Indan, 1-methyl-	TIC	200	J	ug/kg	200	J	1.0	Yes	NV
unknown-04	TIC	75	J	ug/kg	75	J	1.0	Yes	NV
unknown-03	TIC	100	J	ug/kg	100	J	1.0	Yes	NV
unknown-01	TIC	7.2	J	ug/kg	7.2	J	1.0	Yes	NV
Benzene, (1-methyl-1-butenyl)-	TIC	240	J	ug/kg	240	J	1.0	Yes	NV
unknown-05	TIC	58	J	ug/kg	58	J	1.0	Yes	NV
unknown-02	TIC	20	J	ug/kg	20	J	1.0	Yes	NV
Benzene, 1,3,5-trimethyl-2-(1-meth	TIC	270	J	ug/kg	270	J	1.0	Yes	NV
Benzene, 1-methyl-2-(1-methylethyl	TIC	86	J	ug/kg	86	J	1.0	Yes	NV
2-Chloro 5-chloromethylthiophene	TIC	140	J	ug/kg	140	J	1.0	Yes	NV
Benzene, 1-methyl-4-(1-methylpropy	TIC	89	J	ug/kg	89	J	1.0	Yes	NV
1H-Indene, 2,3-dihydro-4,7-dimethy	TIC	120	J	ug/kg	120	J	1.0	Yes	NV
Benzene, 1-butenyl-, (E)-	TIC	170	J	ug/kg	170	J	1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J6ME	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 87.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Chloromethane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Vinyl chloride	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Bromomethane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Chloroethane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Trichlorofluoromethane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
1,1-Dichloroethene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Acetone	Target	580	U	ug/kg	580	U	1.0	No	S3VEM
Carbon disulfide	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Methyl Acetate	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Methylene chloride	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
trans-1,2-Dichloroethene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Methyl tert-butyl Ether	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
1,1-Dichloroethane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
cis-1,2-Dichloroethene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
2-Butanone	Target	580	U	ug/kg	580	U	1.0	No	S3VEM
Bromochloromethane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Chloroform	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
1,1,1-Trichloroethane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Cyclohexane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Carbon tetrachloride	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Benzene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
1,2-Dichloroethane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Trichloroethene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Methylcyclohexane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
1,2-Dichloropropane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Bromodichloromethane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
cis-1,3-Dichloropropene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
4-Methyl-2-pentanone	Target	580	U	ug/kg	580	U	1.0	No	S3VEM
Toluene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
trans-1,3-Dichloropropene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
1,1,2-Trichloroethane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Tetrachloroethene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
2-Hexanone	Target	580	U	ug/kg	580	U	1.0	No	S3VEM
Dibromochloromethane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
1,2-Dibromoethane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Chlorobenzene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Ethylbenzene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
o-xylene	Target	90	J	ug/kg	90	J	1.0	No	S3VEM
m,p-Xylene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Styrene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Bromoform	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
Isopropylbenzene	Target	1300		ug/kg	1300		1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
1,3-Dichlorobenzene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
1,4-Dichlorobenzene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
1,2-Dichlorobenzene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
1,2-Dibromo-3-chloropropane	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
1,2,4-trichlorobenzene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
1,2,3-Trichlorobenzene	Target	290	U	ug/kg	290	U	1.0	No	S3VEM
13-Oxabicyclo[10.1.0]tridecane	TIC	740	J	ug/kg	740	J	1.0	No	NV
Benzene, 1-ethyl-2,3-dimethyl-	TIC	620	J	ug/kg	620	J	1.0	No	NV
Naphthalene, 2,3,6-trimethyl-	TIC	2200	J	ug/kg	2200	J	1.0	No	NV
Benzene, 1-(2-butenyl)-2,3-dimethy	TIC	3000	J	ug/kg	3000	J	1.0	No	NV
unknown-03	TIC	660	J	ug/kg	660	J	1.0	No	NV
Total Alkanes	TIC	35000		ug/kg	35000		1.0	No	NV
Benzene, 2-ethenyl-1,4-dimethyl-	TIC	2000	J	ug/kg	2000	J	1.0	No	NV
unknown-04	TIC	3100	J	ug/kg	3100	J	1.0	No	NV
Naphthalene, 1,6,7-trimethyl-	TIC	3000	J	ug/kg	3000	J	1.0	No	NV
.alpha.,.beta.,.beta.-Trimethylsty	TIC	3900	J	ug/kg	3900	J	1.0	No	NV
Naphthalene, 1,4,6-trimethyl-	TIC	4200	J	ug/kg	4200	J	1.0	No	NV
1H-Indene, 2,3-dihydro-1,2-dimethy	TIC	900	J	ug/kg	900	J	1.0	No	NV
1-Phenyl-1-butene	TIC	200	J	ug/kg	200	J	1.0	No	NV

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
unknown-02	TIC	220	J	ug/kg	220	J	1.0	No	NV
unknown-01	TIC	470	J	ug/kg	470	J	1.0	No	NV
Benzene, 1,2-diethyl-	TIC	300	J	ug/kg	300	J	1.0	No	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9J7	Method:	Aroclors	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-SB014	pH:		Sample Date:	01/18/2016	Sample Time:	11:30:00
% Moisture :				% Solids :	78.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	42	U	ug/kg	42	U	1.0	Yes	S3VEM
Aroclor-1221	Target	42	U	ug/kg	42	U	1.0	Yes	S3VEM
Aroclor-1232	Target	42	U	ug/kg	42	U	1.0	Yes	S3VEM
Aroclor-1242	Target	42	U	ug/kg	42	U	1.0	Yes	S3VEM
Aroclor-1248	Target	42	U	ug/kg	42	U	1.0	Yes	S3VEM
Aroclor-1254	Target	42	U	ug/kg	42	U	1.0	Yes	S3VEM
Aroclor-1260	Target	42	U	ug/kg	42	U	1.0	Yes	S3VEM
Aroclor-1262	Target	42	U	ug/kg	42	U	1.0	Yes	S3VEM
Aroclor-1268	Target	42	U	ug/kg	42	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J7	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location: BRC001-SB014	pH:	Sample Date: 01/18/2016	Sample Time: 11:30:00
% Moisture :		% Solids : 78.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Chloromethane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Vinyl chloride	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Bromomethane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Chloroethane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Acetone	Target	11	U	ug/kg	6.8	J	1.0	Yes	S3VEM
Carbon disulfide	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Methyl Acetate	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Methylene chloride	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
2-Butanone	Target	11	U	ug/kg	11	U	1.0	Yes	S3VEM
Bromochloromethane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Chloroform	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Cyclohexane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Benzene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Trichloroethene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	11	U	ug/kg	11	U	1.0	Yes	S3VEM
Toluene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
2-Hexanone	Target	11	U	ug/kg	11	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Chlorobenzene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Ethylbenzene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
o-xylene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
m,p-Xylene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Styrene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Bromoform	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	180		ug/kg	180		1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	5.3	U	ug/kg	5.3	U	1.0	Yes	S3VEM
Benzene, propyl-	TIC	24	J	ug/kg	24	J	1.0	Yes	NV
Total Alkanes	TIC	2.7		ug/kg	2.7		1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J7	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: BRC001-SB014	pH:	Sample Date: 01/18/2016	Sample Time: 11:30:00
% Moisture :		% Solids : 78.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	85	UJ	ug/kg	85	U	1.0	Yes	S3VEM
Benzaldehyde	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
Phenol	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2-Methylphenol	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
Acetophenone	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
4-Methylphenol	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Hexachloroethane	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Nitrobenzene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Isophorone	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Naphthalene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
4-Chloroaniline	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Caprolactam	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2-Chloronaphthalene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	200	J	ug/kg	200	J	1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
Acenaphthene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
Dibenzofuran	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Diethylphthalate	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Fluorene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Atrazine	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
Phenanthrene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Anthracene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Carbazole	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Fluoranthene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Pyrene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Chrysene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	420	U	ug/kg	420	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Total Alkanes	TIC	910		ug/kg	910		1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J8	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: BRC001-SB019	pH:	Sample Date: 01/18/2016	Sample Time: 10:50:00
% Moisture :		% Solids : 76.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	87	U	ug/kg	87	U	1.0	Yes	S3VEM
Benzaldehyde	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Phenol	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2-Methylphenol	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Acetophenone	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
4-Methylphenol	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Hexachloroethane	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Nitrobenzene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Isophorone	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Naphthalene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
4-Chloroaniline	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Caprolactam	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	83	J	ug/kg	83	J	1.0	Yes	S3VEM
2-Chloronaphthalene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	260		ug/kg	260		1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Acenaphthene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Dibenzofuran	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Diethylphthalate	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Fluorene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Atrazine	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Phenanthrene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Anthracene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Carbazole	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Fluoranthene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Pyrene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Chrysene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	430	U	ug/kg	430	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	220	U	ug/kg	220	U	1.0	Yes	S3VEM
Phenol, 3,4-dimethyl-	TIC	380	J	ug/kg	380	J	1.0	Yes	NV
Benzene, (1-methylethyl)-	TIC	1500	J	ug/kg	1500	J	1.0	Yes	NV
Diphenyl ether	TIC	210	J	ug/kg	210	J	1.0	Yes	NV
2-Cyclopenten-1-one, 2,3,4,5-tetra	TIC	150	J	ug/kg	150	J	1.0	Yes	NV
Benzaldehyde, 3-methyl-	TIC	300	J	ug/kg	300	J	1.0	Yes	NV
Total Alkanes	TIC	190		ug/kg	190		1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9J8	Method:	Aroclors	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-SB019	pH:		Sample Date:	01/18/2016	Sample Time:	10:50:00
% Moisture :				% Solids :	76.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1221	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1232	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1242	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1248	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1254	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1260	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1262	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM
Aroclor-1268	Target	43	U	ug/kg	43	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9J8	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location: BRC001-SB019	pH:	Sample Date: 01/18/2016	Sample Time: 10:50:00
% Moisture :		% Solids : 76.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Chloromethane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Vinyl chloride	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Bromomethane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Chloroethane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Trichlorofluoromethane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
1,1-Dichloroethene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Acetone	Target	7300	U	ug/kg	7300	U	10.0	Yes	S3VEM
Carbon disulfide	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Methyl Acetate	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Methylene chloride	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
1,1-Dichloroethane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
2-Butanone	Target	7300	U	ug/kg	7300	U	10.0	Yes	S3VEM
Bromochloromethane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Chloroform	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Cyclohexane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Carbon tetrachloride	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Benzene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
1,2-Dichloroethane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Trichloroethene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Methylcyclohexane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
1,2-Dichloropropane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Bromodichloromethane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	7300	U	ug/kg	7300	U	10.0	Yes	S3VEM
Toluene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Tetrachloroethene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
2-Hexanone	Target	7300	U	ug/kg	7300	U	10.0	Yes	S3VEM
Dibromochloromethane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
1,2-Dibromoethane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Chlorobenzene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Ethylbenzene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
o-xylene	Target	1764000		ug/kg	1800000	D	200.0	Yes	S3VEM
m,p-Xylene	Target	12000		ug/kg	12000		10.0	Yes	S3VEM
Styrene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Bromoform	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Isopropylbenzene	Target	14000		ug/kg	14000		10.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	3700	U	ug/kg	3700	U	10.0	Yes	S3VEM
Benzene, 1-ethyl-3-methyl-	TIC	2000	J	ug/kg	2000	J	10.0	Yes	NV
Total Alkanes	TIC	1200		ug/kg	1200		10.0	Yes	NV
Benzene, propyl-	TIC	1600	J	ug/kg	1600	J	10.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9J9	Method:	Semivolatiles	Matrix:	Water	MA Number:	
Sample Location:	RB01182016	pH:	6	Sample Date:	01/18/2016	Sample Time:	14:00:00
% Moisture :				% Solids :	0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	2.0	UJ	ug/L	2.0	U	1.0	Yes	S3VEM
Benzaldehyde	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Phenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Methylphenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Acetophenone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4-Methylphenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Hexachloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Nitrobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Isophorone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Naphthalene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Chloroaniline	Target	10	UJ	ug/L	10	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Caprolactam	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	10	UJ	ug/L	10	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Chloronaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Acenaphthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Dibenzofuran	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Diethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Fluorene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Atrazine	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Phenanthrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Anthracene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Carbazole	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Pyrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chrysene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/L			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9J9	Method:	Volatile Organics	Matrix:	Water	MA Number:	
Sample Location:	RB01182016	pH:	1.3	Sample Date:	01/18/2016	Sample Time:	14:00:00
% Moisture :				% Solids :	0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Vinyl chloride	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bromomethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Acetone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Carbon disulfide	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methyl Acetate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methylene chloride	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Butanone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Bromochloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chloroform	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Cyclohexane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Benzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Trichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Toluene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Hexanone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Ethylbenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
o-xylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
m,p-Xylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Styrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bromoform	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/L			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9J9	Method:	Aroclors	Matrix:	Water	MA Number:	
Sample Location:	RB01182016	pH:	6	Sample Date:	01/18/2016	Sample Time:	14:00:00
% Moisture :				% Solids :	0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1221	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1232	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1242	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1248	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1254	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1260	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1262	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1268	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9K0	Method:	Aroclors	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-AB001	pH:		Sample Date:	01/20/2016	Sample Time:	11:13:00
% Moisture :				% Solids :	75.5		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1221	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1232	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1242	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1248	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1254	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1260	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1262	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM
Aroclor-1268	Target	44	U	ug/kg	44	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9K0	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: BRC001-AB001	pH:	Sample Date: 01/20/2016	Sample Time: 11:13:00
% Moisture :		% Solids : 75.5	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	89	U	ug/kg	89	U	1.0	Yes	S3VEM
Benzaldehyde	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Phenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Methylphenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Acetophenone	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
4-Methylphenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Hexachloroethane	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Nitrobenzene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Isophorone	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Naphthalene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
4-Chloroaniline	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Caprolactam	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Chloronaphthalene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	190	J	ug/kg	190	J	1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Acenaphthene	Target	45	J	ug/kg	45	J	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Dibenzofuran	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Diethylphthalate	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Fluorene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Atrazine	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Phenanthrene	Target	230		ug/kg	230		1.0	Yes	S3VEM
Anthracene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Carbazole	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Fluoranthene	Target	130	J	ug/kg	130	J	1.0	Yes	S3VEM
Pyrene	Target	130	J	ug/kg	130	J	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Chrysene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	440	U	ug/kg	440	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	230	U	ug/kg	230	U	1.0	Yes	S3VEM
Phenanthrene, 2,5-dimethyl-	TIC	93	J	ug/kg	93	J	1.0	Yes	NV
Phenanthrene, 3,6-dimethyl-	TIC	90	J	ug/kg	90	J	1.0	Yes	NV
Phenanthrene, 1-methyl-	TIC	150	J	ug/kg	150	J	1.0	Yes	NV
Total Alkanes	TIC			ug/kg			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9K0	Method:	Volatile Organics	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-AB001	pH:		Sample Date:	01/20/2016	Sample Time:	11:13:00
% Moisture :				% Solids :	75.5		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Chloromethane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Vinyl chloride	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Bromomethane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Chloroethane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Acetone	Target	12	U	ug/kg	11	J	1.0	Yes	S3VEM
Carbon disulfide	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Methyl Acetate	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Methylene chloride	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
2-Butanone	Target	12	U	ug/kg	12	U	1.0	Yes	S3VEM
Bromochloromethane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Chloroform	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Cyclohexane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Benzene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Trichloroethene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	12	U	ug/kg	12	U	1.0	Yes	S3VEM
Toluene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
2-Hexanone	Target	12	U	ug/kg	12	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Chlorobenzene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Ethylbenzene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
o-xylene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
m,p-Xylene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Styrene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Bromoform	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	6.2	U	ug/kg	6.2	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/kg			1.0	Yes	NV
Ethene, (methylsulfonyl)-	TIC	35	J	ug/kg	35	J	1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9K1	Method:	Volatile Organics	Matrix:	Water	MA Number:	
Sample Location:	RB01182016	pH:	1.3	Sample Date:	01/18/2016	Sample Time:	13:00:00
% Moisture :				% Solids :	0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Vinyl chloride	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bromomethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Acetone	Target	1.6	J	ug/L	1.6	J	1.0	Yes	S3VEM
Carbon disulfide	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methyl Acetate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methylene chloride	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Butanone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Bromochloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chloroform	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Cyclohexane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Benzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Trichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Toluene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Hexanone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Ethylbenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
o-xylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
m,p-Xylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Styrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bromoform	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/L			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9K1	Method:	Semivolatiles	Matrix:	Water	MA Number:	
Sample Location:	RB01182016	pH:	6	Sample Date:	01/18/2016	Sample Time:	13:00:00
% Moisture :				% Solids :	0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	2.0	UJ	ug/L	2.0	U	1.0	Yes	S3VEM
Benzaldehyde	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Phenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Methylphenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Acetophenone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4-Methylphenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Hexachloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Nitrobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Isophorone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Naphthalene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Chloroaniline	Target	10	UJ	ug/L	10	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Caprolactam	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	10	UJ	ug/L	10	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Chloronaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Acenaphthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Dibenzofuran	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Diethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Fluorene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Atrazine	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Phenanthrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Anthracene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Carbazole	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Pyrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chrysene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/L			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9K1	Method:	Aroclors	Matrix:	Water	MA Number:	
Sample Location:	RB01182016	pH:	6	Sample Date:	01/18/2016	Sample Time:	13:00:00
% Moisture :				% Solids :	0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1221	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1232	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1242	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1248	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1254	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1260	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1262	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM
Aroclor-1268	Target	1.0	U	ug/L	1.0	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number:	BC9K2	Method:	Aroclors	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-AB014	pH:		Sample Date:	01/20/2016	Sample Time:	14:55:00
% Moisture :				% Solids :	79.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aroclor-1016	Target	41	U	ug/kg	41	U	1.0	Yes	S3VEM
Aroclor-1221	Target	41	U	ug/kg	41	U	1.0	Yes	S3VEM
Aroclor-1232	Target	41	U	ug/kg	41	U	1.0	Yes	S3VEM
Aroclor-1242	Target	41	U	ug/kg	41	U	1.0	Yes	S3VEM
Aroclor-1248	Target	41	U	ug/kg	41	U	1.0	Yes	S3VEM
Aroclor-1254	Target	41	U	ug/kg	41	U	1.0	Yes	S3VEM
Aroclor-1260	Target	41	U	ug/kg	41	U	1.0	Yes	S3VEM
Aroclor-1262	Target	41	U	ug/kg	41	U	1.0	Yes	S3VEM
Aroclor-1268	Target	41	U	ug/kg	41	U	1.0	Yes	S3VEM

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9K2	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location: BRC001-AB014	pH:	Sample Date: 01/20/2016	Sample Time: 14:55:00
% Moisture :		% Solids : 79.4	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Chloromethane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Vinyl chloride	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Bromomethane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Chloroethane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Acetone	Target	10	U	ug/kg	12		1.0	Yes	S3VEM
Carbon disulfide	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Methyl Acetate	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Methylene chloride	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
2-Butanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Bromochloromethane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Chloroform	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Cyclohexane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Benzene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Trichloroethene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Toluene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
2-Hexanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Chlorobenzene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Ethylbenzene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
o-xylene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
m,p-Xylene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Styrene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Bromoform	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	5.2	U	ug/kg	5.2	U	1.0	Yes	S3VEM
Total Alkanes	TIC	92		ug/kg	92		1.0	Yes	NV
Benzene, 1-(dodecyloxy)-2-nitro-	TIC	3.0	J	ug/kg	3.0	J	1.0	Yes	NV
unknown-01	TIC	2.8	J	ug/kg	2.8	J	1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: BC9K2	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location: BRC001-AB014	pH:	Sample Date: 01/20/2016	Sample Time: 14:55:00
% Moisture :		% Solids : 79.4	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	84	UJ	ug/kg	84	U	1.0	Yes	S3VEM
Benzaldehyde	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
Phenol	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
2-Methylphenol	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
Acetophenone	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
4-Methylphenol	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Hexachloroethane	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Nitrobenzene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Isophorone	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Naphthalene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
4-Chloroaniline	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Caprolactam	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
2-Chloronaphthalene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	140	J	ug/kg	140	J	1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
Acenaphthene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
Dibenzofuran	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Diethylphthalate	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Fluorene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Atrazine	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
Phenanthrene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Anthracene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Carbazole	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Fluoranthene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Pyrene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Chrysene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	410	U	ug/kg	410	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	210	U	ug/kg	210	U	1.0	Yes	S3VEM
Total Alkanes	TIC	4700		ug/kg	4700		1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: SBLK16	Method: Semivolatiles	Matrix: Water	MA Number:
Sample Location:	pH: 6	Sample Date:	Sample Time:
% Moisture :		% Solids : 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	2.0	U	ug/L	2.0	U	1.0	Yes	S3VEM
Benzaldehyde	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Phenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Methylphenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Acetophenone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4-Methylphenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Hexachloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Nitrobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Isophorone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Naphthalene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Chloroaniline	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Caprolactam	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Chloronaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Acenaphthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Dibenzofuran	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Diethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Fluorene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Atrazine	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Phenanthrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Anthracene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Carbazole	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Pyrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chrysene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/L			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: SBLK24	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	67	U	ug/kg	67	U	1.0	Yes	S3VEM
Benzaldehyde	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Phenol	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2-Methylphenol	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Acetophenone	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
4-Methylphenol	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Hexachloroethane	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Nitrobenzene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Isophorone	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Naphthalene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
4-Chloroaniline	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Caprolactam	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2-Chloronaphthalene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Acenaphthene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Dibenzofuran	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Diethylphthalate	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Fluorene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Atrazine	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Phenanthrene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Anthracene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Carbazole	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Fluoranthene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Pyrene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Chrysene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/kg			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: SBLK83	Method: Semivolatiles	Matrix: Water	MA Number:
Sample Location:	pH: 6	Sample Date:	Sample Time:
% Moisture :		% Solids : 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	2.0	U	ug/L	2.0	U	1.0	Yes	S3VEM
Benzaldehyde	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Phenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Methylphenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Acetophenone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4-Methylphenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Hexachloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Nitrobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Isophorone	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Naphthalene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Chloroaniline	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Caprolactam	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Chloronaphthalene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Acenaphthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Dibenzofuran	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Diethylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Fluorene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Atrazine	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Phenanthrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Anthracene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Carbazole	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Pyrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chrysene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/L			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: SBLK85	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	67	U	ug/kg	67	U	1.0	Yes	S3VEM
Benzaldehyde	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Phenol	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2-Methylphenol	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Acetophenone	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
4-Methylphenol	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Hexachloroethane	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Nitrobenzene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Isophorone	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Naphthalene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
4-Chloroaniline	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Caprolactam	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2-Chloronaphthalene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Acenaphthene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Dibenzofuran	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Diethylphthalate	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Fluorene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Atrazine	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Phenanthrene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Anthracene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Carbazole	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Fluoranthene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Pyrene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Chrysene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	330	U	ug/kg	330	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	170	U	ug/kg	170	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/kg			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: SBLK87	Method: Semivolatiles	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
1,4-Dioxane	Target	2000	U	ug/kg	2000	U	1.0	Yes	S3VEM
Benzaldehyde	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
Phenol	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
Bis(2-Chloroethyl)ether	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
2-Chlorophenol	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
2-Methylphenol	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
2,2-oxybis(1-Chloropropane)	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
Acetophenone	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
4-Methylphenol	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
N-Nitroso-di-n-propylamine	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Hexachloroethane	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Nitrobenzene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Isophorone	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
2-Nitrophenol	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
2,4-Dimethylphenol	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Bis(2-Chloroethoxy)methane	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
2,4-Dichlorophenol	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Naphthalene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
4-Chloroaniline	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
Hexachlorobutadiene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Caprolactam	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
4-Chloro-3-methylphenol	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
2-Methylnaphthalene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Hexachlorocyclopentadiene	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
2,4,6-Trichlorophenol	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
2,4,5-Trichlorophenol	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
1,1-Biphenyl	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
2-Chloronaphthalene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
2-Nitroaniline	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Dimethylphthalate	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
2,6-Dinitrotoluene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Acenaphthylene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
3-Nitroaniline	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
Acenaphthene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
2,4-Dinitrophenol	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
4-Nitrophenol	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
Dibenzofuran	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
2,4-Dinitrotoluene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Diethylphthalate	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Fluorene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
4-Chlorophenyl-phenylether	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
4-Nitroaniline	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
4,6-Dinitro-2-methylphenol	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
N-Nitrosodiphenylamine	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
1,2,4,5-Tetrachlorobenzene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
4-Bromophenyl-phenylether	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Hexachlorobenzene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Atrazine	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
Pentachlorophenol	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
Phenanthrene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Anthracene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Carbazole	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
Di-n-butylphthalate	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Fluoranthene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Pyrene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Butylbenzylphthalate	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
3,3-Dichlorobenzidine	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
Benzo(a)anthracene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Chrysene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Bis(2-ethylhexyl)phthalate	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Di-n-octyl phthalate	Target	9600	U	ug/kg	9600	U	1.0	Yes	S3VEM
Benzo(b)fluoranthene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Benzo(k)fluoranthene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Benzo(a)pyrene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Indeno(1,2,3-cd)pyrene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Dibenzo(a,h)anthracene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Benzo(g,h,i)perylene	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
2,3,4,6-Tetrachlorophenol	Target	5000	U	ug/kg	5000	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/kg			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: VBLK15	Method: Volatile Organics	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Vinyl chloride	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bromomethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Acetone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Carbon disulfide	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methyl Acetate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methylene chloride	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Butanone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Bromochloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chloroform	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Cyclohexane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Benzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Trichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Toluene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Hexanone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Ethylbenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
o-xylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
m,p-Xylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Styrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bromoform	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/L			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: VBLK16	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Chloromethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Vinyl chloride	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Bromomethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Chloroethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Acetone	Target	500	U	ug/kg	500	U	1.0	Yes	S3VEM
Carbon disulfide	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Methyl Acetate	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Methylene chloride	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
2-Butanone	Target	500	U	ug/kg	500	U	1.0	Yes	S3VEM
Bromochloromethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Chloroform	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Cyclohexane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Benzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Trichloroethene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	500	U	ug/kg	500	U	1.0	Yes	S3VEM
Toluene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
2-Hexanone	Target	500	U	ug/kg	500	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Chlorobenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Ethylbenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
o-xylene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
m,p-Xylene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Styrene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Bromoform	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/kg			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: VBLK18	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Chloromethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Vinyl chloride	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Bromomethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Chloroethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Acetone	Target	500	U	ug/kg	500	U	1.0	Yes	S3VEM
Carbon disulfide	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Methyl Acetate	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Methylene chloride	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
2-Butanone	Target	500	U	ug/kg	500	U	1.0	Yes	S3VEM
Bromochloromethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Chloroform	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Cyclohexane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Benzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Trichloroethene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	500	U	ug/kg	500	U	1.0	Yes	S3VEM
Toluene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
2-Hexanone	Target	500	U	ug/kg	500	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Chlorobenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Ethylbenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
o-xylene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
m,p-Xylene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Styrene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Bromoform	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	250	U	ug/kg	250	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/kg			1.0	Yes	NV
unknown-01	TIC	880	J	ug/kg	880	J	1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: VBLK19	Method: Volatile Organics	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Vinyl chloride	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bromomethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Acetone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Carbon disulfide	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methyl Acetate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methylene chloride	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Butanone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Bromochloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chloroform	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Cyclohexane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Benzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Trichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Toluene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Hexanone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Ethylbenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
o-xylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
m,p-Xylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Styrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bromoform	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/L			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: VBLK86	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Vinyl chloride	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Bromomethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Acetone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Carbon disulfide	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methyl Acetate	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methylene chloride	Target	3.9	J	ug/kg	3.9	J	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
2-Butanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Bromochloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chloroform	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Cyclohexane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Benzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Trichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Toluene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
2-Hexanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Ethylbenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
o-xylene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
m,p-Xylene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Styrene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Bromoform	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/kg			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: VBLK88	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Vinyl chloride	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Bromomethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Acetone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Carbon disulfide	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methyl Acetate	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methylene chloride	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
2-Butanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Bromochloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chloroform	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Cyclohexane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Benzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Trichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Toluene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
2-Hexanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Ethylbenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
o-xylene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
m,p-Xylene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Styrene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Bromoform	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/kg			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: VBLK89	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Vinyl chloride	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Bromomethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Acetone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Carbon disulfide	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methyl Acetate	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methylene chloride	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
2-Butanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Bromochloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chloroform	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Cyclohexane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Benzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Trichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Toluene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
2-Hexanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Ethylbenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
o-xylene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
m,p-Xylene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Styrene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Bromoform	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/kg			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: VBLK90	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Vinyl chloride	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Bromomethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Acetone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Carbon disulfide	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methyl Acetate	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methylene chloride	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
2-Butanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Bromochloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chloroform	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Cyclohexane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Benzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Trichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Toluene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
2-Hexanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Ethylbenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
o-xylene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
m,p-Xylene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Styrene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Bromoform	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/kg			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: VHBLK01	Method: Volatile Organics	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Vinyl chloride	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Bromomethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Acetone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Carbon disulfide	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methyl Acetate	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methylene chloride	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
2-Butanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Bromochloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chloroform	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Cyclohexane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Benzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Trichloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Toluene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
2-Hexanone	Target	10	U	ug/kg	10	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Chlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Ethylbenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
o-xylene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
m,p-Xylene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Styrene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Bromoform	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	5.0	U	ug/kg	5.0	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/kg			1.0	Yes	NV

Case No: 45919	Contract: EPW14030	SDG No: BC9J1	Lab Code: CHM

Sample Number: VHBLK02	Method: Volatile Organics	Matrix: Water	MA Number:
Sample Location:	pH: 1.6	Sample Date:	Sample Time:
% Moisture :		% Solids : 0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Dichlorodifluoromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Vinyl chloride	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bromomethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Trichlorofluoromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Acetone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Carbon disulfide	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methyl Acetate	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methylene chloride	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
trans-1,2-Dichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methyl tert-butyl Ether	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1-Dichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
cis-1,2-Dichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Butanone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Bromochloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chloroform	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,1-Trichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Cyclohexane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Carbon tetrachloride	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Benzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Trichloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Methylcyclohexane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dichloropropane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bromodichloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
cis-1,3-Dichloropropene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
4-Methyl-2-pentanone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Toluene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
trans-1,3-Dichloropropene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,2-Trichloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Tetrachloroethene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
2-Hexanone	Target	10	U	ug/L	10	U	1.0	Yes	S3VEM
Dibromochloromethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dibromoethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Chlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Ethylbenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
o-xylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
m,p-Xylene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Styrene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Bromoform	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Isopropylbenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,1,2,2-Tetrachloroethane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,3-Dichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,4-Dichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2-Dibromo-3-chloropropane	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2,4-trichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
1,2,3-Trichlorobenzene	Target	5.0	U	ug/L	5.0	U	1.0	Yes	S3VEM
Total Alkanes	TIC			ug/L			1.0	Yes	NV

February 5, 2016

Mrs. Smita Sumbaly
WESTON SOLUTIONS
1090 King Georges Post Road
Suite 201
Edison NJ 08837-3703

I hereby certify that the results reported for EQ Lab Samples #: 2483725 to 2483733 have been reviewed by me are correct as presented herein.

Lic. Sonia Pichardo Rodriguez
Certified by Laboratory Director

SONIA PICHARDO RODRIGUEZ
Químico Licenciado
Estado Libre Asociado de Puerto Rico
LICENCIA NUM. 453

To: WESTON SOLUTIONS
1090 KING GEORGES POST ROAD
SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-005SW-003**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483725**	Collected Date & Time:	**01/22/2016** 08:40	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
Aluminum - Total	EPA 6010B	3788	mg/Kg	D	15.0	25.0	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Antimony - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Arsenic - Total	EPA 6010B	493	mg/Kg	D	5.00	50.00	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Barium -Total	EPA 6010B	159	mg/Kg	D	6.30	50.00	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Beryllium - Total	EPA 6010B	BDL	mg/Kg	D,U	0.10	0.50	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Cadmium - Total	EPA 6010B	75.0	mg/Kg	D	10.00	25.00	--	01/28/2016	22:06	NERC	01/27/2016	YDCV	SW846-3050B
Calcium - Total	EPA 6010B	19795	mg/Kg	D	250.0	1250.0	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Chromium - Total	EPA 6010B	395	mg/Kg	D	1.00	50.00	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Cobalt - Total	EPA 6010B	24.5	mg/Kg	D	2.50	50.00	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Copper - Total	EPA 6010B	883	mg/Kg	D	1.50	25.00	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Iron - Total	EPA 6010B	220550	mg/Kg	D	100.0	250.0	--	01/28/2016	22:06	NERC	01/27/2016	YDCV	SW846-3050B
Lead - Total	EPA 6010B	47930	mg/Kg	D	25.00	500.00	--	01/28/2016	22:06	NERC	01/27/2016	YDCV	SW846-3050B
Magnesium - Total	EPA 6010B	2647	mg/Kg	D	15.0	1250.0	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Manganese - Total	EPA 6010B	818	mg/Kg	D	2.50	50.00	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Nickel - Total	EPA 6010B	213	mg/Kg	D	2.50	50.00	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Potassium - Total	EPA 6010B	383	mg/Kg	D	250.0	500.0	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable
MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level. All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.
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ACCREDITED IN ACCORDANCE WITH nelac
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Refer to eqlab certification number E87783 at www.eqlab.com.

ENVIRONMENTAL QUALITY LABORATORIES, INC.
60 E STREET, MINILLAS INDUSTRIAL PARK, BAYAMÓN, PR 00959
PO BOX 11458 SANTURCE, PR 00910-1458 TEL. (787) 288-6420 FAX (787) 288-6465 www.eqlab.com

PRDOH Certified
EPA ID PR00014

To: WESTON SOLUTIONS
1090 KING GEORGES POST ROAD
SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-005SW-003**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483725**	Collected Date & Time:	**01/22/2016** 08:40	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
Selenium - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Silver - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	25.00	--	01/28/2016	23:02	NERC	01/27/2016	YDCV	SW846-3050B
Sodium - Total	EPA 6010B	84600	mg/Kg	D	1000.0	12500.0	--	01/28/2016	22:06	NERC	01/27/2016	YDCV	SW846-3050B
Thallium - Total	EPA 6010B	BDL	mg/Kg	D,U	25.0	50.0	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Vanadium - Total	EPA 6010B	20.0	mg/Kg	D	2.50	50.00	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Zinc - Total	EPA 6010B	889	mg/Kg	D	2.50	50.00	--	01/29/2016	00:07	NERC	01/27/2016	YDCV	SW846-3050B
Releasable Sulfide	SW 846-7.3.4	BDL	mg/Kg	U	1.0	1.0	500	02/01/2016	11:00	SVG	02/01/2016	SVG	METHOD EXT
Mercury - Total	EPA 7471A	BDL	mg/Kg	U	0.020	0.100	--	01/28/2016	11:27	CRP	01/27/2016	YDCV	Method Digestion
Corrosivity, pH	EPA 9045C	5.94	S. U.	--	1.00	--	<2 - >12.5	01/27/2016	09:45	MGM	--	--	N/A
TCLP - ICP 6010 B													
* Arsenic - Total	EPA 6010 B	BDL	mg/L	D,U	0.10	1.00	5.0	01/28/2016	18:55	NERC	01/28/2016	YDCV	EPA 1311
* Barium -Total	EPA 6010 B	0.200	mg/L	D	0.050	2.000	100	01/28/2016	18:55	NERC	01/28/2016	YDCV	EPA 1311
* Cadmium - Total	EPA 6010 B	0.5090	mg/L	D	0.0050	0.0100	1.0	01/28/2016	18:55	NERC	01/28/2016	YDCV	EPA 1311
* Chromium - Total	EPA 6010 B	BDL	mg/L	D,U	0.050	0.500	5.0	01/28/2016	18:55	NERC	01/28/2016	YDCV	EPA 1311
* Lead - Total	EPA 6010 B	38.3	mg/L	D	0.050	1.000	5.0	01/28/2016	18:55	NERC	01/28/2016	YDCV	EPA 1311
* Selenium - Total	EPA 6010 B	BDL	mg/L	D,U	0.30	1.00	1.0	01/28/2016	18:55	NERC	01/28/2016	YDCV	EPA 1311
* Silver - Total	EPA 6010 B	BDL	mg/L	D,U	0.020	0.100	5.0	01/28/2016	18:55	NERC	01/28/2016	YDCV	EPA 1311

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PRDOH Certified
EPA ID PR00014

To: WESTON SOLUTIONS
1090 KING GEORGES POST ROAD
SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-005SW-003**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

eqlab ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483725**	Collected Date & Time:	**01/22/2016** 08:40	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

	Parameter	Method	Results	Units	DQ	Limits MDL	Limits MRL	Limits MCL	Analysis Date	Analysis Time	Analysis By	Prep Method Date	Prep Method By	Prep Method Method
	TCLP Mercury													
+	* Mercury - Total	EPA 7470 A	0.0003	mg/L	--	0.0002	0.0005	0.2	01/29/2016	11:05	CRP	01/28/2016	YDCV	EPA 1311
+	Ignitability	40CFR261.21	DNI	--	--	--	--	--	02/01/2016	09:00	DSA	--	--	N/A
	Releasable Cyanide	SW 846 - 7.3.3	BDL	mg/Kg	U	1.0	1.0	250	01/28/2016	14:00	LHT	01/27/2016	LHT	METHOD EXT

SONIA RICHARDO RODRIGUEZ
Químico Licenciado
Estado Libre Asociado de Puerto Rico
LICENCIA NÚM. 4538

Certified by Laboratory Director

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To: WESTON SOLUTIONS
1090 KING GEORGES POST ROAD
SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-006SW-002**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483726**	Collected Date & Time:	**01/22/2016** 09:00	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
Aluminum - Total	EPA 6010B	2983	mg/Kg	D	15.0	25.0	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Antimony - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Arsenic - Total	EPA 6010B	543	mg/Kg	D	5.00	50.00	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Barium -Total	EPA 6010B	146	mg/Kg	D	6.30	50.00	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Beryllium - Total	EPA 6010B	BDL	mg/Kg	D,U	0.10	0.50	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Cadmium - Total	EPA 6010B	68.0	mg/Kg	D	10.00	25.00	--	01/28/2016	22:09	NERC	01/27/2016	YDCV	SW846-3050B
Calcium - Total	EPA 6010B	6880	mg/Kg	D	250.0	1250.0	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Chromium - Total	EPA 6010B	339	mg/Kg	D	1.00	50.00	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Cobalt - Total	EPA 6010B	29.5	mg/Kg	D	2.50	50.00	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Copper - Total	EPA 6010B	1071	mg/Kg	D	1.50	25.00	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Iron - Total	EPA 6010B	242100	mg/Kg	D	100.0	250.0	--	01/28/2016	22:09	NERC	01/27/2016	YDCV	SW846-3050B
Lead - Total	EPA 6010B	48635	mg/Kg	D	25.00	500.00	--	01/28/2016	22:09	NERC	01/27/2016	YDCV	SW846-3050B
Magnesium - Total	EPA 6010B	1463	mg/Kg	D	15.0	1250.0	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Manganese - Total	EPA 6010B	821	mg/Kg	D	2.50	50.00	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Nickel - Total	EPA 6010B	408	mg/Kg	D	2.50	50.00	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Potassium - Total	EPA 6010B	481	mg/Kg	D	250.0	500.0	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B

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ACCREDITED IN ACCORDANCE WITH nelac

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PRDOH Certified
EPA ID PR00014

ENVIRONMENTAL QUALITY LABORATORIES, INC.
60 E STREET, MINILLAS INDUSTRIAL PARK, BAYAMÓN, PR 00959
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EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-006SW-002**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483726**	Collected Date & Time:	**01/22/2016** 09:00	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
Selenium - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Silver - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	25.00	--	01/28/2016	23:08	NERC	01/27/2016	YDCV	SW846-3050B
Sodium - Total	EPA 6010B	115100	mg/Kg	D	1000.0	12500.0	--	01/28/2016	22:09	NERC	01/27/2016	YDCV	SW846-3050B
Thallium - Total	EPA 6010B	BDL	mg/Kg	D,U	25.0	50.0	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Vanadium - Total	EPA 6010B	17.5	mg/Kg	D	2.50	50.00	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Zinc - Total	EPA 6010B	639	mg/Kg	D	2.50	50.00	--	01/29/2016	00:12	NERC	01/27/2016	YDCV	SW846-3050B
Releasable Sulfide	SW 846-7.3.4	BDL	mg/Kg	U	1.0	1.0	500	02/01/2016	11:00	SVG	02/01/2016	SVG	METHOD EXT
Mercury - Total	EPA 7471A	BDL	mg/Kg	U	0.020	0.100	--	01/28/2016	11:27	CRP	01/27/2016	YDCV	Method Digestion
Corrosivity, pH	EPA 9045C	8.14	S. U.	--	1.00	--	<2 - >12.5	01/27/2016	09:45	MGM	--	--	N/A
TCLP - ICP 6010 B													
* Arsenic - Total	EPA 6010 B	BDL	mg/L	D,U	0.10	1.00	5.0	01/28/2016	19:01	NERC	01/28/2016	YDCV	EPA 1311
* Barium -Total	EPA 6010 B	BDL	mg/L	D,U	0.050	2.000	100	01/28/2016	19:01	NERC	01/28/2016	YDCV	EPA 1311
* Cadmium - Total	EPA 6010 B	BDL	mg/L	D,U	0.0050	0.0100	1.0	01/28/2016	19:01	NERC	01/28/2016	YDCV	EPA 1311
* Chromium - Total	EPA 6010 B	BDL	mg/L	D,U	0.050	0.500	5.0	01/28/2016	19:01	NERC	01/28/2016	YDCV	EPA 1311
* Lead - Total	EPA 6010 B	0.090	mg/L	D	0.050	1.000	5.0	01/28/2016	19:01	NERC	01/28/2016	YDCV	EPA 1311
* Selenium - Total	EPA 6010 B	0.41	mg/L	D	0.30	1.00	1.0	01/28/2016	19:01	NERC	01/28/2016	YDCV	EPA 1311
* Silver - Total	EPA 6010 B	BDL	mg/L	D,U	0.020	0.100	5.0	01/28/2016	19:01	NERC	01/28/2016	YDCV	EPA 1311

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UNKNOWN, PR

Project Name: SITE ASSESSMENT
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Description: SOIL - Grab
Client Ref. #: N/A

eqlab ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

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Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
TCLP Mercury													
+ * Mercury - Total	EPA 7470 A	BDL	mg/L	U	0.0002	0.0005	0.2	01/29/2016	11:05	CRP	01/28/2016	YDCV	EPA 1311
+ Ignitability	40CFR261.21	DNI	--	--	--	--	--	02/01/2016	09:00	DSA	--	--	N/A
Releasable Cyanide	SW 846 - 7.3.3	BDL	mg/Kg	U	1.0	1.0	250	01/28/2016	14:00	LHT	01/27/2016	LHT	METHOD EXT

SONIA PICHARDO RODRIGUEZ
Químico Licenciado
Estado Libre Asociado de Puerto Rico
LICENCIA NUM. 4538

Certified by Laboratory Director

PRDOH Certified
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EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-008SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483727**	Collected Date & Time:	**01/22/2016** 08:11	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
Aluminum - Total	EPA 6010B	4537	mg/Kg	D	15.0	25.0	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Antimony - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Arsenic - Total	EPA 6010B	258	mg/Kg	D	5.00	50.00	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Barium -Total	EPA 6010B	145	mg/Kg	D	6.30	50.00	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Beryllium - Total	EPA 6010B	BDL	mg/Kg	D,U	0.10	0.50	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Cadmium - Total	EPA 6010B	87.0	mg/Kg	D	10.00	25.00	--	01/28/2016	22:13	NERC	01/27/2016	YDCV	SW846-3050B
Calcium - Total	EPA 6010B	24630	mg/Kg	D	250.0	1250.0	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Chromium - Total	EPA 6010B	514	mg/Kg	D	1.00	50.00	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Cobalt - Total	EPA 6010B	27.5	mg/Kg	D	2.50	50.00	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Copper - Total	EPA 6010B	3724	mg/Kg	D	1.50	25.00	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Iron - Total	EPA 6010B	206150	mg/Kg	D	100.0	250.0	--	01/28/2016	22:13	NERC	01/27/2016	YDCV	SW846-3050B
Lead - Total	EPA 6010B	89150	mg/Kg	D	25.00	500.00	--	01/28/2016	22:13	NERC	01/27/2016	YDCV	SW846-3050B
Magnesium - Total	EPA 6010B	2264	mg/Kg	D	15.0	1250.0	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Manganese - Total	EPA 6010B	805	mg/Kg	D	2.50	50.00	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Nickel - Total	EPA 6010B	322	mg/Kg	D	2.50	50.00	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Potassium - Total	EPA 6010B	491	mg/Kg	D	250.0	500.0	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B

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MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level. All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.
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ACCREDITED IN ACCORDANCE WITH nelac

The results presented herein meet all NELAC requirements.
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ENVIRONMENTAL QUALITY LABORATORIES, INC.
60 E STREET, MINILLAS INDUSTRIAL PARK, BAYAMÓN, PR 00959
PO BOX 11458 SANTURCE, PR 00910-1458 TEL. (787) 288-6420 FAX (787) 288-6465 www.eqlab.com

PRDOH Certified
EPA ID PR00014

To: WESTON SOLUTIONS
1090 KING GEORGES POST ROAD
SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-008SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483727**	Collected Date & Time:	**01/22/2016** 08:11	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
Selenium - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Silver - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	25.00	--	01/28/2016	23:13	NERC	01/27/2016	YDCV	SW846-3050B
Sodium - Total	EPA 6010B	97050	mg/Kg	D	1000.0	12500.0	--	01/28/2016	22:13	NERC	01/27/2016	YDCV	SW846-3050B
Thallium - Total	EPA 6010B	BDL	mg/Kg	D,U	25.0	50.0	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Vanadium - Total	EPA 6010B	34.0	mg/Kg	D	2.50	50.00	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Zinc - Total	EPA 6010B	1230	mg/Kg	D	2.50	50.00	--	01/29/2016	00:18	NERC	01/27/2016	YDCV	SW846-3050B
Releasable Sulfide	SW 846-7.3.4	BDL	mg/Kg	U	1.0	1.0	500	02/01/2016	11:00	SVG	02/01/2016	SVG	METHOD EXT
Mercury - Total	EPA 7471A	0.031	mg/Kg	J	0.020	0.100	--	01/28/2016	11:27	CRP	01/27/2016	YDCV	Method Digestion
Corrosivity, pH	EPA 9045C	8.50	S. U.	--	1.00	--	<2 - >12.5	01/27/2016	09:45	MGM	--	--	N/A
TCLP - ICP 6010 B													
* Arsenic - Total	EPA 6010 B	BDL	mg/L	D,U	0.10	1.00	5.0	01/28/2016	19:06	NERC	01/28/2016	YDCV	EPA 1311
* Barium -Total	EPA 6010 B	2.22	mg/L	D	0.050	2.000	100	01/28/2016	19:06	NERC	01/28/2016	YDCV	EPA 1311
* Cadmium - Total	EPA 6010 B	6.70	mg/L	D	0.0050	0.0100	1.0	01/28/2016	19:06	NERC	01/28/2016	YDCV	EPA 1311
* Chromium - Total	EPA 6010 B	BDL	mg/L	D,U	0.050	0.500	5.0	01/28/2016	19:06	NERC	01/28/2016	YDCV	EPA 1311
* Lead - Total	EPA 6010 B	228	mg/L	D	0.050	1.000	5.0	01/28/2016	19:06	NERC	01/28/2016	YDCV	EPA 1311
* Selenium - Total	EPA 6010 B	BDL	mg/L	D,U	0.30	1.00	1.0	01/28/2016	19:06	NERC	01/28/2016	YDCV	EPA 1311
* Silver - Total	EPA 6010 B	BDL	mg/L	D,U	0.020	0.100	5.0	01/28/2016	19:06	NERC	01/28/2016	YDCV	EPA 1311

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ACCREDITED IN ACCORDANCE WITH nelac

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SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-008SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

eqlab ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483727**	Collected Date & Time:	**01/22/2016** 08:11	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
TCLP Mercury													
+ * Mercury - Total	EPA 7470 A	0.0006	mg/L	--	0.0002	0.0005	0.2	01/29/2016	11:05	CRP	01/28/2016	YDCV	EPA 1311
+ Ignitability	40CFR261.21	DNI	--	--	--	--	--	02/01/2016	09:00	DSA	--	--	N/A
Releasable Cyanide	SW 846 - 7.3.3	BDL	mg/Kg	U	1.0	1.0	250	01/28/2016	14:00	LHT	01/27/2016	LHT	METHOD EXT

SONIA PICHARDO RODRIGUEZ
Químico Licenciado
Estado Libre Asociado de Puerto Rico
LICENCIA NUM. 4558

Certified by Laboratory Director

PRDOH Certified
EPA ID PR00014

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To: WESTON SOLUTIONS
1090 KING GEORGES POST ROAD
SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-009SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483728**	Collected Date & Time:	**01/22/2016** 08:18	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
Aluminum - Total	EPA 6010B	3133	mg/Kg	D	15.0	25.0	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Antimony - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Arsenic - Total	EPA 6010B	267	mg/Kg	D	5.00	50.00	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Barium -Total	EPA 6010B	173	mg/Kg	D	6.30	50.00	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Beryllium - Total	EPA 6010B	BDL	mg/Kg	D,U	0.10	0.50	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Cadmium - Total	EPA 6010B	76.7	mg/Kg	D	10.00	25.00	--	01/28/2016	22:16	NERC	01/27/2016	YDCV	SW846-3050B
Calcium - Total	EPA 6010B	30418	mg/Kg	D	250.0	1250.0	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Chromium - Total	EPA 6010B	332	mg/Kg	D	1.00	50.00	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Cobalt - Total	EPA 6010B	24.8	mg/Kg	D	2.50	50.00	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Copper - Total	EPA 6010B	1408	mg/Kg	D	1.50	25.00	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Iron - Total	EPA 6010B	207282	mg/Kg	D	100.0	250.0	--	01/28/2016	22:16	NERC	01/27/2016	YDCV	SW846-3050B
Lead - Total	EPA 6010B	63010	mg/Kg	D	25.00	500.00	--	01/28/2016	22:16	NERC	01/27/2016	YDCV	SW846-3050B
Magnesium - Total	EPA 6010B	1226	mg/Kg	D	15.0	1250.0	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Manganese - Total	EPA 6010B	753	mg/Kg	D	2.50	50.00	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Nickel - Total	EPA 6010B	261	mg/Kg	D	2.50	50.00	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Potassium - Total	EPA 6010B	438	mg/Kg	D	250.0	500.0	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B

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To: WESTON SOLUTIONS
1090 KING GEORGES POST ROAD
SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-009SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483728**	Collected Date & Time:	**01/22/2016** 08:18	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
Selenium - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Silver - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	25.00	--	01/28/2016	23:19	NERC	01/27/2016	YDCV	SW846-3050B
Sodium - Total	EPA 6010B	90194	mg/Kg	D	1000.0	12500.0	--	01/28/2016	22:16	NERC	01/27/2016	YDCV	SW846-3050B
Thallium - Total	EPA 6010B	BDL	mg/Kg	D,U	25.0	50.0	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Vanadium - Total	EPA 6010B	23.8	mg/Kg	D	2.50	50.00	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Zinc - Total	EPA 6010B	984	mg/Kg	D	2.50	50.00	--	01/29/2016	00:24	YDCV	01/27/2016	YDCV	SW846-3050B
Releasable Sulfide	SW 846-7.3.4	BDL	mg/Kg	U	1.0	1.0	500	02/01/2016	11:00	SVG	02/01/2016	SVG	METHOD EXT
Mercury - Total	EPA 7471A	BDL	mg/Kg	U	0.020	0.100	--	01/28/2016	11:27	CRP	01/27/2016	YDCV	Method Digestion
Corrosivity, pH	EPA 9045C	8.37	S. U.	--	1.00	--	<2 - >12.5	01/27/2016	09:45	MGM	--	--	N/A
TCLP - ICP 6010 B													
* Arsenic - Total	EPA 6010 B	BDL	mg/L	D,U	0.20	2.00	5.0	01/29/2016	17:33	NERC	01/28/2016	YDCV	EPA 1311
* Barium -Total	EPA 6010 B	0.850	mg/L	D	0.050	2.000	100	01/28/2016	19:12	NERC	01/28/2016	YDCV	EPA 1311
* Cadmium - Total	EPA 6010 B	0.6780	mg/L	D	0.0100	0.0200	1.0	01/29/2016	17:33	NERC	01/28/2016	YDCV	EPA 1311
* Chromium - Total	EPA 6010 B	BDL	mg/L	D,U	0.050	0.500	5.0	01/28/2016	19:12	NERC	01/28/2016	YDCV	EPA 1311
* Lead - Total	EPA 6010 B	93.5	mg/L	D	0.100	2.000	5.0	01/29/2016	17:33	NERC	01/28/2016	YDCV	EPA 1311
* Selenium - Total	EPA 6010 B	BDL	mg/L	D,U	0.30	1.00	1.0	01/28/2016	19:12	NERC	01/28/2016	YDCV	EPA 1311
* Silver - Total	EPA 6010 B	0.076	mg/L	D	0.020	0.100	5.0	01/28/2016	19:12	NERC	01/28/2016	YDCV	EPA 1311

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PRDOH Certified
EPA ID PR00014

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EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-009SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

eqlab ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483728**	Collected Date & Time:	**01/22/2016** 08:18	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

	Parameter	Method	Results	Units	DQ	Limits MDL	Limits MRL	Limits MCL	Analysis Date	Analysis Time	Analysis By	Prep Method Date	Prep Method By	Prep Method Method
	TCLP Mercury													
+	* Mercury - Total	EPA 7470 A	0.0008	mg/L	--	0.0002	0.0005	0.2	01/29/2016	11:05	CRP	01/28/2016	YDCV	EPA 1311
+	Ignitability	40CFR261.21	DNI	--	--	--	--	--	02/01/2016	09:00	DSA	--	--	N/A
	Releasable Cyanide	SW 846 - 7.3.3	BDL	mg/Kg	U	1.0	1.0	250	01/28/2016	14:00	LHT	01/27/2016	LHT	METHOD EXT

SONIA PICHARDO RODRIGUEZ Químico Licenciado Estado Libre Asociado de Puerto Rico LICENCIA NUM. 4536

Certified by Laboratory Director

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable
MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level. All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.
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EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-010SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483729**	Collected Date & Time:	**01/22/2016** 08:25	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
Aluminum - Total	EPA 6010B	3870	mg/Kg	D	15.0	25.0	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Antimony - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Arsenic - Total	EPA 6010B	372	mg/Kg	D	5.00	50.00	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Barium -Total	EPA 6010B	180	mg/Kg	D	6.30	50.00	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Beryllium - Total	EPA 6010B	BDL	mg/Kg	D,U	0.10	0.50	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Cadmium - Total	EPA 6010B	48.3	mg/Kg	D	10.00	25.00	--	01/28/2016	22:20	NERC	01/27/2016	YDCV	SW846-3050B
Calcium - Total	EPA 6010B	25230	mg/Kg	D	250.0	1250.0	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Chromium - Total	EPA 6010B	959	mg/Kg	D	1.00	50.00	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Cobalt - Total	EPA 6010B	29.2	mg/Kg	D	2.50	50.00	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Copper - Total	EPA 6010B	2551	mg/Kg	D	1.50	25.00	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Iron - Total	EPA 6010B	246316	mg/Kg	D	100.0	250.0	--	01/28/2016	22:20	NERC	01/27/2016	YDCV	SW846-3050B
Lead - Total	EPA 6010B	46105	mg/Kg	D	25.00	500.00	--	01/28/2016	22:20	NERC	01/27/2016	YDCV	SW846-3050B
Magnesium - Total	EPA 6010B	3265	mg/Kg	D	15.0	1250.0	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Manganese - Total	EPA 6010B	1007	mg/Kg	D	2.50	50.00	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Nickel - Total	EPA 6010B	209	mg/Kg	D	2.50	50.00	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Potassium - Total	EPA 6010B	343	mg/Kg	D	250.0	500.0	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B

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ACCREDITED IN ACCORDANCE WITH nelac

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PRDOH Certified
EPA ID PR00014

To: WESTON SOLUTIONS
1090 KING GEORGES POST ROAD
SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-010SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483729**	Collected Date & Time:	**01/22/2016** 08:25	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

Parameter	Method	Results	Units	DQ	Limits MDL	Limits MRL	Limits MCL	Analysis Date	Analysis Time	Analysis By	Prep Method Date	Prep Method By	Prep Method Method
Selenium - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Silver - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	25.00	--	01/28/2016	23:24	NERC	01/27/2016	YDCV	SW846-3050B
Sodium - Total	EPA 6010B	69234	mg/Kg	D	1000.0	12500.0	--	01/28/2016	22:20	NERC	01/27/2016	YDCV	SW846-3050B
Thallium - Total	EPA 6010B	BDL	mg/Kg	D,U	25.0	50.0	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Vanadium - Total	EPA 6010B	24.9	mg/Kg	D	2.50	50.00	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Zinc - Total	EPA 6010B	1039	mg/Kg	D	2.50	50.00	--	01/29/2016	00:29	NERC	01/27/2016	YDCV	SW846-3050B
Releasable Sulfide	SW 846-7.3.4	BDL	mg/Kg	U	1.0	1.0	500	02/01/2016	11:00	SVG	02/01/2016	SVG	METHOD EXT
Mercury - Total	EPA 7471A	BDL	mg/Kg	U	0.020	0.100	--	01/28/2016	11:27	CRP	01/27/2016	YDCV	Method Digestion
Corrosivity, pH	EPA 9045C	9.07	S. U.	--	1.00	--	<2 - >12.5	01/27/2016	09:45	MGM	--	--	N/A
TCLP - ICP 6010 B													
* Arsenic - Total	EPA 6010 B	BDL	mg/L	D,U	0.10	1.00	5.0	01/28/2016	19:38	NERC	01/28/2016	YDCV	EPA 1311
* Barium -Total	EPA 6010 B	0.740	mg/L	D	0.050	2.000	100	01/28/2016	19:38	NERC	01/28/2016	YDCV	EPA 1311
* Cadmium - Total	EPA 6010 B	0.1660	mg/L	D	0.0050	0.0100	1.0	01/28/2016	19:38	NERC	01/28/2016	YDCV	EPA 1311
* Chromium - Total	EPA 6010 B	BDL	mg/L	D,U	0.050	0.500	5.0	01/28/2016	19:38	NERC	01/28/2016	YDCV	EPA 1311
* Lead - Total	EPA 6010 B	9.24	mg/L	D	0.050	1.000	5.0	01/28/2016	19:38	NERC	01/28/2016	YDCV	EPA 1311
* Selenium - Total	EPA 6010 B	0.37	mg/L	D	0.30	1.00	1.0	01/28/2016	19:38	NERC	01/28/2016	YDCV	EPA 1311
* Silver - Total	EPA 6010 B	BDL	mg/L	D,U	0.020	0.100	5.0	01/28/2016	19:38	NERC	01/28/2016	YDCV	EPA 1311

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PRDOH Certified
EPA ID PR00014

To: WESTON SOLUTIONS
1090 KING GEORGES POST ROAD
SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-010SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

eqlab ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483729**	Collected Date & Time:	**01/22/2016** 08:25	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

	Parameter	Method	Results	Units	DQ	Limits MDL	Limits MRL	Limits MCL	Analysis Date	Analysis Time	Analysis By	Prep Method Date	Prep Method By	Prep Method Method
	TCLP Mercury													
+	* Mercury - Total	EPA 7470 A	BDL	mg/L	U	0.0002	0.0005	0.2	01/29/2016	11:05	CRP	01/28/2016	YDCV	EPA 1311
+	Ignitability	40CFR261.21	DNI	--	--	--	--	--	02/01/2016	09:00	DSA	--	--	N/A
	Releasable Cyanide	SW 846 - 7.3.3	BDL	mg/Kg	U	1.0	1.0	250	01/28/2016	14:00	LHT	01/27/2016	LHT	METHOD EXT

SONIA PICHARDO RODRIGUEZ Químico Licenciado Estado Libre Asociado de Puerto Rico LICENCIA NUM. 138

Certified by Laboratory Director

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SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-011SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483730**	Collected Date & Time:	**01/22/2016** 09:15	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
Aluminum - Total	EPA 6010B	2336	mg/Kg	D	15.0	25.0	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Antimony - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Arsenic - Total	EPA 6010B	278	mg/Kg	D	5.00	50.00	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Barium -Total	EPA 6010B	78.2	mg/Kg	D	6.30	50.00	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Beryllium - Total	EPA 6010B	BDL	mg/Kg	D,U	0.10	0.50	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Cadmium - Total	EPA 6010B	43.2	mg/Kg	D	10.00	25.00	--	01/28/2016	22:26	NERC	01/27/2016	YDCV	SW846-3050B
Calcium - Total	EPA 6010B	11796	mg/Kg	D	250.0	1250.0	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Chromium - Total	EPA 6010B	295	mg/Kg	D	1.00	50.00	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Cobalt - Total	EPA 6010B	11.7	mg/Kg	D	2.50	50.00	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Copper - Total	EPA 6010B	453	mg/Kg	D	1.50	25.00	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Iron - Total	EPA 6010B	136796	mg/Kg	D	100.0	250.0	--	01/28/2016	22:26	NERC	01/27/2016	YDCV	SW846-3050B
Lead - Total	EPA 6010B	18903	mg/Kg	D	25.00	500.00	--	01/28/2016	22:26	NERC	01/27/2016	YDCV	SW846-3050B
Magnesium - Total	EPA 6010B	3628	mg/Kg	D	15.0	1250.0	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Manganese - Total	EPA 6010B	504	mg/Kg	D	2.50	50.00	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Nickel - Total	EPA 6010B	91.3	mg/Kg	D	2.50	50.00	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Potassium - Total	EPA 6010B	251	mg/Kg	D	250.0	500.0	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B

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PRDOH Certified
EPA ID PR00014

To: WESTON SOLUTIONS
1090 KING GEORGES POST ROAD
SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-011SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483730**	Collected Date & Time:	**01/22/2016** 09:15	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

Parameter	Method	Results	Units	DQ	Limits MDL	Limits MRL	Limits MCL	Analysis Date	Analysis Time	Analysis By	Prep Method Date	Prep Method By	Prep Method Method
Selenium - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Silver - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	25.00	--	01/28/2016	23:30	NERC	01/27/2016	YDCV	SW846-3050B
Sodium - Total	EPA 6010B	174515	mg/Kg	D	1000.0	12500.0	--	01/28/2016	22:26	NERC	01/27/2016	YDCV	SW846-3050B
Thallium - Total	EPA 6010B	BDL	mg/Kg	D,U	25.0	50.0	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Vanadium - Total	EPA 6010B	12.6	mg/Kg	D	2.50	50.00	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Zinc - Total	EPA 6010B	499	mg/Kg	D	2.50	50.00	--	01/29/2016	00:35	YDCV	01/27/2016	YDCV	SW846-3050B
Releasable Sulfide	SW 846-7.3.4	BDL	mg/Kg	U	1.0	1.0	500	02/01/2016	11:00	SVG	02/01/2016	SVG	METHOD EXT
Mercury - Total	EPA 7471A	BDL	mg/Kg	U	0.020	0.100	--	01/28/2016	11:27	CRP	01/27/2016	YDCV	Method Digestion
Corrosivity, pH	EPA 9045C	7.73	S. U.	--	1.00	--	<2 - >12.5	01/27/2016	09:45	MGM	--	--	N/A
TCLP - ICP 6010 B													
* Arsenic - Total	EPA 6010 B	BDL	mg/L	D,U	0.10	1.00	5.0	01/28/2016	19:43	NERC	01/28/2016	YDCV	EPA 1311
* Barium -Total	EPA 6010 B	BDL	mg/L	D,U	0.050	2.000	100	01/28/2016	19:43	NERC	01/28/2016	YDCV	EPA 1311
* Cadmium - Total	EPA 6010 B	0.3630	mg/L	D	0.0050	0.0100	1.0	01/28/2016	19:43	NERC	01/28/2016	YDCV	EPA 1311
* Chromium - Total	EPA 6010 B	BDL	mg/L	D,U	0.050	0.500	5.0	01/28/2016	19:43	NERC	01/28/2016	YDCV	EPA 1311
* Lead - Total	EPA 6010 B	19.5	mg/L	D	0.050	1.000	5.0	01/28/2016	19:43	NERC	01/28/2016	YDCV	EPA 1311
* Selenium - Total	EPA 6010 B	BDL	mg/L	D,U	0.30	1.00	1.0	01/28/2016	19:43	NERC	01/28/2016	YDCV	EPA 1311
* Silver - Total	EPA 6010 B	BDL	mg/L	D,U	0.020	0.100	5.0	01/28/2016	19:43	NERC	01/28/2016	YDCV	EPA 1311

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Attn: MRS. SMITA SUMBALY
Source: **PRBR-011SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

eqlab ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483730**	Collected Date & Time:	**01/22/2016** 09:15	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
TCLP Mercury													
+ * Mercury - Total	EPA 7470 A	BDL	mg/L	U	0.0002	0.0005	0.2	01/29/2016	11:05	CRP	01/28/2016	YDCV	EPA 1311
+ Ignitability	40CFR261.21	DNI	--	--	--	--	--	02/01/2016	09:00	DSA	--	--	N/A
Releasable Cyanide	SW 846 - 7.3.3	BDL	mg/Kg	U	1.0	1.0	250	01/28/2016	14:00	LHT	01/27/2016	LHT	METHOD EXT

BONIA PICHARDO RODRIGUEZ
Químico Licenciado
Estado Libre Asociado de Puerto Rico
LICENCIA NUM. 2438

Certified by Laboratory Director

PRDOH Certified
EPA ID PR00014

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Attn: MRS. SMITA SUMBALY
Source: **PRBR-012SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483731**	Collected Date & Time:	**01/22/2016** 10:40	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

Parameter	Method	Results	Units	DQ	Limits MDL	Limits MRL	Limits MCL	Analysis Date	Analysis Time	Analysis By	Prep Method Date	Prep Method By	Prep Method Method
Aluminum - Total	EPA 6010B	3853	mg/Kg	D	15.0	25.0	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Antimony - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Arsenic - Total	EPA 6010B	446	mg/Kg	D	5.00	50.00	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Barium -Total	EPA 6010B	126	mg/Kg	D	6.30	50.00	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Beryllium - Total	EPA 6010B	BDL	mg/Kg	D,U	0.10	0.50	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Cadmium - Total	EPA 6010B	79.4	mg/Kg	D	10.00	25.00	--	01/28/2016	22:29	NERC	01/27/2016	YDCV	SW846-3050B
Calcium - Total	EPA 6010B	9554	mg/Kg	D	250.0	1250.0	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Chromium - Total	EPA 6010B	313	mg/Kg	D	1.00	50.00	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Cobalt - Total	EPA 6010B	19.1	mg/Kg	D	2.50	50.00	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Copper - Total	EPA 6010B	813	mg/Kg	D	1.50	25.00	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Iron - Total	EPA 6010B	252402	mg/Kg	D	100.0	250.0	--	01/28/2016	22:29	NERC	01/27/2016	YDCV	SW846-3050B
Lead - Total	EPA 6010B	41402	mg/Kg	D	25.00	500.00	--	01/28/2016	22:29	NERC	01/27/2016	YDCV	SW846-3050B
Magnesium - Total	EPA 6010B	3263	mg/Kg	D	15.0	1250.0	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Manganese - Total	EPA 6010B	900	mg/Kg	D	2.50	50.00	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Nickel - Total	EPA 6010B	114	mg/Kg	D	2.50	50.00	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Potassium - Total	EPA 6010B	414	mg/Kg	D	250.0	500.0	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B

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PRDOH Certified
EPA ID PR00014

To: WESTON SOLUTIONS
1090 KING GEORGES POST ROAD
SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-012SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

eqlab ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483731**	Collected Date & Time:	**01/22/2016** 10:40	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

Parameter	Method	Results	Units	DQ	Limits MDL	Limits MRL	Limits MCL	Analysis Date	Analysis Time	Analysis By	Prep Method Date	Prep Method By	Prep Method Method
Selenium - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Silver - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	25.00	--	01/28/2016	23:36	NERC	01/27/2016	YDCV	SW846-3050B
Sodium - Total	EPA 6010B	86275	mg/Kg	D	1000.0	12500.0	--	01/28/2016	22:29	NERC	01/27/2016	YDCV	SW846-3050B
Thallium - Total	EPA 6010B	BDL	mg/Kg	D,U	25.0	50.0	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Vanadium - Total	EPA 6010B	22.6	mg/Kg	D	2.50	50.00	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Zinc - Total	EPA 6010B	558	mg/Kg	D	2.50	50.00	--	01/29/2016	00:40	NERC	01/27/2016	YDCV	SW846-3050B
Releasable Sulfide	SW 846-7.3.4	BDL	mg/Kg	U	1.0	1.0	500	02/01/2016	11:00	SVG	02/01/2016	SVG	METHOD EXT
Mercury - Total	EPA 7471A	BDL	mg/Kg	U	0.020	0.100	--	01/28/2016	11:27	CRP	01/27/2016	YDCV	Method Digestion
Corrosivity, pH	EPA 9045C	6.75	S. U.	--	1.00	--	<2 - >12.5	01/27/2016	09:45	MGM	--	--	N/A
TCLP - ICP 6010 B													
* Arsenic - Total	EPA 6010 B	BDL	mg/L	D,U	0.10	1.00	5.0	01/28/2016	19:49	NERC	01/28/2016	YDCV	EPA 1311
* Barium -Total	EPA 6010 B	BDL	mg/L	D,U	0.050	2.000	100	01/28/2016	19:49	NERC	01/28/2016	YDCV	EPA 1311
* Cadmium - Total	EPA 6010 B	4.73	mg/L	D	0.0050	0.0100	1.0	01/28/2016	19:49	NERC	01/28/2016	YDCV	EPA 1311
* Chromium - Total	EPA 6010 B	BDL	mg/L	D,U	0.050	0.500	5.0	01/28/2016	19:49	NERC	01/28/2016	YDCV	EPA 1311
* Lead - Total	EPA 6010 B	28.9	mg/L	D	0.050	1.000	5.0	01/28/2016	19:49	NERC	01/28/2016	YDCV	EPA 1311
* Selenium - Total	EPA 6010 B	BDL	mg/L	D,U	0.30	1.00	1.0	01/28/2016	19:49	NERC	01/28/2016	YDCV	EPA 1311
* Silver - Total	EPA 6010 B	BDL	mg/L	D,U	0.020	0.100	5.0	01/28/2016	19:49	NERC	01/28/2016	YDCV	EPA 1311

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PRDOH Certified
EPA ID PR00014

To: WESTON SOLUTIONS
1090 KING GEORGES POST ROAD
SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-012SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

eqlab ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483731**	Collected Date & Time:	**01/22/2016** 10:40	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

	Parameter	Method	Results	Units	DQ	Limits MDL	Limits MRL	Limits MCL	Analysis Date	Analysis Time	Analysis By	Prep Method Date	Prep Method By	Prep Method Method
	TCLP Mercury													
+	* Mercury - Total	EPA 7470 A	BDL	mg/L	U	0.0002	0.0005	0.2	01/29/2016	11:05	CRP	01/28/2016	YDCV	EPA 1311
+	Ignitability	40CFR261.21	DNI	--	--	--	--	--	02/01/2016	09:00	DSA	--	--	N/A
	Releasable Cyanide	SW 846 - 7.3.3	BDL	mg/Kg	U	1.0	1.0	250	01/28/2016	14:00	LHT	01/27/2016	LHT	METHOD EXT

SONIA PICHARDO RODRIGUEZ Químico Licenciado LICENCIA NUM. 453 Colegio de Químicos Asociado de Puerto Rico

Certified by Laboratory Director

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UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483732**	Collected Date & Time:	**01/22/2016** 10:55	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
Aluminum - Total	EPA 6010B	3354	mg/Kg	D	15.0	25.0	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Antimony - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Arsenic - Total	EPA 6010B	680	mg/Kg	D	5.00	50.00	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Barium -Total	EPA 6010B	141	mg/Kg	D	6.30	50.00	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Beryllium - Total	EPA 6010B	BDL	mg/Kg	D,U	0.10	0.50	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Cadmium - Total	EPA 6010B	72.8	mg/Kg	D	10.00	25.00	--	01/28/2016	22:29	NERC	01/27/2016	YDCV	SW846-3050B
Calcium - Total	EPA 6010B	13965	mg/Kg	D	250.0	1250.0	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Chromium - Total	EPA 6010B	267	mg/Kg	D	1.00	50.00	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Cobalt - Total	EPA 6010B	20.8	mg/Kg	D	2.50	50.00	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Copper - Total	EPA 6010B	989	mg/Kg	D	1.50	25.00	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Iron - Total	EPA 6010B	237624	mg/Kg	D	100.0	250.0	--	01/28/2016	22:29	NERC	01/27/2016	YDCV	SW846-3050B
Lead - Total	EPA 6010B	52921	mg/Kg	D	25.00	500.00	--	01/28/2016	22:29	NERC	01/27/2016	YDCV	SW846-3050B
Magnesium - Total	EPA 6010B	1587	mg/Kg	D	15.0	1250.0	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Manganese - Total	EPA 6010B	819	mg/Kg	D	2.50	50.00	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Nickel - Total	EPA 6010B	147	mg/Kg	D	2.50	50.00	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Potassium - Total	EPA 6010B	399	mg/Kg	D	250.0	500.0	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B

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PRDOH Certified
EPA ID PR00014

To: WESTON SOLUTIONS
1090 KING GEORGES POST ROAD
SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-013SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483732**	Collected Date & Time:	**01/22/2016** 10:55	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
Selenium - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Silver - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	25.00	--	01/28/2016	23:41	NERC	01/27/2016	YDCV	SW846-3050B
Sodium - Total	EPA 6010B	85990	mg/Kg	D	1000.0	12500.0	--	01/28/2016	22:29	NERC	01/27/2016	YDCV	SW846-3050B
Thallium - Total	EPA 6010B	BDL	mg/Kg	D,U	25.0	50.0	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Vanadium - Total	EPA 6010B	21.3	mg/Kg	D	2.50	50.00	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Zinc - Total	EPA 6010B	721	mg/Kg	D	2.50	50.00	--	01/29/2016	00:46	NERC	01/27/2016	YDCV	SW846-3050B
Releasable Sulfide	SW 846-7.3.4	BDL	mg/Kg	U	1.0	1.0	500	02/01/2016	11:00	SVG	02/01/2016	SVG	METHOD EXT
Mercury - Total	EPA 7471A	BDL	mg/Kg	U	0.020	0.100	--	01/28/2016	11:27	CRP	01/27/2016	YDCV	Method Digestion
Corrosivity, pH	EPA 9045C	7.63	S. U.	--	1.00	--	<2 - >12.5	01/27/2016	09:45	MGM	--	--	N/A
TCLP - ICP 6010 B													
* Arsenic - Total	EPA 6010 B	BDL	mg/L	D,U	0.10	1.00	5.0	01/28/2016	19:54	NERC	01/28/2016	YDCV	EPA 1311
* Barium -Total	EPA 6010 B	BDL	mg/L	D,U	0.050	2.000	100	01/28/2016	19:54	NERC	01/28/2016	YDCV	EPA 1311
* Cadmium - Total	EPA 6010 B	1.76	mg/L	D	0.0050	0.0100	1.0	01/28/2016	19:54	NERC	01/28/2016	YDCV	EPA 1311
* Chromium - Total	EPA 6010 B	BDL	mg/L	D,U	0.050	0.500	5.0	01/28/2016	19:54	NERC	01/28/2016	YDCV	EPA 1311
* Lead - Total	EPA 6010 B	18.5	mg/L	D	0.050	1.000	5.0	01/28/2016	19:54	NERC	01/28/2016	YDCV	EPA 1311
* Selenium - Total	EPA 6010 B	BDL	mg/L	D,U	0.30	1.00	1.0	01/28/2016	19:54	NERC	01/28/2016	YDCV	EPA 1311
* Silver - Total	EPA 6010 B	BDL	mg/L	D,U	0.020	0.100	5.0	01/28/2016	19:54	NERC	01/28/2016	YDCV	EPA 1311

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Attn: MRS. SMITA SUMBALY
Source: **PRBR-013SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

eqlab ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483732**	Collected Date & Time:	**01/22/2016** 10:55	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
TCLP Mercury													
+ * Mercury - Total	EPA 7470 A	BDL	mg/L	U	0.0002	0.0005	0.2	01/29/2016	11:05	CRP	01/28/2016	YDCV	EPA 1311
+ Ignitability	40CFR261.21	DNI	–	--	--	--	--	02/01/2016	09:00	DSA	--	--	N/A
Releasable Cyanide	SW 846 - 7.3.3	BDL	mg/Kg	U	1.0	1.0	250	01/28/2016	14:00	LHT	01/27/2016	LHT	METHOD EXT

FONIA PICHARDO RODRIGUEZ
Químico Licenciado
Perito Químico
Libre Asociado de Puerto Rico
LICENCIA NUM. 4535

Certified by Laboratory Director

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable
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EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-014SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483733**	Collected Date & Time:	**01/22/2016** 10:45	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
Aluminum - Total	EPA 6010B	4667	mg/Kg	D	150.0	250.0	--	01/28/2016	22:39	NERC	01/27/2016	YDCV	SW846-3050B
Antimony - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:52	NERC	01/27/2016	YDCV	SW846-3050B
Arsenic - Total	EPA 6010B	BDL	mg/Kg	D,U	25.00	250.00	--	01/28/2016	23:47	NERC	01/27/2016	YDCV	SW846-3050B
Barium -Total	EPA 6010B	572	mg/Kg	D	31.50	250.00	--	01/28/2016	23:47	NERC	01/27/2016	YDCV	SW846-3050B
Beryllium - Total	EPA 6010B	BDL	mg/Kg	D,U	0.10	0.50	--	01/29/2016	00:52	NERC	01/27/2016	YDCV	SW846-3050B
Cadmium - Total	EPA 6010B	395	mg/Kg	D	10.00	25.00	--	01/28/2016	22:39	NERC	01/27/2016	YDCV	SW846-3050B
Calcium - Total	EPA 6010B	34055	mg/Kg	D	1250.0	6250.0	--	01/28/2016	23:47	NERC	01/27/2016	YDCV	SW846-3050B
Chromium - Total	EPA 6010B	197	mg/Kg	D	5.00	250.00	--	01/28/2016	23:47	NERC	01/27/2016	YDCV	SW846-3050B
Cobalt - Total	EPA 6010B	12.4	mg/Kg	D	2.50	50.00	--	01/29/2016	00:52	NERC	01/27/2016	YDCV	SW846-3050B
Copper - Total	EPA 6010B	776	mg/Kg	D	15.00	250.00	--	01/28/2016	22:32	NERC	01/27/2016	YDCV	SW846-3050B
Iron - Total	EPA 6010B	84627	mg/Kg	D	100.0	250.0	--	01/28/2016	22:39	NERC	01/27/2016	YDCV	SW846-3050B
Lead - Total	EPA 6010B	100299	mg/Kg	D	25.00	500.00	--	01/28/2016	22:39	NERC	01/27/2016	YDCV	SW846-3050B
Magnesium - Total	EPA 6010B	2953	mg/Kg	D	75.0	6250.0	--	01/28/2016	23:47	NERC	01/27/2016	YDCV	SW846-3050B
Manganese - Total	EPA 6010B	476	mg/Kg	D	12.50	250.00	--	01/28/2016	23:47	NERC	01/27/2016	YDCV	SW846-3050B
Nickel - Total	EPA 6010B	159	mg/Kg	D	12.50	250.00	--	01/28/2016	23:47	NERC	01/27/2016	YDCV	SW846-3050B
Potassium - Total	EPA 6010B	394	mg/Kg	D	250.0	500.0	--	01/29/2016	00:52	NERC	01/27/2016	YDCV	SW846-3050B

ND = Not Detected MCL = Maximum Contaminant Level BDL = Below Detection Limit DNI = Does Not Ignite MDL = Minimum Detection Limit N/A = Not Applicable
MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level. All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.
+ = Parameter is not accredited under EQLab's NELAP Certification

ACCREDITED IN ACCORDANCE WITH nelac
The results presented herein meet all NELAC requirements.
Refer to eqlab certification number E87783 at www.eqlab.com.

ENVIRONMENTAL QUALITY LABORATORIES, INC.
60 E STREET, MINILLAS INDUSTRIAL PARK, BAYAMÓN, PR 00959
PO BOX 11458 SANTURCE, PR 00910-1458 TEL. (787) 288-6420 FAX (787) 288-6465 www.eqlab.com

PRDOH Certified
EPA ID PR00014

To: WESTON SOLUTIONS
1090 KING GEORGES POST ROAD
SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-014SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483733**	Collected Date & Time:	**01/22/2016** 10:45	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

					Limits			Analysis			Prep Method		
Parameter	Method	Results	Units	DQ	MDL	MRL	MCL	Date	Time	By	Date	By	Method
Selenium - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	50.00	--	01/29/2016	00:52	NERC	01/27/2016	YDCV	SW846-3050B
Silver - Total	EPA 6010B	BDL	mg/Kg	D,U	5.00	25.00	--	01/28/2016	23:47	NERC	01/27/2016	YDCV	SW846-3050B
Sodium - Total	EPA 6010B	31597	mg/Kg	D	1000.0	12500.0	--	01/28/2016	22:39	NERC	01/27/2016	YDCV	SW846-3050B
Thallium - Total	EPA 6010B	BDL	mg/Kg	D,U	25.0	50.0	--	01/29/2016	00:52	NERC	01/27/2016	YDCV	SW846-3050B
Vanadium - Total	EPA 6010B	51.2	mg/Kg	D	2.50	50.00	--	01/29/2016	00:52	NERC	01/27/2016	YDCV	SW846-3050B
Zinc - Total	EPA 6010B	1137	mg/Kg	D	12.50	250.00	--	01/28/2016	23:47	NERC	01/27/2016	YDCV	SW846-3050B
Releasable Sulfide	SW 846-7.3.4	BDL	mg/Kg	U	1.0	1.0	500	02/01/2016	11:00	SVG	02/01/2016	SVG	METHOD EXT
Mercury - Total	EPA 7471A	0.052	mg/Kg	J	0.020	0.100	--	01/28/2016	11:27	CRP	01/27/2016	YDCV	Method Digestion
Corrosivity, pH	EPA 9045C	7.82	S. U.	--	1.00	--	<2 - >12.5	01/27/2016	09:45	MGM	--	--	N/A
TCLP - ICP 6010 B													
* Arsenic - Total	EPA 6010 B	BDL	mg/L	D,U	0.10	1.00	5.0	01/28/2016	20:00	NERC	01/28/2016	YDCV	EPA 1311
* Barium -Total	EPA 6010 B	BDL	mg/L	D,U	0.050	2.000	100	01/28/2016	20:00	NERC	01/28/2016	YDCV	EPA 1311
* Cadmium - Total	EPA 6010 B	4.73	mg/L	D	0.0050	0.0100	1.0	01/28/2016	20:00	NERC	01/28/2016	YDCV	EPA 1311
* Chromium - Total	EPA 6010 B	BDL	mg/L	D,U	0.050	0.500	5.0	01/28/2016	20:00	NERC	01/28/2016	YDCV	EPA 1311
* Lead - Total	EPA 6010 B	91.0	mg/L	D	0.050	1.000	5.0	01/28/2016	20:00	NERC	01/28/2016	YDCV	EPA 1311
* Selenium - Total	EPA 6010 B	BDL	mg/L	D,U	0.30	1.00	1.0	01/28/2016	20:00	NERC	01/28/2016	YDCV	EPA 1311
* Silver - Total	EPA 6010 B	BDL	mg/L	D,U	0.020	0.100	5.0	01/28/2016	20:00	NERC	01/28/2016	YDCV	EPA 1311

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MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level. All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.
+ = Parameter is not accredited under EQLab's NELAP Certification

ACCREDITED IN ACCORDANCE WITH nelac

The results presented herein meet all NELAC requirements.
Refer to eqlab certification number E87783 at www.eqlab.com.

PRDOH Certified
EPA ID PR00014

ENVIRONMENTAL QUALITY LABORATORIES, INC.
60 E STREET, MINILLAS INDUSTRIAL PARK, BAYAMÓN, PR 00959
PO BOX 11458 SANTURCE, PR 00910-1458 TEL. (787) 288-6420 FAX (787) 288-6465 www.eqlab.com

To: WESTON SOLUTIONS
1090 KING GEORGES POST ROAD
SUITE 201
EDISON, NJ 08837-3703

Attn: MRS. SMITA SUMBALY
Source: **PRBR-014SW-001**
UNKNOWN, PR

Project Name: SITE ASSESSMENT
Facility: TO-0006-0122
Description: SOIL - Grab
Client Ref. #: N/A

eqlab ENVIRONMENTAL QUALITY LABORATORIES, INC.

Laboratory Test Report

Sample Number:	**2483733**	Collected Date & Time:	**01/22/2016** 10:45	Date of Report:	02/05/2016
Work Order:	419-02-48	Received Date & Time:	01/26/2016 14:44	Collected By:	CHUERTAS
Delivery Slip:	2016-00716	Temperature at Arrival:	3.0 °C	Eqlab Rep.:	PRODRIGUEZ
Folder Number:	216813			Proposal Number:	18306 - 1

Remarks:

	Parameter	Method	Results	Units	DQ	Limits MDL	Limits MRL	Limits MCL	Analysis Date	Analysis Time	Analysis By	Prep Method Date	Prep Method By	Prep Method Method
	TCLP Mercury													
+	* Mercury - Total	EPA 7470 A	BDL	mg/L	U	0.0002	0.0005	0.2	01/29/2016	11:05	CRP	01/28/2016	YDCV	EPA 1311
+	Ignitability	40CFR261.21	DNI	--	--	--	--	--	02/01/2016	09:00	DSA	--	--	N/A
	Releasable Cyanide	SW 846 - 7.3.3	BDL	mg/Kg	U	1.0	1.0	250	01/28/2016	14:00	LHT	01/27/2016	LHT	METHOD EXT

Certified by Laboratory Director

ZONIA PICHARDO RODRIGUEZ Químico Licenciado Colegio de Químicos Libre Asociado de Puerto Rico LICENCIA NUM.

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MO = Monitoring Only MRL = Minimum Reporting Level PTRL = Pattern Recognition Level. All results are calculated on a wet weight basis unless otherwise stated. All results relate only to this sample.
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ENVIRONMENTAL QUALITY LABORATORIES, INC.

Friday, February 05, 2016 at 3:58PM

Samples with 'OOMCL' status

Order Number	Client Ref #	Run	SOURCE	Test Name	ANALYTE	Final Result	Units	MCL	Client
2483725		175931	PRBR-005SW-003	TCLP - ICP 6010 B	Lead - Total	38.300	mg/L	5.0	419-02-48
2483727		175931	PRBR-008SW-001	TCLP - ICP 6010 B	Cadmium - Total	6.7000	mg/L	1.0	419-02-48
2483727		175931	PRBR-008SW-001	TCLP - ICP 6010 B	Lead - Total	227.600	mg/L	5.0	419-02-48
2483728		175931	PRBR-009SW-001	TCLP - ICP 6010 B	Lead - Total	93.460	mg/L	5.0	419-02-48
2483729		175931	PRBR-010SW-001	TCLP - ICP 6010 B	Lead - Total	9.240	mg/L	5.0	419-02-48
2483730		175931	PRBR-011SW-001	TCLP - ICP 6010 B	Lead - Total	19.490	mg/L	5.0	419-02-48
2483731		175931	PRBR-012SW-001	TCLP - ICP 6010 B	Cadmium - Total	4.7290	mg/L	1.0	419-02-48
2483731		175931	PRBR-012SW-001	TCLP - ICP 6010 B	Lead - Total	28.860	mg/L	5.0	419-02-48
2483732		175931	PRBR-013SW-001	TCLP - ICP 6010 B	Cadmium - Total	1.7640	mg/L	1.0	419-02-48
2483732		175931	PRBR-013SW-001	TCLP - ICP 6010 B	Lead - Total	18.450	mg/L	5.0	419-02-48
2483733		175931	PRBR-014SW-001	TCLP - ICP 6010 B	Cadmium - Total	4.7260	mg/L	1.0	419-02-48
2483733		175931	PRBR-014SW-001	TCLP - ICP 6010 B	Lead - Total	91.030	mg/L	5.0	419-02-48

2016-00716

ENVIRONMENTAL QUALITY LABORATORIES, INC.

SAMPLE DELIVERY SLIP & CHAIN OF CUSTODY

PO BOX 11458, SAN JUAN, PR 00910-1458 • TEL. (787) 288-6420, FAX (787) 288-6465, e-mail: info@eqlab.com

CLIENT NAME: WESTON SOLUTIONS | CLIENT ID: 419-02 | W.O. #: 48 | SITE: UNKNOWN, PR | CLIENT REP: MRS. SMITA SOMBALY

P.O. #: N/A | PWSID #: | FOLDER #: 318913 | PROJECT: RAP NO. 357 & 357A | EQLAB REP: PRENTISS

SAMPLE INFORMATION		CONTAINER INFORMATION	FIELD TESTING	ANALYSIS REQUESTED
SAMPLE #: 2465725-1 MATRIX: SOIL SOURCE: PRBR-0058W-003, UNKNOWN, PR	DATE: 01/22/16 TIME: 08:40 TYPE: Grab	TYPE: GPC; COLOR: CLEAR; VOLUME: 16 PRESERVATIVE: Cool 4 °C		Mercury - Total, TAL Metals - ICP: Al, Na, Tl, Zn, As, Ba, Be, Ca, Cr, Se, K, Mn, Mg, Pb, Fe, Cu, Cd, Al, Co, V, Ag, Sb, , TCLP - ICP 6010 B: As, Cr, Se, Ag, Ba, Pb, Cd, , TCLP Mercury
SAMPLE #: 2465725-2 MATRIX: SOIL SOURCE: PRBR-0058W-003, UNKNOWN, PR	DATE: 01/22/16 TIME: 08:40 TYPE: Grab	TYPE: GPC; COLOR: CLEAR; VOLUME: 4 PRESERVATIVE: Cool 4 °C		Corrosivity, pH (RCRA)
SAMPLE #: 2465725-3 MATRIX: SOIL SOURCE: PRBR-0058W-003, UNKNOWN, PR	DATE: 01/22/16 TIME: 08:40 TYPE: Grab	TYPE: GPC; COLOR: CLEAR; VOLUME: 12 PRESERVATIVE: Cool 4 °C		Ignitability, Releasable Cyanide, Releasable Sulfide
SAMPLE #: 2465726-1 MATRIX: SOIL SOURCE: PRBR-0058W-002, UNKNOWN, PR	DATE: 01/22/16 TIME: 09:00 TYPE: Grab	TYPE: GPC; COLOR: CLEAR; VOLUME: 16 PRESERVATIVE: Cool 4 °C		Mercury - Total, TAL Metals - ICP: Al, Na, Tl, Zn, As, Ba, Be, Ca, Cr, Se, K, Mn, Mg, Pb, Fe, Cu, Cd, Al, Co, V, Ag, Sb, , TCLP - ICP 6010 B: As, Cr, Se, Ag, Ba, Pb, Cd, , TCLP Mercury

CUSTODY RECORD	SIGNATURE	DATE	TIME
Collected in field by:	(1)	01/22/16	Varies
Fixed in field by:	(1)	01/22/16	Varies
Authorized by:	N/A	N/A	N/A
Received by EQLF:	(1)	01/26/16	1414
Released to EQLL by:	Diego Cassia	01/26/16	1414
Received by EQLL:			

SPECIAL INSTRUCTIONS / COMMENTS:
(1) Ver cadena de custodia del cliente. HDL 01/26/16

*EQLF = Eqlab's Field Personnel.
*EQLL = Eqlab's Log-in Personnel.

Arrival Temperature: 3.0°C Signature: HDL

Eqlab's general terms and conditions on reverse side of this document.

P/HDL

2016-00716

ENVIRONMENTAL QUALITY LABORATORIES, INC.

SAMPLE DELIVERY SLIP & CHAIN OF CUSTODY

PO BOX 11458, SAN JUAN, PR 00910-1458 • TEL. (787) 288-6420, FAX (787) 288-6465, e-mail: info@eqlab.com

CLIENT NAME: WESTON SOLUTIONS | CLIENT ID: 419-02 | W.O. #: 48 | SITE: UNKNOWN, PR | CLIENT REP: MRS. SMITA SUMBALY

P.O. #: N/A | PWSID #: | FOLDER #: 216813 | PROJECT: REP NO. 357 & 357A | EQLAB REP: [illegible]

SAMPLE INFORMATION		CONTAINER INFORMATION	FIELD TESTING		ANALYSIS REQUESTED
SAMPLE #: 2483726-2 MATRIX: SOIL SOURCE: PRBR-006SW-002, UNKNOWN, PR	DATE: 01/22/16 TIME: 09:00 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 4 PRESERVATIVE: Cool 4 °C			Corrosivity, pH (RCRA)
SAMPLE #: 2483726-3 MATRIX: SOIL SOURCE: PRBR-006SW-002, UNKNOWN, PR	DATE: 01/22/16 TIME: 09:00 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 12 PRESERVATIVE: Cool 4 °C			Ignitability, Releasable Cyanide, Releasable Sulfide
SAMPLE #: 2485727-1 MATRIX: SOIL SOURCE: PRBR-008SW-001 UNKNOWN, PR	DATE: 01/22/16 TIME: 08:11 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 16 PRESERVATIVE: Cool 4 °C			Mercury - Total, TAL Metals - ICP, Ni, Na, Ti, Zn, As, Ba, Be, Ca, Cr, Se, K, Mn, Mg, Pb, Fe, Cu, Cd, Al, Co, V, Ag, Sb, , TCLP - ICP 6010 B: As, Cr, Se, Ag, Ba, Pb, Cd, , TCLP Mercury
SAMPLE #: 2485727-2 MATRIX: SOIL SOURCE: PRBR-008SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 08:11 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 4 PRESERVATIVE: Cool 4 °C			Corrosivity, pH (RCRA)

CUSTODY RECORD	SIGNATURE	DATE	TIME
Collected in field by:	①	01/22/16	[illegible]
Fixed in field by:	①	01/22/16	[illegible]
Authorized by:	N/A	N/A	
Received by EQLF:			
Released to EQLL by:	①	01/26/16	1444
Received by EQLL:	[illegible]	01/26/16	1444

SPECIAL INSTRUCTIONS / COMMENTS:

*EQLF = Eqlab's Field Personnel.
*EQLL = Eqlab's Log-in Personnel.

Arrival Temperature: 3.0°C Signature: [illegible]

Eqlab's general terms and conditions on reverse side of this document.

2016-00716

ENVIRONMENTAL QUALITY LABORATORIES, INC.

SAMPLE DELIVERY SLIP & CHAIN OF CUSTODY

PO BOX 11458, SAN JUAN, PR 00910-1458 • TEL. (787) 288-6420, FAX (787) 288-6465, e-mail: info@eqlab.com

CLIENT NAME: WESTON SOLUTIONS | CLIENT ID: 419-02 | W.O. #: 49 | SITE: UNKNOWN, PR | CLIENT REP: MRS. SMITA SUMBALY

P.O. #: N/A | PWSID #: | FOLDER #: 216813 | PROJECT: REP 240, 357 & 237A | EQLAB REP: [illegible]

SAMPLE INFORMATION		CONTAINER INFORMATION	FIELD TESTING	ANALYSIS REQUESTED
SAMPLE #: 2483727-3 MATRIX: SOIL SOURCE: PRBR-009SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 08:11 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 12 PRESERVATIVE: Cool 4 °C		Ignitability, Releasable Cyanide, Releasable Sulfide
SAMPLE #: 2483728-1 MATRIX: SOIL SOURCE: PRBR-009SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 08:18 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 16 PRESERVATIVE: Cool 4 °C		Mercury - Total, TAL Metals - ICP: Ni, Na, Tl, Zn, As, Ba, Be, Ca, Cr, Se, K, Mn, Mg, Pb, Fe, Cu, Cd, Al, Co, V, Ag, Sb, , TCLP - ICP 6010 B: As, Cr, Se, Ag, Ba, Pb, Cd, , TCLP Mercury
SAMPLE #: 2483728-2 MATRIX: SOIL SOURCE: PRBR-009SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 08:18 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 4 PRESERVATIVE: Cool 4 °C		Corrosivity, pH (RCRA)
SAMPLE #: 2483728-3 MATRIX: SOIL SOURCE: PRBR-009SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 08:18 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 12 PRESERVATIVE: Cool 4 °C		Ignitability, Releasable Cyanide, Releasable Sulfide

CUSTODY RECORD	SIGNATURE	DATE	TIME
Collected in field by:	(1)	01/22/16	varies
Fixed in field by:	(1)	01/22/16	
Authorized by:			
Received by EQLF:			
Released to EQLL by:	(1)	01/26/16	1444
Received by EQLL:	[signature]	01/26/16	1444

SPECIAL INSTRUCTIONS / COMMENTS:

*EQLF = Eqlab's Field Personnel.
*EQLL = Eqlab's Log-in Personnel.

Arrival Temperature: 3.0°C Signature: [signature]

Eqlab's general terms and conditions on reverse side of this document.

[signature]

2016-00716

ENVIRONMENTAL QUALITY LABORATORIES, INC.

SAMPLE DELIVERY SLIP & CHAIN OF CUSTODY

PO BOX 11458, SAN JUAN, PR 00910-1458 • TEL. (787) 288-6420, FAX (787) 288-6465, e-mail: info@eqlab.com

LIENT NAME: WESTON SOLUTIONS | CLIENT ID: 419-02 | W.O. #: 48 | SITE: UNKNOWN, PR | CLIENT REP: MRS. SMITA SUMBALY

.O. #: N/A | PWSID #: | FOLDER #: 216813 | PROJECT: REP NO. 357 & 357A | EQLAB REP: JPUENTES

SAMPLE INFORMATION		CONTAINER INFORMATION	FIELD TESTING	ANALYSIS REQUESTED
SAMPLE #: 2483729-1 MATRIX: SOIL SOURCE: PRBR-010SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 08:25 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 16 PRESERVATIVE: Cool 4 °C		Mercury - Total, TAL Metals - ICP: Ni, Na, Tl, Zn, As, Ba, Be, Ca, Cr, Se, K, Mn, Mg, Pb, Fe, Cu, Cd, Al, Co, V, Ag, Sb. , TCLP - ICP 6010 B: As, Cr, Se, Ag, Ba, Pb, Cd. , TCLP Mercury
SAMPLE #: 2483729-2 MATRIX: SOIL SOURCE: PRBR-010SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 08:25 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 4 PRESERVATIVE: Cool 4 °C		Corrosivity, pH (RCRA)
SAMPLE #: 2483729-3 MATRIX: SOIL SOURCE: PRBR-010SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 08:25 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 12 PRESERVATIVE: Cool 4 °C		Ignitability, Releasable Cyanide, Releasable Sulfide
SAMPLE #: 2483730-1 MATRIX: SOIL SOURCE: PRBR-011SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 09:15 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 16 PRESERVATIVE: Cool 4 °C		Mercury - Total, TAL Metals - ICP: Ni, Na, Tl, Zn, As, Ba, Be, Ca, Cr, Se, K, Mn, Mg, Pb, Fe, Cu, Cd, Al, Co, V, Ag, Sb. , TCLP - ICP 6010 B: As, Cr, Se, Ag, Ba, Pb, Cd. TCLP Mercury

CUSTODY RECORD	SIGNATURE	DATE	TIME
Collected in field by:	(1)	01/22/16	Varies
Fixed in field by:	(1)	01/22/16	
Authorized by:	N/A	N/A	
Received by EQLF:			
Released to EQLL by:	(1)	01/26/16	1444
Received by EQLL:	[signature]	01/26/16	1444

SPECIAL INSTRUCTIONS / COMMENTS:

*EQLF = Eqlab's Field Personnel.
*EQLL = Eqlab's Log-in Personnel.

P/HOR

Arrival Temperature: 3.0°C Signature: [signature]

Eqlab's general terms and conditions on reverse side of this document.

USEPA
DateShipped: 1/26/2016
CarrierName: Hand Delivered
AirbillNo: N/A

CHAIN OF CUSTODY RECORD
Site #: 0006-0122
Contact Name: Carlos Huertas
Contact Phone: (787) 354-2489

No: 2-012616-120109-0001
RFP # 357 A
Lab: EQ Laboratory
Lab Phone: (787) 288-6420

Lab #	Sample #	Location	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Preservative	Lab QC
	PRBR-013SW-001	SLAG PILE - FROM BUNKER	TAL Metals + Hg	Soil	1/22/2016	10:55	1	8 oz. Jar	4 C	N
	PRBR-013SW-001	SLAG PILE - FROM BUNKER	RCRA Characteristics	Soil	1/22/2016	10:55	1	8 oz. Jar	4 C	
	PRBR-014SW-001	DRY SLUDGE	TCLP Metals + Hg	Soil	1/22/2016	10:45	1	8 oz Jar	4 C	
	PRBR-014SW-001	DRY SLUDGE	TAL Metals + Hg	Soil	1/22/2016	10:45	1	8 oz. Jar	4 C	
	PRBR-014SW-001	DRY SLUDGE	RCRA Characteristics	Soil	1/22/2016	10:45	1	8 oz. Jar	4 C	
	PRBR-005SW-003	SLAG PILE - BUNKER	TCLP Metals + Hg	Soil	1/22/2016	08:40	1	8 oz Jar	4 C	
	PRBR-005SW-003	SLAG PILE - BUNKER	TAL Metals + Hg	Soil	1/22/2016	08:40	1	8 oz. Jar	4 C	
	PRBR-005SW-003	SLAG PILE - BUNKER	RCRA Characteristics	Soil	1/22/2016	08:40	1	8 oz. Jar	4 C	
										N

Special Instructions:	SAMPLES TRANSFERRED FROM
	CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
All transfer	Carlos L. Huertas (CLH) - RST3	1-26-15 (1300)	[signature]	01/26/16 1444	

2016-00716

ENVIRONMENTAL QUALITY LABORATORIES, INC.

SAMPLE DELIVERY SLIP & CHAIN OF CUSTODY

PO BOX 11458, SAN JUAN, PR 00910-1458 • TEL. (787) 288-6420, FAX (787) 288-6465, e-mail: info@eqlab.com

CLIENT NAME: WESTON SOLUTIONS | CLIENT ID: 419-02 | W.O. #: 48 | SITE: UNKNOWN, PR | CLIENT REP: MRS. SMITA SUMBALY

P.O. #: N/A | PWSID #: | FOLDER #: 216813 | PROJECT: RSP NO. 357 & 357A | EQLAB REP: JFUENTES

SAMPLE INFORMATION		CONTAINER INFORMATION	FIELD TESTING	ANALYSIS REQUESTED
SAMPLE #: 2483730-2 MATRIX: SOIL SOURCE: PRBR-011SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 09:15 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 4 PRESERVATIVE: Cool 4 °C		Corrosivity, pH (RCRA)
SAMPLE #: 2483730-3 MATRIX: SOIL SOURCE: PRBR-011SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 09:15 TYPE: Grab	TYPE: G/TC COLOR: CLEAR VOLUME: 12 PRESERVATIVE: Cool 4 °C		Ignitability, Releasable Cyanide, Releasable Sulfide
SAMPLE #: 2483731-1 MATRIX: SOIL SOURCE: PRBR-012SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 10:40 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 16 PRESERVATIVE: Cool 4 °C		Mercury - Tolm, TAL Metals - ICP, Ni, Na, Tl, Zn, As, Ba, Be, Cr, Cr, Se, K, Mn, Mg, Pb, Fe, Co, Cd, Al, Co, Tl, Ag, Sb, . TCLP - ICP 6010 B: As, Cr, Se, Ag, Ba, Pb, Cd, . TCLP Mercury
SAMPLE #: 2483731-2 MATRIX: SOIL SOURCE: PRBR-012SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 10:40 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 4 PRESERVATIVE: Cool 4 °C		Corrosivity, pH (RCRA)

CUSTODY RECORD	SIGNATURE	DATE	TIME
Collected in field by:	(1)	01/22/16	[illegible]
Fixed in field by:	(1)	01/22/16	
Authorized by:	N/A	N/A	
Received by EQLF:			
Released to EQLL by:	(1)	01/26/16	1444
Received by EQLL:	[signature]	01/26/16	1444

SPECIAL INSTRUCTIONS / COMMENTS:

*EQLF = Eqlab's Field Personnel.
*EQLL = Eqlab's Log-in Personnel.

P/HdL

Arrival Temperature: 3.0°C Signature: [signature]

Eqlab's general terms and conditions on reverse side of this document.

2016-00716

ENVIRONMENTAL QUALITY LABORATORIES, INC.

SAMPLE DELIVERY SLIP & CHAIN OF CUSTODY

PO BOX 11458, SAN JUAN, PR 00910-1458 • TEL. (787) 288-6420, FAX (787) 288-6465, e-mail: info@eqlab.com

CLIENT NAME: WESTON SOLUTIONS | CLIENT ID: [illegible] | W.O. #: 48 | SITE: UNKNOWN, PR | CLIENT REP: MRS. SMITA SUMBALY

P.O. #: N/A | PWSID #: | FOLDER #: [illegible] | PROJECT: REP NO. 357 & 357A | EQLAB REP: [illegible]

SAMPLE INFORMATION		CONTAINER INFORMATION	FIELD TESTING		ANALYSIS REQUESTED
SAMPLE #: 2483733-1 MATRIX: SOIL SOURCE: PRBR-014SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 10:45 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 16 PRESERVATIVE: Cool 4 °C			Mercury - Total, TAL Metals - ICP: Ni, Na, Tl, Zn, As, Ba, Be, Ca, Cr, Se, K, Mn, Mg, Pb, Fe, Cu, Cd, Al, Co, V, Ag, Sb. , TCLP - ICP 6010 B: As, Cr, Se, Ag, Ba, Pb, Cu, , TCLP Mercury
SAMPLE #: 2483733-2 MATRIX: SOIL SOURCE: PRBR-014SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 10:45 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 4 PRESERVATIVE: Cool 4 °C			Corrosivity, pH (RCRA)
SAMPLE #: 2483733-3 MATRIX: SOIL SOURCE: PRBR-014SW-001, UNKNOWN, PR	DATE: 01/22/16 TIME: 10:45 TYPE: Grab	TYPE: G/PC COLOR: CLEAR VOLUME: 12 PRESERVATIVE: Cool 4 °C			Ignitability, Releasable Cyanide, Releasable Sulfide
SAMPLE #: MATRIX: SOURCE:	DATE: TIME: TYPE:	TYPE COLOR VOLUME PRESERVATIVE			

CUSTODY RECORD	SIGNATURE	DATE	TIME
Collected in field by:	[illegible]	01/22/16	1045
Fixed in field by:	[illegible]	01/22/16	1045
Authorized by:	N/A	N/A	
Received by EQLF:			
Released to EQLL by:	[illegible]	01/26/16	1444
Received by EQLL:	[illegible]	01/26/16	1444

SPECIAL INSTRUCTIONS / COMMENTS:

*EQLF = Eqlab's Field Personnel.
*EQLL = Eqlab's Log-in Personnel.

[illegible]

Arrival Temperature: 3.0°C Signature: [illegible]

Eqlab's general terms and conditions on reverse side of this document.

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 20 (Wipes)
Analysis: Metals

SDG No.: MBCA00
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/8/2016 – 3/9/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solutions
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
Samples MBCA02, MBCA14, MBCA19, MBCA04, MBCA00, MBCA09, MBCA07, MBCA15, MBCA05, MBCA01, MBCA17, MBCA03 have analytes that have been qualified J, J+ or J-.

Minor Findings:
None

COMMENT: The site-specific QAPP did not specify the project action levels for this site.

Reviewer Name(s): Jianwei Huang

Approver's Signature: **Date: 04/15/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Aluminum MBCA14, MBCA03, MBCA00

Barium MBCA14, MBCA12, MBCA15, MBCA02, MBCA06, MBCA17, MBCA08, MBCA03, MBCA16, MBCA09, MBCA18, MBCA19, MBCA05, MBCA13, MBCA01, MBCA00, MBCA11, MBCA07

Cadmium MBCA07

Calcium MBCA13, MBCA07, MBCA14, MBCA05, MBCA12, MBCA16, MBCA08, MBCA10, MBCA02, MBCA18, MBCA01, MBCA00, MBCA04, MBCA19, MBCA03, MBCA11, MBCA15

Chromium MBCA03, MBCA15, MBCA05, MBCA13, MBCA14, MBCA11, MBCA19, MBCA02, MBCA01

Cobalt MBCA08, MBCA11, MBCA15, MBCA18, MBCA19, MBCA04, MBCA02, MBCA12, MBCA01, MBCA00, MBCA05, MBCA13, MBCA14, MBCA16, MBCA10, MBCA03, MBCA06, MBCA09, MBCA17, MBCA07

Magnesium MBCA00, MBCA02, MBCA12, MBCA07, MBCA03, MBCA04, MBCA14, MBCA05, MBCA19, MBCA15, MBCA18, MBCA06, MBCA01, MBCA09, MBCA08, MBCA11, MBCA13, MBCA17, MBCA16, MBCA10

Manganese MBCA03, MBCA01, MBCA14

Potassium MBCA15, MBCA09, MBCA17, MBCA04, MBCA13, MBCA10, MBCA11, MBCA18, MBCA12, MBCA19, MBCA16, MBCA06

Selenium MBCA13, MBCA08, MBCA15, MBCA18, MBCA09, MBCA04, MBCA02, MBCA14, MBCA16, MBCA10, MBCA05, MBCA17, MBCA00, MBCA11, MBCA12, MBCA01

Silver MBCA01, MBCA17, MBCA02, MBCA12, MBCA13, MBCA15, MBCA08, MBCA07, MBCA06, MBCA11, MBCA09, MBCA03, MBCA05

Sodium MBCA03, MBCA14, MBCA04, MBCA09, MBCA11, MBCA19, MBCA05, MBCA15, MBCA18, MBCA02, MBCA13, MBCA16, MBCA01, MBCA00, MBCA08, MBCA12

Vanadium MBCA00, MBCA15, MBCA11, MBCA03, MBCA05, MBCA01, MBCA13, MBCA12, MBCA18, MBCA02, MBCA07, MBCA04, MBCA08, MBCA10, MBCA19, MBCA14, MBCA09, MBCA16, MBCA06, MBCA17

The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Barium MBCA14, MBCA12, MBCA07, MBCA11, MBCA00, MBCA01, MBCA13, MBCA19, MBCA05, MBCA18, MBCA09, MBCA16, MBCA03, MBCA08, MBCA17, MBCA06, MBCA02, MBCA15

Cadmium MBCA07
Silver MBCA02, MBCA08, MBCA06, MBCA11, MBCA07, MBCA15, MBCA01, MBCA12, MBCA05, MBCA13, MBCA03, MBCA17, MBCA09

Vanadium MBCA03, MBCA11, MBCA09, MBCA17, MBCA00, MBCA05, MBCA19, MBCA01, MBCA10, MBCA08, MBCA04, MBCA15, MBCA07, MBCA02, MBCA16, MBCA12, MBCA18, MBCA13, MBCA06, MBCA14

The following samples are associated with PB with results greater than CRQLs. The samples have analyte results greater than CRQLs but less than 10x the associated PB results. Detects are qualified as J+.

Zinc MBCA00, MBCA01, MBCA02, MBCA03, MBCA04, MBCA05, MBCA07, MBCA09, MBCA14, MBCA15, MBCA17, MBCA19

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

Not applicable.

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required

Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

Not applicable.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

Not applicable.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

Not applicable.

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

Not applicable.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCA00	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	38.1		ug	38.1		1	Yes	S3VEM
Antimony	Target	11.8		ug	11.8		1	Yes	S3VEM
Arsenic	Target	1.8		ug	1.8		1	Yes	S3VEM
Barium	Target	40.1		ug	40.1		1	Yes	S3VEM
Beryllium	Target	0.86		ug	0.86		1	Yes	S3VEM
Cadmium	Target	0.95		ug	0.95		1	Yes	S3VEM
Calcium	Target	1070		ug	1070		1	Yes	S3VEM
Chromium	Target	2.0		ug	2.0		1	Yes	S3VEM
Cobalt	Target	9.7		ug	9.7		1	Yes	S3VEM
Copper	Target	6.4		ug	6.4		1	Yes	S3VEM
Iron	Target	23.1		ug	23.1		1	Yes	S3VEM
Lead	Target	3.1		ug	3.1		1	Yes	S3VEM
Magnesium	Target	979		ug	979		1	Yes	S3VEM
Manganese	Target	3.4		ug	3.4		1	Yes	S3VEM
Nickel	Target	7.5		ug	7.5		1	Yes	S3VEM
Potassium	Target	1020		ug	1020		1	Yes	S3VEM
Selenium	Target	6.3		ug	6.3		1	Yes	S3VEM
Silver	Target	1.8		ug	1.8		1	Yes	S3VEM
Sodium	Target	1230		ug	1230		1	Yes	S3VEM
Thallium	Target	4.5		ug	4.5		1	Yes	S3VEM
Vanadium	Target	9.4		ug	9.4		1	Yes	S3VEM
Zinc	Target	140		ug	140		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number: LCS02	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	42.7		ug	42.7		1	Yes	S3VEM
Antimony	Target	13.0		ug	13.0		1	Yes	S3VEM
Arsenic	Target	1.9		ug	1.9		1	Yes	S3VEM
Barium	Target	45.8		ug	45.8		1	Yes	S3VEM
Beryllium	Target	0.95		ug	0.95		1	Yes	S3VEM
Cadmium	Target	1.1		ug	1.1		1	Yes	S3VEM
Calcium	Target	1170		ug	1170		1	Yes	S3VEM
Chromium	Target	2.1		ug	2.1		1	Yes	S3VEM
Cobalt	Target	11.0		ug	11.0		1	Yes	S3VEM
Copper	Target	4.6		ug	4.6		1	Yes	S3VEM
Iron	Target	23.0		ug	23.0		1	Yes	S3VEM
Lead	Target	2.3		ug	2.3		1	Yes	S3VEM
Magnesium	Target	998		ug	998		1	Yes	S3VEM
Manganese	Target	3.4		ug	3.4		1	Yes	S3VEM
Nickel	Target	8.5		ug	8.5		1	Yes	S3VEM
Potassium	Target	1090		ug	1090		1	Yes	S3VEM
Selenium	Target	7.1		ug	7.1		1	Yes	S3VEM
Silver	Target	2.1		ug	2.1		1	Yes	S3VEM
Sodium	Target	1100		ug	1100		1	Yes	S3VEM
Thallium	Target	5.3		ug	5.3		1	Yes	S3VEM
Vanadium	Target	10.8		ug	10.8		1	Yes	S3VEM
Zinc	Target	13.2		ug	13.2		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA00	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CK01-WP005-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:56:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	300	U	ug	128	JD	15	Yes	S3VEM
Antimony	Target	35700		ug	35700	D	50	Yes	S3VEM
Arsenic	Target	809		ug	809	D	15	Yes	S3VEM
Barium	Target	300	U	ug	24.7	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	161		ug	161	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	429	JD	15	Yes	S3VEM
Chromium	Target	31.3		ug	31.3	D	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	3.2	JD	15	Yes	S3VEM
Copper	Target	3160		ug	3160	D	15	Yes	S3VEM
Iron	Target	23300		ug	23300	D	15	Yes	S3VEM
Lead	Target	34200		ug	34200	D	50	Yes	S3VEM
Magnesium	Target	7500	U	ug	145	JD	15	Yes	S3VEM
Manganese	Target	149		ug	149	D	15	Yes	S3VEM
Nickel	Target	2070		ug	2070	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	7500	UD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	32.2	JD	15	Yes	S3VEM
Silver	Target	31.8		ug	31.8	D	15	Yes	S3VEM
Sodium	Target	7500	U	ug	3530	JD	15	Yes	S3VEM
Thallium	Target	4.5	J	ug	4.5	JD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	0.79	JD	15	Yes	S3VEM
Zinc	Target	555	J+	ug	555	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA01	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CK01-WP006-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:00:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	455		ug	455	D	15	Yes	S3VEM
Antimony	Target	6720		ug	6720	D	15	Yes	S3VEM
Arsenic	Target	591		ug	591	D	15	Yes	S3VEM
Barium	Target	300	U	ug	93.0	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	103		ug	103	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	1380	JD	15	Yes	S3VEM
Chromium	Target	15.0	U	ug	5.6	JD	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	3.6	JD	15	Yes	S3VEM
Copper	Target	158		ug	158	D	15	Yes	S3VEM
Iron	Target	4830		ug	4830	D	15	Yes	S3VEM
Lead	Target	27500		ug	27500	D	15	Yes	S3VEM
Magnesium	Target	7500	U	ug	200	JD	15	Yes	S3VEM
Manganese	Target	22.5	U	ug	21.7	JD	15	Yes	S3VEM
Nickel	Target	678		ug	678	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	7500	UD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	14.6	JD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	6.8	JD	15	Yes	S3VEM
Sodium	Target	7500	U	ug	3290	JD	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	1.7	JD	15	Yes	S3VEM
Zinc	Target	263	J+	ug	263	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA02	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CK01-WP007-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:02:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	581		ug	581	D	15	Yes	S3VEM
Antimony	Target	6970		ug	6970	D	15	Yes	S3VEM
Arsenic	Target	536		ug	536	D	15	Yes	S3VEM
Barium	Target	300	U	ug	101	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	84.9		ug	84.9	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	2190	JD	15	Yes	S3VEM
Chromium	Target	15.0	U	ug	7.1	JD	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	2.4	JD	15	Yes	S3VEM
Copper	Target	280		ug	280	D	15	Yes	S3VEM
Iron	Target	5700		ug	5700	D	15	Yes	S3VEM
Lead	Target	37200		ug	37200	D	15	Yes	S3VEM
Magnesium	Target	7500	U	ug	226	JD	15	Yes	S3VEM
Manganese	Target	28.4		ug	28.4	D	15	Yes	S3VEM
Nickel	Target	730		ug	730	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	7500	UD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	9.2	JD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	11.6	JD	15	Yes	S3VEM
Sodium	Target	7500	U	ug	7480	JD	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	2.1	JD	15	Yes	S3VEM
Zinc	Target	523	J+	ug	523	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA03	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CK01-WP008-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:06:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	300	U	ug	125	JD	15	Yes	S3VEM
Antimony	Target	2350		ug	2350	D	15	Yes	S3VEM
Arsenic	Target	163		ug	163	D	15	Yes	S3VEM
Barium	Target	300	U	ug	42.8	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	35.0		ug	35.0	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	1020	JD	15	Yes	S3VEM
Chromium	Target	15.0	U	ug	7.5	JD	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	1.0	JD	15	Yes	S3VEM
Copper	Target	53.8		ug	53.8	D	15	Yes	S3VEM
Iron	Target	3160		ug	3160	D	15	Yes	S3VEM
Lead	Target	18100		ug	18100	D	15	Yes	S3VEM
Magnesium	Target	7500	U	ug	191	JD	15	Yes	S3VEM
Manganese	Target	22.5	U	ug	19.1	JD	15	Yes	S3VEM
Nickel	Target	61.4		ug	61.4	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	7500	UD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	52.5	UD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	0.68	JD	15	Yes	S3VEM
Sodium	Target	7500	U	ug	2800	JD	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	1.7	JD	15	Yes	S3VEM
Zinc	Target	428	J+	ug	428	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA04	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CK01-WP009-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:08:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	621		ug	621	D	5	Yes	S3VEM
Antimony	Target	6370		ug	6370	D	30	Yes	S3VEM
Arsenic	Target	284		ug	284	D	5	Yes	S3VEM
Barium	Target	115		ug	115	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	51.4		ug	51.4	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	1110	JD	5	Yes	S3VEM
Chromium	Target	6.4		ug	6.4	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	1.4	JD	5	Yes	S3VEM
Copper	Target	285		ug	285	D	5	Yes	S3VEM
Iron	Target	5060		ug	5060	D	5	Yes	S3VEM
Lead	Target	51700		ug	51700	D	30	Yes	S3VEM
Magnesium	Target	2500	U	ug	192	JD	5	Yes	S3VEM
Manganese	Target	28.6		ug	28.6	D	5	Yes	S3VEM
Nickel	Target	357		ug	357	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	73.2	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	12.6	JD	5	Yes	S3VEM
Silver	Target	8.1		ug	8.1	D	5	Yes	S3VEM
Sodium	Target	2500	U	ug	1800	JD	5	Yes	S3VEM
Thallium	Target	2.2	J	ug	2.2	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	3.0	JD	5	Yes	S3VEM
Zinc	Target	423	J+	ug	423	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA05	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CK01-WP010-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:21:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	618		ug	618	D	15	Yes	S3VEM
Antimony	Target	6710		ug	6710	D	15	Yes	S3VEM
Arsenic	Target	277		ug	277	D	15	Yes	S3VEM
Barium	Target	300	U	ug	114	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	51.7		ug	51.7	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	1080	JD	15	Yes	S3VEM
Chromium	Target	15.0	U	ug	6.1	JD	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	1.4	JD	15	Yes	S3VEM
Copper	Target	283		ug	283	D	15	Yes	S3VEM
Iron	Target	5080		ug	5080	D	15	Yes	S3VEM
Lead	Target	64900		ug	64900	D	50	Yes	S3VEM
Magnesium	Target	7500	U	ug	168	JD	15	Yes	S3VEM
Manganese	Target	29.3		ug	29.3	D	15	Yes	S3VEM
Nickel	Target	352		ug	352	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	7500	UD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	11.3	JD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	8.1	JD	15	Yes	S3VEM
Sodium	Target	7500	U	ug	1740	JD	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	2.8	JD	15	Yes	S3VEM
Zinc	Target	426	J+	ug	426	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA06	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CK01-WP011-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:23:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	4010		ug	4010	D	15	Yes	S3VEM
Antimony	Target	34500		ug	34500	D	50	Yes	S3VEM
Arsenic	Target	1500		ug	1500	D	15	Yes	S3VEM
Barium	Target	300	U	ug	33.7	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	266		ug	266	D	15	Yes	S3VEM
Calcium	Target	8860		ug	8860	D	15	Yes	S3VEM
Chromium	Target	97.8		ug	97.8	D	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	12.5	JD	15	Yes	S3VEM
Copper	Target	2570		ug	2570	D	15	Yes	S3VEM
Iron	Target	64700		ug	64700	D	15	Yes	S3VEM
Lead	Target	59500		ug	59500	D	50	Yes	S3VEM
Magnesium	Target	7500	U	ug	779	JD	15	Yes	S3VEM
Manganese	Target	438		ug	438	D	15	Yes	S3VEM
Nickel	Target	2820		ug	2820	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	212	JD	15	Yes	S3VEM
Selenium	Target	130		ug	130	D	15	Yes	S3VEM
Silver	Target	15.0	U	ug	12.3	JD	15	Yes	S3VEM
Sodium	Target	17200		ug	17200	D	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	19.5	JD	15	Yes	S3VEM
Zinc	Target	4300		ug	4300	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA07	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CK01-WP012-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:28:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	538		ug	538	D	15	Yes	S3VEM
Antimony	Target	13100		ug	13100	D	50	Yes	S3VEM
Arsenic	Target	154		ug	154	D	15	Yes	S3VEM
Barium	Target	300	U	ug	193	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	7.5	U	ug	5.1	JD	15	Yes	S3VEM
Calcium	Target	7500	U	ug	1270	JD	15	Yes	S3VEM
Chromium	Target	15.4		ug	15.4	D	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	3.1	JD	15	Yes	S3VEM
Copper	Target	256		ug	256	D	15	Yes	S3VEM
Iron	Target	24100		ug	24100	D	15	Yes	S3VEM
Lead	Target	25700		ug	25700	D	50	Yes	S3VEM
Magnesium	Target	7500	U	ug	174	JD	15	Yes	S3VEM
Manganese	Target	92.3		ug	92.3	D	15	Yes	S3VEM
Nickel	Target	407		ug	407	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	7500	UD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	52.5	UD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	1.3	JD	15	Yes	S3VEM
Sodium	Target	10200		ug	10200	D	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	2.9	JD	15	Yes	S3VEM
Zinc	Target	246	J+	ug	246	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA08	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CK01-WP013-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:32:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1050		ug	1050	D	15	Yes	S3VEM
Antimony	Target	5550		ug	5550	D	15	Yes	S3VEM
Arsenic	Target	399		ug	399	D	15	Yes	S3VEM
Barium	Target	300	U	ug	172	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	64.8		ug	64.8	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	3290	JD	15	Yes	S3VEM
Chromium	Target	24.7		ug	24.7	D	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	3.6	JD	15	Yes	S3VEM
Copper	Target	389		ug	389	D	15	Yes	S3VEM
Iron	Target	29000		ug	29000	D	15	Yes	S3VEM
Lead	Target	29000		ug	29000	D	15	Yes	S3VEM
Magnesium	Target	7500	U	ug	336	JD	15	Yes	S3VEM
Manganese	Target	181		ug	181	D	15	Yes	S3VEM
Nickel	Target	349		ug	349	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	7500	UD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	17.9	JD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	2.0	JD	15	Yes	S3VEM
Sodium	Target	7500	U	ug	2110	JD	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	7.0	JD	15	Yes	S3VEM
Zinc	Target	1900		ug	1900	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA09	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP001-01	pH:		Sample Date:	03/08/2016	Sample Time:	10:32:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1500		ug	1500	D	15	Yes	S3VEM
Antimony	Target	2220		ug	2220	D	15	Yes	S3VEM
Arsenic	Target	159		ug	159	D	15	Yes	S3VEM
Barium	Target	300	U	ug	236	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	37.8		ug	37.8	D	15	Yes	S3VEM
Calcium	Target	8910		ug	8910	D	15	Yes	S3VEM
Chromium	Target	55.5		ug	55.5	D	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	3.0	JD	15	Yes	S3VEM
Copper	Target	268		ug	268	D	15	Yes	S3VEM
Iron	Target	21100		ug	21100	D	15	Yes	S3VEM
Lead	Target	26200		ug	26200	D	15	Yes	S3VEM
Magnesium	Target	7500	U	ug	1160	JD	15	Yes	S3VEM
Manganese	Target	120		ug	120	D	15	Yes	S3VEM
Nickel	Target	149		ug	149	D	15	Yes	S3VEM
Potassium	Target	635		ug	635	JD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	11.2	JD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	2.3	JD	15	Yes	S3VEM
Sodium	Target	7500	U	ug	6890	JD	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	9.3	JD	15	Yes	S3VEM
Zinc	Target	674	J+	ug	674	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA10	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP002-01	pH:		Sample Date:	03/08/2016	Sample Time:	10:34:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3960		ug	3960	D	15	Yes	S3VEM
Antimony	Target	5320		ug	5320	D	15	Yes	S3VEM
Arsenic	Target	382		ug	382	D	15	Yes	S3VEM
Barium	Target	325		ug	325	D	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	76.5		ug	76.5	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	5770	JD	15	Yes	S3VEM
Chromium	Target	47.0		ug	47.0	D	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	7.8	JD	15	Yes	S3VEM
Copper	Target	448		ug	448	D	15	Yes	S3VEM
Iron	Target	147000		ug	147000	D	15	Yes	S3VEM
Lead	Target	75800		ug	75800	D	50	Yes	S3VEM
Magnesium	Target	7500	U	ug	595	JD	15	Yes	S3VEM
Manganese	Target	749		ug	749	D	15	Yes	S3VEM
Nickel	Target	327		ug	327	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	312	JD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	25.5	JD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	15.0	UD	15	Yes	S3VEM
Sodium	Target	9410		ug	9410	D	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	9.1	JD	15	Yes	S3VEM
Zinc	Target	5870		ug	5870	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA11	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP003-01	pH:		Sample Date:	03/08/2016	Sample Time:	10:36:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	397		ug	397	D	15	Yes	S3VEM
Antimony	Target	3530		ug	3530	D	15	Yes	S3VEM
Arsenic	Target	253		ug	253	D	15	Yes	S3VEM
Barium	Target	300	U	ug	76.6	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	40.0		ug	40.0	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	2370	JD	15	Yes	S3VEM
Chromium	Target	15.0	U	ug	5.7	JD	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	1.1	JD	15	Yes	S3VEM
Copper	Target	260		ug	260	D	15	Yes	S3VEM
Iron	Target	6420		ug	6420	D	15	Yes	S3VEM
Lead	Target	32100		ug	32100	D	15	Yes	S3VEM
Magnesium	Target	7500	U	ug	349	JD	15	Yes	S3VEM
Manganese	Target	34.3		ug	34.3	D	15	Yes	S3VEM
Nickel	Target	212		ug	212	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	180	JD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	13.9	JD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	0.96	JD	15	Yes	S3VEM
Sodium	Target	7500	U	ug	3820	JD	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	3.5	JD	15	Yes	S3VEM
Zinc	Target	3000		ug	3000	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA12	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP004-01	pH:		Sample Date:	03/08/2016	Sample Time:	10:42:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	743		ug	743	D	15	Yes	S3VEM
Antimony	Target	13900		ug	13900	D	50	Yes	S3VEM
Arsenic	Target	654		ug	654	D	15	Yes	S3VEM
Barium	Target	300	U	ug	137	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	83.7		ug	83.7	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	2500	JD	15	Yes	S3VEM
Chromium	Target	26.8		ug	26.8	D	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	4.8	JD	15	Yes	S3VEM
Copper	Target	637		ug	637	D	15	Yes	S3VEM
Iron	Target	74000		ug	74000	D	15	Yes	S3VEM
Lead	Target	47600		ug	47600	D	50	Yes	S3VEM
Magnesium	Target	7500	U	ug	339	JD	15	Yes	S3VEM
Manganese	Target	485		ug	485	D	15	Yes	S3VEM
Nickel	Target	1100		ug	1100	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	118	JD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	28.4	JD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	8.5	JD	15	Yes	S3VEM
Sodium	Target	7500	U	ug	2550	JD	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	24.0	JD	15	Yes	S3VEM
Zinc	Target	2270		ug	2270	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA13	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP005-01	pH:		Sample Date:	03/08/2016	Sample Time:	10:39:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	777		ug	777	D	15	Yes	S3VEM
Antimony	Target	4510		ug	4510	D	15	Yes	S3VEM
Arsenic	Target	341		ug	341	D	15	Yes	S3VEM
Barium	Target	300	U	ug	133	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	57.7		ug	57.7	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	7120	JD	15	Yes	S3VEM
Chromium	Target	15.0	U	ug	11.1	JD	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	1.8	JD	15	Yes	S3VEM
Copper	Target	246		ug	246	D	15	Yes	S3VEM
Iron	Target	9300		ug	9300	D	15	Yes	S3VEM
Lead	Target	24000		ug	24000	D	15	Yes	S3VEM
Magnesium	Target	7500	U	ug	636	JD	15	Yes	S3VEM
Manganese	Target	59.7		ug	59.7	D	15	Yes	S3VEM
Nickel	Target	234		ug	234	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	393	JD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	10.1	JD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	1.7	JD	15	Yes	S3VEM
Sodium	Target	7500	U	ug	6660	JD	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	6.6	JD	15	Yes	S3VEM
Zinc	Target	1760		ug	1760	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA14	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP006-01	pH:		Sample Date:	03/08/2016	Sample Time:	10:43:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	300	U	ug	223	JD	15	Yes	S3VEM
Antimony	Target	1890		ug	1890	D	15	Yes	S3VEM
Arsenic	Target	149		ug	149	D	15	Yes	S3VEM
Barium	Target	300	U	ug	60.4	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	32.6		ug	32.6	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	829	JD	15	Yes	S3VEM
Chromium	Target	15.0	U	ug	4.0	JD	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	0.56	JD	15	Yes	S3VEM
Copper	Target	61.4		ug	61.4	D	15	Yes	S3VEM
Iron	Target	2680		ug	2680	D	15	Yes	S3VEM
Lead	Target	27700		ug	27700	D	15	Yes	S3VEM
Magnesium	Target	7500	U	ug	221	JD	15	Yes	S3VEM
Manganese	Target	22.5	U	ug	13.6	JD	15	Yes	S3VEM
Nickel	Target	141		ug	141	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	7500	UD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	3.4	JD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	15.0	UD	15	Yes	S3VEM
Sodium	Target	7500	U	ug	1210	JD	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	2.8	JD	15	Yes	S3VEM
Zinc	Target	253	J+	ug	253	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA15	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP007-01	pH:		Sample Date:	03/08/2016	Sample Time:	10:44:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	389		ug	389	D	15	Yes	S3VEM
Antimony	Target	1730		ug	1730	D	15	Yes	S3VEM
Arsenic	Target	101		ug	101	D	15	Yes	S3VEM
Barium	Target	300	U	ug	50.7	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	33.0		ug	33.0	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	2490	JD	15	Yes	S3VEM
Chromium	Target	15.0	U	ug	9.3	JD	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	0.99	JD	15	Yes	S3VEM
Copper	Target	83.1		ug	83.1	D	15	Yes	S3VEM
Iron	Target	3770		ug	3770	D	15	Yes	S3VEM
Lead	Target	21200		ug	21200	D	15	Yes	S3VEM
Magnesium	Target	7500	U	ug	321	JD	15	Yes	S3VEM
Manganese	Target	24.1		ug	24.1	D	15	Yes	S3VEM
Nickel	Target	110		ug	110	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	126	JD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	3.5	JD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	0.61	JD	15	Yes	S3VEM
Sodium	Target	7500	U	ug	3420	JD	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	4.0	JD	15	Yes	S3VEM
Zinc	Target	343	J+	ug	343	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA16	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP008-01	pH:		Sample Date:	03/08/2016	Sample Time:	10:50:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	714		ug	714	D	15	Yes	S3VEM
Antimony	Target	1400		ug	1400	D	15	Yes	S3VEM
Arsenic	Target	108		ug	108	D	15	Yes	S3VEM
Barium	Target	300	U	ug	89.5	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	48.3		ug	48.3	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	2390	JD	15	Yes	S3VEM
Chromium	Target	17.8		ug	17.8	D	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	1.4	JD	15	Yes	S3VEM
Copper	Target	101		ug	101	D	15	Yes	S3VEM
Iron	Target	14100		ug	14100	D	15	Yes	S3VEM
Lead	Target	29400		ug	29400	D	15	Yes	S3VEM
Magnesium	Target	7500	U	ug	412	JD	15	Yes	S3VEM
Manganese	Target	97.8		ug	97.8	D	15	Yes	S3VEM
Nickel	Target	85.6		ug	85.6	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	156	JD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	3.3	JD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	15.0	UD	15	Yes	S3VEM
Sodium	Target	7500	U	ug	6860	JD	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	4.7	JD	15	Yes	S3VEM
Zinc	Target	1430		ug	1430	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA17	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP009-01	pH:		Sample Date:	03/08/2016	Sample Time:	10:51:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1850		ug	1850	D	15	Yes	S3VEM
Antimony	Target	5130		ug	5130	D	15	Yes	S3VEM
Arsenic	Target	374		ug	374	D	15	Yes	S3VEM
Barium	Target	300	U	ug	272	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	159		ug	159	D	15	Yes	S3VEM
Calcium	Target	18300		ug	18300	D	15	Yes	S3VEM
Chromium	Target	37.2		ug	37.2	D	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	3.0	JD	15	Yes	S3VEM
Copper	Target	213		ug	213	D	15	Yes	S3VEM
Iron	Target	17000		ug	17000	D	15	Yes	S3VEM
Lead	Target	22100		ug	22100	D	15	Yes	S3VEM
Magnesium	Target	7500	U	ug	844	JD	15	Yes	S3VEM
Manganese	Target	98.5		ug	98.5	D	15	Yes	S3VEM
Nickel	Target	322		ug	322	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	392	JD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	26.1	JD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	3.4	JD	15	Yes	S3VEM
Sodium	Target	14100		ug	14100	D	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	12.3	JD	15	Yes	S3VEM
Zinc	Target	520	J+	ug	520	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA18	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP010-01	pH:		Sample Date:	03/08/2016	Sample Time:	10:52:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	487		ug	487	D	15	Yes	S3VEM
Antimony	Target	1900		ug	1900	D	15	Yes	S3VEM
Arsenic	Target	164		ug	164	D	15	Yes	S3VEM
Barium	Target	300	U	ug	106	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	60.5		ug	60.5	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	2120	JD	15	Yes	S3VEM
Chromium	Target	111		ug	111	D	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	2.5	JD	15	Yes	S3VEM
Copper	Target	243		ug	243	D	15	Yes	S3VEM
Iron	Target	23400		ug	23400	D	15	Yes	S3VEM
Lead	Target	16600		ug	16600	D	15	Yes	S3VEM
Magnesium	Target	7500	U	ug	356	JD	15	Yes	S3VEM
Manganese	Target	136		ug	136	D	15	Yes	S3VEM
Nickel	Target	116		ug	116	D	15	Yes	S3VEM
Potassium	Target	163		ug	163	JD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	5.0	JD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	15.0	UD	15	Yes	S3VEM
Sodium	Target	7500	U	ug	3650	JD	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	6.2	JD	15	Yes	S3VEM
Zinc	Target	1030		ug	1030	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number:	MBCA19	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP011-01	pH:		Sample Date:	03/08/2016	Sample Time:	10:55:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	509		ug	509	D	15	Yes	S3VEM
Antimony	Target	1200		ug	1200	D	15	Yes	S3VEM
Arsenic	Target	100		ug	100	D	15	Yes	S3VEM
Barium	Target	300	U	ug	94.8	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	28.4		ug	28.4	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	2860	JD	15	Yes	S3VEM
Chromium	Target	15.0	U	ug	8.8	JD	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	1.7	JD	15	Yes	S3VEM
Copper	Target	167		ug	167	D	15	Yes	S3VEM
Iron	Target	6320		ug	6320	D	15	Yes	S3VEM
Lead	Target	20700		ug	20700	D	15	Yes	S3VEM
Magnesium	Target	7500	U	ug	405	JD	15	Yes	S3VEM
Manganese	Target	37.0		ug	37.0	D	15	Yes	S3VEM
Nickel	Target	65.1		ug	65.1	D	15	Yes	S3VEM
Potassium	Target	226		ug	226	JD	15	Yes	S3VEM
Selenium	Target	52.5	U	ug	52.5	UD	15	Yes	S3VEM
Silver	Target	15.0	U	ug	15.0	UD	15	Yes	S3VEM
Sodium	Target	7500	U	ug	2890	JD	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	4.5	JD	15	Yes	S3VEM
Zinc	Target	546	J+	ug	546	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number: PBF01	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Antimony	Target	0.55	J	ug	0.55	J	1	Yes	S3VEM
Arsenic	Target	0.13	J	ug	0.13	J	1	Yes	S3VEM
Barium	Target	0.11	J	ug	0.11	J	1	Yes	S3VEM
Beryllium	Target	-.0068		ug	-.0068	J	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Calcium	Target	50.8	J	ug	50.8	J	1	Yes	S3VEM
Chromium	Target	0.060	J	ug	0.060	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Copper	Target	1.6	J	ug	1.6	J	1	Yes	S3VEM
Iron	Target	11.3		ug	11.3		1	Yes	S3VEM
Lead	Target	0.22	J	ug	0.22	J	1	Yes	S3VEM
Magnesium	Target	121	J	ug	121	J	1	Yes	S3VEM
Manganese	Target	0.31	J	ug	0.31	J	1	Yes	S3VEM
Nickel	Target	0.084	J	ug	0.084	J	1	Yes	S3VEM
Potassium	Target	97.2		ug	97.2	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	337	J	ug	337	J	1	Yes	S3VEM
Thallium	Target	-.18		ug	-.18	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	87.2		ug	87.2		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA00	Lab Code: BON

Sample Number: PBF02	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	0.81	J	ug	0.81	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	6.0	U	1	Yes	S3VEM
Arsenic	Target	-.2		ug	-.2	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Beryllium	Target	-.0091		ug	-.0091	J	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Calcium	Target	500	U	ug	500	U	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Cobalt	Target	-.0092		ug	-.0092	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Iron	Target	10.0	U	ug	10.0	U	1	Yes	S3VEM
Lead	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Magnesium	Target	2.3	J	ug	2.3	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	1.5	U	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	ug	500	U	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	500	U	1	Yes	S3VEM
Thallium	Target	-.17		ug	-.17	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	6.0	U	ug	6.0	U	1	Yes	S3VEM

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 16 (Wipes)
Analysis: Metals

SDG No.: MBCA20
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/8/2016 – 3/9/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solutions
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
Samples MBCBL5, MBCBL8, MBCAZ8, MBCAZ7, MBCBL4, MBCBM1, MBCAZ6 and MBCAZ9 have analytes that have been qualified J, J+ or J-.

Minor Findings:
None

COMMENT: The site-specific QAPP did not specify the project action levels for this site.

Reviewer Name(s): Jianwei Huang

Approver's Signature: **Date: 04/15/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Aluminum MBCAZ7

Barium MBCBM1, MBCBL5, MBCBL4, MBCAZ6, MBCBL3, MBCAZ8, MBCAZ7, MBCAZ9

Calcium MBCBL1, MBCBL7, MBCAZ7, MBCBL8, MBCBL4, MBCBL9, MBCAZ6, MBCAZ9, MBCAZ8

Chromium MBCAZ8, MBCAZ9, MBCBL4, MBCBL5, MBCAZ6

Cobalt MBCBL1, MBCBL6, MBCBL4, MBCBM0, MBCAZ9, MBCBL9, MBCBL8, MBCBM1, MBCBL3, MBCA20, MBCAZ7, MBCAZ8, MBCBL7, MBCBL2, MBCAZ6

Magnesium MBCAZ7, MBCBL5, MBCAZ9, MBCBM1, MBCBL2, MBCBL9, MBCBL4, MBCBM0, MBCBL1, MBCAZ6, MBCAZ8, MBCA20, MBCBL3, MBCBL6, MBCBL7, MBCBL8

Manganese MBCAZ8

Nickel MBCBL5, MBCBL8

Potassium MBCAZ9, MBCBL2, MBCAZ8, MBCBM0, MBCBL3, MBCBL6, MBCBL1, MBCBL7, MBCA20, MBCAZ7, MBCBL5, MBCBL4, MBCBM1, MBCBL9, MBCAZ6, MBCBL8

Selenium MBCBL4, MBCBL3, MBCAZ6, MBCBL8, MBCBL9, MBCAZ7, MBCBL1, MBCBL5, MBCAZ8, MBCBM1, MBCAZ9, MBCA20

Silver MBCBL4, MBCBL5, MBCAZ9, MBCAZ6, MBCBM0, MBCA20, MBCBL3, MBCBM1, MBCBL1, MBCBL9, MBCAZ7

Sodium MBCBM1, MBCBL4, MBCAZ6

Thallium MBCBL8, MBCAZ7, MBCBM1, MBCBM0, MBCBL7, MBCBL6, MBCBL9, MBCAZ8, MBCAZ9

Vanadium MBCBL6, MBCAZ9, MBCBL8, MBCA20, MBCBL3, MBCBL7, MBCBL4, MBCBL9, MBCBM0, MBCAZ8, MBCBL1, MBCBL2, MBCBL5, MBCBM1, MBCAZ6, MBCAZ7

The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Barium MBCBL5, MBCBM1

Chromium MBCBL5

Cobalt MBCBL8, MBCBL6, MBCBL9, MBCAZ9, MBCA20, MBCAZ7, MBCBM1, MBCAZ6, MBCBL4, MBCAZ8, MBCBM0, MBCBL7, MBCBL3, MBCBL1, MBCBL2

Magnesium MBCBL5, MBCBM1

Potassium MBCA20, MBCBL1, MBCBL6, MBCBL7, MBCBL3, MBCBM0, MBCAZ8, MBCBL2, MBCAZ9, MBCBL8, MBCAZ6, MBCBL9, MBCBL4, MBCAZ7

Selenium MBCBM1, MBCBL5

Silver MBCBM1, MBCBL4, MBCA20, MBCBL5, MBCAZ9, MBCBM0, MBCBL9, MBCAZ7, MBCBL3, MBCAZ6, MBCBL1

Sodium MBCBL4, MBCAZ6

Vanadium MBCBL5, MBCBM1

The following samples are associated with PB with results greater than CRQLs. The samples have analyte results greater than CRQLs but less than 10x the associated PB results. Detects are qualified as J+.

Zinc MBCBL5, MBCBL8, MBCAZ8, MBCAZ7, MBCBL4, MBCBM1, MBCAZ6, MBCAZ9

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

Not applicable.

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

Not applicable.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

Not applicable.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

Not applicable.

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

Not applicable.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCA20	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	36.9		ug	36.9		1	Yes	S3VEM
Antimony	Target	11.4		ug	11.4		1	Yes	S3VEM
Arsenic	Target	2.1		ug	2.1		1	Yes	S3VEM
Barium	Target	39.8		ug	39.8		1	Yes	S3VEM
Beryllium	Target	1.0		ug	1.0		1	Yes	S3VEM
Cadmium	Target	0.96		ug	0.96		1	Yes	S3VEM
Calcium	Target	1030		ug	1030		1	Yes	S3VEM
Chromium	Target	2.1		ug	2.1		1	Yes	S3VEM
Cobalt	Target	9.8		ug	9.8		1	Yes	S3VEM
Copper	Target	6.4		ug	6.4		1	Yes	S3VEM
Iron	Target	30.6		ug	30.6		1	Yes	S3VEM
Lead	Target	2.2		ug	2.2		1	Yes	S3VEM
Magnesium	Target	1020		ug	1020		1	Yes	S3VEM
Manganese	Target	3.2		ug	3.2		1	Yes	S3VEM
Nickel	Target	8.6		ug	8.6		1	Yes	S3VEM
Potassium	Target	983		ug	983		1	Yes	S3VEM
Selenium	Target	7.4		ug	7.4		1	Yes	S3VEM
Silver	Target	1.8		ug	1.8		1	Yes	S3VEM
Sodium	Target	1230		ug	1230		1	Yes	S3VEM
Thallium	Target	4.3		ug	4.3		1	Yes	S3VEM
Vanadium	Target	10.1		ug	10.1		1	Yes	S3VEM
Zinc	Target	96.5		ug	96.5		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number: LCS02	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	35.6		ug	35.6		1	Yes	S3VEM
Antimony	Target	11.2		ug	11.2		1	Yes	S3VEM
Arsenic	Target	1.6		ug	1.6		1	Yes	S3VEM
Barium	Target	39.3		ug	39.3		1	Yes	S3VEM
Beryllium	Target	0.98		ug	0.98		1	Yes	S3VEM
Cadmium	Target	0.96		ug	0.96		1	Yes	S3VEM
Calcium	Target	981		ug	981		1	Yes	S3VEM
Chromium	Target	2.1		ug	2.1		1	Yes	S3VEM
Cobalt	Target	9.8		ug	9.8		1	Yes	S3VEM
Copper	Target	4.7		ug	4.7		1	Yes	S3VEM
Iron	Target	17.2		ug	17.2		1	Yes	S3VEM
Lead	Target	1.6		ug	1.6		1	Yes	S3VEM
Magnesium	Target	907		ug	907		1	Yes	S3VEM
Manganese	Target	3.0		ug	3.0		1	Yes	S3VEM
Nickel	Target	8.4		ug	8.4		1	Yes	S3VEM
Potassium	Target	912		ug	912		1	Yes	S3VEM
Selenium	Target	6.6		ug	6.6		1	Yes	S3VEM
Silver	Target	1.8		ug	1.8		1	Yes	S3VEM
Sodium	Target	950		ug	950		1	Yes	S3VEM
Thallium	Target	4.7		ug	4.7		1	Yes	S3VEM
Vanadium	Target	10.0		ug	10.0		1	Yes	S3VEM
Zinc	Target	12.1		ug	12.1		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCA20	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP012-01	pH:		Sample Date:	03/08/2016	Sample Time:	10:56:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	994		ug	994	D	5	Yes	S3VEM
Antimony	Target	751		ug	751	D	5	Yes	S3VEM
Arsenic	Target	80.0		ug	80.0	D	5	Yes	S3VEM
Barium	Target	273		ug	273	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	32.2		ug	32.2	D	5	Yes	S3VEM
Calcium	Target	5560		ug	5560	D	5	Yes	S3VEM
Chromium	Target	22.1		ug	22.1	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	2.1	JD	5	Yes	S3VEM
Copper	Target	109		ug	109	D	5	Yes	S3VEM
Iron	Target	14800		ug	14800	D	5	Yes	S3VEM
Lead	Target	28000		ug	28000	D	15	Yes	S3VEM
Magnesium	Target	2500	U	ug	805	JD	5	Yes	S3VEM
Manganese	Target	87.7		ug	87.7	D	5	Yes	S3VEM
Nickel	Target	209		ug	209	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	692	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	4.5	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	1.7	JD	5	Yes	S3VEM
Sodium	Target	6290		ug	6290	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	12.5	UD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	7.3	JD	5	Yes	S3VEM
Zinc	Target	1250		ug	1250	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCAZ6	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CK01-WP001-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:02:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	395		ug	395	D	5	Yes	S3VEM
Antimony	Target	811		ug	811	D	5	Yes	S3VEM
Arsenic	Target	55.8		ug	55.8	D	5	Yes	S3VEM
Barium	Target	100	U	ug	16.3	JD	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	6.3		ug	6.3	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	419	JD	5	Yes	S3VEM
Chromium	Target	5.0	U	ug	1.7	JD	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	0.74	JD	5	Yes	S3VEM
Copper	Target	59.5		ug	59.5	D	5	Yes	S3VEM
Iron	Target	2200		ug	2200	D	5	Yes	S3VEM
Lead	Target	20900		ug	20900	D	10	Yes	S3VEM
Magnesium	Target	2500	U	ug	138	JD	5	Yes	S3VEM
Manganese	Target	15.5		ug	15.5	D	5	Yes	S3VEM
Nickel	Target	49.8		ug	49.8	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	84.2	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	1.8	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	0.76	JD	5	Yes	S3VEM
Sodium	Target	2500	U	ug	862	JD	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	12.5	UD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	0.49	JD	5	Yes	S3VEM
Zinc	Target	252	J+	ug	252	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCAZ7	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CK01-WP002-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:03:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	100	U	ug	66.4	JD	5	Yes	S3VEM
Antimony	Target	30900		ug	30900	D	40	Yes	S3VEM
Arsenic	Target	2370		ug	2370	D	40	Yes	S3VEM
Barium	Target	100	U	ug	48.2	JD	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	32.6		ug	32.6	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	336	JD	5	Yes	S3VEM
Chromium	Target	12.3		ug	12.3	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	1.9	JD	5	Yes	S3VEM
Copper	Target	379		ug	379	D	5	Yes	S3VEM
Iron	Target	13000		ug	13000	D	5	Yes	S3VEM
Lead	Target	76500		ug	76500	D	40	Yes	S3VEM
Magnesium	Target	2500	U	ug	108	JD	5	Yes	S3VEM
Manganese	Target	77.9		ug	77.9	D	5	Yes	S3VEM
Nickel	Target	471		ug	471	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	107	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	10.3	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	4.2	JD	5	Yes	S3VEM
Sodium	Target	20100		ug	20100	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	2.2	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	0.39	JD	5	Yes	S3VEM
Zinc	Target	106	J+	ug	106	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCAZ8	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CK01-WP003-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:45:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1560		ug	1560	D	5	Yes	S3VEM
Antimony	Target	1120		ug	1120	D	5	Yes	S3VEM
Arsenic	Target	67.3		ug	67.3	D	5	Yes	S3VEM
Barium	Target	100	U	ug	9.0	JD	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	9.5		ug	9.5	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	508	JD	5	Yes	S3VEM
Chromium	Target	5.0	U	ug	1.6	JD	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	0.78	JD	5	Yes	S3VEM
Copper	Target	124		ug	124	D	5	Yes	S3VEM
Iron	Target	1730		ug	1730	D	5	Yes	S3VEM
Lead	Target	17500		ug	17500	D	10	Yes	S3VEM
Magnesium	Target	2500	U	ug	149	JD	5	Yes	S3VEM
Manganese	Target	7.5		ug	7.5	D	5	Yes	S3VEM
Nickel	Target	70.3		ug	70.3	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	77.6	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	9.9	JD	5	Yes	S3VEM
Silver	Target	27.4		ug	27.4	D	5	Yes	S3VEM
Sodium	Target	8240		ug	8240	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	4.1	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	0.56	JD	5	Yes	S3VEM
Zinc	Target	404	J+	ug	404	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCAZ9	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CK01-WP004-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:54:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1210		ug	1210	D	5	Yes	S3VEM
Antimony	Target	1480		ug	1480	D	5	Yes	S3VEM
Arsenic	Target	106		ug	106	D	5	Yes	S3VEM
Barium	Target	100	U	ug	40.1	JD	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	17.2		ug	17.2	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	778	JD	5	Yes	S3VEM
Chromium	Target	5.0	U	ug	3.4	JD	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	0.71	JD	5	Yes	S3VEM
Copper	Target	188		ug	188	D	5	Yes	S3VEM
Iron	Target	2390		ug	2390	D	5	Yes	S3VEM
Lead	Target	36400		ug	36400	D	20	Yes	S3VEM
Magnesium	Target	2500	U	ug	156	JD	5	Yes	S3VEM
Manganese	Target	13.2		ug	13.2	D	5	Yes	S3VEM
Nickel	Target	134		ug	134	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	79.2	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	6.2	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	1.0	JD	5	Yes	S3VEM
Sodium	Target	3740		ug	3740	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	1.1	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	0.86	JD	5	Yes	S3VEM
Zinc	Target	556	J+	ug	556	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCBL1	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP013-01	pH:		Sample Date:	03/08/2016	Sample Time:	11:05:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	661		ug	661	D	5	Yes	S3VEM
Antimony	Target	2090		ug	2090	D	5	Yes	S3VEM
Arsenic	Target	189		ug	189	D	5	Yes	S3VEM
Barium	Target	156		ug	156	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	68.4		ug	68.4	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	2200	JD	5	Yes	S3VEM
Chromium	Target	20.2		ug	20.2	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	2.7	JD	5	Yes	S3VEM
Copper	Target	142		ug	142	D	5	Yes	S3VEM
Iron	Target	29700		ug	29700	D	5	Yes	S3VEM
Lead	Target	50000		ug	50000	D	30	Yes	S3VEM
Magnesium	Target	2500	U	ug	372	JD	5	Yes	S3VEM
Manganese	Target	263		ug	263	D	5	Yes	S3VEM
Nickel	Target	175		ug	175	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	191	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	8.9	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	3.0	JD	5	Yes	S3VEM
Sodium	Target	7340		ug	7340	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	12.5	UD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	5.2	JD	5	Yes	S3VEM
Zinc	Target	1440		ug	1440	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCBL2	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP014-01	pH:		Sample Date:	03/08/2016	Sample Time:	11:10:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	11600		ug	11600	D	5	Yes	S3VEM
Antimony	Target	20300		ug	20300	D	50	Yes	S3VEM
Arsenic	Target	1770		ug	1770	D	5	Yes	S3VEM
Barium	Target	339		ug	339	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	191		ug	191	D	5	Yes	S3VEM
Calcium	Target	11500		ug	11500	D	5	Yes	S3VEM
Chromium	Target	121		ug	121	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	13.8	JD	5	Yes	S3VEM
Copper	Target	4280		ug	4280	D	5	Yes	S3VEM
Iron	Target	319000		ug	319000	D	50	Yes	S3VEM
Lead	Target	117000		ug	117000	D	50	Yes	S3VEM
Magnesium	Target	2500	U	ug	1050	JD	5	Yes	S3VEM
Manganese	Target	2850		ug	2850	D	5	Yes	S3VEM
Nickel	Target	1370		ug	1370	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	427	JD	5	Yes	S3VEM
Selenium	Target	34.5		ug	34.5	D	5	Yes	S3VEM
Silver	Target	30.3		ug	30.3	D	5	Yes	S3VEM
Sodium	Target	34400		ug	34400	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	12.5	UD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	20.2	JD	5	Yes	S3VEM
Zinc	Target	28000		ug	28000	D	50	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCBL3	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP015-01	pH:		Sample Date:	03/08/2016	Sample Time:	11:31:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	548		ug	548	D	5	Yes	S3VEM
Antimony	Target	672		ug	672	D	5	Yes	S3VEM
Arsenic	Target	66.7		ug	66.7	D	5	Yes	S3VEM
Barium	Target	100	U	ug	43.1	JD	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	12.6		ug	12.6	D	5	Yes	S3VEM
Calcium	Target	3110		ug	3110	D	5	Yes	S3VEM
Chromium	Target	6.6		ug	6.6	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	0.75	JD	5	Yes	S3VEM
Copper	Target	119		ug	119	D	5	Yes	S3VEM
Iron	Target	4060		ug	4060	D	5	Yes	S3VEM
Lead	Target	14700		ug	14700	D	10	Yes	S3VEM
Magnesium	Target	2500	U	ug	443	JD	5	Yes	S3VEM
Manganese	Target	32.7		ug	32.7	D	5	Yes	S3VEM
Nickel	Target	37.9		ug	37.9	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	217	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	1.5	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	0.54	JD	5	Yes	S3VEM
Sodium	Target	3700		ug	3700	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	12.5	UD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	2.9	JD	5	Yes	S3VEM
Zinc	Target	1130		ug	1130	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCBL4	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP016-01	pH:		Sample Date:	03/08/2016	Sample Time:	11:34:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	198		ug	198	D	5	Yes	S3VEM
Antimony	Target	1050		ug	1050	D	5	Yes	S3VEM
Arsenic	Target	87.2		ug	87.2	D	5	Yes	S3VEM
Barium	Target	100	U	ug	34.7	JD	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	16.7		ug	16.7	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	1030	JD	5	Yes	S3VEM
Chromium	Target	5.0	U	ug	3.8	JD	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	0.59	JD	5	Yes	S3VEM
Copper	Target	69.4		ug	69.4	D	5	Yes	S3VEM
Iron	Target	2410		ug	2410	D	5	Yes	S3VEM
Lead	Target	17500		ug	17500	D	10	Yes	S3VEM
Magnesium	Target	2500	U	ug	174	JD	5	Yes	S3VEM
Manganese	Target	18.4		ug	18.4	D	5	Yes	S3VEM
Nickel	Target	74.2		ug	74.2	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	69.1	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	4.5	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	0.65	JD	5	Yes	S3VEM
Sodium	Target	2500	U	ug	856	JD	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	12.5	UD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	1.4	JD	5	Yes	S3VEM
Zinc	Target	409	J+	ug	409	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCBL5	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP017-01	pH:		Sample Date:	03/08/2016	Sample Time:	11:40:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	28.1		ug	28.1		1	Yes	S3VEM
Antimony	Target	78.3		ug	78.3		1	Yes	S3VEM
Arsenic	Target	3.6		ug	3.6		1	Yes	S3VEM
Barium	Target	20.0	U	ug	4.4	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.89		ug	0.89		1	Yes	S3VEM
Calcium	Target	675		ug	675		1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.62	J	1	Yes	S3VEM
Cobalt	Target	13.8		ug	13.8		1	Yes	S3VEM
Copper	Target	8.1		ug	8.1		1	Yes	S3VEM
Iron	Target	350		ug	350		1	Yes	S3VEM
Lead	Target	1150		ug	1150		1	Yes	S3VEM
Magnesium	Target	500	U	ug	157	J	1	Yes	S3VEM
Manganese	Target	3.3		ug	3.3		1	Yes	S3VEM
Nickel	Target	4.0	U	ug	3.7	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	112	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.53	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.052	J	1	Yes	S3VEM
Sodium	Target	928		ug	928		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.17	J	1	Yes	S3VEM
Zinc	Target	124	J+	ug	124		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCBL6	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP018-01	pH:		Sample Date:	03/08/2016	Sample Time:	11:03:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1100		ug	1100	D	5	Yes	S3VEM
Antimony	Target	11800		ug	11800	D	50	Yes	S3VEM
Arsenic	Target	908		ug	908	D	5	Yes	S3VEM
Barium	Target	583		ug	583	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	197		ug	197	D	5	Yes	S3VEM
Calcium	Target	5440		ug	5440	D	5	Yes	S3VEM
Chromium	Target	43.7		ug	43.7	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	5.6	JD	5	Yes	S3VEM
Copper	Target	486		ug	486	D	5	Yes	S3VEM
Iron	Target	25500		ug	25500	D	5	Yes	S3VEM
Lead	Target	103000		ug	103000	D	50	Yes	S3VEM
Magnesium	Target	2500	U	ug	551	JD	5	Yes	S3VEM
Manganese	Target	134		ug	134	D	5	Yes	S3VEM
Nickel	Target	1150		ug	1150	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	253	JD	5	Yes	S3VEM
Selenium	Target	41.4		ug	41.4	D	5	Yes	S3VEM
Silver	Target	8.8		ug	8.8	D	5	Yes	S3VEM
Sodium	Target	8250		ug	8250	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	3.6	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	11.6	JD	5	Yes	S3VEM
Zinc	Target	790		ug	790	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCBL7	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP019-01	pH:		Sample Date:	03/08/2016	Sample Time:	14:10:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	4000		ug	4000	D	5	Yes	S3VEM
Antimony	Target	6800		ug	6800	D	40	Yes	S3VEM
Arsenic	Target	357		ug	357	D	5	Yes	S3VEM
Barium	Target	135		ug	135	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	103		ug	103	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	2390	JD	5	Yes	S3VEM
Chromium	Target	14.0		ug	14.0	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	5.8	JD	5	Yes	S3VEM
Copper	Target	249		ug	249	D	5	Yes	S3VEM
Iron	Target	3830		ug	3830	D	5	Yes	S3VEM
Lead	Target	67300		ug	67300	D	40	Yes	S3VEM
Magnesium	Target	2500	U	ug	208	JD	5	Yes	S3VEM
Manganese	Target	40.9		ug	40.9	D	5	Yes	S3VEM
Nickel	Target	156		ug	156	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	145	JD	5	Yes	S3VEM
Selenium	Target	30.0		ug	30.0	D	5	Yes	S3VEM
Silver	Target	43.0		ug	43.0	D	5	Yes	S3VEM
Sodium	Target	5110		ug	5110	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	9.8	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	3.5	JD	5	Yes	S3VEM
Zinc	Target	6520		ug	6520	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCBL8	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP020-01	pH:		Sample Date:	03/08/2016	Sample Time:	14:18:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	161		ug	161	D	5	Yes	S3VEM
Antimony	Target	2370		ug	2370	D	5	Yes	S3VEM
Arsenic	Target	146		ug	146	D	5	Yes	S3VEM
Barium	Target	123		ug	123	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	40.0		ug	40.0	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	1520	JD	5	Yes	S3VEM
Chromium	Target	54.9		ug	54.9	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	3.5	JD	5	Yes	S3VEM
Copper	Target	90.4		ug	90.4	D	5	Yes	S3VEM
Iron	Target	4410		ug	4410	D	5	Yes	S3VEM
Lead	Target	49400		ug	49400	D	40	Yes	S3VEM
Magnesium	Target	2500	U	ug	201	JD	5	Yes	S3VEM
Manganese	Target	46.3		ug	46.3	D	5	Yes	S3VEM
Nickel	Target	20.0	U	ug	16.8	JD	5	Yes	S3VEM
Potassium	Target	2500	U	ug	111	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	15.4	JD	5	Yes	S3VEM
Silver	Target	25.5		ug	25.5	D	5	Yes	S3VEM
Sodium	Target	3070		ug	3070	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	5.2	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	1.3	JD	5	Yes	S3VEM
Zinc	Target	238	J+	ug	238	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCBL9	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP021-01	pH:		Sample Date:	03/08/2016	Sample Time:	14:01:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	17500		ug	17500	D	5	Yes	S3VEM
Antimony	Target	1950		ug	1950	D	5	Yes	S3VEM
Arsenic	Target	77.2		ug	77.2	D	5	Yes	S3VEM
Barium	Target	130		ug	130	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	29.0		ug	29.0	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	977	JD	5	Yes	S3VEM
Chromium	Target	12.9		ug	12.9	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	0.66	JD	5	Yes	S3VEM
Copper	Target	149		ug	149	D	5	Yes	S3VEM
Iron	Target	2500		ug	2500	D	5	Yes	S3VEM
Lead	Target	52600		ug	52600	D	25	Yes	S3VEM
Magnesium	Target	2500	U	ug	153	JD	5	Yes	S3VEM
Manganese	Target	14.9		ug	14.9	D	5	Yes	S3VEM
Nickel	Target	93.6		ug	93.6	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	85.7	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	3.5	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	1.9	JD	5	Yes	S3VEM
Sodium	Target	8770		ug	8770	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	2.6	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	2.3	JD	5	Yes	S3VEM
Zinc	Target	17200		ug	17200	D	25	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCBM0	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP022-01	pH:		Sample Date:	03/09/2016	Sample Time:	08:45:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	694		ug	694	D	5	Yes	S3VEM
Antimony	Target	7700		ug	7700	D	50	Yes	S3VEM
Arsenic	Target	524		ug	524	D	5	Yes	S3VEM
Barium	Target	207		ug	207	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	114		ug	114	D	5	Yes	S3VEM
Calcium	Target	2710		ug	2710	D	5	Yes	S3VEM
Chromium	Target	16.2		ug	16.2	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	2.4	JD	5	Yes	S3VEM
Copper	Target	355		ug	355	D	5	Yes	S3VEM
Iron	Target	7720		ug	7720	D	5	Yes	S3VEM
Lead	Target	91800		ug	91800	D	50	Yes	S3VEM
Magnesium	Target	2500	U	ug	389	JD	5	Yes	S3VEM
Manganese	Target	42.4		ug	42.4	D	5	Yes	S3VEM
Nickel	Target	602		ug	602	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	189	JD	5	Yes	S3VEM
Selenium	Target	36.9		ug	36.9	D	5	Yes	S3VEM
Silver	Target	5.0	U	ug	2.7	JD	5	Yes	S3VEM
Sodium	Target	8780		ug	8780	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	3.3	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	8.1	JD	5	Yes	S3VEM
Zinc	Target	817		ug	817	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number:	MBCBM1	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP023-01	pH:		Sample Date:	03/09/2016	Sample Time:	08:54:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	64.6		ug	64.6		1	Yes	S3VEM
Antimony	Target	843		ug	843	D	5	Yes	S3VEM
Arsenic	Target	48.4		ug	48.4		1	Yes	S3VEM
Barium	Target	20.0	U	ug	16.1	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	5.9		ug	5.9		1	Yes	S3VEM
Calcium	Target	230	J	ug	230	J	1	Yes	S3VEM
Chromium	Target	1.9		ug	1.9		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.27	J	1	Yes	S3VEM
Copper	Target	38.8		ug	38.8		1	Yes	S3VEM
Iron	Target	948		ug	948		1	Yes	S3VEM
Lead	Target	10800		ug	10800	D	5	Yes	S3VEM
Magnesium	Target	500	U	ug	130	J	1	Yes	S3VEM
Manganese	Target	4.6		ug	4.6		1	Yes	S3VEM
Nickel	Target	64.4		ug	64.4		1	Yes	S3VEM
Potassium	Target	500	U	ug	94.8	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	2.7	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.22	J	1	Yes	S3VEM
Sodium	Target	500	U	ug	444	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	0.23	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.56	J	1	Yes	S3VEM
Zinc	Target	114	J+	ug	114		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number: PBF01	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Antimony	Target	0.27	J	ug	0.27	J	1	Yes	S3VEM
Arsenic	Target	0.14	J	ug	0.14	J	1	Yes	S3VEM
Barium	Target	0.13	J	ug	0.13	J	1	Yes	S3VEM
Beryllium	Target	-.0066		ug	-.0066	J	1	Yes	S3VEM
Cadmium	Target	-.014		ug	-.014	J	1	Yes	S3VEM
Calcium	Target	41.5	J	ug	41.5	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Copper	Target	1.5	J	ug	1.5	J	1	Yes	S3VEM
Iron	Target	9.5	J	ug	9.5	J	1	Yes	S3VEM
Lead	Target	-.22		ug	-.22	J	1	Yes	S3VEM
Magnesium	Target	106	J	ug	106	J	1	Yes	S3VEM
Manganese	Target	0.22	J	ug	0.22	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	4.0	U	1	Yes	S3VEM
Potassium	Target	73.1		ug	73.1	J	1	Yes	S3VEM
Selenium	Target	0.29	J	ug	0.29	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	274	J	ug	274	J	1	Yes	S3VEM
Thallium	Target	-.4		ug	-.4	J	1	Yes	S3VEM
Vanadium	Target	-.037		ug	-.037	J	1	Yes	S3VEM
Zinc	Target	77.9		ug	77.9		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCA20	Lab Code: BON

Sample Number: PBF02	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	-.68		ug	-.68	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	6.0	U	1	Yes	S3VEM
Arsenic	Target	-.2		ug	-.2	J	1	Yes	S3VEM
Barium	Target	-.07		ug	-.07	J	1	Yes	S3VEM
Beryllium	Target	-.0045		ug	-.0045	J	1	Yes	S3VEM
Cadmium	Target	-.01		ug	-.01	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	500	U	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Cobalt	Target	-.02		ug	-.02	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Iron	Target	10.0	U	ug	10.0	U	1	Yes	S3VEM
Lead	Target	-.29		ug	-.29	J	1	Yes	S3VEM
Magnesium	Target	500	U	ug	500	U	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	1.5	U	1	Yes	S3VEM
Nickel	Target	-.068		ug	-.068	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	500	U	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	500	U	1	Yes	S3VEM
Thallium	Target	-.22		ug	-.22	J	1	Yes	S3VEM
Vanadium	Target	-.049		ug	-.049	J	1	Yes	S3VEM
Zinc	Target	-.16		ug	-.16	J	1	Yes	S3VEM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
DESA/HWSB/HWSS
2890, Woodbridge Avenue, Edison, NJ 08837

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 16 (Water)
Analysis: Metals

SDG No.: MBCAD1
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 2/29/2016; 03/01/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solutions
Contractor Document #: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
None

Minor Findings:
None

COMMENT: The Site-specific QAPP did not provide project action levels for this site.

Reviewer Name(s): T. Solomon

Approver's Signature: **Date: 03/25/2016**

Name: **Narendra Kumar**

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Aluminum MBCAD4, MBCAD5, MBCAD6, MBCAD8, MBCAD9, MBCAE3, MBCAE4, MBCAE5

Antimony MBCAD5, MBCAD6, MBCAE4

Arsenic MBCAD9

Barium MBCAD1, MBCAD2, MBCAD3, MBCAD4, MBCAD5, MBCAD6, MBCAD7, MBCAD8, MBCAD9, MBCAE0, MBCAE1, MBCAE2, MBCAE3, MBCAE5, MBCAE6

Beryllium MBCAD2, MBCAD3, MBCAE6

Cadmium MBCAD2, MBCAD4, MBCAD5, MBCAD6, MBCAD7, MBCAE2, MBCAE3, MBCAE4, MBCAE5

Chromium MBCAD1, MBCAD4, MBCAD5, MBCAD6, MBCAD7, MBCAD8, MBCAD9, MBCAE3, MBCAE4, MBCAE5, MBCAE6

Cobalt MBCAD3, MBCAD4, MBCAD5, MBCAD6, MBCAD7 MBCAD8, MBCAE0, MBCAE1, MBCAE2, MBCAE3, MBCAE4, MBCAE5, MBCAE6

Copper MBCAD1, MBCAD4, MBCAD5, MBCAD6, MBCAD7, MBCAD9, MBCAE4

Iron MBCAD1

Lead MBCAD1

Magnesium MBCAD5, MBCAD6, MBCAD7, MBCAD9, MBCAE0, MBCAE2, MBCAE3,

Nickel MBCAD5, MBCAD6, MBCAD7, MBCAD8, MBCAD9, MBCAE3, MBCAE4, MBCAE5

Selenium MBCAD3, MBCAD4, MBCAD8, MBCAD9, MBCAE0, MBCAE1, MBCAE2, MBCAE6

Silver MBCAD2, MBCAD8

Thallium MBCAD1, MBCAD2, MBCAD3, MBCAD4, MBCAE3, MBCAE6

Vanadium MBCAD1, MBCAD3, MBCAD4, MBCAD5, MBCAD6 MBCAD7, MBCAD8, MBCAD9, MBCAE0, MBCAE1, MBCAE2, MBCAE3, MBCAE4, MBCAE5, MBCAE6

Zinc MBCAD1, MBCAD4, MBCAD5, MBCAD6, MBCAD7, MBCAE3, MBCAE4

The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Aluminum MBCAD4, MBCAD5, MBCAD6, MBCAD8, MBCAD9, MBCAE3, MBCAE4, MBCAE5

Antimony MBCAD5, MBCAD6, MBCAE4

Cadmium MBCAD2, MBCAD4, MBCAD5, MBCAD6, MBCAD7, MBCAE2, MBCAE3, MBCAE4, MBCAE5

Chromium MBCAD1, MBCAD4, MBCAD5 MBCAD6, MBCAD7, MBCAD8, MBCAD9, MBCAE3, MBCAE4, MBCAE5, MBCAE6

Copper MBCAD1, MBCAD4, MBCAD5, MBCAD6, MBCAD7, MBCAD9, MBCAE4

Magnesium MBCAD5, MBCAD6, MBCAD7, MBCAD9, MBCAE0, MBCAE2, MBCAE3

Nickel MBCAD5, MBCAD6, MBCAD7, MBCAD8, MBCAD9, MBCAE3, MBCAE4, MBCAE5

Silver MBCAD2, MBCAD8

Thallium MBCAD1, MBCAD2, MBCAD3, MBCAD4, MBCAE3, MBCAE6

The following samples have analyte results less than or equal to CRQLs. The associated preparation blank analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Aluminum MBCAD4, MBCAD5, MBCAD6, MBCAD8, MBCAD9, MBCAE3, MBCAE4, MBCAE5

Barium MBCAD1, MBCAD2, MBCAD3, MBCAD4, MBCAD5, MBCAD6, MBCAD7, MBCAD8, MBCAD9, MBCAE0, MBCAE1, MBCAE2, MBCAE3, MBCAE5, MBCAE6

Zinc MBCAD1, MBCAD4, MBCAD5, MBCAD6, MBCAD7, MBCAE3, MBCAE4

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

No problems were found for this criterion.

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

No problems were found for this criterion.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

No problems were found for this criterion.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration

is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

No problems were found for this criterion.

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

Not applicable.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAD1	Lab Code:	BON

Sample Number: LCS01	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	387		ug/L	387		1	Yes	S3VEM
Antimony	Target	125		ug/L	125		1	Yes	S3VEM
Arsenic	Target	20.2		ug/L	20.2		1	Yes	S3VEM
Barium	Target	405		ug/L	405		1	Yes	S3VEM
Beryllium	Target	9.9		ug/L	9.9		1	Yes	S3VEM
Cadmium	Target	10.3		ug/L	10.3		1	Yes	S3VEM
Calcium	Target	9790		ug/L	9790		1	Yes	S3VEM
Chromium	Target	21.3		ug/L	21.3		1	Yes	S3VEM
Cobalt	Target	105		ug/L	105		1	Yes	S3VEM
Copper	Target	50.3		ug/L	50.3		1	Yes	S3VEM
Iron	Target	195		ug/L	195		1	Yes	S3VEM
Lead	Target	18.7		ug/L	18.7		1	Yes	S3VEM
Magnesium	Target	9240		ug/L	9240		1	Yes	S3VEM
Manganese	Target	30.0		ug/L	30.0		1	Yes	S3VEM
Nickel	Target	81.3		ug/L	81.3		1	Yes	S3VEM
Potassium	Target	9520		ug/L	9520		1	Yes	S3VEM
Selenium	Target	74.8		ug/L	74.8		1	Yes	S3VEM
Silver	Target	20.0		ug/L	20.0		1	Yes	S3VEM
Sodium	Target	9720		ug/L	9720		1	Yes	S3VEM
Thallium	Target	51.9		ug/L	51.9		1	Yes	S3VEM
Vanadium	Target	101		ug/L	101		1	Yes	S3VEM
Zinc	Target	119		ug/L	119		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number:	MBCAD1	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-AT01-Lagoon 01	pH:		Sample Date:	03/01/2016	Sample Time:	16:00:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	200	U	1	Yes	S3VEM
Antimony	Target	1190		ug/L	1190		1	Yes	S3VEM
Arsenic	Target	45.6		ug/L	45.6		1	Yes	S3VEM
Barium	Target	200	U	ug/L	24.3	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Cadmium	Target	14.1		ug/L	14.1		1	Yes	S3VEM
Calcium	Target	225000		ug/L	225000		1	Yes	S3VEM
Chromium	Target	10.0	U	ug/L	2.2	J	1	Yes	S3VEM
Cobalt	Target	3.0		ug/L	3.0	J	1	Yes	S3VEM
Copper	Target	25.0	U	ug/L	6.0	J	1	Yes	S3VEM
Iron	Target	100	U	ug/L	11.5	J	1	Yes	S3VEM
Lead	Target	10.0	U	ug/L	7.7	J	1	Yes	S3VEM
Magnesium	Target	28100		ug/L	28100		1	Yes	S3VEM
Manganese	Target	122		ug/L	122		1	Yes	S3VEM
Nickel	Target	175		ug/L	175		1	Yes	S3VEM
Potassium	Target	6980		ug/L	6980		1	Yes	S3VEM
Selenium	Target	70.6		ug/L	70.6		1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Sodium	Target	346000		ug/L	346000	D	3	Yes	S3VEM
Thallium	Target	25.0	U	ug/L	2.6	J	1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	2.7	J	1	Yes	S3VEM
Zinc	Target	60.0	U	ug/L	36.7	J	1	Yes	S3VEM
Hardness	Derived	678		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number:	MBCAD2	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-AT02-Lagoon 02	pH:		Sample Date:	03/01/2016	Sample Time:	15:55:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	114000		ug/L	114000		1	Yes	S3VEM
Antimony	Target	4110		ug/L	4110		1	Yes	S3VEM
Arsenic	Target	799		ug/L	799		1	Yes	S3VEM
Barium	Target	200	U	ug/L	19.1	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	1.8	J	1	Yes	S3VEM
Cadmium	Target	100	U	ug/L	2.5	JD	20	Yes	S3VEM
Calcium	Target	400000		ug/L	400000		1	Yes	S3VEM
Chromium	Target	2130		ug/L	2130		1	Yes	S3VEM
Cobalt	Target	450		ug/L	450		1	Yes	S3VEM
Copper	Target	5450		ug/L	5450		1	Yes	S3VEM
Iron	Target	187000		ug/L	187000		1	Yes	S3VEM
Lead	Target	3530		ug/L	3530		1	Yes	S3VEM
Magnesium	Target	73500		ug/L	73500		1	Yes	S3VEM
Manganese	Target	2590		ug/L	2590		1	Yes	S3VEM
Nickel	Target	6660		ug/L	6660		1	Yes	S3VEM
Potassium	Target	41800		ug/L	41800		1	Yes	S3VEM
Selenium	Target	144		ug/L	144		1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0		1	Yes	S3VEM
Sodium	Target	855000		ug/L	855000	D	20	Yes	S3VEM
Thallium	Target	25.0	U	ug/L	17.6	J	1	Yes	S3VEM
Vanadium	Target	293		ug/L	293		1	Yes	S3VEM
Zinc	Target	12700		ug/L	12700		1	Yes	S3VEM
Hardness	Derived	1300		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number: MBCAD3	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: BRC001-AT02-Tank 01	pH:	Sample Date: 03/01/2016	Sample Time: 16:20:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	377		ug/L	377		1	Yes	S3VEM
Antimony	Target	425		ug/L	425		1	Yes	S3VEM
Arsenic	Target	24.8		ug/L	24.8		1	Yes	S3VEM
Barium	Target	200	U	ug/L	107	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	0.044	J	1	Yes	S3VEM
Cadmium	Target	109		ug/L	109		1	Yes	S3VEM
Calcium	Target	494000		ug/L	494000	D	6	Yes	S3VEM
Chromium	Target	21.0		ug/L	21.0		1	Yes	S3VEM
Cobalt	Target	50.0	U	ug/L	8.5	J	1	Yes	S3VEM
Copper	Target	52.9		ug/L	52.9		1	Yes	S3VEM
Iron	Target	614		ug/L	614		1	Yes	S3VEM
Lead	Target	60.9		ug/L	60.9		1	Yes	S3VEM
Magnesium	Target	68300		ug/L	68300		1	Yes	S3VEM
Manganese	Target	157		ug/L	157		1	Yes	S3VEM
Nickel	Target	182		ug/L	182		1	Yes	S3VEM
Potassium	Target	42800		ug/L	42800		1	Yes	S3VEM
Selenium	Target	35.0	U	ug/L	23.9	J	1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Sodium	Target	1070000		ug/L	1070000	D	6	Yes	S3VEM
Thallium	Target	25.0	U	ug/L	2.9	J	1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	3.7	J	1	Yes	S3VEM
Zinc	Target	142		ug/L	142		1	Yes	S3VEM
Hardness	Derived	1490		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number: MBCAD4	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: BRC001-AT04-Tank 02	pH:	Sample Date: 03/01/2016	Sample Time: 16:15:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	27.7	J	1	Yes	S3VEM
Antimony	Target	268		ug/L	268		1	Yes	S3VEM
Arsenic	Target	89.7		ug/L	89.7		1	Yes	S3VEM
Barium	Target	200	U	ug/L	29.4	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Cadmium	Target	5.0	U	ug/L	0.81	J	1	Yes	S3VEM
Calcium	Target	136000		ug/L	136000		1	Yes	S3VEM
Chromium	Target	10.0	U	ug/L	2.3	J	1	Yes	S3VEM
Cobalt	Target	50.0	U	ug/L	2.0	J	1	Yes	S3VEM
Copper	Target	25.0	U	ug/L	5.7	J	1	Yes	S3VEM
Iron	Target	169		ug/L	169		1	Yes	S3VEM
Lead	Target	16.3		ug/L	16.3		1	Yes	S3VEM
Magnesium	Target	6200		ug/L	6200		1	Yes	S3VEM
Manganese	Target	241		ug/L	241		1	Yes	S3VEM
Nickel	Target	47.1		ug/L	47.1		1	Yes	S3VEM
Potassium	Target	11200		ug/L	11200		1	Yes	S3VEM
Selenium	Target	35.0	U	ug/L	15.4	J	1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Sodium	Target	964000		ug/L	964000	D	5	Yes	S3VEM
Thallium	Target	25.0	U	ug/L	2.9	J	1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	0.69	J	1	Yes	S3VEM
Zinc	Target	60.0	U	ug/L	31.0	J	1	Yes	S3VEM
Hardness	Derived	366		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number:	MBCAD5	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-SUMPPUMP-01	pH:		Sample Date:	02/29/2016	Sample Time:	14:55:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	142	J	1	Yes	S3VEM
Antimony	Target	60.0	U	ug/L	33.0	J	1	Yes	S3VEM
Arsenic	Target	18.8		ug/L	18.8		1	Yes	S3VEM
Barium	Target	200	U	ug/L	40.8	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Cadmium	Target	5.0	U	ug/L	0.39	J	1	Yes	S3VEM
Calcium	Target	45700		ug/L	45700		1	Yes	S3VEM
Chromium	Target	10.0	U	ug/L	1.5	J	1	Yes	S3VEM
Cobalt	Target	50.0	U	ug/L	0.38	J	1	Yes	S3VEM
Copper	Target	25.0	U	ug/L	4.4	J	1	Yes	S3VEM
Iron	Target	361		ug/L	361		1	Yes	S3VEM
Lead	Target	189		ug/L	189		1	Yes	S3VEM
Magnesium	Target	5000	U	ug/L	4050	J	1	Yes	S3VEM
Manganese	Target	151		ug/L	151		1	Yes	S3VEM
Nickel	Target	40.0	U	ug/L	5.4	J	1	Yes	S3VEM
Potassium	Target	12000		ug/L	12000		1	Yes	S3VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Sodium	Target	228000		ug/L	228000	D	3	Yes	S3VEM
Thallium	Target	25.0	U	ug/L	25.0	U	1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	6.2	J	1	Yes	S3VEM
Zinc	Target	60.0	U	ug/L	26.1	J	1	Yes	S3VEM
Hardness	Derived	131		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number: MBCAD5D	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date: 02/29/2016	Sample Time: 14:55:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	135		ug/L	135	J	1	Yes	S3VEM
Antimony	Target	32.5		ug/L	32.5	J	1	Yes	S3VEM
Arsenic	Target	18.4		ug/L	18.4		1	Yes	S3VEM
Barium	Target	40.6		ug/L	40.6	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Cadmium	Target	0.36		ug/L	0.36	J	1	Yes	S3VEM
Calcium	Target	45100		ug/L	45100		1	Yes	S3VEM
Chromium	Target	1.6		ug/L	1.6	J	1	Yes	S3VEM
Cobalt	Target	0.49		ug/L	0.49	J	1	Yes	S3VEM
Copper	Target	4.5		ug/L	4.5	J	1	Yes	S3VEM
Iron	Target	334		ug/L	334		1	Yes	S3VEM
Lead	Target	183		ug/L	183		1	Yes	S3VEM
Magnesium	Target	3980		ug/L	3980	J	1	Yes	S3VEM
Manganese	Target	149		ug/L	149		1	Yes	S3VEM
Nickel	Target	5.3		ug/L	5.3	J	1	Yes	S3VEM
Potassium	Target	11900		ug/L	11900		1	Yes	S3VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Sodium	Target	234000		ug/L	234000	D	3	Yes	S3VEM
Thallium	Target	1.9		ug/L	1.9	J	1	Yes	S3VEM
Vanadium	Target	6.2		ug/L	6.2	J	1	Yes	S3VEM
Zinc	Target	25.3		ug/L	25.3	J	1	Yes	S3VEM
Hardness	Derived	129		mg/L			1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number: MBCAD5L	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	142	J	ug/L	142	J	5	Yes	S3VEM
Antimony	Target	34.3	J	ug/L	34.3	J	5	Yes	S3VEM
Arsenic	Target	19.4	J	ug/L	19.4	J	5	Yes	S3VEM
Barium	Target	40.5	J	ug/L	40.5	J	5	Yes	S3VEM
Beryllium	Target	0.14	J	ug/L	0.14	J	5	Yes	S3VEM
Cadmium	Target	0.26	J	ug/L	0.26	J	5	Yes	S3VEM
Calcium	Target	45500		ug/L	45500		5	Yes	S3VEM
Chromium	Target	1.6	J	ug/L	1.6	J	5	Yes	S3VEM
Cobalt	Target	250	U	ug/L	250	U	5	Yes	S3VEM
Copper	Target	3.7	J	ug/L	3.7	J	5	Yes	S3VEM
Iron	Target	325	J	ug/L	325	J	5	Yes	S3VEM
Lead	Target	191		ug/L	191		5	Yes	S3VEM
Magnesium	Target	4130	J	ug/L	4130	J	5	Yes	S3VEM
Manganese	Target	152		ug/L	152		5	Yes	S3VEM
Nickel	Target	5.6	J	ug/L	5.6	J	5	Yes	S3VEM
Potassium	Target	11800		ug/L	11800	J	5	Yes	S3VEM
Selenium	Target	175	U	ug/L	175	U	5	Yes	S3VEM
Silver	Target	50.0	U	ug/L	50.0	U	5	Yes	S3VEM
Sodium	Target	247000		ug/L	247000	D	15	Yes	S3VEM
Thallium	Target	3.2	J	ug/L	3.2	J	5	Yes	S3VEM
Vanadium	Target	6.4	J	ug/L	6.4	J	5	Yes	S3VEM
Zinc	Target	23.9	J	ug/L	23.9	J	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number: MBCAD5S	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date: 02/29/2016	Sample Time: 14:55:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Spike	2230		ug/L	2230		1	Yes	S3VEM
Antimony	Spike	141		ug/L	141		1	Yes	S3VEM
Arsenic	Spike	63.8		ug/L	63.8		1	Yes	S3VEM
Barium	Spike	2250		ug/L	2250		1	Yes	S3VEM
Beryllium	Spike	55.0		ug/L	55.0		1	Yes	S3VEM
Cadmium	Spike	54.9		ug/L	54.9		1	Yes	S3VEM
Chromium	Spike	228		ug/L	228		1	Yes	S3VEM
Cobalt	Spike	542		ug/L	542		1	Yes	S3VEM
Copper	Spike	272		ug/L	272		1	Yes	S3VEM
Iron	Spike	1420		ug/L	1420		1	Yes	S3VEM
Lead	Spike	215		ug/L	215		1	Yes	S3VEM
Manganese	Spike	692		ug/L	692		1	Yes	S3VEM
Nickel	Spike	573		ug/L	573		1	Yes	S3VEM
Selenium	Spike	114		ug/L	114		1	Yes	S3VEM
Silver	Spike	54.3		ug/L	54.3		1	Yes	S3VEM
Thallium	Spike	57.3		ug/L	57.3		1	Yes	S3VEM
Vanadium	Spike	561		ug/L	561		1	Yes	S3VEM
Zinc	Spike	606		ug/L	606		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number:	MBCAD6	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-SUMPPUMP-01	pH:		Sample Date:	02/29/2016	Sample Time:	14:55:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	150	J	1	Yes	S3VEM
Antimony	Target	60.0	U	ug/L	35.7	J	1	Yes	S3VEM
Arsenic	Target	17.4		ug/L	17.4		1	Yes	S3VEM
Barium	Target	200	U	ug/L	41.6	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Cadmium	Target	5.0	U	ug/L	0.50	J	1	Yes	S3VEM
Calcium	Target	45100		ug/L	45100		1	Yes	S3VEM
Chromium	Target	10.0	U	ug/L	1.9	J	1	Yes	S3VEM
Cobalt	Target	50.0	U	ug/L	0.58	J	1	Yes	S3VEM
Copper	Target	25.0	U	ug/L	5.5	J	1	Yes	S3VEM
Iron	Target	447		ug/L	447		1	Yes	S3VEM
Lead	Target	269		ug/L	269		1	Yes	S3VEM
Magnesium	Target	5000	U	ug/L	4000	J	1	Yes	S3VEM
Manganese	Target	157		ug/L	157		1	Yes	S3VEM
Nickel	Target	40.0	U	ug/L	7.0	J	1	Yes	S3VEM
Potassium	Target	11900		ug/L	11900		1	Yes	S3VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Sodium	Target	220000		ug/L	220000	D	3	Yes	S3VEM
Thallium	Target	25.0	U	ug/L	25.0	U	1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	6.6	J	1	Yes	S3VEM
Zinc	Target	60.0	U	ug/L	25.7	J	1	Yes	S3VEM
Hardness	Derived	129		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number:	MBCAD7	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-SUMPPUMP-02	pH:		Sample Date:	02/29/2016	Sample Time:	15:15:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	639		ug/L	639		1	Yes	S3VEM
Antimony	Target	133		ug/L	133		1	Yes	S3VEM
Arsenic	Target	17.2		ug/L	17.2		1	Yes	S3VEM
Barium	Target	200	U	ug/L	64.2	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Cadmium	Target	5.0	U	ug/L	2.6	J	1	Yes	S3VEM
Calcium	Target	17200		ug/L	17200		1	Yes	S3VEM
Chromium	Target	10.0	U	ug/L	1.7	J	1	Yes	S3VEM
Cobalt	Target	50.0	U	ug/L	0.31	J	1	Yes	S3VEM
Copper	Target	25.0	U	ug/L	15.1	J	1	Yes	S3VEM
Iron	Target	1480		ug/L	1480		1	Yes	S3VEM
Lead	Target	2000		ug/L	2000		1	Yes	S3VEM
Magnesium	Target	5000	U	ug/L	1220	J	1	Yes	S3VEM
Manganese	Target	93.4		ug/L	93.4		1	Yes	S3VEM
Nickel	Target	40.0	U	ug/L	6.0	J	1	Yes	S3VEM
Potassium	Target	2370		ug/L	2370	J	1	Yes	S3VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Sodium	Target	24300		ug/L	24300		1	Yes	S3VEM
Thallium	Target	25.0	U	ug/L	25.0	U	1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	1.9	J	1	Yes	S3VEM
Zinc	Target	60.0	U	ug/L	47.0	J	1	Yes	S3VEM
Hardness	Derived	47.9		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number:	MBCAD8	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-SUMPPUMP-03	pH:		Sample Date:	02/29/2016	Sample Time:	15:30:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	91.8	J	1	Yes	S3VEM
Antimony	Target	866		ug/L	866		1	Yes	S3VEM
Arsenic	Target	117		ug/L	117		1	Yes	S3VEM
Barium	Target	200	U	ug/L	32.6	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Cadmium	Target	137		ug/L	137		1	Yes	S3VEM
Calcium	Target	181000		ug/L	181000		1	Yes	S3VEM
Chromium	Target	10.0	U	ug/L	3.4	J	1	Yes	S3VEM
Cobalt	Target	50.0	U	ug/L	0.65	J	1	Yes	S3VEM
Copper	Target	25.3		ug/L	25.3		1	Yes	S3VEM
Iron	Target	1840		ug/L	1840		1	Yes	S3VEM
Lead	Target	65400		ug/L	65400	D	5	Yes	S3VEM
Magnesium	Target	7980		ug/L	7980		1	Yes	S3VEM
Manganese	Target	30.2		ug/L	30.2		1	Yes	S3VEM
Nickel	Target	40.0	U	ug/L	17.8	J	1	Yes	S3VEM
Potassium	Target	110000		ug/L	110000		1	Yes	S3VEM
Selenium	Target	35.0	U	ug/L	16.4	J	1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	0.43	J	1	Yes	S3VEM
Sodium	Target	652000		ug/L	652000	D	5	Yes	S3VEM
Thallium	Target	33.9		ug/L	33.9		1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	4.2	J	1	Yes	S3VEM
Zinc	Target	804		ug/L	804		1	Yes	S3VEM
Hardness	Derived	486		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number:	MBCAD9	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-SUMPPUMP-04	pH:		Sample Date:	02/29/2016	Sample Time:	15:45:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	108	J	1	Yes	S3VEM
Antimony	Target	96.7		ug/L	96.7		1	Yes	S3VEM
Arsenic	Target	10.0	U	ug/L	9.4	J	1	Yes	S3VEM
Barium	Target	200	U	ug/L	104	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Cadmium	Target	6.1		ug/L	6.1		1	Yes	S3VEM
Calcium	Target	16900		ug/L	16900		1	Yes	S3VEM
Chromium	Target	10.0	U	ug/L	0.43	J	1	Yes	S3VEM
Cobalt	Target	50.0	U	ug/L	50.0	U	1	Yes	S3VEM
Copper	Target	25.0	U	ug/L	11.9	J	1	Yes	S3VEM
Iron	Target	234		ug/L	234		1	Yes	S3VEM
Lead	Target	384		ug/L	384		1	Yes	S3VEM
Magnesium	Target	5000	U	ug/L	1540	J	1	Yes	S3VEM
Manganese	Target	34.9		ug/L	34.9		1	Yes	S3VEM
Nickel	Target	40.0	U	ug/L	3.3	J	1	Yes	S3VEM
Potassium	Target	2950		ug/L	2950	J	1	Yes	S3VEM
Selenium	Target	35.0	U	ug/L	6.8	J	1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Sodium	Target	62700		ug/L	62700		1	Yes	S3VEM
Thallium	Target	25.0	U	ug/L	25.0	U	1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	0.21	J	1	Yes	S3VEM
Zinc	Target	72.0		ug/L	72.0		1	Yes	S3VEM
Hardness	Derived	48.5		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number:	MBCAE0	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-SUMPPUMP-05	pH:		Sample Date:	03/01/2016	Sample Time:	09:15:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	401		ug/L	401		1	Yes	S3VEM
Antimony	Target	225		ug/L	225		1	Yes	S3VEM
Arsenic	Target	122		ug/L	122		1	Yes	S3VEM
Barium	Target	200	U	ug/L	132	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Cadmium	Target	26.5		ug/L	26.5		1	Yes	S3VEM
Calcium	Target	110000		ug/L	110000		1	Yes	S3VEM
Chromium	Target	13.4		ug/L	13.4		1	Yes	S3VEM
Cobalt	Target	50.0	U	ug/L	3.4	J	1	Yes	S3VEM
Copper	Target	73.8		ug/L	73.8		1	Yes	S3VEM
Iron	Target	5090		ug/L	5090		1	Yes	S3VEM
Lead	Target	1610		ug/L	1610		1	Yes	S3VEM
Magnesium	Target	5000	U	ug/L	4480	J	1	Yes	S3VEM
Manganese	Target	200		ug/L	200		1	Yes	S3VEM
Nickel	Target	51.2		ug/L	51.2		1	Yes	S3VEM
Potassium	Target	9520		ug/L	9520		1	Yes	S3VEM
Selenium	Target	35.0	U	ug/L	12.2	J	1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Sodium	Target	615000		ug/L	615000	D	5	Yes	S3VEM
Thallium	Target	25.0	U	ug/L	25.0	U	1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	3.7	J	1	Yes	S3VEM
Zinc	Target	110		ug/L	110		1	Yes	S3VEM
Hardness	Derived	293		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number:	MBCAE1	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-SUMPPUMP-06	pH:		Sample Date:	03/01/2016	Sample Time:	09:20:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	271		ug/L	271		1	Yes	S3VEM
Antimony	Target	167		ug/L	167		1	Yes	S3VEM
Arsenic	Target	211		ug/L	211		1	Yes	S3VEM
Barium	Target	200	U	ug/L	73.3	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Cadmium	Target	5.3		ug/L	5.3		1	Yes	S3VEM
Calcium	Target	285000		ug/L	285000		1	Yes	S3VEM
Chromium	Target	61.4		ug/L	61.4		1	Yes	S3VEM
Cobalt	Target	50.0	U	ug/L	2.0	J	1	Yes	S3VEM
Copper	Target	37.1		ug/L	37.1		1	Yes	S3VEM
Iron	Target	1330		ug/L	1330		1	Yes	S3VEM
Lead	Target	248		ug/L	248		1	Yes	S3VEM
Magnesium	Target	13900		ug/L	13900		1	Yes	S3VEM
Manganese	Target	340		ug/L	340		1	Yes	S3VEM
Nickel	Target	68.4		ug/L	68.4		1	Yes	S3VEM
Potassium	Target	37300		ug/L	37300		1	Yes	S3VEM
Selenium	Target	35	U	ug/L	4.2	J	1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Sodium	Target	2020000		ug/L	2020000	D	20	Yes	S3VEM
Thallium	Target	25.0	U	ug/L	25.0	U	1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	3.6	J	1	Yes	S3VEM
Zinc	Target	322		ug/L	322		1	Yes	S3VEM
Hardness	Derived	769		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number:	MBCAE2	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-SUMPPUMP-07	pH:		Sample Date:	03/01/2016	Sample Time:	09:30:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	529		ug/L	529		1	Yes	S3VEM
Antimony	Target	125		ug/L	125		1	Yes	S3VEM
Arsenic	Target	56.7		ug/L	56.7		1	Yes	S3VEM
Barium	Target	200	U	ug/L	47.2	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Cadmium	Target	5.0	U	ug/L	3.0	J	1	Yes	S3VEM
Calcium	Target	83500		ug/L	83500		1	Yes	S3VEM
Chromium	Target	16.7		ug/L	16.7		1	Yes	S3VEM
Cobalt	Target	50.0	U	ug/L	1.1	J	1	Yes	S3VEM
Copper	Target	42.1		ug/L	42.1		1	Yes	S3VEM
Iron	Target	457		ug/L	457		1	Yes	S3VEM
Lead	Target	307		ug/L	307		1	Yes	S3VEM
Magnesium	Target	5000	U	ug/L	3970	J	1	Yes	S3VEM
Manganese	Target	27.3		ug/L	27.3		1	Yes	S3VEM
Nickel	Target	40.3		ug/L	40.3		1	Yes	S3VEM
Potassium	Target	22500		ug/L	22500		1	Yes	S3VEM
Selenium	Target	35.0	U	ug/L	6.0	J	1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Sodium	Target	826000		ug/L	826000	D	6	Yes	S3VEM
Thallium	Target	25.0	U	ug/L	25.0	U	1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	1.7	J	1	Yes	S3VEM
Zinc	Target	76.0		ug/L	76.0		1	Yes	S3VEM
Hardness	Derived	225		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number:	MBCAE3	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-SUMPPUMP-08	pH:		Sample Date:	03/01/2016	Sample Time:	09:40:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	51.2	J	1	Yes	S3VEM
Antimony	Target	230		ug/L	230		1	Yes	S3VEM
Arsenic	Target	89.5		ug/L	89.5		1	Yes	S3VEM
Barium	Target	200	U	ug/L	66.0	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Cadmium	Target	5.0	U	ug/L	1.0	J	1	Yes	S3VEM
Calcium	Target	114000		ug/L	114000		1	Yes	S3VEM
Chromium	Target	10.0	U	ug/L	1.9	J	1	Yes	S3VEM
Cobalt	Target	50.0	U	ug/L	0.26	J	1	Yes	S3VEM
Copper	Target	32.1		ug/L	32.1		1	Yes	S3VEM
Iron	Target	660		ug/L	660		1	Yes	S3VEM
Lead	Target	303		ug/L	303		1	Yes	S3VEM
Magnesium	Target	5000	U	ug/L	4960	J	1	Yes	S3VEM
Manganese	Target	31.5		ug/L	31.5		1	Yes	S3VEM
Nickel	Target	40.0	U	ug/L	5.9	J	1	Yes	S3VEM
Potassium	Target	5320		ug/L	5320		1	Yes	S3VEM
Selenium	Target	57.1		ug/L	57.1		1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Sodium	Target	709000		ug/L	709000	D	5	Yes	S3VEM
Thallium	Target	25	U	ug/L	2.9	J	1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	0.86	J	1	Yes	S3VEM
Zinc	Target	60	U	ug/L	17.3	J	1	Yes	S3VEM
Hardness	Derived	304		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number:	MBCAE4	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-SUMPPUMP-09	pH:		Sample Date:	03/01/2016	Sample Time:	09:50:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	35.1	J	1	Yes	S3VEM
Antimony	Target	60.0	U	ug/L	36.8	J	1	Yes	S3VEM
Arsenic	Target	14.3		ug/L	14.3		1	Yes	S3VEM
Barium	Target	200	U	ug/L	59.4	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Cadmium	Target	5.0	U	ug/L	0.44	J	1	Yes	S3VEM
Calcium	Target	87900		ug/L	87900		1	Yes	S3VEM
Chromium	Target	10.0	U	ug/L	1.6	J	1	Yes	S3VEM
Cobalt	Target	50.0	U	ug/L	0.46	J	1	Yes	S3VEM
Copper	Target	25.0	U	ug/L	4.6	J	1	Yes	S3VEM
Iron	Target	582		ug/L	582		1	Yes	S3VEM
Lead	Target	209		ug/L	209		1	Yes	S3VEM
Magnesium	Target	32000		ug/L	32000		1	Yes	S3VEM
Manganese	Target	76.9		ug/L	76.9		1	Yes	S3VEM
Nickel	Target	40.0	U	ug/L	20.1	J	1	Yes	S3VEM
Potassium	Target	42000		ug/L	42000		1	Yes	S3VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Sodium	Target	134000		ug/L	134000	D	3	Yes	S3VEM
Thallium	Target	25.0	U	ug/L	25.0	U	1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	11.0	J	1	Yes	S3VEM
Zinc	Target	60.0	U	ug/L	26.6	J	1	Yes	S3VEM
Hardness	Derived	352		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number:	MBCAE5	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-SUMPPUMP-10	pH:		Sample Date:	03/01/2016	Sample Time:	10:00:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	200	U	ug/L	119	J	1	Yes	S3VEM
Antimony	Target	128		ug/L	128		1	Yes	S3VEM
Arsenic	Target	26.0		ug/L	26.0		1	Yes	S3VEM
Barium	Target	200	U	ug/L	44.6	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Cadmium	Target	5.0	U	ug/L	3.2	J	1	Yes	S3VEM
Calcium	Target	22800		ug/L	22800		1	Yes	S3VEM
Chromium	Target	10.0	U	ug/L	3.1	J	1	Yes	S3VEM
Cobalt	Target	50.0	U	ug/L	0.31	J	1	Yes	S3VEM
Copper	Target	44.0		ug/L	44.0		1	Yes	S3VEM
Iron	Target	1380		ug/L	1380		1	Yes	S3VEM
Lead	Target	2970		ug/L	2970		1	Yes	S3VEM
Magnesium	Target	18300		ug/L	18300		1	Yes	S3VEM
Manganese	Target	40.4		ug/L	40.4		1	Yes	S3VEM
Nickel	Target	40.0	U	ug/L	11.8	J	1	Yes	S3VEM
Potassium	Target	11900		ug/L	11900		1	Yes	S3VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Sodium	Target	171000		ug/L	171000		1	Yes	S3VEM
Thallium	Target	25.0	U	ug/L	25.0	U	1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	7.3	J	1	Yes	S3VEM
Zinc	Target	321		ug/L	321		1	Yes	S3VEM
Hardness	Derived	132		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number: MBCAE6	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location: BRC001-CS01	pH:	Sample Date: 03/01/2016	Sample Time: 16:05:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	204		ug/L	204		1	Yes	S3VEM
Antimony	Target	555		ug/L	555		1	Yes	S3VEM
Arsenic	Target	36.3		ug/L	36.3		1	Yes	S3VEM
Barium	Target	200	U	ug/L	65.8	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	0.090	J	1	Yes	S3VEM
Cadmium	Target	67.5		ug/L	67.5		1	Yes	S3VEM
Calcium	Target	472000		ug/L	472000	D	20	Yes	S3VEM
Chromium	Target	10.0	U	ug/L	7.3	J	1	Yes	S3VEM
Cobalt	Target	50.0	U	ug/L	20.7	J	1	Yes	S3VEM
Copper	Target	36.7		ug/L	36.7		1	Yes	S3VEM
Iron	Target	2520		ug/L	2520		1	Yes	S3VEM
Lead	Target	4710		ug/L	4710		1	Yes	S3VEM
Magnesium	Target	128000		ug/L	128000		1	Yes	S3VEM
Manganese	Target	789		ug/L	789		1	Yes	S3VEM
Nickel	Target	411		ug/L	411		1	Yes	S3VEM
Potassium	Target	53300		ug/L	53300		1	Yes	S3VEM
Selenium	Target	35.0	U	ug/L	14.5	J	1	Yes	S3VEM
Silver	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Sodium	Target	2060000		ug/L	2060000	D	20	Yes	S3VEM
Thallium	Target	25.0	U	ug/L	4.2	J	1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	2.7	J	1	Yes	S3VEM
Zinc	Target	323		ug/L	323		1	Yes	S3VEM
Hardness	Derived	1730		mg/L		J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAD1	Lab Code: BON

Sample Number: PBW01	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	4.7	J	ug/L	4.7	J	1	Yes	S3VEM
Antimony	Target	-1.8		ug/L	-1.8	J	1	Yes	S3VEM
Arsenic	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Barium	Target	0.21	J	ug/L	0.21	J	1	Yes	S3VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Cadmium	Target	5.0	U	ug/L	5.0	U	1	Yes	S3VEM
Calcium	Target	5000	U	ug/L	5000	U	1	Yes	S3VEM
Chromium	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Cobalt	Target	50.0	U	ug/L	50.0	U	1	Yes	S3VEM
Copper	Target	25.0	U	ug/L	25.0	U	1	Yes	S3VEM
Iron	Target	100	U	ug/L	100	U	1	Yes	S3VEM
Lead	Target	10.0	U	ug/L	10.0	U	1	Yes	S3VEM
Magnesium	Target	5000	U	ug/L	5000	U	1	Yes	S3VEM
Manganese	Target	15.0	U	ug/L	15.0	U	1	Yes	S3VEM
Nickel	Target	40.0	U	ug/L	40.0	U	1	Yes	S3VEM
Potassium	Target	5000	U	ug/L	5000	U	1	Yes	S3VEM
Selenium	Target	35.0	U	ug/L	35.0	U	1	Yes	S3VEM
Silver	Target	-.45		ug/L	-.45	J	1	Yes	S3VEM
Sodium	Target	-17		ug/L	-17	J	1	Yes	S3VEM
Thallium	Target	25.0	U	ug/L	25.0	U	1	Yes	S3VEM
Vanadium	Target	50.0	U	ug/L	50.0	U	1	Yes	S3VEM
Zinc	Target	2.1	J	ug/L	2.1	J	1	Yes	S3VEM
Hardness	Derived	0.058		mg/L		J	1	Yes	S3VEM

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 15 (Wipes)
Analysis: Metals

SDG No.: MBCAF0
Laboratory: Bonner Analytical Testing Co.
sampling dates: 3/10/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solutions
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
All samples have analytes that have been qualified J, J+ or J-".

Minor Findings:
None

COMMENT: The site-specific QAPP did not specify the project action levels for this site.

Reviewer Name(s): Israel Okwuonu

Approver's Signature: **Date: 04/15/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Antimony MBCAF0, MBCBR1, MBCBR3, MBCBS2, MBCBR0

Beryllium MBCBS3, MBCBR5, MBCBS0

Cobalt MBCBR6, MBCBR4, MBCBS3, MBCBR8, MBCBR5, MBCBR3, MBCBS0, MBCBS1, MBCBR9, MBCBR7, MBCBR2

Potassium MBCBS1, MBCBR0, MBCBR3, MBCBR1, MBCBS2, MBCAF0, MBCBR4, MBCBR2, MBCBR8, MBCBR7, MBCBR9

Selenium MBCBS0, MBCBR5, MBCBS3

Silver MBCBR8, MBCBR9, MBCBS0, MBCBR5, MBCBR2, MBCBR6, MBCBS1, MBCBS3

Sodium MBCAF0, MBCBS2, MBCBR1, MBCBR4, MBCBR3, MBCBR0

The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Aluminum MBCBR0, MBCBR1, MBCBR3, MBCAF0, MBCBS2

Antimony MBCBR1, MBCBS2, MBCBR0, MBCBR3, MBCAF0

Arsenic MBCBR3, MBCBR0, MBCBS2, MBCBR1, MBCBR4, MBCAF0

Barium MBCBR9, MBCBS1, MBCBR6, MBCAF0, MBCBR0, MBCBR4, MBCBR1, MBCBR7, MBCBR3

Beryllium MBCBR5, MBCBS3, MBCBS0, MBCBR8, MBCBR6

Cadmium MBCAF0, MBCBS2, MBCBR7, MBCBR3, MBCBR0

Calcium MBCAF0, MBCBR1, MBCBR0, MBCBR3, MBCBR4

Chromium MBCBR1, MBCBR4, MBCAF0, MBCBR3, MBCBR0, MBCBS2

Cobalt MBCBR9, MBCBR8, MBCBR5, MBCBR3, MBCBR7, MBCBS0, MBCBR2, MBCBS3, MBCBS1, MBCBR6, MBCBR4

Copper MBCAF0, MBCBR1, MBCBR0

Magnesium MBCBR1, MBCBS1, MBCBR0, MBCBR8, MBCBR7, MBCBR4, MBCBR3, MBCBR6, MBCBR9, MBCBR2, MBCAF0, MBCBS2

Manganese MBCBS2, MBCBR0, MBCBR1, MBCAF0, MBCBR3

Nickel MBCBS1, MBCBR7, MBCBR3, MBCBR0, MBCBS2, MBCBR4, MBCAF0

Potassium MBCBR7, MBCBR4, MBCBR1, MBCBS2, MBCBR0, MBCBR8, MBCBR3, MBCBR9, MBCBS1, MBCBR2, MBCAF0

Selenium MBCBR5, MBCBS3, MBCBR2, MBCBS2, MBCBS0, MBCBR8, MBCBR9, MBCBR6, MBCBS1

Silver MBCBR8, MBCBR2, MBCBS0, MBCBR9, MBCBS1, MBCBR6, MBCBS3, MBCBR5

Sodium MBCBR1, MBCBR3, MBCBR4, MBCAF0, MBCBS2, MBCBR0

Vanadium MBCBR9, MBCBR4, MBCBR7, MBCBR8, MBCBR6, MBCBS1, MBCBS2, MBCBR2

The following samples have analyte results less than or equal to CRQLs. The associated PB has results greater than CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Copper MBCBR0, MBCAF0, MBCBR1

The following samples are associated with PB with results greater than CRQLs. The samples have analyte results greater than CRQLs but less than 10x the associated PB results. Detects are qualified as J+.

Copper MBCBR6, MBCBS2, MBCBR9, MBCBR4, MBCBR8, MBCBS1, MBCBR3, MBCBR2, MBCBR7, MBCBS0

Zinc MBCBR9, MBCBR4, MBCAF0, MBCBS1, MBCBR6, MBCBS2, MBCBR7, MBCBR3, MBCBR8, MBCBR2, MBCBR1, MBCBR0, MBCBS0, MBCBR5, MBCBS3

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

Not applicable.

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

Not applicable.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

Not applicable.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

Not applicable.

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

Not applicable

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAF0	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	37.6		ug	37.6		1	Yes	S3VEM
Antimony	Target	11.4		ug	11.4		1	Yes	S3VEM
Arsenic	Target	2.0		ug	2.0		1	Yes	S3VEM
Barium	Target	39.8		ug	39.8		1	Yes	S3VEM
Beryllium	Target	0.97		ug	0.97		1	Yes	S3VEM
Cadmium	Target	0.96		ug	0.96		1	Yes	S3VEM
Calcium	Target	1050		ug	1050		1	Yes	S3VEM
Chromium	Target	2.0		ug	2.0		1	Yes	S3VEM
Cobalt	Target	9.9		ug	9.9		1	Yes	S3VEM
Copper	Target	7.2		ug	7.2		1	Yes	S3VEM
Iron	Target	21.8		ug	21.8		1	Yes	S3VEM
Lead	Target	2.1		ug	2.1		1	Yes	S3VEM
Magnesium	Target	1040		ug	1040		1	Yes	S3VEM
Manganese	Target	3.3		ug	3.3		1	Yes	S3VEM
Nickel	Target	8.1		ug	8.1		1	Yes	S3VEM
Potassium	Target	997		ug	997		1	Yes	S3VEM
Selenium	Target	7.0		ug	7.0		1	Yes	S3VEM
Silver	Target	1.8		ug	1.8		1	Yes	S3VEM
Sodium	Target	1200		ug	1200		1	Yes	S3VEM
Thallium	Target	4.2		ug	4.2		1	Yes	S3VEM
Vanadium	Target	9.9		ug	9.9		1	Yes	S3VEM
Zinc	Target	145		ug	145		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number: LCS02	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	6.0	U	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Barium	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Beryllium	Target	0.046	J	ug	0.046	J	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Calcium	Target	500	U	ug	500	U	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Iron	Target	10.0	U	ug	10.0	U	1	Yes	S3VEM
Lead	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Magnesium	Target	500	U	ug	500	U	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	1.5	U	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	ug	500	U	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	500	U	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	6.0	U	ug	6.0	U	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number: MBCAF0	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: WP001-20160310-FB	pH:	Sample Date: 03/10/2016	Sample Time: 13:30:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	1.2	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	1.1	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.22	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	1.9	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.0088	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	236	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.043	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Copper	Target	2.5	U	ug	1.6	J	1	Yes	S3VEM
Iron	Target	10.8		ug	10.8		1	Yes	S3VEM
Lead	Target	29.2		ug	29.2		1	Yes	S3VEM
Magnesium	Target	500	U	ug	114	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	0.28	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	0.099	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	94.8	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	332	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	83.7	J+	ug	83.7		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number:	MBCBR0	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP016-01	pH:		Sample Date:	03/10/2016	Sample Time:	09:53:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	2.7	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	1.0	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.13	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	0.14	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.0037	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	281	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.073	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Copper	Target	2.5	U	ug	1.2	J	1	Yes	S3VEM
Iron	Target	15.4		ug	15.4		1	Yes	S3VEM
Lead	Target	19.3		ug	19.3		1	Yes	S3VEM
Magnesium	Target	500	U	ug	106	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	0.40	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	0.067	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	120	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	318	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	66.8	J+	ug	66.8		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number:	MBCBR1	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP017-01	pH:		Sample Date:	03/10/2016	Sample Time:	09:36:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	3.2	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	0.79	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.12	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	0.56	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Calcium	Target	500	U	ug	263	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.084	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Copper	Target	2.5	U	ug	1.6	J	1	Yes	S3VEM
Iron	Target	16.6		ug	16.6		1	Yes	S3VEM
Lead	Target	14.7		ug	14.7		1	Yes	S3VEM
Magnesium	Target	500	U	ug	109	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	0.54	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	ug	94.5	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	330	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	73.9	J+	ug	73.9		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number:	MBCBR2	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP018-01	pH:		Sample Date:	03/10/2016	Sample Time:	12:01:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	210		ug	210		1	Yes	S3VEM
Antimony	Target	24.9		ug	24.9		1	Yes	S3VEM
Arsenic	Target	2.4		ug	2.4		1	Yes	S3VEM
Barium	Target	937		ug	937		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.78		ug	0.78		1	Yes	S3VEM
Calcium	Target	1430		ug	1430		1	Yes	S3VEM
Chromium	Target	2.0		ug	2.0		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.091	J	1	Yes	S3VEM
Copper	Target	7.2	J+	ug	7.2		1	Yes	S3VEM
Iron	Target	4100		ug	4100		1	Yes	S3VEM
Lead	Target	646		ug	646		1	Yes	S3VEM
Magnesium	Target	500	U	ug	245	J	1	Yes	S3VEM
Manganese	Target	9.5		ug	9.5		1	Yes	S3VEM
Nickel	Target	5.8		ug	5.8		1	Yes	S3VEM
Potassium	Target	500	U	ug	158	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.26	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.28	J	1	Yes	S3VEM
Sodium	Target	801		ug	801		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.96	J	1	Yes	S3VEM
Zinc	Target	100	J+	ug	100		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number:	MBCBR3	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP019-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:20:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	11.0	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	1.9	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.29	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	0.45	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.034	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	134	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.22	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.024	J	1	Yes	S3VEM
Copper	Target	3.1	J+	ug	3.1		1	Yes	S3VEM
Iron	Target	29.6		ug	29.6		1	Yes	S3VEM
Lead	Target	31.5		ug	31.5		1	Yes	S3VEM
Magnesium	Target	500	U	ug	125	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	0.80	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	0.35	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	71.2	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	413	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	138	J+	ug	138		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number:	MBCBR4	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP020-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:23:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	60.8		ug	60.8		1	Yes	S3VEM
Antimony	Target	7.4		ug	7.4		1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.68	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	2.0	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.67		ug	0.67		1	Yes	S3VEM
Calcium	Target	500	U	ug	362	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.62	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.066	J	1	Yes	S3VEM
Copper	Target	4.4	J+	ug	4.4		1	Yes	S3VEM
Iron	Target	216		ug	216		1	Yes	S3VEM
Lead	Target	211		ug	211		1	Yes	S3VEM
Magnesium	Target	500	U	ug	161	J	1	Yes	S3VEM
Manganese	Target	2.7		ug	2.7		1	Yes	S3VEM
Nickel	Target	4.0	U	ug	1.1	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	107	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	484	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.48	J	1	Yes	S3VEM
Zinc	Target	128	J+	ug	128		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number:	MBCBR5	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP021-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:24:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1040		ug	1040		1	Yes	S3VEM
Antimony	Target	152		ug	152		1	Yes	S3VEM
Arsenic	Target	15.1		ug	15.1		1	Yes	S3VEM
Barium	Target	48.3		ug	48.3		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.022	J	1	Yes	S3VEM
Cadmium	Target	4.3		ug	4.3		1	Yes	S3VEM
Calcium	Target	21200		ug	21200		1	Yes	S3VEM
Chromium	Target	11.9		ug	11.9		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	1.2	J	1	Yes	S3VEM
Copper	Target	99.4		ug	99.4		1	Yes	S3VEM
Iron	Target	4380		ug	4380		1	Yes	S3VEM
Lead	Target	4900		ug	4900	D	5	Yes	S3VEM
Magnesium	Target	1110		ug	1110		1	Yes	S3VEM
Manganese	Target	51.9		ug	51.9		1	Yes	S3VEM
Nickel	Target	29.2		ug	29.2		1	Yes	S3VEM
Potassium	Target	641		ug	641		1	Yes	S3VEM
Selenium	Target	3.5	U	ug	2.1	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.79	J	1	Yes	S3VEM
Sodium	Target	6970		ug	6970		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	20.0		ug	20.0		1	Yes	S3VEM
Zinc	Target	265	J+	ug	265		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number:	MBCBR6	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP022-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:28:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	208		ug	208		1	Yes	S3VEM
Antimony	Target	51.8		ug	51.8		1	Yes	S3VEM
Arsenic	Target	4.6		ug	4.6		1	Yes	S3VEM
Barium	Target	20.0	U	ug	8.9	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.0029	J	1	Yes	S3VEM
Cadmium	Target	0.86		ug	0.86		1	Yes	S3VEM
Calcium	Target	1420		ug	1420		1	Yes	S3VEM
Chromium	Target	3.5		ug	3.5		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.24	J	1	Yes	S3VEM
Copper	Target	20.9	J+	ug	20.9		1	Yes	S3VEM
Iron	Target	853		ug	853		1	Yes	S3VEM
Lead	Target	1370		ug	1370		1	Yes	S3VEM
Magnesium	Target	500	U	ug	194	J	1	Yes	S3VEM
Manganese	Target	8.6		ug	8.6		1	Yes	S3VEM
Nickel	Target	6.2		ug	6.2		1	Yes	S3VEM
Potassium	Target	521		ug	521		1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.25	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.078	J	1	Yes	S3VEM
Sodium	Target	567		ug	567		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	1.7	J	1	Yes	S3VEM
Zinc	Target	121	J+	ug	121		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number:	MBCBR7	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP023-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:36:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	65.2		ug	65.2		1	Yes	S3VEM
Antimony	Target	12.3		ug	12.3		1	Yes	S3VEM
Arsenic	Target	1.1		ug	1.1		1	Yes	S3VEM
Barium	Target	20.0	U	ug	3.3	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.35	J	1	Yes	S3VEM
Calcium	Target	642		ug	642		1	Yes	S3VEM
Chromium	Target	1.2		ug	1.2		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.084	J	1	Yes	S3VEM
Copper	Target	4.8	J+	ug	4.8		1	Yes	S3VEM
Iron	Target	261		ug	261		1	Yes	S3VEM
Lead	Target	364		ug	364		1	Yes	S3VEM
Magnesium	Target	500	U	ug	165	J	1	Yes	S3VEM
Manganese	Target	2.8		ug	2.8		1	Yes	S3VEM
Nickel	Target	4.0	U	ug	1.6	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	118	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	616		ug	616		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.45	J	1	Yes	S3VEM
Zinc	Target	84.8	J+	ug	84.8		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number:	MBCBR8	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP024-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:31:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	396		ug	396		1	Yes	S3VEM
Antimony	Target	50.7		ug	50.7		1	Yes	S3VEM
Arsenic	Target	4.7		ug	4.7		1	Yes	S3VEM
Barium	Target	22.8		ug	22.8		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.0041	J	1	Yes	S3VEM
Cadmium	Target	1.6		ug	1.6		1	Yes	S3VEM
Calcium	Target	1780		ug	1780		1	Yes	S3VEM
Chromium	Target	4.6		ug	4.6		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.36	J	1	Yes	S3VEM
Copper	Target	15.8	J+	ug	15.8		1	Yes	S3VEM
Iron	Target	1200		ug	1200		1	Yes	S3VEM
Lead	Target	1200		ug	1200		1	Yes	S3VEM
Magnesium	Target	500	U	ug	384	J	1	Yes	S3VEM
Manganese	Target	13.5		ug	13.5		1	Yes	S3VEM
Nickel	Target	9.1		ug	9.1		1	Yes	S3VEM
Potassium	Target	500	U	ug	192	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.29	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.12	J	1	Yes	S3VEM
Sodium	Target	1710		ug	1710		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	2.6	J	1	Yes	S3VEM
Zinc	Target	122	J+	ug	122		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number:	MBCBR9	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP025-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:27:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	377		ug	377		1	Yes	S3VEM
Antimony	Target	35.6		ug	35.6		1	Yes	S3VEM
Arsenic	Target	4.2		ug	4.2		1	Yes	S3VEM
Barium	Target	20.0	U	ug	8.0	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.83		ug	0.83		1	Yes	S3VEM
Calcium	Target	1450		ug	1450		1	Yes	S3VEM
Chromium	Target	4.9		ug	4.9		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.31	J	1	Yes	S3VEM
Copper	Target	11.4	J+	ug	11.4		1	Yes	S3VEM
Iron	Target	815		ug	815		1	Yes	S3VEM
Lead	Target	877		ug	877		1	Yes	S3VEM
Magnesium	Target	500	U	ug	360	J	1	Yes	S3VEM
Manganese	Target	12.4		ug	12.4		1	Yes	S3VEM
Nickel	Target	4.9		ug	4.9		1	Yes	S3VEM
Potassium	Target	500	U	ug	182	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.20	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.10	J	1	Yes	S3VEM
Sodium	Target	1280		ug	1280		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	2.2	J	1	Yes	S3VEM
Zinc	Target	125	J+	ug	125		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number:	MBCBS0	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP026-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:32:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	396		ug	396		1	Yes	S3VEM
Antimony	Target	103		ug	103		1	Yes	S3VEM
Arsenic	Target	8.0		ug	8.0		1	Yes	S3VEM
Barium	Target	33.6		ug	33.6		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.011	J	1	Yes	S3VEM
Cadmium	Target	2.1		ug	2.1		1	Yes	S3VEM
Calcium	Target	4530		ug	4530		1	Yes	S3VEM
Chromium	Target	6.6		ug	6.6		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.52	J	1	Yes	S3VEM
Copper	Target	24.0	J+	ug	24.0		1	Yes	S3VEM
Iron	Target	1750		ug	1750		1	Yes	S3VEM
Lead	Target	5420		ug	5420	D	5	Yes	S3VEM
Magnesium	Target	615		ug	615		1	Yes	S3VEM
Manganese	Target	17.2		ug	17.2		1	Yes	S3VEM
Nickel	Target	7.6		ug	7.6		1	Yes	S3VEM
Potassium	Target	825		ug	825		1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.74	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.20	J	1	Yes	S3VEM
Sodium	Target	9960		ug	9960		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	16.7		ug	16.7		1	Yes	S3VEM
Zinc	Target	220	J+	ug	220		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number:	MBCBS1	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP027-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:40:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	101		ug	101		1	Yes	S3VEM
Antimony	Target	17.9		ug	17.9		1	Yes	S3VEM
Arsenic	Target	1.8		ug	1.8		1	Yes	S3VEM
Barium	Target	20.0	U	ug	4.4	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.51		ug	0.51		1	Yes	S3VEM
Calcium	Target	804		ug	804		1	Yes	S3VEM
Chromium	Target	1.2		ug	1.2		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.10	J	1	Yes	S3VEM
Copper	Target	27.4	J+	ug	27.4		1	Yes	S3VEM
Iron	Target	318		ug	318		1	Yes	S3VEM
Lead	Target	480		ug	480		1	Yes	S3VEM
Magnesium	Target	500	U	ug	175	J	1	Yes	S3VEM
Manganese	Target	3.9		ug	3.9		1	Yes	S3VEM
Nickel	Target	4.0	U	ug	3.6	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	96.2	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.24	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.063	J	1	Yes	S3VEM
Sodium	Target	711		ug	711		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.56	J	1	Yes	S3VEM
Zinc	Target	154	J+	ug	154		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number:	MBCBS2	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP028-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:34:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	15.9	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	2.4	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.83	J	1	Yes	S3VEM
Barium	Target	4810		ug	4810		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.17	J	1	Yes	S3VEM
Calcium	Target	792		ug	792		1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.24	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Copper	Target	2.6	J+	ug	2.6		1	Yes	S3VEM
Iron	Target	72.1		ug	72.1		1	Yes	S3VEM
Lead	Target	95.3		ug	95.3		1	Yes	S3VEM
Magnesium	Target	500	U	ug	115	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	0.67	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	0.43	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	101	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.21	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	359	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.11	J	1	Yes	S3VEM
Zinc	Target	120	J+	ug	120		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number:	MBCBS3	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP029-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:41:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1230		ug	1230		1	Yes	S3VEM
Antimony	Target	118		ug	118		1	Yes	S3VEM
Arsenic	Target	7.8		ug	7.8		1	Yes	S3VEM
Barium	Target	65.1		ug	65.1		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.031	J	1	Yes	S3VEM
Cadmium	Target	3.9		ug	3.9		1	Yes	S3VEM
Calcium	Target	20600		ug	20600		1	Yes	S3VEM
Chromium	Target	38.7		ug	38.7		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	1.1	J	1	Yes	S3VEM
Copper	Target	76.8		ug	76.8		1	Yes	S3VEM
Iron	Target	6080		ug	6080		1	Yes	S3VEM
Lead	Target	8300		ug	8300	D	5	Yes	S3VEM
Magnesium	Target	1010		ug	1010		1	Yes	S3VEM
Manganese	Target	55.6		ug	55.6		1	Yes	S3VEM
Nickel	Target	28.1		ug	28.1		1	Yes	S3VEM
Potassium	Target	1140		ug	1140		1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.78	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.54	J	1	Yes	S3VEM
Sodium	Target	1310		ug	1310		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	23.7		ug	23.7		1	Yes	S3VEM
Zinc	Target	280	J+	ug	280		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number: PBF01	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1.3	J	ug	1.3	J	1	Yes	S3VEM
Antimony	Target	0.24	J	ug	0.24	J	1	Yes	S3VEM
Arsenic	Target	0.24	J	ug	0.24	J	1	Yes	S3VEM
Barium	Target	0.085	J	ug	0.085	J	1	Yes	S3VEM
Beryllium	Target	-.0086		ug	-.0086	J	1	Yes	S3VEM
Cadmium	Target	-.0093		ug	-.0093	J	1	Yes	S3VEM
Calcium	Target	49.8	J	ug	49.8	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Copper	Target	2.9		ug	2.9		1	Yes	S3VEM
Iron	Target	2.2	J	ug	2.2	J	1	Yes	S3VEM
Lead	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Magnesium	Target	110	J	ug	110	J	1	Yes	S3VEM
Manganese	Target	0.34	J	ug	0.34	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	4.0	U	1	Yes	S3VEM
Potassium	Target	63.5		ug	63.5	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	275	J	ug	275	J	1	Yes	S3VEM
Thallium	Target	-.47		ug	-.47	J	1	Yes	S3VEM
Vanadium	Target	-.043		ug	-.043	J	1	Yes	S3VEM
Zinc	Target	145		ug	145		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF0	Lab Code: BON

Sample Number: PBF02	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	6.0	U	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Barium	Target	-.16		ug	-.16	J	1	Yes	S3VEM
Beryllium	Target	0.022	J	ug	0.022	J	1	Yes	S3VEM
Cadmium	Target	-.0065		ug	-.0065	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	500	U	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Copper	Target	-.16		ug	-.16	J	1	Yes	S3VEM
Iron	Target	10.0	U	ug	10.0	U	1	Yes	S3VEM
Lead	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Magnesium	Target	500	U	ug	500	U	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	1.5	U	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	ug	500	U	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	500	U	1	Yes	S3VEM
Thallium	Target	-.22		ug	-.22	J	1	Yes	S3VEM
Vanadium	Target	-.052		ug	-.052	J	1	Yes	S3VEM
Zinc	Target	-.14		ug	-.14	J	1	Yes	S3VEM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
DESA/HWSB/HWSS
2890, Woodbridge Avenue, Edison, NJ 08837

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 15 (Soil)
Analysis: Metals

SDG No.: MBCAF1
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/1/2016, 3/2/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solution
Contractor Document: DCN # RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
All samples except MBCAG1 have analytes that have been qualified J, J+ or UJ.

Minor Findings:
None

COMMENT:	The site specific QAPP did not specify the project levels for this site.

Reviewer Name(s): T. Solomon

Approver's Signature: **Date: 04/05/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Barium MBCAF4, MBCAG2

Beryllium MBCAF1, MBCAF2, MBCAF3, MBCAF5, MBCAF6, MBCAF7, MBCAF8, MBCAF9, MBCAG0, MBCAG1, MBCAG2, MBCAG4, MBCAG5

Calcium MBCAF4

Cobalt MBCAF3, MBCAF4, MBCAF5, MBCAF8, MBCAF9, MBCAG0, MBCAG1, MBCAG3

Magnesium MBCAF4, MBCAF5, MBCAF9, MBCAG0, MBCAG2, MBCAG3, MBCAG5

Potassium MBCAF1, MBCAF2, MBCAF3, MBCAF4, MBCAF5, MBCAF6, MBCAF7, MBCAF8, MBCAF9, MBCAG0, MBCAG1, MBCAG2, MBCAG3, MBCAG4, MBCAG5

Selenium MBCAF1, MBCAF2, MBCAF6, MBCAF7, MBCAF8, MBCAG1

Silver MBCAF4, MBCAF6, MBCAF8, MBCAG2, MBCAG4, MBCAG5

Vanadium MBCAF4, MBCAF8, MBCAG3

The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Calcium MBCAF4

Silver MBCAF4, MBCAF6, MBCAF8, MBCAG2, MBCAG4, MBCAG5

Vanadium MBCAF4, MBCAF8, MBCAG3

The following samples have analyte results less than or equal to CRQLs. The associated preparation blank analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Calcium MBCAF4

Selenium MBCAF1, MBCAF2, MBCAF6, MBCAF7, MBCAF8, MBCAG1

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

The following matrix spike sample has a percent recovery greater than 125% and the post digestion spike sample had a percent recovery greater than 125%. The detected analyte with a result greater than or equal to the MDL is qualified J+.

Nickel MBCAF1

The following matrix spike sample has a percent recovery less than 75% and the post digestion spike sample had a percent recovery greater than 75%. The detected analyte with a result greater than or equal to the MDL is qualified J.

Selenium MBCAF1

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

No problems were found for this criterion.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

No problems were found for this criterion.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

The following sample is associated to the serial dilution sample with analyte %D > 15% and the original sample result is > 50X MDL. The detected analyte is qualified J.

Silver MBCAF1

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

The following samples have percent solids less than 50%. The detected analytes are qualified J and nondetects are qualified UJ.

All Analytes MBCAF1, MBCAF2, MBCAF3, MBCAF4, MBCAF5, MBCAF6, MBCAF7, MBCAF8, MBCAF9, MBCAG0, MBCAG2, MBCAG3, MBCAG4, MBCAG5

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAF1	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	40.0		mg/kg	40.0		1	Yes	S3VEM
Antimony	Target	12.4		mg/kg	12.4		1	Yes	S3VEM
Arsenic	Target	1.8		mg/kg	1.8		1	Yes	S3VEM
Barium	Target	41.6		mg/kg	41.6		1	Yes	S3VEM
Beryllium	Target	0.91		mg/kg	0.91		1	Yes	S3VEM
Cadmium	Target	0.99		mg/kg	0.99		1	Yes	S3VEM
Calcium	Target	1060		mg/kg	1060		1	Yes	S3VEM
Chromium	Target	2.1		mg/kg	2.1		1	Yes	S3VEM
Cobalt	Target	10.5		mg/kg	10.5		1	Yes	S3VEM
Copper	Target	5.2		mg/kg	5.2		1	Yes	S3VEM
Iron	Target	19.4		mg/kg	19.4		1	Yes	S3VEM
Lead	Target	2.1		mg/kg	2.1		1	Yes	S3VEM
Magnesium	Target	924		mg/kg	924		1	Yes	S3VEM
Manganese	Target	3.2		mg/kg	3.2		1	Yes	S3VEM
Nickel	Target	8.5		mg/kg	8.5		1	Yes	S3VEM
Potassium	Target	1010		mg/kg	1010		1	Yes	S3VEM
Selenium	Target	6.5		mg/kg	6.5		1	Yes	S3VEM
Silver	Target	2.0		mg/kg	2.0		1	Yes	S3VEM
Sodium	Target	990		mg/kg	990		1	Yes	S3VEM
Thallium	Target	4.9		mg/kg	4.9		1	Yes	S3VEM
Vanadium	Target	10.8		mg/kg	10.8		1	Yes	S3VEM
Zinc	Target	11.9		mg/kg	11.9		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAF1	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-SUMPPUMP-01	pH:		Sample Date:	03/01/2016	Sample Time:	09:10:00
% Moisture :				% Solids :	22.7		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	11600	J	mg/kg	11600	D	2	Yes	S3VEM
Antimony	Target	426	J	mg/kg	426	D*	2	Yes	S3VEM
Arsenic	Target	56.9	J	mg/kg	56.9	D	2	Yes	S3VEM
Barium	Target	162	J	mg/kg	162	D	2	Yes	S3VEM
Beryllium	Target	1.0	UJ	mg/kg	0.26	JD	2	Yes	S3VEM
Cadmium	Target	44.6	J	mg/kg	44.6	D*	2	Yes	S3VEM
Calcium	Target	40400	J	mg/kg	40400	D*	2	Yes	S3VEM
Chromium	Target	73.0	J	mg/kg	73.0	D*	2	Yes	S3VEM
Cobalt	Target	17.3	J	mg/kg	17.3	D*	2	Yes	S3VEM
Copper	Target	257	J	mg/kg	257	D	2	Yes	S3VEM
Iron	Target	29900	J	mg/kg	29900	D*	2	Yes	S3VEM
Lead	Target	34400	J	mg/kg	34400	D	100	Yes	S3VEM
Magnesium	Target	6350	J	mg/kg	6350	D*	2	Yes	S3VEM
Manganese	Target	580	J	mg/kg	580	D*	2	Yes	S3VEM
Nickel	Target	152	J+	mg/kg	152	D*	2	Yes	S3VEM
Potassium	Target	1000	UJ	mg/kg	832	JD	2	Yes	S3VEM
Selenium	Target	7.0	UJ	mg/kg	3.9	JD*	2	Yes	S3VEM
Silver	Target	2.1	J	mg/kg	2.1	D*	2	Yes	S3VEM
Sodium	Target	2050	J	mg/kg	2050	D	2	Yes	S3VEM
Thallium	Target	1.1	J	mg/kg	1.1	JD	2	Yes	S3VEM
Vanadium	Target	183	J	mg/kg	183	D*	2	Yes	S3VEM
Zinc	Target	1310	J	mg/kg	1310	D*	2	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAF1A	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:	03/01/2016	Sample Time:	09:10:00
% Moisture :				% Solids :	22.7		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Nickel	Spike	459		mg/kg	459	D*	2	Yes	S3VEM
Selenium	Spike	10.7		mg/kg	10.7	D	2	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number: MBCAF1D	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/01/2016	Sample Time: 09:10:00
% Moisture :		% Solids : 22.7	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	13500		mg/kg	13500	D	2	Yes	S3VEM
Antimony	Target	460		mg/kg	460	D	2	Yes	S3VEM
Arsenic	Target	63.6		mg/kg	63.6	D	2	Yes	S3VEM
Barium	Target	187		mg/kg	187	D	2	Yes	S3VEM
Beryllium	Target	0.29		mg/kg	0.29	JD	2	Yes	S3VEM
Cadmium	Target	49.2		mg/kg	49.2	D	2	Yes	S3VEM
Calcium	Target	43400		mg/kg	43400	D	2	Yes	S3VEM
Chromium	Target	87.7		mg/kg	87.7	D	2	Yes	S3VEM
Cobalt	Target	19.5		mg/kg	19.5	D	2	Yes	S3VEM
Copper	Target	281		mg/kg	281	D	2	Yes	S3VEM
Iron	Target	35100		mg/kg	35100	D	2	Yes	S3VEM
Lead	Target	34600		mg/kg	34600	D	100	Yes	S3VEM
Magnesium	Target	7250		mg/kg	7250	D	2	Yes	S3VEM
Manganese	Target	636		mg/kg	636	D	2	Yes	S3VEM
Nickel	Target	177		mg/kg	177	D	2	Yes	S3VEM
Potassium	Target	921		mg/kg	921	JD	2	Yes	S3VEM
Selenium	Target	4.2		mg/kg	4.2	JD	2	Yes	S3VEM
Silver	Target	2.4		mg/kg	2.4	D	2	Yes	S3VEM
Sodium	Target	2190		mg/kg	2190	D	2	Yes	S3VEM
Thallium	Target	1.0		mg/kg	1.0	JD	2	Yes	S3VEM
Vanadium	Target	184		mg/kg	184	D	2	Yes	S3VEM
Zinc	Target	1620		mg/kg	1620	D*	2	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number: MBCAF1L	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 22.7	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	12500		mg/kg	12500	D	10	Yes	S3VEM
Antimony	Target	474		mg/kg	474	D*	10	Yes	S3VEM
Arsenic	Target	61.9		mg/kg	61.9	D	10	Yes	S3VEM
Barium	Target	176	J	mg/kg	176	JD	10	Yes	S3VEM
Beryllium	Target	0.27	J	mg/kg	0.27	JD	10	Yes	S3VEM
Cadmium	Target	51.0		mg/kg	51.0	D*	10	Yes	S3VEM
Calcium	Target	44900		mg/kg	44900	D*	10	Yes	S3VEM
Chromium	Target	81.9		mg/kg	81.9	D*	10	Yes	S3VEM
Cobalt	Target	19.5	J	mg/kg	19.5	JD*	10	Yes	S3VEM
Copper	Target	272		mg/kg	272	D	10	Yes	S3VEM
Iron	Target	33800		mg/kg	33800	D*	10	Yes	S3VEM
Lead	Target	33600		mg/kg	33600	D	500	Yes	S3VEM
Magnesium	Target	7160		mg/kg	7160	D*	10	Yes	S3VEM
Manganese	Target	648		mg/kg	648	D*	10	Yes	S3VEM
Nickel	Target	155		mg/kg	155	D	10	Yes	S3VEM
Potassium	Target	850		mg/kg	850	JD	10	Yes	S3VEM
Selenium	Target	35.0	U	mg/kg	35.0	UD	10	Yes	S3VEM
Silver	Target	2.6	J	mg/kg	2.6	JD*	10	Yes	S3VEM
Sodium	Target	2100	J	mg/kg	2100	JD	10	Yes	S3VEM
Thallium	Target	25.0	U	mg/kg	25.0	UD	10	Yes	S3VEM
Vanadium	Target	202		mg/kg	202	D*	10	Yes	S3VEM
Zinc	Target	1370		mg/kg	1370	D	10	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number: MBCAF1S	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/01/2016	Sample Time: 09:10:00
% Moisture :		% Solids : 22.7	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Antimony	Spike	487		mg/kg	487	D	2	Yes	S3VEM
Arsenic	Spike	71.6		mg/kg	71.6	D	2	Yes	S3VEM
Barium	Spike	620		mg/kg	620	D	2	Yes	S3VEM
Beryllium	Spike	10.3		mg/kg	10.3	D	2	Yes	S3VEM
Cadmium	Spike	59.1		mg/kg	59.1	D	2	Yes	S3VEM
Chromium	Spike	123		mg/kg	123	D	2	Yes	S3VEM
Cobalt	Spike	122		mg/kg	122	D	2	Yes	S3VEM
Copper	Spike	333		mg/kg	333	D	2	Yes	S3VEM
Lead	Spike	84500		mg/kg	84500	D	100	Yes	S3VEM
Manganese	Spike	747		mg/kg	747	D	2	Yes	S3VEM
Nickel	Spike	281		mg/kg	281	D*	2	Yes	S3VEM
Selenium	Spike	18.1		mg/kg	18.1	D*	2	Yes	S3VEM
Silver	Spike	12.4		mg/kg	12.4	D	2	Yes	S3VEM
Thallium	Spike	11.1		mg/kg	11.1	D	2	Yes	S3VEM
Vanadium	Spike	297		mg/kg	297	D	2	Yes	S3VEM
Zinc	Spike	1560		mg/kg	1560	D	2	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAF2	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-SUMPPUMP-01	pH:		Sample Date:	03/01/2016	Sample Time:	09:10:00
% Moisture :				% Solids :	20.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	13100	J	mg/kg	13100	D	2	Yes	S3VEM
Antimony	Target	419	J	mg/kg	419	D*	2	Yes	S3VEM
Arsenic	Target	58.3	J	mg/kg	58.3	D	2	Yes	S3VEM
Barium	Target	177	J	mg/kg	177	D	2	Yes	S3VEM
Beryllium	Target	1.0	UJ	mg/kg	0.28	JD	2	Yes	S3VEM
Cadmium	Target	44.9	J	mg/kg	44.9	D*	2	Yes	S3VEM
Calcium	Target	40600	J	mg/kg	40600	D*	2	Yes	S3VEM
Chromium	Target	81.1	J	mg/kg	81.1	D*	2	Yes	S3VEM
Cobalt	Target	16.9	J	mg/kg	16.9	D*	2	Yes	S3VEM
Copper	Target	260	J	mg/kg	260	D	2	Yes	S3VEM
Iron	Target	31700	J	mg/kg	31700	D*	2	Yes	S3VEM
Lead	Target	34100	J	mg/kg	34100	D	100	Yes	S3VEM
Magnesium	Target	7360	J	mg/kg	7360	D*	2	Yes	S3VEM
Manganese	Target	633	J	mg/kg	633	D*	2	Yes	S3VEM
Nickel	Target	156	J	mg/kg	156	D*	2	Yes	S3VEM
Potassium	Target	1000	UJ	mg/kg	945	JD	2	Yes	S3VEM
Selenium	Target	7.0	UJ	mg/kg	4.0	JD*	2	Yes	S3VEM
Silver	Target	2.1	J	mg/kg	2.1	D*	2	Yes	S3VEM
Sodium	Target	2100	J	mg/kg	2100	D	2	Yes	S3VEM
Thallium	Target	0.83	J	mg/kg	0.83	JD	2	Yes	S3VEM
Vanadium	Target	171	J	mg/kg	171	D*	2	Yes	S3VEM
Zinc	Target	1390	J	mg/kg	1390	D*	2	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAF3	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-SUMPPUMP-02	pH:		Sample Date:	03/01/2016	Sample Time:	10:55:00
% Moisture :				% Solids :	45.3		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	11500	J	mg/kg	11500	D	3	Yes	S3VEM
Antimony	Target	2970	J	mg/kg	2970	D*	3	Yes	S3VEM
Arsenic	Target	410	J	mg/kg	410	D	3	Yes	S3VEM
Barium	Target	1170	J	mg/kg	1170	D	3	Yes	S3VEM
Beryllium	Target	3.0	UJ	mg/kg	0.21	JD	3	Yes	S3VEM
Cadmium	Target	104	J	mg/kg	104	D*	3	Yes	S3VEM
Calcium	Target	47100	J	mg/kg	47100	D*	3	Yes	S3VEM
Chromium	Target	123	J	mg/kg	123	D*	3	Yes	S3VEM
Cobalt	Target	29.9	UJ	mg/kg	17.6	JD*	3	Yes	S3VEM
Copper	Target	1660	J	mg/kg	1660	D	3	Yes	S3VEM
Iron	Target	91700	J	mg/kg	91700	D*	3	Yes	S3VEM
Lead	Target	156000	J	mg/kg	156000	D	100	Yes	S3VEM
Magnesium	Target	5550	J	mg/kg	5550	D*	3	Yes	S3VEM
Manganese	Target	662	J	mg/kg	662	D*	3	Yes	S3VEM
Nickel	Target	243	J	mg/kg	243	D*	3	Yes	S3VEM
Potassium	Target	2990	UJ	mg/kg	399	JD	3	Yes	S3VEM
Selenium	Target	22.1	J	mg/kg	22.1	D*	3	Yes	S3VEM
Silver	Target	8.5	J	mg/kg	8.5	D*	3	Yes	S3VEM
Sodium	Target	2380	J	mg/kg	2380	JD	3	Yes	S3VEM
Thallium	Target	6.6	J	mg/kg	6.6	JD	3	Yes	S3VEM
Vanadium	Target	84.8	J	mg/kg	84.8	D*	3	Yes	S3VEM
Zinc	Target	1450	J	mg/kg	1450	D*	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAF4	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-SUMPPUMP-03	pH:		Sample Date:	03/01/2016	Sample Time:	11:10:00
% Moisture :				% Solids :	44.7		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	831	J	mg/kg	831	D	5	Yes	S3VEM
Antimony	Target	6050	J	mg/kg	6050	D*	5	Yes	S3VEM
Arsenic	Target	891	J	mg/kg	891	D	5	Yes	S3VEM
Barium	Target	203	UJ	mg/kg	169	JD	5	Yes	S3VEM
Beryllium	Target	5.1	UJ	mg/kg	5.1	UD	5	Yes	S3VEM
Cadmium	Target	746	J	mg/kg	746	D*	5	Yes	S3VEM
Calcium	Target	5070	UJ	mg/kg	2370	JD*	5	Yes	S3VEM
Chromium	Target	15.8	J	mg/kg	15.8	D*	5	Yes	S3VEM
Cobalt	Target	50.7	UJ	mg/kg	2.5	JD*	5	Yes	S3VEM
Copper	Target	224	J	mg/kg	224	D	5	Yes	S3VEM
Iron	Target	5890	J	mg/kg	5890	D*	5	Yes	S3VEM
Lead	Target	298000	J	mg/kg	298000	D	100	Yes	S3VEM
Magnesium	Target	5070	UJ	mg/kg	481	JD*	5	Yes	S3VEM
Manganese	Target	90.3	J	mg/kg	90.3	D*	5	Yes	S3VEM
Nickel	Target	133	J	mg/kg	133	D*	5	Yes	S3VEM
Potassium	Target	5070	UJ	mg/kg	187	JD	5	Yes	S3VEM
Selenium	Target	96.3	J	mg/kg	96.3	D*	5	Yes	S3VEM
Silver	Target	10.1	UJ	mg/kg	4.4	JD*	5	Yes	S3VEM
Sodium	Target	1540	J	mg/kg	1540	JD	5	Yes	S3VEM
Thallium	Target	14.9	J	mg/kg	14.9	JD	5	Yes	S3VEM
Vanadium	Target	50.7	UJ	mg/kg	42.3	JD*	5	Yes	S3VEM
Zinc	Target	2580	J	mg/kg	2580	D*	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAF5	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-SUMPPUMP-04	pH:		Sample Date:	03/01/2016	Sample Time:	13:15:00
% Moisture :				% Solids :	43.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	8580	J	mg/kg	8580	D	5	Yes	S3VEM
Antimony	Target	3950	J	mg/kg	3950	D*	5	Yes	S3VEM
Arsenic	Target	909	J	mg/kg	909	D	5	Yes	S3VEM
Barium	Target	2410	J	mg/kg	2410	D	5	Yes	S3VEM
Beryllium	Target	5.8	UJ	mg/kg	0.19	JD	5	Yes	S3VEM
Cadmium	Target	334	J	mg/kg	334	D*	5	Yes	S3VEM
Calcium	Target	40000	J	mg/kg	40000	D*	5	Yes	S3VEM
Chromium	Target	136	J	mg/kg	136	D*	5	Yes	S3VEM
Cobalt	Target	57.6	UJ	mg/kg	24.6	JD*	5	Yes	S3VEM
Copper	Target	1620	J	mg/kg	1620	D	5	Yes	S3VEM
Iron	Target	134000	J	mg/kg	134000	D*	5	Yes	S3VEM
Lead	Target	190000	J	mg/kg	190000	D	100	Yes	S3VEM
Magnesium	Target	5760	UJ	mg/kg	3610	JD*	5	Yes	S3VEM
Manganese	Target	679	J	mg/kg	679	D*	5	Yes	S3VEM
Nickel	Target	315	J	mg/kg	315	D*	5	Yes	S3VEM
Potassium	Target	5760	UJ	mg/kg	405	JD	5	Yes	S3VEM
Selenium	Target	47.9	J	mg/kg	47.9	D*	5	Yes	S3VEM
Silver	Target	12.7	J	mg/kg	12.7	D*	5	Yes	S3VEM
Sodium	Target	4280	J	mg/kg	4280	JD	5	Yes	S3VEM
Thallium	Target	6.4	J	mg/kg	6.4	JD	5	Yes	S3VEM
Vanadium	Target	73.4	J	mg/kg	73.4	D*	5	Yes	S3VEM
Zinc	Target	2820	J	mg/kg	2820	D*	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAF6	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-SUMPPUMP-05	pH:		Sample Date:	03/01/2016	Sample Time:	13:30:00
% Moisture :				% Solids :	36.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2650	J	mg/kg	2650	D	2	Yes	S3VEM
Antimony	Target	794	J	mg/kg	794	D*	2	Yes	S3VEM
Arsenic	Target	130	J	mg/kg	130	D	2	Yes	S3VEM
Barium	Target	268	J	mg/kg	268	D	2	Yes	S3VEM
Beryllium	Target	2.5	UJ	mg/kg	0.076	JD	2	Yes	S3VEM
Cadmium	Target	269	J	mg/kg	269	D*	2	Yes	S3VEM
Calcium	Target	229000	J	mg/kg	229000	D*	4	Yes	S3VEM
Chromium	Target	145	J	mg/kg	145	D*	2	Yes	S3VEM
Cobalt	Target	31.2	J	mg/kg	31.2	D*	2	Yes	S3VEM
Copper	Target	407	J	mg/kg	407	D	2	Yes	S3VEM
Iron	Target	25800	J	mg/kg	25800	D*	2	Yes	S3VEM
Lead	Target	8530	J	mg/kg	8530	D	2	Yes	S3VEM
Magnesium	Target	2520	J	mg/kg	2520	D*	2	Yes	S3VEM
Manganese	Target	486	J	mg/kg	486	D*	2	Yes	S3VEM
Nickel	Target	414	J	mg/kg	414	D*	2	Yes	S3VEM
Potassium	Target	2480	UJ	mg/kg	68.8	JD	2	Yes	S3VEM
Selenium	Target	17.4	UJ	mg/kg	16.0	JD*	2	Yes	S3VEM
Silver	Target	5.0	UJ	mg/kg	1.3	JD*	2	Yes	S3VEM
Sodium	Target	1930	J	mg/kg	1930	JD	2	Yes	S3VEM
Thallium	Target	12.4	UJ	mg/kg	12.4	UD	2	Yes	S3VEM
Vanadium	Target	25.4	J	mg/kg	25.4	D*	2	Yes	S3VEM
Zinc	Target	673	J	mg/kg	673	D*	2	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAF7	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-SUMPPUMP-06	pH:		Sample Date:	03/01/2016	Sample Time:	13:38:00
% Moisture :				% Solids :	18.0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	49300	J	mg/kg	49300	D	3	Yes	S3VEM
Antimony	Target	942	J	mg/kg	942	D*	3	Yes	S3VEM
Arsenic	Target	201	J	mg/kg	201	D	3	Yes	S3VEM
Barium	Target	224	J	mg/kg	224	D	3	Yes	S3VEM
Beryllium	Target	1.5	UJ	mg/kg	0.094	JD	3	Yes	S3VEM
Cadmium	Target	188	J	mg/kg	188	D*	3	Yes	S3VEM
Calcium	Target	61400	J	mg/kg	61400	D*	3	Yes	S3VEM
Chromium	Target	3160	J	mg/kg	3160	D*	4	Yes	S3VEM
Cobalt	Target	35.1	J	mg/kg	35.1	D*	3	Yes	S3VEM
Copper	Target	809	J	mg/kg	809	D	3	Yes	S3VEM
Iron	Target	88300	J	mg/kg	88300	D*	3	Yes	S3VEM
Lead	Target	19400	J	mg/kg	19400	D	100	Yes	S3VEM
Magnesium	Target	1770	J	mg/kg	1770	D*	3	Yes	S3VEM
Manganese	Target	842	J	mg/kg	842	D*	3	Yes	S3VEM
Nickel	Target	1070	J	mg/kg	1070	D*	3	Yes	S3VEM
Potassium	Target	1500	UJ	mg/kg	444	JD	3	Yes	S3VEM
Selenium	Target	10.5	UJ	mg/kg	7.1	JD*	3	Yes	S3VEM
Silver	Target	4.5	J	mg/kg	4.5	D*	3	Yes	S3VEM
Sodium	Target	13900	J	mg/kg	13900	D	3	Yes	S3VEM
Thallium	Target	0.50	J	mg/kg	0.50	JD	3	Yes	S3VEM
Vanadium	Target	70.5	J	mg/kg	70.5	D*	3	Yes	S3VEM
Zinc	Target	3220	J	mg/kg	3220	D*	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAF8	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-SUMPPUMP-07	pH:		Sample Date:	03/01/2016	Sample Time:	13:45:00
% Moisture :				% Solids :	33.2		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3090	J	mg/kg	3090	D	2	Yes	S3VEM
Antimony	Target	378	J	mg/kg	378	D*	2	Yes	S3VEM
Arsenic	Target	35.6	J	mg/kg	35.6	D	2	Yes	S3VEM
Barium	Target	860	J	mg/kg	860	D	2	Yes	S3VEM
Beryllium	Target	2.6	UJ	mg/kg	0.058	JD	2	Yes	S3VEM
Cadmium	Target	28.9	J	mg/kg	28.9	D*	2	Yes	S3VEM
Calcium	Target	307000	J	mg/kg	307000	D*	5	Yes	S3VEM
Chromium	Target	133	J	mg/kg	133	D*	2	Yes	S3VEM
Cobalt	Target	26.2	UJ	mg/kg	6.6	JD*	2	Yes	S3VEM
Copper	Target	71.7	J	mg/kg	71.7	D	2	Yes	S3VEM
Iron	Target	25700	J	mg/kg	25700	D*	2	Yes	S3VEM
Lead	Target	9390	J	mg/kg	9390	D	2	Yes	S3VEM
Magnesium	Target	11800	J	mg/kg	11800	D*	2	Yes	S3VEM
Manganese	Target	576	J	mg/kg	576	D*	2	Yes	S3VEM
Nickel	Target	112	J	mg/kg	112	D*	2	Yes	S3VEM
Potassium	Target	2620	UJ	mg/kg	61.0	JD	2	Yes	S3VEM
Selenium	Target	18.3	UJ	mg/kg	4.4	JD*	2	Yes	S3VEM
Silver	Target	5.2	UJ	mg/kg	1.4	JD*	2	Yes	S3VEM
Sodium	Target	2280	J	mg/kg	2280	JD	2	Yes	S3VEM
Thallium	Target	13.1	UJ	mg/kg	13.1	UD	2	Yes	S3VEM
Vanadium	Target	26.2	UJ	mg/kg	25.4	JD*	2	Yes	S3VEM
Zinc	Target	733	J	mg/kg	733	D*	2	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAF9	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-SUMPPUMP-08	pH:		Sample Date:	03/01/2016	Sample Time:	13:50:00
% Moisture :				% Solids :	33.1		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	9630	J	mg/kg	9630	D	5	Yes	S3VEM
Antimony	Target	5620	J	mg/kg	5620	D*	5	Yes	S3VEM
Arsenic	Target	1550	J	mg/kg	1550	D	5	Yes	S3VEM
Barium	Target	3960	J	mg/kg	3960	D	5	Yes	S3VEM
Beryllium	Target	5.6	UJ	mg/kg	0.31	JD	5	Yes	S3VEM
Cadmium	Target	142	J	mg/kg	142	D*	5	Yes	S3VEM
Calcium	Target	121000	J	mg/kg	121000	D*	5	Yes	S3VEM
Chromium	Target	111	J	mg/kg	111	D*	5	Yes	S3VEM
Cobalt	Target	55.6	UJ	mg/kg	29.9	JD*	5	Yes	S3VEM
Copper	Target	2970	J	mg/kg	2970	D	5	Yes	S3VEM
Iron	Target	191000	J	mg/kg	191000	D*	5	Yes	S3VEM
Lead	Target	85700	J	mg/kg	85700	D	100	Yes	S3VEM
Magnesium	Target	5560	UJ	mg/kg	3180	JD*	5	Yes	S3VEM
Manganese	Target	864	J	mg/kg	864	D*	5	Yes	S3VEM
Nickel	Target	287	J	mg/kg	287	D*	5	Yes	S3VEM
Potassium	Target	5560	UJ	mg/kg	592	JD	5	Yes	S3VEM
Selenium	Target	68.8	J	mg/kg	68.8	D*	5	Yes	S3VEM
Silver	Target	11.3	J	mg/kg	11.3	D*	5	Yes	S3VEM
Sodium	Target	24300	J	mg/kg	24300	D	5	Yes	S3VEM
Thallium	Target	27.8	UJ	mg/kg	27.8	UD	5	Yes	S3VEM
Vanadium	Target	71.0	J	mg/kg	71.0	D*	5	Yes	S3VEM
Zinc	Target	1770	J	mg/kg	1770	D*	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAG0	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-SUMPPUMP-09	pH:		Sample Date:	03/01/2016	Sample Time:	14:05:00
% Moisture :				% Solids :	42.3		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2000	J	mg/kg	2000	D	3	Yes	S3VEM
Antimony	Target	2780	J	mg/kg	2780	D*	3	Yes	S3VEM
Arsenic	Target	317	J	mg/kg	317	D	3	Yes	S3VEM
Barium	Target	831	J	mg/kg	831	D	3	Yes	S3VEM
Beryllium	Target	2.9	UJ	mg/kg	0.036	JD	3	Yes	S3VEM
Cadmium	Target	135	J	mg/kg	135	D*	3	Yes	S3VEM
Calcium	Target	45100	J	mg/kg	45100	D*	3	Yes	S3VEM
Chromium	Target	81.0	J	mg/kg	81.0	D*	3	Yes	S3VEM
Cobalt	Target	29.4	UJ	mg/kg	8.5	JD*	3	Yes	S3VEM
Copper	Target	772	J	mg/kg	772	D	3	Yes	S3VEM
Iron	Target	40700	J	mg/kg	40700	D*	3	Yes	S3VEM
Lead	Target	255000	J	mg/kg	255000	D	100	Yes	S3VEM
Magnesium	Target	2940	UJ	mg/kg	1950	JD*	3	Yes	S3VEM
Manganese	Target	235	J	mg/kg	235	D*	3	Yes	S3VEM
Nickel	Target	165	J	mg/kg	165	D*	3	Yes	S3VEM
Potassium	Target	2940	UJ	mg/kg	258	JD	3	Yes	S3VEM
Selenium	Target	28.4	J	mg/kg	28.4	D*	3	Yes	S3VEM
Silver	Target	9.1	J	mg/kg	9.1	D*	3	Yes	S3VEM
Sodium	Target	1150	J	mg/kg	1150	JD	3	Yes	S3VEM
Thallium	Target	10.1	J	mg/kg	10.1	JD	3	Yes	S3VEM
Vanadium	Target	138	J	mg/kg	138	D*	3	Yes	S3VEM
Zinc	Target	546	J	mg/kg	546	D*	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAG1	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-SUMPPUMP-10	pH:		Sample Date:	03/01/2016	Sample Time:	14:20:00
% Moisture :				% Solids :	53.1		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2720		mg/kg	2720	D	3	Yes	S3VEM
Antimony	Target	1630		mg/kg	1630	D*	3	Yes	S3VEM
Arsenic	Target	230		mg/kg	230	D	3	Yes	S3VEM
Barium	Target	819		mg/kg	819	D	3	Yes	S3VEM
Beryllium	Target	2.2	U	mg/kg	0.060	JD	3	Yes	S3VEM
Cadmium	Target	42.8		mg/kg	42.8	D*	3	Yes	S3VEM
Calcium	Target	38100		mg/kg	38100	D*	3	Yes	S3VEM
Chromium	Target	324		mg/kg	324	D*	3	Yes	S3VEM
Cobalt	Target	21.8	U	mg/kg	13.4	JD*	3	Yes	S3VEM
Copper	Target	680		mg/kg	680	D	3	Yes	S3VEM
Iron	Target	78800		mg/kg	78800	D*	3	Yes	S3VEM
Lead	Target	126000		mg/kg	126000	D	100	Yes	S3VEM
Magnesium	Target	3460		mg/kg	3460	D*	3	Yes	S3VEM
Manganese	Target	479		mg/kg	479	D*	3	Yes	S3VEM
Nickel	Target	377		mg/kg	377	D*	3	Yes	S3VEM
Potassium	Target	2180	U	mg/kg	121	JD	3	Yes	S3VEM
Selenium	Target	15.3	U	mg/kg	11.8	JD*	3	Yes	S3VEM
Silver	Target	6.4		mg/kg	6.4	D*	3	Yes	S3VEM
Sodium	Target	3030		mg/kg	3030	D	3	Yes	S3VEM
Thallium	Target	3.9		mg/kg	3.9	JD	3	Yes	S3VEM
Vanadium	Target	53.1		mg/kg	53.1	D*	3	Yes	S3VEM
Zinc	Target	729		mg/kg	729	D*	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAG2	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-AT01-Lagoon 01	pH:		Sample Date:	03/02/2016	Sample Time:	09:55:00
% Moisture :				% Solids :	29.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6020	J	mg/kg	6020	D	10	Yes	S3VEM
Antimony	Target	11700	J	mg/kg	11700	D*	100	Yes	S3VEM
Arsenic	Target	246	J	mg/kg	246	D	10	Yes	S3VEM
Barium	Target	200	UJ	mg/kg	97.4	JD	10	Yes	S3VEM
Beryllium	Target	5.0	UJ	mg/kg	0.16	JD	10	Yes	S3VEM
Cadmium	Target	4510	J	mg/kg	4510	D*	100	Yes	S3VEM
Calcium	Target	269000	J	mg/kg	269000	D*	10	Yes	S3VEM
Chromium	Target	331	J	mg/kg	331	D*	10	Yes	S3VEM
Cobalt	Target	658	J	mg/kg	658	D*	10	Yes	S3VEM
Copper	Target	1310	J	mg/kg	1310	D	10	Yes	S3VEM
Iron	Target	17200	J	mg/kg	17200	D*	10	Yes	S3VEM
Lead	Target	10400	J	mg/kg	10400	D	100	Yes	S3VEM
Magnesium	Target	5000	UJ	mg/kg	3530	JD*	10	Yes	S3VEM
Manganese	Target	5270	J	mg/kg	5270	D*	10	Yes	S3VEM
Nickel	Target	8540	J	mg/kg	8540	D*	100	Yes	S3VEM
Potassium	Target	5000	UJ	mg/kg	296	JD	10	Yes	S3VEM
Selenium	Target	661	J	mg/kg	661	D*	10	Yes	S3VEM
Silver	Target	10.0	UJ	mg/kg	2.7	JD*	10	Yes	S3VEM
Sodium	Target	2790	J	mg/kg	2790	JD	10	Yes	S3VEM
Thallium	Target	25.0	UJ	mg/kg	25.0	UD	10	Yes	S3VEM
Vanadium	Target	123	J	mg/kg	123	D*	10	Yes	S3VEM
Zinc	Target	7750	J	mg/kg	7750	D*	10	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAG3	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-AT01-Lagoon 02	pH:		Sample Date:	03/02/2016	Sample Time:	10:10:00
% Moisture :				% Solids :	39.2		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	416	J	mg/kg	416		1	Yes	S3VEM
Antimony	Target	555	J	mg/kg	555	*	1	Yes	S3VEM
Arsenic	Target	15.0	J	mg/kg	15.0		1	Yes	S3VEM
Barium	Target	918	J	mg/kg	918		1	Yes	S3VEM
Beryllium	Target	0.97	UJ	mg/kg	0.97	U	1	Yes	S3VEM
Cadmium	Target	11.3	J	mg/kg	11.3	*	1	Yes	S3VEM
Calcium	Target	3500	J	mg/kg	3500	*	1	Yes	S3VEM
Chromium	Target	9.3	J	mg/kg	9.3	*	1	Yes	S3VEM
Cobalt	Target	9.7	UJ	mg/kg	1.4	J*	1	Yes	S3VEM
Copper	Target	40.6	J	mg/kg	40.6		1	Yes	S3VEM
Iron	Target	802	J	mg/kg	802	*	1	Yes	S3VEM
Lead	Target	266000	J	mg/kg	266000	D	100	Yes	S3VEM
Magnesium	Target	966	UJ	mg/kg	182	J*	1	Yes	S3VEM
Manganese	Target	12.0	J	mg/kg	12.0	*	1	Yes	S3VEM
Nickel	Target	21.6	J	mg/kg	21.6	*	1	Yes	S3VEM
Potassium	Target	966	UJ	mg/kg	220	J	1	Yes	S3VEM
Selenium	Target	108	J	mg/kg	108	*	1	Yes	S3VEM
Silver	Target	106	J	mg/kg	106	*	1	Yes	S3VEM
Sodium	Target	3980	J	mg/kg	3980		1	Yes	S3VEM
Thallium	Target	14.6	J	mg/kg	14.6		1	Yes	S3VEM
Vanadium	Target	9.7	UJ	mg/kg	5.3	J*	1	Yes	S3VEM
Zinc	Target	33.5	J	mg/kg	33.5	*	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAG4	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-AT01-Tank 01	pH:		Sample Date:	03/02/2016	Sample Time:	10:40:00
% Moisture :				% Solids :	9.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6500	J	mg/kg	6500	D	5	Yes	S3VEM
Antimony	Target	2930	J	mg/kg	2930	D*	5	Yes	S3VEM
Arsenic	Target	95.6	J	mg/kg	95.6	D	5	Yes	S3VEM
Barium	Target	315	J	mg/kg	315	D	5	Yes	S3VEM
Beryllium	Target	2.5	UJ	mg/kg	0.14	JD	5	Yes	S3VEM
Cadmium	Target	1620	J	mg/kg	1620	D*	8	Yes	S3VEM
Calcium	Target	201000	J	mg/kg	201000	D*	8	Yes	S3VEM
Chromium	Target	364	J	mg/kg	364	D*	5	Yes	S3VEM
Cobalt	Target	165	J	mg/kg	165	D*	5	Yes	S3VEM
Copper	Target	1040	J	mg/kg	1040	D	5	Yes	S3VEM
Iron	Target	13400	J	mg/kg	13400	D*	5	Yes	S3VEM
Lead	Target	919	J	mg/kg	919	D	100	Yes	S3VEM
Magnesium	Target	4920	J	mg/kg	4920	D*	5	Yes	S3VEM
Manganese	Target	738	J	mg/kg	738	D*	5	Yes	S3VEM
Nickel	Target	2410	J	mg/kg	2410	D*	5	Yes	S3VEM
Potassium	Target	2500	UJ	mg/kg	895	JD	5	Yes	S3VEM
Selenium	Target	146	J	mg/kg	146	D*	5	Yes	S3VEM
Silver	Target	5.0	UJ	mg/kg	1.1	JD*	5	Yes	S3VEM
Sodium	Target	12600	J	mg/kg	12600	D	5	Yes	S3VEM
Thallium	Target	2.5	J	mg/kg	2.5	JD	5	Yes	S3VEM
Vanadium	Target	48.9	J	mg/kg	48.9	D*	5	Yes	S3VEM
Zinc	Target	2590	J	mg/kg	2590	D*	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number:	MBCAG5	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-AT01-Tank 02	pH:		Sample Date:	03/02/2016	Sample Time:	10:50:00
% Moisture :				% Solids :	5.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	9690	J	mg/kg	9690	D	10	Yes	S3VEM
Antimony	Target	16500	J	mg/kg	16500	D*	100	Yes	S3VEM
Arsenic	Target	528	J	mg/kg	528	D	10	Yes	S3VEM
Barium	Target	648	J	mg/kg	648	D	10	Yes	S3VEM
Beryllium	Target	5.0	UJ	mg/kg	0.16	JD	10	Yes	S3VEM
Cadmium	Target	6060	J	mg/kg	6060	D*	100	Yes	S3VEM
Calcium	Target	129000	J	mg/kg	129000	D*	10	Yes	S3VEM
Chromium	Target	633	J	mg/kg	633	D*	10	Yes	S3VEM
Cobalt	Target	1400	J	mg/kg	1400	D*	10	Yes	S3VEM
Copper	Target	1890	J	mg/kg	1890	D	10	Yes	S3VEM
Iron	Target	33100	J	mg/kg	33100	D*	10	Yes	S3VEM
Lead	Target	10400	J	mg/kg	10400	D	100	Yes	S3VEM
Magnesium	Target	5000	UJ	mg/kg	2650	JD*	10	Yes	S3VEM
Manganese	Target	8950	J	mg/kg	8950	D*	10	Yes	S3VEM
Nickel	Target	15300	J	mg/kg	15300	D*	100	Yes	S3VEM
Potassium	Target	5000	UJ	mg/kg	431	JD	10	Yes	S3VEM
Selenium	Target	436	J	mg/kg	436	D*	10	Yes	S3VEM
Silver	Target	10.0	UJ	mg/kg	3.8	JD*	10	Yes	S3VEM
Sodium	Target	19300	J	mg/kg	19300	D	10	Yes	S3VEM
Thallium	Target	25.0	UJ	mg/kg	25.0	UD	10	Yes	S3VEM
Vanadium	Target	161	J	mg/kg	161	D*	10	Yes	S3VEM
Zinc	Target	9630	J	mg/kg	9630	D*	10	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAF1	Lab Code: BON

Sample Number: PBS01	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2.7	J	mg/kg	2.7	J	1	Yes	S3VEM
Antimony	Target	0.34	J	mg/kg	0.34	J	1	Yes	S3VEM
Arsenic	Target	-.17		mg/kg	-.17	J	1	Yes	S3VEM
Barium	Target	-.052		mg/kg	-.052	J	1	Yes	S3VEM
Beryllium	Target	-.0065		mg/kg	-.0065	J	1	Yes	S3VEM
Cadmium	Target	-.0088		mg/kg	-.0088	J	1	Yes	S3VEM
Calcium	Target	6.8	J	mg/kg	6.8	J	1	Yes	S3VEM
Chromium	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Cobalt	Target	-.019		mg/kg	-.019	J	1	Yes	S3VEM
Copper	Target	0.13	J	mg/kg	0.13	J	1	Yes	S3VEM
Iron	Target	10.0	U	mg/kg	10.0	U	1	Yes	S3VEM
Lead	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Magnesium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Manganese	Target	0.040	J	mg/kg	0.040	J	1	Yes	S3VEM
Nickel	Target	4.0	U	mg/kg	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Selenium	Target	0.31	J	mg/kg	0.31	J	1	Yes	S3VEM
Silver	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Sodium	Target	-4.1		mg/kg	-4.1	J	1	Yes	S3VEM
Thallium	Target	-.18		mg/kg	-.18	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	mg/kg	5.0	U	1	Yes	S3VEM
Zinc	Target	6.0	U	mg/kg	6.0	U	1	Yes	S3VEM

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 6 (Soil)
Analysis: Metals

SDG No.: MBCAG6
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/3/2016, 3/4/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solution
Contractor Document: DCN # RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
Sample MBCAG6 has analytes that have been qualified J or J+.

Minor Findings:
None

COMMENT:	The site specific QAPP did not specify the project action levels for this site.

Reviewer Name(s): T. Solomon

Approver's Signature: **Date:04/05/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Cobalt MBCAG6, MBCAG7, MBCAG8, MBCAG9, MBCAH0, MBCAH1

Magnesium MBCAG6, MBCAG7, MBCAG8, MBCAG9, MBCAH0

Potassium MBCAG6, MBCAG7, MBCAG8

Silver MBCAG6, MBCAG7, MBCAG8, MBCAG9, MBCAH0

Thallium MBCAG6, MBCAG7, MBCAG8, MBCAG9, MBCAH0

Vanadium MBCAH0

The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Beryllium MBCAH1

Cobalt MBCAG6, MBCAG7, MBCAG8, MBCAG9, MBCAH0, MBCAH1

Potassium MBCAG6, MBCAG7, MBCAG8

Silver MBCAG6, MBCAG7, MBCAG8, MBCAG9, MBCAH0

The following samples have analyte results less than or equal to CRQLs. The associated preparation blank analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Potassium MBCAG6, MBCAG7, MBCAG8

Silver MBCAG6, MBCAG7, MBCAG8, MBCAG9, MBCAH0

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

The following matrix spike sample has percent recoveries greater than 125% and the post digestion spike sample had percent recoveries less than 125%. The detected analytes with results greater than or equal to the MDL are qualified J.

Copper, Manganese, Selenium MBCAG6

The following matrix spike sample has a percent recovery less than 75% and the post digestion spike sample had a percent recovery greater than 75%. The detected analyte with a result greater than or equal to the MDL is qualified J.

Barium MBCAG6

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

No problems were found for this criterion.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

This SDG did not contain field duplicates.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

The following sample is associated to the serial dilution sample with analyte %Ds > 15% and the original sample results are > 50X MDL. The detected analytes are qualified J.

Cobalt, Potassium MBCAG6

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAG6	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	43.0		mg/kg	43.0		1	Yes	S3VEM
Antimony	Target	11.6		mg/kg	11.6		1	Yes	S3VEM
Arsenic	Target	2.0		mg/kg	2.0		1	Yes	S3VEM
Barium	Target	44.8		mg/kg	44.8		1	Yes	S3VEM
Beryllium	Target	1.0		mg/kg	1.0		1	Yes	S3VEM
Cadmium	Target	1.1		mg/kg	1.1		1	Yes	S3VEM
Calcium	Target	1120		mg/kg	1120		1	Yes	S3VEM
Chromium	Target	2.1		mg/kg	2.1		1	Yes	S3VEM
Cobalt	Target	10.8		mg/kg	10.8		1	Yes	S3VEM
Copper	Target	4.8		mg/kg	4.8		1	Yes	S3VEM
Iron	Target	20.4		mg/kg	20.4		1	Yes	S3VEM
Lead	Target	2.1		mg/kg	2.1		1	Yes	S3VEM
Magnesium	Target	1020		mg/kg	1020		1	Yes	S3VEM
Manganese	Target	3.4		mg/kg	3.4		1	Yes	S3VEM
Nickel	Target	8.7		mg/kg	8.7		1	Yes	S3VEM
Potassium	Target	1010		mg/kg	1010		1	Yes	S3VEM
Selenium	Target	6.5		mg/kg	6.5		1	Yes	S3VEM
Silver	Target	2.0		mg/kg	2.0		1	Yes	S3VEM
Sodium	Target	985		mg/kg	985		1	Yes	S3VEM
Thallium	Target	4.7		mg/kg	4.7		1	Yes	S3VEM
Vanadium	Target	10.9		mg/kg	10.9		1	Yes	S3VEM
Zinc	Target	12.5		mg/kg	12.5		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAG6	Lab Code: BON

Sample Number:	MBCAG6	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-BB01	pH:		Sample Date:	03/03/2016	Sample Time:	11:40:00
% Moisture :				% Solids :	97.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	518		mg/kg	518	D	5	Yes	S3VEM
Antimony	Target	3680		mg/kg	3680	D	5	Yes	S3VEM
Arsenic	Target	895		mg/kg	895	D	5	Yes	S3VEM
Barium	Target	132	J	mg/kg	132	D*	5	Yes	S3VEM
Beryllium	Target	2.6	U	mg/kg	2.6	UD	5	Yes	S3VEM
Cadmium	Target	1710		mg/kg	1710	D	100	Yes	S3VEM
Calcium	Target	6210		mg/kg	6210	D	5	Yes	S3VEM
Chromium	Target	28.0		mg/kg	28.0	D*	5	Yes	S3VEM
Cobalt	Target	25.6	UJ	mg/kg	7.3	JD*	5	Yes	S3VEM
Copper	Target	188	J	mg/kg	188	D*	5	Yes	S3VEM
Iron	Target	77200	J	mg/kg	77200	D*	5	Yes	S3VEM
Lead	Target	110000		mg/kg	110000	D	100	Yes	S3VEM
Magnesium	Target	2560	U	mg/kg	351	JD	5	Yes	S3VEM
Manganese	Target	393	J	mg/kg	393	D*	5	Yes	S3VEM
Nickel	Target	68.3		mg/kg	68.3	D	5	Yes	S3VEM
Potassium	Target	2560	UJ	mg/kg	851	JD	5	Yes	S3VEM
Selenium	Target	64.9	J	mg/kg	64.9	D*	5	Yes	S3VEM
Silver	Target	5.1	U	mg/kg	2.2	JD	5	Yes	S3VEM
Sodium	Target	31900		mg/kg	31900	D	5	Yes	S3VEM
Thallium	Target	12.8	U	mg/kg	3.1	JD	5	Yes	S3VEM
Vanadium	Target	55.2		mg/kg	55.2	D	5	Yes	S3VEM
Zinc	Target	5440		mg/kg	5440	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAG6	Lab Code: BON

Sample Number:	MBCAG6A	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:	03/03/2016	Sample Time:	11:40:00
% Moisture :				% Solids :	97.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Barium	Spike	399		mg/kg	399	D	5	Yes	S3VEM
Copper	Spike	636		mg/kg	636	D	5	Yes	S3VEM
Manganese	Spike	1220		mg/kg	1220	D	5	Yes	S3VEM
Selenium	Spike	244		mg/kg	244	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAG6	Lab Code: BON

Sample Number: MBCAG6D	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/03/2016	Sample Time: 11:40:00
% Moisture :		% Solids : 97.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	607		mg/kg	607	D	5	Yes	S3VEM
Antimony	Target	4110		mg/kg	4110	D	5	Yes	S3VEM
Arsenic	Target	1050		mg/kg	1050	D	5	Yes	S3VEM
Barium	Target	146		mg/kg	146	D	5	Yes	S3VEM
Beryllium	Target	2.6	U	mg/kg	2.6	UD	5	Yes	S3VEM
Cadmium	Target	1700		mg/kg	1700	D	100	Yes	S3VEM
Calcium	Target	6980		mg/kg	6980	D	5	Yes	S3VEM
Chromium	Target	37.0		mg/kg	37.0	D*	5	Yes	S3VEM
Cobalt	Target	8.9		mg/kg	8.9	JD	5	Yes	S3VEM
Copper	Target	220		mg/kg	220	D	5	Yes	S3VEM
Iron	Target	96500		mg/kg	96500	D*	5	Yes	S3VEM
Lead	Target	107000		mg/kg	107000	D	100	Yes	S3VEM
Magnesium	Target	392		mg/kg	392	JD	5	Yes	S3VEM
Manganese	Target	515		mg/kg	515	D*	5	Yes	S3VEM
Nickel	Target	81.2		mg/kg	81.2	D	5	Yes	S3VEM
Potassium	Target	938		mg/kg	938	JD	5	Yes	S3VEM
Selenium	Target	71.8		mg/kg	71.8	D	5	Yes	S3VEM
Silver	Target	2.4		mg/kg	2.4	JD	5	Yes	S3VEM
Sodium	Target	35200		mg/kg	35200	D	5	Yes	S3VEM
Thallium	Target	3.5		mg/kg	3.5	JD	5	Yes	S3VEM
Vanadium	Target	61.1		mg/kg	61.1	D	5	Yes	S3VEM
Zinc	Target	6010		mg/kg	6010	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAG6	Lab Code: BON

Sample Number: MBCAG6L	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 97.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	547		mg/kg	547	D	25	Yes	S3VEM
Antimony	Target	3800		mg/kg	3800	D	25	Yes	S3VEM
Arsenic	Target	871		mg/kg	871	D	25	Yes	S3VEM
Barium	Target	135	J	mg/kg	135	JD	25	Yes	S3VEM
Beryllium	Target	12.8	U	mg/kg	12.8	UD	25	Yes	S3VEM
Cadmium	Target	1650		mg/kg	1650	D	500	Yes	S3VEM
Calcium	Target	6450	J	mg/kg	6450	JD	25	Yes	S3VEM
Chromium	Target	28.0		mg/kg	28.0	D	25	Yes	S3VEM
Cobalt	Target	8.8	J	mg/kg	8.8	JD*	25	Yes	S3VEM
Copper	Target	215		mg/kg	215	D*	25	Yes	S3VEM
Iron	Target	78800		mg/kg	78800	D	25	Yes	S3VEM
Lead	Target	105000		mg/kg	105000	D	500	Yes	S3VEM
Magnesium	Target	329	J	mg/kg	329	JD	25	Yes	S3VEM
Manganese	Target	408		mg/kg	408	D	25	Yes	S3VEM
Nickel	Target	67.3	J	mg/kg	67.3	JD	25	Yes	S3VEM
Potassium	Target	1030		mg/kg	1030	JD	25	Yes	S3VEM
Selenium	Target	56.9	J	mg/kg	56.9	JD	25	Yes	S3VEM
Silver	Target	3.4	J	mg/kg	3.4	JD	25	Yes	S3VEM
Sodium	Target	32600		mg/kg	32600	D	25	Yes	S3VEM
Thallium	Target	3.1	J	mg/kg	3.1	JD	25	Yes	S3VEM
Vanadium	Target	55.1	J	mg/kg	55.1	JD	25	Yes	S3VEM
Zinc	Target	5740		mg/kg	5740	D	25	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAG6	Lab Code: BON

Sample Number: MBCAG6S	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/03/2016	Sample Time: 11:40:00
% Moisture :		% Solids : 97.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Antimony	Spike	4350		mg/kg	4350	D	5	Yes	S3VEM
Arsenic	Spike	1050		mg/kg	1050	D	5	Yes	S3VEM
Barium	Spike	257		mg/kg	257	D*	5	Yes	S3VEM
Beryllium	Spike	10.6		mg/kg	10.6	D	5	Yes	S3VEM
Cadmium	Spike	1700		mg/kg	1700	D	100	Yes	S3VEM
Chromium	Spike	73.8		mg/kg	73.8	D	5	Yes	S3VEM
Cobalt	Spike	117		mg/kg	117	D	5	Yes	S3VEM
Copper	Spike	284		mg/kg	284	D*	5	Yes	S3VEM
Lead	Spike	101000		mg/kg	101000	D	100	Yes	S3VEM
Manganese	Spike	534		mg/kg	534	D*	5	Yes	S3VEM
Nickel	Spike	193		mg/kg	193	D	5	Yes	S3VEM
Selenium	Spike	94.9		mg/kg	94.9	D*	5	Yes	S3VEM
Silver	Spike	12.4		mg/kg	12.4	D	5	Yes	S3VEM
Thallium	Spike	13.9		mg/kg	13.9	D	5	Yes	S3VEM
Vanadium	Spike	172		mg/kg	172	D	5	Yes	S3VEM
Zinc	Spike	6070		mg/kg	6070	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAG6	Lab Code: BON

Sample Number: MBCAG7	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-BB01	pH:	Sample Date: 03/03/2016	Sample Time: 11:40:00
% Moisture :		% Solids : 97.3	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	539		mg/kg	539	D	6	Yes	S3VEM
Antimony	Target	3980		mg/kg	3980	D	6	Yes	S3VEM
Arsenic	Target	1050		mg/kg	1050	D	6	Yes	S3VEM
Barium	Target	140		mg/kg	140	D*	6	Yes	S3VEM
Beryllium	Target	3.1	U	mg/kg	3.1	UD	6	Yes	S3VEM
Cadmium	Target	1640		mg/kg	1640	D	100	Yes	S3VEM
Calcium	Target	6450		mg/kg	6450	D	6	Yes	S3VEM
Chromium	Target	35.2		mg/kg	35.2	D*	6	Yes	S3VEM
Cobalt	Target	30.8	U	mg/kg	10.2	JD*	6	Yes	S3VEM
Copper	Target	204		mg/kg	204	D*	6	Yes	S3VEM
Iron	Target	109000		mg/kg	109000	D*	6	Yes	S3VEM
Lead	Target	120000		mg/kg	120000	D	100	Yes	S3VEM
Magnesium	Target	3080	U	mg/kg	370	JD	6	Yes	S3VEM
Manganese	Target	583		mg/kg	583	D*	6	Yes	S3VEM
Nickel	Target	77.9		mg/kg	77.9	D	6	Yes	S3VEM
Potassium	Target	3080	U	mg/kg	918	JD	6	Yes	S3VEM
Selenium	Target	73.1		mg/kg	73.1	D*	6	Yes	S3VEM
Silver	Target	6.2	U	mg/kg	2.3	JD	6	Yes	S3VEM
Sodium	Target	39700		mg/kg	39700	D	6	Yes	S3VEM
Thallium	Target	15.4	U	mg/kg	2.5	JD	6	Yes	S3VEM
Vanadium	Target	57.2		mg/kg	57.2	D	6	Yes	S3VEM
Zinc	Target	5770		mg/kg	5770	D	6	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAG6	Lab Code: BON

Sample Number: MBCAG8	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-BB01	pH:	Sample Date: 03/03/2016	Sample Time: 11:55:00
% Moisture :		% Solids : 98.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	794		mg/kg	794	D	5	Yes	S3VEM
Antimony	Target	10500		mg/kg	10500	D	100	Yes	S3VEM
Arsenic	Target	966		mg/kg	966	D	5	Yes	S3VEM
Barium	Target	150		mg/kg	150	D*	5	Yes	S3VEM
Beryllium	Target	2.5	U	mg/kg	2.5	UD	5	Yes	S3VEM
Cadmium	Target	1560		mg/kg	1560	D	100	Yes	S3VEM
Calcium	Target	13500		mg/kg	13500	D	5	Yes	S3VEM
Chromium	Target	15.1		mg/kg	15.1	D*	5	Yes	S3VEM
Cobalt	Target	25.5	U	mg/kg	4.3	JD*	5	Yes	S3VEM
Copper	Target	450		mg/kg	450	D*	5	Yes	S3VEM
Iron	Target	7170		mg/kg	7170	D*	5	Yes	S3VEM
Lead	Target	128000		mg/kg	128000	D	100	Yes	S3VEM
Magnesium	Target	2550	U	mg/kg	306	JD	5	Yes	S3VEM
Manganese	Target	77.5		mg/kg	77.5	D*	5	Yes	S3VEM
Nickel	Target	475		mg/kg	475	D	5	Yes	S3VEM
Potassium	Target	2550	U	mg/kg	331	JD	5	Yes	S3VEM
Selenium	Target	109		mg/kg	109	D*	5	Yes	S3VEM
Silver	Target	5.1	U	mg/kg	3.4	JD	5	Yes	S3VEM
Sodium	Target	14300		mg/kg	14300	D	5	Yes	S3VEM
Thallium	Target	12.7	U	mg/kg	8.5	JD	5	Yes	S3VEM
Vanadium	Target	102		mg/kg	102	D	5	Yes	S3VEM
Zinc	Target	2530		mg/kg	2530	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAG6	Lab Code: BON

Sample Number: MBCAG9	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-BB01	pH:	Sample Date: 03/03/2016	Sample Time: 12:05:00
% Moisture :		% Solids : 92.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	484		mg/kg	484	D	4	Yes	S3VEM
Antimony	Target	6850		mg/kg	6850	D	100	Yes	S3VEM
Arsenic	Target	1120		mg/kg	1120	D	4	Yes	S3VEM
Barium	Target	110		mg/kg	110	D*	4	Yes	S3VEM
Beryllium	Target	2.2	U	mg/kg	2.2	UD	4	Yes	S3VEM
Cadmium	Target	893		mg/kg	893	D	100	Yes	S3VEM
Calcium	Target	14300		mg/kg	14300	D	4	Yes	S3VEM
Chromium	Target	18.9		mg/kg	18.9	D*	4	Yes	S3VEM
Cobalt	Target	21.6	U	mg/kg	2.7	JD*	4	Yes	S3VEM
Copper	Target	238		mg/kg	238	D*	4	Yes	S3VEM
Iron	Target	13600		mg/kg	13600	D*	4	Yes	S3VEM
Lead	Target	126000		mg/kg	126000	D	100	Yes	S3VEM
Magnesium	Target	2160	U	mg/kg	288	JD	4	Yes	S3VEM
Manganese	Target	133		mg/kg	133	D*	4	Yes	S3VEM
Nickel	Target	146		mg/kg	146	D	4	Yes	S3VEM
Potassium	Target	20600		mg/kg	20600	D	4	Yes	S3VEM
Selenium	Target	87.8		mg/kg	87.8	D*	4	Yes	S3VEM
Silver	Target	4.3	U	mg/kg	3.5	JD	4	Yes	S3VEM
Sodium	Target	58300		mg/kg	58300	D	4	Yes	S3VEM
Thallium	Target	10.8	U	mg/kg	5.4	JD	4	Yes	S3VEM
Vanadium	Target	60.4		mg/kg	60.4	D	4	Yes	S3VEM
Zinc	Target	2140		mg/kg	2140	D	4	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAG6	Lab Code: BON

Sample Number:	MBCAH0	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-BB01	pH:		Sample Date:	03/04/2016	Sample Time:	14:05:00
% Moisture :				% Solids :	93.5		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1620		mg/kg	1620	D	5	Yes	S3VEM
Antimony	Target	3160		mg/kg	3160	D	5	Yes	S3VEM
Arsenic	Target	1350		mg/kg	1350	D	5	Yes	S3VEM
Barium	Target	211		mg/kg	211	D*	5	Yes	S3VEM
Beryllium	Target	2.7	U	mg/kg	2.7	UD	5	Yes	S3VEM
Cadmium	Target	7110		mg/kg	7110	D	100	Yes	S3VEM
Calcium	Target	125000		mg/kg	125000	D	5	Yes	S3VEM
Chromium	Target	9.2		mg/kg	9.2	D*	5	Yes	S3VEM
Cobalt	Target	26.7	U	mg/kg	4.0	JD*	5	Yes	S3VEM
Copper	Target	103		mg/kg	103	D*	5	Yes	S3VEM
Iron	Target	5540		mg/kg	5540	D*	5	Yes	S3VEM
Lead	Target	110000		mg/kg	110000	D	100	Yes	S3VEM
Magnesium	Target	2670	U	mg/kg	628	JD	5	Yes	S3VEM
Manganese	Target	164		mg/kg	164	D*	5	Yes	S3VEM
Nickel	Target	236		mg/kg	236	D	5	Yes	S3VEM
Potassium	Target	6040		mg/kg	6040	D	5	Yes	S3VEM
Selenium	Target	120		mg/kg	120	D*	5	Yes	S3VEM
Silver	Target	5.3	U	mg/kg	1.9	JD	5	Yes	S3VEM
Sodium	Target	4630		mg/kg	4630	D	5	Yes	S3VEM
Thallium	Target	13.4	U	mg/kg	5.0	JD	5	Yes	S3VEM
Vanadium	Target	26.7	U	mg/kg	25.9	JD	5	Yes	S3VEM
Zinc	Target	3330		mg/kg	3330	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAG6	Lab Code: BON

Sample Number:	MBCAH1	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-BB01	pH:		Sample Date:	03/04/2016	Sample Time:	14:55:00
% Moisture :				% Solids :	97.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	8350		mg/kg	8350	D	2	Yes	S3VEM
Antimony	Target	8.3	J	mg/kg	8.3	JD	2	Yes	S3VEM
Arsenic	Target	16.6		mg/kg	16.6	D	2	Yes	S3VEM
Barium	Target	50.8		mg/kg	50.8	D*	2	Yes	S3VEM
Beryllium	Target	1.0	U	mg/kg	0.19	JD	2	Yes	S3VEM
Cadmium	Target	23.4		mg/kg	23.4	D	2	Yes	S3VEM
Calcium	Target	393000		mg/kg	393000	D	100	Yes	S3VEM
Chromium	Target	21.8		mg/kg	21.8	D*	2	Yes	S3VEM
Cobalt	Target	10.2	U	mg/kg	2.7	JD*	2	Yes	S3VEM
Copper	Target	8.7		mg/kg	8.7	D*	2	Yes	S3VEM
Iron	Target	6290		mg/kg	6290	D*	2	Yes	S3VEM
Lead	Target	3030		mg/kg	3030	D	2	Yes	S3VEM
Magnesium	Target	2240		mg/kg	2240	D	2	Yes	S3VEM
Manganese	Target	179		mg/kg	179	D*	2	Yes	S3VEM
Nickel	Target	10.3		mg/kg	10.3	D	2	Yes	S3VEM
Potassium	Target	8330		mg/kg	8330	D	2	Yes	S3VEM
Selenium	Target	7.2	U	mg/kg	7.2	UD*	2	Yes	S3VEM
Silver	Target	2.0	U	mg/kg	2.0	UD	2	Yes	S3VEM
Sodium	Target	3610		mg/kg	3610	D	2	Yes	S3VEM
Thallium	Target	5.1	U	mg/kg	5.1	UD	2	Yes	S3VEM
Vanadium	Target	24.2		mg/kg	24.2	D	2	Yes	S3VEM
Zinc	Target	36.9		mg/kg	36.9	D	2	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAG6	Lab Code: BON

Sample Number: PBS01	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	mg/kg	20.0	U	1	Yes	S3VEM
Antimony	Target	-.25		mg/kg	-.25	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Barium	Target	20.0	U	mg/kg	20.0	U	1	Yes	S3VEM
Beryllium	Target	-.0088		mg/kg	-.0088	J	1	Yes	S3VEM
Cadmium	Target	0.50	U	mg/kg	0.50	U	1	Yes	S3VEM
Calcium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Chromium	Target	0.32	J	mg/kg	0.32	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	mg/kg	5.0	U	1	Yes	S3VEM
Copper	Target	2.5	U	mg/kg	2.5	U	1	Yes	S3VEM
Iron	Target	2.1	J	mg/kg	2.1	J	1	Yes	S3VEM
Lead	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Magnesium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Manganese	Target	1.5	U	mg/kg	1.5	U	1	Yes	S3VEM
Nickel	Target	0.062	J	mg/kg	0.062	J	1	Yes	S3VEM
Potassium	Target	8.2		mg/kg	8.2	J	1	Yes	S3VEM
Selenium	Target	3.5	U	mg/kg	3.5	U	1	Yes	S3VEM
Silver	Target	0.060	J	mg/kg	0.060	J	1	Yes	S3VEM
Sodium	Target	3.3	J	mg/kg	3.3	J	1	Yes	S3VEM
Thallium	Target	-.17		mg/kg	-.17	J	1	Yes	S3VEM
Vanadium	Target	-.057		mg/kg	-.057	J	1	Yes	S3VEM
Zinc	Target	6.0	U	mg/kg	6.0	U	1	Yes	S3VEM

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Puerto Rico Battery Recycling Assessment
Number of Samples: 20 soils
Analysis: Metals

SDG No.: MBCAH2
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/2/2016 – 3/4/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solutions
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
Sample MBCAH8 has analytes that have been qualified J, J+ or J-.

Minor Findings:
None

COMMENT:	The site-specific QAPP did not specify any project action levels for this site.

Reviewer Name(s): Steffanie Tobin

Approver's Signature: **Date: 04/11/2016**

Name: **Narendra Kumar**

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi- Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCBs have analyte results less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Barium: MBCAJ5

Beryllium: MBCAH4, MBCAH6, MBCAH7, MBCAH8, MBCAH9, MBCAJ0, MBCAJ1, MBCAJ2, MBCAJ3, MBCAJ4, MBCAJ5, MBCAJ6, MBCAJ7, MBCAJ8, MBCAJ9, MBCAK0, MBCAK1

Cadmium: MBCAJ4

Cobalt: MBCAH2, MBCAH3, MBCAH4, MBCAH5, MBCAH6, MBCAH7, MBCAH8, MBCAH9, MBCAJ0, MBCAJ1, MBCAJ2, MBCAJ3, MBCAJ4, MBCAJ5, MBCAJ6, MBCAJ7, MBCAJ8, MBCAJ9, MBCAK0, MBCAK1

Magnesium: MBCAH2, MBCAH3, MBCAH4, MBCAH5, MBCAH6, MBCAH7, MBCAH8, MBCAH9, MBCAJ0, MBCAJ3, MBCAJ4, MBCAJ5, MBCAJ6, MBCAJ7, MBCAJ8, MBCAJ9, MBCAK1

Potassium: MBCAH2, MBCAH3, MBCAH4, MBCAH5, MBCAH6, MBCAH7, MBCAH8, MBCAH9, MBCAJ0, MBCAJ1, MBCAJ2, MBCAJ3, MBCAJ4, MBCAJ5, MBCAJ6, MBCAJ7, MBCAJ8, MBCAJ9, MBCAK0, MBCAK1

Selenium: MBCAH2, MBCAH3, MBCAH5, MBCAH6, MBCAH7, MBCAH8, MBCAH9, MBCAJ3, MBCAJ4, MBCAJ5, MBCAK0

Silver: MBCAH6, MBCAH8, MBCAH9, MBCAJ3, MBCAJ5, MBCAK0

Sodium: MBCAH2, MBCAH3, MBCAH4

Thallium: MBCAH4, MBCAH5, MBCAJ1, MBCAJ3, MBCAJ4, MBCAJ6, MBCAJ9, MBCAK0, MBCAK1

Vanadium: MBCAH2

The following samples have analyte results less than or equal to CRQLs. The associated ICB has analyte results less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Beryllium: MBCAH4, MBCAH6, MBCAH7, MBCAH8, MBCAH9, MBCAJ0, MBCAJ1, MBCAJ2, MBCAJ3, MBCAJ4, MBCAJ5, MBCAJ6, MBCAJ7, MBCAJ8, MBCAJ9, MBCAK0, MBCAK1

Cadmium: MBCAJ4

Cobalt: MBCAH2, MBCAH3, MBCAH4, MBCAH5, MBCAH6, MBCAH7, MBCAH8, MBCAH9, MBCAJ0, MBCAJ1, MBCAJ2, MBCAJ3, MBCAJ4, MBCAJ5, MBCAJ6, MBCAJ7, MBCAJ8, MBCAJ9, MBCAK0, MBCAK1

Selenium: MBCAH2, MBCAH3, MBCAH5, MBCAH6, MBCAH7, MBCAH8, MBCAH9, MBCAJ3, MBCAJ4, MBCAJ5, MBCAK0

Silver: MBCAH6, MBCAH8, MBCAH9, MBCAJ3, MBCAJ5, MBCAK0

Thallium: MBCAH4, MBCAH5, MBCAJ1, MBCAJ3, MBCAJ4, MBCAJ6, MBCAJ9, MBCAK0, MBCAK1

The following samples have analyte results less than or equal to CRQLs. The associated preparation blank has analyte results less than CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Selenium: MBCAH2, MBCAH3, MBCAH5, MBCAH6, MBCAH7, MBCAH8, MBCAH9, MBCAJ3, MBCAJ4, MBCAJ5, MBCAK0

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

The following Matrix Spike sample has percent recovery in the range of 30-74% and post-digestion spike sample has percent recovery less than 75%. Detected analyte with result greater than or equal to MDL is qualified J-. Non-detected analyte is qualified UJ.

Thallium: MBCAH8

The following Matrix Spike sample has percent recovery in the range of 30-74% and post-digestion spike sample has percent recovery greater than or equal to 75%. Detected analyte with result greater than or equal to MDL is qualified J. Non-detected analyte is qualified UJ.

Barium: MBCAH8

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

No problems were found for this criterion.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 50% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of 2X the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

Not applicable.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

No problems were found for this criterion.

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAH2	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	44.7		mg/kg	44.7		1	Yes	S3VEM
Antimony	Target	12.0		mg/kg	12.0		1	Yes	S3VEM
Arsenic	Target	1.9		mg/kg	1.9		1	Yes	S3VEM
Barium	Target	41.8		mg/kg	41.8		1	Yes	S3VEM
Beryllium	Target	0.99		mg/kg	0.99		1	Yes	S3VEM
Cadmium	Target	1.0		mg/kg	1.0		1	Yes	S3VEM
Calcium	Target	1060		mg/kg	1060		1	Yes	S3VEM
Chromium	Target	2.0		mg/kg	2.0		1	Yes	S3VEM
Cobalt	Target	10.3		mg/kg	10.3		1	Yes	S3VEM
Copper	Target	5.1		mg/kg	5.1		1	Yes	S3VEM
Iron	Target	20.1		mg/kg	20.1		1	Yes	S3VEM
Lead	Target	2.0		mg/kg	2.0		1	Yes	S3VEM
Magnesium	Target	1010		mg/kg	1010		1	Yes	S3VEM
Manganese	Target	3.0		mg/kg	3.0		1	Yes	S3VEM
Nickel	Target	8.9		mg/kg	8.9		1	Yes	S3VEM
Potassium	Target	977		mg/kg	977		1	Yes	S3VEM
Selenium	Target	6.8		mg/kg	6.8		1	Yes	S3VEM
Silver	Target	1.9		mg/kg	1.9		1	Yes	S3VEM
Sodium	Target	983		mg/kg	983		1	Yes	S3VEM
Thallium	Target	4.8		mg/kg	4.8		1	Yes	S3VEM
Vanadium	Target	10.3		mg/kg	10.3		1	Yes	S3VEM
Zinc	Target	12.6		mg/kg	12.6		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number: MBCAH2	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CC01	pH:	Sample Date: 03/02/2016	Sample Time: 16:07:00
% Moisture :		% Solids : 92.2	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	4250		mg/kg	4250	D	6	Yes	S3VEM
Antimony	Target	1360		mg/kg	1360	D	6	Yes	S3VEM
Arsenic	Target	168		mg/kg	168	D	6	Yes	S3VEM
Barium	Target	279		mg/kg	279	D*	6	Yes	S3VEM
Beryllium	Target	3.1	U	mg/kg	3.1	UD	6	Yes	S3VEM
Cadmium	Target	62.0		mg/kg	62.0	D*	6	Yes	S3VEM
Calcium	Target	35400		mg/kg	35400	D*	6	Yes	S3VEM
Chromium	Target	94.2		mg/kg	94.2	D	6	Yes	S3VEM
Cobalt	Target	31.0	U	mg/kg	14.6	JD*	6	Yes	S3VEM
Copper	Target	703		mg/kg	703	D	6	Yes	S3VEM
Iron	Target	173000		mg/kg	173000	D	6	Yes	S3VEM
Lead	Target	61500		mg/kg	61500	D	100	Yes	S3VEM
Magnesium	Target	3100	U	mg/kg	433	JD*	6	Yes	S3VEM
Manganese	Target	913		mg/kg	913	D*	6	Yes	S3VEM
Nickel	Target	267		mg/kg	267	D	6	Yes	S3VEM
Potassium	Target	3100	U	mg/kg	132	JD	6	Yes	S3VEM
Selenium	Target	21.7	U	mg/kg	10.3	JD	6	Yes	S3VEM
Silver	Target	6.2	U	mg/kg	6.2	UD	6	Yes	S3VEM
Sodium	Target	3100	U	mg/kg	978	JD	6	Yes	S3VEM
Thallium	Target	15.5	U	mg/kg	15.5	UD*	6	Yes	S3VEM
Vanadium	Target	31.0	U	mg/kg	11.8	JD	6	Yes	S3VEM
Zinc	Target	6900		mg/kg	6900	D*	6	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number:	MBCAH3	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CC01	pH:		Sample Date:	03/02/2016	Sample Time:	16:15:00
% Moisture :				% Solids :	99.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2480		mg/kg	2480	D	5	Yes	S3VEM
Antimony	Target	1320		mg/kg	1320	D	5	Yes	S3VEM
Arsenic	Target	106		mg/kg	106	D	5	Yes	S3VEM
Barium	Target	249		mg/kg	249	D*	5	Yes	S3VEM
Beryllium	Target	2.3	U	mg/kg	2.3	UD	5	Yes	S3VEM
Cadmium	Target	39.6		mg/kg	39.6	D*	5	Yes	S3VEM
Calcium	Target	14600		mg/kg	14600	D*	5	Yes	S3VEM
Chromium	Target	88.8		mg/kg	88.8	D	5	Yes	S3VEM
Cobalt	Target	22.9	U	mg/kg	14.5	JD*	5	Yes	S3VEM
Copper	Target	370		mg/kg	370	D	5	Yes	S3VEM
Iron	Target	129000		mg/kg	129000	D	5	Yes	S3VEM
Lead	Target	111000		mg/kg	111000	D	100	Yes	S3VEM
Magnesium	Target	2290	U	mg/kg	291	JD*	5	Yes	S3VEM
Manganese	Target	787		mg/kg	787	D*	5	Yes	S3VEM
Nickel	Target	119		mg/kg	119	D	5	Yes	S3VEM
Potassium	Target	2290	U	mg/kg	959	JD	5	Yes	S3VEM
Selenium	Target	16.0	U	mg/kg	10.1	JD	5	Yes	S3VEM
Silver	Target	9.5		mg/kg	9.5	D	5	Yes	S3VEM
Sodium	Target	2290	U	mg/kg	2200	JD	5	Yes	S3VEM
Thallium	Target	11.4	U	mg/kg	11.4	UD*	5	Yes	S3VEM
Vanadium	Target	9.7	J	mg/kg	9.7	JD	5	Yes	S3VEM
Zinc	Target	4540		mg/kg	4540	D*	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number: MBCAH4	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CC01	pH:	Sample Date: 03/02/2016	Sample Time: 16:23:00
% Moisture :		% Solids : 86.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2590		mg/kg	2590	D	3	Yes	S3VEM
Antimony	Target	1920		mg/kg	1920	D	3	Yes	S3VEM
Arsenic	Target	219		mg/kg	219	D	3	Yes	S3VEM
Barium	Target	251		mg/kg	251	D*	3	Yes	S3VEM
Beryllium	Target	1.5	U	mg/kg	0.015	JD	3	Yes	S3VEM
Cadmium	Target	30.9		mg/kg	30.9	D*	3	Yes	S3VEM
Calcium	Target	7570		mg/kg	7570	D*	3	Yes	S3VEM
Chromium	Target	41.7		mg/kg	41.7	D	3	Yes	S3VEM
Cobalt	Target	15.2	U	mg/kg	7.2	JD*	3	Yes	S3VEM
Copper	Target	362		mg/kg	362	D	3	Yes	S3VEM
Iron	Target	41000		mg/kg	41000	D	3	Yes	S3VEM
Lead	Target	135000		mg/kg	135000	D	100	Yes	S3VEM
Magnesium	Target	1520	U	mg/kg	157	JD*	3	Yes	S3VEM
Manganese	Target	258		mg/kg	258	D*	3	Yes	S3VEM
Nickel	Target	102		mg/kg	102	D	3	Yes	S3VEM
Potassium	Target	1520	U	mg/kg	134	JD	3	Yes	S3VEM
Selenium	Target	17.2		mg/kg	17.2	D	3	Yes	S3VEM
Silver	Target	3.1		mg/kg	3.1	D	3	Yes	S3VEM
Sodium	Target	1520	U	mg/kg	607	JD	3	Yes	S3VEM
Thallium	Target	7.6	U	mg/kg	1.7	JD*	3	Yes	S3VEM
Vanadium	Target	6.2	J	mg/kg	6.2	JD	3	Yes	S3VEM
Zinc	Target	3090		mg/kg	3090	D*	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number:	MBCAH5	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CC01	pH:		Sample Date:	03/02/2016	Sample Time:	16:28:00
% Moisture :				% Solids :	96.0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	281		mg/kg	281	D	2	Yes	S3VEM
Antimony	Target	778		mg/kg	778	D	2	Yes	S3VEM
Arsenic	Target	34.7		mg/kg	34.7	D	2	Yes	S3VEM
Barium	Target	97.6		mg/kg	97.6	D*	2	Yes	S3VEM
Beryllium	Target	0.92	U	mg/kg	0.92	UD	2	Yes	S3VEM
Cadmium	Target	21.1		mg/kg	21.1	D*	2	Yes	S3VEM
Calcium	Target	23100		mg/kg	23100	D*	2	Yes	S3VEM
Chromium	Target	64.3		mg/kg	64.3	D	2	Yes	S3VEM
Cobalt	Target	9.2	U	mg/kg	6.4	JD*	2	Yes	S3VEM
Copper	Target	121		mg/kg	121	D	2	Yes	S3VEM
Iron	Target	9100		mg/kg	9100	D	2	Yes	S3VEM
Lead	Target	121000		mg/kg	121000	D	100	Yes	S3VEM
Magnesium	Target	922	U	mg/kg	328	JD*	2	Yes	S3VEM
Manganese	Target	42.2		mg/kg	42.2	D*	2	Yes	S3VEM
Nickel	Target	109		mg/kg	109	D	2	Yes	S3VEM
Potassium	Target	922	U	mg/kg	384	JD	2	Yes	S3VEM
Selenium	Target	6.5	U	mg/kg	4.0	JD	2	Yes	S3VEM
Silver	Target	16.9		mg/kg	16.9	D	2	Yes	S3VEM
Sodium	Target	8230		mg/kg	8230	D	2	Yes	S3VEM
Thallium	Target	4.6	U	mg/kg	2.0	JD*	2	Yes	S3VEM
Vanadium	Target	1.3	J	mg/kg	1.3	JD	2	Yes	S3VEM
Zinc	Target	224		mg/kg	224	D*	2	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number:	MBCAH6	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CC01	pH:		Sample Date:	03/03/2016	Sample Time:	14:50:00
% Moisture :				% Solids :	99.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3090		mg/kg	3090	D	6	Yes	S3VEM
Antimony	Target	3420		mg/kg	3420	D	6	Yes	S3VEM
Arsenic	Target	293		mg/kg	293	D	6	Yes	S3VEM
Barium	Target	161		mg/kg	161	D*	6	Yes	S3VEM
Beryllium	Target	2.6	U	mg/kg	0.054	JD	6	Yes	S3VEM
Cadmium	Target	99.3		mg/kg	99.3	D*	6	Yes	S3VEM
Calcium	Target	137000		mg/kg	137000	D*	6	Yes	S3VEM
Chromium	Target	68.2		mg/kg	68.2	D	6	Yes	S3VEM
Cobalt	Target	26.2	U	mg/kg	8.3	JD*	6	Yes	S3VEM
Copper	Target	1490		mg/kg	1490	D	6	Yes	S3VEM
Iron	Target	96100		mg/kg	96100	D	6	Yes	S3VEM
Lead	Target	96800		mg/kg	96800	D	100	Yes	S3VEM
Magnesium	Target	2620	U	mg/kg	916	JD*	6	Yes	S3VEM
Manganese	Target	546		mg/kg	546	D*	6	Yes	S3VEM
Nickel	Target	327		mg/kg	327	D	6	Yes	S3VEM
Potassium	Target	2620	U	mg/kg	850	JD	6	Yes	S3VEM
Selenium	Target	18.3	U	mg/kg	16.6	JD	6	Yes	S3VEM
Silver	Target	5.2	U	mg/kg	2.2	JD	6	Yes	S3VEM
Sodium	Target	36000		mg/kg	36000	D	6	Yes	S3VEM
Thallium	Target	13.1	U	mg/kg	13.1	UD*	6	Yes	S3VEM
Vanadium	Target	15.1	J	mg/kg	15.1	JD	6	Yes	S3VEM
Zinc	Target	6860		mg/kg	6860	D*	6	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number: MBCAH7	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CC01	pH:	Sample Date: 03/03/2016	Sample Time: 14:55:00
% Moisture :		% Solids : 96.5	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3540		mg/kg	3540	D	4	Yes	S3VEM
Antimony	Target	2920		mg/kg	2920	D	4	Yes	S3VEM
Arsenic	Target	252		mg/kg	252	D	4	Yes	S3VEM
Barium	Target	473		mg/kg	473	D*	4	Yes	S3VEM
Beryllium	Target	2.0	U	mg/kg	0.074	JD	4	Yes	S3VEM
Cadmium	Target	73.1		mg/kg	73.1	D*	4	Yes	S3VEM
Calcium	Target	80700		mg/kg	80700	D*	4	Yes	S3VEM
Chromium	Target	74.0		mg/kg	74.0	D	4	Yes	S3VEM
Cobalt	Target	19.6	U	mg/kg	10.5	JD*	4	Yes	S3VEM
Copper	Target	1660		mg/kg	1660	D	4	Yes	S3VEM
Iron	Target	85900		mg/kg	85900	D	4	Yes	S3VEM
Lead	Target	140000		mg/kg	140000	D	100	Yes	S3VEM
Magnesium	Target	1960	U	mg/kg	1170	JD*	4	Yes	S3VEM
Manganese	Target	515		mg/kg	515	D*	4	Yes	S3VEM
Nickel	Target	577		mg/kg	577	D	4	Yes	S3VEM
Potassium	Target	1960	U	mg/kg	617	JD	4	Yes	S3VEM
Selenium	Target	13.7	U	mg/kg	10.3	JD	4	Yes	S3VEM
Silver	Target	5.6		mg/kg	5.6	D	4	Yes	S3VEM
Sodium	Target	18400		mg/kg	18400	D	4	Yes	S3VEM
Thallium	Target	9.8	U	mg/kg	9.8	UD*	4	Yes	S3VEM
Vanadium	Target	16.8	J	mg/kg	16.8	JD	4	Yes	S3VEM
Zinc	Target	3860		mg/kg	3860	D*	4	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number: MBCAH8	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CF01	pH:	Sample Date: 03/02/2016	Sample Time: 14:20:00
% Moisture :		% Solids : 98.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5670		mg/kg	5670	D	6	Yes	S3VEM
Antimony	Target	4240		mg/kg	4240	D	6	Yes	S3VEM
Arsenic	Target	473		mg/kg	473	D	6	Yes	S3VEM
Barium	Target	569	J	mg/kg	569	D*	6	Yes	S3VEM
Beryllium	Target	3.1	U	mg/kg	0.24	JD	6	Yes	S3VEM
Cadmium	Target	154		mg/kg	154	D*	6	Yes	S3VEM
Calcium	Target	12200		mg/kg	12200	D*	6	Yes	S3VEM
Chromium	Target	188		mg/kg	188	D	6	Yes	S3VEM
Cobalt	Target	30.6	U	mg/kg	26.2	JD*	6	Yes	S3VEM
Copper	Target	3440		mg/kg	3440	D	6	Yes	S3VEM
Iron	Target	153000		mg/kg	153000	D	6	Yes	S3VEM
Lead	Target	72800		mg/kg	72800	D	100	Yes	S3VEM
Magnesium	Target	3060	U	mg/kg	981	JD*	6	Yes	S3VEM
Manganese	Target	629		mg/kg	629	D*	6	Yes	S3VEM
Nickel	Target	439		mg/kg	439	D	6	Yes	S3VEM
Potassium	Target	3060	U	mg/kg	309	JD	6	Yes	S3VEM
Selenium	Target	21.4	U	mg/kg	16.5	JD	6	Yes	S3VEM
Silver	Target	6.1	U	mg/kg	2.5	JD	6	Yes	S3VEM
Sodium	Target	61200		mg/kg	61200	D	6	Yes	S3VEM
Thallium	Target	15.3	UJ	mg/kg	15.3	UD*	6	Yes	S3VEM
Vanadium	Target	48.1		mg/kg	48.1	D	6	Yes	S3VEM
Zinc	Target	1450		mg/kg	1450	D*	6	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number:	MBCAH8A	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:	03/02/2016	Sample Time:	14:20:00
% Moisture :				% Solids :	98.1		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Barium	Spike	1890		mg/kg	1890	D	6	Yes	S3VEM
Thallium	Spike	25.6		mg/kg	25.6	D*	6	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number: MBCAH8D	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/02/2016	Sample Time: 14:20:00
% Moisture :		% Solids : 98.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6170		mg/kg	6170	D	6	Yes	S3VEM
Antimony	Target	4490		mg/kg	4490	D	6	Yes	S3VEM
Arsenic	Target	560		mg/kg	560	D	6	Yes	S3VEM
Barium	Target	646		mg/kg	646	D	6	Yes	S3VEM
Beryllium	Target	0.20		mg/kg	0.20	JD	6	Yes	S3VEM
Cadmium	Target	178		mg/kg	178	D	6	Yes	S3VEM
Calcium	Target	15800		mg/kg	15800	D*	6	Yes	S3VEM
Chromium	Target	154		mg/kg	154	D	6	Yes	S3VEM
Cobalt	Target	16.0		mg/kg	16.0	JD	6	Yes	S3VEM
Copper	Target	3410		mg/kg	3410	D	6	Yes	S3VEM
Iron	Target	173000		mg/kg	173000	D	6	Yes	S3VEM
Lead	Target	72000		mg/kg	72000	D	100	Yes	S3VEM
Magnesium	Target	1040		mg/kg	1040	JD	6	Yes	S3VEM
Manganese	Target	684		mg/kg	684	D	6	Yes	S3VEM
Nickel	Target	533		mg/kg	533	D	6	Yes	S3VEM
Potassium	Target	317		mg/kg	317	JD	6	Yes	S3VEM
Selenium	Target	21.7		mg/kg	21.7	D	6	Yes	S3VEM
Silver	Target	2.6		mg/kg	2.6	JD	6	Yes	S3VEM
Sodium	Target	65600		mg/kg	65600	D	6	Yes	S3VEM
Thallium	Target	15.3	U	mg/kg	15.3	UD	6	Yes	S3VEM
Vanadium	Target	49.1		mg/kg	49.1	D	6	Yes	S3VEM
Zinc	Target	1200		mg/kg	1200	D	6	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number: MBCAH8L	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 98.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6170		mg/kg	6170	D	30	Yes	S3VEM
Antimony	Target	4680		mg/kg	4680	D	30	Yes	S3VEM
Arsenic	Target	471		mg/kg	471	D	30	Yes	S3VEM
Barium	Target	622		mg/kg	622	D	30	Yes	S3VEM
Beryllium	Target	0.20	J	mg/kg	0.20	JD	30	Yes	S3VEM
Cadmium	Target	172		mg/kg	172	D*	30	Yes	S3VEM
Calcium	Target	13500	J	mg/kg	13500	JD	30	Yes	S3VEM
Chromium	Target	207		mg/kg	207	D	30	Yes	S3VEM
Cobalt	Target	29.5	J	mg/kg	29.5	JD*	30	Yes	S3VEM
Copper	Target	3610		mg/kg	3610	D	30	Yes	S3VEM
Iron	Target	167000		mg/kg	167000	D	30	Yes	S3VEM
Lead	Target	69800		mg/kg	69800	D	500	Yes	S3VEM
Magnesium	Target	1090	J	mg/kg	1090	JD*	30	Yes	S3VEM
Manganese	Target	695		mg/kg	695	D*	30	Yes	S3VEM
Nickel	Target	457		mg/kg	457	D	30	Yes	S3VEM
Potassium	Target	266		mg/kg	266	JD	30	Yes	S3VEM
Selenium	Target	20.1	J	mg/kg	20.1	JD	30	Yes	S3VEM
Silver	Target	3.5	J	mg/kg	3.5	JD	30	Yes	S3VEM
Sodium	Target	66900		mg/kg	66900	D	30	Yes	S3VEM
Thallium	Target	76.5	U	mg/kg	76.5	UD	30	Yes	S3VEM
Vanadium	Target	52.3	J	mg/kg	52.3	JD	30	Yes	S3VEM
Zinc	Target	1630		mg/kg	1630	D*	30	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number: MBCAH8S	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/02/2016	Sample Time: 14:20:00
% Moisture :		% Solids : 98.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Antimony	Spike	4450		mg/kg	4450	D	6	Yes	S3VEM
Arsenic	Spike	560		mg/kg	560	D	6	Yes	S3VEM
Barium	Spike	725		mg/kg	725	D*	6	Yes	S3VEM
Beryllium	Spike	10.5		mg/kg	10.5	D	6	Yes	S3VEM
Cadmium	Spike	201		mg/kg	201	D	6	Yes	S3VEM
Chromium	Spike	216		mg/kg	216	D	6	Yes	S3VEM
Cobalt	Spike	117		mg/kg	117	D	6	Yes	S3VEM
Copper	Spike	3500		mg/kg	3500	D	6	Yes	S3VEM
Lead	Spike	86300		mg/kg	86300	D	100	Yes	S3VEM
Manganese	Spike	783		mg/kg	783	D	6	Yes	S3VEM
Nickel	Spike	556		mg/kg	556	D	6	Yes	S3VEM
Selenium	Spike	34.9		mg/kg	34.9	D	6	Yes	S3VEM
Silver	Spike	12.2		mg/kg	12.2	D	6	Yes	S3VEM
Thallium	Spike	5.3	J	mg/kg	5.3	JD*	6	Yes	S3VEM
Vanadium	Spike	145		mg/kg	145	D	6	Yes	S3VEM
Zinc	Spike	1350		mg/kg	1350	D	6	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number: MBCAH9	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CF01	pH:	Sample Date: 03/02/2016	Sample Time: 14:20:00
% Moisture :		% Solids : 97.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6070		mg/kg	6070	D	6	Yes	S3VEM
Antimony	Target	4400		mg/kg	4400	D	6	Yes	S3VEM
Arsenic	Target	561		mg/kg	561	D	6	Yes	S3VEM
Barium	Target	693		mg/kg	693	D*	6	Yes	S3VEM
Beryllium	Target	3.0	U	mg/kg	0.21	JD	6	Yes	S3VEM
Cadmium	Target	180		mg/kg	180	D*	6	Yes	S3VEM
Calcium	Target	14700		mg/kg	14700	D*	6	Yes	S3VEM
Chromium	Target	143		mg/kg	143	D	6	Yes	S3VEM
Cobalt	Target	30.1	U	mg/kg	16.2	JD*	6	Yes	S3VEM
Copper	Target	4020		mg/kg	4020	D	6	Yes	S3VEM
Iron	Target	174000		mg/kg	174000	D	6	Yes	S3VEM
Lead	Target	79500		mg/kg	79500	D	100	Yes	S3VEM
Magnesium	Target	3010	U	mg/kg	1010	JD*	6	Yes	S3VEM
Manganese	Target	696		mg/kg	696	D*	6	Yes	S3VEM
Nickel	Target	554		mg/kg	554	D	6	Yes	S3VEM
Potassium	Target	3010	U	mg/kg	343	JD	6	Yes	S3VEM
Selenium	Target	21.1	U	mg/kg	18.9	JD	6	Yes	S3VEM
Silver	Target	6.0	U	mg/kg	2.7	JD	6	Yes	S3VEM
Sodium	Target	72800		mg/kg	72800	D	6	Yes	S3VEM
Thallium	Target	15.0	U	mg/kg	15.0	UD*	6	Yes	S3VEM
Vanadium	Target	51.2		mg/kg	51.2	D	6	Yes	S3VEM
Zinc	Target	1260		mg/kg	1260	D*	6	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number:	MBCAJ0	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CF01	pH:		Sample Date:	03/02/2016	Sample Time:	15:50:00
% Moisture :				% Solids :	96.7		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3100		mg/kg	3100	D	3	Yes	S3VEM
Antimony	Target	9190		mg/kg	9190	D	100	Yes	S3VEM
Arsenic	Target	426		mg/kg	426	D	3	Yes	S3VEM
Barium	Target	553		mg/kg	553	D*	3	Yes	S3VEM
Beryllium	Target	1.5	U	mg/kg	0.096	JD	3	Yes	S3VEM
Cadmium	Target	643		mg/kg	643	D*	100	Yes	S3VEM
Calcium	Target	24600		mg/kg	24600	D*	3	Yes	S3VEM
Chromium	Target	124		mg/kg	124	D	3	Yes	S3VEM
Cobalt	Target	15.2	U	mg/kg	8.5	JD*	3	Yes	S3VEM
Copper	Target	1330		mg/kg	1330	D	3	Yes	S3VEM
Iron	Target	85800		mg/kg	85800	D	3	Yes	S3VEM
Lead	Target	136000		mg/kg	136000	D	100	Yes	S3VEM
Magnesium	Target	1520	U	mg/kg	1430	JD*	3	Yes	S3VEM
Manganese	Target	377		mg/kg	377	D*	3	Yes	S3VEM
Nickel	Target	563		mg/kg	563	D	3	Yes	S3VEM
Potassium	Target	1520	U	mg/kg	564	JD	3	Yes	S3VEM
Selenium	Target	26.8		mg/kg	26.8	D	3	Yes	S3VEM
Silver	Target	9.8		mg/kg	9.8	D	3	Yes	S3VEM
Sodium	Target	37800		mg/kg	37800	D	3	Yes	S3VEM
Thallium	Target	7.6	U	mg/kg	7.6	UD*	3	Yes	S3VEM
Vanadium	Target	26.1		mg/kg	26.1	D	3	Yes	S3VEM
Zinc	Target	1120		mg/kg	1120	D*	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number:	MBCAJ1	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CF01	pH:		Sample Date:	03/03/2016	Sample Time:	15:10:00
% Moisture :				% Solids :	99.3		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5260		mg/kg	5260	D	3	Yes	S3VEM
Antimony	Target	1840		mg/kg	1840	D	3	Yes	S3VEM
Arsenic	Target	973		mg/kg	973	D	3	Yes	S3VEM
Barium	Target	402		mg/kg	402	D*	3	Yes	S3VEM
Beryllium	Target	1.4	U	mg/kg	0.27	JD	3	Yes	S3VEM
Cadmium	Target	3870		mg/kg	3870	D*	100	Yes	S3VEM
Calcium	Target	25900		mg/kg	25900	D*	3	Yes	S3VEM
Chromium	Target	54.2		mg/kg	54.2	D	3	Yes	S3VEM
Cobalt	Target	14.1	U	mg/kg	12.9	JD*	3	Yes	S3VEM
Copper	Target	1280		mg/kg	1280	D	3	Yes	S3VEM
Iron	Target	56900		mg/kg	56900	D	3	Yes	S3VEM
Lead	Target	121000		mg/kg	121000	D	100	Yes	S3VEM
Magnesium	Target	1710		mg/kg	1710	D*	3	Yes	S3VEM
Manganese	Target	403		mg/kg	403	D*	3	Yes	S3VEM
Nickel	Target	246		mg/kg	246	D	3	Yes	S3VEM
Potassium	Target	1410	U	mg/kg	609	JD	3	Yes	S3VEM
Selenium	Target	17.1		mg/kg	17.1	D	3	Yes	S3VEM
Silver	Target	5.3		mg/kg	5.3	D	3	Yes	S3VEM
Sodium	Target	84100		mg/kg	84100	D	100	Yes	S3VEM
Thallium	Target	7.1	U	mg/kg	0.84	JD*	3	Yes	S3VEM
Vanadium	Target	309		mg/kg	309	D	3	Yes	S3VEM
Zinc	Target	2180		mg/kg	2180	D*	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number:	MBCAJ2	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CF01	pH:		Sample Date:	03/03/2016	Sample Time:	15:15:00
% Moisture :				% Solids :	93.5		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5170		mg/kg	5170	D	6	Yes	S3VEM
Antimony	Target	4340		mg/kg	4340	D	6	Yes	S3VEM
Arsenic	Target	1000		mg/kg	1000	D	6	Yes	S3VEM
Barium	Target	712		mg/kg	712	D*	6	Yes	S3VEM
Beryllium	Target	3.1	U	mg/kg	0.15	JD	6	Yes	S3VEM
Cadmium	Target	235		mg/kg	235	D*	6	Yes	S3VEM
Calcium	Target	7330		mg/kg	7330	D*	6	Yes	S3VEM
Chromium	Target	420		mg/kg	420	D	6	Yes	S3VEM
Cobalt	Target	30.6	U	mg/kg	21.8	JD*	6	Yes	S3VEM
Copper	Target	1200		mg/kg	1200	D	6	Yes	S3VEM
Iron	Target	196000		mg/kg	196000	D	6	Yes	S3VEM
Lead	Target	83800		mg/kg	83800	D	100	Yes	S3VEM
Magnesium	Target	3110		mg/kg	3110	D*	6	Yes	S3VEM
Manganese	Target	774		mg/kg	774	D*	6	Yes	S3VEM
Nickel	Target	542		mg/kg	542	D	6	Yes	S3VEM
Potassium	Target	3060	U	mg/kg	268	JD	6	Yes	S3VEM
Selenium	Target	62.2		mg/kg	62.2	D	6	Yes	S3VEM
Silver	Target	6.1	U	mg/kg	6.1	UD	6	Yes	S3VEM
Sodium	Target	67900		mg/kg	67900	D	6	Yes	S3VEM
Thallium	Target	15.3	U	mg/kg	15.3	UD*	6	Yes	S3VEM
Vanadium	Target	30.2	J	mg/kg	30.2	JD	6	Yes	S3VEM
Zinc	Target	2050		mg/kg	2050	D*	6	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number: MBCAJ3	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CF01	pH:	Sample Date: 03/03/2016	Sample Time: 16:25:00
% Moisture :		% Solids : 99.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1510		mg/kg	1510	D	4	Yes	S3VEM
Antimony	Target	1650		mg/kg	1650	D	4	Yes	S3VEM
Arsenic	Target	1100		mg/kg	1100	D	4	Yes	S3VEM
Barium	Target	166		mg/kg	166	D*	4	Yes	S3VEM
Beryllium	Target	1.9	U	mg/kg	0.049	JD	4	Yes	S3VEM
Cadmium	Target	148		mg/kg	148	D*	4	Yes	S3VEM
Calcium	Target	12600		mg/kg	12600	D*	4	Yes	S3VEM
Chromium	Target	19.7		mg/kg	19.7	D	4	Yes	S3VEM
Cobalt	Target	18.6	U	mg/kg	3.2	JD*	4	Yes	S3VEM
Copper	Target	237		mg/kg	237	D	4	Yes	S3VEM
Iron	Target	6830		mg/kg	6830	D	4	Yes	S3VEM
Lead	Target	118000		mg/kg	118000	D	100	Yes	S3VEM
Magnesium	Target	1860	U	mg/kg	694	JD*	4	Yes	S3VEM
Manganese	Target	111		mg/kg	111	D*	4	Yes	S3VEM
Nickel	Target	67.9		mg/kg	67.9	D	4	Yes	S3VEM
Potassium	Target	1860	U	mg/kg	373	JD	4	Yes	S3VEM
Selenium	Target	13.0	U	mg/kg	4.6	JD	4	Yes	S3VEM
Silver	Target	3.7	U	mg/kg	1.8	JD	4	Yes	S3VEM
Sodium	Target	39800		mg/kg	39800	D	4	Yes	S3VEM
Thallium	Target	9.3	U	mg/kg	4.2	JD*	4	Yes	S3VEM
Vanadium	Target	88.2		mg/kg	88.2	D	4	Yes	S3VEM
Zinc	Target	3230		mg/kg	3230	D*	4	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number:	MBCAJ4	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CF01	pH:		Sample Date:	03/04/2016	Sample Time:	10:40:00
% Moisture :				% Solids :	99.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1800		mg/kg	1800	D	3	Yes	S3VEM
Antimony	Target	1090		mg/kg	1090	D	3	Yes	S3VEM
Arsenic	Target	560		mg/kg	560	D	3	Yes	S3VEM
Barium	Target	322		mg/kg	322	D*	3	Yes	S3VEM
Beryllium	Target	1.2	U	mg/kg	0.075	JD	3	Yes	S3VEM
Cadmium	Target	1.2	U	mg/kg	1.1	JD*	3	Yes	S3VEM
Calcium	Target	2120		mg/kg	2120	D*	3	Yes	S3VEM
Chromium	Target	91.6		mg/kg	91.6	D	3	Yes	S3VEM
Cobalt	Target	11.6	U	mg/kg	3.4	JD*	3	Yes	S3VEM
Copper	Target	756		mg/kg	756	D	3	Yes	S3VEM
Iron	Target	25400		mg/kg	25400	D	3	Yes	S3VEM
Lead	Target	83700		mg/kg	83700	D	100	Yes	S3VEM
Magnesium	Target	1160	U	mg/kg	317	JD*	3	Yes	S3VEM
Manganese	Target	102		mg/kg	102	D*	3	Yes	S3VEM
Nickel	Target	115		mg/kg	115	D	3	Yes	S3VEM
Potassium	Target	1160	U	mg/kg	122	JD	3	Yes	S3VEM
Selenium	Target	8.1	U	mg/kg	2.8	JD	3	Yes	S3VEM
Silver	Target	9.0		mg/kg	9.0	D	3	Yes	S3VEM
Sodium	Target	42300		mg/kg	42300	D	3	Yes	S3VEM
Thallium	Target	5.8	U	mg/kg	0.80	JD*	3	Yes	S3VEM
Vanadium	Target	10.5	J	mg/kg	10.5	JD	3	Yes	S3VEM
Zinc	Target	56.5		mg/kg	56.5	D*	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number:	MBCAJ5	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CF01	pH:		Sample Date:	03/04/2016	Sample Time:	10:55:00
% Moisture :				% Solids :	98.0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5790		mg/kg	5790	D	8	Yes	S3VEM
Antimony	Target	4960		mg/kg	4960	D	8	Yes	S3VEM
Arsenic	Target	189		mg/kg	189	D	8	Yes	S3VEM
Barium	Target	151	U	mg/kg	126	JD*	8	Yes	S3VEM
Beryllium	Target	3.8	U	mg/kg	0.26	JD	8	Yes	S3VEM
Cadmium	Target	4.4		mg/kg	4.4	D*	8	Yes	S3VEM
Calcium	Target	10800		mg/kg	10800	D*	8	Yes	S3VEM
Chromium	Target	167		mg/kg	167	D	8	Yes	S3VEM
Cobalt	Target	37.8	U	mg/kg	4.3	JD*	8	Yes	S3VEM
Copper	Target	267		mg/kg	267	D	8	Yes	S3VEM
Iron	Target	58500		mg/kg	58500	D	8	Yes	S3VEM
Lead	Target	38700		mg/kg	38700	D	100	Yes	S3VEM
Magnesium	Target	3780	U	mg/kg	2190	JD*	8	Yes	S3VEM
Manganese	Target	138		mg/kg	138	D*	8	Yes	S3VEM
Nickel	Target	186		mg/kg	186	D	8	Yes	S3VEM
Potassium	Target	3780	U	mg/kg	262	JD	8	Yes	S3VEM
Selenium	Target	26.5	U	mg/kg	5.0	JD	8	Yes	S3VEM
Silver	Target	7.6	U	mg/kg	1.5	JD	8	Yes	S3VEM
Sodium	Target	71000		mg/kg	71000	D	8	Yes	S3VEM
Thallium	Target	18.9	U	mg/kg	18.9	UD*	8	Yes	S3VEM
Vanadium	Target	21.6	J	mg/kg	21.6	JD	8	Yes	S3VEM
Zinc	Target	422		mg/kg	422	D*	8	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number:	MBCAJ6	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CK01	pH:		Sample Date:	03/02/2016	Sample Time:	16:30:00
% Moisture :				% Solids :	96.2		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1240		mg/kg	1240	D	5	Yes	S3VEM
Antimony	Target	29900		mg/kg	29900	D	100	Yes	S3VEM
Arsenic	Target	1390		mg/kg	1390	D	5	Yes	S3VEM
Barium	Target	223		mg/kg	223	D*	5	Yes	S3VEM
Beryllium	Target	2.5	U	mg/kg	0.029	JD	5	Yes	S3VEM
Cadmium	Target	40.9		mg/kg	40.9	D*	5	Yes	S3VEM
Calcium	Target	12400		mg/kg	12400	D*	5	Yes	S3VEM
Chromium	Target	20.6		mg/kg	20.6	D	5	Yes	S3VEM
Cobalt	Target	25.2	U	mg/kg	5.1	JD*	5	Yes	S3VEM
Copper	Target	3030		mg/kg	3030	D	5	Yes	S3VEM
Iron	Target	18300		mg/kg	18300	D	5	Yes	S3VEM
Lead	Target	121000		mg/kg	121000	D	100	Yes	S3VEM
Magnesium	Target	2520	U	mg/kg	659	JD*	5	Yes	S3VEM
Manganese	Target	140		mg/kg	140	D*	5	Yes	S3VEM
Nickel	Target	1400		mg/kg	1400	D	5	Yes	S3VEM
Potassium	Target	2520	U	mg/kg	236	JD	5	Yes	S3VEM
Selenium	Target	17.9		mg/kg	17.9	D	5	Yes	S3VEM
Silver	Target	10.6		mg/kg	10.6	D	5	Yes	S3VEM
Sodium	Target	41400		mg/kg	41400	D	5	Yes	S3VEM
Thallium	Target	12.6	U	mg/kg	2.1	JD*	5	Yes	S3VEM
Vanadium	Target	7.3	J	mg/kg	7.3	JD	5	Yes	S3VEM
Zinc	Target	621		mg/kg	621	D*	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number: MBCAJ7	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CK01	pH:	Sample Date: 03/02/2016	Sample Time: 09:28:00
% Moisture :		% Solids : 95.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	8080		mg/kg	8080	D	3	Yes	S3VEM
Antimony	Target	9030		mg/kg	9030	D	100	Yes	S3VEM
Arsenic	Target	1040		mg/kg	1040	D	3	Yes	S3VEM
Barium	Target	677		mg/kg	677	D*	3	Yes	S3VEM
Beryllium	Target	1.5	U	mg/kg	0.19	JD	3	Yes	S3VEM
Cadmium	Target	118		mg/kg	118	D*	3	Yes	S3VEM
Calcium	Target	8650		mg/kg	8650	D*	3	Yes	S3VEM
Chromium	Target	108		mg/kg	108	D	3	Yes	S3VEM
Cobalt	Target	15.3	U	mg/kg	12.2	JD*	3	Yes	S3VEM
Copper	Target	6950		mg/kg	6950	D	100	Yes	S3VEM
Iron	Target	130000		mg/kg	130000	D	100	Yes	S3VEM
Lead	Target	87600		mg/kg	87600	D	100	Yes	S3VEM
Magnesium	Target	1530	U	mg/kg	887	JD*	3	Yes	S3VEM
Manganese	Target	482		mg/kg	482	D*	3	Yes	S3VEM
Nickel	Target	895		mg/kg	895	D	3	Yes	S3VEM
Potassium	Target	1530	U	mg/kg	192	JD	3	Yes	S3VEM
Selenium	Target	25.1		mg/kg	25.1	D	3	Yes	S3VEM
Silver	Target	4.5		mg/kg	4.5	D	3	Yes	S3VEM
Sodium	Target	59400		mg/kg	59400	D	3	Yes	S3VEM
Thallium	Target	7.7	U	mg/kg	7.7	UD*	3	Yes	S3VEM
Vanadium	Target	27.5		mg/kg	27.5	D	3	Yes	S3VEM
Zinc	Target	9110		mg/kg	9110	D*	100	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number: MBCAJ8	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CK01	pH:	Sample Date: 03/02/2016	Sample Time: 09:34:00
% Moisture :		% Solids : 98.2	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3270		mg/kg	3270	D	4	Yes	S3VEM
Antimony	Target	7230		mg/kg	7230	D	100	Yes	S3VEM
Arsenic	Target	1160		mg/kg	1160	D	4	Yes	S3VEM
Barium	Target	433		mg/kg	433	D*	4	Yes	S3VEM
Beryllium	Target	1.9	U	mg/kg	0.11	JD	4	Yes	S3VEM
Cadmium	Target	159		mg/kg	159	D*	4	Yes	S3VEM
Calcium	Target	13300		mg/kg	13300	D*	4	Yes	S3VEM
Chromium	Target	38.3		mg/kg	38.3	D	4	Yes	S3VEM
Cobalt	Target	18.9	U	mg/kg	13.5	JD*	4	Yes	S3VEM
Copper	Target	624		mg/kg	624	D	4	Yes	S3VEM
Iron	Target	75800		mg/kg	75800	D	4	Yes	S3VEM
Lead	Target	105000		mg/kg	105000	D	100	Yes	S3VEM
Magnesium	Target	1890	U	mg/kg	694	JD*	4	Yes	S3VEM
Manganese	Target	312		mg/kg	312	D*	4	Yes	S3VEM
Nickel	Target	1490		mg/kg	1490	D	4	Yes	S3VEM
Potassium	Target	1890	U	mg/kg	1250	JD	4	Yes	S3VEM
Selenium	Target	44.2		mg/kg	44.2	D	4	Yes	S3VEM
Silver	Target	6.9		mg/kg	6.9	D	4	Yes	S3VEM
Sodium	Target	41900		mg/kg	41900	D	4	Yes	S3VEM
Thallium	Target	9.4	U	mg/kg	9.4	UD*	4	Yes	S3VEM
Vanadium	Target	16.5	J	mg/kg	16.5	JD	4	Yes	S3VEM
Zinc	Target	1200		mg/kg	1200	D*	4	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number: MBCAJ9	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CK01	pH:	Sample Date: 03/04/2016	Sample Time: 09:50:00
% Moisture :		% Solids : 99.7	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1820		mg/kg	1820	D	4	Yes	S3VEM
Antimony	Target	13300		mg/kg	13300	D	100	Yes	S3VEM
Arsenic	Target	570		mg/kg	570	D	4	Yes	S3VEM
Barium	Target	179		mg/kg	179	D*	4	Yes	S3VEM
Beryllium	Target	1.6	U	mg/kg	0.042	JD	4	Yes	S3VEM
Cadmium	Target	106		mg/kg	106	D*	4	Yes	S3VEM
Calcium	Target	26600		mg/kg	26600	D*	4	Yes	S3VEM
Chromium	Target	23.2		mg/kg	23.2	D	4	Yes	S3VEM
Cobalt	Target	16.3	U	mg/kg	5.3	JD*	4	Yes	S3VEM
Copper	Target	1300		mg/kg	1300	D	4	Yes	S3VEM
Iron	Target	33100		mg/kg	33100	D	4	Yes	S3VEM
Lead	Target	104000		mg/kg	104000	D	100	Yes	S3VEM
Magnesium	Target	1630	U	mg/kg	1080	JD*	4	Yes	S3VEM
Manganese	Target	202		mg/kg	202	D*	4	Yes	S3VEM
Nickel	Target	1190		mg/kg	1190	D	4	Yes	S3VEM
Potassium	Target	1630	U	mg/kg	520	JD	4	Yes	S3VEM
Selenium	Target	26.0		mg/kg	26.0	D	4	Yes	S3VEM
Silver	Target	11.1		mg/kg	11.1	D	4	Yes	S3VEM
Sodium	Target	16700		mg/kg	16700	D	4	Yes	S3VEM
Thallium	Target	8.2	U	mg/kg	1.6	JD*	4	Yes	S3VEM
Vanadium	Target	10.1	J	mg/kg	10.1	JD	4	Yes	S3VEM
Zinc	Target	4350		mg/kg	4350	D*	4	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number: MBCAK0	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CK01	pH:	Sample Date: 03/04/2016	Sample Time: 09:54:00
% Moisture :		% Solids : 99.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	11000		mg/kg	11000	D	4	Yes	S3VEM
Antimony	Target	2820		mg/kg	2820	D	4	Yes	S3VEM
Arsenic	Target	525		mg/kg	525	D	4	Yes	S3VEM
Barium	Target	184		mg/kg	184	D*	4	Yes	S3VEM
Beryllium	Target	2.0	U	mg/kg	0.21	JD	4	Yes	S3VEM
Cadmium	Target	33.6		mg/kg	33.6	D*	4	Yes	S3VEM
Calcium	Target	224000		mg/kg	224000	D*	100	Yes	S3VEM
Chromium	Target	63.7		mg/kg	63.7	D	4	Yes	S3VEM
Cobalt	Target	19.6	U	mg/kg	7.2	JD*	4	Yes	S3VEM
Copper	Target	1250		mg/kg	1250	D	4	Yes	S3VEM
Iron	Target	21800		mg/kg	21800	D	4	Yes	S3VEM
Lead	Target	220000		mg/kg	220000	D	100	Yes	S3VEM
Magnesium	Target	2610		mg/kg	2610	D*	4	Yes	S3VEM
Manganese	Target	182		mg/kg	182	D*	4	Yes	S3VEM
Nickel	Target	824		mg/kg	824	D	4	Yes	S3VEM
Potassium	Target	1960	U	mg/kg	1280	JD	4	Yes	S3VEM
Selenium	Target	13.8	U	mg/kg	12.8	JD	4	Yes	S3VEM
Silver	Target	3.9	U	mg/kg	3.5	JD	4	Yes	S3VEM
Sodium	Target	15700		mg/kg	15700	D	4	Yes	S3VEM
Thallium	Target	9.8	U	mg/kg	0.73	JD*	4	Yes	S3VEM
Vanadium	Target	29.4		mg/kg	29.4	D	4	Yes	S3VEM
Zinc	Target	1180		mg/kg	1180	D*	4	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number:	MBCAK1	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CK01	pH:		Sample Date:	03/04/2016	Sample Time:	09:56:00
% Moisture :				% Solids :	98.7		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3790		mg/kg	3790	D	4	Yes	S3VEM
Antimony	Target	9870		mg/kg	9870	D	100	Yes	S3VEM
Arsenic	Target	474		mg/kg	474	D	4	Yes	S3VEM
Barium	Target	145		mg/kg	145	D*	4	Yes	S3VEM
Beryllium	Target	1.8	U	mg/kg	0.064	JD	4	Yes	S3VEM
Cadmium	Target	63.6		mg/kg	63.6	D*	4	Yes	S3VEM
Calcium	Target	27000		mg/kg	27000	D*	4	Yes	S3VEM
Chromium	Target	25.4		mg/kg	25.4	D	4	Yes	S3VEM
Cobalt	Target	17.9	U	mg/kg	6.2	JD*	4	Yes	S3VEM
Copper	Target	1340		mg/kg	1340	D	4	Yes	S3VEM
Iron	Target	42300		mg/kg	42300	D	4	Yes	S3VEM
Lead	Target	241000		mg/kg	241000	D	150	Yes	S3VEM
Magnesium	Target	1790	U	mg/kg	1140	JD*	4	Yes	S3VEM
Manganese	Target	293		mg/kg	293	D*	4	Yes	S3VEM
Nickel	Target	1270		mg/kg	1270	D	4	Yes	S3VEM
Potassium	Target	1790	U	mg/kg	516	JD	4	Yes	S3VEM
Selenium	Target	35.8		mg/kg	35.8	D	4	Yes	S3VEM
Silver	Target	9.1		mg/kg	9.1	D	4	Yes	S3VEM
Sodium	Target	29900		mg/kg	29900	D	4	Yes	S3VEM
Thallium	Target	9.0	U	mg/kg	0.80	JD*	4	Yes	S3VEM
Vanadium	Target	12.8	J	mg/kg	12.8	JD	4	Yes	S3VEM
Zinc	Target	3250		mg/kg	3250	D*	4	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAH2	Lab Code: BON

Sample Number: PBS01	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	mg/kg	20.0	U	1	Yes	S3VEM
Antimony	Target	0.45	J	mg/kg	0.45	J	1	Yes	S3VEM
Arsenic	Target	-.24		mg/kg	-.24	J	1	Yes	S3VEM
Barium	Target	-.035		mg/kg	-.035	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	mg/kg	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	mg/kg	0.50	U	1	Yes	S3VEM
Calcium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Chromium	Target	-.061		mg/kg	-.061	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	mg/kg	5.0	U	1	Yes	S3VEM
Copper	Target	2.5	U	mg/kg	2.5	U	1	Yes	S3VEM
Iron	Target	10.0	U	mg/kg	10.0	U	1	Yes	S3VEM
Lead	Target	0.11	J	mg/kg	0.11	J	1	Yes	S3VEM
Magnesium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Manganese	Target	1.5	U	mg/kg	1.5	U	1	Yes	S3VEM
Nickel	Target	4.0	U	mg/kg	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Selenium	Target	0.38	J	mg/kg	0.38	J	1	Yes	S3VEM
Silver	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Thallium	Target	2.5	U	mg/kg	2.5	U	1	Yes	S3VEM
Vanadium	Target	-.062		mg/kg	-.062	J	1	Yes	S3VEM
Zinc	Target	6.0	U	mg/kg	6.0	U	1	Yes	S3VEM

	UNITED STATES ENVIRONMENTAL PROTECTION AGENCY **REGION 2** **DESA/HWSB/HWSS** **2890, Woodbridge Avenue, Edison, NJ 08837**

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Puerto Rico Battery Recycling Assessment
Number of Samples: 14 soils
Analysis: Metals

SDG No.: MBCAK2
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/2/2016 – 3/9/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solutions
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
Sample MBCAP9 has analytes that have been qualified J, J+ or J-.

Minor Findings:
None

COMMENT:	The site-specific QAPP did not specify any project action levels for this site.

Reviewer Name(s): Steffanie Tobin

Approver's Signature: **Date: 04/11/2016**

Name: **Narendra Kumar**

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi- Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCBs have analyte results less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Barium: MBCAP9, MBCAQ7

Calcium: MBCAQ6

Cobalt: MBCAK2, MBCAK3, MBCAK4, MBCAK5, MBCAK6, MBCAK7, MBCAK8, MBCAK9, MBCAL0, MBCAL2, MBCAP9, MBCAQ7

Magnesium: MBCAK2, MBCAK3, MBCAK4, MBCAK6, MBCAK7, MBCAK8, MBCAK9, MBCAQ6, MBCAQ7

Potassium: MBCAK2, MBCAK3, MBCAK4, MBCAK5, MBCAK6, MBCAK7, MBCAK8, MBCAK9, MBCAL0, MBCAP9, MBCAQ6, MBCAQ7

Silver: MBCAK3, MBCAK4, MBCAL0, MBCAL2, MBCAP9

Thallium: MBCAK2, MBCAK5, MBCAK6, MBCAQ7

The following samples have analyte results less than or equal to CRQLs. The associated ICB has analyte results less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Silver: MBCAK3, MBCAK4, MBCAL0, MBCAL2, MBCAP9

The following samples have analyte results less than or equal to CRQLs. The associated preparation blank has analyte results less than CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Silver: MBCAK3, MBCAK4, MBCAL0, MBCAL2, MBCAP9

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the

sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

No problems were found for this criterion.

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

The following duplicate and/or original soil sample results are less than 5x the CRQL. The absolute differences between duplicate and original sample are greater than the CRQL. Detected analytes with results greater than MDL are qualified J. Non-detected analytes are qualified UJ.

Antimony, Arsenic: MBCAP9

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 50% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of 2X the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

Not applicable.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

The following sample is associated to the Serial Dilution sample with analyte %D > 15% and the original sample result is > 50xMDL. Detects are qualified as estimated J. Non-detects are qualified estimated UJ.

Antimony, Cadmium, Manganese, Nickel: MBCAP9

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAK2	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	41.4		mg/kg	41.4		1	Yes	S3VEM
Antimony	Target	11.8		mg/kg	11.8		1	Yes	S3VEM
Arsenic	Target	2.0		mg/kg	2.0		1	Yes	S3VEM
Barium	Target	43.2		mg/kg	43.2		1	Yes	S3VEM
Beryllium	Target	0.98		mg/kg	0.98		1	Yes	S3VEM
Cadmium	Target	1.0		mg/kg	1.0		1	Yes	S3VEM
Calcium	Target	1070		mg/kg	1070		1	Yes	S3VEM
Chromium	Target	2.0		mg/kg	2.0		1	Yes	S3VEM
Cobalt	Target	10.6		mg/kg	10.6		1	Yes	S3VEM
Copper	Target	5.0		mg/kg	5.0		1	Yes	S3VEM
Iron	Target	18.9		mg/kg	18.9		1	Yes	S3VEM
Lead	Target	2.0		mg/kg	2.0		1	Yes	S3VEM
Magnesium	Target	1030		mg/kg	1030		1	Yes	S3VEM
Manganese	Target	3.1		mg/kg	3.1		1	Yes	S3VEM
Nickel	Target	8.6		mg/kg	8.6		1	Yes	S3VEM
Potassium	Target	1020		mg/kg	1020		1	Yes	S3VEM
Selenium	Target	6.8		mg/kg	6.8		1	Yes	S3VEM
Silver	Target	2.0		mg/kg	2.0		1	Yes	S3VEM
Sodium	Target	1030		mg/kg	1030		1	Yes	S3VEM
Thallium	Target	4.9		mg/kg	4.9		1	Yes	S3VEM
Vanadium	Target	10.4		mg/kg	10.4		1	Yes	S3VEM
Zinc	Target	12.4		mg/kg	12.4		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number:	MBCAK2	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CK01	pH:		Sample Date:	03/04/2016	Sample Time:	10:16:00
% Moisture :				% Solids :	99.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1090		mg/kg	1090	D	3	Yes	S3VEM
Antimony	Target	11000		mg/kg	11000	D*	100	Yes	S3VEM
Arsenic	Target	300		mg/kg	300	D*	3	Yes	S3VEM
Barium	Target	126		mg/kg	126	D*	3	Yes	S3VEM
Beryllium	Target	1.3	U	mg/kg	1.3	UD	3	Yes	S3VEM
Cadmium	Target	36.9		mg/kg	36.9	D*	3	Yes	S3VEM
Calcium	Target	9850		mg/kg	9850	D	3	Yes	S3VEM
Chromium	Target	17.5		mg/kg	17.5	D	3	Yes	S3VEM
Cobalt	Target	12.9	U	mg/kg	2.7	JD	3	Yes	S3VEM
Copper	Target	1600		mg/kg	1600	D*	3	Yes	S3VEM
Iron	Target	19100		mg/kg	19100	D*	3	Yes	S3VEM
Lead	Target	73400		mg/kg	73400	D	100	Yes	S3VEM
Magnesium	Target	1290	U	mg/kg	505	JD	3	Yes	S3VEM
Manganese	Target	104		mg/kg	104	D*	3	Yes	S3VEM
Nickel	Target	480		mg/kg	480	D*	3	Yes	S3VEM
Potassium	Target	1290	U	mg/kg	295	JD	3	Yes	S3VEM
Selenium	Target	9.9		mg/kg	9.9	D	3	Yes	S3VEM
Silver	Target	9.8		mg/kg	9.8	D	3	Yes	S3VEM
Sodium	Target	13400		mg/kg	13400	D	3	Yes	S3VEM
Thallium	Target	6.4	U	mg/kg	1.0	JD	3	Yes	S3VEM
Vanadium	Target	4.5	J	mg/kg	4.5	JD	3	Yes	S3VEM
Zinc	Target	904		mg/kg	904	D	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number:	MBCAK3	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/02/2016	Sample Time:	13:50:00
% Moisture :				% Solids :	98.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6680		mg/kg	6680	D	7	Yes	S3VEM
Antimony	Target	3200		mg/kg	3200	D*	7	Yes	S3VEM
Arsenic	Target	660		mg/kg	660	D*	7	Yes	S3VEM
Barium	Target	667		mg/kg	667	D*	7	Yes	S3VEM
Beryllium	Target	0.13	J	mg/kg	0.13	JD	7	Yes	S3VEM
Cadmium	Target	112		mg/kg	112	D*	7	Yes	S3VEM
Calcium	Target	101000		mg/kg	101000	D	7	Yes	S3VEM
Chromium	Target	168		mg/kg	168	D	7	Yes	S3VEM
Cobalt	Target	35.4	U	mg/kg	14.1	JD	7	Yes	S3VEM
Copper	Target	828		mg/kg	828	D*	7	Yes	S3VEM
Iron	Target	130000		mg/kg	130000	D*	7	Yes	S3VEM
Lead	Target	107000		mg/kg	107000	D	100	Yes	S3VEM
Magnesium	Target	3540	U	mg/kg	3360	JD	7	Yes	S3VEM
Manganese	Target	786		mg/kg	786	D*	7	Yes	S3VEM
Nickel	Target	366		mg/kg	366	D*	7	Yes	S3VEM
Potassium	Target	3540	U	mg/kg	2470	JD	7	Yes	S3VEM
Selenium	Target	20.9	J	mg/kg	20.9	JD	7	Yes	S3VEM
Silver	Target	7.1	U	mg/kg	1.3	JD	7	Yes	S3VEM
Sodium	Target	21300		mg/kg	21300	D	7	Yes	S3VEM
Thallium	Target	17.7	U	mg/kg	17.7	UD	7	Yes	S3VEM
Vanadium	Target	55.7		mg/kg	55.7	D	7	Yes	S3VEM
Zinc	Target	9320		mg/kg	9320	D	7	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number:	MBCAK4	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/02/2016	Sample Time:	13:57:00
% Moisture :				% Solids :	89.3		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3830		mg/kg	3830	D	6	Yes	S3VEM
Antimony	Target	2520		mg/kg	2520	D*	6	Yes	S3VEM
Arsenic	Target	341		mg/kg	341	D*	6	Yes	S3VEM
Barium	Target	535		mg/kg	535	D*	6	Yes	S3VEM
Beryllium	Target	2.8	U	mg/kg	2.8	UD	6	Yes	S3VEM
Cadmium	Target	85.3		mg/kg	85.3	D*	6	Yes	S3VEM
Calcium	Target	65100		mg/kg	65100	D	6	Yes	S3VEM
Chromium	Target	137		mg/kg	137	D	6	Yes	S3VEM
Cobalt	Target	27.8	U	mg/kg	13.1	JD	6	Yes	S3VEM
Copper	Target	2350		mg/kg	2350	D*	6	Yes	S3VEM
Iron	Target	227000		mg/kg	227000	D*	100	Yes	S3VEM
Lead	Target	93200		mg/kg	93200	D	100	Yes	S3VEM
Magnesium	Target	2780	U	mg/kg	1220	JD	6	Yes	S3VEM
Manganese	Target	706		mg/kg	706	D*	6	Yes	S3VEM
Nickel	Target	492		mg/kg	492	D*	6	Yes	S3VEM
Potassium	Target	2780	U	mg/kg	703	JD	6	Yes	S3VEM
Selenium	Target	13.7	J	mg/kg	13.7	JD	6	Yes	S3VEM
Silver	Target	5.6	U	mg/kg	1.3	JD	6	Yes	S3VEM
Sodium	Target	4450		mg/kg	4450	D	6	Yes	S3VEM
Thallium	Target	13.9	U	mg/kg	13.9	UD	6	Yes	S3VEM
Vanadium	Target	21.8	J	mg/kg	21.8	JD	6	Yes	S3VEM
Zinc	Target	8140		mg/kg	8140	D	6	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number: MBCAK5	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/02/2016	Sample Time: 14:00:00
% Moisture :		% Solids : 98.7	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2420		mg/kg	2420	D	2	Yes	S3VEM
Antimony	Target	9710		mg/kg	9710	D*	100	Yes	S3VEM
Arsenic	Target	375		mg/kg	375	D*	2	Yes	S3VEM
Barium	Target	215		mg/kg	215	D*	2	Yes	S3VEM
Beryllium	Target	0.021	J	mg/kg	0.021	JD	2	Yes	S3VEM
Cadmium	Target	62.8		mg/kg	62.8	D*	2	Yes	S3VEM
Calcium	Target	29200		mg/kg	29200	D	2	Yes	S3VEM
Chromium	Target	36.9		mg/kg	36.9	D	2	Yes	S3VEM
Cobalt	Target	9.9	U	mg/kg	4.4	JD	2	Yes	S3VEM
Copper	Target	1390		mg/kg	1390	D*	2	Yes	S3VEM
Iron	Target	36800		mg/kg	36800	D*	2	Yes	S3VEM
Lead	Target	86600		mg/kg	86600	D	100	Yes	S3VEM
Magnesium	Target	1270		mg/kg	1270	D	2	Yes	S3VEM
Manganese	Target	199		mg/kg	199	D*	2	Yes	S3VEM
Nickel	Target	745		mg/kg	745	D*	2	Yes	S3VEM
Potassium	Target	990	U	mg/kg	349	JD	2	Yes	S3VEM
Selenium	Target	16.5		mg/kg	16.5	D	2	Yes	S3VEM
Silver	Target	11.9		mg/kg	11.9	D	2	Yes	S3VEM
Sodium	Target	17800		mg/kg	17800	D	2	Yes	S3VEM
Thallium	Target	5.0	U	mg/kg	0.49	JD	2	Yes	S3VEM
Vanadium	Target	8.9	J	mg/kg	8.9	JD	2	Yes	S3VEM
Zinc	Target	1710		mg/kg	1710	D	2	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number:	MBCAK6	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/02/2016	Sample Time:	14:00:00
% Moisture :				% Solids :	97.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1920		mg/kg	1920	D	2	Yes	S3VEM
Antimony	Target	6280		mg/kg	6280	D*	100	Yes	S3VEM
Arsenic	Target	263		mg/kg	263	D*	2	Yes	S3VEM
Barium	Target	217		mg/kg	217	D*	2	Yes	S3VEM
Beryllium	Target	0.029	J	mg/kg	0.029	JD	2	Yes	S3VEM
Cadmium	Target	44.3		mg/kg	44.3	D*	2	Yes	S3VEM
Calcium	Target	16400		mg/kg	16400	D	2	Yes	S3VEM
Chromium	Target	108		mg/kg	108	D	2	Yes	S3VEM
Cobalt	Target	8.2	U	mg/kg	4.5	JD	2	Yes	S3VEM
Copper	Target	1180		mg/kg	1180	D*	2	Yes	S3VEM
Iron	Target	32700		mg/kg	32700	D*	2	Yes	S3VEM
Lead	Target	62400		mg/kg	62400	D	100	Yes	S3VEM
Magnesium	Target	824	U	mg/kg	775	JD	2	Yes	S3VEM
Manganese	Target	197		mg/kg	197	D*	2	Yes	S3VEM
Nickel	Target	813		mg/kg	813	D*	2	Yes	S3VEM
Potassium	Target	824	U	mg/kg	485	JD	2	Yes	S3VEM
Selenium	Target	11.3		mg/kg	11.3	D	2	Yes	S3VEM
Silver	Target	14.2		mg/kg	14.2	D	2	Yes	S3VEM
Sodium	Target	12600		mg/kg	12600	D	2	Yes	S3VEM
Thallium	Target	4.1	U	mg/kg	1.4	JD	2	Yes	S3VEM
Vanadium	Target	3.3	J	mg/kg	3.3	JD	2	Yes	S3VEM
Zinc	Target	740		mg/kg	740	D	2	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number: MBCAK7	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/02/2016	Sample Time: 14:10:00
% Moisture :		% Solids : 99.5	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2220		mg/kg	2220	D	5	Yes	S3VEM
Antimony	Target	3960		mg/kg	3960	D*	100	Yes	S3VEM
Arsenic	Target	323		mg/kg	323	D*	5	Yes	S3VEM
Barium	Target	288		mg/kg	288	D*	5	Yes	S3VEM
Beryllium	Target	0.081	J	mg/kg	0.081	JD	5	Yes	S3VEM
Cadmium	Target	70.5		mg/kg	70.5	D*	5	Yes	S3VEM
Calcium	Target	16900		mg/kg	16900	D	5	Yes	S3VEM
Chromium	Target	50.8		mg/kg	50.8	D	5	Yes	S3VEM
Cobalt	Target	21.5	U	mg/kg	6.9	JD	5	Yes	S3VEM
Copper	Target	1090		mg/kg	1090	D*	5	Yes	S3VEM
Iron	Target	26600		mg/kg	26600	D*	5	Yes	S3VEM
Lead	Target	79700		mg/kg	79700	D	100	Yes	S3VEM
Magnesium	Target	2150	U	mg/kg	1140	JD	5	Yes	S3VEM
Manganese	Target	194		mg/kg	194	D*	5	Yes	S3VEM
Nickel	Target	383		mg/kg	383	D*	5	Yes	S3VEM
Potassium	Target	2150	U	mg/kg	524	JD	5	Yes	S3VEM
Selenium	Target	19.7		mg/kg	19.7	D	5	Yes	S3VEM
Silver	Target	6.4		mg/kg	6.4	D	5	Yes	S3VEM
Sodium	Target	14800		mg/kg	14800	D	5	Yes	S3VEM
Thallium	Target	10.7	U	mg/kg	10.7	UD	5	Yes	S3VEM
Vanadium	Target	82.0		mg/kg	82.0	D	5	Yes	S3VEM
Zinc	Target	5870		mg/kg	5870	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number: MBCAK8	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/02/2016	Sample Time: 14:35:00
% Moisture :		% Solids : 82.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2270		mg/kg	2270	D	4	Yes	S3VEM
Antimony	Target	9430		mg/kg	9430	D*	100	Yes	S3VEM
Arsenic	Target	823		mg/kg	823	D*	4	Yes	S3VEM
Barium	Target	154		mg/kg	154	D*	4	Yes	S3VEM
Beryllium	Target	2.1	U	mg/kg	2.1	UD	4	Yes	S3VEM
Cadmium	Target	57.0		mg/kg	57.0	D*	4	Yes	S3VEM
Calcium	Target	23200		mg/kg	23200	D	4	Yes	S3VEM
Chromium	Target	145		mg/kg	145	D	4	Yes	S3VEM
Cobalt	Target	21.4	U	mg/kg	5.9	JD	4	Yes	S3VEM
Copper	Target	2700		mg/kg	2700	D*	4	Yes	S3VEM
Iron	Target	46400		mg/kg	46400	D*	4	Yes	S3VEM
Lead	Target	74600		mg/kg	74600	D	100	Yes	S3VEM
Magnesium	Target	2140	U	mg/kg	881	JD	4	Yes	S3VEM
Manganese	Target	243		mg/kg	243	D*	4	Yes	S3VEM
Nickel	Target	505		mg/kg	505	D*	4	Yes	S3VEM
Potassium	Target	2140	U	mg/kg	622	JD	4	Yes	S3VEM
Selenium	Target	11.9	J	mg/kg	11.9	JD	4	Yes	S3VEM
Silver	Target	5.1		mg/kg	5.1	D	4	Yes	S3VEM
Sodium	Target	116000		mg/kg	116000	D	100	Yes	S3VEM
Thallium	Target	10.7	U	mg/kg	10.7	UD	4	Yes	S3VEM
Vanadium	Target	9.9	J	mg/kg	9.9	JD	4	Yes	S3VEM
Zinc	Target	6580		mg/kg	6580	D	4	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number: MBCAK9	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/02/2016	Sample Time: 15:40:00
% Moisture :		% Solids : 99.3	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2090		mg/kg	2090	D	3	Yes	S3VEM
Antimony	Target	4560		mg/kg	4560	D*	100	Yes	S3VEM
Arsenic	Target	223		mg/kg	223	D*	3	Yes	S3VEM
Barium	Target	285		mg/kg	285	D*	3	Yes	S3VEM
Beryllium	Target	0.017	J	mg/kg	0.017	JD	3	Yes	S3VEM
Cadmium	Target	82.2		mg/kg	82.2	D*	3	Yes	S3VEM
Calcium	Target	50200		mg/kg	50200	D	3	Yes	S3VEM
Chromium	Target	102		mg/kg	102	D	3	Yes	S3VEM
Cobalt	Target	14.4	U	mg/kg	6.1	JD	3	Yes	S3VEM
Copper	Target	2600		mg/kg	2600	D*	3	Yes	S3VEM
Iron	Target	61900		mg/kg	61900	D*	3	Yes	S3VEM
Lead	Target	87200		mg/kg	87200	D	100	Yes	S3VEM
Magnesium	Target	1440	U	mg/kg	849	JD	3	Yes	S3VEM
Manganese	Target	226		mg/kg	226	D*	3	Yes	S3VEM
Nickel	Target	1130		mg/kg	1130	D*	3	Yes	S3VEM
Potassium	Target	1440	U	mg/kg	460	JD	3	Yes	S3VEM
Selenium	Target	7.2	J	mg/kg	7.2	JD	3	Yes	S3VEM
Silver	Target	17.1		mg/kg	17.1	D	3	Yes	S3VEM
Sodium	Target	32400		mg/kg	32400	D	3	Yes	S3VEM
Thallium	Target	7.2	U	mg/kg	7.2	UD	3	Yes	S3VEM
Vanadium	Target	12.6	J	mg/kg	12.6	JD	3	Yes	S3VEM
Zinc	Target	1190		mg/kg	1190	D	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number:	MBCAL0	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/02/2016	Sample Time:	16:00:00
% Moisture :				% Solids :	99.5		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6250		mg/kg	6250	D	4	Yes	S3VEM
Antimony	Target	5040		mg/kg	5040	D*	100	Yes	S3VEM
Arsenic	Target	483		mg/kg	483	D*	4	Yes	S3VEM
Barium	Target	115		mg/kg	115	D*	4	Yes	S3VEM
Beryllium	Target	0.10	J	mg/kg	0.10	JD	4	Yes	S3VEM
Cadmium	Target	52.6		mg/kg	52.6	D*	4	Yes	S3VEM
Calcium	Target	54700		mg/kg	54700	D	4	Yes	S3VEM
Chromium	Target	261		mg/kg	261	D	4	Yes	S3VEM
Cobalt	Target	18.8	U	mg/kg	15.2	JD	4	Yes	S3VEM
Copper	Target	1590		mg/kg	1590	D*	4	Yes	S3VEM
Iron	Target	115000		mg/kg	115000	D*	4	Yes	S3VEM
Lead	Target	62700		mg/kg	62700	D	100	Yes	S3VEM
Magnesium	Target	2040		mg/kg	2040	D	4	Yes	S3VEM
Manganese	Target	622		mg/kg	622	D*	4	Yes	S3VEM
Nickel	Target	375		mg/kg	375	D*	4	Yes	S3VEM
Potassium	Target	1880	U	mg/kg	1250	JD	4	Yes	S3VEM
Selenium	Target	15.0		mg/kg	15.0	D	4	Yes	S3VEM
Silver	Target	3.8	U	mg/kg	3.8	JD	4	Yes	S3VEM
Sodium	Target	47000		mg/kg	47000	D	4	Yes	S3VEM
Thallium	Target	9.4	U	mg/kg	9.4	UD	4	Yes	S3VEM
Vanadium	Target	23.2		mg/kg	23.2	D	4	Yes	S3VEM
Zinc	Target	4210		mg/kg	4210	D	4	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number:	MBCAL1	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/02/2016	Sample Time:	09:15:00
% Moisture :				% Solids :	98.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	4250		mg/kg	4250	D	2	Yes	S3VEM
Antimony	Target	6390		mg/kg	6390	D*	100	Yes	S3VEM
Arsenic	Target	517		mg/kg	517	D*	2	Yes	S3VEM
Barium	Target	242		mg/kg	242	D*	2	Yes	S3VEM
Beryllium	Target	0.037	J	mg/kg	0.037	JD	2	Yes	S3VEM
Cadmium	Target	148		mg/kg	148	D*	2	Yes	S3VEM
Calcium	Target	54600		mg/kg	54600	D	2	Yes	S3VEM
Chromium	Target	163		mg/kg	163	D	2	Yes	S3VEM
Cobalt	Target	13.3		mg/kg	13.3	D	2	Yes	S3VEM
Copper	Target	1390		mg/kg	1390	D*	2	Yes	S3VEM
Iron	Target	215000		mg/kg	215000	D*	100	Yes	S3VEM
Lead	Target	64900		mg/kg	64900	D	100	Yes	S3VEM
Magnesium	Target	1640		mg/kg	1640	D	2	Yes	S3VEM
Manganese	Target	862		mg/kg	862	D*	2	Yes	S3VEM
Nickel	Target	647		mg/kg	647	D*	2	Yes	S3VEM
Potassium	Target	2080		mg/kg	2080	D	2	Yes	S3VEM
Selenium	Target	13.2		mg/kg	13.2	D	2	Yes	S3VEM
Silver	Target	13.3		mg/kg	13.3	D	2	Yes	S3VEM
Sodium	Target	26500		mg/kg	26500	D	2	Yes	S3VEM
Thallium	Target	4.4	U	mg/kg	4.4	UD	2	Yes	S3VEM
Vanadium	Target	29.1		mg/kg	29.1	D	2	Yes	S3VEM
Zinc	Target	10100		mg/kg	10100	D	100	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number:	MBCAL2	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/03/2016	Sample Time:	14:40:00
% Moisture :				% Solids :	99.1		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5090		mg/kg	5090	D	3	Yes	S3VEM
Antimony	Target	4410		mg/kg	4410	D*	100	Yes	S3VEM
Arsenic	Target	501		mg/kg	501	D*	3	Yes	S3VEM
Barium	Target	416		mg/kg	416	D*	3	Yes	S3VEM
Beryllium	Target	0.061	J	mg/kg	0.061	JD	3	Yes	S3VEM
Cadmium	Target	109		mg/kg	109	D*	3	Yes	S3VEM
Calcium	Target	69600		mg/kg	69600	D	3	Yes	S3VEM
Chromium	Target	161		mg/kg	161	D	3	Yes	S3VEM
Cobalt	Target	12.9	U	mg/kg	12.7	JD	3	Yes	S3VEM
Copper	Target	991		mg/kg	991	D*	3	Yes	S3VEM
Iron	Target	159000		mg/kg	159000	D*	100	Yes	S3VEM
Lead	Target	76600		mg/kg	76600	D	100	Yes	S3VEM
Magnesium	Target	2260		mg/kg	2260	D	3	Yes	S3VEM
Manganese	Target	695		mg/kg	695	D*	3	Yes	S3VEM
Nickel	Target	471		mg/kg	471	D*	3	Yes	S3VEM
Potassium	Target	2190		mg/kg	2190	D	3	Yes	S3VEM
Selenium	Target	17.4		mg/kg	17.4	D	3	Yes	S3VEM
Silver	Target	2.6	U	mg/kg	1.0	JD	3	Yes	S3VEM
Sodium	Target	20100		mg/kg	20100	D	3	Yes	S3VEM
Thallium	Target	6.5	U	mg/kg	6.5	UD	3	Yes	S3VEM
Vanadium	Target	29.6		mg/kg	29.6	D	3	Yes	S3VEM
Zinc	Target	12900		mg/kg	12900	D	100	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number:	MBCAP9	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/07/2016	Sample Time:	16:55:00
% Moisture :				% Solids :	98.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	4540		mg/kg	4540	D	3	Yes	S3VEM
Antimony	Target	121	J	mg/kg	121	D*	3	Yes	S3VEM
Arsenic	Target	13.7	J	mg/kg	13.7	D*	3	Yes	S3VEM
Barium	Target	60.7	U	mg/kg	41.0	JD*	3	Yes	S3VEM
Beryllium	Target	0.12	J	mg/kg	0.12	JD	3	Yes	S3VEM
Cadmium	Target	9.7	J	mg/kg	9.7	D*	3	Yes	S3VEM
Calcium	Target	316000		mg/kg	316000	D	15	Yes	S3VEM
Chromium	Target	25.6		mg/kg	25.6	D	3	Yes	S3VEM
Cobalt	Target	15.2	U	mg/kg	1.8	JD	3	Yes	S3VEM
Copper	Target	87.0		mg/kg	87.0	D*	3	Yes	S3VEM
Iron	Target	5220		mg/kg	5220	D*	3	Yes	S3VEM
Lead	Target	6150		mg/kg	6150	D	3	Yes	S3VEM
Magnesium	Target	1840		mg/kg	1840	D	3	Yes	S3VEM
Manganese	Target	95.6	J	mg/kg	95.6	D*	3	Yes	S3VEM
Nickel	Target	14.6	J	mg/kg	14.6	D*	3	Yes	S3VEM
Potassium	Target	1520	U	mg/kg	832	JD	3	Yes	S3VEM
Selenium	Target	10.6	U	mg/kg	10.6	UD	3	Yes	S3VEM
Silver	Target	3.0	U	mg/kg	0.16	JD	3	Yes	S3VEM
Sodium	Target	5590		mg/kg	5590	D	3	Yes	S3VEM
Thallium	Target	7.6	U	mg/kg	7.6	UD	3	Yes	S3VEM
Vanadium	Target	14.7	J	mg/kg	14.7	JD	3	Yes	S3VEM
Zinc	Target	75.4		mg/kg	75.4	D	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number: MBCAP9D	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/07/2016	Sample Time: 16:55:00
% Moisture :		% Solids : 98.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5050		mg/kg	5050	D	3	Yes	S3VEM
Antimony	Target	89.3		mg/kg	89.3	D*	3	Yes	S3VEM
Arsenic	Target	17.0		mg/kg	17.0	D*	3	Yes	S3VEM
Barium	Target	52.9		mg/kg	52.9	JD	3	Yes	S3VEM
Beryllium	Target	0.13		mg/kg	0.13	JD	3	Yes	S3VEM
Cadmium	Target	13.6		mg/kg	13.6	D*	3	Yes	S3VEM
Calcium	Target	312000		mg/kg	312000	D	15	Yes	S3VEM
Chromium	Target	27.6		mg/kg	27.6	D	3	Yes	S3VEM
Cobalt	Target	2.4		mg/kg	2.4	JD	3	Yes	S3VEM
Copper	Target	110		mg/kg	110	D*	3	Yes	S3VEM
Iron	Target	6430		mg/kg	6430	D*	3	Yes	S3VEM
Lead	Target	7430		mg/kg	7430	D	3	Yes	S3VEM
Magnesium	Target	2000		mg/kg	2000	D	3	Yes	S3VEM
Manganese	Target	127		mg/kg	127	D*	3	Yes	S3VEM
Nickel	Target	20.3		mg/kg	20.3	D	3	Yes	S3VEM
Potassium	Target	1020		mg/kg	1020	JD	3	Yes	S3VEM
Selenium	Target	10.6	U	mg/kg	10.6	UD	3	Yes	S3VEM
Silver	Target	0.22		mg/kg	0.22	JD	3	Yes	S3VEM
Sodium	Target	6550		mg/kg	6550	D	3	Yes	S3VEM
Thallium	Target	7.6	U	mg/kg	7.6	UD	3	Yes	S3VEM
Vanadium	Target	16.3		mg/kg	16.3	D	3	Yes	S3VEM
Zinc	Target	82.0		mg/kg	82.0	D	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number: MBCAP9L	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 98.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	4500		mg/kg	4500	D	15	Yes	S3VEM
Antimony	Target	74.9	J	mg/kg	74.9	JD*	15	Yes	S3VEM
Arsenic	Target	12.6	J	mg/kg	12.6	JD	15	Yes	S3VEM
Barium	Target	46.6	J	mg/kg	46.6	JD*	15	Yes	S3VEM
Beryllium	Target	7.6	U	mg/kg	7.6	UD	15	Yes	S3VEM
Cadmium	Target	12.8		mg/kg	12.8	D*	15	Yes	S3VEM
Calcium	Target	326000		mg/kg	326000	D	75	Yes	S3VEM
Chromium	Target	26.1		mg/kg	26.1	D	15	Yes	S3VEM
Cobalt	Target	1.9	J	mg/kg	1.9	JD	15	Yes	S3VEM
Copper	Target	99.5		mg/kg	99.5	D*	15	Yes	S3VEM
Iron	Target	5830		mg/kg	5830	D*	15	Yes	S3VEM
Lead	Target	6510		mg/kg	6510	D	15	Yes	S3VEM
Magnesium	Target	1840	J	mg/kg	1840	JD	15	Yes	S3VEM
Manganese	Target	116		mg/kg	116	D*	15	Yes	S3VEM
Nickel	Target	17.5	J	mg/kg	17.5	JD*	15	Yes	S3VEM
Potassium	Target	895		mg/kg	895	JD	15	Yes	S3VEM
Selenium	Target	53.1	U	mg/kg	53.1	UD	15	Yes	S3VEM
Silver	Target	0.86	J	mg/kg	0.86	JD	15	Yes	S3VEM
Sodium	Target	5710	J	mg/kg	5710	JD	15	Yes	S3VEM
Thallium	Target	0.73	J	mg/kg	0.73	JD	15	Yes	S3VEM
Vanadium	Target	13.6	J	mg/kg	13.6	JD	15	Yes	S3VEM
Zinc	Target	76.7	J	mg/kg	76.7	JD	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number: MBCAP9S	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/07/2016	Sample Time: 16:55:00
% Moisture :		% Solids : 98.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Antimony	Spike	77.6		mg/kg	77.6	D	3	Yes	S3VEM
Arsenic	Spike	22.0		mg/kg	22.0	D	3	Yes	S3VEM
Barium	Spike	441		mg/kg	441	D	3	Yes	S3VEM
Beryllium	Spike	9.6		mg/kg	9.6	D	3	Yes	S3VEM
Cadmium	Spike	22.3		mg/kg	22.3	D	3	Yes	S3VEM
Chromium	Spike	64.6		mg/kg	64.6	D	3	Yes	S3VEM
Cobalt	Spike	94.4		mg/kg	94.4	D	3	Yes	S3VEM
Copper	Spike	149		mg/kg	149	D	3	Yes	S3VEM
Lead	Spike	8460		mg/kg	8460	D	3	Yes	S3VEM
Manganese	Spike	199		mg/kg	199	D	3	Yes	S3VEM
Nickel	Spike	116		mg/kg	116	D	3	Yes	S3VEM
Selenium	Spike	19.4		mg/kg	19.4	D	3	Yes	S3VEM
Silver	Spike	9.7		mg/kg	9.7	D	3	Yes	S3VEM
Thallium	Spike	9.0		mg/kg	9.0	D	3	Yes	S3VEM
Vanadium	Spike	112		mg/kg	112	D	3	Yes	S3VEM
Zinc	Spike	198		mg/kg	198	D	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number:	MBCAQ6	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/09/2016	Sample Time:	08:38:00
% Moisture :				% Solids :	99.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	287		mg/kg	287	D	3	Yes	S3VEM
Antimony	Target	50300		mg/kg	50300	D*	100	Yes	S3VEM
Arsenic	Target	12100		mg/kg	12100	D*	100	Yes	S3VEM
Barium	Target	70.1		mg/kg	70.1	D*	3	Yes	S3VEM
Beryllium	Target	1.5	U	mg/kg	1.5	UD	3	Yes	S3VEM
Cadmium	Target	105		mg/kg	105	D*	3	Yes	S3VEM
Calcium	Target	1510	U	mg/kg	1470	JD	3	Yes	S3VEM
Chromium	Target	20.0		mg/kg	20.0	D	3	Yes	S3VEM
Cobalt	Target	17.5		mg/kg	17.5	D	3	Yes	S3VEM
Copper	Target	19000		mg/kg	19000	D*	100	Yes	S3VEM
Iron	Target	72900		mg/kg	72900	D*	3	Yes	S3VEM
Lead	Target	53000		mg/kg	53000	D	100	Yes	S3VEM
Magnesium	Target	1510	U	mg/kg	159	JD	3	Yes	S3VEM
Manganese	Target	159		mg/kg	159	D*	3	Yes	S3VEM
Nickel	Target	3670		mg/kg	3670	D*	100	Yes	S3VEM
Potassium	Target	1510	U	mg/kg	75.1	JD	3	Yes	S3VEM
Selenium	Target	1310		mg/kg	1310	D	3	Yes	S3VEM
Silver	Target	5.0		mg/kg	5.0	D	3	Yes	S3VEM
Sodium	Target	31200		mg/kg	31200	D	3	Yes	S3VEM
Thallium	Target	7.5	U	mg/kg	7.5	UD	3	Yes	S3VEM
Vanadium	Target	2.8	J	mg/kg	2.8	JD	3	Yes	S3VEM
Zinc	Target	137		mg/kg	137	D	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number:	MBCAQ7	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/09/2016	Sample Time:	08:40:00
% Moisture :				% Solids :	99.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1090		mg/kg	1090	D	3	Yes	S3VEM
Antimony	Target	7060		mg/kg	7060	D*	50	Yes	S3VEM
Arsenic	Target	270		mg/kg	270	D*	3	Yes	S3VEM
Barium	Target	40.9	U	mg/kg	24.7	JD*	3	Yes	S3VEM
Beryllium	Target	1.0	U	mg/kg	1.0	UD	3	Yes	S3VEM
Cadmium	Target	119		mg/kg	119	D*	3	Yes	S3VEM
Calcium	Target	3200		mg/kg	3200	D	3	Yes	S3VEM
Chromium	Target	50.8		mg/kg	50.8	D	3	Yes	S3VEM
Cobalt	Target	10.2	U	mg/kg	6.0	JD	3	Yes	S3VEM
Copper	Target	3930		mg/kg	3930	D*	50	Yes	S3VEM
Iron	Target	29900		mg/kg	29900	D*	3	Yes	S3VEM
Lead	Target	44500		mg/kg	44500	D	50	Yes	S3VEM
Magnesium	Target	1020	U	mg/kg	242	JD	3	Yes	S3VEM
Manganese	Target	142		mg/kg	142	D*	3	Yes	S3VEM
Nickel	Target	2110		mg/kg	2110	D*	50	Yes	S3VEM
Potassium	Target	1020	U	mg/kg	121	JD	3	Yes	S3VEM
Selenium	Target	34.2		mg/kg	34.2	D	3	Yes	S3VEM
Silver	Target	10.7		mg/kg	10.7	D	3	Yes	S3VEM
Sodium	Target	19900		mg/kg	19900	D	3	Yes	S3VEM
Thallium	Target	5.1	U	mg/kg	0.77	JD	3	Yes	S3VEM
Vanadium	Target	2.1	J	mg/kg	2.1	JD	3	Yes	S3VEM
Zinc	Target	272		mg/kg	272	D	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAK2	Lab Code: BON

Sample Number: PBS01	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	mg/kg	20.0	U	1	Yes	S3VEM
Antimony	Target	6.0	U	mg/kg	6.0	U	1	Yes	S3VEM
Arsenic	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Barium	Target	-.088		mg/kg	-.088	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	mg/kg	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	mg/kg	0.50	U	1	Yes	S3VEM
Calcium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Chromium	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Cobalt	Target	-.037		mg/kg	-.037	J	1	Yes	S3VEM
Copper	Target	2.5	U	mg/kg	2.5	U	1	Yes	S3VEM
Iron	Target	10.0	U	mg/kg	10.0	U	1	Yes	S3VEM
Lead	Target	0.18	J	mg/kg	0.18	J	1	Yes	S3VEM
Magnesium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Manganese	Target	1.5	U	mg/kg	1.5	U	1	Yes	S3VEM
Nickel	Target	4.0	U	mg/kg	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Selenium	Target	3.5	U	mg/kg	3.5	U	1	Yes	S3VEM
Silver	Target	0.072	J	mg/kg	0.072	J	1	Yes	S3VEM
Sodium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Thallium	Target	-.25		mg/kg	-.25	J	1	Yes	S3VEM
Vanadium	Target	-.072		mg/kg	-.072	J	1	Yes	S3VEM
Zinc	Target	6.0	U	mg/kg	6.0	U	1	Yes	S3VEM

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 14 (Soil)
Analysis: Metals

SDG No.: MBCAL3
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/2/2016, 3/3/2016, 3/4/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solution
Contractor Document: DCN # RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
Samples MBCAM4 and MBCAM5 have analytes that have been qualified J and UJ.

Minor Findings:
None

COMMENT:	The site specific QAPP did not specify the project levels for this site.

Reviewer Name(s): T. Solomon

Approver's Signature: **Date:04/05/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Barium MBCAL9

Cobalt MBCAL3, MBCAL4, MBCAL5, MBCAL6, MBCAL7, MBCAL8, MBCAL9, MBCAM0, MBCAM1, MBCAM2, MBCAM4, MBCAM6

Magnesium MBCAL4, MBCAL5, MBCAL6, MBCAL9, MBCAM0, MBCAM2, MBCAM4

Potassium MBCAL3, MBCAL4, MBCAL5, MBCAL6, MBCAL7, MBCAL8, MBCAM0, MBCAM1, MBCAM3, MBCAM4, MBCAM5, MBCAM6

Silver MBCAL3, MBCAL5, MBCAL6, MBCAL7, MBCAL9, MBCAM3, MBCAM5

Vanadium MBCAL4, MBCAL5, MBCAL9

The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Barium MBCAL9, MBCAM1

Beryllium MBCAL3, MBCAL7, MBCAL8, MBCAM3, MBCAM4, MBCAM5, MBCAM6

Cobalt MBCAL3, MBCAL4, MBCAL5, MBCAL6, MBCAL7, MBCAL8, MBCAL9, MBCAM0, MBCAM1, MBCAM2, MBCAM4, MBCAM6

Magnesium MBCAM4

Potassium MBCAL3, MBCAL4, MBCAL5, MBCAL6, MBCAL7, MBCAL8, MBCAM0, MBCAM1, MBCAM3, MBCAM4, MBCAM5, MBCAM6

Silver MBCAL3, MBCAL5, MBCAL6, MBCAL7, MBCAL9, MBCAM3, MBCAM5

The following samples have analyte results less than or equal to CRQLs. The associated preparation blank analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Potassium MBCAL3, MBCAL4, MBCAL5, MBCAL6, MBCAL7, MBCAL8, MBCAM0, MBCAM1, MBCAM3, MBCAM4, MBCAM5, MBCAM6

Silver MBCAL3, MBCAL5, MBCAL6, MBCAL7, MBCAL9, MBCAM3, MBCAM5

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

The following matrix spike sample has a percent recovery less than 30% and the post digestion spike sample had a percent recovery greater than 75%. The detected analyte with a result greater than or equal to the MDL is qualified J.

Barium MBCAM4

The following matrix spike sample has a percent recovery less than 75% and the post digestion spike sample had a percent recovery less than 75%. The nondetected analyte is qualified UJ.

Thallium MBCAM4

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

No problems were found for this criterion.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

The following field duplicate and original soil sample result is greater than or equal to 5x the CRQL and RPD is greater than 50%. Detected analyte is qualified J.

Nickel MBCAM4, MBCAM5

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

The following sample is associated to the serial dilution sample with an analyte %D > 15% and the original sample result is > 50X MDL. The detected analyte is qualified J.

Cobalt MBCAM4

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAL3	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	43.1		mg/kg	43.1		1	Yes	S3VEM
Antimony	Target	11.8		mg/kg	11.8		1	Yes	S3VEM
Arsenic	Target	1.8		mg/kg	1.8		1	Yes	S3VEM
Barium	Target	45.2		mg/kg	45.2		1	Yes	S3VEM
Beryllium	Target	1.0		mg/kg	1.0		1	Yes	S3VEM
Cadmium	Target	1.1		mg/kg	1.1		1	Yes	S3VEM
Calcium	Target	1120		mg/kg	1120		1	Yes	S3VEM
Chromium	Target	2.0		mg/kg	2.0		1	Yes	S3VEM
Cobalt	Target	10.9		mg/kg	10.9		1	Yes	S3VEM
Copper	Target	5.8		mg/kg	5.8		1	Yes	S3VEM
Iron	Target	19.6		mg/kg	19.6		1	Yes	S3VEM
Lead	Target	2.3		mg/kg	2.3		1	Yes	S3VEM
Magnesium	Target	1120		mg/kg	1120		1	Yes	S3VEM
Manganese	Target	3.6		mg/kg	3.6		1	Yes	S3VEM
Nickel	Target	8.8		mg/kg	8.8		1	Yes	S3VEM
Potassium	Target	1020		mg/kg	1020		1	Yes	S3VEM
Selenium	Target	7.4		mg/kg	7.4		1	Yes	S3VEM
Silver	Target	2.0		mg/kg	2.0		1	Yes	S3VEM
Sodium	Target	980		mg/kg	980		1	Yes	S3VEM
Thallium	Target	4.8		mg/kg	4.8		1	Yes	S3VEM
Vanadium	Target	11.1		mg/kg	11.1		1	Yes	S3VEM
Zinc	Target	12.4		mg/kg	12.4		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number:	MBCAL3	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/03/2016	Sample Time:	15:00:00
% Moisture :				% Solids :	96.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5100		mg/kg	5100	D*	3	Yes	S3VEM
Antimony	Target	7990		mg/kg	7990	D	100	Yes	S3VEM
Arsenic	Target	461		mg/kg	461	D	3	Yes	S3VEM
Barium	Target	452		mg/kg	452	D*	3	Yes	S3VEM
Beryllium	Target	1.5	U	mg/kg	0.044	JD	3	Yes	S3VEM
Cadmium	Target	69.8		mg/kg	69.8	D*	3	Yes	S3VEM
Calcium	Target	116000		mg/kg	116000	D*	3	Yes	S3VEM
Chromium	Target	118		mg/kg	118	D*	3	Yes	S3VEM
Cobalt	Target	14.9	U	mg/kg	11.9	JD*	3	Yes	S3VEM
Copper	Target	1580		mg/kg	1580	D*	3	Yes	S3VEM
Iron	Target	166000		mg/kg	166000	D*	100	Yes	S3VEM
Lead	Target	138000		mg/kg	138000	D	100	Yes	S3VEM
Magnesium	Target	1670		mg/kg	1670	D*	3	Yes	S3VEM
Manganese	Target	828		mg/kg	828	D*	3	Yes	S3VEM
Nickel	Target	385		mg/kg	385	D	3	Yes	S3VEM
Potassium	Target	1490	U	mg/kg	1070	JD	3	Yes	S3VEM
Selenium	Target	3.7		mg/kg	3.7	JD	3	Yes	S3VEM
Silver	Target	3.0	U	mg/kg	2.0	JD	3	Yes	S3VEM
Sodium	Target	20000		mg/kg	20000	D*	3	Yes	S3VEM
Thallium	Target	7.5	U	mg/kg	7.5	UD*	3	Yes	S3VEM
Vanadium	Target	19.8		mg/kg	19.8	D	3	Yes	S3VEM
Zinc	Target	18300		mg/kg	18300	D*	100	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number:	MBCAL4	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/02/2016	Sample Time:	09:08:00
% Moisture :				% Solids :	98.7		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2140		mg/kg	2140	D*	3	Yes	S3VEM
Antimony	Target	14900		mg/kg	14900	D	100	Yes	S3VEM
Arsenic	Target	457		mg/kg	457	D	3	Yes	S3VEM
Barium	Target	125		mg/kg	125	D*	3	Yes	S3VEM
Beryllium	Target	1.1	U	mg/kg	1.1	UD	3	Yes	S3VEM
Cadmium	Target	41.4		mg/kg	41.4	D*	3	Yes	S3VEM
Calcium	Target	29000		mg/kg	29000	D*	3	Yes	S3VEM
Chromium	Target	28.0		mg/kg	28.0	D*	3	Yes	S3VEM
Cobalt	Target	10.6	U	mg/kg	6.9	JD*	3	Yes	S3VEM
Copper	Target	1010		mg/kg	1010	D*	3	Yes	S3VEM
Iron	Target	47900		mg/kg	47900	D*	3	Yes	S3VEM
Lead	Target	111000		mg/kg	111000	D	100	Yes	S3VEM
Magnesium	Target	1060	U	mg/kg	949	JD*	3	Yes	S3VEM
Manganese	Target	246		mg/kg	246	D*	3	Yes	S3VEM
Nickel	Target	1150		mg/kg	1150	D	3	Yes	S3VEM
Potassium	Target	1060	U	mg/kg	281	JD	3	Yes	S3VEM
Selenium	Target	28.6		mg/kg	28.6	D	3	Yes	S3VEM
Silver	Target	13.8		mg/kg	13.8	D	3	Yes	S3VEM
Sodium	Target	6440		mg/kg	6440	D*	3	Yes	S3VEM
Thallium	Target	5.3	U	mg/kg	5.3	UD*	3	Yes	S3VEM
Vanadium	Target	10.6	U	mg/kg	8.3	JD	3	Yes	S3VEM
Zinc	Target	2140		mg/kg	2140	D*	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number: MBCAL5	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/03/2016	Sample Time: 14:45:00
% Moisture :		% Solids : 97.5	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6110		mg/kg	6110	D*	8	Yes	S3VEM
Antimony	Target	4550		mg/kg	4550	D	8	Yes	S3VEM
Arsenic	Target	460		mg/kg	460	D	8	Yes	S3VEM
Barium	Target	331		mg/kg	331	D*	8	Yes	S3VEM
Beryllium	Target	3.6	U	mg/kg	3.6	UD	8	Yes	S3VEM
Cadmium	Target	60.1		mg/kg	60.1	D*	8	Yes	S3VEM
Calcium	Target	143000		mg/kg	143000	D*	8	Yes	S3VEM
Chromium	Target	170		mg/kg	170	D*	8	Yes	S3VEM
Cobalt	Target	36.3	U	mg/kg	10.7	JD*	8	Yes	S3VEM
Copper	Target	6160		mg/kg	6160	D*	8	Yes	S3VEM
Iron	Target	115000		mg/kg	115000	D*	8	Yes	S3VEM
Lead	Target	128000		mg/kg	128000	D	100	Yes	S3VEM
Magnesium	Target	3630	U	mg/kg	2400	JD*	8	Yes	S3VEM
Manganese	Target	635		mg/kg	635	D*	8	Yes	S3VEM
Nickel	Target	369		mg/kg	369	D	8	Yes	S3VEM
Potassium	Target	3630	U	mg/kg	813	JD	8	Yes	S3VEM
Selenium	Target	8.0		mg/kg	8.0	JD	8	Yes	S3VEM
Silver	Target	7.3	U	mg/kg	4.5	JD	8	Yes	S3VEM
Sodium	Target	36700		mg/kg	36700	D*	8	Yes	S3VEM
Thallium	Target	18.2	U	mg/kg	18.2	UD*	8	Yes	S3VEM
Vanadium	Target	36.3	U	mg/kg	19.7	JD	8	Yes	S3VEM
Zinc	Target	13300		mg/kg	13300	D*	100	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number: MBCAL6	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/03/2016	Sample Time: 16:00:00
% Moisture :		% Solids : 96.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	11300		mg/kg	11300	D*	5	Yes	S3VEM
Antimony	Target	2170		mg/kg	2170	D	5	Yes	S3VEM
Arsenic	Target	407		mg/kg	407	D	5	Yes	S3VEM
Barium	Target	464		mg/kg	464	D*	5	Yes	S3VEM
Beryllium	Target	2.4	U	mg/kg	2.4	UD	5	Yes	S3VEM
Cadmium	Target	284		mg/kg	284	D*	5	Yes	S3VEM
Calcium	Target	77800		mg/kg	77800	D*	5	Yes	S3VEM
Chromium	Target	154		mg/kg	154	D*	5	Yes	S3VEM
Cobalt	Target	24.4	U	mg/kg	20.1	JD*	5	Yes	S3VEM
Copper	Target	628		mg/kg	628	D*	5	Yes	S3VEM
Iron	Target	203000		mg/kg	203000	D*	100	Yes	S3VEM
Lead	Target	118000		mg/kg	118000	D	100	Yes	S3VEM
Magnesium	Target	2440	U	mg/kg	1840	JD*	5	Yes	S3VEM
Manganese	Target	1560		mg/kg	1560	D*	5	Yes	S3VEM
Nickel	Target	500		mg/kg	500	D	5	Yes	S3VEM
Potassium	Target	2440	U	mg/kg	1830	JD	5	Yes	S3VEM
Selenium	Target	10.2		mg/kg	10.2	JD	5	Yes	S3VEM
Silver	Target	4.9	U	mg/kg	0.39	JD	5	Yes	S3VEM
Sodium	Target	33300		mg/kg	33300	D*	5	Yes	S3VEM
Thallium	Target	12.2	U	mg/kg	12.2	UD*	5	Yes	S3VEM
Vanadium	Target	39.0		mg/kg	39.0	D	5	Yes	S3VEM
Zinc	Target	3730		mg/kg	3730	D*	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number: MBCAL7	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/03/2016	Sample Time: 16:05:00
% Moisture :		% Solids : 97.7	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5710		mg/kg	5710	D*	7	Yes	S3VEM
Antimony	Target	4310		mg/kg	4310	D	7	Yes	S3VEM
Arsenic	Target	480		mg/kg	480	D	7	Yes	S3VEM
Barium	Target	406		mg/kg	406	D*	7	Yes	S3VEM
Beryllium	Target	3.2	U	mg/kg	0.039	JD	7	Yes	S3VEM
Cadmium	Target	260		mg/kg	260	D*	7	Yes	S3VEM
Calcium	Target	147000		mg/kg	147000	D*	7	Yes	S3VEM
Chromium	Target	126		mg/kg	126	D*	7	Yes	S3VEM
Cobalt	Target	31.7	U	mg/kg	13.5	JD*	7	Yes	S3VEM
Copper	Target	532		mg/kg	532	D*	7	Yes	S3VEM
Iron	Target	94200		mg/kg	94200	D*	7	Yes	S3VEM
Lead	Target	136000		mg/kg	136000	D	100	Yes	S3VEM
Magnesium	Target	3760		mg/kg	3760	D*	7	Yes	S3VEM
Manganese	Target	821		mg/kg	821	D*	7	Yes	S3VEM
Nickel	Target	488		mg/kg	488	D	7	Yes	S3VEM
Potassium	Target	3170	U	mg/kg	1590	JD	7	Yes	S3VEM
Selenium	Target	17.7		mg/kg	17.7	JD	7	Yes	S3VEM
Silver	Target	6.3	U	mg/kg	3.8	JD	7	Yes	S3VEM
Sodium	Target	41400		mg/kg	41400	D*	7	Yes	S3VEM
Thallium	Target	15.9	U	mg/kg	15.9	UD*	7	Yes	S3VEM
Vanadium	Target	35.3		mg/kg	35.3	D	7	Yes	S3VEM
Zinc	Target	2410		mg/kg	2410	D*	7	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number: MBCAL8	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/03/2016	Sample Time: 16:10:00
% Moisture :		% Solids : 97.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	4370		mg/kg	4370	D*	5	Yes	S3VEM
Antimony	Target	11400		mg/kg	11400	D	100	Yes	S3VEM
Arsenic	Target	734		mg/kg	734	D	5	Yes	S3VEM
Barium	Target	454		mg/kg	454	D*	5	Yes	S3VEM
Beryllium	Target	1.9	U	mg/kg	0.054	JD	5	Yes	S3VEM
Cadmium	Target	196		mg/kg	196	D*	5	Yes	S3VEM
Calcium	Target	71200		mg/kg	71200	D*	5	Yes	S3VEM
Chromium	Target	74.0		mg/kg	74.0	D*	5	Yes	S3VEM
Cobalt	Target	18.5	U	mg/kg	15.2	JD*	5	Yes	S3VEM
Copper	Target	1070		mg/kg	1070	D*	5	Yes	S3VEM
Iron	Target	81000		mg/kg	81000	D*	5	Yes	S3VEM
Lead	Target	112000		mg/kg	112000	D	100	Yes	S3VEM
Magnesium	Target	3270		mg/kg	3270	D*	5	Yes	S3VEM
Manganese	Target	522		mg/kg	522	D*	5	Yes	S3VEM
Nickel	Target	1100		mg/kg	1100	D	5	Yes	S3VEM
Potassium	Target	1850	U	mg/kg	948	JD	5	Yes	S3VEM
Selenium	Target	27.3		mg/kg	27.3	D	5	Yes	S3VEM
Silver	Target	8.6		mg/kg	8.6	D	5	Yes	S3VEM
Sodium	Target	12900		mg/kg	12900	D*	5	Yes	S3VEM
Thallium	Target	9.3	U	mg/kg	9.3	UD*	5	Yes	S3VEM
Vanadium	Target	25.4		mg/kg	25.4	D	5	Yes	S3VEM
Zinc	Target	2990		mg/kg	2990	D*	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number: MBCAL9	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/03/2016	Sample Time: 16:15:00
% Moisture :		% Solids : 98.2	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2720		mg/kg	2720	D*	5	Yes	S3VEM
Antimony	Target	207		mg/kg	207	D	5	Yes	S3VEM
Arsenic	Target	86.4		mg/kg	86.4	D	5	Yes	S3VEM
Barium	Target	93.4	U	mg/kg	92.3	JD*	5	Yes	S3VEM
Beryllium	Target	2.3	U	mg/kg	2.3	UD	5	Yes	S3VEM
Cadmium	Target	28.9		mg/kg	28.9	D*	5	Yes	S3VEM
Calcium	Target	164000		mg/kg	164000	D*	5	Yes	S3VEM
Chromium	Target	45.8		mg/kg	45.8	D*	5	Yes	S3VEM
Cobalt	Target	23.4	U	mg/kg	1.5	JD*	5	Yes	S3VEM
Copper	Target	79.9		mg/kg	79.9	D*	5	Yes	S3VEM
Iron	Target	11200		mg/kg	11200	D*	5	Yes	S3VEM
Lead	Target	11800		mg/kg	11800	D	5	Yes	S3VEM
Magnesium	Target	2340	U	mg/kg	1210	JD*	5	Yes	S3VEM
Manganese	Target	94.3		mg/kg	94.3	D*	5	Yes	S3VEM
Nickel	Target	36.2		mg/kg	36.2	D	5	Yes	S3VEM
Potassium	Target	2990		mg/kg	2990	D	5	Yes	S3VEM
Selenium	Target	9.4		mg/kg	9.4	JD	5	Yes	S3VEM
Silver	Target	4.7	U	mg/kg	0.62	JD	5	Yes	S3VEM
Sodium	Target	181000		mg/kg	181000	D*	100	Yes	S3VEM
Thallium	Target	11.7	U	mg/kg	11.7	UD*	5	Yes	S3VEM
Vanadium	Target	23.4	U	mg/kg	11.3	JD	5	Yes	S3VEM
Zinc	Target	211		mg/kg	211	D*	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number:	MBCAM0	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/03/2016	Sample Time:	16:30:00
% Moisture :				% Solids :	97.3		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6580		mg/kg	6580	D*	6	Yes	S3VEM
Antimony	Target	6140		mg/kg	6140	D	100	Yes	S3VEM
Arsenic	Target	465		mg/kg	465	D	6	Yes	S3VEM
Barium	Target	333		mg/kg	333	D*	6	Yes	S3VEM
Beryllium	Target	2.9	U	mg/kg	2.9	UD	6	Yes	S3VEM
Cadmium	Target	112		mg/kg	112	D*	6	Yes	S3VEM
Calcium	Target	55800		mg/kg	55800	D*	6	Yes	S3VEM
Chromium	Target	134		mg/kg	134	D*	6	Yes	S3VEM
Cobalt	Target	28.5	U	mg/kg	12.9	JD*	6	Yes	S3VEM
Copper	Target	843		mg/kg	843	D*	6	Yes	S3VEM
Iron	Target	160000		mg/kg	160000	D*	6	Yes	S3VEM
Lead	Target	137000		mg/kg	137000	D	100	Yes	S3VEM
Magnesium	Target	2850	U	mg/kg	2410	JD*	6	Yes	S3VEM
Manganese	Target	1030		mg/kg	1030	D*	6	Yes	S3VEM
Nickel	Target	592		mg/kg	592	D	6	Yes	S3VEM
Potassium	Target	2850	U	mg/kg	1600	JD	6	Yes	S3VEM
Selenium	Target	21.1		mg/kg	21.1	D	6	Yes	S3VEM
Silver	Target	6.7		mg/kg	6.7	D	6	Yes	S3VEM
Sodium	Target	7720		mg/kg	7720	D*	6	Yes	S3VEM
Thallium	Target	14.3	U	mg/kg	14.3	UD*	6	Yes	S3VEM
Vanadium	Target	32.2		mg/kg	32.2	D	6	Yes	S3VEM
Zinc	Target	10200		mg/kg	10200	D*	100	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number:	MBCAM1	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/04/2016	Sample Time:	09:40:00
% Moisture :				% Solids :	95.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3640		mg/kg	3640	D*	3	Yes	S3VEM
Antimony	Target	7080		mg/kg	7080	D	100	Yes	S3VEM
Arsenic	Target	760		mg/kg	760	D	3	Yes	S3VEM
Barium	Target	322		mg/kg	322	D*	3	Yes	S3VEM
Beryllium	Target	1.5	U	mg/kg	0.075	JD	3	Yes	S3VEM
Cadmium	Target	429		mg/kg	429	D*	3	Yes	S3VEM
Calcium	Target	124000		mg/kg	124000	D*	100	Yes	S3VEM
Chromium	Target	78.4		mg/kg	78.4	D*	3	Yes	S3VEM
Cobalt	Target	15.1	U	mg/kg	8.4	JD*	3	Yes	S3VEM
Copper	Target	666		mg/kg	666	D*	3	Yes	S3VEM
Iron	Target	41500		mg/kg	41500	D*	3	Yes	S3VEM
Lead	Target	140000		mg/kg	140000	D	100	Yes	S3VEM
Magnesium	Target	8460		mg/kg	8460	D*	3	Yes	S3VEM
Manganese	Target	362		mg/kg	362	D*	3	Yes	S3VEM
Nickel	Target	716		mg/kg	716	D	3	Yes	S3VEM
Potassium	Target	1510	U	mg/kg	757	JD	3	Yes	S3VEM
Selenium	Target	29.5		mg/kg	29.5	D	3	Yes	S3VEM
Silver	Target	4.8		mg/kg	4.8	D	3	Yes	S3VEM
Sodium	Target	24400		mg/kg	24400	D*	3	Yes	S3VEM
Thallium	Target	7.5	U	mg/kg	7.5	UD*	3	Yes	S3VEM
Vanadium	Target	37.8		mg/kg	37.8	D	3	Yes	S3VEM
Zinc	Target	1460		mg/kg	1460	D*	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number:	MBCAM2	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/04/2016	Sample Time:	09:45:00
% Moisture :				% Solids :	96.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3220		mg/kg	3220	D*	5	Yes	S3VEM
Antimony	Target	33400		mg/kg	33400	D	100	Yes	S3VEM
Arsenic	Target	1610		mg/kg	1610	D	5	Yes	S3VEM
Barium	Target	287		mg/kg	287	D*	5	Yes	S3VEM
Beryllium	Target	2.5	U	mg/kg	2.5	UD	5	Yes	S3VEM
Cadmium	Target	201		mg/kg	201	D*	5	Yes	S3VEM
Calcium	Target	45300		mg/kg	45300	D*	5	Yes	S3VEM
Chromium	Target	43.4		mg/kg	43.4	D*	5	Yes	S3VEM
Cobalt	Target	24.8	U	mg/kg	8.2	JD*	5	Yes	S3VEM
Copper	Target	1330		mg/kg	1330	D*	5	Yes	S3VEM
Iron	Target	66400		mg/kg	66400	D*	5	Yes	S3VEM
Lead	Target	149000		mg/kg	149000	D	100	Yes	S3VEM
Magnesium	Target	2480	U	mg/kg	1310	JD*	5	Yes	S3VEM
Manganese	Target	459		mg/kg	459	D*	5	Yes	S3VEM
Nickel	Target	1410		mg/kg	1410	D	5	Yes	S3VEM
Potassium	Target	3630		mg/kg	3630	D	5	Yes	S3VEM
Selenium	Target	66.9		mg/kg	66.9	D	5	Yes	S3VEM
Silver	Target	6.4		mg/kg	6.4	D	5	Yes	S3VEM
Sodium	Target	15300		mg/kg	15300	D*	5	Yes	S3VEM
Thallium	Target	12.4	U	mg/kg	12.4	UD*	5	Yes	S3VEM
Vanadium	Target	28.2		mg/kg	28.2	D	5	Yes	S3VEM
Zinc	Target	5270		mg/kg	5270	D*	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number:	MBCAM3	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/04/2016	Sample Time:	10:10:00
% Moisture :				% Solids :	91.2		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3000		mg/kg	3000	D*	5	Yes	S3VEM
Antimony	Target	7040		mg/kg	7040	D	100	Yes	S3VEM
Arsenic	Target	1100		mg/kg	1100	D	5	Yes	S3VEM
Barium	Target	178		mg/kg	178	D*	5	Yes	S3VEM
Beryllium	Target	2.5	U	mg/kg	0.038	JD	5	Yes	S3VEM
Cadmium	Target	1250		mg/kg	1250	D*	100	Yes	S3VEM
Calcium	Target	88000		mg/kg	88000	D*	5	Yes	S3VEM
Chromium	Target	99.4		mg/kg	99.4	D*	5	Yes	S3VEM
Cobalt	Target	76.8		mg/kg	76.8	D*	5	Yes	S3VEM
Copper	Target	666		mg/kg	666	D*	5	Yes	S3VEM
Iron	Target	90800		mg/kg	90800	D*	5	Yes	S3VEM
Lead	Target	140000		mg/kg	140000	D	100	Yes	S3VEM
Magnesium	Target	3580		mg/kg	3580	D*	5	Yes	S3VEM
Manganese	Target	1730		mg/kg	1730	D*	5	Yes	S3VEM
Nickel	Target	1860		mg/kg	1860	D	5	Yes	S3VEM
Potassium	Target	2510	U	mg/kg	560	JD	5	Yes	S3VEM
Selenium	Target	197		mg/kg	197	D	5	Yes	S3VEM
Silver	Target	5.0	U	mg/kg	3.8	JD	5	Yes	S3VEM
Sodium	Target	23500		mg/kg	23500	D*	5	Yes	S3VEM
Thallium	Target	12.6	U	mg/kg	12.6	UD*	5	Yes	S3VEM
Vanadium	Target	71.2		mg/kg	71.2	D	5	Yes	S3VEM
Zinc	Target	4820		mg/kg	4820	D*	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number: MBCAM4	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/04/2016	Sample Time: 10:12:00
% Moisture :		% Solids : 89.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6470		mg/kg	6470	D*	7	Yes	S3VEM
Antimony	Target	14800		mg/kg	14800	D	100	Yes	S3VEM
Arsenic	Target	1360		mg/kg	1360	D	7	Yes	S3VEM
Barium	Target	194	J	mg/kg	194	D*	7	Yes	S3VEM
Beryllium	Target	3.9	U	mg/kg	0.12	JD	7	Yes	S3VEM
Cadmium	Target	80.3		mg/kg	80.3	D*	7	Yes	S3VEM
Calcium	Target	12500		mg/kg	12500	D*	7	Yes	S3VEM
Chromium	Target	424		mg/kg	424	D*	7	Yes	S3VEM
Cobalt	Target	39.3	UJ	mg/kg	37.4	JD*	7	Yes	S3VEM
Copper	Target	5670		mg/kg	5670	D*	7	Yes	S3VEM
Iron	Target	222000		mg/kg	222000	D*	7	Yes	S3VEM
Lead	Target	109000		mg/kg	109000	D	100	Yes	S3VEM
Magnesium	Target	3930	U	mg/kg	2170	JD*	7	Yes	S3VEM
Manganese	Target	922		mg/kg	922	D*	7	Yes	S3VEM
Nickel	Target	709	J	mg/kg	709	D	7	Yes	S3VEM
Potassium	Target	3930	U	mg/kg	381	JD	7	Yes	S3VEM
Selenium	Target	18.0		mg/kg	18.0	JD	7	Yes	S3VEM
Silver	Target	7.9	U	mg/kg	7.9	UD	7	Yes	S3VEM
Sodium	Target	89900		mg/kg	89900	D*	7	Yes	S3VEM
Thallium	Target	19.6	UJ	mg/kg	19.6	UD*	7	Yes	S3VEM
Vanadium	Target	39.6		mg/kg	39.6	D	7	Yes	S3VEM
Zinc	Target	1100		mg/kg	1100	D*	7	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number:	MBCAM4A	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:	03/04/2016	Sample Time:	10:12:00
% Moisture :				% Solids :	89.1		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Barium	Spike	578		mg/kg	578	D	3	Yes	S3VEM
Thallium	Spike	7.5	U	mg/kg	7.5	UD*	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number: MBCAM4D	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/04/2016	Sample Time: 10:12:00
% Moisture :		% Solids : 89.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6140		mg/kg	6140	D	7	Yes	S3VEM
Antimony	Target	12800		mg/kg	12800	D	100	Yes	S3VEM
Arsenic	Target	1210		mg/kg	1210	D	7	Yes	S3VEM
Barium	Target	193		mg/kg	193	D	7	Yes	S3VEM
Beryllium	Target	0.12		mg/kg	0.12	JD	7	Yes	S3VEM
Cadmium	Target	82.0		mg/kg	82.0	D	7	Yes	S3VEM
Calcium	Target	11800		mg/kg	11800	D	7	Yes	S3VEM
Chromium	Target	397		mg/kg	397	D	7	Yes	S3VEM
Cobalt	Target	33.2		mg/kg	33.2	JD	7	Yes	S3VEM
Copper	Target	4420		mg/kg	4420	D*	7	Yes	S3VEM
Iron	Target	208000		mg/kg	208000	D	7	Yes	S3VEM
Lead	Target	130000		mg/kg	130000	D	100	Yes	S3VEM
Magnesium	Target	2030		mg/kg	2030	JD	7	Yes	S3VEM
Manganese	Target	874		mg/kg	874	D	7	Yes	S3VEM
Nickel	Target	826		mg/kg	826	D	7	Yes	S3VEM
Potassium	Target	400		mg/kg	400	JD	7	Yes	S3VEM
Selenium	Target	21.3		mg/kg	21.3	JD	7	Yes	S3VEM
Silver	Target	3.1		mg/kg	3.1	JD	7	Yes	S3VEM
Sodium	Target	86700		mg/kg	86700	D	7	Yes	S3VEM
Thallium	Target	19.6	U	mg/kg	19.6	UD	7	Yes	S3VEM
Vanadium	Target	36.8		mg/kg	36.8	JD	7	Yes	S3VEM
Zinc	Target	940		mg/kg	940	D	7	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number: MBCAM4L	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 89.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	7230		mg/kg	7230	D*	35	Yes	S3VEM
Antimony	Target	15000		mg/kg	15000	D	500	Yes	S3VEM
Arsenic	Target	1400		mg/kg	1400	D	35	Yes	S3VEM
Barium	Target	216	J	mg/kg	216	JD*	35	Yes	S3VEM
Beryllium	Target	19.6	U	mg/kg	19.6	UD	35	Yes	S3VEM
Cadmium	Target	90.5		mg/kg	90.5	D*	35	Yes	S3VEM
Calcium	Target	13900	J	mg/kg	13900	JD*	35	Yes	S3VEM
Chromium	Target	476		mg/kg	476	D*	35	Yes	S3VEM
Cobalt	Target	43.8	J	mg/kg	43.8	JD*	35	Yes	S3VEM
Copper	Target	6090		mg/kg	6090	D	35	Yes	S3VEM
Iron	Target	248000		mg/kg	248000	D*	35	Yes	S3VEM
Lead	Target	111000		mg/kg	111000	D	500	Yes	S3VEM
Magnesium	Target	2450	J	mg/kg	2450	JD*	35	Yes	S3VEM
Manganese	Target	1030		mg/kg	1030	D*	35	Yes	S3VEM
Nickel	Target	747		mg/kg	747	D	35	Yes	S3VEM
Potassium	Target	533		mg/kg	533	JD	35	Yes	S3VEM
Selenium	Target	11.2	J	mg/kg	11.2	JD	35	Yes	S3VEM
Silver	Target	2.9	J	mg/kg	2.9	JD	35	Yes	S3VEM
Sodium	Target	99800		mg/kg	99800	D*	35	Yes	S3VEM
Thallium	Target	98.2	U	mg/kg	98.2	UD	35	Yes	S3VEM
Vanadium	Target	42.2	J	mg/kg	42.2	JD	35	Yes	S3VEM
Zinc	Target	1240		mg/kg	1240	D*	35	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number: MBCAM4S	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/04/2016	Sample Time: 10:12:00
% Moisture :		% Solids : 89.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Antimony	Spike	14100		mg/kg	14100	D	100	Yes	S3VEM
Arsenic	Spike	1200		mg/kg	1200	D	7	Yes	S3VEM
Barium	Spike	181		mg/kg	181	D*	7	Yes	S3VEM
Beryllium	Spike	12.1		mg/kg	12.1	D	7	Yes	S3VEM
Cadmium	Spike	94.3		mg/kg	94.3	D	7	Yes	S3VEM
Chromium	Spike	480		mg/kg	480	D	7	Yes	S3VEM
Cobalt	Spike	154		mg/kg	154	D	7	Yes	S3VEM
Copper	Spike	4570		mg/kg	4570	D	7	Yes	S3VEM
Lead	Spike	117000		mg/kg	117000	D	100	Yes	S3VEM
Manganese	Spike	1020		mg/kg	1020	D	7	Yes	S3VEM
Nickel	Spike	961		mg/kg	961	D	7	Yes	S3VEM
Selenium	Spike	39.8		mg/kg	39.8	D	7	Yes	S3VEM
Silver	Spike	12.3		mg/kg	12.3	D	7	Yes	S3VEM
Thallium	Spike	3.5	J	mg/kg	3.5	JD*	7	Yes	S3VEM
Vanadium	Spike	158		mg/kg	158	D	7	Yes	S3VEM
Zinc	Spike	1340		mg/kg	1340	D	7	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number: MBCAM5	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/04/2016	Sample Time: 10:12:00
% Moisture :		% Solids : 91.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5530		mg/kg	5530	D*	6	Yes	S3VEM
Antimony	Target	15100		mg/kg	15100	D	100	Yes	S3VEM
Arsenic	Target	1050		mg/kg	1050	D	6	Yes	S3VEM
Barium	Target	275		mg/kg	275	D*	6	Yes	S3VEM
Beryllium	Target	3.3	U	mg/kg	0.12	JD	6	Yes	S3VEM
Cadmium	Target	72.6		mg/kg	72.6	D*	6	Yes	S3VEM
Calcium	Target	10700		mg/kg	10700	D*	6	Yes	S3VEM
Chromium	Target	414		mg/kg	414	D*	6	Yes	S3VEM
Cobalt	Target	33.7		mg/kg	33.7	D*	6	Yes	S3VEM
Copper	Target	4530		mg/kg	4530	D*	6	Yes	S3VEM
Iron	Target	187000		mg/kg	187000	D*	6	Yes	S3VEM
Lead	Target	132000		mg/kg	132000	D	100	Yes	S3VEM
Magnesium	Target	3370		mg/kg	3370	D*	6	Yes	S3VEM
Manganese	Target	814		mg/kg	814	D*	6	Yes	S3VEM
Nickel	Target	1310	J	mg/kg	1310	D	6	Yes	S3VEM
Potassium	Target	3270	U	mg/kg	341	JD	6	Yes	S3VEM
Selenium	Target	16.6		mg/kg	16.6	JD	6	Yes	S3VEM
Silver	Target	6.5	U	mg/kg	2.9	JD	6	Yes	S3VEM
Sodium	Target	80100		mg/kg	80100	D*	6	Yes	S3VEM
Thallium	Target	16.3	U	mg/kg	16.3	UD*	6	Yes	S3VEM
Vanadium	Target	33.1		mg/kg	33.1	D	6	Yes	S3VEM
Zinc	Target	856		mg/kg	856	D*	6	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number:	MBCAM6	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/04/2016	Sample Time:	10:20:00
% Moisture :				% Solids :	94.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	4560		mg/kg	4560	D*	3	Yes	S3VEM
Antimony	Target	8560		mg/kg	8560	D	100	Yes	S3VEM
Arsenic	Target	853		mg/kg	853	D	3	Yes	S3VEM
Barium	Target	359		mg/kg	359	D*	3	Yes	S3VEM
Beryllium	Target	1.5	U	mg/kg	0.086	JD	3	Yes	S3VEM
Cadmium	Target	380		mg/kg	380	D*	3	Yes	S3VEM
Calcium	Target	26400		mg/kg	26400	D*	3	Yes	S3VEM
Chromium	Target	146		mg/kg	146	D*	3	Yes	S3VEM
Cobalt	Target	15.1	U	mg/kg	13.8	JD*	3	Yes	S3VEM
Copper	Target	975		mg/kg	975	D*	3	Yes	S3VEM
Iron	Target	79100		mg/kg	79100	D*	3	Yes	S3VEM
Lead	Target	145000		mg/kg	145000	D	100	Yes	S3VEM
Magnesium	Target	3480		mg/kg	3480	D*	3	Yes	S3VEM
Manganese	Target	482		mg/kg	482	D*	3	Yes	S3VEM
Nickel	Target	977		mg/kg	977	D	3	Yes	S3VEM
Potassium	Target	1510	U	mg/kg	445	JD	3	Yes	S3VEM
Selenium	Target	40.4		mg/kg	40.4	D	3	Yes	S3VEM
Silver	Target	11.1		mg/kg	11.1	D	3	Yes	S3VEM
Sodium	Target	42700		mg/kg	42700	D*	3	Yes	S3VEM
Thallium	Target	7.6	U	mg/kg	7.6	UD*	3	Yes	S3VEM
Vanadium	Target	33.8		mg/kg	33.8	D	3	Yes	S3VEM
Zinc	Target	1550		mg/kg	1550	D*	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAL3	Lab Code: BON

Sample Number: PBS01	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	mg/kg	20.0	U	1	Yes	S3VEM
Antimony	Target	6.0	U	mg/kg	6.0	U	1	Yes	S3VEM
Arsenic	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Barium	Target	20.0	U	mg/kg	20.0	U	1	Yes	S3VEM
Beryllium	Target	-.014		mg/kg	-.014	J	1	Yes	S3VEM
Cadmium	Target	0.50	U	mg/kg	0.50	U	1	Yes	S3VEM
Calcium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Chromium	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Cobalt	Target	5.0	U	mg/kg	5.0	U	1	Yes	S3VEM
Copper	Target	1.1	J	mg/kg	1.1	J	1	Yes	S3VEM
Iron	Target	10.0	U	mg/kg	10.0	U	1	Yes	S3VEM
Lead	Target	0.48	J	mg/kg	0.48	J	1	Yes	S3VEM
Magnesium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Manganese	Target	1.5	U	mg/kg	1.5	U	1	Yes	S3VEM
Nickel	Target	4.0	U	mg/kg	4.0	U	1	Yes	S3VEM
Potassium	Target	13.2		mg/kg	13.2	J	1	Yes	S3VEM
Selenium	Target	3.5	U	mg/kg	3.5	U	1	Yes	S3VEM
Silver	Target	0.094	J	mg/kg	0.094	J	1	Yes	S3VEM
Sodium	Target	4.5	J	mg/kg	4.5	J	1	Yes	S3VEM
Thallium	Target	-.2		mg/kg	-.2	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	mg/kg	5.0	U	1	Yes	S3VEM
Zinc	Target	6.0	U	mg/kg	6.0	U	1	Yes	S3VEM

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 16 (Soil)
Analysis: Metals

SDG No.: MBCAM7
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/4/2016, 3/7/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solution
Contractor Document: DCN # RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
Sample MBCAM7 has an analyte that has been qualified R.

Major Findings:
Samples MBCAM7 and MBCAM8 have analytes that have been qualified J.

Minor Findings:
None

COMMENT:	The site specific QAPP did not specify the project action levels for this site.

Reviewer Name(s): T. Solomon

Approver's Signature: **Date:04/05/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Arsenic MBCAN0

Barium MBCAN0, MBCAN4

Beryllium MBCAM7, MBCAM8, MBCAM9, MBCAN0, MBCAN1, MBCAN2, MBCAN3, MBCAN4, MBCAN5, MBCAN6, MBCAN7, MBCAN8, MBCAN9, MBCAP0, MBCAP1, MBCAP2

Cobalt MBCAM7, MBCAM8, MBCAM9, MBCAN0, MBCAN1, MBCAN2, MBCAN3, MBCAN4, MBCAN5, MBCAN6, MBCAN7, MBCAN8, MBCAN9, MBCAP0, MBCAP1, MBCAP2

Magnesium MBCAM7, MBCAM8

Potassium MBCAM7, MBCAM8, MBCAN0, MBCAN2, MBCAN3, MBCAN4

Selenium MBCAM9, MBCAN1, MBCAN2, MBCAN4, MBCAN6, MBCAN7, MBCAN8, MBCAN9, MBCAP0, MBCAP1, MBCAP2

Sodium MBCAN0

Vanadium MBCAM8, MBCAN0, MBCAN4

The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Barium MBCAN0, MBCAN4

Beryllium MBCAM7, MBCAM8, MBCAM9, MBCAN0, MBCAN1, MBCAN2, MBCAN3, MBCAN4, MBCAN5, MBCAN6, MBCAN7, MBCAN8, MBCAN9, MBCAP0, MBCAP1, MBCAP2

Cobalt MBCAM7, MBCAM8, MBCAM9, MBCAN0, MBCAN1, MBCAN2, MBCAN3, MBCAN4, MBCAN5, MBCAN6, MBCAN7, MBCAN8, MBCAN9, MBCAP0, MBCAP1, MBCAP2

Potassium MBCAM7, MBCAM8, MBCAN0, MBCAN2, MBCAN3, MBCAN4

Selenium MBCAM9, MBCAN1, MBCAN2, MBCAN4, MBCAN6, MBCAN7, MBCAN8, MBCAN9, MBCAP0, MBCAP1, MBCAP2

Sodium MBCAN0

Vanadium MBCAM8, MBCAN0, MBCAN4

The following samples have analyte results less than or equal to CRQLs. The associated preparation blank analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Potassium MBCAM7, MBCAM8, MBCAN0, MBCAN2, MBCAN3, MBCAN4

Silver MBCAM8, MBCAN2, MBCAN9, MBCAP0

Sodium MBCAN0

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

The following matrix spike sample has a percent recovery less than 30% and the post digestion spike sample had a percent recovery less than 75%. The nondetected analyte is qualified R.

Thallium MBCAM7

The following matrix spike sample has a percent recovery less than 30% and the post digestion spike sample had a percent recovery greater than 75%. The detected analyte with a result greater than or equal to the MDL is qualified J.

Barium MBCAM7

The following matrix spike sample has a percent recovery greater than 125% and the post digestion spike sample had a percent recovery less than 125%. The detected analyte with a result greater than or equal to the MDL is qualified J.

Nickel MBCAM7

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

No problems were found for this criterion.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

The following field duplicate and original soil sample result is greater than or equal to 5x the CRQL and RPD is greater than 50%. Detected analyte is qualified J.

Cadmium MBCAM7, MBCAM8

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution

analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

The following sample is associated to the serial dilution sample with an analyte %D > 15% and the original sample result is > 50X MDL. The detected analyte is qualified J.

Calcium MBCAM4

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAM7	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	43.2		mg/kg	43.2		1	Yes	S3VEM
Antimony	Target	12.1		mg/kg	12.1		1	Yes	S3VEM
Arsenic	Target	1.8		mg/kg	1.8		1	Yes	S3VEM
Barium	Target	44.6		mg/kg	44.6		1	Yes	S3VEM
Beryllium	Target	1.0		mg/kg	1.0		1	Yes	S3VEM
Cadmium	Target	1.1		mg/kg	1.1		1	Yes	S3VEM
Calcium	Target	1110		mg/kg	1110		1	Yes	S3VEM
Chromium	Target	2.0		mg/kg	2.0		1	Yes	S3VEM
Cobalt	Target	10.8		mg/kg	10.8		1	Yes	S3VEM
Copper	Target	5.8		mg/kg	5.8		1	Yes	S3VEM
Iron	Target	19.5		mg/kg	19.5		1	Yes	S3VEM
Lead	Target	2.2		mg/kg	2.2		1	Yes	S3VEM
Magnesium	Target	1100		mg/kg	1100		1	Yes	S3VEM
Manganese	Target	3.3		mg/kg	3.3		1	Yes	S3VEM
Nickel	Target	8.7		mg/kg	8.7		1	Yes	S3VEM
Potassium	Target	1010		mg/kg	1010		1	Yes	S3VEM
Selenium	Target	7.2		mg/kg	7.2		1	Yes	S3VEM
Silver	Target	2.0		mg/kg	2.0		1	Yes	S3VEM
Sodium	Target	972		mg/kg	972		1	Yes	S3VEM
Thallium	Target	4.8		mg/kg	4.8		1	Yes	S3VEM
Vanadium	Target	10.9		mg/kg	10.9		1	Yes	S3VEM
Zinc	Target	12.2		mg/kg	12.2		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number:	MBCAM7	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/04/2016	Sample Time:	10:28:00
% Moisture :				% Solids :	89.1		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6570		mg/kg	6570	D	5	Yes	S3VEM
Antimony	Target	3980		mg/kg	3980	D	5	Yes	S3VEM
Arsenic	Target	719		mg/kg	719	D*	5	Yes	S3VEM
Barium	Target	587	J	mg/kg	587	D*	5	Yes	S3VEM
Beryllium	Target	2.8	U	mg/kg	0.26	JD	5	Yes	S3VEM
Cadmium	Target	119	J	mg/kg	119	D*	5	Yes	S3VEM
Calcium	Target	9900	J	mg/kg	9900	D*	5	Yes	S3VEM
Chromium	Target	651		mg/kg	651	D	5	Yes	S3VEM
Cobalt	Target	28.1	U	mg/kg	21.2	JD	5	Yes	S3VEM
Copper	Target	2510		mg/kg	2510	D	5	Yes	S3VEM
Iron	Target	212000		mg/kg	212000	D	100	Yes	S3VEM
Lead	Target	137000		mg/kg	137000	D	100	Yes	S3VEM
Magnesium	Target	2810	U	mg/kg	1700	JD	5	Yes	S3VEM
Manganese	Target	897		mg/kg	897	D	5	Yes	S3VEM
Nickel	Target	323	J	mg/kg	323	D*	5	Yes	S3VEM
Potassium	Target	2810	U	mg/kg	310	JD	5	Yes	S3VEM
Selenium	Target	27.9		mg/kg	27.9	D	5	Yes	S3VEM
Silver	Target	5.6	U	mg/kg	5.6	UD	5	Yes	S3VEM
Sodium	Target	70900		mg/kg	70900	D	5	Yes	S3VEM
Thallium	Target	14.0	R	mg/kg	14.0	UD*	5	Yes	S3VEM
Vanadium	Target	38.1		mg/kg	38.1	D	5	Yes	S3VEM
Zinc	Target	1470		mg/kg	1470	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number:	MBCAM7A	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:	03/04/2016	Sample Time:	10:28:00
% Moisture :				% Solids :	89.1		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Barium	Spike	1650		mg/kg	1650	D	5	Yes	S3VEM
Nickel	Spike	1120		mg/kg	1120	D	5	Yes	S3VEM
Thallium	Spike	12.5	U	mg/kg	12.5	UD*	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number: MBCAM7D	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/04/2016	Sample Time: 10:28:00
% Moisture :		% Solids : 89.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	7810		mg/kg	7810	D	5	Yes	S3VEM
Antimony	Target	4440		mg/kg	4440	D	5	Yes	S3VEM
Arsenic	Target	937		mg/kg	937	D*	5	Yes	S3VEM
Barium	Target	455		mg/kg	455	D*	5	Yes	S3VEM
Beryllium	Target	0.33		mg/kg	0.33	JD	5	Yes	S3VEM
Cadmium	Target	147		mg/kg	147	D*	5	Yes	S3VEM
Calcium	Target	11600		mg/kg	11600	D	5	Yes	S3VEM
Chromium	Target	680		mg/kg	680	D	5	Yes	S3VEM
Cobalt	Target	25.1		mg/kg	25.1	JD	5	Yes	S3VEM
Copper	Target	2960		mg/kg	2960	D	5	Yes	S3VEM
Iron	Target	242000		mg/kg	242000	D	100	Yes	S3VEM
Lead	Target	146000		mg/kg	146000	D	100	Yes	S3VEM
Magnesium	Target	1890		mg/kg	1890	JD	5	Yes	S3VEM
Manganese	Target	1050		mg/kg	1050	D	5	Yes	S3VEM
Nickel	Target	374		mg/kg	374	D	5	Yes	S3VEM
Potassium	Target	390		mg/kg	390	JD	5	Yes	S3VEM
Selenium	Target	36.2		mg/kg	36.2	D	5	Yes	S3VEM
Silver	Target	5.6	U	mg/kg	5.6	UD	5	Yes	S3VEM
Sodium	Target	81700		mg/kg	81700	D	5	Yes	S3VEM
Thallium	Target	14.0	U	mg/kg	14.0	UD	5	Yes	S3VEM
Vanadium	Target	48.0		mg/kg	48.0	D	5	Yes	S3VEM
Zinc	Target	1670		mg/kg	1670	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number: MBCAM7L	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 89.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6970		mg/kg	6970	D	25	Yes	S3VEM
Antimony	Target	4200		mg/kg	4200	D	25	Yes	S3VEM
Arsenic	Target	653		mg/kg	653	D	25	Yes	S3VEM
Barium	Target	618		mg/kg	618	D	25	Yes	S3VEM
Beryllium	Target	0.35	J	mg/kg	0.35	JD	25	Yes	S3VEM
Cadmium	Target	128		mg/kg	128	D	25	Yes	S3VEM
Calcium	Target	11900	J	mg/kg	11900	JD*	25	Yes	S3VEM
Chromium	Target	698		mg/kg	698	D	25	Yes	S3VEM
Cobalt	Target	22.1	J	mg/kg	22.1	JD	25	Yes	S3VEM
Copper	Target	2530		mg/kg	2530	D	25	Yes	S3VEM
Iron	Target	216000		mg/kg	216000	D	500	Yes	S3VEM
Lead	Target	140000		mg/kg	140000	D	500	Yes	S3VEM
Magnesium	Target	1840	J	mg/kg	1840	JD	25	Yes	S3VEM
Manganese	Target	963		mg/kg	963	D	25	Yes	S3VEM
Nickel	Target	304		mg/kg	304	D	25	Yes	S3VEM
Potassium	Target	493		mg/kg	493	JD	25	Yes	S3VEM
Selenium	Target	32.0	J	mg/kg	32.0	JD	25	Yes	S3VEM
Silver	Target	28.1	U	mg/kg	28.1	UD	25	Yes	S3VEM
Sodium	Target	74200		mg/kg	74200	D	25	Yes	S3VEM
Thallium	Target	70.1	U	mg/kg	70.1	UD	25	Yes	S3VEM
Vanadium	Target	41.2	J	mg/kg	41.2	JD	25	Yes	S3VEM
Zinc	Target	1610		mg/kg	1610	D	25	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number: MBCAM7S	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/04/2016	Sample Time: 10:28:00
% Moisture :		% Solids : 89.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Antimony	Spike	4400		mg/kg	4400	D	5	Yes	S3VEM
Arsenic	Spike	929		mg/kg	929	D	5	Yes	S3VEM
Barium	Spike	539		mg/kg	539	D*	5	Yes	S3VEM
Beryllium	Spike	12.2		mg/kg	12.2	D	5	Yes	S3VEM
Cadmium	Spike	161		mg/kg	161	D	5	Yes	S3VEM
Chromium	Spike	762		mg/kg	762	D	5	Yes	S3VEM
Cobalt	Spike	141		mg/kg	141	D	5	Yes	S3VEM
Copper	Spike	3170		mg/kg	3170	D	5	Yes	S3VEM
Lead	Spike	146000		mg/kg	146000	D	100	Yes	S3VEM
Manganese	Spike	1160		mg/kg	1160	D	5	Yes	S3VEM
Nickel	Spike	510		mg/kg	510	D*	5	Yes	S3VEM
Selenium	Spike	53.4		mg/kg	53.4	D	5	Yes	S3VEM
Silver	Spike	8.8		mg/kg	8.8	D	5	Yes	S3VEM
Thallium	Spike	2.4	J	mg/kg	2.4	JD*	5	Yes	S3VEM
Vanadium	Spike	175		mg/kg	175	D	5	Yes	S3VEM
Zinc	Spike	2260		mg/kg	2260	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number: MBCAM8	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/04/2016	Sample Time: 10:28:00
% Moisture :		% Solids : 92.9	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5520		mg/kg	5520	D	8	Yes	S3VEM
Antimony	Target	5820		mg/kg	5820	D	8	Yes	S3VEM
Arsenic	Target	785		mg/kg	785	D*	8	Yes	S3VEM
Barium	Target	461		mg/kg	461	D*	8	Yes	S3VEM
Beryllium	Target	4.2	U	mg/kg	0.24	JD	8	Yes	S3VEM
Cadmium	Target	233	J	mg/kg	233	D*	8	Yes	S3VEM
Calcium	Target	8570		mg/kg	8570	D*	8	Yes	S3VEM
Chromium	Target	437		mg/kg	437	D	8	Yes	S3VEM
Cobalt	Target	42.2	U	mg/kg	18.5	JD	8	Yes	S3VEM
Copper	Target	2040		mg/kg	2040	D	8	Yes	S3VEM
Iron	Target	164000		mg/kg	164000	D	8	Yes	S3VEM
Lead	Target	128000		mg/kg	128000	D	100	Yes	S3VEM
Magnesium	Target	4220	U	mg/kg	1400	JD	8	Yes	S3VEM
Manganese	Target	683		mg/kg	683	D	8	Yes	S3VEM
Nickel	Target	403		mg/kg	403	D*	8	Yes	S3VEM
Potassium	Target	4220	U	mg/kg	336	JD	8	Yes	S3VEM
Selenium	Target	30.3		mg/kg	30.3	D	8	Yes	S3VEM
Silver	Target	8.4	U	mg/kg	3.3	JD	8	Yes	S3VEM
Sodium	Target	53000		mg/kg	53000	D	8	Yes	S3VEM
Thallium	Target	21.1	U	mg/kg	21.1	UD*	8	Yes	S3VEM
Vanadium	Target	42.2	U	mg/kg	38.8	JD	8	Yes	S3VEM
Zinc	Target	1740		mg/kg	1740	D	8	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number: MBCAM9	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/07/2016	Sample Time: 09:25:00
% Moisture :		% Solids : 87.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1170		mg/kg	1170		1	Yes	S3VEM
Antimony	Target	564		mg/kg	564		1	Yes	S3VEM
Arsenic	Target	60.0		mg/kg	60.0	*	1	Yes	S3VEM
Barium	Target	155		mg/kg	155	*	1	Yes	S3VEM
Beryllium	Target	0.55	U	mg/kg	0.055	J	1	Yes	S3VEM
Cadmium	Target	12.9		mg/kg	12.9	*	1	Yes	S3VEM
Calcium	Target	236000		mg/kg	236000	D*	100	Yes	S3VEM
Chromium	Target	21.2		mg/kg	21.2		1	Yes	S3VEM
Cobalt	Target	5.5	U	mg/kg	1.7	J	1	Yes	S3VEM
Copper	Target	216		mg/kg	216		1	Yes	S3VEM
Iron	Target	6540		mg/kg	6540		1	Yes	S3VEM
Lead	Target	49400		mg/kg	49400	D	100	Yes	S3VEM
Magnesium	Target	708		mg/kg	708		1	Yes	S3VEM
Manganese	Target	51.8		mg/kg	51.8		1	Yes	S3VEM
Nickel	Target	44.1		mg/kg	44.1	*	1	Yes	S3VEM
Potassium	Target	657		mg/kg	657		1	Yes	S3VEM
Selenium	Target	3.8	U	mg/kg	2.0	J	1	Yes	S3VEM
Silver	Target	1.2		mg/kg	1.2		1	Yes	S3VEM
Sodium	Target	2260		mg/kg	2260		1	Yes	S3VEM
Thallium	Target	2.7	U	mg/kg	2.7	U*	1	Yes	S3VEM
Vanadium	Target	7.3		mg/kg	7.3		1	Yes	S3VEM
Zinc	Target	211		mg/kg	211		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number: MBCAN0	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/07/2016	Sample Time: 09:30:00
% Moisture :		% Solids : 86.5	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3650		mg/kg	3650	D	3	Yes	S3VEM
Antimony	Target	22.5		mg/kg	22.5	D	3	Yes	S3VEM
Arsenic	Target	3.5	U	mg/kg	2.2	JD*	3	Yes	S3VEM
Barium	Target	69.4	U	mg/kg	60.2	JD*	3	Yes	S3VEM
Beryllium	Target	1.7	U	mg/kg	0.12	JD	3	Yes	S3VEM
Cadmium	Target	15.4		mg/kg	15.4	D*	3	Yes	S3VEM
Calcium	Target	366000		mg/kg	366000	D*	100	Yes	S3VEM
Chromium	Target	26.3		mg/kg	26.3	D	3	Yes	S3VEM
Cobalt	Target	17.3	U	mg/kg	4.1	JD	3	Yes	S3VEM
Copper	Target	48.0		mg/kg	48.0	D	3	Yes	S3VEM
Iron	Target	5080		mg/kg	5080	D	3	Yes	S3VEM
Lead	Target	7640		mg/kg	7640	D	100	Yes	S3VEM
Magnesium	Target	2500		mg/kg	2500	D	3	Yes	S3VEM
Manganese	Target	92.0		mg/kg	92.0	D	3	Yes	S3VEM
Nickel	Target	56.5		mg/kg	56.5	D*	3	Yes	S3VEM
Potassium	Target	1730	U	mg/kg	1100	JD	3	Yes	S3VEM
Selenium	Target	12.1	U	mg/kg	12.1	UD	3	Yes	S3VEM
Silver	Target	3.5	U	mg/kg	3.5	UD	3	Yes	S3VEM
Sodium	Target	1730	U	mg/kg	1240	JD	3	Yes	S3VEM
Thallium	Target	8.7	U	mg/kg	8.7	UD*	3	Yes	S3VEM
Vanadium	Target	17.3	U	mg/kg	12.3	JD	3	Yes	S3VEM
Zinc	Target	214		mg/kg	214	D	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number:	MBCAN1	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/07/2016	Sample Time:	09:33:00
% Moisture :				% Solids :	86.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6380		mg/kg	6380		1	Yes	S3VEM
Antimony	Target	225		mg/kg	225		1	Yes	S3VEM
Arsenic	Target	30.1		mg/kg	30.1	*	1	Yes	S3VEM
Barium	Target	171		mg/kg	171	*	1	Yes	S3VEM
Beryllium	Target	0.55	U	mg/kg	0.31	J	1	Yes	S3VEM
Cadmium	Target	8.5		mg/kg	8.5	*	1	Yes	S3VEM
Calcium	Target	316000		mg/kg	316000	D*	100	Yes	S3VEM
Chromium	Target	38.2		mg/kg	38.2		1	Yes	S3VEM
Cobalt	Target	5.5	U	mg/kg	3.8	J	1	Yes	S3VEM
Copper	Target	276		mg/kg	276		1	Yes	S3VEM
Iron	Target	13500		mg/kg	13500		1	Yes	S3VEM
Lead	Target	36200		mg/kg	36200	D	100	Yes	S3VEM
Magnesium	Target	4010		mg/kg	4010		1	Yes	S3VEM
Manganese	Target	209		mg/kg	209		1	Yes	S3VEM
Nickel	Target	123		mg/kg	123	*	1	Yes	S3VEM
Potassium	Target	919		mg/kg	919		1	Yes	S3VEM
Selenium	Target	3.8	U	mg/kg	2.8	J	1	Yes	S3VEM
Silver	Target	1.1	U	mg/kg	1.1	U	1	Yes	S3VEM
Sodium	Target	2640		mg/kg	2640		1	Yes	S3VEM
Thallium	Target	2.7	U	mg/kg	2.7	U*	1	Yes	S3VEM
Vanadium	Target	17.8		mg/kg	17.8		1	Yes	S3VEM
Zinc	Target	97.4		mg/kg	97.4		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number:	MBCAN2	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/07/2016	Sample Time:	09:56:00
% Moisture :				% Solids :	94.0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5150		mg/kg	5150		1	Yes	S3VEM
Antimony	Target	34.6		mg/kg	34.6		1	Yes	S3VEM
Arsenic	Target	12.7		mg/kg	12.7	*	1	Yes	S3VEM
Barium	Target	37.6		mg/kg	37.6	*	1	Yes	S3VEM
Beryllium	Target	0.51	U	mg/kg	0.12	J	1	Yes	S3VEM
Cadmium	Target	5.3		mg/kg	5.3	*	1	Yes	S3VEM
Calcium	Target	388000		mg/kg	388000	D*	100	Yes	S3VEM
Chromium	Target	23.1		mg/kg	23.1		1	Yes	S3VEM
Cobalt	Target	5.1	U	mg/kg	1.7	J	1	Yes	S3VEM
Copper	Target	114		mg/kg	114		1	Yes	S3VEM
Iron	Target	4450		mg/kg	4450		1	Yes	S3VEM
Lead	Target	3150		mg/kg	3150	D	100	Yes	S3VEM
Magnesium	Target	2740		mg/kg	2740		1	Yes	S3VEM
Manganese	Target	74.2		mg/kg	74.2		1	Yes	S3VEM
Nickel	Target	12.8		mg/kg	12.8	*	1	Yes	S3VEM
Potassium	Target	507	U	mg/kg	273	J	1	Yes	S3VEM
Selenium	Target	3.5	U	mg/kg	1.4	J	1	Yes	S3VEM
Silver	Target	1.0	U	mg/kg	0.10	J	1	Yes	S3VEM
Sodium	Target	7130		mg/kg	7130		1	Yes	S3VEM
Thallium	Target	2.5	U	mg/kg	2.5	U*	1	Yes	S3VEM
Vanadium	Target	13.3		mg/kg	13.3		1	Yes	S3VEM
Zinc	Target	132		mg/kg	132		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number:	MBCAN3	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/07/2016	Sample Time:	10:00:00
% Moisture :				% Solids :	85.3		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1640		mg/kg	1640		1	Yes	S3VEM
Antimony	Target	320		mg/kg	320		1	Yes	S3VEM
Arsenic	Target	18.8		mg/kg	18.8	*	1	Yes	S3VEM
Barium	Target	33.5		mg/kg	33.5	*	1	Yes	S3VEM
Beryllium	Target	0.51	U	mg/kg	0.085	J	1	Yes	S3VEM
Cadmium	Target	28.4		mg/kg	28.4	*	1	Yes	S3VEM
Calcium	Target	269000		mg/kg	269000	D*	100	Yes	S3VEM
Chromium	Target	12.9		mg/kg	12.9		1	Yes	S3VEM
Cobalt	Target	5.1	U	mg/kg	2.0	J	1	Yes	S3VEM
Copper	Target	48.9		mg/kg	48.9		1	Yes	S3VEM
Iron	Target	2980		mg/kg	2980		1	Yes	S3VEM
Lead	Target	5370		mg/kg	5370	D	100	Yes	S3VEM
Magnesium	Target	878		mg/kg	878		1	Yes	S3VEM
Manganese	Target	54.6		mg/kg	54.6		1	Yes	S3VEM
Nickel	Target	86.2		mg/kg	86.2	*	1	Yes	S3VEM
Potassium	Target	505	U	mg/kg	440	J	1	Yes	S3VEM
Selenium	Target	4.5		mg/kg	4.5		1	Yes	S3VEM
Silver	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Sodium	Target	1810		mg/kg	1810		1	Yes	S3VEM
Thallium	Target	2.5	U	mg/kg	2.5	U*	1	Yes	S3VEM
Vanadium	Target	8.1		mg/kg	8.1		1	Yes	S3VEM
Zinc	Target	232		mg/kg	232		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number:	MBCAN4	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/07/2016	Sample Time:	10:05:00
% Moisture :				% Solids :	95.3		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5180		mg/kg	5180	D	4	Yes	S3VEM
Antimony	Target	55.6		mg/kg	55.6	D	4	Yes	S3VEM
Arsenic	Target	48.6		mg/kg	48.6	D*	4	Yes	S3VEM
Barium	Target	66.6	U	mg/kg	44.1	JD*	4	Yes	S3VEM
Beryllium	Target	1.7	U	mg/kg	0.15	JD	4	Yes	S3VEM
Cadmium	Target	4.9		mg/kg	4.9	D*	4	Yes	S3VEM
Calcium	Target	386000		mg/kg	386000	D*	100	Yes	S3VEM
Chromium	Target	18.8		mg/kg	18.8	D	4	Yes	S3VEM
Cobalt	Target	16.7	U	mg/kg	1.5	JD	4	Yes	S3VEM
Copper	Target	204		mg/kg	204	D	4	Yes	S3VEM
Iron	Target	5470		mg/kg	5470	D	4	Yes	S3VEM
Lead	Target	6240		mg/kg	6240	D	100	Yes	S3VEM
Magnesium	Target	2440		mg/kg	2440	D	4	Yes	S3VEM
Manganese	Target	94.3		mg/kg	94.3	D	4	Yes	S3VEM
Nickel	Target	18.6		mg/kg	18.6	D*	4	Yes	S3VEM
Potassium	Target	1670	U	mg/kg	829	JD	4	Yes	S3VEM
Selenium	Target	11.7	U	mg/kg	1.0	JD	4	Yes	S3VEM
Silver	Target	3.3	U	mg/kg	3.3	UD	4	Yes	S3VEM
Sodium	Target	17800		mg/kg	17800	D	4	Yes	S3VEM
Thallium	Target	8.3	U	mg/kg	8.3	UD*	4	Yes	S3VEM
Vanadium	Target	16.7	U	mg/kg	15.1	JD	4	Yes	S3VEM
Zinc	Target	102		mg/kg	102	D	4	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number: MBCAN5	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/07/2016	Sample Time: 11:07:00
% Moisture :		% Solids : 93.0	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6870		mg/kg	6870	D	3	Yes	S3VEM
Antimony	Target	34.8		mg/kg	34.8	D	3	Yes	S3VEM
Arsenic	Target	16.1		mg/kg	16.1	D*	3	Yes	S3VEM
Barium	Target	72.6		mg/kg	72.6	D*	3	Yes	S3VEM
Beryllium	Target	1.5	U	mg/kg	0.31	JD	3	Yes	S3VEM
Cadmium	Target	15.1		mg/kg	15.1	D*	3	Yes	S3VEM
Calcium	Target	373000		mg/kg	373000	D*	100	Yes	S3VEM
Chromium	Target	22.5		mg/kg	22.5	D	3	Yes	S3VEM
Cobalt	Target	15.2	U	mg/kg	2.0	JD	3	Yes	S3VEM
Copper	Target	76.1		mg/kg	76.1	D	3	Yes	S3VEM
Iron	Target	6190		mg/kg	6190	D	3	Yes	S3VEM
Lead	Target	6960		mg/kg	6960	D	100	Yes	S3VEM
Magnesium	Target	3400		mg/kg	3400	D	3	Yes	S3VEM
Manganese	Target	161		mg/kg	161	D	3	Yes	S3VEM
Nickel	Target	16.0		mg/kg	16.0	D*	3	Yes	S3VEM
Potassium	Target	2010		mg/kg	2010	D	3	Yes	S3VEM
Selenium	Target	10.7	U	mg/kg	10.7	UD	3	Yes	S3VEM
Silver	Target	3.0	U	mg/kg	3.0	UD	3	Yes	S3VEM
Sodium	Target	12200		mg/kg	12200	D	3	Yes	S3VEM
Thallium	Target	7.6	U	mg/kg	7.6	UD*	3	Yes	S3VEM
Vanadium	Target	16.6		mg/kg	16.6	D	3	Yes	S3VEM
Zinc	Target	206		mg/kg	206	D	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number:	MBCAN6	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/07/2016	Sample Time:	11:17:00
% Moisture :				% Solids :	97.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6610		mg/kg	6610		1	Yes	S3VEM
Antimony	Target	89.3		mg/kg	89.3		1	Yes	S3VEM
Arsenic	Target	28.5		mg/kg	28.5	*	1	Yes	S3VEM
Barium	Target	63.4		mg/kg	63.4	*	1	Yes	S3VEM
Beryllium	Target	0.47	U	mg/kg	0.22	J	1	Yes	S3VEM
Cadmium	Target	3.8		mg/kg	3.8	*	1	Yes	S3VEM
Calcium	Target	326000		mg/kg	326000	D*	100	Yes	S3VEM
Chromium	Target	18.3		mg/kg	18.3		1	Yes	S3VEM
Cobalt	Target	4.7	U	mg/kg	3.1	J	1	Yes	S3VEM
Copper	Target	85.0		mg/kg	85.0		1	Yes	S3VEM
Iron	Target	8480		mg/kg	8480		1	Yes	S3VEM
Lead	Target	9620		mg/kg	9620	D	100	Yes	S3VEM
Magnesium	Target	2460		mg/kg	2460		1	Yes	S3VEM
Manganese	Target	122		mg/kg	122		1	Yes	S3VEM
Nickel	Target	15.5		mg/kg	15.5	*	1	Yes	S3VEM
Potassium	Target	3510		mg/kg	3510		1	Yes	S3VEM
Selenium	Target	3.3	U	mg/kg	0.39	J	1	Yes	S3VEM
Silver	Target	0.95	U	mg/kg	0.95	U	1	Yes	S3VEM
Sodium	Target	5310		mg/kg	5310		1	Yes	S3VEM
Thallium	Target	2.4	U	mg/kg	2.4	U*	1	Yes	S3VEM
Vanadium	Target	21.2		mg/kg	21.2		1	Yes	S3VEM
Zinc	Target	146		mg/kg	146		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number:	MBCAN7	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/07/2016	Sample Time:	11:29:00
% Moisture :				% Solids :	95.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5440		mg/kg	5440		1	Yes	S3VEM
Antimony	Target	80.1		mg/kg	80.1		1	Yes	S3VEM
Arsenic	Target	27.8		mg/kg	27.8	*	1	Yes	S3VEM
Barium	Target	34.6		mg/kg	34.6	*	1	Yes	S3VEM
Beryllium	Target	0.49	U	mg/kg	0.14	J	1	Yes	S3VEM
Cadmium	Target	10.4		mg/kg	10.4	*	1	Yes	S3VEM
Calcium	Target	380000		mg/kg	380000	D*	100	Yes	S3VEM
Chromium	Target	27.2		mg/kg	27.2		1	Yes	S3VEM
Cobalt	Target	4.9	U	mg/kg	1.9	J	1	Yes	S3VEM
Copper	Target	215		mg/kg	215		1	Yes	S3VEM
Iron	Target	5410		mg/kg	5410		1	Yes	S3VEM
Lead	Target	7350		mg/kg	7350	D	100	Yes	S3VEM
Magnesium	Target	1700		mg/kg	1700		1	Yes	S3VEM
Manganese	Target	84.2		mg/kg	84.2		1	Yes	S3VEM
Nickel	Target	11.6		mg/kg	11.6	*	1	Yes	S3VEM
Potassium	Target	1310		mg/kg	1310		1	Yes	S3VEM
Selenium	Target	3.4	U	mg/kg	0.93	J	1	Yes	S3VEM
Silver	Target	0.97	U	mg/kg	0.97	U	1	Yes	S3VEM
Sodium	Target	11400		mg/kg	11400		1	Yes	S3VEM
Thallium	Target	2.4	U	mg/kg	2.4	U*	1	Yes	S3VEM
Vanadium	Target	16.4		mg/kg	16.4		1	Yes	S3VEM
Zinc	Target	99.2		mg/kg	99.2		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number: MBCAN8	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location: BRC001-CM01	pH:	Sample Date: 03/07/2016	Sample Time: 11:40:00
% Moisture :		% Solids : 98.1	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3760		mg/kg	3760		1	Yes	S3VEM
Antimony	Target	101		mg/kg	101		1	Yes	S3VEM
Arsenic	Target	36.5		mg/kg	36.5	*	1	Yes	S3VEM
Barium	Target	45.9		mg/kg	45.9	*	1	Yes	S3VEM
Beryllium	Target	0.49	U	mg/kg	0.12	J	1	Yes	S3VEM
Cadmium	Target	25.7		mg/kg	25.7	*	1	Yes	S3VEM
Calcium	Target	390000		mg/kg	390000	D*	100	Yes	S3VEM
Chromium	Target	20.7		mg/kg	20.7		1	Yes	S3VEM
Cobalt	Target	4.9	U	mg/kg	1.3	J	1	Yes	S3VEM
Copper	Target	89.1		mg/kg	89.1		1	Yes	S3VEM
Iron	Target	4480		mg/kg	4480		1	Yes	S3VEM
Lead	Target	8650		mg/kg	8650	D	100	Yes	S3VEM
Magnesium	Target	1490		mg/kg	1490		1	Yes	S3VEM
Manganese	Target	75.6		mg/kg	75.6		1	Yes	S3VEM
Nickel	Target	14.6		mg/kg	14.6	*	1	Yes	S3VEM
Potassium	Target	1370		mg/kg	1370		1	Yes	S3VEM
Selenium	Target	3.5	U	mg/kg	1.6	J	1	Yes	S3VEM
Silver	Target	0.99	U	mg/kg	0.99	U	1	Yes	S3VEM
Sodium	Target	9390		mg/kg	9390		1	Yes	S3VEM
Thallium	Target	2.5	U	mg/kg	2.5	U*	1	Yes	S3VEM
Vanadium	Target	11.8		mg/kg	11.8		1	Yes	S3VEM
Zinc	Target	243		mg/kg	243		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number:	MBCAN9	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/07/2016	Sample Time:	11:50:00
% Moisture :				% Solids :	96.0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5640		mg/kg	5640		1	Yes	S3VEM
Antimony	Target	308		mg/kg	308		1	Yes	S3VEM
Arsenic	Target	70.2		mg/kg	70.2	*	1	Yes	S3VEM
Barium	Target	139		mg/kg	139	*	1	Yes	S3VEM
Beryllium	Target	0.51	U	mg/kg	0.18	J	1	Yes	S3VEM
Cadmium	Target	12.8		mg/kg	12.8	*	1	Yes	S3VEM
Calcium	Target	285000		mg/kg	285000	D*	100	Yes	S3VEM
Chromium	Target	36.5		mg/kg	36.5		1	Yes	S3VEM
Cobalt	Target	5.1	U	mg/kg	4.8	J	1	Yes	S3VEM
Copper	Target	312		mg/kg	312		1	Yes	S3VEM
Iron	Target	11400		mg/kg	11400		1	Yes	S3VEM
Lead	Target	36200		mg/kg	36200	D	100	Yes	S3VEM
Magnesium	Target	2330		mg/kg	2330		1	Yes	S3VEM
Manganese	Target	128		mg/kg	128		1	Yes	S3VEM
Nickel	Target	42.3		mg/kg	42.3	*	1	Yes	S3VEM
Potassium	Target	6510		mg/kg	6510		1	Yes	S3VEM
Selenium	Target	3.5	U	mg/kg	1.3	J	1	Yes	S3VEM
Silver	Target	1.0	U	mg/kg	0.086	J	1	Yes	S3VEM
Sodium	Target	12300		mg/kg	12300		1	Yes	S3VEM
Thallium	Target	2.5	U	mg/kg	2.5	U*	1	Yes	S3VEM
Vanadium	Target	22.9		mg/kg	22.9		1	Yes	S3VEM
Zinc	Target	368		mg/kg	368		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number:	MBCAP0	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/07/2016	Sample Time:	14:10:00
% Moisture :				% Solids :	93.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5420		mg/kg	5420		1	Yes	S3VEM
Antimony	Target	383		mg/kg	383		1	Yes	S3VEM
Arsenic	Target	59.3		mg/kg	59.3	*	1	Yes	S3VEM
Barium	Target	105		mg/kg	105	*	1	Yes	S3VEM
Beryllium	Target	0.44	U	mg/kg	0.18	J	1	Yes	S3VEM
Cadmium	Target	10.7		mg/kg	10.7	*	1	Yes	S3VEM
Calcium	Target	321000		mg/kg	321000	D*	100	Yes	S3VEM
Chromium	Target	22.5		mg/kg	22.5		1	Yes	S3VEM
Cobalt	Target	4.4	U	mg/kg	3.9	J	1	Yes	S3VEM
Copper	Target	209		mg/kg	209		1	Yes	S3VEM
Iron	Target	8990		mg/kg	8990		1	Yes	S3VEM
Lead	Target	34100		mg/kg	34100	D	100	Yes	S3VEM
Magnesium	Target	2620		mg/kg	2620		1	Yes	S3VEM
Manganese	Target	133		mg/kg	133		1	Yes	S3VEM
Nickel	Target	35.1		mg/kg	35.1	*	1	Yes	S3VEM
Potassium	Target	5170		mg/kg	5170		1	Yes	S3VEM
Selenium	Target	3.1	U	mg/kg	0.88	J	1	Yes	S3VEM
Silver	Target	0.88	U	mg/kg	0.23	J	1	Yes	S3VEM
Sodium	Target	8940		mg/kg	8940		1	Yes	S3VEM
Thallium	Target	2.2	U	mg/kg	2.2	U*	1	Yes	S3VEM
Vanadium	Target	17.0		mg/kg	17.0		1	Yes	S3VEM
Zinc	Target	261		mg/kg	261		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number:	MBCAP1	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/07/2016	Sample Time:	14:17:00
% Moisture :				% Solids :	97.1		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5040		mg/kg	5040		1	Yes	S3VEM
Antimony	Target	83.6		mg/kg	83.6		1	Yes	S3VEM
Arsenic	Target	25.8		mg/kg	25.8	*	1	Yes	S3VEM
Barium	Target	70.6		mg/kg	70.6	*	1	Yes	S3VEM
Beryllium	Target	0.50	U	mg/kg	0.12	J	1	Yes	S3VEM
Cadmium	Target	13.8		mg/kg	13.8	*	1	Yes	S3VEM
Calcium	Target	376000		mg/kg	376000	D*	100	Yes	S3VEM
Chromium	Target	35.9		mg/kg	35.9		1	Yes	S3VEM
Cobalt	Target	5.0	U	mg/kg	4.1	J	1	Yes	S3VEM
Copper	Target	43.4		mg/kg	43.4		1	Yes	S3VEM
Iron	Target	6250		mg/kg	6250		1	Yes	S3VEM
Lead	Target	9350		mg/kg	9350	D	100	Yes	S3VEM
Magnesium	Target	2540		mg/kg	2540		1	Yes	S3VEM
Manganese	Target	122		mg/kg	122		1	Yes	S3VEM
Nickel	Target	31.5		mg/kg	31.5	*	1	Yes	S3VEM
Potassium	Target	4350		mg/kg	4350		1	Yes	S3VEM
Selenium	Target	3.5	U	mg/kg	0.42	J	1	Yes	S3VEM
Silver	Target	0.99	U	mg/kg	0.99	U	1	Yes	S3VEM
Sodium	Target	9890		mg/kg	9890		1	Yes	S3VEM
Thallium	Target	2.5	U	mg/kg	2.5	U*	1	Yes	S3VEM
Vanadium	Target	14.1		mg/kg	14.1		1	Yes	S3VEM
Zinc	Target	58.7		mg/kg	58.7		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number:	MBCAP2	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01	pH:		Sample Date:	03/07/2016	Sample Time:	14:24:00
% Moisture :				% Solids :	95.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6520		mg/kg	6520		1	Yes	S3VEM
Antimony	Target	15.8		mg/kg	15.8		1	Yes	S3VEM
Arsenic	Target	15.0		mg/kg	15.0	*	1	Yes	S3VEM
Barium	Target	49.7		mg/kg	49.7	*	1	Yes	S3VEM
Beryllium	Target	0.52	U	mg/kg	0.13	J	1	Yes	S3VEM
Cadmium	Target	7.9		mg/kg	7.9	*	1	Yes	S3VEM
Calcium	Target	379000		mg/kg	379000	D*	100	Yes	S3VEM
Chromium	Target	25.2		mg/kg	25.2		1	Yes	S3VEM
Cobalt	Target	5.2	U	mg/kg	2.4	J	1	Yes	S3VEM
Copper	Target	22.9		mg/kg	22.9		1	Yes	S3VEM
Iron	Target	5130		mg/kg	5130		1	Yes	S3VEM
Lead	Target	1440		mg/kg	1440	D	100	Yes	S3VEM
Magnesium	Target	3160		mg/kg	3160		1	Yes	S3VEM
Manganese	Target	98.1		mg/kg	98.1		1	Yes	S3VEM
Nickel	Target	13.3		mg/kg	13.3	*	1	Yes	S3VEM
Potassium	Target	4560		mg/kg	4560		1	Yes	S3VEM
Selenium	Target	3.6	U	mg/kg	0.95	J	1	Yes	S3VEM
Silver	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Sodium	Target	10500		mg/kg	10500		1	Yes	S3VEM
Thallium	Target	2.6	U	mg/kg	2.6	U*	1	Yes	S3VEM
Vanadium	Target	21.6		mg/kg	21.6		1	Yes	S3VEM
Zinc	Target	23.7		mg/kg	23.7		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAM7	Lab Code: BON

Sample Number: PBS01	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	mg/kg	20.0	U	1	Yes	S3VEM
Antimony	Target	1.0	J	mg/kg	1.0	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Barium	Target	20.0	U	mg/kg	20.0	U	1	Yes	S3VEM
Beryllium	Target	-.014		mg/kg	-.014	J	1	Yes	S3VEM
Cadmium	Target	0.50	U	mg/kg	0.50	U	1	Yes	S3VEM
Calcium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Chromium	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Cobalt	Target	5.0	U	mg/kg	5.0	U	1	Yes	S3VEM
Copper	Target	1.1	J	mg/kg	1.1	J	1	Yes	S3VEM
Iron	Target	10.0	U	mg/kg	10.0	U	1	Yes	S3VEM
Lead	Target	0.21	J	mg/kg	0.21	J	1	Yes	S3VEM
Magnesium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Manganese	Target	1.5	U	mg/kg	1.5	U	1	Yes	S3VEM
Nickel	Target	4.0	U	mg/kg	4.0	U	1	Yes	S3VEM
Potassium	Target	9.0		mg/kg	9.0	J	1	Yes	S3VEM
Selenium	Target	3.5	U	mg/kg	3.5	U	1	Yes	S3VEM
Silver	Target	0.085	J	mg/kg	0.085	J	1	Yes	S3VEM
Sodium	Target	3.7	J	mg/kg	3.7	J	1	Yes	S3VEM
Thallium	Target	-.17		mg/kg	-.17	J	1	Yes	S3VEM
Vanadium	Target	-.068		mg/kg	-.068	J	1	Yes	S3VEM
Zinc	Target	6.0	U	mg/kg	6.0	U	1	Yes	S3VEM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
DESA/HWSB/HWSS
2890, Woodbridge Avenue, Edison, NJ 08837

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 12 (Soil)
Analysis: Metals

SDG No.: MBCAP3
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/3/2016 – 3/7/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solutions
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
Sample MBCAQ3 has analytes that have been qualified J, J+ or J-.

Minor Findings:
None

COMMENT:	The site-specific QAPP did not specify the project action levels for this site. Field duplicate samples are MBCAP0 (this SDG) and MBCAP9 (unknown SDG). Sample MBCAP9 was not available during the data assessment. Therefore, field duplicates were not evaluated for this SDG.

Reviewer Name(s): Jianwei Huang

Approver's Signature: **Date: 04/05/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Barium MBCAP6, MBCAQ5, MBCAQ3, MBCAQ0, MBCAQ4

Cobalt MBCAP5, MBCAP7, MBCAP3, MBCAP6, MBCAP8, MBCAP4, MBCAQ0

Magnesium MBCAQ3, MBCAQ0

Nickel MBCAP6

Potassium MBCAQ2, MBCAQ1, MBCAP6, MBCAQ3, MBCAQ4, MBCAQ0

Selenium MBCAP6, MBCAP3, MBCAP7, MBCAP8, MBCAP4

Silver MBCAQ1, MBCAQ0, MBCAP6, MBCAP4, MBCAP5

Thallium MBCAQ1, MBCAQ5

Vanadium MBCAQ0

The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Beryllium MBCAQ2, MBCAQ4, MBCAP7, MBCAQ3, MBCAP4, MBCAQ5, MBCAQ1, MBCAQ0, MBCAP6, MBCAP5, MBCAP8, MBCAP3

Magnesium MBCAQ0, MBCAQ3

Selenium MBCAP7, MBCAP8, MBCAP6, MBCAP4, MBCAP3

Silver MBCAQ1, MBCAP5, MBCAQ0, MBCAP4, MBCAP6

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution,

the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

The following sample is associated with a Matrix Spike with %R less than 30% and a Post-digestion spike with %R > 75%. Detects are qualified as J. Non-detects are qualified as UJ.

Barium MBCAQ3

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

The following sample is associated with a Duplicate sample that has analyte results are greater than or equal to 5xCRQL in both Duplicate and original samples and RPD is greater than 35. Detects are qualified as J. Non-detects are qualified as UJ.

Nickel MBCAQ3

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

Field duplicate samples are MBCAP0 (this SDG) and MBCAP9 (unknown SDG). Sample MBCAP9 was not available during the data assessment. Therefore, field duplicates were not evaluated for this SDG.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

The following sample is associated to the Serial Dilution sample with analyte absolute value %D >15% and the original sample result is > 50xMDL. Detects are qualified as estimated J. Non-detects are qualified estimated UJ.

Arsenic and Nickel MBCAQ3

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAP3	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	42.0		mg/kg	42.0		1	Yes	S3VEM
Antimony	Target	12.0		mg/kg	12.0		1	Yes	S3VEM
Arsenic	Target	1.8		mg/kg	1.8		1	Yes	S3VEM
Barium	Target	43.0		mg/kg	43.0		1	Yes	S3VEM
Beryllium	Target	1.0		mg/kg	1.0		1	Yes	S3VEM
Cadmium	Target	1.1		mg/kg	1.1		1	Yes	S3VEM
Calcium	Target	1070		mg/kg	1070		1	Yes	S3VEM
Chromium	Target	2.1		mg/kg	2.1		1	Yes	S3VEM
Cobalt	Target	10.8		mg/kg	10.8		1	Yes	S3VEM
Copper	Target	5.2		mg/kg	5.2		1	Yes	S3VEM
Iron	Target	20.8		mg/kg	20.8		1	Yes	S3VEM
Lead	Target	2.2		mg/kg	2.2		1	Yes	S3VEM
Magnesium	Target	1040		mg/kg	1040		1	Yes	S3VEM
Manganese	Target	3.2		mg/kg	3.2		1	Yes	S3VEM
Nickel	Target	8.7		mg/kg	8.7		1	Yes	S3VEM
Potassium	Target	1010		mg/kg	1010		1	Yes	S3VEM
Selenium	Target	7.1		mg/kg	7.1		1	Yes	S3VEM
Silver	Target	2.0		mg/kg	2.0		1	Yes	S3VEM
Sodium	Target	1010		mg/kg	1010		1	Yes	S3VEM
Thallium	Target	5.0		mg/kg	5.0		1	Yes	S3VEM
Vanadium	Target	10.6		mg/kg	10.6		1	Yes	S3VEM
Zinc	Target	12.7		mg/kg	12.7		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number:	MBCAP3	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01-SL039-01	pH:		Sample Date:	03/07/2016	Sample Time:	14:35:00
% Moisture :				% Solids :	98.1		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6400		mg/kg	6400		1	Yes	S3VEM
Antimony	Target	10.9		mg/kg	10.9	*	1	Yes	S3VEM
Arsenic	Target	28.0		mg/kg	28.0	*	1	Yes	S3VEM
Barium	Target	40.4		mg/kg	40.4	*	1	Yes	S3VEM
Beryllium	Target	0.42	U	mg/kg	0.14	J	1	Yes	S3VEM
Cadmium	Target	2.9		mg/kg	2.9		1	Yes	S3VEM
Calcium	Target	273000		mg/kg	273000	D	20	Yes	S3VEM
Chromium	Target	23.2		mg/kg	23.2		1	Yes	S3VEM
Cobalt	Target	4.2	U	mg/kg	1.8	J	1	Yes	S3VEM
Copper	Target	202		mg/kg	202		1	Yes	S3VEM
Iron	Target	5740		mg/kg	5740		1	Yes	S3VEM
Lead	Target	510		mg/kg	510	*	1	Yes	S3VEM
Magnesium	Target	1850		mg/kg	1850		1	Yes	S3VEM
Manganese	Target	94.2		mg/kg	94.2		1	Yes	S3VEM
Nickel	Target	9.5		mg/kg	9.5	*	1	Yes	S3VEM
Potassium	Target	2000		mg/kg	2000		1	Yes	S3VEM
Selenium	Target	2.9	U	mg/kg	1.5	J*	1	Yes	S3VEM
Silver	Target	0.84	U	mg/kg	0.84	U*	1	Yes	S3VEM
Sodium	Target	11400		mg/kg	11400		1	Yes	S3VEM
Thallium	Target	2.1	U	mg/kg	2.1	U*	1	Yes	S3VEM
Vanadium	Target	11.9		mg/kg	11.9		1	Yes	S3VEM
Zinc	Target	12.2		mg/kg	12.2		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number:	MBCAP4	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01-SL040-01	pH:		Sample Date:	03/07/2016	Sample Time:	14:42:00
% Moisture :				% Solids :	98.1		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6940		mg/kg	6940		1	Yes	S3VEM
Antimony	Target	307		mg/kg	307	*	1	Yes	S3VEM
Arsenic	Target	102		mg/kg	102	*	1	Yes	S3VEM
Barium	Target	90.0		mg/kg	90.0	*	1	Yes	S3VEM
Beryllium	Target	0.45	U	mg/kg	0.26	J	1	Yes	S3VEM
Cadmium	Target	19.0		mg/kg	19.0		1	Yes	S3VEM
Calcium	Target	300000		mg/kg	300000	D	25	Yes	S3VEM
Chromium	Target	18.0		mg/kg	18.0		1	Yes	S3VEM
Cobalt	Target	4.5	U	mg/kg	3.1	J	1	Yes	S3VEM
Copper	Target	58.7		mg/kg	58.7		1	Yes	S3VEM
Iron	Target	6700		mg/kg	6700		1	Yes	S3VEM
Lead	Target	18000		mg/kg	18000	D*	25	Yes	S3VEM
Magnesium	Target	2520		mg/kg	2520		1	Yes	S3VEM
Manganese	Target	141		mg/kg	141		1	Yes	S3VEM
Nickel	Target	67.4		mg/kg	67.4	*	1	Yes	S3VEM
Potassium	Target	4390		mg/kg	4390		1	Yes	S3VEM
Selenium	Target	3.1	U	mg/kg	2.5	J*	1	Yes	S3VEM
Silver	Target	0.89	U	mg/kg	0.19	J*	1	Yes	S3VEM
Sodium	Target	7120		mg/kg	7120		1	Yes	S3VEM
Thallium	Target	2.2	U	mg/kg	2.2	U*	1	Yes	S3VEM
Vanadium	Target	18.5		mg/kg	18.5		1	Yes	S3VEM
Zinc	Target	122		mg/kg	122		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number:	MBCAP5	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01-SL041-01	pH:		Sample Date:	03/07/2016	Sample Time:	14:50:00
% Moisture :				% Solids :	98.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	6800		mg/kg	6800		1	Yes	S3VEM
Antimony	Target	445		mg/kg	445	*	1	Yes	S3VEM
Arsenic	Target	136		mg/kg	136	*	1	Yes	S3VEM
Barium	Target	123		mg/kg	123	*	1	Yes	S3VEM
Beryllium	Target	0.49	U	mg/kg	0.24	J	1	Yes	S3VEM
Cadmium	Target	19.0		mg/kg	19.0		1	Yes	S3VEM
Calcium	Target	302000		mg/kg	302000	D	25	Yes	S3VEM
Chromium	Target	28.4		mg/kg	28.4		1	Yes	S3VEM
Cobalt	Target	4.9	U	mg/kg	2.9	J	1	Yes	S3VEM
Copper	Target	97.6		mg/kg	97.6		1	Yes	S3VEM
Iron	Target	9030		mg/kg	9030		1	Yes	S3VEM
Lead	Target	40100		mg/kg	40100	D*	25	Yes	S3VEM
Magnesium	Target	2580		mg/kg	2580		1	Yes	S3VEM
Manganese	Target	180		mg/kg	180		1	Yes	S3VEM
Nickel	Target	97.1		mg/kg	97.1	*	1	Yes	S3VEM
Potassium	Target	3180		mg/kg	3180		1	Yes	S3VEM
Selenium	Target	6.7		mg/kg	6.7	*	1	Yes	S3VEM
Silver	Target	0.98	U	mg/kg	0.80	J*	1	Yes	S3VEM
Sodium	Target	7370		mg/kg	7370		1	Yes	S3VEM
Thallium	Target	2.5	U	mg/kg	2.5	U*	1	Yes	S3VEM
Vanadium	Target	19.4		mg/kg	19.4		1	Yes	S3VEM
Zinc	Target	197		mg/kg	197		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number:	MBCAP6	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01-SL042-01	pH:		Sample Date:	03/07/2016	Sample Time:	16:00:00
% Moisture :				% Solids :	95.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5480		mg/kg	5480	D	2	Yes	S3VEM
Antimony	Target	59.8		mg/kg	59.8	D*	2	Yes	S3VEM
Arsenic	Target	48.2		mg/kg	48.2	D*	2	Yes	S3VEM
Barium	Target	41.5	U	mg/kg	34.1	JD*	2	Yes	S3VEM
Beryllium	Target	1.0	U	mg/kg	0.13	JD	2	Yes	S3VEM
Cadmium	Target	2.3		mg/kg	2.3	D	2	Yes	S3VEM
Calcium	Target	287000		mg/kg	287000	D	15	Yes	S3VEM
Chromium	Target	19.3		mg/kg	19.3	D	2	Yes	S3VEM
Cobalt	Target	10.4	U	mg/kg	2.2	JD	2	Yes	S3VEM
Copper	Target	81.7		mg/kg	81.7	D	2	Yes	S3VEM
Iron	Target	5930		mg/kg	5930	D	2	Yes	S3VEM
Lead	Target	3700		mg/kg	3700	D*	2	Yes	S3VEM
Magnesium	Target	2210		mg/kg	2210	D	2	Yes	S3VEM
Manganese	Target	91.7		mg/kg	91.7	D	2	Yes	S3VEM
Nickel	Target	8.3	U	mg/kg	6.7	JD*	2	Yes	S3VEM
Potassium	Target	1038	U	mg/kg	950	JD	2	Yes	S3VEM
Selenium	Target	7.3	U	mg/kg	0.83	JD*	2	Yes	S3VEM
Silver	Target	2.1	U	mg/kg	0.14	JD*	2	Yes	S3VEM
Sodium	Target	18200		mg/kg	18200	D	2	Yes	S3VEM
Thallium	Target	5.2	U	mg/kg	5.2	UD*	2	Yes	S3VEM
Vanadium	Target	17.9		mg/kg	17.9	D	2	Yes	S3VEM
Zinc	Target	47.1		mg/kg	47.1	D	2	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number:	MBCAP7	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01-SL043-01	pH:		Sample Date:	03/07/2016	Sample Time:	16:15:00
% Moisture :				% Solids :	99.0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	8120		mg/kg	8120		1	Yes	S3VEM
Antimony	Target	14.7		mg/kg	14.7	*	1	Yes	S3VEM
Arsenic	Target	18.0		mg/kg	18.0	*	1	Yes	S3VEM
Barium	Target	66.4		mg/kg	66.4	*	1	Yes	S3VEM
Beryllium	Target	0.49	U	mg/kg	0.16	J	1	Yes	S3VEM
Cadmium	Target	2.8		mg/kg	2.8		1	Yes	S3VEM
Calcium	Target	345000		mg/kg	345000	D	20	Yes	S3VEM
Chromium	Target	29.6		mg/kg	29.6		1	Yes	S3VEM
Cobalt	Target	4.9	U	mg/kg	2.3	J	1	Yes	S3VEM
Copper	Target	21.1		mg/kg	21.1		1	Yes	S3VEM
Iron	Target	7720		mg/kg	7720		1	Yes	S3VEM
Lead	Target	2130		mg/kg	2130	*	1	Yes	S3VEM
Magnesium	Target	1990		mg/kg	1990		1	Yes	S3VEM
Manganese	Target	132		mg/kg	132		1	Yes	S3VEM
Nickel	Target	12.6		mg/kg	12.6	*	1	Yes	S3VEM
Potassium	Target	5350		mg/kg	5350		1	Yes	S3VEM
Selenium	Target	3.4	U	mg/kg	1.3	J*	1	Yes	S3VEM
Silver	Target	0.97	U	mg/kg	0.97	U*	1	Yes	S3VEM
Sodium	Target	6710		mg/kg	6710		1	Yes	S3VEM
Thallium	Target	2.4	U	mg/kg	2.4	U*	1	Yes	S3VEM
Vanadium	Target	24.5		mg/kg	24.5		1	Yes	S3VEM
Zinc	Target	21.4		mg/kg	21.4		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number:	MBCAP8	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01-SL044-01	pH:		Sample Date:	03/07/2016	Sample Time:	16:38:00
% Moisture :				% Solids :	97.7		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5110		mg/kg	5110		1	Yes	S3VEM
Antimony	Target	7.2		mg/kg	7.2	*	1	Yes	S3VEM
Arsenic	Target	17.9		mg/kg	17.9	*	1	Yes	S3VEM
Barium	Target	36.4		mg/kg	36.4	*	1	Yes	S3VEM
Beryllium	Target	0.47	U	mg/kg	0.11	J	1	Yes	S3VEM
Cadmium	Target	2.9		mg/kg	2.9		1	Yes	S3VEM
Calcium	Target	345000		mg/kg	345000	D	20	Yes	S3VEM
Chromium	Target	21.7		mg/kg	21.7		1	Yes	S3VEM
Cobalt	Target	4.7	U	mg/kg	1.0	J	1	Yes	S3VEM
Copper	Target	99.5		mg/kg	99.5		1	Yes	S3VEM
Iron	Target	3270		mg/kg	3270		1	Yes	S3VEM
Lead	Target	408		mg/kg	408	*	1	Yes	S3VEM
Magnesium	Target	1750		mg/kg	1750		1	Yes	S3VEM
Manganese	Target	61.5		mg/kg	61.5		1	Yes	S3VEM
Nickel	Target	4.5		mg/kg	4.5	*	1	Yes	S3VEM
Potassium	Target	1250		mg/kg	1250		1	Yes	S3VEM
Selenium	Target	3.3	U	mg/kg	0.71	J*	1	Yes	S3VEM
Silver	Target	0.95	U	mg/kg	0.95	U*	1	Yes	S3VEM
Sodium	Target	9220		mg/kg	9220		1	Yes	S3VEM
Thallium	Target	2.4	U	mg/kg	2.4	U*	1	Yes	S3VEM
Vanadium	Target	12.4		mg/kg	12.4		1	Yes	S3VEM
Zinc	Target	10.7		mg/kg	10.7		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number:	MBCAQ0	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01-SL045-02	pH:		Sample Date:	03/07/2016	Sample Time:	16:55:00
% Moisture :				% Solids :	98.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5630		mg/kg	5630	D	5	Yes	S3VEM
Antimony	Target	139		mg/kg	139	D*	5	Yes	S3VEM
Arsenic	Target	16.4		mg/kg	16.4	D*	5	Yes	S3VEM
Barium	Target	95.5	U	mg/kg	49.0	JD*	5	Yes	S3VEM
Beryllium	Target	2.4	U	mg/kg	0.12	JD	5	Yes	S3VEM
Cadmium	Target	13.9		mg/kg	13.9	D	5	Yes	S3VEM
Calcium	Target	342000		mg/kg	342000	D	30	Yes	S3VEM
Chromium	Target	30.6		mg/kg	30.6	D	5	Yes	S3VEM
Cobalt	Target	23.9	U	mg/kg	2.7	JD	5	Yes	S3VEM
Copper	Target	117		mg/kg	117	D	5	Yes	S3VEM
Iron	Target	6070		mg/kg	6070	D	5	Yes	S3VEM
Lead	Target	8300		mg/kg	8300	D*	5	Yes	S3VEM
Magnesium	Target	2390	U	mg/kg	2260	JD	5	Yes	S3VEM
Manganese	Target	121		mg/kg	121	D	5	Yes	S3VEM
Nickel	Target	20.6		mg/kg	20.6	D*	5	Yes	S3VEM
Potassium	Target	2390	U	mg/kg	1170	JD	5	Yes	S3VEM
Selenium	Target	16.7	U	mg/kg	16.7	UD*	5	Yes	S3VEM
Silver	Target	4.8	U	mg/kg	0.35	JD*	5	Yes	S3VEM
Sodium	Target	7530		mg/kg	7530	D	5	Yes	S3VEM
Thallium	Target	11.9	U	mg/kg	11.9	UD*	5	Yes	S3VEM
Vanadium	Target	23.9	U	mg/kg	17.4	JD	5	Yes	S3VEM
Zinc	Target	92.2		mg/kg	92.2	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number:	MBCAQ1	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CS01-SL001-01	pH:		Sample Date:	03/01/2016	Sample Time:	16:15:00
% Moisture :				% Solids :	39.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3960		mg/kg	3960	D	4	Yes	S3VEM
Antimony	Target	2650		mg/kg	2650	D*	4	Yes	S3VEM
Arsenic	Target	423		mg/kg	423	D*	4	Yes	S3VEM
Barium	Target	387		mg/kg	387	D*	4	Yes	S3VEM
Beryllium	Target	4.1	U	mg/kg	0.052	JD	4	Yes	S3VEM
Cadmium	Target	877		mg/kg	877	D	4	Yes	S3VEM
Calcium	Target	201000		mg/kg	201000	D	4	Yes	S3VEM
Chromium	Target	131		mg/kg	131	D	4	Yes	S3VEM
Cobalt	Target	385		mg/kg	385	D	4	Yes	S3VEM
Copper	Target	472		mg/kg	472	D	4	Yes	S3VEM
Iron	Target	72000		mg/kg	72000	D	4	Yes	S3VEM
Lead	Target	69400		mg/kg	69400	D*	50	Yes	S3VEM
Magnesium	Target	6390		mg/kg	6390	D	4	Yes	S3VEM
Manganese	Target	16700		mg/kg	16700	D	50	Yes	S3VEM
Nickel	Target	4490		mg/kg	4490	D*	4	Yes	S3VEM
Potassium	Target	4080	U	mg/kg	448	JD	4	Yes	S3VEM
Selenium	Target	114		mg/kg	114	D*	4	Yes	S3VEM
Silver	Target	8.2	U	mg/kg	4.1	JD*	4	Yes	S3VEM
Sodium	Target	5600		mg/kg	5600	D	4	Yes	S3VEM
Thallium	Target	20.4	U	mg/kg	13.9	JD*	4	Yes	S3VEM
Vanadium	Target	59.9		mg/kg	59.9	D	4	Yes	S3VEM
Zinc	Target	2850		mg/kg	2850	D	4	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number:	MBCAQ2	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CS01-SL002-01	pH:		Sample Date:	03/02/2016	Sample Time:	14:25:00
% Moisture :				% Solids :	93.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5250		mg/kg	5250	D	3	Yes	S3VEM
Antimony	Target	6700		mg/kg	6700	D*	50	Yes	S3VEM
Arsenic	Target	1090		mg/kg	1090	D*	3	Yes	S3VEM
Barium	Target	67.8		mg/kg	67.8	D*	3	Yes	S3VEM
Beryllium	Target	1.5	U	mg/kg	0.15	JD	3	Yes	S3VEM
Cadmium	Target	119		mg/kg	119	D	3	Yes	S3VEM
Calcium	Target	29900		mg/kg	29900	D	3	Yes	S3VEM
Chromium	Target	344		mg/kg	344	D	3	Yes	S3VEM
Cobalt	Target	25.5		mg/kg	25.5	D	3	Yes	S3VEM
Copper	Target	1740		mg/kg	1740	D	3	Yes	S3VEM
Iron	Target	227000		mg/kg	227000	D	50	Yes	S3VEM
Lead	Target	80700		mg/kg	80700	D*	50	Yes	S3VEM
Magnesium	Target	2650		mg/kg	2650	D	3	Yes	S3VEM
Manganese	Target	1100		mg/kg	1100	D	3	Yes	S3VEM
Nickel	Target	425		mg/kg	425	D*	3	Yes	S3VEM
Potassium	Target	1500	U	mg/kg	501	JD	3	Yes	S3VEM
Selenium	Target	34.4		mg/kg	34.4	D*	3	Yes	S3VEM
Silver	Target	3.0	U	mg/kg	3.0	UD*	3	Yes	S3VEM
Sodium	Target	63200		mg/kg	63200	D	50	Yes	S3VEM
Thallium	Target	7.5	U	mg/kg	7.5	UD*	3	Yes	S3VEM
Vanadium	Target	32.1		mg/kg	32.1	D	3	Yes	S3VEM
Zinc	Target	1940		mg/kg	1940	D	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number:	MBCAQ3	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CS01-SL003-01	pH:		Sample Date:	03/03/2016	Sample Time:	14:35:00
% Moisture :				% Solids :	94.2		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5710		mg/kg	5710	D	3	Yes	S3VEM
Antimony	Target	1690		mg/kg	1690	D*	3	Yes	S3VEM
Arsenic	Target	989	J	mg/kg	989	D*	3	Yes	S3VEM
Barium	Target	63.7	UJ	mg/kg	44.1	JD*	3	Yes	S3VEM
Beryllium	Target	1.6	U	mg/kg	0.16	JD	3	Yes	S3VEM
Cadmium	Target	61.3		mg/kg	61.3	D	3	Yes	S3VEM
Calcium	Target	11800		mg/kg	11800	D	3	Yes	S3VEM
Chromium	Target	392		mg/kg	392	D	3	Yes	S3VEM
Cobalt	Target	35.6		mg/kg	35.6	D	3	Yes	S3VEM
Copper	Target	1600		mg/kg	1600	D	3	Yes	S3VEM
Iron	Target	295000		mg/kg	295000	D	50	Yes	S3VEM
Lead	Target	54300		mg/kg	54300	D*	50	Yes	S3VEM
Magnesium	Target	1590	U	mg/kg	1580	JD	3	Yes	S3VEM
Manganese	Target	1390		mg/kg	1390	D	3	Yes	S3VEM
Nickel	Target	515	J	mg/kg	515	D*	3	Yes	S3VEM
Potassium	Target	1590	U	mg/kg	452	JD	3	Yes	S3VEM
Selenium	Target	59.3		mg/kg	59.3	D*	3	Yes	S3VEM
Silver	Target	3.2	U	mg/kg	3.2	UD*	3	Yes	S3VEM
Sodium	Target	77500		mg/kg	77500	D	50	Yes	S3VEM
Thallium	Target	8.0	U	mg/kg	8.0	UD*	3	Yes	S3VEM
Vanadium	Target	32.9		mg/kg	32.9	D	3	Yes	S3VEM
Zinc	Target	1730		mg/kg	1730	D	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number:	MBCAQ3A	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:	03/03/2016	Sample Time:	14:35:00
% Moisture :				% Solids :	94.2		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Barium	Spike	131		mg/kg	131	D*	2	Yes	S3VEM
Thallium	Spike	5.0	U	mg/kg	5.0	UD*	2	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number: MBCAQ3D	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/03/2016	Sample Time: 14:35:00
% Moisture :		% Solids : 94.2	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5110		mg/kg	5110	D	3	Yes	S3VEM
Antimony	Target	2390		mg/kg	2390	D*	3	Yes	S3VEM
Arsenic	Target	742		mg/kg	742	D*	3	Yes	S3VEM
Barium	Target	50.9		mg/kg	50.9	JD	3	Yes	S3VEM
Beryllium	Target	0.13		mg/kg	0.13	JD	3	Yes	S3VEM
Cadmium	Target	61.7		mg/kg	61.7	D	3	Yes	S3VEM
Calcium	Target	12400		mg/kg	12400	D	3	Yes	S3VEM
Chromium	Target	400		mg/kg	400	D	3	Yes	S3VEM
Cobalt	Target	23.1		mg/kg	23.1	D	3	Yes	S3VEM
Copper	Target	1550		mg/kg	1550	D	3	Yes	S3VEM
Iron	Target	279000		mg/kg	279000	D	50	Yes	S3VEM
Lead	Target	71500		mg/kg	71500	D*	50	Yes	S3VEM
Magnesium	Target	2220		mg/kg	2220	D	3	Yes	S3VEM
Manganese	Target	1350		mg/kg	1350	D	3	Yes	S3VEM
Nickel	Target	338		mg/kg	338	D*	3	Yes	S3VEM
Potassium	Target	430		mg/kg	430	JD	3	Yes	S3VEM
Selenium	Target	60.5		mg/kg	60.5	D	3	Yes	S3VEM
Silver	Target	3.2	U	mg/kg	3.2	UD	3	Yes	S3VEM
Sodium	Target	71400		mg/kg	71400	D	50	Yes	S3VEM
Thallium	Target	8.0	U	mg/kg	8.0	UD	3	Yes	S3VEM
Vanadium	Target	30.9		mg/kg	30.9	D	3	Yes	S3VEM
Zinc	Target	1600		mg/kg	1600	D	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number: MBCAQ3L	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 94.2	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5630		mg/kg	5630	D	15	Yes	S3VEM
Antimony	Target	1680		mg/kg	1680	D	15	Yes	S3VEM
Arsenic	Target	789		mg/kg	789	D*	15	Yes	S3VEM
Barium	Target	42.9	J	mg/kg	42.9	JD	15	Yes	S3VEM
Beryllium	Target	8.0	U	mg/kg	8.0	UD	15	Yes	S3VEM
Cadmium	Target	62.5		mg/kg	62.5	D	15	Yes	S3VEM
Calcium	Target	11900		mg/kg	11900	D	15	Yes	S3VEM
Chromium	Target	396		mg/kg	396	D	15	Yes	S3VEM
Cobalt	Target	36.0	J	mg/kg	36.0	JD	15	Yes	S3VEM
Copper	Target	1490		mg/kg	1490	D	15	Yes	S3VEM
Iron	Target	293000		mg/kg	293000	D	250	Yes	S3VEM
Lead	Target	53000		mg/kg	53000	D	250	Yes	S3VEM
Magnesium	Target	1620	J	mg/kg	1620	JD	15	Yes	S3VEM
Manganese	Target	1410		mg/kg	1410	D	15	Yes	S3VEM
Nickel	Target	431		mg/kg	431	D*	15	Yes	S3VEM
Potassium	Target	434		mg/kg	434	JD	15	Yes	S3VEM
Selenium	Target	65.7		mg/kg	65.7	D*	15	Yes	S3VEM
Silver	Target	15.9	U	mg/kg	15.9	UD	15	Yes	S3VEM
Sodium	Target	75800	J	mg/kg	75800	JD	250	Yes	S3VEM
Thallium	Target	39.8	U	mg/kg	39.8	UD	15	Yes	S3VEM
Vanadium	Target	31.1	J	mg/kg	31.1	JD	15	Yes	S3VEM
Zinc	Target	1780		mg/kg	1780	D	15	Yes	S3VEM

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Sample Number: MBCAQ3S	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/03/2016	Sample Time: 14:35:00
% Moisture :		% Solids : 94.2	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Antimony	Spike	1850		mg/kg	1850	D	3	Yes	S3VEM
Arsenic	Spike	716		mg/kg	716	D	3	Yes	S3VEM
Barium	Spike	40.0	J	mg/kg	40.0	JD*	3	Yes	S3VEM
Beryllium	Spike	10.4		mg/kg	10.4	D	3	Yes	S3VEM
Cadmium	Spike	73.2		mg/kg	73.2	D	3	Yes	S3VEM
Chromium	Spike	431		mg/kg	431	D	3	Yes	S3VEM
Cobalt	Spike	127		mg/kg	127	D	3	Yes	S3VEM
Copper	Spike	1550		mg/kg	1550	D	3	Yes	S3VEM
Lead	Spike	64800		mg/kg	64800	D	50	Yes	S3VEM
Manganese	Spike	1510		mg/kg	1510	D	3	Yes	S3VEM
Nickel	Spike	459		mg/kg	459	D	3	Yes	S3VEM
Selenium	Spike	82.9		mg/kg	82.9	D	3	Yes	S3VEM
Silver	Spike	5.6		mg/kg	5.6	D*	3	Yes	S3VEM
Thallium	Spike	8.0	U	mg/kg	8.0	UD*	3	Yes	S3VEM
Vanadium	Spike	137		mg/kg	137	D	3	Yes	S3VEM
Zinc	Spike	1730		mg/kg	1730	D	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number:	MBCAQ4	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CS01-SL003-02	pH:		Sample Date:	03/03/2016	Sample Time:	14:35:00
% Moisture :				% Solids :	94.0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5530		mg/kg	5530	D	3	Yes	S3VEM
Antimony	Target	1850		mg/kg	1850	D*	3	Yes	S3VEM
Arsenic	Target	778		mg/kg	778	D*	3	Yes	S3VEM
Barium	Target	60.2	U	mg/kg	37.9	JD*	3	Yes	S3VEM
Beryllium	Target	1.5	U	mg/kg	0.14	JD	3	Yes	S3VEM
Cadmium	Target	60.4		mg/kg	60.4	D	3	Yes	S3VEM
Calcium	Target	12100		mg/kg	12100	D	3	Yes	S3VEM
Chromium	Target	524		mg/kg	524	D	3	Yes	S3VEM
Cobalt	Target	26.2		mg/kg	26.2	D	3	Yes	S3VEM
Copper	Target	1550		mg/kg	1550	D	3	Yes	S3VEM
Iron	Target	298000		mg/kg	298000	D	50	Yes	S3VEM
Lead	Target	64400		mg/kg	64400	D*	50	Yes	S3VEM
Magnesium	Target	7450		mg/kg	7450	D	3	Yes	S3VEM
Manganese	Target	1420		mg/kg	1420	D	3	Yes	S3VEM
Nickel	Target	326		mg/kg	326	D*	3	Yes	S3VEM
Potassium	Target	1690	U	mg/kg	446	JD	3	Yes	S3VEM
Selenium	Target	58.5		mg/kg	58.5	D*	3	Yes	S3VEM
Silver	Target	3.0	U	mg/kg	3.0	UD*	3	Yes	S3VEM
Sodium	Target	85300		mg/kg	85300	D	50	Yes	S3VEM
Thallium	Target	7.5	U	mg/kg	7.5	UD*	3	Yes	S3VEM
Vanadium	Target	32.0		mg/kg	32.0	D	3	Yes	S3VEM
Zinc	Target	1810		mg/kg	1810	D	3	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number:	MBCAQ5	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CS01-SL004-01	pH:		Sample Date:	03/03/2016	Sample Time:	15:55:00
% Moisture :				% Solids :	87.7		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2820		mg/kg	2820	D	4	Yes	S3VEM
Antimony	Target	8920		mg/kg	8920	D*	50	Yes	S3VEM
Arsenic	Target	1240		mg/kg	1240	D*	4	Yes	S3VEM
Barium	Target	86.9	U	mg/kg	53.7	JD*	4	Yes	S3VEM
Beryllium	Target	2.2	U	mg/kg	0.057	JD	4	Yes	S3VEM
Cadmium	Target	806		mg/kg	806	D	4	Yes	S3VEM
Calcium	Target	72600		mg/kg	72600	D	4	Yes	S3VEM
Chromium	Target	91.2		mg/kg	91.2	D	4	Yes	S3VEM
Cobalt	Target	158		mg/kg	158	D	4	Yes	S3VEM
Copper	Target	1090		mg/kg	1090	D	4	Yes	S3VEM
Iron	Target	69500		mg/kg	69500	D	4	Yes	S3VEM
Lead	Target	81600		mg/kg	81600	D*	50	Yes	S3VEM
Magnesium	Target	4230		mg/kg	4230	D	4	Yes	S3VEM
Manganese	Target	4300		mg/kg	4300	D	4	Yes	S3VEM
Nickel	Target	2290		mg/kg	2290	D*	4	Yes	S3VEM
Potassium	Target	4670		mg/kg	4670	D	4	Yes	S3VEM
Selenium	Target	131		mg/kg	131	D*	4	Yes	S3VEM
Silver	Target	6.2		mg/kg	6.2	D*	4	Yes	S3VEM
Sodium	Target	73800		mg/kg	73800	D	4	Yes	S3VEM
Thallium	Target	10.9	U	mg/kg	2.0	JD*	4	Yes	S3VEM
Vanadium	Target	43.6		mg/kg	43.6	D	4	Yes	S3VEM
Zinc	Target	1980		mg/kg	1980	D	4	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAP3	Lab Code: BON

Sample Number: PBS01	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2.4	J	mg/kg	2.4	J	1	Yes	S3VEM
Antimony	Target	6.0	U	mg/kg	6.0	U	1	Yes	S3VEM
Arsenic	Target	-.14		mg/kg	-.14	J	1	Yes	S3VEM
Barium	Target	-.029		mg/kg	-.029	J	1	Yes	S3VEM
Beryllium	Target	-.0064		mg/kg	-.0064	J	1	Yes	S3VEM
Cadmium	Target	0.50	U	mg/kg	0.50	U	1	Yes	S3VEM
Calcium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Chromium	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Cobalt	Target	5.0	U	mg/kg	5.0	U	1	Yes	S3VEM
Copper	Target	0.089	J	mg/kg	0.089	J	1	Yes	S3VEM
Iron	Target	10.0	U	mg/kg	10.0	U	1	Yes	S3VEM
Lead	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Magnesium	Target	3.8	J	mg/kg	3.8	J	1	Yes	S3VEM
Manganese	Target	1.5	U	mg/kg	1.5	U	1	Yes	S3VEM
Nickel	Target	4.0	U	mg/kg	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Selenium	Target	3.5	U	mg/kg	3.5	U	1	Yes	S3VEM
Silver	Target	0.051	J	mg/kg	0.051	J	1	Yes	S3VEM
Sodium	Target	3.3	J	mg/kg	3.3	J	1	Yes	S3VEM
Thallium	Target	-.25		mg/kg	-.25	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	mg/kg	5.0	U	1	Yes	S3VEM
Zinc	Target	6.0	U	mg/kg	6.0	U	1	Yes	S3VEM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
DESA/HWSB/HWSS
2890, Woodbridge Avenue, Edison, NJ 08837

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 2 (Soil)
Analysis: Metals

SDG No.: MBCAQ8
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/9/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solutions
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
Sample MBCAQ8 has analytes that have been qualified J, J+ or J-.

Minor Findings:
None

COMMENT: The site-specific QAPP did not specify the project action levels for this site.

Reviewer Name(s): Jianwei Huang

Approver's Signature: **Date: 04/05/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Cobalt and Silver MBCAQ9, MBCAQ8

Selenium MBCAQ8

The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Cobalt and Silver MBCAQ9, MBCAQ8

Selenium MBCAQ8

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

The following sample is associated with a Matrix Spike with %R less than 30% and a Post-digestion spike with %R less than 75%. Detects are qualified as J-. Non-detects are qualified as R.

Antimony MBCAQ8

The following Matrix Spike sample has percent recoveries in the range of 30-74% and post-digestion spike sample has percent recoveries less than 75%. Detected analytes are qualified J-. Non-detected analytes are qualified UJ.

Cadmium MBCAQ8

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

No problems were found for this criterion.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

Not applicable.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

The following sample is associated to the Serial Dilution sample with analyte absolute value %D >15% and the original sample result is > 50xMDL. Detects are qualified as estimated J. Non-detects are qualified estimated UJ.

Cadmium, Calcium, Chromium, Lead and Magnesium MBCAQ8

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAQ8	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	38.9	J+	mg/kg	38.9		1	Yes	S3VEM
Antimony	Target	11.7	J+	mg/kg	11.7		1	Yes	S3VEM
Arsenic	Target	1.9	J+	mg/kg	1.9		1	Yes	S3VEM
Barium	Target	40.2	J+	mg/kg	40.2		1	Yes	S3VEM
Beryllium	Target	1.0	J+	mg/kg	1.0		1	Yes	S3VEM
Cadmium	Target	1.0	J+	mg/kg	1.0		1	Yes	S3VEM
Calcium	Target	995	J+	mg/kg	995		1	Yes	S3VEM
Chromium	Target	2.0	J+	mg/kg	2.0		1	Yes	S3VEM
Cobalt	Target	10.2	J+	mg/kg	10.2		1	Yes	S3VEM
Copper	Target	5.0	J+	mg/kg	5.0		1	Yes	S3VEM
Iron	Target	19.4	J+	mg/kg	19.4		1	Yes	S3VEM
Lead	Target	1.9	J+	mg/kg	1.9		1	Yes	S3VEM
Magnesium	Target	998	J+	mg/kg	998		1	Yes	S3VEM
Manganese	Target	3.0	J+	mg/kg	3.0		1	Yes	S3VEM
Nickel	Target	8.3	J+	mg/kg	8.3		1	Yes	S3VEM
Potassium	Target	969		mg/kg	969		1	Yes	S3VEM
Selenium	Target	6.7	J+	mg/kg	6.7		1	Yes	S3VEM
Silver	Target	1.9	J+	mg/kg	1.9		1	Yes	S3VEM
Sodium	Target	971	J+	mg/kg	971		1	Yes	S3VEM
Thallium	Target	4.6	J+	mg/kg	4.6		1	Yes	S3VEM
Vanadium	Target	10.0	J+	mg/kg	10.0		1	Yes	S3VEM
Zinc	Target	10.7	J+	mg/kg	10.7		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAQ8	Lab Code: BON

Sample Number:	MBCAQ8	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01-SL048-01	pH:		Sample Date:	03/09/2016	Sample Time:	14:00:00
% Moisture :				% Solids :	98.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3770		mg/kg	3770		1	Yes	S3VEM
Antimony	Target	26.1	J-	mg/kg	26.1	*	1	Yes	S3VEM
Arsenic	Target	26.7		mg/kg	26.7		1	Yes	S3VEM
Barium	Target	39.7		mg/kg	39.7	*	1	Yes	S3VEM
Beryllium	Target	0.099	J	mg/kg	0.099	J	1	Yes	S3VEM
Cadmium	Target	3.5	J-	mg/kg	3.5	*	1	Yes	S3VEM
Calcium	Target	369000	J	mg/kg	369000	D*	10	Yes	S3VEM
Chromium	Target	15.5	J	mg/kg	15.5	*	1	Yes	S3VEM
Cobalt	Target	5.1	U	mg/kg	1.2	J	1	Yes	S3VEM
Copper	Target	32.3		mg/kg	32.3	*	1	Yes	S3VEM
Iron	Target	3270		mg/kg	3270	*	1	Yes	S3VEM
Lead	Target	9150	J	mg/kg	9150	D*	10	Yes	S3VEM
Magnesium	Target	1860	J	mg/kg	1860	*	1	Yes	S3VEM
Manganese	Target	62.9		mg/kg	62.9	*	1	Yes	S3VEM
Nickel	Target	6.3		mg/kg	6.3	*	1	Yes	S3VEM
Potassium	Target	516		mg/kg	516	*	1	Yes	S3VEM
Selenium	Target	3.5	U	mg/kg	0.86	J	1	Yes	S3VEM
Silver	Target	1.0	U	mg/kg	0.21	J	1	Yes	S3VEM
Sodium	Target	14100		mg/kg	14100		1	Yes	S3VEM
Thallium	Target	2.5	U	mg/kg	2.5	U	1	Yes	S3VEM
Vanadium	Target	11.3		mg/kg	11.3		1	Yes	S3VEM
Zinc	Target	43.8		mg/kg	43.8		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAQ8	Lab Code: BON

Sample Number:	MBCAQ8A	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:		pH:		Sample Date:	03/09/2016	Sample Time:	14:00:00
% Moisture :				% Solids :	98.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Antimony	Spike	57.2	J+	mg/kg	57.2	*	1	Yes	S3VEM
Cadmium	Spike	4.2	J+	mg/kg	4.2	*	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAQ8	Lab Code: BON

Sample Number: MBCAQ8D	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/09/2016	Sample Time: 14:00:00
% Moisture :		% Solids : 98.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	3770	J+	mg/kg	3770		1	Yes	S3VEM
Antimony	Target	22.5	J+	mg/kg	22.5		1	Yes	S3VEM
Arsenic	Target	23.4	J+	mg/kg	23.4		1	Yes	S3VEM
Barium	Target	31.4	J+	mg/kg	31.4		1	Yes	S3VEM
Beryllium	Target	0.088	J+	mg/kg	0.088	J	1	Yes	S3VEM
Cadmium	Target	2.4	J+	mg/kg	2.4	*	1	Yes	S3VEM
Calcium	Target	353000	J+	mg/kg	353000	D	10	Yes	S3VEM
Chromium	Target	15.0	J+	mg/kg	15.0		1	Yes	S3VEM
Cobalt	Target	1.1	J+	mg/kg	1.1	J	1	Yes	S3VEM
Copper	Target	29.7	J+	mg/kg	29.7		1	Yes	S3VEM
Iron	Target	3100	J+	mg/kg	3100		1	Yes	S3VEM
Lead	Target	6300	J+	mg/kg	6300	D*	10	Yes	S3VEM
Magnesium	Target	1740	J+	mg/kg	1740		1	Yes	S3VEM
Manganese	Target	61.9	J+	mg/kg	61.9		1	Yes	S3VEM
Nickel	Target	5.8	J+	mg/kg	5.8		1	Yes	S3VEM
Potassium	Target	517		mg/kg	517		1	Yes	S3VEM
Selenium	Target	0.87	J+	mg/kg	0.87	J	1	Yes	S3VEM
Silver	Target	0.12	J+	mg/kg	0.12	J	1	Yes	S3VEM
Sodium	Target	13900	J+	mg/kg	13900		1	Yes	S3VEM
Thallium	Target	2.5	U	mg/kg	2.5	U	1	Yes	S3VEM
Vanadium	Target	11.1	J+	mg/kg	11.1		1	Yes	S3VEM
Zinc	Target	43.8	J+	mg/kg	43.8		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAQ8	Lab Code: BON

Sample Number: MBCAQ8L	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 98.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	4160	J+	mg/kg	4160		5	Yes	S3VEM
Antimony	Target	27.7	J+	mg/kg	27.7	J	5	Yes	S3VEM
Arsenic	Target	25.1	J+	mg/kg	25.1		5	Yes	S3VEM
Barium	Target	44.1	J+	mg/kg	44.1	J*	5	Yes	S3VEM
Beryllium	Target	0.053	J+	mg/kg	0.053	J	5	Yes	S3VEM
Cadmium	Target	4.2	J+	mg/kg	4.2	*	5	Yes	S3VEM
Calcium	Target	285000	J+	mg/kg	285000	D*	50	Yes	S3VEM
Chromium	Target	18.2	J+	mg/kg	18.2	*	5	Yes	S3VEM
Cobalt	Target	1.4	J+	mg/kg	1.4	J	5	Yes	S3VEM
Copper	Target	36.3	J+	mg/kg	36.3	*	5	Yes	S3VEM
Iron	Target	3760	J+	mg/kg	3760	*	5	Yes	S3VEM
Lead	Target	5040	J+	mg/kg	5040	D*	50	Yes	S3VEM
Magnesium	Target	2170	J+	mg/kg	2170	J*	5	Yes	S3VEM
Manganese	Target	72.3	J+	mg/kg	72.3	*	5	Yes	S3VEM
Nickel	Target	7.1	J+	mg/kg	7.1	J*	5	Yes	S3VEM
Potassium	Target	574		mg/kg	574	J*	5	Yes	S3VEM
Selenium	Target	17.7	U	mg/kg	17.7	U	5	Yes	S3VEM
Silver	Target	0.44	J+	mg/kg	0.44	J	5	Yes	S3VEM
Sodium	Target	15400	J+	mg/kg	15400		5	Yes	S3VEM
Thallium	Target	12.7	U	mg/kg	12.7	U	5	Yes	S3VEM
Vanadium	Target	12.5	J+	mg/kg	12.5	J	5	Yes	S3VEM
Zinc	Target	46.8	J+	mg/kg	46.8		5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAQ8	Lab Code: BON

Sample Number: MBCAQ8S	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date: 03/09/2016	Sample Time: 14:00:00
% Moisture :		% Solids : 98.8	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Antimony	Spike	17.3	J+	mg/kg	17.3	*	1	Yes	S3VEM
Arsenic	Spike	32.9	J+	mg/kg	32.9		1	Yes	S3VEM
Barium	Spike	396	J+	mg/kg	396		1	Yes	S3VEM
Beryllium	Spike	9.1	J+	mg/kg	9.1		1	Yes	S3VEM
Cadmium	Spike	10.8	J+	mg/kg	10.8	*	1	Yes	S3VEM
Chromium	Spike	49.7	J+	mg/kg	49.7		1	Yes	S3VEM
Cobalt	Spike	84.3	J+	mg/kg	84.3		1	Yes	S3VEM
Copper	Spike	76.1	J+	mg/kg	76.1		1	Yes	S3VEM
Lead	Spike	3990	J+	mg/kg	3990	D	10	Yes	S3VEM
Manganese	Spike	149	J+	mg/kg	149		1	Yes	S3VEM
Nickel	Spike	99.3	J+	mg/kg	99.3		1	Yes	S3VEM
Selenium	Spike	19.4	J+	mg/kg	19.4		1	Yes	S3VEM
Silver	Spike	9.4	J+	mg/kg	9.4		1	Yes	S3VEM
Thallium	Spike	8.4	J+	mg/kg	8.4		1	Yes	S3VEM
Vanadium	Spike	99.2	J+	mg/kg	99.2		1	Yes	S3VEM
Zinc	Spike	121	J+	mg/kg	121		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAQ8	Lab Code: BON

Sample Number:	MBCAQ9	Method:	Metals by ICP-AES	Matrix:	Soil	MA Number:	
Sample Location:	BRC001-CM01-SL049-01	pH:		Sample Date:	03/09/2016	Sample Time:	14:20:00
% Moisture :				% Solids :	99.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2270		mg/kg	2270		1	Yes	S3VEM
Antimony	Target	54.8		mg/kg	54.8	*	1	Yes	S3VEM
Arsenic	Target	26.0		mg/kg	26.0		1	Yes	S3VEM
Barium	Target	29.7		mg/kg	29.7	*	1	Yes	S3VEM
Beryllium	Target	0.043	J	mg/kg	0.043	J	1	Yes	S3VEM
Cadmium	Target	33.7		mg/kg	33.7	*	1	Yes	S3VEM
Calcium	Target	230000		mg/kg	230000	D*	10	Yes	S3VEM
Chromium	Target	24.8		mg/kg	24.8	*	1	Yes	S3VEM
Cobalt	Target	5.0	U	mg/kg	3.5	J	1	Yes	S3VEM
Copper	Target	44.1		mg/kg	44.1	*	1	Yes	S3VEM
Iron	Target	4600		mg/kg	4600	*	1	Yes	S3VEM
Lead	Target	6540		mg/kg	6540	D*	10	Yes	S3VEM
Magnesium	Target	957		mg/kg	957	*	1	Yes	S3VEM
Manganese	Target	26.8		mg/kg	26.8	*	1	Yes	S3VEM
Nickel	Target	43.8		mg/kg	43.8	*	1	Yes	S3VEM
Potassium	Target	1450		mg/kg	1450	*	1	Yes	S3VEM
Selenium	Target	4.5		mg/kg	4.5		1	Yes	S3VEM
Silver	Target	1.0	U	mg/kg	0.52	J	1	Yes	S3VEM
Sodium	Target	2510		mg/kg	2510		1	Yes	S3VEM
Thallium	Target	2.5	U	mg/kg	2.5	U	1	Yes	S3VEM
Vanadium	Target	7.8		mg/kg	7.8		1	Yes	S3VEM
Zinc	Target	85.8		mg/kg	85.8		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAQ8	Lab Code: BON

Sample Number: PBS01	Method: Metals by ICP-AES	Matrix: Soil	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	mg/kg	20.0	U	1	Yes	S3VEM
Antimony	Target	6.0	U	mg/kg	6.0	U	1	Yes	S3VEM
Arsenic	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Barium	Target	-.044	J+	mg/kg	-.044	J	1	Yes	S3VEM
Beryllium	Target	-.013	J+	mg/kg	-.013	J	1	Yes	S3VEM
Cadmium	Target	0.50	U	mg/kg	0.50	U	1	Yes	S3VEM
Calcium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Chromium	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Cobalt	Target	5.0	U	mg/kg	5.0	U	1	Yes	S3VEM
Copper	Target	0.17	J+	mg/kg	0.17	J	1	Yes	S3VEM
Iron	Target	10.0	U	mg/kg	10.0	U	1	Yes	S3VEM
Lead	Target	1.0	U	mg/kg	1.0	U	1	Yes	S3VEM
Magnesium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Manganese	Target	1.5	U	mg/kg	1.5	U	1	Yes	S3VEM
Nickel	Target	4.0	U	mg/kg	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Selenium	Target	3.5	U	mg/kg	3.5	U	1	Yes	S3VEM
Silver	Target	0.076	J+	mg/kg	0.076	J	1	Yes	S3VEM
Sodium	Target	500	U	mg/kg	500	U	1	Yes	S3VEM
Thallium	Target	-.17	J+	mg/kg	-.17	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	mg/kg	5.0	U	1	Yes	S3VEM
Zinc	Target	-1.4	J+	mg/kg	-1.4	J	1	Yes	S3VEM

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 3 (Filters)
Analysis: Metals (MA 2594.1)

SDG No.: MBCAS3
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/3/2016 – 3/4/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solutions
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
None

Minor Findings:
None

COMMENT: The site-specific QAPP did not specify the project action levels for this site.

Reviewer Name(s): Jianwei Huang

Approver's Signature: **Date: 04/15/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Antimony and Sodium MBCAS5

Potassium MBCAS4, MBCAS3

The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Antimony and Sodium MBCAS5

Potassium MBCAS4, MBCAS3

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

Not applicable.

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

Not applicable.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

Not applicable.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

Not applicable.

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

Not applicable

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAS3	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0		ug	20.0		1	Yes	S3VEM
Antimony	Target	5.9		ug	5.9		1	Yes	S3VEM
Arsenic	Target	0.89		ug	0.89		1	Yes	S3VEM
Barium	Target	20.7		ug	20.7		1	Yes	S3VEM
Beryllium	Target	0.50		ug	0.50		1	Yes	S3VEM
Cadmium	Target	0.50		ug	0.50		1	Yes	S3VEM
Calcium	Target	531		ug	531		1	Yes	S3VEM
Chromium	Target	1.1		ug	1.1		1	Yes	S3VEM
Cobalt	Target	5.2		ug	5.2		1	Yes	S3VEM
Copper	Target	2.4		ug	2.4		1	Yes	S3VEM
Iron	Target	10.4		ug	10.4		1	Yes	S3VEM
Lead	Target	1.0		ug	1.0		1	Yes	S3VEM
Magnesium	Target	499		ug	499		1	Yes	S3VEM
Manganese	Target	1.6		ug	1.6		1	Yes	S3VEM
Nickel	Target	4.2		ug	4.2		1	Yes	S3VEM
Potassium	Target	502		ug	502		1	Yes	S3VEM
Selenium	Target	3.4		ug	3.4		1	Yes	S3VEM
Silver	Target	0.95		ug	0.95		1	Yes	S3VEM
Sodium	Target	503		ug	503		1	Yes	S3VEM
Thallium	Target	2.4		ug	2.4		1	Yes	S3VEM
Vanadium	Target	5.2		ug	5.2		1	Yes	S3VEM
Zinc	Target	6.3		ug	6.3		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAS3	Lab Code: BON

Sample Number: LCS02	Method: Metals by ICP-AES	Matrix: Filter	MA Number: 2594.1
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.5		ug	20.5		1	Yes	S3VEM
Antimony	Target	5.8		ug	5.8		1	Yes	S3VEM
Arsenic	Target	0.94		ug	0.94		1	Yes	S3VEM
Barium	Target	21.1		ug	21.1		1	Yes	S3VEM
Beryllium	Target	0.51		ug	0.51		1	Yes	S3VEM
Cadmium	Target	0.51		ug	0.51		1	Yes	S3VEM
Calcium	Target	529		ug	529		1	Yes	S3VEM
Chromium	Target	1.1		ug	1.1		1	Yes	S3VEM
Cobalt	Target	5.2		ug	5.2		1	Yes	S3VEM
Copper	Target	2.5		ug	2.5		1	Yes	S3VEM
Iron	Target	10.3		ug	10.3		1	Yes	S3VEM
Lead	Target	0.97		ug	0.97		1	Yes	S3VEM
Magnesium	Target	502		ug	502		1	Yes	S3VEM
Manganese	Target	1.6		ug	1.6		1	Yes	S3VEM
Nickel	Target	4.3		ug	4.3		1	Yes	S3VEM
Potassium	Target	499		ug	499		1	Yes	S3VEM
Selenium	Target	3.3		ug	3.3		1	Yes	S3VEM
Silver	Target	0.96		ug	0.96		1	Yes	S3VEM
Sodium	Target	505		ug	505		1	Yes	S3VEM
Thallium	Target	2.5		ug	2.5		1	Yes	S3VEM
Vanadium	Target	5.2		ug	5.2		1	Yes	S3VEM
Zinc	Target	6.3		ug	6.3		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAS3	Lab Code: BON

Sample Number:	MBCAS3	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-BB01	pH:		Sample Date:	03/03/2016	Sample Time:	11:10:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	23.6		ug	23.6		1	Yes	S3VEM
Antimony	Target	176		ug	176		1	Yes	S3VEM
Arsenic	Target	62.6		ug	62.6		1	Yes	S3VEM
Barium	Target	7.1	J	ug	7.1	J	1	Yes	S3VEM
Beryllium	Target	0.25	U	ug	0.25	U	1	Yes	S3VEM
Cadmium	Target	191		ug	191	D	30	Yes	S3VEM
Calcium	Target	275		ug	275		1	Yes	S3VEM
Chromium	Target	0.62		ug	0.62		1	Yes	S3VEM
Cobalt	Target	0.048	J	ug	0.048	J	1	Yes	S3VEM
Copper	Target	5.7		ug	5.7		1	Yes	S3VEM
Iron	Target	312		ug	312		1	Yes	S3VEM
Lead	Target	21600		ug	21600	D	30	Yes	S3VEM
Magnesium	Target	17.7	J	ug	17.7	J	1	Yes	S3VEM
Manganese	Target	3.6		ug	3.6		1	Yes	S3VEM
Nickel	Target	5.2		ug	5.2		1	Yes	S3VEM
Potassium	Target	500	U	ug	30.4	J	1	Yes	S3VEM
Selenium	Target	7.0		ug	7.0		1	Yes	S3VEM
Silver	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Sodium	Target	1140		ug	1140		1	Yes	S3VEM
Thallium	Target	1.0	J	ug	1.0	J	1	Yes	S3VEM
Vanadium	Target	1.8	J	ug	1.8	J	1	Yes	S3VEM
Zinc	Target	149		ug	149		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAS3	Lab Code: BON

Sample Number:	MBCAS4	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-BB01	pH:		Sample Date:	03/03/2016	Sample Time:	11:20:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	31.0		ug	31.0		1	Yes	S3VEM
Antimony	Target	112		ug	112		1	Yes	S3VEM
Arsenic	Target	28.3		ug	28.3		1	Yes	S3VEM
Barium	Target	13.8		ug	13.8		1	Yes	S3VEM
Beryllium	Target	0.25	U	ug	0.25	U	1	Yes	S3VEM
Cadmium	Target	76.7		ug	76.7		1	Yes	S3VEM
Calcium	Target	288		ug	288		1	Yes	S3VEM
Chromium	Target	2.5		ug	2.5		1	Yes	S3VEM
Cobalt	Target	0.16	J	ug	0.16	J	1	Yes	S3VEM
Copper	Target	7.0		ug	7.0		1	Yes	S3VEM
Iron	Target	906		ug	906		1	Yes	S3VEM
Lead	Target	15700		ug	15700	D	20	Yes	S3VEM
Magnesium	Target	17.8	J	ug	17.8	J	1	Yes	S3VEM
Manganese	Target	8.5		ug	8.5		1	Yes	S3VEM
Nickel	Target	6.4		ug	6.4		1	Yes	S3VEM
Potassium	Target	500	U	ug	24.2	J	1	Yes	S3VEM
Selenium	Target	2.8		ug	2.8		1	Yes	S3VEM
Silver	Target	0.14	J	ug	0.14	J	1	Yes	S3VEM
Sodium	Target	828		ug	828		1	Yes	S3VEM
Thallium	Target	0.67	J	ug	0.67	J	1	Yes	S3VEM
Vanadium	Target	2.2	J	ug	2.2	J	1	Yes	S3VEM
Zinc	Target	105		ug	105		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAS3	Lab Code: BON

Sample Number:	MBCAS5	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-BB01	pH:		Sample Date:	03/04/2016	Sample Time:	17:02:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	10.0	U	ug	10.0	U	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	0.39	J	1	Yes	S3VEM
Arsenic	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Barium	Target	10.0	U	ug	10.0	U	1	Yes	S3VEM
Beryllium	Target	0.25	U	ug	0.25	U	1	Yes	S3VEM
Cadmium	Target	0.16	J	ug	0.16	J	1	Yes	S3VEM
Calcium	Target	18.8	J	ug	18.8	J	1	Yes	S3VEM
Chromium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cobalt	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Copper	Target	1.2	U	ug	1.2	U	1	Yes	S3VEM
Iron	Target	4.4	J	ug	4.4	J	1	Yes	S3VEM
Lead	Target	35.3		ug	35.3		1	Yes	S3VEM
Magnesium	Target	250	U	ug	250	U	1	Yes	S3VEM
Manganese	Target	0.75	U	ug	0.75	U	1	Yes	S3VEM
Nickel	Target	2.0	U	ug	2.0	U	1	Yes	S3VEM
Potassium	Target	250	U	ug	250	U	1	Yes	S3VEM
Selenium	Target	1.8	U	ug	1.8	U	1	Yes	S3VEM
Silver	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	5.4	J	1	Yes	S3VEM
Thallium	Target	1.2	U	ug	1.2	U	1	Yes	S3VEM
Vanadium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Zinc	Target	1.6	J	ug	1.6	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAS3	Lab Code: BON

Sample Number: PBF01	Method: Metals by ICP-AES	Matrix: Filter	MA Number: 2594.1
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	10.0	U	ug	10.0	U	1	Yes	S3VEM
Antimony	Target	3.0	U	ug	3.0	U	1	Yes	S3VEM
Arsenic	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Barium	Target	10.0	U	ug	10.0	U	1	Yes	S3VEM
Beryllium	Target	0.25	U	ug	0.25	U	1	Yes	S3VEM
Cadmium	Target	0.25	U	ug	0.25	U	1	Yes	S3VEM
Calcium	Target	250	U	ug	250	U	1	Yes	S3VEM
Chromium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cobalt	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Copper	Target	1.2	U	ug	1.2	U	1	Yes	S3VEM
Iron	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Lead	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Magnesium	Target	250	U	ug	250	U	1	Yes	S3VEM
Manganese	Target	0.75	U	ug	0.75	U	1	Yes	S3VEM
Nickel	Target	2.0	U	ug	2.0	U	1	Yes	S3VEM
Potassium	Target	250	U	ug	250	U	1	Yes	S3VEM
Selenium	Target	1.8	U	ug	1.8	U	1	Yes	S3VEM
Silver	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Sodium	Target	250	U	ug	250	U	1	Yes	S3VEM
Thallium	Target	1.2	U	ug	1.2	U	1	Yes	S3VEM
Vanadium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Zinc	Target	3.0	U	ug	3.0	U	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAS3	Lab Code: BON

Sample Number: PBF02	Method: Metals by ICP-AES	Matrix: Filter	MA Number: 2594.1
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	10.0	U	ug	10.0	U	1	Yes	S3VEM
Antimony	Target	3.0	U	ug	3.0	U	1	Yes	S3VEM
Arsenic	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Barium	Target	10.0	U	ug	10.0	U	1	Yes	S3VEM
Beryllium	Target	0.25	U	ug	0.25	U	1	Yes	S3VEM
Cadmium	Target	0.25	U	ug	0.25	U	1	Yes	S3VEM
Calcium	Target	250	U	ug	250	U	1	Yes	S3VEM
Chromium	Target	0.15	J	ug	0.15	J	1	Yes	S3VEM
Cobalt	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Copper	Target	1.2	U	ug	1.2	U	1	Yes	S3VEM
Iron	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Lead	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Magnesium	Target	250	U	ug	250	U	1	Yes	S3VEM
Manganese	Target	0.75	U	ug	0.75	U	1	Yes	S3VEM
Nickel	Target	2.0	U	ug	2.0	U	1	Yes	S3VEM
Potassium	Target	250	U	ug	250	U	1	Yes	S3VEM
Selenium	Target	1.8	U	ug	1.8	U	1	Yes	S3VEM
Silver	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Sodium	Target	250	U	ug	250	U	1	Yes	S3VEM
Thallium	Target	1.2	U	ug	1.2	U	1	Yes	S3VEM
Vanadium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Zinc	Target	3.0	U	ug	3.0	U	1	Yes	S3VEM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
DESA/HWSB/HWSS
2890, Woodbridge Avenue, Edison, NJ 08837

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 14 (Filter)
Analysis: Metals

SDG No.: MBCAS6
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/10/16
Validation SOP: HW-3a

QAPP
Contractor: Weston Solution
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
All samples have Iron, Lead, and Zinc analytes that have been qualified J, J+ or J-. Several samples have Aluminum analytes that have been qualified J, J+, or J-.

Minor Findings:
None

COMMENT: The site-specific QAPP did not specify the project action levels for this site.

Reviewer Name(s): Constantin Stanca

Approver's Signature: **Date: 05/10/2016**

Name: **Narendra Kumar**

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results greater than or equal to MDLs but less than or equal to CRQLs. The associated CCB analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Detected analytes are qualified U. Non-detected analytes are not qualified. Sample results are elevated to CRQLs.

Antimony MBCAT9, MBCAS7

Barium MBCAT6, MBCAS6, MBCAS7, MBCAT0, MBCAT2, MBCAT7, MBCAT9, MBCAT1, MBCAT5, MBCAT4, MBCAS8, MBCAT8, MBCAT3, MBCAS9

Cadmium MBCAT9, MBCAT7, MBCAT8, MBCAS7, MBCAT1

Calcium MBCAT9, MBCAT8, MBCAT7

Chromium MBCAT7, MBCAT9, MBCAS7, MBCAT1

Cobalt MBCAT7, MBCAT2, MBCAT8, MBCAT0, MBCAS9, MBCAS8, MBCAT5, MBCAT6, MBCAS7, MBCAT3, MBCAT4, MBCAS6, MBCAT1

Copper MBCAT9

Magnesium MBCAS7, MBCAS6, MBCAT5, MBCAS8, MBCAT7, MBCAS9, MBCAT8, MBCAT0, MBCAT6, MBCAT1, MBCAT2, MBCAT9, MBCAT4

Potassium MBCAT9, MBCAT0, MBCAS9, MBCAT8, MBCAS6, MBCAT2, MBCAT5, MBCAT7, MBCAT6, MBCAS8, MBCAS7, MBCAT1, MBCAT3, MBCAT4

Sodium MBCAS7, MBCAT2, MBCAT1, MBCAT9, MBCAS8, MBCAT6, MBCAT5, MBCAT7, MBCAT4, MBCAS6, MBCAT8

Vanadium MBCAT4, MBCAT7, MBCAS6, MBCAS9, MBCAT2, MBCAS7, MBCAT0, MBCAT5, MBCAS8, MBCAT6, MBCAT9, MBCAT8, MBCAT1

The following samples have analyte results greater than or equal to MDLs but less than or equal to CRQLs. The associated ICB analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Detected analytes are qualified U. Non-detected analytes are not qualified. Sample results are elevated to CRQLs.

Antimony MBCAT9, MBCAS7

The following samples have analyte results greater than or equal to MDLs but less than or equal to CRQLs. The associated CCB analyte results are greater than CRQLs. Detected analytes are qualified U. Non-detected analytes are not qualified. Sample results are elevated to CRQLs.

Aluminum MBCAT9

The following samples have analyte results greater than or equal to MDLs but less than or equal to CRQLs. The associated preparation blank analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Detected analytes are qualified U. Non-detected analytes are not qualified. Sample results are elevated to CRQLs.

Antimony MBCAT9, MBCAS7

Calcium MBCAT9, MBCAT8, MBCAT7

Copper MBCAT9

Sodium MBCAT5, MBCAT6, MBCAT1, MBCAT9, MBCAS6, MBCAT8, MBCAS7, MBCAT2, MBCAT4, MBCAS8, MBCAT7

Zinc MBCAT9

The following samples have analyte results less than 10x CRQLs. The associated ICB has analyte results less than (-CRQLs). Detects with analyte results greater than or equal to CRQLs are qualified as estimated J-. Nondetects as estimated UJ .

Iron MBCAT9

The following samples have analyte results less than 10x CRQLs. The associated CCB has analyte results less than (-CRQLs). Detects with analyte results greater than or equal to CRQLs are qualified as estimated J-. Nondetects as estimated UJ .

Aluminum MBCAS9, MBCAT7, MBCAT2, MBCAT8, MBCAT1, MBCAS6, MBCAT0, MBCAS7, MBCAT5, MBCAT4, MBCAT6

Iron MBCAT9

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

Not applicable.

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

Not applicable.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

Not applicable.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

The following samples are associated with a LCS with percent recoveries greater than 130%. Detected analytes are qualified J+. Non-detected analytes are not qualified.

Iron, Lead, Zinc	MBCAS6, MBCAS7, MBCAS8, MBCAS9, MBCAT0, MBCAT1, MBCAT2, MBCAT3, MBCAT4, MBCAT5, MBCAT6, MBCAT7, MBCAT8, MBCAT9

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

Not applicable.

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

Not applicable.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAS6	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	18.1	J	ug	18.1	J	1	Yes	S3VEM
Antimony	Target	5.8	J	ug	5.8	J	1	Yes	S3VEM
Arsenic	Target	0.80	J	ug	0.80	J	1	Yes	S3VEM
Barium	Target	19.8	J	ug	19.8	J	1	Yes	S3VEM
Beryllium	Target	0.44	J	ug	0.44	J	1	Yes	S3VEM
Cadmium	Target	0.48	J	ug	0.48	J	1	Yes	S3VEM
Calcium	Target	523		ug	523		1	Yes	S3VEM
Chromium	Target	1.1		ug	1.1		1	Yes	S3VEM
Cobalt	Target	5.2		ug	5.2		1	Yes	S3VEM
Copper	Target	2.3	J	ug	2.3	J	1	Yes	S3VEM
Iron	Target	9.1	J	ug	9.1	J	1	Yes	S3VEM
Lead	Target	0.98	J	ug	0.98	J	1	Yes	S3VEM
Magnesium	Target	462	J	ug	462	J	1	Yes	S3VEM
Manganese	Target	1.5	J+	ug	1.5		1	Yes	S3VEM
Nickel	Target	4.1		ug	4.1		1	Yes	S3VEM
Potassium	Target	488	J	ug	488	J	1	Yes	S3VEM
Selenium	Target	3.0	J	ug	3.0	J	1	Yes	S3VEM
Silver	Target	0.99	J	ug	0.99	J	1	Yes	S3VEM
Sodium	Target	488	J	ug	488	J	1	Yes	S3VEM
Thallium	Target	2.3	J	ug	2.3	J	1	Yes	S3VEM
Vanadium	Target	5.3		ug	5.3		1	Yes	S3VEM
Zinc	Target	5.9	J	ug	5.9	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAS6	Lab Code: BON

Sample Number: LCS02	Method: Metals by ICP-AES	Matrix: Filter	MA Number: 2594.1
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	24.3	J-	ug	24.3		1	Yes	S3VEM
Antimony	Target	6.2		ug	6.2		1	Yes	S3VEM
Arsenic	Target	0.81	J	ug	0.81	J	1	Yes	S3VEM
Barium	Target	20.8		ug	20.8		1	Yes	S3VEM
Beryllium	Target	0.46	J	ug	0.46	J	1	Yes	S3VEM
Cadmium	Target	0.50	J+	ug	0.50		1	Yes	S3VEM
Calcium	Target	560		ug	560		1	Yes	S3VEM
Chromium	Target	1.1		ug	1.1		1	Yes	S3VEM
Cobalt	Target	5.3		ug	5.3		1	Yes	S3VEM
Copper	Target	2.6		ug	2.6		1	Yes	S3VEM
Iron	Target	17.1	J-	ug	17.1		1	Yes	S3VEM
Lead	Target	9.2	J-	ug	9.2		1	Yes	S3VEM
Magnesium	Target	479	J	ug	479	J	1	Yes	S3VEM
Manganese	Target	1.7	J+	ug	1.7		1	Yes	S3VEM
Nickel	Target	4.8		ug	4.8		1	Yes	S3VEM
Potassium	Target	503		ug	503		1	Yes	S3VEM
Selenium	Target	3.2	J	ug	3.2	J	1	Yes	S3VEM
Silver	Target	0.94	J	ug	0.94	J	1	Yes	S3VEM
Sodium	Target	506		ug	506		1	Yes	S3VEM
Thallium	Target	2.3	J	ug	2.3	J	1	Yes	S3VEM
Vanadium	Target	5.5		ug	5.5		1	Yes	S3VEM
Zinc	Target	9.1		ug	9.1		1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAS6	Lab Code:	BON

Sample Number:	MBCAS6	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-DM01-MW001-01	pH:		Sample Date:	03/10/2016	Sample Time:	09:15:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	145	J-	ug	145		1	Yes	S3VEM
Antimony	Target	34.5		ug	34.5		1	Yes	S3VEM
Arsenic	Target	4.3		ug	4.3		1	Yes	S3VEM
Barium	Target	20.0	U	ug	9.6	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	1.1		ug	1.1		1	Yes	S3VEM
Calcium	Target	1250		ug	1250		1	Yes	S3VEM
Chromium	Target	2.7		ug	2.7		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.22	J	1	Yes	S3VEM
Copper	Target	18.9		ug	18.9		1	Yes	S3VEM
Iron	Target	678	J+	ug	678		1	Yes	S3VEM
Lead	Target	1360	J+	ug	1360	D	2	Yes	S3VEM
Magnesium	Target	500	U	ug	77.0	J	1	Yes	S3VEM
Manganese	Target	9.7		ug	9.7		1	Yes	S3VEM
Nickel	Target	7.2		ug	7.2		1	Yes	S3VEM
Potassium	Target	500	U	ug	85.0	J	1	Yes	S3VEM
Selenium	Target	1.5	J	ug	1.5	J	1	Yes	S3VEM
Silver	Target	0.14	J	ug	0.14	J	1	Yes	S3VEM
Sodium	Target	500	U	ug	340	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.71	J	1	Yes	S3VEM
Zinc	Target	60.4	J+	ug	60.4		1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAS6	Lab Code:	BON

Sample Number:	MBCAS7	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-DM01-MW002-01	pH:		Sample Date:	03/10/2016	Sample Time:	09:20:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	55.1	J-	ug	55.1		1	Yes	S3VEM
Antimony	Target	6.0	U	ug	5.5	J	1	Yes	S3VEM
Arsenic	Target	0.36	J	ug	0.36	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	4.3	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.28	J	1	Yes	S3VEM
Calcium	Target	529	J	ug	529		1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.54	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.034	J	1	Yes	S3VEM
Copper	Target	6.0		ug	6.0		1	Yes	S3VEM
Iron	Target	131	J+	ug	131		1	Yes	S3VEM
Lead	Target	212	J+	ug	212		1	Yes	S3VEM
Magnesium	Target	500	U	ug	36.7	J	1	Yes	S3VEM
Manganese	Target	6.1		ug	6.1		1	Yes	S3VEM
Nickel	Target	1.9	J	ug	1.9	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	67.6	J	1	Yes	S3VEM
Selenium	Target	0.13	J	ug	0.13	J	1	Yes	S3VEM
Silver	Target	0.52	J	ug	0.52	J	1	Yes	S3VEM
Sodium	Target	500	U	ug	118	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.16	J	1	Yes	S3VEM
Zinc	Target	27.3	J+	ug	27.3		1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAS6	Lab Code:	BON

Sample Number:	MBCAS8	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-DM01-MW003-01	pH:		Sample Date:	03/10/2016	Sample Time:	09:39:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5560		ug	5560	D	50	Yes	S3VEM
Antimony	Target	1440		ug	1440	D	50	Yes	S3VEM
Arsenic	Target	279		ug	279	D	50	Yes	S3VEM
Barium	Target	1000	U	ug	399	JD	50	Yes	S3VEM
Beryllium	Target	25.0	U	ug	25.0	UD	50	Yes	S3VEM
Cadmium	Target	70.0		ug	70.0	D	50	Yes	S3VEM
Calcium	Target	36600		ug	36600	D	50	Yes	S3VEM
Chromium	Target	159		ug	159	D	50	Yes	S3VEM
Cobalt	Target	250	U	ug	11.0	JD	50	Yes	S3VEM
Copper	Target	807		ug	807	D	50	Yes	S3VEM
Iron	Target	63400	J+	ug	63400	D	50	Yes	S3VEM
Lead	Target	92300	J+	ug	92300	D	80	Yes	S3VEM
Magnesium	Target	25000	U	ug	2560	JD	50	Yes	S3VEM
Manganese	Target	492		ug	492	D	50	Yes	S3VEM
Nickel	Target	363		ug	363	D	50	Yes	S3VEM
Potassium	Target	25000	U	ug	515	JD	50	Yes	S3VEM
Selenium	Target	175		ug	175	D	50	Yes	S3VEM
Silver	Target	50.0	U	ug	50.0	UD	50	Yes	S3VEM
Sodium	Target	25000	U	ug	4390	JD	50	Yes	S3VEM
Thallium	Target	125	U	ug	125	UD	50	Yes	S3VEM
Vanadium	Target	250	U	ug	41.4	JD	50	Yes	S3VEM
Zinc	Target	1900	J+	ug	1900	D	50	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAS6	Lab Code:	BON

Sample Number:	MBCAS9	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-DM01-MW004-01	pH:		Sample Date:	03/10/2016	Sample Time:	09:30:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	156	J-	ug	156		1	Yes	S3VEM
Antimony	Target	77.2		ug	77.2		1	Yes	S3VEM
Arsenic	Target	8.7		ug	8.7		1	Yes	S3VEM
Barium	Target	20.0	U	ug	14.6	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	2.3		ug	2.3		1	Yes	S3VEM
Calcium	Target	1280		ug	1280		1	Yes	S3VEM
Chromium	Target	4.1		ug	4.1		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.20	J	1	Yes	S3VEM
Copper	Target	16.1		ug	16.1		1	Yes	S3VEM
Iron	Target	961	J+	ug	961		1	Yes	S3VEM
Lead	Target	3830	J+	ug	3830	D	4	Yes	S3VEM
Magnesium	Target	500	U	ug	62.4	J	1	Yes	S3VEM
Manganese	Target	8.7		ug	8.7		1	Yes	S3VEM
Nickel	Target	12.6		ug	12.6		1	Yes	S3VEM
Potassium	Target	500	U	ug	50.0	J	1	Yes	S3VEM
Selenium	Target	1.9	J	ug	1.9	J	1	Yes	S3VEM
Silver	Target	0.13	J	ug	0.13	J	1	Yes	S3VEM
Sodium	Target	787		ug	787		1	Yes	S3VEM
Thallium	Target	0.095	J	ug	0.095	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.87	J	1	Yes	S3VEM
Zinc	Target	42.0	J+	ug	42.0		1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAS6	Lab Code:	BON

Sample Number:	MBCAT0	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-DM01-MW005-01	pH:		Sample Date:	03/10/2016	Sample Time:	10:22:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	96.2	J-	ug	96.2		1	Yes	S3VEM
Antimony	Target	80.2		ug	80.2		1	Yes	S3VEM
Arsenic	Target	5.6		ug	5.6		1	Yes	S3VEM
Barium	Target	20.0	U	ug	12.5	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	1.8		ug	1.8		1	Yes	S3VEM
Calcium	Target	958		ug	958		1	Yes	S3VEM
Chromium	Target	2.4		ug	2.4		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.17	J	1	Yes	S3VEM
Copper	Target	11.1		ug	11.1		1	Yes	S3VEM
Iron	Target	670	J+	ug	670		1	Yes	S3VEM
Lead	Target	3300	J+	ug	3300	D	3	Yes	S3VEM
Magnesium	Target	500	U	ug	48.2	J	1	Yes	S3VEM
Manganese	Target	6.3		ug	6.3		1	Yes	S3VEM
Nickel	Target	8.4		ug	8.4		1	Yes	S3VEM
Potassium	Target	500	U	ug	39.9	J	1	Yes	S3VEM
Selenium	Target	15.5		ug	15.5		1	Yes	S3VEM
Silver	Target	0.093	J	ug	0.093	J	1	Yes	S3VEM
Sodium	Target	638		ug	638		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.67	J	1	Yes	S3VEM
Zinc	Target	41.6	J+	ug	41.6		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAS6	Lab Code: BON

Sample Number:	MBCAT1	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-DM01-MW006-01	pH:		Sample Date:	03/10/2016	Sample Time:	10:04:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	40.2	J-	ug	40.2		1	Yes	S3VEM
Antimony	Target	16.6		ug	16.6		1	Yes	S3VEM
Arsenic	Target	1.2		ug	1.2		1	Yes	S3VEM
Barium	Target	20.0	U	ug	2.5	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.37	J	1	Yes	S3VEM
Calcium	Target	682		ug	682		1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.43	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.028	J	1	Yes	S3VEM
Copper	Target	4.2		ug	4.2		1	Yes	S3VEM
Iron	Target	151	J+	ug	151		1	Yes	S3VEM
Lead	Target	441	J+	ug	441		1	Yes	S3VEM
Magnesium	Target	500	U	ug	25.7	J	1	Yes	S3VEM
Manganese	Target	1.7		ug	1.7		1	Yes	S3VEM
Nickel	Target	2.5	J	ug	2.5	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	44.4	J	1	Yes	S3VEM
Selenium	Target	0.27	J	ug	0.27	J	1	Yes	S3VEM
Silver	Target	0.052	J	ug	0.052	J	1	Yes	S3VEM
Sodium	Target	500	U	ug	127	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.26	J	1	Yes	S3VEM
Zinc	Target	13.0	J+	ug	13.0		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAS6	Lab Code: BON

Sample Number:	MBCAT2	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-DM01-MW007-01	pH:		Sample Date:	03/10/2016	Sample Time:	09:57:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	113	J-	ug	113		1	Yes	S3VEM
Antimony	Target	116		ug	116		1	Yes	S3VEM
Arsenic	Target	6.8		ug	6.8		1	Yes	S3VEM
Barium	Target	20.0	U	ug	13.0	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	1.1		ug	1.1		1	Yes	S3VEM
Calcium	Target	1460		ug	1460		1	Yes	S3VEM
Chromium	Target	3.0		ug	3.0		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.15	J	1	Yes	S3VEM
Copper	Target	12.9		ug	12.9		1	Yes	S3VEM
Iron	Target	668	J+	ug	668		1	Yes	S3VEM
Lead	Target	3460	J+	ug	3460	D	4	Yes	S3VEM
Magnesium	Target	500	U	ug	63.6	J	1	Yes	S3VEM
Manganese	Target	7.1		ug	7.1		1	Yes	S3VEM
Nickel	Target	6.8		ug	6.8		1	Yes	S3VEM
Potassium	Target	500	U	ug	75.4	J	1	Yes	S3VEM
Selenium	Target	2.2	J	ug	2.2	J	1	Yes	S3VEM
Silver	Target	0.24	J	ug	0.24	J	1	Yes	S3VEM
Sodium	Target	500	U	ug	407	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.64	J	1	Yes	S3VEM
Zinc	Target	34.5	J+	ug	34.5		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAS6	Lab Code: BON

Sample Number:	MBCAT3	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-DM01-MW008-01	pH:		Sample Date:	03/10/2016	Sample Time:	09:48:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	55000		ug	55000	D	50	Yes	S3VEM
Antimony	Target	2610		ug	2610	D	50	Yes	S3VEM
Arsenic	Target	791		ug	791	D	50	Yes	S3VEM
Barium	Target	1000	U	ug	222	JD	50	Yes	S3VEM
Beryllium	Target	0.88	J	ug	0.88	JD	50	Yes	S3VEM
Cadmium	Target	701		ug	701	D	50	Yes	S3VEM
Calcium	Target	432000		ug	432000	D	50	Yes	S3VEM
Chromium	Target	816		ug	816	D	50	Yes	S3VEM
Cobalt	Target	250	U	ug	97.3	JD	50	Yes	S3VEM
Copper	Target	14100		ug	14100	D	50	Yes	S3VEM
Iron	Target	364000	J+	ug	364000	D	50	Yes	S3VEM
Lead	Target	519000	J+	ug	519000	D	500	Yes	S3VEM
Magnesium	Target	30700		ug	30700	D	50	Yes	S3VEM
Manganese	Target	4640		ug	4640	D	50	Yes	S3VEM
Nickel	Target	6250		ug	6250	D	50	Yes	S3VEM
Potassium	Target	25000	U	ug	5440	JD	50	Yes	S3VEM
Selenium	Target	280		ug	280	D	50	Yes	S3VEM
Silver	Target	14.1	J	ug	14.1	JD	50	Yes	S3VEM
Sodium	Target	75500		ug	75500	D	50	Yes	S3VEM
Thallium	Target	19.1	J	ug	19.1	JD	50	Yes	S3VEM
Vanadium	Target	160		ug	160	D	50	Yes	S3VEM
Zinc	Target	21700	J+	ug	21700	D	50	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAS6	Lab Code:	BON

Sample Number:	MBCAT4	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-DM01-MW009-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:46:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	116	J-	ug	116		1	Yes	S3VEM
Antimony	Target	21.8		ug	21.8		1	Yes	S3VEM
Arsenic	Target	3.7		ug	3.7		1	Yes	S3VEM
Barium	Target	20.0	U	ug	3.8	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	1.6		ug	1.6		1	Yes	S3VEM
Calcium	Target	1030		ug	1030		1	Yes	S3VEM
Chromium	Target	2.3		ug	2.3		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.19	J	1	Yes	S3VEM
Copper	Target	26.5		ug	26.5		1	Yes	S3VEM
Iron	Target	772	J+	ug	772		1	Yes	S3VEM
Lead	Target	1130	J+	ug	1130	D	2	Yes	S3VEM
Magnesium	Target	500	U	ug	56.4	J	1	Yes	S3VEM
Manganese	Target	9.5		ug	9.5		1	Yes	S3VEM
Nickel	Target	11.6		ug	11.6		1	Yes	S3VEM
Potassium	Target	500	U	ug	21.1	J	1	Yes	S3VEM
Selenium	Target	0.78	J	ug	0.78	J	1	Yes	S3VEM
Silver	Target	0.023	J	ug	0.023	J	1	Yes	S3VEM
Sodium	Target	500	U	ug	236	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.64	J	1	Yes	S3VEM
Zinc	Target	56.7	J+	ug	56.7		1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAS6	Lab Code:	BON

Sample Number:	MBCAT5	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-DM01-MW010-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:44:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	118	J-	ug	118		1	Yes	S3VEM
Antimony	Target	21.5		ug	21.5		1	Yes	S3VEM
Arsenic	Target	3.2		ug	3.2		1	Yes	S3VEM
Barium	Target	20.0	U	ug	4.9	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	1.4		ug	1.4		1	Yes	S3VEM
Calcium	Target	991		ug	991		1	Yes	S3VEM
Chromium	Target	2.0		ug	2.0		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.18	J	1	Yes	S3VEM
Copper	Target	21.3		ug	21.3		1	Yes	S3VEM
Iron	Target	708	J+	ug	708		1	Yes	S3VEM
Lead	Target	1300	J+	ug	1300	D	2	Yes	S3VEM
Magnesium	Target	500	U	ug	67.0	J	1	Yes	S3VEM
Manganese	Target	9.4		ug	9.4		1	Yes	S3VEM
Nickel	Target	9.6		ug	9.6		1	Yes	S3VEM
Potassium	Target	500	U	ug	22.5	J	1	Yes	S3VEM
Selenium	Target	1.2	J	ug	1.2	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	203	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.69	J	1	Yes	S3VEM
Zinc	Target	49.4	J+	ug	49.4		1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAS6	Lab Code:	BON

Sample Number:	MBCAT6	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-DM01-MW011-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:54:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	103	J-	ug	103		1	Yes	S3VEM
Antimony	Target	21.1		ug	21.1		1	Yes	S3VEM
Arsenic	Target	2.5		ug	2.5		1	Yes	S3VEM
Barium	Target	20.0	U	ug	4.1	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	1.1		ug	1.1		1	Yes	S3VEM
Calcium	Target	881		ug	881		1	Yes	S3VEM
Chromium	Target	1.8		ug	1.8		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.13	J	1	Yes	S3VEM
Copper	Target	16.0		ug	16.0		1	Yes	S3VEM
Iron	Target	607	J+	ug	607		1	Yes	S3VEM
Lead	Target	1030	J+	ug	1030		1	Yes	S3VEM
Magnesium	Target	500	U	ug	55.4	J	1	Yes	S3VEM
Manganese	Target	6.4		ug	6.4		1	Yes	S3VEM
Nickel	Target	7.5		ug	7.5		1	Yes	S3VEM
Potassium	Target	500	U	ug	13.2	J	1	Yes	S3VEM
Selenium	Target	0.62	J	ug	0.62	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	165	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	1.2	J	1	Yes	S3VEM
Zinc	Target	42.1	J+	ug	42.1		1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAS6	Lab Code:	BON

Sample Number:	MBCAT7	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-DM01-MW012-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:41:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	41.7	J-	ug	41.7		1	Yes	S3VEM
Antimony	Target	8.8		ug	8.8		1	Yes	S3VEM
Arsenic	Target	1.0		ug	1.0		1	Yes	S3VEM
Barium	Target	20.0	U	ug	1.6	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.43	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	393	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.67	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.045	J	1	Yes	S3VEM
Copper	Target	7.4		ug	7.4		1	Yes	S3VEM
Iron	Target	253	J+	ug	253		1	Yes	S3VEM
Lead	Target	428	J+	ug	428		1	Yes	S3VEM
Magnesium	Target	500	U	ug	23.1	J	1	Yes	S3VEM
Manganese	Target	3.2		ug	3.2		1	Yes	S3VEM
Nickel	Target	3.4	J	ug	3.4	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	8.9	J	1	Yes	S3VEM
Selenium	Target	0.31	J	ug	0.31	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	68.1	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.21	J	1	Yes	S3VEM
Zinc	Target	17.6	J+	ug	17.6		1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAS6	Lab Code:	BON

Sample Number:	MBCAT8	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	BRC001-DM01-MW013-01	pH:		Sample Date:	03/10/2016	Sample Time:	11:38:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	56.5	J-	ug	56.5		1	Yes	S3VEM
Antimony	Target	9.9		ug	9.9		1	Yes	S3VEM
Arsenic	Target	1.0		ug	1.0		1	Yes	S3VEM
Barium	Target	20.0	U	ug	2.2	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.29	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	337	J	1	Yes	S3VEM
Chromium	Target	1.8		ug	1.8		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.066	J	1	Yes	S3VEM
Copper	Target	5.7		ug	5.7		1	Yes	S3VEM
Iron	Target	339	J+	ug	339		1	Yes	S3VEM
Lead	Target	519	J+	ug	519		1	Yes	S3VEM
Magnesium	Target	500	U	ug	32.3	J	1	Yes	S3VEM
Manganese	Target	4.0		ug	4.0		1	Yes	S3VEM
Nickel	Target	2.6	J	ug	2.6	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	14.2	J	1	Yes	S3VEM
Selenium	Target	0.64	J	ug	0.64	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	74.9	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.40	J	1	Yes	S3VEM
Zinc	Target	13.6	J+	ug	13.6		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAS6	Lab Code: BON

Sample Number:	MBCAT9	Method:	Metals by ICP-AES	Matrix:	Filter	MA Number:	2594.1
Sample Location:	MW001-20160310-FB	pH:		Sample Date:	03/10/2016	Sample Time:	13:31:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	5.7	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	2.1	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Barium	Target	20.0	U	ug	0.34	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.054	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	52.6	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.16	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Copper	Target	2.5	U	ug	0.96	J	1	Yes	S3VEM
Iron	Target	46.9	J	ug	46.9		1	Yes	S3VEM
Lead	Target	98.6	J+	ug	98.6		1	Yes	S3VEM
Magnesium	Target	500	U	ug	2.0	J	1	Yes	S3VEM
Manganese	Target	1.9		ug	1.9		1	Yes	S3VEM
Nickel	Target	0.60	J	ug	0.60	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	2.2	J	1	Yes	S3VEM
Selenium	Target	0.083	J	ug	0.083	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	12.4	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.012	J	1	Yes	S3VEM
Zinc	Target	6.0	UJ	ug	3.6	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAS6	Lab Code: BON

Sample Number: PBF01	Method: Metals by ICP-AES	Matrix: Filter	MA Number: 2594.1
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Antimony	Target	0.32	J	ug	0.32	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Barium	Target	-.078		ug	-.078	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	-.0075	J+	ug	-.0075	J	1	Yes	S3VEM
Calcium	Target	8.4	J	ug	8.4	J	1	Yes	S3VEM
Chromium	Target	-.021		ug	-.021	J	1	Yes	S3VEM
Cobalt	Target	-.019		ug	-.019	J	1	Yes	S3VEM
Copper	Target	0.053	J	ug	0.053	J	1	Yes	S3VEM
Iron	Target	3.4	J	ug	3.4	J	1	Yes	S3VEM
Lead	Target	8.8	J-	ug	8.8	J	1	Yes	S3VEM
Magnesium	Target	-1.4		ug	-1.4	J	1	Yes	S3VEM
Manganese	Target	0.038	J+	ug	0.038	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	ug	500	U	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	0.89	J	ug	0.89	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	-.021		ug	-.021	J	1	Yes	S3VEM
Zinc	Target	0.55	J	ug	0.55	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAS6	Lab Code: BON

Sample Number: PBS01	Method: Metals by ICP-AES	Matrix: Filter	MA Number: 2594.1
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	-1.1		ug	-1.1	J	1	Yes	S3VEM
Antimony	Target	0.096	J	ug	0.096	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Barium	Target	-.15		ug	-.15	J	1	Yes	S3VEM
Beryllium	Target	-.0045		ug	-.0045	J	1	Yes	S3VEM
Cadmium	Target	-.013	J+	ug	-.013	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	500	U	1	Yes	S3VEM
Chromium	Target	-.051		ug	-.051	J	1	Yes	S3VEM
Cobalt	Target	-.017		ug	-.017	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Iron	Target	-1.2		ug	-1.2	J	1	Yes	S3VEM
Lead	Target	-.16		ug	-.16	J	1	Yes	S3VEM
Magnesium	Target	-1.3		ug	-1.3	J	1	Yes	S3VEM
Manganese	Target	-.068	J+	ug	-.068	J	1	Yes	S3VEM
Nickel	Target	-.043		ug	-.043	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	500	U	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	-1.3		ug	-1.3	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	-.028		ug	-.028	J	1	Yes	S3VEM
Zinc	Target	6.0	U	ug	6.0	U	1	Yes	S3VEM

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 8 (Wipes)
Analysis: Metals

SDG No.: MBCAW1
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/3/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solutions
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
Samples MBCAW2, MBCAW4, MBCAW5 and MBCAW7 have an analyte (Zinc) that have been qualified J, J+ or J-.

Minor Findings:
None

COMMENT: The site-specific QAPP did not specify the project action levels for this site.

Reviewer Name(s): Jianwei Huang

Approver's Signature: **Date: 4/05/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Barium, Calcium, Nickel Selenium and Vanadium MBCAW4

Cobalt MBCAW5, MBCAW6, MBCAW4, MBCAW7, MBCAW2, MBCAW1

Magnesium MBCAW4, MBCAW7, MBCAW2, MBCAW6, MBCAW1, MBCAW5

Potassium MBCAW3, MBCAW7, MBCAW1, MBCAW5, MBCAW2, MBCAW4

Silver MBCAW7, MBCAW4, MBCAW5

The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Calcium and Selenium MBCAW4

Cobalt MBCAW5, MBCAW2, MBCAW6, MBCAW1, MBCAW4, MBCAW7

Magnesium MBCAW1, MBCAW5, MBCAW6, MBCAW7, MBCAW4, MBCAW2

The following samples have an analyte (Zinc) results greater than Field Blank Results, but less than 10x the Blank results. Using professional judgement, the results of these samples are qualified as J.

Zinc MBCAW2, MBCAW4, MBCAW5 and MBCAW7

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

Not applicable (not required for wipes).

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

No problems were found for this criterion.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

Not applicable.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection

Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

No problems were found for this criterion.

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

Not applicable.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAW1	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	40.7		ug	40.7		1	Yes	S3VEM
Antimony	Target	13.2		ug	13.2		1	Yes	S3VEM
Arsenic	Target	2.0		ug	2.0		1	Yes	S3VEM
Barium	Target	43.7		ug	43.7		1	Yes	S3VEM
Beryllium	Target	1.0		ug	1.0		1	Yes	S3VEM
Cadmium	Target	1.0		ug	1.0		1	Yes	S3VEM
Calcium	Target	1070		ug	1070		1	Yes	S3VEM
Chromium	Target	2.2		ug	2.2		1	Yes	S3VEM
Cobalt	Target	11.1		ug	11.1		1	Yes	S3VEM
Copper	Target	5.4		ug	5.4		1	Yes	S3VEM
Iron	Target	21.1		ug	21.1		1	Yes	S3VEM
Lead	Target	2.6		ug	2.6		1	Yes	S3VEM
Magnesium	Target	970		ug	970		1	Yes	S3VEM
Manganese	Target	3.3		ug	3.3		1	Yes	S3VEM
Nickel	Target	9.0		ug	9.0		1	Yes	S3VEM
Potassium	Target	1020		ug	1020		1	Yes	S3VEM
Selenium	Target	7.1		ug	7.1		1	Yes	S3VEM
Silver	Target	2.0		ug	2.0		1	Yes	S3VEM
Sodium	Target	1040		ug	1040		1	Yes	S3VEM
Thallium	Target	4.9		ug	4.9		1	Yes	S3VEM
Vanadium	Target	10.8		ug	10.8		1	Yes	S3VEM
Zinc	Target	12.9		ug	12.9		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW1	Lab Code: BON

Sample Number:	MBCAW1	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-BB01	pH:		Sample Date:	03/03/2016	Sample Time:	11:00:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	260		ug	260		1	Yes	S3VEM
Antimony	Target	1920		ug	1920	D	50	Yes	S3VEM
Arsenic	Target	714		ug	714	D	50	Yes	S3VEM
Barium	Target	72.7		ug	72.7		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	882		ug	882	D	50	Yes	S3VEM
Calcium	Target	4860		ug	4860		1	Yes	S3VEM
Chromium	Target	13.4		ug	13.4		1	Yes	S3VEM
Cobalt	Target	5	U	ug	1.3	J	1	Yes	S3VEM
Copper	Target	40.9		ug	40.9		1	Yes	S3VEM
Iron	Target	15300		ug	15300		1	Yes	S3VEM
Lead	Target	110000		ug	110000	D	50	Yes	S3VEM
Magnesium	Target	500	U	ug	476	J	1	Yes	S3VEM
Manganese	Target	145		ug	145		1	Yes	S3VEM
Nickel	Target	89.4		ug	89.4		1	Yes	S3VEM
Potassium	Target	500	U	ug	350	J	1	Yes	S3VEM
Selenium	Target	41.3		ug	41.3		1	Yes	S3VEM
Silver	Target	1.9		ug	1.9		1	Yes	S3VEM
Sodium	Target	13000		ug	13000		1	Yes	S3VEM
Thallium	Target	6.9		ug	6.9		1	Yes	S3VEM
Vanadium	Target	11.2		ug	11.2		1	Yes	S3VEM
Zinc	Target	1830		ug	1830	D	50	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW1	Lab Code: BON

Sample Number: MBCAW2	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-BB01	pH:	Sample Date: 03/03/2016	Sample Time: 11:05:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	138		ug	138		1	Yes	S3VEM
Antimony	Target	1220		ug	1220	D	50	Yes	S3VEM
Arsenic	Target	740		ug	740	D	50	Yes	S3VEM
Barium	Target	41.2		ug	41.2		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	3840		ug	3840	D	50	Yes	S3VEM
Calcium	Target	1450		ug	1450		1	Yes	S3VEM
Chromium	Target	3.3		ug	3.3		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.43	J	1	Yes	S3VEM
Copper	Target	40.0		ug	40.0		1	Yes	S3VEM
Iron	Target	13600		ug	13600		1	Yes	S3VEM
Lead	Target	113000		ug	113000	D	50	Yes	S3VEM
Magnesium	Target	500	U	ug	142	J	1	Yes	S3VEM
Manganese	Target	51.8		ug	51.8		1	Yes	S3VEM
Nickel	Target	33.8		ug	33.8		1	Yes	S3VEM
Potassium	Target	500	U	ug	140	J	1	Yes	S3VEM
Selenium	Target	42.7		ug	42.7		1	Yes	S3VEM
Silver	Target	1.7		ug	1.7		1	Yes	S3VEM
Sodium	Target	1100		ug	1100		1	Yes	S3VEM
Thallium	Target	5.4		ug	5.4		1	Yes	S3VEM
Vanadium	Target	7.9		ug	7.9		1	Yes	S3VEM
Zinc	Target	743	J	ug	743		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW1	Lab Code: BON

Sample Number: MBCAW3	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-BB01	pH:	Sample Date: 03/03/2016	Sample Time: 11:25:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1440		ug	1440		1	Yes	S3VEM
Antimony	Target	1660		ug	1660	D	50	Yes	S3VEM
Arsenic	Target	512		ug	512	D	50	Yes	S3VEM
Barium	Target	258		ug	258		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	873		ug	873	D	50	Yes	S3VEM
Calcium	Target	6160		ug	6160		1	Yes	S3VEM
Chromium	Target	62.1		ug	62.1		1	Yes	S3VEM
Cobalt	Target	12.7		ug	12.7		1	Yes	S3VEM
Copper	Target	197		ug	197		1	Yes	S3VEM
Iron	Target	160000		ug	160000	D	50	Yes	S3VEM
Lead	Target	118000		ug	118000	D	50	Yes	S3VEM
Magnesium	Target	1520		ug	1520		1	Yes	S3VEM
Manganese	Target	750		ug	750		1	Yes	S3VEM
Nickel	Target	194		ug	194		1	Yes	S3VEM
Potassium	Target	500	U	ug	422	J	1	Yes	S3VEM
Selenium	Target	28.0		ug	28.0		1	Yes	S3VEM
Silver	Target	10.8		ug	10.8		1	Yes	S3VEM
Sodium	Target	11700		ug	11700		1	Yes	S3VEM
Thallium	Target	5.5		ug	5.5		1	Yes	S3VEM
Vanadium	Target	22.9		ug	22.9		1	Yes	S3VEM
Zinc	Target	3780		ug	3780	D	50	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW1	Lab Code: BON

Sample Number: MBCAW4	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-BB01	pH:	Sample Date: 03/03/2016	Sample Time: 11:30:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	19.1	J	ug	19.1	J	1	Yes	S3VEM
Antimony	Target	22.9		ug	22.9		1	Yes	S3VEM
Arsenic	Target	7.5		ug	7.5		1	Yes	S3VEM
Barium	Target	20.0	U	ug	6.8	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	10.9		ug	10.9		1	Yes	S3VEM
Calcium	Target	500	U	ug	239	J	1	Yes	S3VEM
Chromium	Target	2.0		ug	2.0		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.13	J	1	Yes	S3VEM
Copper	Target	5.6		ug	5.6		1	Yes	S3VEM
Iron	Target	1290		ug	1290		1	Yes	S3VEM
Lead	Target	2710		ug	2710	D	2	Yes	S3VEM
Magnesium	Target	500	U	ug	95.3	J	1	Yes	S3VEM
Manganese	Target	13.5		ug	13.5		1	Yes	S3VEM
Nickel	Target	4.0	U	ug	2.8	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	67.3	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.43	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.090	J	1	Yes	S3VEM
Sodium	Target	394	J	ug	394	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.32	J	1	Yes	S3VEM
Zinc	Target	178	J	ug	178		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW1	Lab Code: BON

Sample Number: MBCAW5	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-BB01	pH:	Sample Date: 03/03/2016	Sample Time: 11:35:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	123		ug	123		1	Yes	S3VEM
Antimony	Target	763		ug	763		1	Yes	S3VEM
Arsenic	Target	166		ug	166		1	Yes	S3VEM
Barium	Target	30.7		ug	30.7		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	188		ug	188		1	Yes	S3VEM
Calcium	Target	816		ug	816		1	Yes	S3VEM
Chromium	Target	1.4		ug	1.4		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.53	J	1	Yes	S3VEM
Copper	Target	23.4		ug	23.4		1	Yes	S3VEM
Iron	Target	514		ug	514		1	Yes	S3VEM
Lead	Target	106000		ug	106000	D	100	Yes	S3VEM
Magnesium	Target	500	U	ug	146	J	1	Yes	S3VEM
Manganese	Target	19.4		ug	19.4		1	Yes	S3VEM
Nickel	Target	22.2		ug	22.2		1	Yes	S3VEM
Potassium	Target	500	U	ug	94.4	J	1	Yes	S3VEM
Selenium	Target	27.4		ug	27.4		1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.56	J	1	Yes	S3VEM
Sodium	Target	984		ug	984		1	Yes	S3VEM
Thallium	Target	5.4		ug	5.4		1	Yes	S3VEM
Vanadium	Target	12.9		ug	12.9		1	Yes	S3VEM
Zinc	Target	602	J	ug	602		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW1	Lab Code: BON

Sample Number: MBCAW6	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-BB01	pH:	Sample Date: 03/03/2016	Sample Time: 12:00:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	430		ug	430		1	Yes	S3VEM
Antimony	Target	5180		ug	5180	D	50	Yes	S3VEM
Arsenic	Target	701		ug	701	D	50	Yes	S3VEM
Barium	Target	105		ug	105		1	Yes	S3VEM
Beryllium	Target	0.016	J	ug	0.016	J	1	Yes	S3VEM
Cadmium	Target	909		ug	909	D	50	Yes	S3VEM
Calcium	Target	10000		ug	10000		1	Yes	S3VEM
Chromium	Target	6.5		ug	6.5		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	1.8	J	1	Yes	S3VEM
Copper	Target	116		ug	116		1	Yes	S3VEM
Iron	Target	2380		ug	2380		1	Yes	S3VEM
Lead	Target	114000		ug	114000	D	50	Yes	S3VEM
Magnesium	Target	500	U	ug	342	J	1	Yes	S3VEM
Manganese	Target	39.1		ug	39.1		1	Yes	S3VEM
Nickel	Target	222		ug	222		1	Yes	S3VEM
Potassium	Target	724		ug	724		1	Yes	S3VEM
Selenium	Target	89.7		ug	89.7		1	Yes	S3VEM
Silver	Target	1.5		ug	1.5		1	Yes	S3VEM
Sodium	Target	14400		ug	14400		1	Yes	S3VEM
Thallium	Target	10.5		ug	10.5		1	Yes	S3VEM
Vanadium	Target	44.8		ug	44.8		1	Yes	S3VEM
Zinc	Target	1540		ug	1540		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW1	Lab Code: BON

Sample Number: MBCAW7	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-BB01	pH:	Sample Date: 03/03/2016	Sample Time: 12:15:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	135		ug	135		1	Yes	S3VEM
Antimony	Target	2040		ug	2040	D	50	Yes	S3VEM
Arsenic	Target	501		ug	501	D	50	Yes	S3VEM
Barium	Target	67.7		ug	67.7		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	260		ug	260	D	50	Yes	S3VEM
Calcium	Target	4570		ug	4570		1	Yes	S3VEM
Chromium	Target	2.9		ug	2.9		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.86	J	1	Yes	S3VEM
Copper	Target	30.3		ug	30.3		1	Yes	S3VEM
Iron	Target	916		ug	916		1	Yes	S3VEM
Lead	Target	110000		ug	110000	D	50	Yes	S3VEM
Magnesium	Target	500	U	ug	128	J	1	Yes	S3VEM
Manganese	Target	61.9		ug	61.9		1	Yes	S3VEM
Nickel	Target	41.6		ug	41.6		1	Yes	S3VEM
Potassium	Target	500	U	ug	81.7	J	1	Yes	S3VEM
Selenium	Target	70.4		ug	70.4		1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.75	J	1	Yes	S3VEM
Sodium	Target	475	J	ug	475	J	1	Yes	S3VEM
Thallium	Target	5.0		ug	5.0		1	Yes	S3VEM
Vanadium	Target	19.1		ug	19.1		1	Yes	S3VEM
Zinc	Target	551	J	ug	551		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW1	Lab Code: BON

Sample Number: MBCAW8	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: WP001-20160303-FB	pH:	Sample Date: 03/03/2016	Sample Time: 16:59:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	7.7	J	ug	7.7	J	1	Yes	S3VEM
Antimony	Target	2.3	J	ug	2.3	J	1	Yes	S3VEM
Arsenic	Target	0.99	J	ug	0.99	J	1	Yes	S3VEM
Barium	Target	0.32	J	ug	0.32	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.29	J	ug	0.29	J	1	Yes	S3VEM
Calcium	Target	233	J	ug	233	J	1	Yes	S3VEM
Chromium	Target	0.16	J	ug	0.16	J	1	Yes	S3VEM
Cobalt	Target	0.0099	J	ug	0.0099	J	1	Yes	S3VEM
Copper	Target	2.0	J	ug	2.0	J	1	Yes	S3VEM
Iron	Target	25.0		ug	25.0		1	Yes	S3VEM
Lead	Target	52.0		ug	52.0		1	Yes	S3VEM
Magnesium	Target	116	J	ug	116	J	1	Yes	S3VEM
Manganese	Target	0.77	J	ug	0.77	J	1	Yes	S3VEM
Nickel	Target	0.19	J	ug	0.19	J	1	Yes	S3VEM
Potassium	Target	90.1	J	ug	90.1	J	1	Yes	S3VEM
Selenium	Target	0.55	J	ug	0.55	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	348	J	ug	348	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	75.4		ug	75.4		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW1	Lab Code: BON

Sample Number: PBS01	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Antimony	Target	0.12	J	ug	0.12	J	1	Yes	S3VEM
Arsenic	Target	0.075	J	ug	0.075	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Beryllium	Target	-.0059		ug	-.0059	J	1	Yes	S3VEM
Cadmium	Target	-.0063		ug	-.0063	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	500	U	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Cobalt	Target	0.0090	J	ug	0.0090	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Iron	Target	10.0	U	ug	10.0	U	1	Yes	S3VEM
Lead	Target	0.26	J	ug	0.26	J	1	Yes	S3VEM
Magnesium	Target	500	U	ug	500	U	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	1.5	U	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	ug	500	U	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	500	U	1	Yes	S3VEM
Thallium	Target	-.24		ug	-.24	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	0.23	J	ug	0.23	J	1	Yes	S3VEM

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Puerto Rico Battery Recycling Assessment
Number of Samples: 20 wipes
Analysis: Metals

SDG No.: MBCAW9
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/8/2016 and 3/9/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solutions
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
Samples MBCAX0, MBCAX1, MBCAX4, MBCAX5, MBCAX7, MBCAX9, MBCAY1, MBCAY3, MBCAY4, MBCAY5 and MBCAY7 have analytes that have been qualified J, J+ or J-.

Minor Findings:
None

COMMENT:	The site-specific QAPP did not specify the project action levels for this site.

Reviewer Name(s): Steffanie Tobin

Approver's Signature: **Date: 04/19/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi- Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCBs have analyte results less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Aluminum: MBCAY1

Barium: MBCAX0, MBCAX2, MBCAX6, MBCAY1

Cadmium: MBCAX2

Cobalt: MBCAW9, MBCAX0, MBCAX1, MBCAX3, MBCAX5, MBCAX6, MBCAX8, MBCAX9, MBCAY0, MBCAY1, MBCAY2, MBCAY3, MBCAY4, MBCAY6, MBCAY7, MBCAY8

Magnesium: MBCAX0, MBCAX2, MBCAX9, MBCAY0, MBCAY1, MBCAY2, MBCAY3, MBCAY4, MBCAY5, MBCAY6, MBCAY7, MBCAY8

Manganese: MBCAX2

Nickel: MBCAX0, MBCAX2

Potassium: MBCAW9, MBCAX0, MBCAX1, MBCAX2, MBCAX3, MBCAX4, MBCAX5, MBCAX6, MBCAX7, MBCAX8, MBCAX9, MBCAY0, MBCAY1, MBCAY2, MBCAY3, MBCAY4, MBCAY5, MBCAY6, MBCAY7, MBCAY8

Silver: MBCAW9, MBCAX8

Sodium: MBCAX2, MBCAY4, MBCAY7

Vanadium: MBCAW9, MBCAX0, MBCAX1, MBCAX2, MBCAX3, MBCAX4, MBCAX5, MBCAX6, MBCAX8, MBCAX9, MBCAY0, MBCAY1, MBCAY2, MBCAY3, MBCAY4, MBCAY5, MBCAY6, MBCAY7, MBCAY8

The following samples have analyte results less than or equal to CRQLs. The associated ICB has analyte results less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Barium: MBCAX0, MBCAX2, MBCAX6, MBCAY1

Cadmium: MBCAX2

Cobalt: MBCAW9, MBCAX0, MBCAX1, MBCAX3, MBCAX5, MBCAX6, MBCAX8, MBCAX9, MBCAY0, MBCAY1, MBCAY2, MBCAY3, MBCAY4, MBCAY6, MBCAY7, MBCAY8

Nickel: MBCAX0, MBCAX2

Silver: MBCAW9, MBCAX0, MBCAX2, MBCAX8, MBCAY0, MBCAY2, MBCAY3, MBCAY4, MBCAY6, MBCAY7, MBCAY8

Vanadium: MBCAW9, MBCAX0, MBCAX1, MBCAX2, MBCAX3, MBCAX4, MBCAX5, MBCAX6, MBCAX8, MBCAX9, MBCAY0, MBCAY1, MBCAY2, MBCAY3, MBCAY4, MBCAY5, MBCAY6, MBCAY7, MBCAY8

The following samples have analyte results less than or equal to CRQLs. The associated preparation blank has analyte results less than CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Aluminum: MBCAY1

Calcium: MBCAX0, MBCAX5, MBCAY1, MBCAY4, MBCAY5, MBCAY7, MBCAY8

Copper: MBCAX2

Magnesium: MBCAW9, MBCAX0, MBCAX1, MBCAX2, MBCAX3, MBCAX4, MBCAX5, MBCAX6, MBCAX7, MBCAX8, MBCAX9, MBCAY0, MBCAY1, MBCAY2, MBCAY3, MBCAY4, MBCAY5, MBCAY6, MBCAY7, MBCAY8

Manganese: MBCAX2

Potassium: MBCAW9, MBCAX0, MBCAX1, MBCAX2, MBCAX3, MBCAX4, MBCAX5, MBCAX6, MBCAX7, MBCAX8, MBCAX9, MBCAY0, MBCAY1, MBCAY2, MBCAY3, MBCAY4, MBCAY5, MBCAY6, MBCAY7, MBCAY8

Sodium: MBCAX2, MBCAY4, MBCAY7

The following samples have analyte results greater than the CRQLs (also greater than field blank results) but less than 10X the field blank results. The associated field blanks (MBCBP1 and MBCBP2) have analyte results greater that CRQLs. Detects are qualified as J.

Zinc: MBCAX0, MBCAX1, MBCAX4, MBCAX5, MBCAX7, MBCAX9, MBCAY1, MBCAY3, MBCAY4, MBCAY5, MBCAY7

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

Not applicable.

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

Not applicable.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 50% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of 2X the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

Not applicable.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that

does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

Not applicable.

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

Not applicable.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAW9	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	45.9		ug	45.9		1	Yes	S3VEM
Antimony	Target	14.0		ug	14.0		1	Yes	S3VEM
Arsenic	Target	2.3		ug	2.3		1	Yes	S3VEM
Barium	Target	45.8		ug	45.8		1	Yes	S3VEM
Beryllium	Target	1.1		ug	1.1		1	Yes	S3VEM
Cadmium	Target	1.1		ug	1.1		1	Yes	S3VEM
Calcium	Target	1270		ug	1270		1	Yes	S3VEM
Chromium	Target	2.3		ug	2.3		1	Yes	S3VEM
Cobalt	Target	11.2		ug	11.2		1	Yes	S3VEM
Copper	Target	6.3		ug	6.3		1	Yes	S3VEM
Iron	Target	39.6		ug	39.6		1	Yes	S3VEM
Lead	Target	6.6		ug	6.6		1	Yes	S3VEM
Magnesium	Target	1160		ug	1160		1	Yes	S3VEM
Manganese	Target	3.8		ug	3.8		1	Yes	S3VEM
Nickel	Target	9.3		ug	9.3		1	Yes	S3VEM
Potassium	Target	1220		ug	1220		1	Yes	S3VEM
Selenium	Target	7.6		ug	7.6		1	Yes	S3VEM
Silver	Target	2.1		ug	2.1		1	Yes	S3VEM
Sodium	Target	1460		ug	1460		1	Yes	S3VEM
Thallium	Target	5.1		ug	5.1		1	Yes	S3VEM
Vanadium	Target	11.0		ug	11.0		1	Yes	S3VEM
Zinc	Target	114		ug	114		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number: LCS02	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	42.6		ug	42.6		1	Yes	S3VEM
Antimony	Target	12.9		ug	12.9		1	Yes	S3VEM
Arsenic	Target	1.9		ug	1.9		1	Yes	S3VEM
Barium	Target	45.2		ug	45.2		1	Yes	S3VEM
Beryllium	Target	1.1		ug	1.1		1	Yes	S3VEM
Cadmium	Target	1.1		ug	1.1		1	Yes	S3VEM
Calcium	Target	1180		ug	1180		1	Yes	S3VEM
Chromium	Target	2.2		ug	2.2		1	Yes	S3VEM
Cobalt	Target	11.1		ug	11.1		1	Yes	S3VEM
Copper	Target	4.7		ug	4.7		1	Yes	S3VEM
Iron	Target	22.3		ug	22.3		1	Yes	S3VEM
Lead	Target	2.2		ug	2.2		1	Yes	S3VEM
Magnesium	Target	1020		ug	1020		1	Yes	S3VEM
Manganese	Target	3.4		ug	3.4		1	Yes	S3VEM
Nickel	Target	9.0		ug	9.0		1	Yes	S3VEM
Potassium	Target	1110		ug	1110		1	Yes	S3VEM
Selenium	Target	6.7		ug	6.7		1	Yes	S3VEM
Silver	Target	2.1		ug	2.1		1	Yes	S3VEM
Sodium	Target	1110		ug	1110		1	Yes	S3VEM
Thallium	Target	5.1		ug	5.1		1	Yes	S3VEM
Vanadium	Target	11.0		ug	11.0		1	Yes	S3VEM
Zinc	Target	14.1		ug	14.1		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number: MBCAW9	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CC01	pH:	Sample Date: 03/08/2016	Sample Time: 11:12:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	805		ug	805	D	5	Yes	S3VEM
Antimony	Target	2140		ug	2140	D	5	Yes	S3VEM
Arsenic	Target	165		ug	165	D	5	Yes	S3VEM
Barium	Target	209		ug	209	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	31.6		ug	31.6	D	5	Yes	S3VEM
Calcium	Target	2920		ug	2920	D	5	Yes	S3VEM
Chromium	Target	105		ug	105	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	2.3	JD	5	Yes	S3VEM
Copper	Target	144		ug	144	D	5	Yes	S3VEM
Iron	Target	14200		ug	14200	D	5	Yes	S3VEM
Lead	Target	10400		ug	10400	D	5	Yes	S3VEM
Magnesium	Target	2500	U	ug	371	JD	5	Yes	S3VEM
Manganese	Target	83.2		ug	83.2	D	5	Yes	S3VEM
Nickel	Target	159		ug	159	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	198	JD	5	Yes	S3VEM
Selenium	Target	6.1	J	ug	6.1	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	1.3	JD	5	Yes	S3VEM
Sodium	Target	2600		ug	2600	D	5	Yes	S3VEM
Thallium	Target	1.1	J	ug	1.1	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	4.8	JD	5	Yes	S3VEM
Zinc	Target	1010		ug	1010	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number:	MBCAX0	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CC01	pH:		Sample Date:	03/08/2016	Sample Time:	11:13:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	26.5		ug	26.5		1	Yes	S3VEM
Antimony	Target	73.3		ug	73.3		1	Yes	S3VEM
Arsenic	Target	4.7		ug	4.7		1	Yes	S3VEM
Barium	Target	20.0	U	ug	7.1	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	1.2		ug	1.2		1	Yes	S3VEM
Calcium	Target	500	U	ug	364	J	1	Yes	S3VEM
Chromium	Target	1.7		ug	1.7		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.062	J	1	Yes	S3VEM
Copper	Target	8.0		ug	8.0		1	Yes	S3VEM
Iron	Target	383		ug	383		1	Yes	S3VEM
Lead	Target	1970		ug	1970		1	Yes	S3VEM
Magnesium	Target	500	U	ug	136	J	1	Yes	S3VEM
Manganese	Target	2.3		ug	2.3		1	Yes	S3VEM
Nickel	Target	4.0	U	ug	3.2	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	91.0	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.073	J	1	Yes	S3VEM
Sodium	Target	743		ug	743		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.22	J	1	Yes	S3VEM
Zinc	Target	116	J	ug	116		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number:	MBCAX1	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CC01	pH:		Sample Date:	03/09/2016	Sample Time:	09:12:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	154		ug	154	D	5	Yes	S3VEM
Antimony	Target	2700		ug	2700	D	5	Yes	S3VEM
Arsenic	Target	165		ug	165	D	5	Yes	S3VEM
Barium	Target	122		ug	122	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	51.5		ug	51.5	D	5	Yes	S3VEM
Calcium	Target	11700		ug	11700	D	5	Yes	S3VEM
Chromium	Target	8.6		ug	8.6	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	5.3	JD	5	Yes	S3VEM
Copper	Target	178		ug	178	D	5	Yes	S3VEM
Iron	Target	3950		ug	3950	D	5	Yes	S3VEM
Lead	Target	36900		ug	36900	D	50	Yes	S3VEM
Magnesium	Target	2500	U	ug	238	JD	5	Yes	S3VEM
Manganese	Target	94.9		ug	94.9	D	5	Yes	S3VEM
Nickel	Target	98.4		ug	98.4	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	124	JD	5	Yes	S3VEM
Selenium	Target	12.2	J	ug	12.2	JD	5	Yes	S3VEM
Silver	Target	13.7		ug	13.7	D	5	Yes	S3VEM
Sodium	Target	4080		ug	4080	D	5	Yes	S3VEM
Thallium	Target	2.4	J	ug	2.4	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	1.9	JD	5	Yes	S3VEM
Zinc	Target	317	J	ug	317	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number:	MBCAX2	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CC01	pH:		Sample Date:	03/08/2016	Sample Time:	11:15:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	16400		ug	16400	D	4	Yes	S3VEM
Antimony	Target	55.7		ug	55.7	D	4	Yes	S3VEM
Arsenic	Target	5.9		ug	5.9	D	4	Yes	S3VEM
Barium	Target	80.0	U	ug	13.9	JD	4	Yes	S3VEM
Beryllium	Target	2.0	U	ug	2.0	UD	4	Yes	S3VEM
Cadmium	Target	2.0	U	ug	1.5	JD	4	Yes	S3VEM
Calcium	Target	2130		ug	2130	D	4	Yes	S3VEM
Chromium	Target	6.8		ug	6.8	D	4	Yes	S3VEM
Cobalt	Target	20.0	U	ug	20.0	UD	4	Yes	S3VEM
Copper	Target	10	U	ug	4.5	JD	4	Yes	S3VEM
Iron	Target	501		ug	501	D	4	Yes	S3VEM
Lead	Target	6790		ug	6790	D	4	Yes	S3VEM
Magnesium	Target	2000	U	ug	126	JD	4	Yes	S3VEM
Manganese	Target	6.0	U	ug	3.7	JD	4	Yes	S3VEM
Nickel	Target	16.0	U	ug	3.9	JD	4	Yes	S3VEM
Potassium	Target	2000	U	ug	87.0	JD	4	Yes	S3VEM
Selenium	Target	14.0	U	ug	14.0	UD	4	Yes	S3VEM
Silver	Target	4.0	U	ug	0.22	JD	4	Yes	S3VEM
Sodium	Target	2000	U	ug	1020	JD	4	Yes	S3VEM
Thallium	Target	10.0	U	ug	10.0	UD	4	Yes	S3VEM
Vanadium	Target	20.0	U	ug	0.17	JD	4	Yes	S3VEM
Zinc	Target	21900		ug	21900	D	25	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number:	MBCAX3	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CC01	pH:		Sample Date:	03/08/2016	Sample Time:	11:16:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	21000		ug	21000		1	Yes	S3VEM
Antimony	Target	248		ug	248		1	Yes	S3VEM
Arsenic	Target	12.3		ug	12.3		1	Yes	S3VEM
Barium	Target	151		ug	151		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	2.1		ug	2.1		1	Yes	S3VEM
Calcium	Target	4550		ug	4550		1	Yes	S3VEM
Chromium	Target	6.6		ug	6.6		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.18	J	1	Yes	S3VEM
Copper	Target	15.6		ug	15.6		1	Yes	S3VEM
Iron	Target	1150		ug	1150		1	Yes	S3VEM
Lead	Target	45800		ug	45800	D	25	Yes	S3VEM
Magnesium	Target	500	U	ug	152	J	1	Yes	S3VEM
Manganese	Target	8.9		ug	8.9		1	Yes	S3VEM
Nickel	Target	9.0		ug	9.0		1	Yes	S3VEM
Potassium	Target	500	U	ug	104	J	1	Yes	S3VEM
Selenium	Target	1.2	J	ug	1.2	J	1	Yes	S3VEM
Silver	Target	1.3		ug	1.3		1	Yes	S3VEM
Sodium	Target	846		ug	846		1	Yes	S3VEM
Thallium	Target	2.4	J	ug	2.4	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.74	J	1	Yes	S3VEM
Zinc	Target	23000		ug	23000	D	25	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number: MBCAX4	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CC01	pH:	Sample Date: 03/08/2016	Sample Time: 11:19:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	208		ug	208		1	Yes	S3VEM
Antimony	Target	223		ug	223		1	Yes	S3VEM
Arsenic	Target	9.7		ug	9.7		1	Yes	S3VEM
Barium	Target	198		ug	198		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	13.3		ug	13.3		1	Yes	S3VEM
Calcium	Target	1460		ug	1460		1	Yes	S3VEM
Chromium	Target	122		ug	122		1	Yes	S3VEM
Cobalt	Target	6.4		ug	6.4		1	Yes	S3VEM
Copper	Target	27.6		ug	27.6		1	Yes	S3VEM
Iron	Target	355		ug	355		1	Yes	S3VEM
Lead	Target	32900		ug	32900	D	50	Yes	S3VEM
Magnesium	Target	500	U	ug	480	J	1	Yes	S3VEM
Manganese	Target	5.5		ug	5.5		1	Yes	S3VEM
Nickel	Target	77.2		ug	77.2		1	Yes	S3VEM
Potassium	Target	500	U	ug	308	J	1	Yes	S3VEM
Selenium	Target	1.5	J	ug	1.5	J	1	Yes	S3VEM
Silver	Target	4.6		ug	4.6		1	Yes	S3VEM
Sodium	Target	4450		ug	4450		1	Yes	S3VEM
Thallium	Target	2.1	J	ug	2.1	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.16	J	1	Yes	S3VEM
Zinc	Target	524	J	ug	524		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number:	MBCAX5	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CC01	pH:		Sample Date:	03/08/2016	Sample Time:	11:25:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	27.7		ug	27.7		1	Yes	S3VEM
Antimony	Target	204		ug	204		1	Yes	S3VEM
Arsenic	Target	10.5		ug	10.5		1	Yes	S3VEM
Barium	Target	37.5		ug	37.5		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	1.5		ug	1.5		1	Yes	S3VEM
Calcium	Target	500	U	ug	390	J	1	Yes	S3VEM
Chromium	Target	239		ug	239		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.77	J	1	Yes	S3VEM
Copper	Target	13.4		ug	13.4		1	Yes	S3VEM
Iron	Target	1270		ug	1270		1	Yes	S3VEM
Lead	Target	16700		ug	16700	D	10	Yes	S3VEM
Magnesium	Target	500	U	ug	133	J	1	Yes	S3VEM
Manganese	Target	24.0		ug	24.0		1	Yes	S3VEM
Nickel	Target	47.4		ug	47.4		1	Yes	S3VEM
Potassium	Target	500	U	ug	94.1	J	1	Yes	S3VEM
Selenium	Target	1.3	J	ug	1.3	J	1	Yes	S3VEM
Silver	Target	1.5		ug	1.5		1	Yes	S3VEM
Sodium	Target	1860		ug	1860		1	Yes	S3VEM
Thallium	Target	0.64	J	ug	0.64	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.11	J	1	Yes	S3VEM
Zinc	Target	115	J	ug	115		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number: MBCAX6	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CC01	pH:	Sample Date: 03/08/2016	Sample Time: 11:26:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	335		ug	335	D	5	Yes	S3VEM
Antimony	Target	1130		ug	1130	D	5	Yes	S3VEM
Arsenic	Target	67.4		ug	67.4	D	5	Yes	S3VEM
Barium	Target	100	U	ug	88.6	JD	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	21.4		ug	21.4	D	5	Yes	S3VEM
Calcium	Target	6030		ug	6030	D	5	Yes	S3VEM
Chromium	Target	310		ug	310	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	6.6	JD	5	Yes	S3VEM
Copper	Target	61.5		ug	61.5	D	5	Yes	S3VEM
Iron	Target	1890		ug	1890	D	5	Yes	S3VEM
Lead	Target	37400		ug	37400	D	50	Yes	S3VEM
Magnesium	Target	2500	U	ug	238	JD	5	Yes	S3VEM
Manganese	Target	106		ug	106	D	5	Yes	S3VEM
Nickel	Target	115		ug	115	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	196	JD	5	Yes	S3VEM
Selenium	Target	5.1	J	ug	5.1	JD	5	Yes	S3VEM
Silver	Target	5.6		ug	5.6	D	5	Yes	S3VEM
Sodium	Target	4360		ug	4360	D	5	Yes	S3VEM
Thallium	Target	2.2	J	ug	2.2	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	2.4	JD	5	Yes	S3VEM
Zinc	Target	1620		ug	1620	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number: MBCAX7	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CC01	pH:	Sample Date: 03/08/2016	Sample Time: 11:27:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1180		ug	1180		1	Yes	S3VEM
Antimony	Target	659		ug	659		1	Yes	S3VEM
Arsenic	Target	53.6		ug	53.6		1	Yes	S3VEM
Barium	Target	130		ug	130		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	17.1		ug	17.1		1	Yes	S3VEM
Calcium	Target	7300		ug	7300		1	Yes	S3VEM
Chromium	Target	10300		ug	10300	D	20	Yes	S3VEM
Cobalt	Target	123		ug	123		1	Yes	S3VEM
Copper	Target	212		ug	212		1	Yes	S3VEM
Iron	Target	55200		ug	55200		1	Yes	S3VEM
Lead	Target	34800		ug	34800	D	20	Yes	S3VEM
Magnesium	Target	500	U	ug	390	J	1	Yes	S3VEM
Manganese	Target	870		ug	870		1	Yes	S3VEM
Nickel	Target	6040		ug	6040		1	Yes	S3VEM
Potassium	Target	500	U	ug	498	J	1	Yes	S3VEM
Selenium	Target	4.2		ug	4.2		1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	1910		ug	1910		1	Yes	S3VEM
Thallium	Target	1.9	J	ug	1.9	J	1	Yes	S3VEM
Vanadium	Target	45.7		ug	45.7		1	Yes	S3VEM
Zinc	Target	674	J	ug	674		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number:	MBCAX8	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CC01	pH:		Sample Date:	03/08/2016	Sample Time:	11:30:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	442		ug	442		1	Yes	S3VEM
Antimony	Target	299		ug	299		1	Yes	S3VEM
Arsenic	Target	35.0		ug	35.0		1	Yes	S3VEM
Barium	Target	2960		ug	2960		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	6.1		ug	6.1		1	Yes	S3VEM
Calcium	Target	5890		ug	5890		1	Yes	S3VEM
Chromium	Target	12.6		ug	12.6		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.49	J	1	Yes	S3VEM
Copper	Target	50.5		ug	50.5		1	Yes	S3VEM
Iron	Target	17200		ug	17200		1	Yes	S3VEM
Lead	Target	9000		ug	9000	D	10	Yes	S3VEM
Magnesium	Target	500	U	ug	438	J	1	Yes	S3VEM
Manganese	Target	36.6		ug	36.6		1	Yes	S3VEM
Nickel	Target	18.9		ug	18.9		1	Yes	S3VEM
Potassium	Target	500	U	ug	340	J	1	Yes	S3VEM
Selenium	Target	1.8	J	ug	1.8	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.19	J	1	Yes	S3VEM
Sodium	Target	2390		ug	2390		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	2.3	J	1	Yes	S3VEM
Zinc	Target	1160		ug	1160		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number: MBCAX9	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CC01	pH:	Sample Date: 03/09/2016	Sample Time: 09:15:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	27.6		ug	27.6		1	Yes	S3VEM
Antimony	Target	318		ug	318		1	Yes	S3VEM
Arsenic	Target	19.5		ug	19.5		1	Yes	S3VEM
Barium	Target	197		ug	197		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	4.2		ug	4.2		1	Yes	S3VEM
Calcium	Target	878		ug	878		1	Yes	S3VEM
Chromium	Target	80.3		ug	80.3		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	2.0	J	1	Yes	S3VEM
Copper	Target	11.7		ug	11.7		1	Yes	S3VEM
Iron	Target	1080		ug	1080		1	Yes	S3VEM
Lead	Target	64200		ug	64200	D	30	Yes	S3VEM
Magnesium	Target	500	U	ug	145	J	1	Yes	S3VEM
Manganese	Target	46.2		ug	46.2		1	Yes	S3VEM
Nickel	Target	93.1		ug	93.1		1	Yes	S3VEM
Potassium	Target	500	U	ug	122	J	1	Yes	S3VEM
Selenium	Target	2.3	J	ug	2.3	J	1	Yes	S3VEM
Silver	Target	2.8		ug	2.8		1	Yes	S3VEM
Sodium	Target	692		ug	692		1	Yes	S3VEM
Thallium	Target	2.4	J	ug	2.4	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.44	J	1	Yes	S3VEM
Zinc	Target	121	J	ug	121		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number: MBCAY0	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CC01	pH:	Sample Date: 03/09/2016	Sample Time: 09:17:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	569		ug	569	D	5	Yes	S3VEM
Antimony	Target	2560		ug	2560	D	5	Yes	S3VEM
Arsenic	Target	191		ug	191	D	5	Yes	S3VEM
Barium	Target	162		ug	162	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	125		ug	125	D	5	Yes	S3VEM
Calcium	Target	7560		ug	7560	D	5	Yes	S3VEM
Chromium	Target	8.1		ug	8.1	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	1.9	JD	5	Yes	S3VEM
Copper	Target	87.3		ug	87.3	D	5	Yes	S3VEM
Iron	Target	6300		ug	6300	D	5	Yes	S3VEM
Lead	Target	50700		ug	50700	D	50	Yes	S3VEM
Magnesium	Target	2500	U	ug	242	JD	5	Yes	S3VEM
Manganese	Target	49.8		ug	49.8	D	5	Yes	S3VEM
Nickel	Target	158		ug	158	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	119	JD	5	Yes	S3VEM
Selenium	Target	12.9	J	ug	12.9	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	1.5	JD	5	Yes	S3VEM
Sodium	Target	3520		ug	3520	D	5	Yes	S3VEM
Thallium	Target	0.89	J	ug	0.89	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	4.4	JD	5	Yes	S3VEM
Zinc	Target	783		ug	783	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number:	MBCAY1	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CC01	pH:		Sample Date:	03/09/2016	Sample Time:	09:25:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	100	U	ug	30.6	JD	5	Yes	S3VEM
Antimony	Target	982		ug	982	D	5	Yes	S3VEM
Arsenic	Target	46.0		ug	46.0	D	5	Yes	S3VEM
Barium	Target	100	U	ug	82.1	JD	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	36.6		ug	36.6	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	985	JD	5	Yes	S3VEM
Chromium	Target	220		ug	220	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	4.3	JD	5	Yes	S3VEM
Copper	Target	20.8		ug	20.8	D	5	Yes	S3VEM
Iron	Target	2020		ug	2020	D	5	Yes	S3VEM
Lead	Target	42700		ug	42700	D	50	Yes	S3VEM
Magnesium	Target	2500	U	ug	123	JD	5	Yes	S3VEM
Manganese	Target	49.0		ug	49.0	D	5	Yes	S3VEM
Nickel	Target	49.0		ug	49.0	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	101	JD	5	Yes	S3VEM
Selenium	Target	2.5	J	ug	2.5	JD	5	Yes	S3VEM
Silver	Target	14.5		ug	14.5	D	5	Yes	S3VEM
Sodium	Target	3770		ug	3770	D	5	Yes	S3VEM
Thallium	Target	2.5	J	ug	2.5	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	1.0	JD	5	Yes	S3VEM
Zinc	Target	203	J	ug	203	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number: MBCAY2	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CC01	pH:	Sample Date: 03/09/2016	Sample Time: 09:27:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1030		ug	1030	D	5	Yes	S3VEM
Antimony	Target	3700		ug	3700	D	5	Yes	S3VEM
Arsenic	Target	355		ug	355	D	5	Yes	S3VEM
Barium	Target	214		ug	214	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	87.9		ug	87.9	D	5	Yes	S3VEM
Calcium	Target	4700		ug	4700	D	5	Yes	S3VEM
Chromium	Target	38.7		ug	38.7	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	2.5	JD	5	Yes	S3VEM
Copper	Target	378		ug	378	D	5	Yes	S3VEM
Iron	Target	11200		ug	11200	D	5	Yes	S3VEM
Lead	Target	69000		ug	69000	D	50	Yes	S3VEM
Magnesium	Target	2500	U	ug	431	JD	5	Yes	S3VEM
Manganese	Target	72.0		ug	72.0	D	5	Yes	S3VEM
Nickel	Target	205		ug	205	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	227	JD	5	Yes	S3VEM
Selenium	Target	14.5	J	ug	14.5	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	2.4	JD	5	Yes	S3VEM
Sodium	Target	10100		ug	10100	D	5	Yes	S3VEM
Thallium	Target	1.5	J	ug	1.5	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	5.6	JD	5	Yes	S3VEM
Zinc	Target	4190		ug	4190	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number: MBCAY3	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CF01	pH:	Sample Date: 03/08/2016	Sample Time: 10:45:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	377		ug	377	D	2	Yes	S3VEM
Antimony	Target	989		ug	989	D	2	Yes	S3VEM
Arsenic	Target	113		ug	113	D	2	Yes	S3VEM
Barium	Target	79.2		ug	79.2	D	2	Yes	S3VEM
Beryllium	Target	1.0	U	ug	1.0	UD	2	Yes	S3VEM
Cadmium	Target	64.4		ug	64.4	D	2	Yes	S3VEM
Calcium	Target	1310		ug	1310	D	2	Yes	S3VEM
Chromium	Target	61.2		ug	61.2	D	2	Yes	S3VEM
Cobalt	Target	10.0	U	ug	1.2	JD	2	Yes	S3VEM
Copper	Target	64.8		ug	64.8	D	2	Yes	S3VEM
Iron	Target	7470		ug	7470	D	2	Yes	S3VEM
Lead	Target	23200		ug	23200	D	10	Yes	S3VEM
Magnesium	Target	1000	U	ug	220	JD	2	Yes	S3VEM
Manganese	Target	55.4		ug	55.4	D	2	Yes	S3VEM
Nickel	Target	98.0		ug	98.0	D	2	Yes	S3VEM
Potassium	Target	1000	U	ug	142	JD	2	Yes	S3VEM
Selenium	Target	4.8	J	ug	4.8	JD	2	Yes	S3VEM
Silver	Target	2.0	U	ug	0.27	JD	2	Yes	S3VEM
Sodium	Target	4370		ug	4370	D	2	Yes	S3VEM
Thallium	Target	0.66	J	ug	0.66	JD	2	Yes	S3VEM
Vanadium	Target	10.0	U	ug	3.4	JD	2	Yes	S3VEM
Zinc	Target	411	J	ug	411	D	2	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number: MBCAY4	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CF01	pH:	Sample Date: 03/08/2016	Sample Time: 10:47:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	477		ug	477	D	5	Yes	S3VEM
Antimony	Target	3770		ug	3770	D	5	Yes	S3VEM
Arsenic	Target	317		ug	317	D	5	Yes	S3VEM
Barium	Target	193		ug	193	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	84.1		ug	84.1	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	1670	JD	5	Yes	S3VEM
Chromium	Target	13.3		ug	13.3	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	1.4	JD	5	Yes	S3VEM
Copper	Target	161		ug	161	D	5	Yes	S3VEM
Iron	Target	6590		ug	6590	D	5	Yes	S3VEM
Lead	Target	44700		ug	44700	D	50	Yes	S3VEM
Magnesium	Target	2500	U	ug	309	JD	5	Yes	S3VEM
Manganese	Target	34.0		ug	34.0	D	5	Yes	S3VEM
Nickel	Target	351		ug	351	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	127	JD	5	Yes	S3VEM
Selenium	Target	16.4	J	ug	16.4	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	2.1	JD	5	Yes	S3VEM
Sodium	Target	2500	U	ug	2260	JD	5	Yes	S3VEM
Thallium	Target	0.88	J	ug	0.88	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	6.2	JD	5	Yes	S3VEM
Zinc	Target	261	J	ug	261	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number: MBCAY5	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CF01	pH:	Sample Date: 03/08/2016	Sample Time: 10:48:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	409		ug	409	D	5	Yes	S3VEM
Antimony	Target	1470		ug	1470	D	5	Yes	S3VEM
Arsenic	Target	172		ug	172	D	5	Yes	S3VEM
Barium	Target	118		ug	118	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	156		ug	156	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	1240	JD	5	Yes	S3VEM
Chromium	Target	74.8		ug	74.8	D	5	Yes	S3VEM
Cobalt	Target	26.4		ug	26.4	D	5	Yes	S3VEM
Copper	Target	180		ug	180	D	5	Yes	S3VEM
Iron	Target	285000		ug	285000	D	5	Yes	S3VEM
Lead	Target	40300		ug	40300	D	20	Yes	S3VEM
Magnesium	Target	2500	U	ug	227	JD	5	Yes	S3VEM
Manganese	Target	1360		ug	1360	D	5	Yes	S3VEM
Nickel	Target	164		ug	164	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	301	JD	5	Yes	S3VEM
Selenium	Target	8.9	J	ug	8.9	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	5.0	UD	5	Yes	S3VEM
Sodium	Target	7890		ug	7890	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	12.5	UD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	17.1	JD	5	Yes	S3VEM
Zinc	Target	419	J	ug	419	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number:	MBCAY6	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CF01	pH:		Sample Date:	03/08/2016	Sample Time:	10:59:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2990		ug	2990	D	10	Yes	S3VEM
Antimony	Target	7450		ug	7450	D	10	Yes	S3VEM
Arsenic	Target	534		ug	534	D	10	Yes	S3VEM
Barium	Target	388		ug	388	D	10	Yes	S3VEM
Beryllium	Target	5.0	U	ug	5.0	UD	10	Yes	S3VEM
Cadmium	Target	164		ug	164	D	10	Yes	S3VEM
Calcium	Target	5610		ug	5610	D	10	Yes	S3VEM
Chromium	Target	39.3		ug	39.3	D	10	Yes	S3VEM
Cobalt	Target	50.0	U	ug	5.3	JD	10	Yes	S3VEM
Copper	Target	271		ug	271	D	10	Yes	S3VEM
Iron	Target	28100		ug	28100	D	10	Yes	S3VEM
Lead	Target	26100		ug	26100	D	30	Yes	S3VEM
Magnesium	Target	5000	U	ug	365	JD	10	Yes	S3VEM
Manganese	Target	161		ug	161	D	10	Yes	S3VEM
Nickel	Target	674		ug	674	D	10	Yes	S3VEM
Potassium	Target	5000	U	ug	95.4	JD	10	Yes	S3VEM
Selenium	Target	23.7	J	ug	23.7	JD	10	Yes	S3VEM
Silver	Target	10.0	U	ug	4.1	JD	10	Yes	S3VEM
Sodium	Target	8210		ug	8210	D	10	Yes	S3VEM
Thallium	Target	25.0	U	ug	25.0	UD	10	Yes	S3VEM
Vanadium	Target	50.0	U	ug	8.9	JD	10	Yes	S3VEM
Zinc	Target	996		ug	996	D	10	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number: MBCAY7	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CF01	pH:	Sample Date: 03/08/2016	Sample Time: 11:01:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1920		ug	1920	D	5	Yes	S3VEM
Antimony	Target	1750		ug	1750	D	5	Yes	S3VEM
Arsenic	Target	280		ug	280	D	5	Yes	S3VEM
Barium	Target	147		ug	147	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	69.5		ug	69.5	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	1350	JD	5	Yes	S3VEM
Chromium	Target	6.8		ug	6.8	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	1.0	JD	5	Yes	S3VEM
Copper	Target	106		ug	106	D	5	Yes	S3VEM
Iron	Target	8290		ug	8290	D	5	Yes	S3VEM
Lead	Target	33900		ug	33900	D	20	Yes	S3VEM
Magnesium	Target	2500	U	ug	224	JD	5	Yes	S3VEM
Manganese	Target	56.6		ug	56.6	D	5	Yes	S3VEM
Nickel	Target	130		ug	130	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	92.3	JD	5	Yes	S3VEM
Selenium	Target	7.2	J	ug	7.2	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	0.77	JD	5	Yes	S3VEM
Sodium	Target	2500	U	ug	2250	JD	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	12.5	UD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	3.5	JD	5	Yes	S3VEM
Zinc	Target	439	J	ug	439	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number: MBCAY8	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CF01	pH:	Sample Date: 03/09/2016	Sample Time: 10:09:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2480		ug	2480	D	5	Yes	S3VEM
Antimony	Target	3390		ug	3390	D	5	Yes	S3VEM
Arsenic	Target	270		ug	270	D	5	Yes	S3VEM
Barium	Target	263		ug	263	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	106		ug	106	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	2490	JD	5	Yes	S3VEM
Chromium	Target	24.0		ug	24.0	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	3.8	JD	5	Yes	S3VEM
Copper	Target	1510		ug	1510	D	5	Yes	S3VEM
Iron	Target	25400		ug	25400	D	5	Yes	S3VEM
Lead	Target	33500		ug	33500	D	50	Yes	S3VEM
Magnesium	Target	2500	U	ug	347	JD	5	Yes	S3VEM
Manganese	Target	136		ug	136	D	5	Yes	S3VEM
Nickel	Target	249		ug	249	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	181	JD	5	Yes	S3VEM
Selenium	Target	12.2	J	ug	12.2	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	3.1	JD	5	Yes	S3VEM
Sodium	Target	11000		ug	11000	D	5	Yes	S3VEM
Thallium	Target	1.1	J	ug	1.1	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	5.5	JD	5	Yes	S3VEM
Zinc	Target	6800		ug	6800	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number: PBF01	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Antimony	Target	0.69	J	ug	0.69	J	1	Yes	S3VEM
Arsenic	Target	0.18	J	ug	0.18	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Beryllium	Target	-.012		ug	-.012	J	1	Yes	S3VEM
Cadmium	Target	-.016		ug	-.016	J	1	Yes	S3VEM
Calcium	Target	48.8	J	ug	48.8	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Cobalt	Target	-.018		ug	-.018	J	1	Yes	S3VEM
Copper	Target	1.4	J	ug	1.4	J	1	Yes	S3VEM
Iron	Target	11.0		ug	11.0	J	1	Yes	S3VEM
Lead	Target	0.77	J	ug	0.77	J	1	Yes	S3VEM
Magnesium	Target	121	J	ug	121	J	1	Yes	S3VEM
Manganese	Target	0.14	J	ug	0.14	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	4.0	U	1	Yes	S3VEM
Potassium	Target	85.3		ug	85.3	J	1	Yes	S3VEM
Selenium	Target	-.19		ug	-.19	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	309	J	ug	309	J	1	Yes	S3VEM
Thallium	Target	-.34		ug	-.34	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	83.5		ug	83.5	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAW9	Lab Code: BON

Sample Number: PBF02	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1.1	J	ug	1.1	J	1	Yes	S3VEM
Antimony	Target	0.18	J	ug	0.18	J	1	Yes	S3VEM
Arsenic	Target	-.16		ug	-.16	J	1	Yes	S3VEM
Barium	Target	-.2		ug	-.2	J	1	Yes	S3VEM
Beryllium	Target	-.0058		ug	-.0058	J	1	Yes	S3VEM
Cadmium	Target	-.013		ug	-.013	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	500	U	1	Yes	S3VEM
Chromium	Target	-.06		ug	-.06	J	1	Yes	S3VEM
Cobalt	Target	-.037		ug	-.037	J	1	Yes	S3VEM
Copper	Target	-.091		ug	-.091	J	1	Yes	S3VEM
Iron	Target	10.0	U	ug	10.0	U	1	Yes	S3VEM
Lead	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Magnesium	Target	1.3	J	ug	1.3	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	1.5	U	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	ug	500	U	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	500	U	1	Yes	S3VEM
Thallium	Target	-.33		ug	-.33	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	6.0	U	ug	6.0	U	1	Yes	S3VEM

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Puerto Rico Battery Recycling Assessment
Number of Samples: 9 wipes
Analysis: Metals

SDG No.: MBCAY9
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/3/2016 and 3/9/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solutions
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:

Samples MBCAY9, MBCAZ0, MBCAZ1, MBCAZ3 and MBCAZ5 have analytes that have been qualified J, J+ or J-.

Minor Findings:
None

COMMENT: The site-specific QAPP did not specify any project action levels for this site.

Reviewer Name(s): Steffanie Tobin

Approver's Signature: **Date:**

Name: **Narendra Kumar**

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi- Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCBs have analyte results less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Aluminum: MBCAZ3, MBCAZ5

Barium: MBCAY9, MBCAZ0, MBCAZ1, MBCAZ2, MBCAZ3, MBCAZ4, MBCAZ5

Beryllium: MBCAZ4

Calcium: MBCAY9, MBCAZ0, MBCAZ1, MBCAZ2, MBCAZ3, MBCAZ5

Chromium: MBCAY9

Cobalt: MBCAY9, MBCAZ0, MBCAZ1, MBCAZ2, MBCAZ3, MBCAZ4, MBCAZ5

Magnesium: MBCAY9, MBCAZ0, MBCAZ1, MBCAZ2, MBCAZ3, MBCAZ4, MBCAZ5

Nickel: MBCAY9, MBCAZ3

Sodium: MBCAY9, MBCAZ0, MBCAZ2, MBCAZ3, MBCAZ5

Thallium: MBCAZ1

Vanadium: MBCAY9, MBCAZ0, MBCAZ1, MBCAZ2, MBCAZ3, MBCAZ4, MBCAZ5

The following samples have analyte results less than or equal to CRQLs. The associated ICB has analyte results less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Aluminum: MBCAZ3, MBCAZ5

Beryllium: MBCAZ4

Chromium: MBCAY9

Cobalt: MBCAY9, MBCAZ0, MBCAZ1, MBCAZ2, MBCAZ3, MBCAZ4, MBCAZ5

Magnesium: MBCAY9, MBCAZ0, MBCAZ1, MBCAZ2, MBCAZ3, MBCAZ4, MBCAZ5

Nickel: MBCAY9, MBCAZ3

The following samples have analyte results less than or equal to CRQLs. The associated preparation blank has analyte results less than CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Beryllium: MBCAZ4

The following samples have analyte results greater than the CRQLs (also greater than field blank results) but less than 10X the field blank results. The associated field blanks (MBCBP1 and MBCBP2) have analyte results greater that CRQLs. Detects are qualified as J.

Zinc: MBCAY9, MBCAZ0, MBCAZ1, MBCAZ3, MBCAZ5

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

Not applicable.

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

Not applicable.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 50% for the Relative Percent Difference

(RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of 2X the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

Not applicable.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

Not applicable.

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCAY9	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	39.9		ug	39.9		1	Yes	S3VEM
Antimony	Target	11.5		ug	11.5		1	Yes	S3VEM
Arsenic	Target	1.7		ug	1.7		1	Yes	S3VEM
Barium	Target	40.2		ug	40.2		1	Yes	S3VEM
Beryllium	Target	0.97		ug	0.97		1	Yes	S3VEM
Cadmium	Target	1.0		ug	1.0		1	Yes	S3VEM
Calcium	Target	1040		ug	1040		1	Yes	S3VEM
Chromium	Target	2.1		ug	2.1		1	Yes	S3VEM
Cobalt	Target	10.3		ug	10.3		1	Yes	S3VEM
Copper	Target	4.7		ug	4.7		1	Yes	S3VEM
Iron	Target	21.5		ug	21.5		1	Yes	S3VEM
Lead	Target	2.0		ug	2.0		1	Yes	S3VEM
Magnesium	Target	972		ug	972		1	Yes	S3VEM
Manganese	Target	3.3		ug	3.3		1	Yes	S3VEM
Nickel	Target	8.4		ug	8.4		1	Yes	S3VEM
Potassium	Target	978		ug	978		1	Yes	S3VEM
Selenium	Target	6.4		ug	6.4		1	Yes	S3VEM
Silver	Target	1.8		ug	1.8		1	Yes	S3VEM
Sodium	Target	990		ug	990		1	Yes	S3VEM
Thallium	Target	4.7		ug	4.7		1	Yes	S3VEM
Vanadium	Target	9.9		ug	9.9		1	Yes	S3VEM
Zinc	Target	12.6		ug	12.6		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAY9	Lab Code: BON

Sample Number:	MBCAY9	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CF01	pH:		Sample Date:	03/09/2016	Sample Time:	10:10:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	393		ug	393	D	10	Yes	S3VEM
Antimony	Target	416		ug	416	D	10	Yes	S3VEM
Arsenic	Target	49.1		ug	49.1	D	10	Yes	S3VEM
Barium	Target	200	U	ug	59.4	JD	10	Yes	S3VEM
Beryllium	Target	5.0	U	ug	5.0	UD	10	Yes	S3VEM
Cadmium	Target	32.2		ug	32.2	D	10	Yes	S3VEM
Calcium	Target	5000	U	ug	480	JD	10	Yes	S3VEM
Chromium	Target	10.0	U	ug	6.9	JD	10	Yes	S3VEM
Cobalt	Target	50.0	U	ug	0.71	JD	10	Yes	S3VEM
Copper	Target	30.9		ug	30.9	D	10	Yes	S3VEM
Iron	Target	4120		ug	4120	D	10	Yes	S3VEM
Lead	Target	22900		ug	22900	D	10	Yes	S3VEM
Magnesium	Target	5000	U	ug	167	JD	10	Yes	S3VEM
Manganese	Target	18.4		ug	18.4	D	10	Yes	S3VEM
Nickel	Target	40.0	U	ug	25.7	JD	10	Yes	S3VEM
Potassium	Target	5000	U	ug	5000	UD	10	Yes	S3VEM
Selenium	Target	16.8	J	ug	16.8	JD	10	Yes	S3VEM
Silver	Target	0.64	J	ug	0.64	JD	10	Yes	S3VEM
Sodium	Target	5000	U	ug	1630	JD	10	Yes	S3VEM
Thallium	Target	25.0	U	ug	25.0	UD	10	Yes	S3VEM
Vanadium	Target	50.0	U	ug	1.0	JD	10	Yes	S3VEM
Zinc	Target	231	J	ug	231	D	10	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAY9	Lab Code: BON

Sample Number: MBCAZ0	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CF01	pH:	Sample Date: 03/09/2016	Sample Time: 10:11:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5810		ug	5810	D	50	Yes	S3VEM
Antimony	Target	4140		ug	4140	D	50	Yes	S3VEM
Arsenic	Target	225		ug	225	D	50	Yes	S3VEM
Barium	Target	1000	U	ug	280	JD	50	Yes	S3VEM
Beryllium	Target	25.0	U	ug	25.0	UD	50	Yes	S3VEM
Cadmium	Target	100		ug	100	D	50	Yes	S3VEM
Calcium	Target	25000	U	ug	2120	JD	50	Yes	S3VEM
Chromium	Target	67.6		ug	67.6	D	50	Yes	S3VEM
Cobalt	Target	250	U	ug	11.5	JD	50	Yes	S3VEM
Copper	Target	417		ug	417	D	50	Yes	S3VEM
Iron	Target	253000		ug	253000	D	50	Yes	S3VEM
Lead	Target	119000		ug	119000	D	50	Yes	S3VEM
Magnesium	Target	25000	U	ug	224	JD	50	Yes	S3VEM
Manganese	Target	982		ug	982	D	50	Yes	S3VEM
Nickel	Target	321		ug	321	D	50	Yes	S3VEM
Potassium	Target	25000	U	ug	25000	UD	50	Yes	S3VEM
Selenium	Target	175	U	ug	175	UD	50	Yes	S3VEM
Silver	Target	20.3	J	ug	20.3	JD	50	Yes	S3VEM
Sodium	Target	25000	U	ug	9590	JD	50	Yes	S3VEM
Thallium	Target	125	U	ug	125	UD	50	Yes	S3VEM
Vanadium	Target	250	U	ug	7.8	JD	50	Yes	S3VEM
Zinc	Target	300	J	ug	300	D	50	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAY9	Lab Code: BON

Sample Number: MBCAZ1	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CF01	pH:	Sample Date: 03/09/2016	Sample Time: 10:12:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1920		ug	1920	D	15	Yes	S3VEM
Antimony	Target	218		ug	218	D	15	Yes	S3VEM
Arsenic	Target	53.7		ug	53.7	D	15	Yes	S3VEM
Barium	Target	300	U	ug	174	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	876		ug	876	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	925	JD	15	Yes	S3VEM
Chromium	Target	31.0		ug	31.0	D	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	2.5	JD	15	Yes	S3VEM
Copper	Target	106		ug	106	D	15	Yes	S3VEM
Iron	Target	36600		ug	36600	D	15	Yes	S3VEM
Lead	Target	31700		ug	31700	D	15	Yes	S3VEM
Magnesium	Target	7500	U	ug	187	JD	15	Yes	S3VEM
Manganese	Target	289		ug	289	D	15	Yes	S3VEM
Nickel	Target	60.4		ug	60.4	D	15	Yes	S3VEM
Potassium	Target	7500	U	ug	7500	UD	15	Yes	S3VEM
Selenium	Target	3.8	J	ug	3.8	JD	15	Yes	S3VEM
Silver	Target	2.8	J	ug	2.8	JD	15	Yes	S3VEM
Sodium	Target	26800		ug	26800	D	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	4.9	JD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	7.6	JD	15	Yes	S3VEM
Zinc	Target	387	J	ug	387	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAY9	Lab Code: BON

Sample Number: MBCAZ2	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CF01	pH:	Sample Date: 03/09/2016	Sample Time: 10:15:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1940		ug	1940	D	50	Yes	S3VEM
Antimony	Target	5350		ug	5350	D	50	Yes	S3VEM
Arsenic	Target	459		ug	459	D	50	Yes	S3VEM
Barium	Target	1000	U	ug	384	JD	50	Yes	S3VEM
Beryllium	Target	25.0	U	ug	25.0	UD	50	Yes	S3VEM
Cadmium	Target	144		ug	144	D	50	Yes	S3VEM
Calcium	Target	25000	U	ug	3920	JD	50	Yes	S3VEM
Chromium	Target	50.4		ug	50.4	D	50	Yes	S3VEM
Cobalt	Target	250	U	ug	31.9	JD	50	Yes	S3VEM
Copper	Target	739		ug	739	D	50	Yes	S3VEM
Iron	Target	90700		ug	90700	D	50	Yes	S3VEM
Lead	Target	82400		ug	82400	D	50	Yes	S3VEM
Magnesium	Target	25000	U	ug	659	JD	50	Yes	S3VEM
Manganese	Target	475		ug	475	D	50	Yes	S3VEM
Nickel	Target	409		ug	409	D	50	Yes	S3VEM
Potassium	Target	25000	U	ug	25000	UD	50	Yes	S3VEM
Selenium	Target	23.8	J	ug	23.8	JD	50	Yes	S3VEM
Silver	Target	7.4	J	ug	7.4	JD	50	Yes	S3VEM
Sodium	Target	25000	U	ug	12900	JD	50	Yes	S3VEM
Thallium	Target	125	U	ug	125	UD	50	Yes	S3VEM
Vanadium	Target	250	U	ug	9.8	JD	50	Yes	S3VEM
Zinc	Target	6530		ug	6530	D	50	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAY9	Lab Code: BON

Sample Number: MBCAZ3	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CF01	pH:	Sample Date: 03/09/2016	Sample Time: 10:16:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	300	U	ug	174	JD	15	Yes	S3VEM
Antimony	Target	353		ug	353	D	15	Yes	S3VEM
Arsenic	Target	43.8		ug	43.8	D	15	Yes	S3VEM
Barium	Target	300	U	ug	45.4	JD	15	Yes	S3VEM
Beryllium	Target	7.5	U	ug	7.5	UD	15	Yes	S3VEM
Cadmium	Target	511		ug	511	D	15	Yes	S3VEM
Calcium	Target	7500	U	ug	648	JD	15	Yes	S3VEM
Chromium	Target	18.1		ug	18.1	D	15	Yes	S3VEM
Cobalt	Target	75.0	U	ug	3.8	JD	15	Yes	S3VEM
Copper	Target	45.9		ug	45.9	D	15	Yes	S3VEM
Iron	Target	85900		ug	85900	D	15	Yes	S3VEM
Lead	Target	20900		ug	20900	D	15	Yes	S3VEM
Magnesium	Target	7500	U	ug	221	JD	15	Yes	S3VEM
Manganese	Target	780		ug	780	D	15	Yes	S3VEM
Nickel	Target	60.0	U	ug	24.0	JD	15	Yes	S3VEM
Potassium	Target	7500	U	ug	7500	UD	15	Yes	S3VEM
Selenium	Target	4.5	J	ug	4.5	JD	15	Yes	S3VEM
Silver	Target	4.7	J	ug	4.7	JD	15	Yes	S3VEM
Sodium	Target	7500	U	ug	1650	JD	15	Yes	S3VEM
Thallium	Target	37.5	U	ug	37.5	UD	15	Yes	S3VEM
Vanadium	Target	75.0	U	ug	4.2	JD	15	Yes	S3VEM
Zinc	Target	231	J	ug	231	D	15	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAY9	Lab Code: BON

Sample Number: MBCAZ4	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CF01	pH:	Sample Date: 03/09/2016	Sample Time: 10:17:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	21300		ug	21300	D	50	Yes	S3VEM
Antimony	Target	14800		ug	14800	D	50	Yes	S3VEM
Arsenic	Target	550		ug	550	D	50	Yes	S3VEM
Barium	Target	1000	U	ug	150	JD	50	Yes	S3VEM
Beryllium	Target	25.0	U	ug	0.47	JD	50	Yes	S3VEM
Cadmium	Target	43.2		ug	43.2	D	50	Yes	S3VEM
Calcium	Target	26400		ug	26400	D	50	Yes	S3VEM
Chromium	Target	1190		ug	1190	D	50	Yes	S3VEM
Cobalt	Target	250	U	ug	30.3	JD	50	Yes	S3VEM
Copper	Target	1510		ug	1510	D	50	Yes	S3VEM
Iron	Target	249000		ug	249000	D	50	Yes	S3VEM
Lead	Target	114000		ug	114000	D	50	Yes	S3VEM
Magnesium	Target	25000	U	ug	21800	JD	50	Yes	S3VEM
Manganese	Target	914		ug	914	D	50	Yes	S3VEM
Nickel	Target	1090		ug	1090	D	50	Yes	S3VEM
Potassium	Target	801	J	ug	801	JD	50	Yes	S3VEM
Selenium	Target	175	U	ug	175	UD	50	Yes	S3VEM
Silver	Target	18.1	J	ug	18.1	JD	50	Yes	S3VEM
Sodium	Target	188000		ug	188000	D	50	Yes	S3VEM
Thallium	Target	125	U	ug	125	UD	50	Yes	S3VEM
Vanadium	Target	250	U	ug	91.4	JD	50	Yes	S3VEM
Zinc	Target	1890		ug	1890	D	50	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAY9	Lab Code: BON

Sample Number: MBCAZ5	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: BRC001-CF01	pH:	Sample Date: 03/09/2016	Sample Time: 10:19:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1000	U	ug	789	JD	50	Yes	S3VEM
Antimony	Target	3580		ug	3580	D	50	Yes	S3VEM
Arsenic	Target	159		ug	159	D	50	Yes	S3VEM
Barium	Target	1000	U	ug	239	JD	50	Yes	S3VEM
Beryllium	Target	25.0	U	ug	25.0	UD	50	Yes	S3VEM
Cadmium	Target	72.5		ug	72.5	D	50	Yes	S3VEM
Calcium	Target	25000	U	ug	2170	JD	50	Yes	S3VEM
Chromium	Target	70.1		ug	70.1	D	50	Yes	S3VEM
Cobalt	Target	250	U	ug	12.0	JD	50	Yes	S3VEM
Copper	Target	324		ug	324	D	50	Yes	S3VEM
Iron	Target	126000		ug	126000	D	50	Yes	S3VEM
Lead	Target	81800		ug	81800	D	50	Yes	S3VEM
Magnesium	Target	25000	U	ug	237	JD	50	Yes	S3VEM
Manganese	Target	594		ug	594	D	50	Yes	S3VEM
Nickel	Target	275		ug	275	D	50	Yes	S3VEM
Potassium	Target	25000	U	ug	25000	UD	50	Yes	S3VEM
Selenium	Target	175	U	ug	175	UD	50	Yes	S3VEM
Silver	Target	8.4	J	ug	8.4	JD	50	Yes	S3VEM
Sodium	Target	25000	U	ug	9900	JD	50	Yes	S3VEM
Thallium	Target	125	U	ug	125	UD	50	Yes	S3VEM
Vanadium	Target	250	U	ug	15.8	JD	50	Yes	S3VEM
Zinc	Target	352	J	ug	352	D	50	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAY9	Lab Code: BON

Sample Number: MBCBP1	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location: WP001-20160308-FB	pH:	Sample Date: 03/03/2016	Sample Time: 13:00:00
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	2.2	J	ug	2.2	J	1	Yes	S3VEM
Antimony	Target	0.84	J	ug	0.84	J	1	Yes	S3VEM
Arsenic	Target	0.34	J	ug	0.34	J	1	Yes	S3VEM
Barium	Target	0.13	J	ug	0.13	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.0052	J	ug	0.0052	J	1	Yes	S3VEM
Calcium	Target	75.3	J	ug	75.3	J	1	Yes	S3VEM
Chromium	Target	0.12	J	ug	0.12	J	1	Yes	S3VEM
Cobalt	Target	0.018	J	ug	0.018	J	1	Yes	S3VEM
Copper	Target	1.5	J	ug	1.5	J	1	Yes	S3VEM
Iron	Target	19.5		ug	19.5		1	Yes	S3VEM
Lead	Target	6.7		ug	6.7		1	Yes	S3VEM
Magnesium	Target	117	J	ug	117	J	1	Yes	S3VEM
Manganese	Target	0.29	J	ug	0.29	J	1	Yes	S3VEM
Nickel	Target	0.085	J	ug	0.085	J	1	Yes	S3VEM
Potassium	Target	81.0	J	ug	81.0	J	1	Yes	S3VEM
Selenium	Target	0.18	J	ug	0.18	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	323	J	ug	323	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	76.0		ug	76.0		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAY9	Lab Code: BON

Sample Number:	MBCBP2	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	WP001-20160309-FB	pH:		Sample Date:	03/03/2016	Sample Time:	14:50:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1.5	J	ug	1.5	J	1	Yes	S3VEM
Antimony	Target	0.61	J	ug	0.61	J	1	Yes	S3VEM
Arsenic	Target	0.31	J	ug	0.31	J	1	Yes	S3VEM
Barium	Target	0.12	J	ug	0.12	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.015	J	ug	0.015	J	1	Yes	S3VEM
Calcium	Target	60.2	J	ug	60.2	J	1	Yes	S3VEM
Chromium	Target	0.16	J	ug	0.16	J	1	Yes	S3VEM
Cobalt	Target	0.011	J	ug	0.011	J	1	Yes	S3VEM
Copper	Target	1.5	J	ug	1.5	J	1	Yes	S3VEM
Iron	Target	16.3		ug	16.3		1	Yes	S3VEM
Lead	Target	8.1		ug	8.1		1	Yes	S3VEM
Magnesium	Target	117	J	ug	117	J	1	Yes	S3VEM
Manganese	Target	0.33	J	ug	0.33	J	1	Yes	S3VEM
Nickel	Target	0.088	J	ug	0.088	J	1	Yes	S3VEM
Potassium	Target	80.8	J	ug	80.8	J	1	Yes	S3VEM
Selenium	Target	0.23	J	ug	0.23	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	322	J	ug	322	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	76.4		ug	76.4		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCAY9	Lab Code: BON

Sample Number: PBS01	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Antimony	Target	0.21	J	ug	0.21	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Barium	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Beryllium	Target	0.0044	J	ug	0.0044	J	1	Yes	S3VEM
Cadmium	Target	-.0082		ug	-.0082	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	500	U	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Iron	Target	10.0	U	ug	10.0	U	1	Yes	S3VEM
Lead	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Magnesium	Target	500	U	ug	500	U	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	1.5	U	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	ug	500	U	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	-.042		ug	-.042	J	1	Yes	S3VEM
Sodium	Target	500	U	ug	500	U	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	6.0	U	ug	6.0	U	1	Yes	S3VEM

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 20 (Wipes)
Analysis: Metals

SDG No.: MBCBM2
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/9/16
Validation SOP: HW-3a

QAPP
Contractor: Weston Solution
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
All samples have analytes that have been qualified J, J+ or J-.

Minor Findings:
None

COMMENT: The site-specific QAPP did not specify the project action levels for this site.

Reviewer Name(s): Constantin Stanca

Approver's Signature: **Date: 04/18/2016**

Name: **Narendra Kumar**

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results greater than or equal to MDLs but less than or equal to CRQLs. The associated CCB analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Detected analytes are qualified U. Non-detected analytes are not qualified. Sample results are elevated to CRQLs.

Barium MBCBN1, MBCBM2, MBCBM3, MBCBN8, MBCBP0, MBCBN6, MBCBM7, MBCBM5, MBCBN9, MBCBN3, MBCBN2, MBCBM6

Beryllium MBCBN5

Calcium MBCBM6, MBCBN9, MBCBN8, MBCBM2, MBCBP0, MBCBN1, MBCBM3, MBCBN3

Chromium MBCBN8, MBCBP0, MBCBM5

Cobalt MBCBN9, MBCBN8, MBCBN2, MBCBN3, MBCBM9, MBCBN1, MBCBM2, MBCBM7, MBCBM3, MBCBM5, MBCBN4, MBCBN7, MBCBN0, MBCBM6, MBCBN6, MBCBM8, MBCBP3, MBCBP0, MBCBN5, MBCBM4

Magnesium MBCBN1, MBCBM4, MBCBM2, MBCBN4, MBCBM9, MBCBM6, MBCBN8, MBCBN6, MBCBM3, MBCBP3, MBCBN2, MBCBP0, MBCBM7, MBCBN3, MBCBM8, MBCBN9, MBCBM5, MBCBN5, MBCBN0, MBCBN7

Nickel MBCBP0

Potassium MBCBN3, MBCBN1, MBCBN9, MBCBM9, MBCBP3, MBCBP0, MBCBM3, MBCBM4, MBCBN7, MBCBN5, MBCBM2, MBCBN8, MBCBM7, MBCBN2, MBCBM8, MBCBN0, MBCBN4, MBCBM5, MBCBM6, MBCBN6

Selenium MBCBM5, MBCBM9, MBCBM3, MBCBN0, MBCBN2, MBCBP0, MBCBN3, MBCBM7, MBCBN4, MBCBN6, MBCBN1, MBCBM8, MBCBM6, MBCBM2

Silver MBCBM9, MBCBN4, MBCBP0, MBCBN3, MBCBN2, MBCBN9, MBCBM6, MBCBM3, MBCBM2, MBCBN6, MBCBM7, MBCBN1, MBCBN0, MBCBN7, MBCBM5, MBCBM8, MBCBN8, MBCBM4

Sodium MBCBN3, MBCBM2, MBCBN6, MBCBM3

Thallium MBCBN9, MBCBP3, MBCBN5, MBCBM6, MBCBN1, MBCBM7, MBCBM4, MBCBM9, MBCBM5, MBCBM3, MBCBN7, MBCBM8, MBCBN4

Vanadium MBCBN4, MBCBM9, MBCBM7, MBCBP3, MBCBN8, MBCBM2, MBCBN3, MBCBM4, MBCBM8, MBCBN6, MBCBN9, MBCBN1, MBCBM5, MBCBN5, MBCBN2, MBCBM3, MBCBP0, MBCBM6, MBCBN0, MBCBN7

The following samples have analyte results greater than or equal to MDLs but less than or equal to CRQLs. The associated ICB analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Detected analytes are qualified U. Non-detected analytes are not qualified. Sample results are elevated to CRQLs.

Beryllium MBCBN5

Calcium MBCBM6, MBCBN9, MBCBN8, MBCBM2, MBCBP0, MBCBN1, MBCBM3, MBCBN3

Chromium MBCBN8, MBCBP0, MBCBM5

Cobalt MBCBN1, MBCBM2, MBCBM7, MBCBM3, MBCBN4, MBCBM5, MBCBN7, MBCBN0, MBCBM6, MBCBN6, MBCBM8, MBCBP3, MBCBP0, MBCBN8, MBCBN5, MBCBM9, MBCBN3, MBCBN2, MBCBN9, MBCBM4

Magnesium MBCBN1, MBCBN7, MBCBM2, MBCBN4, MBCBM9, MBCBM6, MBCBN8, MBCBN6, MBCBM3, MBCBP3, MBCBN2, MBCBP0, MBCBM7, MBCBN3, MBCBM8, MBCBN9, MBCBN5, MBCBM5, MBCBM4, MBCBN0

Nickel MBCBP0

Potassium MBCBN3, MBCBM2, MBCBM7, MBCBN2, MBCBM9, MBCBP3, MBCBP0, MBCBM6, MBCBM4, MBCBM3, MBCBM5, MBCBN6, MBCBN4, MBCBN7, MBCBN0, MBCBM8, MBCBN1, MBCBN5, MBCBN8, MBCBN9

Selenium MBCBN2, MBCBN0, MBCBM3, MBCBM9, MBCBM5, MBCBN3, MBCBM6, MBCBM8, MBCBN1, MBCBN6, MBCBN4, MBCBM7, MBCBM2, MBCBP0

Silver MBCBN8, MBCBN6, MBCBN3, MBCBP0, MBCBN7, MBCBM5, MBCBM4, MBCBN4, MBCBM8, MBCBM9, MBCBM6, MBCBN0, MBCBN2, MBCBM2, MBCBN1, MBCBM3, MBCBM7, MBCBN9

The following samples have analyte results greater than or equal to MDLs but less than or equal to CRQLs. The associated preparation blank analyte results are greater than or equal to MDLs but less than or equal to CRQLs. Detected analytes are qualified U. Non-detected analytes are not qualified. Sample results are elevated to CRQLs.

Barium MBCBN1, MBCBM2, MBCBM3, MBCBN8, MBCBP0, MBCBN6, MBCBM7, MBCBM5, MBCBN9, MBCBN3, MBCBN2, MBCBM6

Calcium MBCBM6, MBCBN9, MBCBN8, MBCBM2, MBCBP0, MBCBN1, MBCBM3, MBCBN3

Chromium MBCBN8, MBCBP0, MBCBM5

Magnesium MBCBN1, MBCBN7, MBCBM2, MBCBN4, MBCBM9, MBCBM6, MBCBN8, MBCBN6, MBCBM3, MBCBP3, MBCBN2, MBCBP0, MBCBM7, MBCBN3, MBCBM8, MBCBN9, MBCBN5, MBCBM5, MBCBM4, MBCBN0

Nickel MBCBP0

Potassium MBCBN3, MBCBM2, MBCBM7, MBCBN2, MBCBM9, MBCBP3, MBCBP0, MBCBM6,

MBCBM4, MBCBM3, MBCBM5, MBCBN6, MBCBN4, MBCBN7, MBCBN0, MBCBM8, MBCBN1, MBCBN5, MBCBN8, MBCBN9

Selenium MBCBN2, MBCBN0, MBCBM3, MBCBM9, MBCBM5, MBCBN3, MBCBM6, MBCBM8, MBCBN1, MBCBN6, MBCBN4, MBCBM7, MBCBM2, MBCBP0

Sodium MBCBN3, MBCBM2, MBCBN6, MBCBM3

The following samples are associated with PB with results greater than CRQLs. The samples have analyte results greater than CRQLs but less than 10x the associated PB results. Detects are qualified as J+.

Copper MBCBP0, MBCBM5, MBCBM7

Zinc MBCBN8, MBCBP3, MBCBM3, MBCBM8, MBCBM7, MBCBM5, MBCBN5, MBCBM9, MBCBN7, MBCBN3, MBCBN9, MBCBP0, MBCBM6, MBCBM4

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

Not applicable.

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate

value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

Not applicable.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

Not applicable.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

The following samples are associated with a LCS with percent recoveries greater than 130%. Detected analytes are qualified J+. Non-detected analytes are not qualified.

Copper, Sodium, Zinc MBCBM2, MBCBM3, MBCBM4, MBCBM5, MBCBM6, MBCBM7, MBCBM8, MBCBM9, MBCBN0, MBCBN1, MBCBN2, MBCBN3, MBCBN4, MBCBN5, MBCBN6, MBCBN7, MBCBN8, MBCBN9, MBCBP0, MBCBP3

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

Not applicable.

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

Not applicable.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBM2	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	44.1		ug	44.1		1	Yes	S3VEM
Antimony	Target	13.7		ug	13.7		1	Yes	S3VEM
Arsenic	Target	2.3		ug	2.3		1	Yes	S3VEM
Barium	Target	44.6		ug	44.6		1	Yes	S3VEM
Beryllium	Target	1.1		ug	1.1		1	Yes	S3VEM
Cadmium	Target	1.1		ug	1.1		1	Yes	S3VEM
Calcium	Target	1190		ug	1190		1	Yes	S3VEM
Chromium	Target	2.3		ug	2.3		1	Yes	S3VEM
Cobalt	Target	11.5		ug	11.5		1	Yes	S3VEM
Copper	Target	8.6		ug	8.6		1	Yes	S3VEM
Iron	Target	25.9		ug	25.9		1	Yes	S3VEM
Magnesium	Target	1110		ug	1110		1	Yes	S3VEM
Manganese	Target	3.9		ug	3.9		1	Yes	S3VEM
Nickel	Target	9.5		ug	9.5		1	Yes	S3VEM
Potassium	Target	1170		ug	1170		1	Yes	S3VEM
Selenium	Target	8.0		ug	8.0		1	Yes	S3VEM
Silver	Target	2.0		ug	2.0		1	Yes	S3VEM
Sodium	Target	1370		ug	1370		1	Yes	S3VEM
Thallium	Target	5.3		ug	5.3		1	Yes	S3VEM
Vanadium	Target	11.0		ug	11.0		1	Yes	S3VEM
Zinc	Target	160		ug	160		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number: LCS02	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	43.2		ug	43.2		1	Yes	S3VEM
Antimony	Target	12.2		ug	12.2		1	Yes	S3VEM
Arsenic	Target	1.9		ug	1.9		1	Yes	S3VEM
Barium	Target	43.5		ug	43.5		1	Yes	S3VEM
Beryllium	Target	1.0		ug	1.0		1	Yes	S3VEM
Cadmium	Target	1.1		ug	1.1		1	Yes	S3VEM
Calcium	Target	1120		ug	1120		1	Yes	S3VEM
Chromium	Target	2.4		ug	2.4		1	Yes	S3VEM
Cobalt	Target	10.8		ug	10.8		1	Yes	S3VEM
Copper	Target	5.1		ug	5.1		1	Yes	S3VEM
Iron	Target	22.4		ug	22.4		1	Yes	S3VEM
Lead	Target	2.2		ug	2.2		1	Yes	S3VEM
Magnesium	Target	1070		ug	1070		1	Yes	S3VEM
Manganese	Target	3.4		ug	3.4		1	Yes	S3VEM
Nickel	Target	9.0		ug	9.0		1	Yes	S3VEM
Potassium	Target	1040		ug	1040		1	Yes	S3VEM
Selenium	Target	6.8		ug	6.8		1	Yes	S3VEM
Silver	Target	2.0		ug	2.0		1	Yes	S3VEM
Sodium	Target	1060		ug	1060		1	Yes	S3VEM
Thallium	Target	5.1		ug	5.1		1	Yes	S3VEM
Vanadium	Target	10.8		ug	10.8		1	Yes	S3VEM
Zinc	Target	13.3		ug	13.3		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBM2	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP024-01	pH:		Sample Date:	03/09/2016	Sample Time:	08:56:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1290		ug	1290	D	5	Yes	S3VEM
Antimony	Target	1860		ug	1860	D	5	Yes	S3VEM
Arsenic	Target	132		ug	132	D	5	Yes	S3VEM
Barium	Target	100	U	ug	39.5	JD	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	21.3		ug	21.3	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	1230	JD	5	Yes	S3VEM
Chromium	Target	5.6		ug	5.6	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	0.56	JD	5	Yes	S3VEM
Copper	Target	85.4	J+	ug	85.4	D	5	Yes	S3VEM
Iron	Target	2710		ug	2710	D	5	Yes	S3VEM
Lead	Target	26900		ug	26900	D	15	Yes	S3VEM
Magnesium	Target	2500	U	ug	173	JD	5	Yes	S3VEM
Manganese	Target	16.2		ug	16.2	D	5	Yes	S3VEM
Nickel	Target	131		ug	131	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	100	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	7.3	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	0.75	JD	5	Yes	S3VEM
Sodium	Target	2500	UJ	ug	1710	JD	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	12.5	UD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	1.4	JD	5	Yes	S3VEM
Zinc	Target	5850	J+	ug	5850	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBM3	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP025-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:00:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	208		ug	208	D	5	Yes	S3VEM
Antimony	Target	4010		ug	4010	D	15	Yes	S3VEM
Arsenic	Target	141		ug	141	D	5	Yes	S3VEM
Barium	Target	100	U	ug	20.6	JD	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	7.2		ug	7.2	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	240	JD	5	Yes	S3VEM
Chromium	Target	16.5		ug	16.5	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	0.51	JD	5	Yes	S3VEM
Copper	Target	100	J+	ug	100	D	5	Yes	S3VEM
Iron	Target	2260		ug	2260	D	5	Yes	S3VEM
Lead	Target	28600		ug	28600	D	15	Yes	S3VEM
Magnesium	Target	2500	U	ug	136	JD	5	Yes	S3VEM
Manganese	Target	11.7		ug	11.7	D	5	Yes	S3VEM
Nickel	Target	229		ug	229	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	89.8	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	13.1	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	2.4	JD	5	Yes	S3VEM
Sodium	Target	2500	UJ	ug	505	JD	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	1.2	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	0.45	JD	5	Yes	S3VEM
Zinc	Target	385	J+	ug	385	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBM4	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP026-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:05:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	113		ug	113		1	Yes	S3VEM
Antimony	Target	558		ug	558	D	10	Yes	S3VEM
Arsenic	Target	67.4		ug	67.4		1	Yes	S3VEM
Barium	Target	26.7		ug	26.7		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	15.2		ug	15.2		1	Yes	S3VEM
Calcium	Target	1230		ug	1230		1	Yes	S3VEM
Chromium	Target	4.0		ug	4.0		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.37	J	1	Yes	S3VEM
Copper	Target	40.6	J+	ug	40.6		1	Yes	S3VEM
Iron	Target	1680		ug	1680		1	Yes	S3VEM
Lead	Target	12000		ug	12000	D	10	Yes	S3VEM
Magnesium	Target	500	U	ug	164	J	1	Yes	S3VEM
Manganese	Target	13.0		ug	13.0		1	Yes	S3VEM
Nickel	Target	64.5		ug	64.5		1	Yes	S3VEM
Potassium	Target	500	U	ug	114	J	1	Yes	S3VEM
Selenium	Target	5.3		ug	5.3		1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.28	J	1	Yes	S3VEM
Sodium	Target	1100	J+	ug	1100		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	0.78	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.90	J	1	Yes	S3VEM
Zinc	Target	441	J+	ug	441		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBM5	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP027-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:07:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	67.8		ug	67.8		1	Yes	S3VEM
Antimony	Target	336		ug	336		1	Yes	S3VEM
Arsenic	Target	29.1		ug	29.1		1	Yes	S3VEM
Barium	Target	20.0	U	ug	13.8	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	4.7		ug	4.7		1	Yes	S3VEM
Calcium	Target	2990		ug	2990		1	Yes	S3VEM
Chromium	Target	1.0	U	ug	1.0		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	1.7	J	1	Yes	S3VEM
Copper	Target	15.1	J+	ug	15.1		1	Yes	S3VEM
Iron	Target	883		ug	883		1	Yes	S3VEM
Lead	Target	5590		ug	5590	D	10	Yes	S3VEM
Magnesium	Target	500	U	ug	159	J	1	Yes	S3VEM
Manganese	Target	5.5		ug	5.5		1	Yes	S3VEM
Nickel	Target	20.2		ug	20.2		1	Yes	S3VEM
Potassium	Target	500	U	ug	75.9	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	1.4	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.20	J	1	Yes	S3VEM
Sodium	Target	793	J+	ug	793		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	0.21	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.39	J	1	Yes	S3VEM
Zinc	Target	227	J+	ug	227		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBM6	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP028-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:08:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	4570		ug	4570	D	5	Yes	S3VEM
Antimony	Target	2940		ug	2940	D	5	Yes	S3VEM
Arsenic	Target	154		ug	154	D	5	Yes	S3VEM
Barium	Target	100	U	ug	70.4	JD	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	25.7		ug	25.7	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	1540	JD	5	Yes	S3VEM
Chromium	Target	9.3		ug	9.3	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	6.1	JD	5	Yes	S3VEM
Copper	Target	98.0	J+	ug	98.0	D	5	Yes	S3VEM
Iron	Target	14400		ug	14400	D	5	Yes	S3VEM
Lead	Target	25200		ug	25200	D	15	Yes	S3VEM
Magnesium	Target	2500	U	ug	170	JD	5	Yes	S3VEM
Manganese	Target	64.3		ug	64.3	D	5	Yes	S3VEM
Nickel	Target	181		ug	181	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	95.6	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	11.4	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	1.8	JD	5	Yes	S3VEM
Sodium	Target	2680	J+	ug	2680	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	1.2	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	1.9	JD	5	Yes	S3VEM
Zinc	Target	211	J+	ug	211	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBM7	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP029-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:10:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	166		ug	166		1	Yes	S3VEM
Antimony	Target	214		ug	214		1	Yes	S3VEM
Arsenic	Target	22.7		ug	22.7		1	Yes	S3VEM
Barium	Target	20.0	U	ug	17.2	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	8.2		ug	8.2		1	Yes	S3VEM
Calcium	Target	1150		ug	1150		1	Yes	S3VEM
Chromium	Target	27.8		ug	27.8		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.45	J	1	Yes	S3VEM
Copper	Target	29.0	J+	ug	29.0		1	Yes	S3VEM
Iron	Target	1220		ug	1220		1	Yes	S3VEM
Lead	Target	9800		ug	9800	D	10	Yes	S3VEM
Magnesium	Target	500	U	ug	174	J	1	Yes	S3VEM
Manganese	Target	11.3		ug	11.3		1	Yes	S3VEM
Nickel	Target	23.8		ug	23.8		1	Yes	S3VEM
Potassium	Target	500	U	ug	122	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	1.1	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.20	J	1	Yes	S3VEM
Sodium	Target	1970	J+	ug	1970		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	0.31	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	1.5	J	1	Yes	S3VEM
Zinc	Target	164	J+	ug	164		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBM8	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP030-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:30:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1240		ug	1240	D	5	Yes	S3VEM
Antimony	Target	1590		ug	1590	D	5	Yes	S3VEM
Arsenic	Target	123		ug	123	D	5	Yes	S3VEM
Barium	Target	105		ug	105	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	28.6		ug	28.6	D	5	Yes	S3VEM
Calcium	Target	4960		ug	4960	D	5	Yes	S3VEM
Chromium	Target	16.1		ug	16.1	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	3.2	JD	5	Yes	S3VEM
Copper	Target	225	J+	ug	225	D	5	Yes	S3VEM
Iron	Target	11000		ug	11000	D	5	Yes	S3VEM
Lead	Target	24700		ug	24700	D	15	Yes	S3VEM
Magnesium	Target	2500	U	ug	589	JD	5	Yes	S3VEM
Manganese	Target	72.8		ug	72.8	D	5	Yes	S3VEM
Nickel	Target	98.1		ug	98.1	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	262	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	5.8	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	1.5	JD	5	Yes	S3VEM
Sodium	Target	5290	J+	ug	5290	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	1.0	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	4.6	JD	5	Yes	S3VEM
Zinc	Target	1200	J+	ug	1200	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBM9	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP031-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:32:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	97.4		ug	97.4		1	Yes	S3VEM
Antimony	Target	358		ug	358		1	Yes	S3VEM
Arsenic	Target	32.5		ug	32.5		1	Yes	S3VEM
Barium	Target	36.3		ug	36.3		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	6.5		ug	6.5		1	Yes	S3VEM
Calcium	Target	835		ug	835		1	Yes	S3VEM
Chromium	Target	4.1		ug	4.1		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.50	J	1	Yes	S3VEM
Copper	Target	105	J+	ug	105		1	Yes	S3VEM
Iron	Target	1490		ug	1490		1	Yes	S3VEM
Lead	Target	7950		ug	7950	D	10	Yes	S3VEM
Magnesium	Target	500	U	ug	158	J	1	Yes	S3VEM
Manganese	Target	12.7		ug	12.7		1	Yes	S3VEM
Nickel	Target	24.2		ug	24.2		1	Yes	S3VEM
Potassium	Target	500	U	ug	117	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	1.4	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.31	J	1	Yes	S3VEM
Sodium	Target	2120	J+	ug	2120		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	0.17	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.66	J	1	Yes	S3VEM
Zinc	Target	564	J+	ug	564		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBN0	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP032-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:35:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1200		ug	1200	D	5	Yes	S3VEM
Antimony	Target	2220		ug	2220	D	5	Yes	S3VEM
Arsenic	Target	164		ug	164	D	5	Yes	S3VEM
Barium	Target	114		ug	114	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	52.2		ug	52.2	D	5	Yes	S3VEM
Calcium	Target	8720		ug	8720	D	5	Yes	S3VEM
Chromium	Target	16.5		ug	16.5	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	2.0	JD	5	Yes	S3VEM
Copper	Target	167	J+	ug	167	D	5	Yes	S3VEM
Iron	Target	11100		ug	11100	D	5	Yes	S3VEM
Lead	Target	21400		ug	21400	D	15	Yes	S3VEM
Magnesium	Target	2500	U	ug	781	JD	5	Yes	S3VEM
Manganese	Target	92.8		ug	92.8	D	5	Yes	S3VEM
Nickel	Target	130		ug	130	D	5	Yes	S3VEM
Potassium	Target	500	U	ug	426	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	7.1	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	1.7	JD	5	Yes	S3VEM
Sodium	Target	8560	J+	ug	8560	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	12.5	UD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	7.4	JD	5	Yes	S3VEM
Zinc	Target	1780	J+	ug	1780	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBN1	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP033-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:42:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	469		ug	469	D	5	Yes	S3VEM
Antimony	Target	3350		ug	3350	D	5	Yes	S3VEM
Arsenic	Target	210		ug	210	D	5	Yes	S3VEM
Barium	Target	100	U	ug	74.2	JD	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	20.7		ug	20.7	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	1700	JD	5	Yes	S3VEM
Chromium	Target	8.3		ug	8.3	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	1.2	JD	5	Yes	S3VEM
Copper	Target	558	J+	ug	558	D	5	Yes	S3VEM
Iron	Target	7180		ug	7180	D	5	Yes	S3VEM
Lead	Target	28100		ug	28100	D	15	Yes	S3VEM
Magnesium	Target	2500	U	ug	245	JD	5	Yes	S3VEM
Manganese	Target	48.2		ug	48.2	D	5	Yes	S3VEM
Nickel	Target	145		ug	145	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	432	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	4.4	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	4.8	JD	5	Yes	S3VEM
Sodium	Target	4550	J+	ug	4550	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	1.2	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	2.3	JD	5	Yes	S3VEM
Zinc	Target	2300	J+	ug	2300	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBN2	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP034-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:48:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5080		ug	5080	D	20	Yes	S3VEM
Antimony	Target	19000		ug	19000	D	15	Yes	S3VEM
Arsenic	Target	2070		ug	2070	D	20	Yes	S3VEM
Barium	Target	400	U	ug	113	JD	20	Yes	S3VEM
Beryllium	Target	10.0	U	ug	10.0	UD	20	Yes	S3VEM
Cadmium	Target	126		ug	126	D	20	Yes	S3VEM
Calcium	Target	10600		ug	10600	D	20	Yes	S3VEM
Chromium	Target	63.0		ug	63.0	D	20	Yes	S3VEM
Cobalt	Target	100	U	ug	11.2	JD	20	Yes	S3VEM
Copper	Target	12600	J+	ug	12600	D	20	Yes	S3VEM
Iron	Target	54000		ug	54000	D	20	Yes	S3VEM
Lead	Target	33800		ug	33800	D	15	Yes	S3VEM
Magnesium	Target	10000	U	ug	865	JD	20	Yes	S3VEM
Manganese	Target	281		ug	281	D	20	Yes	S3VEM
Nickel	Target	809		ug	809	D	20	Yes	S3VEM
Potassium	Target	10000	U	ug	466	JD	20	Yes	S3VEM
Selenium	Target	70.0	U	ug	35.8	JD	20	Yes	S3VEM
Silver	Target	20.0	U	ug	11.4	JD	20	Yes	S3VEM
Sodium	Target	23700	J+	ug	23700	D	20	Yes	S3VEM
Thallium	Target	50.0	U	ug	50.0	UD	20	Yes	S3VEM
Vanadium	Target	100	U	ug	17.5	JD	20	Yes	S3VEM
Zinc	Target	47000	J+	ug	47000	D	20	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBN3	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP035-01	pH:		Sample Date:	03/09/2016	Sample Time:	09:50:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	489		ug	489	D	5	Yes	S3VEM
Antimony	Target	3880		ug	3880	D	5	Yes	S3VEM
Arsenic	Target	240		ug	240	D	5	Yes	S3VEM
Barium	Target	100	U	ug	44.6	JD	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	22.5		ug	22.5	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	662	JD	5	Yes	S3VEM
Chromium	Target	8.8		ug	8.8	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	1.9	JD	5	Yes	S3VEM
Copper	Target	154	J+	ug	154	D	5	Yes	S3VEM
Iron	Target	23800		ug	23800	D	5	Yes	S3VEM
Lead	Target	27700		ug	27700	D	15	Yes	S3VEM
Magnesium	Target	2500	U	ug	163	JD	5	Yes	S3VEM
Manganese	Target	115		ug	115	D	5	Yes	S3VEM
Nickel	Target	144		ug	144	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	85.1	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	4.5	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	2.0	JD	5	Yes	S3VEM
Sodium	Target	2500	UJ	ug	1160	JD	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	12.5	UD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	2.3	JD	5	Yes	S3VEM
Zinc	Target	1070	J+	ug	1070	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBN4	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP036-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:25:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	583		ug	583	D	5	Yes	S3VEM
Antimony	Target	4170		ug	4170	D	15	Yes	S3VEM
Arsenic	Target	246		ug	246	D	5	Yes	S3VEM
Barium	Target	118		ug	118	D	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	53.4		ug	53.4	D	5	Yes	S3VEM
Calcium	Target	3500		ug	3500	D	5	Yes	S3VEM
Chromium	Target	13.4		ug	13.4	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	1.7	JD	5	Yes	S3VEM
Copper	Target	311	J+	ug	311	D	5	Yes	S3VEM
Iron	Target	9510		ug	9510	D	5	Yes	S3VEM
Lead	Target	19700		ug	19700	D	15	Yes	S3VEM
Magnesium	Target	2500	U	ug	376	JD	5	Yes	S3VEM
Manganese	Target	58.1		ug	58.1	D	5	Yes	S3VEM
Nickel	Target	268		ug	268	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	181	JD	5	Yes	S3VEM
Selenium	Target	17.5	U	ug	11.9	JD	5	Yes	S3VEM
Silver	Target	5.0	U	ug	2.0	JD	5	Yes	S3VEM
Sodium	Target	4760	J+	ug	4760	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	0.85	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	5.2	JD	5	Yes	S3VEM
Zinc	Target	2710	J+	ug	2710	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBN5	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP037-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:26:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1050		ug	1050		1	Yes	S3VEM
Antimony	Target	1320		ug	1320	D	15	Yes	S3VEM
Arsenic	Target	101		ug	101		1	Yes	S3VEM
Barium	Target	1050		ug	1050		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.016	J	1	Yes	S3VEM
Cadmium	Target	23.0		ug	23.0		1	Yes	S3VEM
Calcium	Target	1400		ug	1400		1	Yes	S3VEM
Chromium	Target	4.9		ug	4.9		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	2.1	J	1	Yes	S3VEM
Copper	Target	289	J+	ug	289		1	Yes	S3VEM
Iron	Target	5280		ug	5280		1	Yes	S3VEM
Lead	Target	18100		ug	18100	D	15	Yes	S3VEM
Magnesium	Target	500	U	ug	193	J	1	Yes	S3VEM
Manganese	Target	48.0		ug	48.0		1	Yes	S3VEM
Nickel	Target	88.7		ug	88.7		1	Yes	S3VEM
Potassium	Target	500	U	ug	252	J	1	Yes	S3VEM
Selenium	Target	4.3		ug	4.3		1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.3		1	Yes	S3VEM
Sodium	Target	2340	J+	ug	2340		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	0.97	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	1.7	J	1	Yes	S3VEM
Zinc	Target	329	J+	ug	329		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBN6	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP038-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:30:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	4650		ug	4650	D	40	Yes	S3VEM
Antimony	Target	28500		ug	28500	D	40	Yes	S3VEM
Arsenic	Target	1480		ug	1480	D	40	Yes	S3VEM
Barium	Target	800	U	ug	19.9	JD	40	Yes	S3VEM
Beryllium	Target	20.0	U	ug	20.0	UD	40	Yes	S3VEM
Cadmium	Target	216		ug	216	D	40	Yes	S3VEM
Calcium	Target	28000		ug	28000	D	40	Yes	S3VEM
Chromium	Target	123		ug	123	D	40	Yes	S3VEM
Cobalt	Target	200	U	ug	20.8	JD	40	Yes	S3VEM
Copper	Target	2160	J+	ug	2160	D	40	Yes	S3VEM
Iron	Target	134000		ug	134000	D	40	Yes	S3VEM
Lead	Target	74500		ug	74500	D	25	Yes	S3VEM
Magnesium	Target	20000	U	ug	1520	JD	40	Yes	S3VEM
Manganese	Target	748		ug	748	D	40	Yes	S3VEM
Nickel	Target	1280		ug	1280	D	40	Yes	S3VEM
Potassium	Target	20000	U	ug	397	JD	40	Yes	S3VEM
Selenium	Target	140	U	ug	86.6	JD	40	Yes	S3VEM
Silver	Target	40.0	U	ug	17.4	JD	40	Yes	S3VEM
Sodium	Target	20000	UJ	ug	19500	JD	40	Yes	S3VEM
Thallium	Target	100	U	ug	100	UD	40	Yes	S3VEM
Vanadium	Target	200	U	ug	35.7	JD	40	Yes	S3VEM
Zinc	Target	6990	J+	ug	6990	D	40	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBN7	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP039-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:34:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	158		ug	158		1	Yes	S3VEM
Antimony	Target	852		ug	852	D	15	Yes	S3VEM
Arsenic	Target	236		ug	236		1	Yes	S3VEM
Barium	Target	21.0		ug	21.0		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	9.5		ug	9.5		1	Yes	S3VEM
Calcium	Target	822		ug	822		1	Yes	S3VEM
Chromium	Target	3.8		ug	3.8		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.43	J	1	Yes	S3VEM
Copper	Target	91.0	J+	ug	91.0		1	Yes	S3VEM
Iron	Target	1820		ug	1820		1	Yes	S3VEM
Lead	Target	13800		ug	13800	D	15	Yes	S3VEM
Magnesium	Target	500	U	ug	183	J	1	Yes	S3VEM
Manganese	Target	10.7		ug	10.7		1	Yes	S3VEM
Nickel	Target	73.4		ug	73.4		1	Yes	S3VEM
Potassium	Target	500	U	ug	126	J	1	Yes	S3VEM
Selenium	Target	5.5		ug	5.5		1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.37	J	1	Yes	S3VEM
Sodium	Target	1410	J+	ug	1410		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	0.60	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	1.2	J	1	Yes	S3VEM
Zinc	Target	293	J+	ug	293		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBN8	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP040-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:37:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	677		ug	677	D	5	Yes	S3VEM
Antimony	Target	2980		ug	2980	D	5	Yes	S3VEM
Arsenic	Target	190		ug	190	D	5	Yes	S3VEM
Barium	Target	100	U	ug	44.0	JD	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	24.6		ug	24.6	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	1250	JD	5	Yes	S3VEM
Chromium	Target	5.0	U	ug	3.9	JD	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	1.1	JD	5	Yes	S3VEM
Copper	Target	286	J+	ug	286	D	5	Yes	S3VEM
Iron	Target	2700		ug	2700	D	5	Yes	S3VEM
Lead	Target	26500		ug	26500	D	15	Yes	S3VEM
Magnesium	Target	2500	U	ug	249	JD	5	Yes	S3VEM
Manganese	Target	16.8		ug	16.8	D	5	Yes	S3VEM
Nickel	Target	244		ug	244	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	137	JD	5	Yes	S3VEM
Selenium	Target	20.4		ug	20.4	D	5	Yes	S3VEM
Silver	Target	5.0	U	ug	1.0	JD	5	Yes	S3VEM
Sodium	Target	2940	J+	ug	2940	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	12.5	UD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	2.1	JD	5	Yes	S3VEM
Zinc	Target	926	J+	ug	926	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBN9	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP041-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:40:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1200		ug	1200	D	5	Yes	S3VEM
Antimony	Target	3990		ug	3990	D	15	Yes	S3VEM
Arsenic	Target	311		ug	311	D	5	Yes	S3VEM
Barium	Target	100	U	ug	80.6	JD	5	Yes	S3VEM
Beryllium	Target	2.5	U	ug	2.5	UD	5	Yes	S3VEM
Cadmium	Target	39.9		ug	39.9	D	5	Yes	S3VEM
Calcium	Target	2500	U	ug	2460	JD	5	Yes	S3VEM
Chromium	Target	7.1		ug	7.1	D	5	Yes	S3VEM
Cobalt	Target	25.0	U	ug	1.6	JD	5	Yes	S3VEM
Copper	Target	404	J+	ug	404	D	5	Yes	S3VEM
Iron	Target	6500		ug	6500	D	5	Yes	S3VEM
Lead	Target	25900		ug	25900	D	15	Yes	S3VEM
Magnesium	Target	2500	U	ug	323	JD	5	Yes	S3VEM
Manganese	Target	37.1		ug	37.1	D	5	Yes	S3VEM
Nickel	Target	257		ug	257	D	5	Yes	S3VEM
Potassium	Target	2500	U	ug	176	JD	5	Yes	S3VEM
Selenium	Target	17.9		ug	17.9	D	5	Yes	S3VEM
Silver	Target	5.0	U	ug	1.8	JD	5	Yes	S3VEM
Sodium	Target	4930	J+	ug	4930	D	5	Yes	S3VEM
Thallium	Target	12.5	U	ug	0.90	JD	5	Yes	S3VEM
Vanadium	Target	25.0	U	ug	3.5	JD	5	Yes	S3VEM
Zinc	Target	953	J+	ug	953	D	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBP0	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CM01-WP042-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:45:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	21.5		ug	21.5		1	Yes	S3VEM
Antimony	Target	33.0		ug	33.0		1	Yes	S3VEM
Arsenic	Target	2.3		ug	2.3		1	Yes	S3VEM
Barium	Target	20.0	U	ug	1.4	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.71		ug	0.71		1	Yes	S3VEM
Calcium	Target	500	U	ug	328	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.62	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.054	J	1	Yes	S3VEM
Copper	Target	5.9	J+	ug	5.9		1	Yes	S3VEM
Iron	Target	212		ug	212		1	Yes	S3VEM
Lead	Target	469		ug	469		1	Yes	S3VEM
Magnesium	Target	500	U	ug	127	J	1	Yes	S3VEM
Manganese	Target	1.8		ug	1.8		1	Yes	S3VEM
Nickel	Target	4.0	U	ug	2.3	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	94.6	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.23	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.062	J	1	Yes	S3VEM
Sodium	Target	1330	J+	ug	1330		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.083	J	1	Yes	S3VEM
Zinc	Target	88.2	J+	ug	88.2		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number:	MBCBP3	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CS01-WP001-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:13:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	308		ug	308		1	Yes	S3VEM
Antimony	Target	754		ug	754		1	Yes	S3VEM
Arsenic	Target	119		ug	119		1	Yes	S3VEM
Barium	Target	143		ug	143		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	1450		ug	1450		1	Yes	S3VEM
Calcium	Target	845		ug	845		1	Yes	S3VEM
Chromium	Target	10.6		ug	10.6		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	1.7	J	1	Yes	S3VEM
Copper	Target	143	J+	ug	143		1	Yes	S3VEM
Iron	Target	16600		ug	16600		1	Yes	S3VEM
Lead	Target	36800		ug	36800	D	15	Yes	S3VEM
Magnesium	Target	500	U	ug	155	J	1	Yes	S3VEM
Manganese	Target	127		ug	127		1	Yes	S3VEM
Nickel	Target	50.9		ug	50.9		1	Yes	S3VEM
Potassium	Target	500	U	ug	140	J	1	Yes	S3VEM
Selenium	Target	14.6		ug	14.6		1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.3		1	Yes	S3VEM
Sodium	Target	4210	J+	ug	4210		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	1.4	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	2.4	J	1	Yes	S3VEM
Zinc	Target	308	J+	ug	308		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number: PBF01	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1.8	J	ug	1.8	J	1	Yes	S3VEM
Antimony	Target	0.81	J	ug	0.81	J	1	Yes	S3VEM
Arsenic	Target	0.34	J	ug	0.34	J	1	Yes	S3VEM
Barium	Target	0.15	J	ug	0.15	J	1	Yes	S3VEM
Beryllium	Target	-.0035		ug	-.0035	J	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Calcium	Target	55.1	J	ug	55.1	J	1	Yes	S3VEM
Chromium	Target	0.094	J	ug	0.094	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Copper	Target	3.2		ug	3.2	J	1	Yes	S3VEM
Iron	Target	18.0		ug	18.0	J	1	Yes	S3VEM
Magnesium	Target	126	J	ug	126	J	1	Yes	S3VEM
Manganese	Target	0.48	J	ug	0.48	J	1	Yes	S3VEM
Nickel	Target	0.23	J	ug	0.23	J	1	Yes	S3VEM
Potassium	Target	81.2		ug	81.2	J	1	Yes	S3VEM
Selenium	Target	0.26	J	ug	0.26	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	306	J	ug	306	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	149		ug	149	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBM2	Lab Code: BON

Sample Number: PBF02	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1.5	J	ug	1.5	J	1	Yes	S3VEM
Antimony	Target	0.14	J	ug	0.14	J	1	Yes	S3VEM
Arsenic	Target	-.088		ug	-.088	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Beryllium	Target	0.0038	J	ug	0.0038	J	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Calcium	Target	6.0	J	ug	6.0	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Cobalt	Target	-.026		ug	-.026	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Iron	Target	10.0	U	ug	10.0	U	1	Yes	S3VEM
Lead	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Magnesium	Target	1.5	J	ug	1.5	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	1.5	U	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	ug	500	U	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	500	U	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	6.0	U	ug	6.0	U	1	Yes	S3VEM

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
DESA/HWSB/HWSS
2890, Woodbridge Avenue, Edison, NJ 08837

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 16 (Wipes)
Analysis: Metals

SDG No.: MBCBP4
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/10/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solutions
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
Samples MBCBP5 and MBCBQ8 have analytes that have been qualified J, J+ or J-.

Minor Findings:
None

COMMENT: The site-specific QAPP did not specify the project action levels for this site.

Reviewer Name(s): Jianwei Huang

Approver's Signature: **Date: 04/15/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Aluminum MBCBP8, MBCBQ0, MBCBP7, MBCBP9, MBCBP5, MBCBP6, MBCBQ6, MBCBQ8, MBCBQ9, MBCBQ1

Antimony MBCBQ8, MBCBP8, MBCBQ6, MBCBP9, MBCBQ9, MBCBQ1, MBCBP5, MBCBP6, MBCBP7, MBCBQ0

Arsenic MBCBQ6, MBCBP9, MBCBP5, MBCBP7, MBCBQ7, MBCBQ8, MBCBQ0, MBCBQ1, MBCBP6, MBCBQ9, MBCBP8

Barium MBCBQ2, MBCBQ4, MBCBP6, MBCBP5, MBCBQ9, MBCBQ6, MBCBP9, MBCBQ8, MBCBP8, MBCBQ0, MBCBP7, MBCBQ7, MBCBQ1

Beryllium MBCBQ8, MBCBQ7, MBCBQ3, MBCBP4

Cadmium MBCBQ1, MBCBQ2, MBCBQ4, MBCBQ0, MBCBQ7, MBCBQ8, MBCBP9, MBCBQ6, MBCBP8, MBCBP5, MBCBP6, MBCBP7, MBCBQ9

Calcium MBCBQ4, MBCBQ0, MBCBQ2, MBCBP6, MBCBP7, MBCBQ6, MBCBQ1, MBCBP9, MBCBQ8, MBCBQ9, MBCBP8, MBCBP4, MBCBP5

Chromium MBCBQ7, MBCBQ8, MBCBQ6, MBCBP8, MBCBP7, MBCBP9, MBCBP6, MBCBQ4, MBCBP5, MBCBQ1, MBCBQ9, MBCBQ0

Cobalt MBCBQ0, MBCBP8, MBCBQ3, MBCBP6, MBCBP5, MBCBQ1, MBCBQ4, MBCBQ9, MBCBP7, MBCBP9, MBCBQ6, MBCBQ5, MBCBQ7, MBCBQ2

Copper MBCBP6, MBCBQ8, MBCBQ9, MBCBP5, MBCBP8, MBCBQ6, MBCBP7, MBCBQ1, MBCBQ0, MBCBP9

Magnesium MBCBQ7, MBCBQ9, MBCBP5, MBCBP9, MBCBQ6, MBCBQ8, MBCBP8, MBCBQ5, MBCBQ0, MBCBQ1, MBCBP4, MBCBP7, MBCBP6, MBCBQ4, MBCBQ3, MBCBQ2

Manganese MBCBP6, MBCBQ4, MBCBQ0, MBCBQ1, MBCBQ8, MBCBP7, MBCBP5, MBCBP9, MBCBQ9, MBCBP8, MBCBQ7, MBCBQ6
Nickel MBCBP6, MBCBQ4, MBCBQ2, MBCBP8, MBCBQ0, MBCBP7, MBCBQ7, MBCBP5, MBCBQ1, MBCBP9, MBCBQ8, MBCBQ9, MBCBQ6

Potassium MBCBQ9, MBCBQ8, MBCBP5, MBCBP6, MBCBQ7, MBCBP8, MBCBP4, MBCBQ0, MBCBQ4, MBCBQ5, MBCBQ1, MBCBP9, MBCBQ2, MBCBQ6, MBCBQ3, MBCBP7

Selenium MBCBP5, MBCBP7, MBCBQ9, MBCBQ8, MBCBQ6, MBCBQ7, MBCBQ2, MBCBQ1, MBCBP9, MBCBP6

Sodium MBCBQ2, MBCBQ4, MBCBP6, MBCBP9, MBCBP7, MBCBQ8, MBCBQ6, MBCBQ0, MBCBQ1, MBCBP5, MBCBQ9, MBCBP8, MBCBQ7

Vanadium MBCBP6, MBCBQ0, MBCBQ5, MBCBQ2, MBCBP7, MBCBQ7, MBCBQ1, MBCBQ4, MBCBQ6, MBCBQ9

The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Arsenic MBCBP5, MBCBQ8, MBCBQ6, MBCBQ1, MBCBP7, MBCBQ7, MBCBP6, MBCBP8, MBCBQ9, MBCBP9, MBCBQ0

Barium MBCBQ6, MBCBP8, MBCBQ9, MBCBQ7, MBCBQ1, MBCBP6, MBCBQ8, MBCBQ4, MBCBP5, MBCBP9, MBCBQ2, MBCBP7, MBCBQ0

Beryllium MBCBP4, MBCBQ8, MBCBQ7, MBCBQ3

Cadmium MBCBP9, MBCBQ8, MBCBQ9, MBCBQ0, MBCBQ4, MBCBQ2, MBCBQ1, MBCBQ7, MBCBP7, MBCBP6, MBCBP5, MBCBP8, MBCBQ6

Chromium MBCBP6, MBCBQ8, MBCBQ0, MBCBQ7, MBCBP7, MBCBQ1, MBCBQ6, MBCBP9, MBCBQ4, MBCBP5, MBCBQ9, MBCBP8

Cobalt MBCBQ0, MBCBP8, MBCBQ3, MBCBP6, MBCBP5, MBCBQ1, MBCBQ2, MBCBQ9, MBCBP7, MBCBP9, MBCBQ6, MBCBQ5, MBCBQ7, MBCBQ4

Magnesium MBCBQ1, MBCBQ5, MBCBQ9, MBCBQ0, MBCBQ3, MBCBQ2, MBCBP5, MBCBQ7, MBCBQ4, MBCBP6, MBCBP9, MBCBP7, MBCBQ6, MBCBQ8, MBCBP8, MBCBP4

Selenium MBCBQ8, MBCBQ9, MBCBP7, MBCBQ6, MBCBP5, MBCBP9, MBCBQ1, MBCBQ2, MBCBQ7, MBCBP6

Silver MBCBQ5, MBCBQ3, MBCBQ7

Vanadium MBCBQ2, MBCBQ0, MBCBQ4, MBCBQ7, MBCBQ1, MBCBQ5, MBCBQ9, MBCBP7, MBCBQ6, MBCBP6

The following samples are associated with PB with results greater than CRQLs. The samples have analyte results greater than CRQLs but less than 10x the associated PB results. Detects are qualified as J+.

Lead MBCBP5, MBCBQ8

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the

interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

Not applicable.

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

Not applicable.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

Not applicable.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which

must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

Not applicable.

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

Not applicable.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBP4	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :	100		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	45.0		ug	45.0		1	Yes	S3VEM
Antimony	Target	13.9		ug	13.9		1	Yes	S3VEM
Arsenic	Target	2.5		ug	2.5		1	Yes	S3VEM
Barium	Target	47.6		ug	47.6		1	Yes	S3VEM
Beryllium	Target	1.1		ug	1.1		1	Yes	S3VEM
Cadmium	Target	1.1		ug	1.1		1	Yes	S3VEM
Calcium	Target	1140		ug	1140		1	Yes	S3VEM
Chromium	Target	2.5		ug	2.5		1	Yes	S3VEM
Cobalt	Target	11.6		ug	11.6		1	Yes	S3VEM
Copper	Target	8.8		ug	8.8		1	Yes	S3VEM
Iron	Target	25.3		ug	25.3		1	Yes	S3VEM
Lead	Target	2.7		ug	2.7		1	Yes	S3VEM
Magnesium	Target	1120		ug	1120		1	Yes	S3VEM
Manganese	Target	3.7		ug	3.7		1	Yes	S3VEM
Nickel	Target	9.4		ug	9.4		1	Yes	S3VEM
Potassium	Target	1140		ug	1140		1	Yes	S3VEM
Selenium	Target	8.4		ug	8.4		1	Yes	S3VEM
Silver	Target	2.1		ug	2.1		1	Yes	S3VEM
Sodium	Target	1400		ug	1400		1	Yes	S3VEM
Thallium	Target	5.4		ug	5.4		1	Yes	S3VEM
Vanadium	Target	11.3		ug	11.3		1	Yes	S3VEM
Zinc	Target	158		ug	158		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number: LCS02	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	40.1		ug	40.1		1	Yes	S3VEM
Antimony	Target	12.4		ug	12.4		1	Yes	S3VEM
Arsenic	Target	1.8		ug	1.8		1	Yes	S3VEM
Barium	Target	43.8		ug	43.8		1	Yes	S3VEM
Beryllium	Target	1.0		ug	1.0		1	Yes	S3VEM
Cadmium	Target	1.0		ug	1.0		1	Yes	S3VEM
Calcium	Target	1030		ug	1030		1	Yes	S3VEM
Chromium	Target	2.2		ug	2.2		1	Yes	S3VEM
Cobalt	Target	10.7		ug	10.7		1	Yes	S3VEM
Copper	Target	5.0		ug	5.0		1	Yes	S3VEM
Iron	Target	20.0		ug	20.0		1	Yes	S3VEM
Lead	Target	2.0		ug	2.0		1	Yes	S3VEM
Magnesium	Target	944		ug	944		1	Yes	S3VEM
Manganese	Target	3.1		ug	3.1		1	Yes	S3VEM
Nickel	Target	8.7		ug	8.7		1	Yes	S3VEM
Potassium	Target	987		ug	987		1	Yes	S3VEM
Selenium	Target	7.0		ug	7.0		1	Yes	S3VEM
Silver	Target	1.9		ug	1.9		1	Yes	S3VEM
Sodium	Target	1020		ug	1020		1	Yes	S3VEM
Thallium	Target	5.0		ug	5.0		1	Yes	S3VEM
Vanadium	Target	10.5		ug	10.5		1	Yes	S3VEM
Zinc	Target	12.4		ug	12.4		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number:	MBCBP4	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-CS01-WP002-01	pH:		Sample Date:	03/09/2016	Sample Time:	10:14:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	5720		ug	5720		1	Yes	S3VEM
Antimony	Target	6680		ug	6680	D	30	Yes	S3VEM
Arsenic	Target	700		ug	700	D	30	Yes	S3VEM
Barium	Target	83.9		ug	83.9		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.053	J	1	Yes	S3VEM
Cadmium	Target	170		ug	170		1	Yes	S3VEM
Calcium	Target	15000	U	ug	6400	JD	30	Yes	S3VEM
Chromium	Target	107		ug	107		1	Yes	S3VEM
Cobalt	Target	8.7		ug	8.7		1	Yes	S3VEM
Copper	Target	955		ug	955		1	Yes	S3VEM
Iron	Target	102000		ug	102000	D	30	Yes	S3VEM
Lead	Target	65900		ug	65900	D	30	Yes	S3VEM
Magnesium	Target	15000	U	ug	790	JD	30	Yes	S3VEM
Manganese	Target	391		ug	391		1	Yes	S3VEM
Nickel	Target	614		ug	614		1	Yes	S3VEM
Potassium	Target	500	U	ug	449	J	1	Yes	S3VEM
Selenium	Target	65.1		ug	65.1		1	Yes	S3VEM
Silver	Target	9.2		ug	9.2		1	Yes	S3VEM
Sodium	Target	49500		ug	49500	D	30	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	18.5		ug	18.5		1	Yes	S3VEM
Zinc	Target	718		ug	718		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number:	MBCBP5	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP001-01	pH:		Sample Date:	03/10/2016	Sample Time:	10:42:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	4.2	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	1.1	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.42	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	0.43	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.015	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	178	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.098	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.019	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	1.9	J	1	Yes	S3VEM
Iron	Target	23.3		ug	23.3		1	Yes	S3VEM
Lead	Target	20.2	J+	ug	20.2		1	Yes	S3VEM
Magnesium	Target	500	U	ug	112	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	0.35	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	0.088	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	104	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.24	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	367	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	76.9		ug	76.9		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number:	MBCBP6	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP002-01	pH:		Sample Date:	03/10/2016	Sample Time:	09:18:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	14.7	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	2.9	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.54	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	1.0	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.053	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	344	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.48	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.025	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.2	J	1	Yes	S3VEM
Iron	Target	57.7		ug	57.7		1	Yes	S3VEM
Lead	Target	81.6		ug	81.6		1	Yes	S3VEM
Magnesium	Target	500	U	ug	118	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	0.93	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	0.34	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	107	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.29	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	434	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.13	J	1	Yes	S3VEM
Zinc	Target	74.9		ug	74.9		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number:	MBCBP7	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP003-01	pH:		Sample Date:	03/10/2016	Sample Time:	09:22:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	9.1	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	2.5	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.50	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	0.87	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.032	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	265	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.18	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.020	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.1	J	1	Yes	S3VEM
Iron	Target	32.0		ug	32.0		1	Yes	S3VEM
Lead	Target	54.5		ug	54.5		1	Yes	S3VEM
Magnesium	Target	500	U	ug	113	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	0.51	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	0.20	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	104	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.30	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	440	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.064	J	1	Yes	S3VEM
Zinc	Target	76.0		ug	76.0		1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBP4	Lab Code:	BON

Sample Number:	MBCBP8	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP004-01	pH:		Sample Date:	03/10/2016	Sample Time:	09:25:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	5.9	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	2.2	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.41	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	0.41	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.058	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	197	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.11	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.020	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.2	J	1	Yes	S3VEM
Iron	Target	26.0		ug	26.0		1	Yes	S3VEM
Lead	Target	45.0		ug	45.0		1	Yes	S3VEM
Magnesium	Target	500	U	ug	108	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	0.37	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	0.24	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	97.2	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	389	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	69.8		ug	69.8		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number:	MBCBP9	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP005-01	pH:		Sample Date:	03/10/2016	Sample Time:	10:12:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	9.5	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	1.7	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.35	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	0.62	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.068	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	349	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.18	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.020	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.1	J	1	Yes	S3VEM
Iron	Target	30.8		ug	30.8		1	Yes	S3VEM
Lead	Target	45.5		ug	45.5		1	Yes	S3VEM
Magnesium	Target	500	U	ug	107	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	0.43	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	0.19	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	96.9	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.29	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	353	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	76.7		ug	76.7		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number:	MBCBQ0	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP006-01	pH:		Sample Date:	03/10/2016	Sample Time:	10:17:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	13.7	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	3.6	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.57	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	1.1	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.075	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	276	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.24	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.026	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.4	J	1	Yes	S3VEM
Iron	Target	60.9		ug	60.9		1	Yes	S3VEM
Lead	Target	81.6		ug	81.6		1	Yes	S3VEM
Magnesium	Target	500	U	ug	115	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	0.63	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	0.27	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	99.8	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	3.5	U	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	466	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.16	J	1	Yes	S3VEM
Zinc	Target	76.8		ug	76.8		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number:	MBCBQ1	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP007-01	pH:		Sample Date:	03/10/2016	Sample Time:	10:26:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	14.5	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	4.5	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.55	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	1.3	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.077	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	235	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.39	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.025	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.0	J	1	Yes	S3VEM
Iron	Target	74.1		ug	74.1		1	Yes	S3VEM
Lead	Target	122		ug	122		1	Yes	S3VEM
Magnesium	Target	500	U	ug	107	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	0.71	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	0.32	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	83.1	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.36	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	460	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.20	J	1	Yes	S3VEM
Zinc	Target	70.1		ug	70.1		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number:	MBCBQ2	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP008-01	pH:		Sample Date:	03/10/2016	Sample Time:	10:37:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	24.2		ug	24.2		1	Yes	S3VEM
Antimony	Target	16.8		ug	16.8		1	Yes	S3VEM
Arsenic	Target	1.4		ug	1.4		1	Yes	S3VEM
Barium	Target	20.0	U	ug	3.4	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.43	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	382	J	1	Yes	S3VEM
Chromium	Target	1.9		ug	1.9		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.071	J	1	Yes	S3VEM
Copper	Target	4.3		ug	4.3		1	Yes	S3VEM
Iron	Target	224		ug	224		1	Yes	S3VEM
Lead	Target	569		ug	569		1	Yes	S3VEM
Magnesium	Target	500	U	ug	119	J	1	Yes	S3VEM
Manganese	Target	2.0		ug	2.0		1	Yes	S3VEM
Nickel	Target	4.0	U	ug	2.9	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	112	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.49	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	493	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.13	J	1	Yes	S3VEM
Zinc	Target	79.3		ug	79.3		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number:	MBCBQ3	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP009-01	pH:		Sample Date:	03/10/2016	Sample Time:	10:36:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	756		ug	756		1	Yes	S3VEM
Antimony	Target	287		ug	287		1	Yes	S3VEM
Arsenic	Target	28.3		ug	28.3		1	Yes	S3VEM
Barium	Target	74.4		ug	74.4		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.011	J	1	Yes	S3VEM
Cadmium	Target	6.6		ug	6.6		1	Yes	S3VEM
Calcium	Target	4370		ug	4370		1	Yes	S3VEM
Chromium	Target	57.1		ug	57.1		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	1.6	J	1	Yes	S3VEM
Copper	Target	84.1		ug	84.1		1	Yes	S3VEM
Iron	Target	8540		ug	8540		1	Yes	S3VEM
Lead	Target	13100		ug	13100	D	15	Yes	S3VEM
Magnesium	Target	500	U	ug	372	J	1	Yes	S3VEM
Manganese	Target	64.9		ug	64.9		1	Yes	S3VEM
Nickel	Target	57.6		ug	57.6		1	Yes	S3VEM
Potassium	Target	500	U	ug	255	J	1	Yes	S3VEM
Selenium	Target	456		ug	456		1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.90	J	1	Yes	S3VEM
Sodium	Target	1850		ug	1850		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.2		ug	5.2		1	Yes	S3VEM
Zinc	Target	323		ug	323		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number:	MBCBQ4	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP010-01	pH:		Sample Date:	03/10/2016	Sample Time:	10:33:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	25.6		ug	25.6		1	Yes	S3VEM
Antimony	Target	9.8		ug	9.8		1	Yes	S3VEM
Arsenic	Target	1.3		ug	1.3		1	Yes	S3VEM
Barium	Target	20.0	U	ug	2.3	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.19	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	450	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.61	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.092	J	1	Yes	S3VEM
Copper	Target	3.9		ug	3.9		1	Yes	S3VEM
Iron	Target	146		ug	146		1	Yes	S3VEM
Lead	Target	282		ug	282		1	Yes	S3VEM
Magnesium	Target	500	U	ug	117	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	1.4	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	0.84	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	136	J	1	Yes	S3VEM
Selenium	Target	3.6		ug	3.6		1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	466	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.14	J	1	Yes	S3VEM
Zinc	Target	77.8		ug	77.8		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number:	MBCBQ5	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP011-01	pH:		Sample Date:	03/10/2016	Sample Time:	10:33:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	409		ug	409		1	Yes	S3VEM
Antimony	Target	149		ug	149		1	Yes	S3VEM
Arsenic	Target	15.3		ug	15.3		1	Yes	S3VEM
Barium	Target	39.5		ug	39.5		1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	4.5		ug	4.5		1	Yes	S3VEM
Calcium	Target	2030		ug	2030		1	Yes	S3VEM
Chromium	Target	9.2		ug	9.2		1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.47	J	1	Yes	S3VEM
Copper	Target	30.0		ug	30.0		1	Yes	S3VEM
Iron	Target	2120		ug	2120		1	Yes	S3VEM
Lead	Target	4500		ug	4500	D	2	Yes	S3VEM
Magnesium	Target	500	U	ug	239	J	1	Yes	S3VEM
Manganese	Target	17.2		ug	17.2		1	Yes	S3VEM
Nickel	Target	11.1		ug	11.1		1	Yes	S3VEM
Potassium	Target	500	U	ug	499	J	1	Yes	S3VEM
Selenium	Target	11.9		ug	11.9		1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.27	J	1	Yes	S3VEM
Sodium	Target	1770		ug	1770		1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	2.8	J	1	Yes	S3VEM
Zinc	Target	157		ug	157		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number:	MBCBQ6	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP012-01	pH:		Sample Date:	03/10/2016	Sample Time:	10:44:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	15.5	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	1.9	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.45	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	0.57	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.030	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	273	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.17	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.025	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.1	J	1	Yes	S3VEM
Iron	Target	44.8		ug	44.8		1	Yes	S3VEM
Lead	Target	42.2		ug	42.2		1	Yes	S3VEM
Magnesium	Target	500	U	ug	109	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	0.65	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	0.14	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	96.2	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.19	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	433	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.098	J	1	Yes	S3VEM
Zinc	Target	76.4		ug	76.4		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number:	MBCBQ7	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP013-01	pH:		Sample Date:	03/10/2016	Sample Time:	10:05:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	48.2		ug	48.2		1	Yes	S3VEM
Antimony	Target	8.0		ug	8.0		1	Yes	S3VEM
Arsenic	Target	1.0		ug	1.0		1	Yes	S3VEM
Barium	Target	20.0	U	ug	3.0	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.0029	J	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.25	J	1	Yes	S3VEM
Calcium	Target	703		ug	703		1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.70	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.058	J	1	Yes	S3VEM
Copper	Target	3.6		ug	3.6		1	Yes	S3VEM
Iron	Target	115		ug	115		1	Yes	S3VEM
Lead	Target	242		ug	242		1	Yes	S3VEM
Magnesium	Target	500	U	ug	138	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	1.4	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	1.0	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	127	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.47	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	0.043	J	1	Yes	S3VEM
Sodium	Target	500	U	ug	481	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.18	J	1	Yes	S3VEM
Zinc	Target	81.7		ug	81.7		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number:	MBCBQ8	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP014-01	pH:		Sample Date:	03/10/2016	Sample Time:	10:06:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	7.2	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	1.0	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.29	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	0.36	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.0044	J	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.013	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	248	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.15	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.0	J	1	Yes	S3VEM
Iron	Target	20.4		ug	20.4		1	Yes	S3VEM
Lead	Target	20.4	J+	ug	20.4		1	Yes	S3VEM
Magnesium	Target	500	U	ug	121	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	0.37	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	0.11	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	101	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.40	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	393	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	75.2		ug	75.2		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number:	MBCBQ9	Method:	Metals by ICP-AES	Matrix:	Wipe	MA Number:	
Sample Location:	BRC001-DM01-WP015-01	pH:		Sample Date:	03/10/2016	Sample Time:	09:49:00
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	5.5	J	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	1.3	J	1	Yes	S3VEM
Arsenic	Target	1.0	U	ug	0.35	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	0.39	J	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	0.50	U	ug	0.014	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	216	J	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	0.13	J	1	Yes	S3VEM
Cobalt	Target	5.0	U	ug	0.012	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.0	J	1	Yes	S3VEM
Iron	Target	20.5		ug	20.5		1	Yes	S3VEM
Lead	Target	23.0		ug	23.0		1	Yes	S3VEM
Magnesium	Target	500	U	ug	113	J	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	0.36	J	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	0.14	J	1	Yes	S3VEM
Potassium	Target	500	U	ug	107	J	1	Yes	S3VEM
Selenium	Target	3.5	U	ug	0.32	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	418	J	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	0.048	J	1	Yes	S3VEM
Zinc	Target	76.3		ug	76.3		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number: PBF01	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	1.2	J	ug	1.2	J	1	Yes	S3VEM
Antimony	Target	0.23	J	ug	0.23	J	1	Yes	S3VEM
Arsenic	Target	-.14		ug	-.14	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Beryllium	Target	-.006		ug	-.006	J	1	Yes	S3VEM
Cadmium	Target	-.0077		ug	-.0077	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	500	U	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Cobalt	Target	-.012		ug	-.012	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Iron	Target	2.0	J	ug	2.0	J	1	Yes	S3VEM
Lead	Target	2.3		ug	2.3		1	Yes	S3VEM
Magnesium	Target	500	U	ug	500	U	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	1.5	U	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	ug	500	U	1	Yes	S3VEM
Selenium	Target	0.33	J	ug	0.33	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	500	U	1	Yes	S3VEM
Thallium	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	0.089	J	ug	0.089	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBP4	Lab Code: BON

Sample Number: PBF02	Method: Metals by ICP-AES	Matrix: Wipe	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 100	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Antimony	Target	6.0	U	ug	6.0	U	1	Yes	S3VEM
Arsenic	Target	-.14		ug	-.14	J	1	Yes	S3VEM
Barium	Target	20.0	U	ug	20.0	U	1	Yes	S3VEM
Beryllium	Target	0.50	U	ug	0.50	U	1	Yes	S3VEM
Cadmium	Target	-.0037		ug	-.0037	J	1	Yes	S3VEM
Calcium	Target	500	U	ug	500	U	1	Yes	S3VEM
Chromium	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Cobalt	Target	-.013		ug	-.013	J	1	Yes	S3VEM
Copper	Target	2.5	U	ug	2.5	U	1	Yes	S3VEM
Iron	Target	10.0	U	ug	10.0	U	1	Yes	S3VEM
Lead	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Magnesium	Target	500	U	ug	500	U	1	Yes	S3VEM
Manganese	Target	1.5	U	ug	1.5	U	1	Yes	S3VEM
Nickel	Target	4.0	U	ug	4.0	U	1	Yes	S3VEM
Potassium	Target	500	U	ug	500	U	1	Yes	S3VEM
Selenium	Target	0.40	J	ug	0.40	J	1	Yes	S3VEM
Silver	Target	1.0	U	ug	1.0	U	1	Yes	S3VEM
Sodium	Target	500	U	ug	500	U	1	Yes	S3VEM
Thallium	Target	-.18		ug	-.18	J	1	Yes	S3VEM
Vanadium	Target	5.0	U	ug	5.0	U	1	Yes	S3VEM
Zinc	Target	6.0	U	ug	6.0	U	1	Yes	S3VEM

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Battery Recycling
Number of Samples: 7 (Soil/TCLP)
Analysis: Metals and Mercury

SDG No.: MBCBS4
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/1/2016 – 3/3/2016
Validation SOP: HW-3a (Rev 0)

QAPP
Contractor: Weston Solutions
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
None

Minor Findings:
None

COMMENT: The site-specific QAPP did not specify the project action levels for this site.

Reviewer Name(s): Jianwei Huang

Approver's Signature: **Date: 04/15/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Barium MBCBS6, MBCBT0, MBCBS5, MBCBS8, MBCBS7, MBCBS4, MBCBS9

Chromium MBCBS7, MBCBS6, MBCBS4, MBCBS5, MBCBT0, MBCBS8

Silver MBCBS8, MBCBS9, MBCBT0, MBCBS4, MBCBS6, MBCBS5, MBCBS7

The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Chromium MBCBS7, MBCBS6, MBCBS4, MBCBS5, MBCBT0, MBCBS8

Silver MBCBS8, MBCBS9, MBCBT0, MBCBS4, MBCBS6, MBCBS5, MBCBS7

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

No problems were found for this criterion.

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

No problems were found for this criterion.

7. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 35% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

No problems were found for this criterion.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 15. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

No problems were found for this criterion.

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

Not applicable.

ANALYSIS: MERCURY

The current SOP HW-3c (Revision 0) July 2015, USEPA Region II for the evaluation of Mercury generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi-Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time, pH (aqueous samples), or cooler temperature are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (28 days) and pH ($\leq$2) have not been met, will be qualified as estimated, "J"; the non-detects (sample quantitation limits) will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for mercury. Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be employed to establish the analytical curve. At least one of the calibration standards shall be at or below the Contract Required Quantitation Limit (CRQL). The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The calibration curves for mercury shall possess a correlation coefficient of ≥ 0.995 to ensure the linearity over the calibrated range. The percent differences calculated for all of the non-zero standards must fall within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. All sample results shall be reported from an analysis within the calibrated range. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for mercury by the analysis of an ICV solution(s). The CCV standard shall be analyzed at a frequency of every hour during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery

acceptable limits for ICV/CCV are 85 – 115%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

4. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

No problems were found for this criterion.

5. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 20% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

No problems were found for this criterion.

6. FIELD DUPLICATE

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 20% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

No problems were found for this criterion.

7. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. Qualifications were applied to the samples and analytes as shown below.

Not applicable.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBS4	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	0.019	J	mg/L	0.019	J	1	Yes	S3VEM
Barium	Target	0.42	J	mg/L	0.42	J	1	Yes	S3VEM
Cadmium	Target	0.011	J	mg/L	0.011	J	1	Yes	S3VEM
Chromium	Target	0.020	J	mg/L	0.020	J	1	Yes	S3VEM
Lead	Target	0.020	J	mg/L	0.020	J	1	Yes	S3VEM
Selenium	Target	0.078	J	mg/L	0.078	J	1	Yes	S3VEM
Silver	Target	0.020	J	mg/L	0.020	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number:	MBCBS4	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-BR01	pH:		Sample Date:	03/01/2016	Sample Time:	16:15:00
% Moisture :				% Solids :	70.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	0.034	J	mg/L	0.034	JD	5	Yes	S3VEM
Barium	Target	1.0	U	mg/L	0.17	JD*	5	Yes	S3VEM
Cadmium	Target	0.16	J	mg/L	0.16	JD	5	Yes	S3VEM
Chromium	Target	0.05	U	mg/L	0.0070	JD	5	Yes	S3VEM
Lead	Target	10.9	J	mg/L	10.9	JD	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	5.0	UD	5	Yes	S3VEM
Silver	Target	0.05	U	mg/L	0.0037	JD	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number:	MBCBS4	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-BR01	pH:		Sample Date:	03/01/2016	Sample Time:	16:15:00
% Moisture :				% Solids :	70.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.000089	J	mg/L	0.000089	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number:	MBCBS4D	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:		pH:		Sample Date:	03/01/2016	Sample Time:	16:15:00
% Moisture :				% Solids :	70.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.000083		mg/L	0.000083	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number: MBCBS4D	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date: 03/01/2016	Sample Time: 16:15:00
% Moisture :		% Solids : 70.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	0.025		mg/L	0.025	JD	5	Yes	S3VEM
Barium	Target	0.16		mg/L	0.16	JD	5	Yes	S3VEM
Cadmium	Target	0.16		mg/L	0.16	JD	5	Yes	S3VEM
Chromium	Target	0.0083		mg/L	0.0083	JD	5	Yes	S3VEM
Lead	Target	10.7		mg/L	10.7	JD	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	5.0	UD	5	Yes	S3VEM
Silver	Target	0.0045		mg/L	0.0045	JD	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number: MBCBS4L	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids : 70.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	0.012		mg/L	0.012	JD	25	Yes	S3VEM
Barium	Target	0.14		mg/L	0.14	JD*	25	Yes	S3VEM
Cadmium	Target	0.15		mg/L	0.15	JD	25	Yes	S3VEM
Chromium	Target	0.012		mg/L	0.012	JD	25	Yes	S3VEM
Lead	Target	9.9		mg/L	9.9	JD	25	Yes	S3VEM
Selenium	Target	25.0	U	mg/L	25.0	UD	25	Yes	S3VEM
Silver	Target	0.016		mg/L	0.016	JD	25	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number:	MBCBS4S	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:		pH:		Sample Date:	03/01/2016	Sample Time:	16:15:00
% Moisture :				% Solids :	70.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Spike	0.0012		mg/L	0.0012		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number: MBCBS4S	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date: 03/01/2016	Sample Time: 16:15:00
% Moisture :		% Solids : 70.6	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Spike	0.071		mg/L	0.071	JD	5	Yes	S3VEM
Barium	Spike	2.4		mg/L	2.4	JD	5	Yes	S3VEM
Cadmium	Spike	0.21		mg/L	0.21	JD	5	Yes	S3VEM
Chromium	Spike	0.21		mg/L	0.21	JD	5	Yes	S3VEM
Lead	Spike	10.9		mg/L	10.9	JD	5	Yes	S3VEM
Selenium	Spike	0.12		mg/L	0.12	JD	5	Yes	S3VEM
Silver	Spike	0.056		mg/L	0.056	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBS4	Lab Code:	BON

Sample Number:	MBCBS5	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-BR01	pH:		Sample Date:	03/01/2016	Sample Time:	16:15:00
% Moisture :				% Solids :	67.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.00027		mg/L	0.00027		1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number:	MBCBS5	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-BR01	pH:		Sample Date:	03/01/2016	Sample Time:	16:15:00
% Moisture :				% Solids :	67.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	0.036	J	mg/L	0.036	JD	5	Yes	S3VEM
Barium	Target	1.0	U	mg/L	0.17	JD*	5	Yes	S3VEM
Cadmium	Target	0.18	J	mg/L	0.18	JD	5	Yes	S3VEM
Chromium	Target	0.05	U	mg/L	0.0096	JD	5	Yes	S3VEM
Lead	Target	10.1	J	mg/L	10.1	JD	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	5.0	UD	5	Yes	S3VEM
Silver	Target	0.05	U	mg/L	0.0073	JD	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number:	MBCBS6	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-AT01-Lagoon 01	pH:		Sample Date:	03/02/2016	Sample Time:	12:50:00
% Moisture :				% Solids :	65.3		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	0.12	J	mg/L	0.12	JD	5	Yes	S3VEM
Barium	Target	1.0	U	mg/L	0.34	JD*	5	Yes	S3VEM
Cadmium	Target	0.31	J	mg/L	0.31	JD	5	Yes	S3VEM
Chromium	Target	0.05	U	mg/L	0.019	JD	5	Yes	S3VEM
Lead	Target	35.1		mg/L	35.1	D	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	5.0	UD	5	Yes	S3VEM
Silver	Target	0.05	U	mg/L	0.0071	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBS4	Lab Code:	BON

Sample Number:	MBCBS6	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-AT01-Lagoon 01	pH:		Sample Date:	03/02/2016	Sample Time:	12:50:00
% Moisture :				% Solids :	65.3		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.00018	J	mg/L	0.00018	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number:	MBCBS7	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-AT01-Lagoon 02	pH:		Sample Date:	03/02/2016	Sample Time:	13:10:00
% Moisture :				% Solids :	73.3		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	0.025	J	mg/L	0.025	JD	5	Yes	S3VEM
Barium	Target	1.0	U	mg/L	0.039	JD*	5	Yes	S3VEM
Cadmium	Target	0.26	J	mg/L	0.26	JD	5	Yes	S3VEM
Chromium	Target	0.05	U	mg/L	0.029	JD	5	Yes	S3VEM
Lead	Target	9.6	J	mg/L	9.6	JD	5	Yes	S3VEM
Selenium	Target	0.0082	J	mg/L	0.0082	JD	5	Yes	S3VEM
Silver	Target	0.05	U	mg/L	0.0033	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBS4	Lab Code:	BON

Sample Number:	MBCBS7	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-AT01-Lagoon 02	pH:		Sample Date:	03/02/2016	Sample Time:	13:10:00
% Moisture :				% Solids :	73.3		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.000062	J	mg/L	0.000062	J	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBS4	Lab Code:	BON

Sample Number:	MBCBS8	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-AT01-Tank 01 & 02	pH:		Sample Date:	03/02/2016	Sample Time:	11:00:00
% Moisture :				% Solids :	62.1		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	0.050	J	mg/L	0.050	JD	5	Yes	S3VEM
Barium	Target	1.0	U	mg/L	0.26	JD*	5	Yes	S3VEM
Cadmium	Target	4.4	J	mg/L	4.4	JD	5	Yes	S3VEM
Chromium	Target	0.05	U	mg/L	0.026	JD	5	Yes	S3VEM
Lead	Target	4.9	J	mg/L	4.9	JD	5	Yes	S3VEM
Selenium	Target	0.027	J	mg/L	0.027	JD	5	Yes	S3VEM
Silver	Target	0.05	U	mg/L	0.0060	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBS4	Lab Code:	BON

Sample Number:	MBCBS8	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-AT01-Tank 01 & 02	pH:		Sample Date:	03/02/2016	Sample Time:	11:00:00
% Moisture :				% Solids :	62.1		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.000065	J	mg/L	0.000065	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number:	MBCBS9	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-BB01	pH:		Sample Date:	03/03/2016	Sample Time:	11:40:00
% Moisture :				% Solids :	99.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	0.021	J	mg/L	0.021	JD	5	Yes	S3VEM
Barium	Target	1.0	U	mg/L	0.11	JD*	5	Yes	S3VEM
Cadmium	Target	34.9		mg/L	34.9	D	25	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	25.0	UD	5	Yes	S3VEM
Lead	Target	38.9		mg/L	38.9	D	5	Yes	S3VEM
Selenium	Target	0.12	J	mg/L	0.12	JD	5	Yes	S3VEM
Silver	Target	0.05	U	mg/L	0.0054	JD	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number:	MBCBS9	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-BB01	pH:		Sample Date:	03/03/2016	Sample Time:	11:40:00
% Moisture :				% Solids :	99.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.00013	J	mg/L	0.00013	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number:	MBCBT0	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-BB01	pH:		Sample Date:	03/03/2016	Sample Time:	12:05:00
% Moisture :				% Solids :	98.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.00013	J	mg/L	0.00013	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number:	MBCBT0	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-BB01	pH:		Sample Date:	03/03/2016	Sample Time:	12:05:00
% Moisture :				% Solids :	98.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	0.025	J	mg/L	0.025	JD	5	Yes	S3VEM
Barium	Target	1.0	U	mg/L	0.085	JD*	5	Yes	S3VEM
Cadmium	Target	13.9	J	mg/L	13.9	JD	15	Yes	S3VEM
Chromium	Target	0.05	U	mg/L	0.0045	JD	5	Yes	S3VEM
Lead	Target	42.2		mg/L	42.2	D	5	Yes	S3VEM
Selenium	Target	0.16	J	mg/L	0.16	JD	5	Yes	S3VEM
Silver	Target	0.05	U	mg/L	0.0040	JD	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number: PBW01	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	5.0	U	mg/L	5.0	U	1	Yes	S3VEM
Barium	Target	0.00016		mg/L	0.00016	J	1	Yes	S3VEM
Cadmium	Target	1.0	U	mg/L	1.0	U	1	Yes	S3VEM
Chromium	Target	5.0	U	mg/L	5.0	U	1	Yes	S3VEM
Lead	Target	5.0	U	mg/L	5.0	U	1	Yes	S3VEM
Selenium	Target	1.0	U	mg/L	1.0	U	1	Yes	S3VEM
Silver	Target	0.00069		mg/L	0.00069	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBS4	Lab Code: BON

Sample Number: PBW01	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.000048	J	mg/L	0.000048	J	1	Yes	S3VEM

EXECUTIVE NARRATIVE

Case No.: 46023
Site: Puerto Rico Battery Recycling Assessment
Number of Samples: 20 TCLP
Analysis: Metals and Mercury

SDG No.: MBCBT1
Laboratory: Bonner Analytical Testing Co.
Sampling dates: 3/2/2016 thru 3/9/2016
Validation SOP: HW-3a and -3c (Rev 0)

QAPP
Contractor: Weston Solutions
Contractor Document #: DCN: RST3-02-D-0168

SUMMARY OF DEFINITIONS:

Critical: Results have an unacceptable level of uncertainty and should not be used for making decisions. Data have been qualified "R" rejected.
Major: A level of uncertainty exists that may not meet the data quality objectives for the project. A bias is likely to be present in the results. Data has been qualified "J" estimated. "J+" and "J-" represent likely direction of the bias.
Minor: The level of uncertainty is acceptable. No significant bias in the data was observed.

Critical Findings:
None

Major Findings:
Sample MBCBW9 has analytes that have been qualified J, J+ or J-.

Minor Findings:
None

COMMENT:	The site-specific QAPP did not specify the project action levels for this site.

Reviewer Name(s): Steffanie Tobin

Approver's Signature: **Date: 04/19/16**

Name: Russell Arnone

Affiliation: USEPA/R2/HWSB/HWSS

Data Qualifier Definitions (National Functional Guidelines)			
Qualifier Symbol	Explanation		
	INORGANICS	ORGANICS	CHLORINATED DIOXIN/FURAN
U	The analyte was analyzed for, but was not detected above the level of the reported quantitation limit.	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method	The analyte was analyzed for but not detected. The value preceding the "U" may represent the adjusted Contract Required Quantitation Limit (see DLM02.X, Exhibit D, Section 1.2 and Table 2), or the sample specific estimated detection limit (EDL, see Method 8290A, Section 11.9.5).
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL.	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to an issue with the quality of the data generated because certain QC criteria were not met, or the concentration of the analyte was below the adjusted CRQL).
J+	The result is an estimated quantity, but the result may be biased high.	The result is an estimated quantity, but the result may be biased high.	
J–	The result is an estimated quantity, but the result may be biased low.	The result is an estimated quantity, but the result may be biased low.	
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.	The analyte was not detected (see definition of "U" flag, above). The reported value should be considered approximate.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
N		The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification”.	
NJ		The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.	
C		This qualifier applies to pesticide and Aroclor results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS).	
X		This qualifier applies to pesticide and Aroclor results when GC/MS analysis was attempted but was unsuccessful.	

DATA ASSESSMENT

ANALYSIS: METALS ICP-AES

The current SOP HW-3a (Revision 0) July 2015, USEPA Region II for the evaluation of ICP-AES metals generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi- Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time or pH (aqueous samples are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (180 days) or pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for the metals on the Inorganic Target Analyte List (TAL). Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be used to establish each analytical curve. At least one of these standards shall be at or below the CRQL. The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The curve must have a correlation coefficient ≥ 0.995. The percent differences calculated for all of the non-zero standards must be within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for each target analyte by the analysis of an ICV solution(s).
The CCV standard shall be analyzed at a frequency of every two hours during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 90 – 110%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Calibration blanks (ICB and CCB) are used to ensure a stable instrument baseline before and during the analysis of analytical samples. The preparation blank is used to assess the level of contamination introduced to the analytical samples throughout the sample preparation process. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated CCBs have analyte results less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Arsenic: MBCBT1, MBCBT3, MBCBT4, MBCBT5, MBCBT6, MBCBT7, MBCBT8, MBCBT9, MBCBW0, MBCBW1, MBCBW3, MBCBW4, MBCBW6, MBCBW7, MBCBW8, MBCBW9, MBCBX0

Barium: MBCBT1, MBCBT2, MBCBT3, MBCBT4, MBCBT5, MBCBT6, MBCBT7, MBCBT8, MBCBT9, MBCBW0, MBCBW1, MBCBW2, MBCBW3, MBCBW4, MBCBW5, MBCBW6, MBCBW7, MBCBW8, MBCBW9, MBCBX0

Cadmium: MBCBT1, MBCBT2, MBCBT6, MBCBT7, MBCBT8, MBCBT9, MBCBW0, MBCBW1, MBCBW2, MBCBW3, MBCBW4, MBCBW5, MBCBW6, MBCBW7, MBCBW9, MBCBX0

Chromium: MBCBT1, MBCBT2, MBCBT3, MBCBT4, MBCBT5, MBCBT7, MBCBT8, MBCBT9, MBCBW0, MBCBW1, MBCBW2, MBCBW3, MBCBW4, MBCBW5, MBCBW6, MBCBW7, MBCBW8, MBCBX0

Lead: MBCBT3, MBCBW0, MBCBW2, MBCBW4, MBCBW5, MBCBW6, MBCBW7

Selenium: MBCBW1, MBCBW2, MBCBW4, MBCBW7, MBCBW8

Silver: MBCBT1, MBCBT2, MBCBT3, MBCBT4, MBCBT5, MBCBT6, MBCBT7, MBCBT8, MBCBT9, MBCBW0, MBCBW1, MBCBW2, MBCBW3, MBCBW4, MBCBW5, MBCBW6, MBCBW7, MBCBW8, MBCBW9, MBCBX0

The following samples have analyte results less than or equal to CRQLs. The associated ICB has analyte results less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Chromium: MBCBT1, MBCBT2, MBCBT3, MBCBT4, MBCBT5, MBCBT7, MBCBT8, MBCBT9, MBCBW0, MBCBW1, MBCBW2, MBCBW3, MBCBW4, MBCBW5, MBCBW6, MBCBW7, MBCBW8, MBCBX0

Lead: MBCBT3, MBCBW0, MBCBW2, MBCBW4, MBCBW5, MBCBW6, MBCBW7

Silver: MBCBT1, MBCBT2, MBCBT3, MBCBT4, MBCBT5, MBCBT6, MBCBT7, MBCBT8, MBCBT9, MBCBW0, MBCBW1, MBCBW2, MBCBW3, MBCBW4, MBCBW5, MBCBW6, MBCBW7, MBCBW8, MBCBW9, MBCBX0

The following samples have analyte results less than or equal to CRQLs. The associated preparation blank has analyte results less than CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Arsenic: MBCBT1, MBCBT3, MBCBT4, MBCBT5, MBCBT6, MBCBT7, MBCBT8, MBCBT9, MBCBW0, MBCBW1, MBCBW3, MBCBW4, MBCBW6, MBCBW7, MBCBW8, MBCBW9, MBCBX0

Barium: MBCBT1, MBCBT2, MBCBT3, MBCBT4, MBCBT5, MBCBT6, MBCBT7, MBCBT8, MBCBT9, MBCBW0, MBCBW1, MBCBW2, MBCBW3, MBCBW4, MBCBW5, MBCBW6, MBCBW7, MBCBW8, MBCBW9, MBCBX0

Cadmium: MBCBT1, MBCBT2, MBCBT6, MBCBT7, MBCBT8, MBCBT9, MBCBW0, MBCBW1, MBCBW2, MBCBW3, MBCBW4, MBCBW5, MBCBW6, MBCBW7, MBCBW9, MBCBX0

Chromium: MBCBT1, MBCBT2, MBCBT3, MBCBT4, MBCBT5, MBCBT7, MBCBT8, MBCBT9, MBCBW0, MBCBW1, MBCBW2, MBCBW3, MBCBW4, MBCBW5, MBCBW6, MBCBW7, MBCBW8, MBCBX0

Lead: MBCBT3, MBCBW0, MBCBW2, MBCBW4, MBCBW5, MBCBW6, MBCBW7

Selenium: MBCBT2, MBCBT3, MBCBT4, MBCBT5, MBCBT6, MBCBT7, MBCBT8, MBCBT9, MBCBW0, MBCBW1, MBCBW2, MBCBW4, MBCBW7, MBCBW8

Silver: MBCBT1, MBCBT2, MBCBT3, MBCBT4, MBCBT5, MBCBT6, MBCBT7, MBCBT8, MBCBT9, MBCBW0, MBCBW1, MBCBW2, MBCBW3, MBCBW4, MBCBW5, MBCBW6, MBCBW7, MBCBW8, MBCBW9, MBCBX0

4. **INTERFERENCE CHECK SAMPLE**

The Interference Check Sample (ICS) verifies the analytical instrument's ability to overcome interferences typical of those found in samples. The laboratory should have analyzed and reported ICS results for all elements being reported from the analytical run and for all interferents (target and non-target) for these reported elements. The ICS consists of two solutions: Solution A and Solution AB. Solution A consists of the interferents, and Solution AB consists of the analytes mixed with the interferents. Results for the analysis of ICS Solution must fall within the control limits of ± 20% or ±CRQL (whichever is greater) of the true value for the analytes and interferents included in the solution. If results that are ≥ MDL are observed for analytes that are not present in the ICS solution, the possibility of false positives exists. If negative results are observed for analytes that are not present in the ICS solution, and their absolute value is ≥ MDL, the possibility of false negatives in the samples exists. In general, ICP sample data can be accepted if the concentrations of Al, Ca, Fe, and Mg in the sample are found to be less than or equal to their respective concentrations in the ICS. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

5. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

No problems were found for this criterion.

6. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 20% for the Relative Percent Difference (RPD) shall

be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

No problems were found for this criterion.

7. FIELD DUPLICATE (MBCBW9/MBCBX0)

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 20% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

No problems were found for this criterion.

8. LABORATORY CONTROL SAMPLE

The Laboratory Control Sample (LCS) serves as a monitor of the overall performance of each step during the analysis, including the sample preparation. Aqueous/water, soil/sediment, wipe, and filter LCSs shall be analyzed for each analyte utilizing the same sample preparations, analytical methods, and Quality Assurance/Quality Control (QA/QC) procedures as employed for the samples. All LCS Percent Recoveries (%R) must fall within the control limits of 70-130%, except for Sb and Ag which must fall within the control limits of 50-150%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

9. ICP SERIAL DILUTION

The serial dilution of samples quantitated by Inductively Coupled Plasma determines whether or not significant physical or chemical interferences exist due to sample matrix. If the analyte concentration is sufficiently high [concentration in the original sample is > 50 times (50x) the Method Detection Limit (MDL)], the Percent Difference (%D) between the original determination and the serial dilution analysis (a five-fold dilution) after correction for dilution shall be less than 10. For a serial dilution analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the serial dilution sample.

The following sample is associated to the Serial Dilution Sample with analyte %D > 10% and the original sample result is > 50xMDL. Detects are qualified as estimated J. Non-detects are qualified estimated UJ.

Barium: MBCBW9

10. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. All results of a sample with percent solids less than 50% are qualified estimated, "J". Qualifications were applied to the samples and analytes as shown below.

Not applicable.

ANALYSIS: MERCURY

The current SOP HW-3c (Revision 0) July 2015, USEPA Region II for the evaluation of Mercury generated through Statement of Work ISOM02.2 has been applied. Data have been reviewed according to TDF specifications, the National Functional Guidelines Report and the CCS Semi- Automated Screening Results Report.

1. HOLDING TIME AND PRESERVATION

The amount of an analyte in a sample can change with time due to chemical instability, degradation, volatilization, etc. If the specified holding time, pH (aqueous samples), or cooler temperature are not within the acceptable range, the data may not be valid. Those analytes detected in the samples whose holding time (28 days) and pH (≤2) have not been met, will be qualified as estimated, "J"; the non-detects (sample quantitation limits) will be flagged as unusable, "R". Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

2. CALIBRATION

Method requirements for satisfactory instrument calibration are established to ensure that the instrument is capable of producing acceptable quantitative data for mercury. Initial Calibration Verification (ICV) demonstrates that the instrument is capable of acceptable performance at the beginning of the analytical run. Continuing Calibration Verification (CCV) demonstrates that the initial calibration is still valid by checking the performance of the instrument on a continuing basis.

A) INITIAL CALIBRATION

A blank and at least five calibration standards shall be employed to establish the analytical curve. At least one of the calibration standards shall be at or below the Contract Required Quantitation Limit (CRQL). The calibration curve shall be fitted using linear regression or weighted linear regression. The curve may be forced through zero. The calibration curves for mercury shall possess a correlation coefficient of ≥ 0.995 to ensure the linearity over the calibrated range. The percent differences calculated for all of the non-zero standards must fall within ±30% of the true value of the standard. The y-intercept of the curve must be less than the CRQL. All sample results shall be reported from an analysis within the calibrated range. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

B) INITIAL AND CONTINUING CALIBRATION VERIFICATION

Immediately after each system has been calibrated, the accuracy of the initial calibration must be verified and documented for mercury by the analysis of an ICV solution(s). The CCV standard shall be analyzed at a frequency of every hour during an analytical run. The CCV standard shall also be analyzed at the beginning of the run, and again after the last analytical sample. The percent recovery acceptable limits for ICV/CCV are 85 – 115%. Qualifications were applied to the samples and analytes as shown below.

No problems were found for this criterion.

3. BLANK CONTAMINATION

Quality assurance (QA) blanks, i.e., method, field, or rinse blanks are prepared to identify any contamination, which may have been introduced into the samples during sample preparation or field activity. Method blanks measure laboratory contamination. Field and rinse blanks measure cross-contamination of samples during field operations. Qualifications were applied to the samples and analytes as shown below.

The following samples have analyte results less than or equal to CRQLs. The associated preparation blank has analyte results less than CRQLs. Detects are qualified as U. Sample results are reported at CRQLs.

Mercury: MBCBT1, MBCBT2, MBCBT3, MBCBT4, MBCBT5, MBCBT6, MBCBT7, MBCBW0, MBCBW1, MBCBW2, MBCBW3, MBCBW5, MBCBW6, MBCBW8, MBCBW9, MBCBX0

4. SPIKE SAMPLE ANALYSIS

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. The spike Percent Recovery (%R) shall be within the established acceptance limits of 75 – 125%. However, spike recovery limits do not apply when the sample concentration is ≥ 4x the spike added. For a matrix spike analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the matrix spike sample.

The following Matrix Spike sample has percent recovery greater than 125%. Detected analyte with result greater than or equal to MDL in the non-spike sample is qualified J+. Non-detected analyte is not qualified.

Mercury: MBCBW9

5. DUPLICATE SAMPLE ANALYSIS

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. A control limit of 20% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For a duplicate sample analysis that does not meet the technical criteria, the action was applied to only the field sample used to prepare the duplicate sample.

No problems were found for this criterion.

6. FIELD DUPLICATE (MBCBW9/MBCBX0)

Field duplicates may be taken and analyzed as an indication of overall precision. These analyses measure both field and laboratory precision. A control limit of 20% for the Relative Percent Difference (RPD) shall be used for original and duplicate sample values ≥ five times (5x) the Contract Required Quantitation Limit (CRQL). A control limit of the CRQL shall be used if either the sample or duplicate value is < 5x the CRQL. For field duplicates analysis that does not meet the technical criteria, the action was applied to only the field sample and it's duplicate.

No problems were found for this criterion.

7. PERCENT SOLIDS

The laboratory is required to perform the percent solids determination prior to sample preparation and analysis. Qualifications were applied to the samples and analytes as shown below.

Not applicable.

Sample Summary Report

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	LCS01	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :				% Solids :			

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	0.019	J	mg/L	0.019	J	1	Yes	S3VEM
Barium	Target	0.43	J	mg/L	0.43	J	1	Yes	S3VEM
Cadmium	Target	0.011	J	mg/L	0.011	J	1	Yes	S3VEM
Chromium	Target	0.021	J	mg/L	0.021	J	1	Yes	S3VEM
Lead	Target	0.021	J	mg/L	0.021	J	1	Yes	S3VEM
Selenium	Target	0.076	J	mg/L	0.076	J	1	Yes	S3VEM
Silver	Target	0.020	J	mg/L	0.020	J	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT1	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CC01-TCLP001-01	pH:	1.	Sample Date:	03/02/2016	Sample Time:	16:07:00
% Moisture :				% Solids :	93.0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.000069	J*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT1	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CC01-TCLP001-01	pH:	1.	Sample Date:	03/02/2016	Sample Time:	16:07:00
% Moisture :				% Solids :	93.0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25	U	mg/L	0.059	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.034	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	0.39	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.0074	JD	5	Yes	S3VEM
Lead	Target	80.9		mg/L	80.9	D	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	5.0	UD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0039	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT2	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CF01-TCLP001-01	pH:	1.	Sample Date:	03/02/2016	Sample Time:	14:20:00
% Moisture :				% Solids :	97.5		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25.0	U	mg/L	25.0	UD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.54	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	2.7	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.015	JD	5	Yes	S3VEM
Lead	Target	66.4		mg/L	66.4	D	10	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	0.039	JD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0070	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT2	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CF01-TCLP001-01	pH:	1.	Sample Date:	03/02/2016	Sample Time:	14:20:00
% Moisture :				% Solids :	97.5		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.00014	J*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT3	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CF01-TCLP002-01	pH:	1.	Sample Date:	03/02/2016	Sample Time:	15:50:00
% Moisture :				% Solids :	94.5		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25	U	mg/L	0.018	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.019	JD*	5	Yes	S3VEM
Cadmium	Target	10.5		mg/L	10.5	D	10	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.0098	JD	5	Yes	S3VEM
Lead	Target	2.50	U	mg/L	24.2	JD	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	0.034	JD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0042	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT3	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CF01-TCLP002-01	pH:	1.	Sample Date:	03/02/2016	Sample Time:	15:50:00
% Moisture :				% Solids :	94.5		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.00017	J*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT4	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CF01-TCLP003-01	pH:	1.	Sample Date:	03/03/2016	Sample Time:	15:10:00
% Moisture :				% Solids :	99.3		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.00012	J*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT4	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CF01-TCLP003-01	pH:	1.	Sample Date:	03/03/2016	Sample Time:	15:10:00
% Moisture :				% Solids :	99.3		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25	U	mg/L	0.045	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.058	JD*	5	Yes	S3VEM
Cadmium	Target	108		mg/L	108	D	100	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.017	JD	5	Yes	S3VEM
Lead	Target	35.3		mg/L	35.3	D	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	0.091	JD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0064	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT5	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CF01-TCLP004-01	pH:	1.	Sample Date:	03/03/2016	Sample Time:	16:25:00
% Moisture :				% Solids :	98.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25	U	mg/L	0.31	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.045	JD*	5	Yes	S3VEM
Cadmium	Target	5.3		mg/L	5.3	D	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.013	JD	5	Yes	S3VEM
Lead	Target	41.7		mg/L	41.7	D	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	0.015	JD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0046	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT5	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CF01-TCLP004-01	pH:	1.	Sample Date:	03/03/2016	Sample Time:	16:25:00
% Moisture :				% Solids :	98.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.000066	J*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT6	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CF01-TCLP005-01	pH:	1.	Sample Date:	03/04/2016	Sample Time:	10:40:00
% Moisture :				% Solids :	99.7		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25	U	mg/L	0.011	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.18	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	0.018	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	25.0	UD	5	Yes	S3VEM
Lead	Target	42.3		mg/L	42.3	D	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	0.029	JD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0055	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT6	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CF01-TCLP005-01	pH:	1.	Sample Date:	03/04/2016	Sample Time:	10:40:00
% Moisture :				% Solids :	99.7		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.00019	J*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT7	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CK01-TCLP001-01	pH:	1.	Sample Date:	03/02/2016	Sample Time:	16:30:00
% Moisture :				% Solids :	97.2		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25	U	mg/L	0.044	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.0042	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	0.55	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.012	JD	5	Yes	S3VEM
Lead	Target	120		mg/L	120	D	10	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	0.10	JD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0048	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT7	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CK01-TCLP001-01	pH:	1.	Sample Date:	03/02/2016	Sample Time:	16:30:00
% Moisture :				% Solids :	97.2		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.000076	J*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT8	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CK01-TCLP002-01	pH:	1.	Sample Date:	03/03/2016	Sample Time:	09:28:00
% Moisture :				% Solids :	91.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25	U	mg/L	0.093	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.69	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	1.3	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.0039	JD	5	Yes	S3VEM
Lead	Target	28.7		mg/L	28.7	D	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	0.27	JD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0087	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT8	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CK01-TCLP002-01	pH:	1.	Sample Date:	03/03/2016	Sample Time:	09:28:00
% Moisture :				% Solids :	91.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0014		mg/L	0.0014	*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT9	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CK01-TCLP003-01	pH:	1.	Sample Date:	03/04/2016	Sample Time:	09:59:00
% Moisture :				% Solids :	98.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25	U	mg/L	0.086	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.0025	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	0.75	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.013	JD	5	Yes	S3VEM
Lead	Target	103		mg/L	103	D	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	0.12	JD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0038	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBT9	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CK01-TCLP003-01	pH:	1.	Sample Date:	03/04/2016	Sample Time:	09:59:00
% Moisture :				% Solids :	98.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.00020	U	mg/L	0.00020	U*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW0	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP001-01	pH:	1.	Sample Date:	03/04/2016	Sample Time:	10:28:00
% Moisture :				% Solids :	92.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25	U	mg/L	0.011	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	1.0	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	2.8	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.013	JD	5	Yes	S3VEM
Lead	Target	50.0	U	mg/L	35.9	JD	10	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	0.081	JD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0085	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW0	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP001-01	pH:	1.	Sample Date:	03/04/2016	Sample Time:	10:28:00
% Moisture :				% Solids :	92.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.00017	J*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW1	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP002-01	pH:	1.	Sample Date:	03/04/2016	Sample Time:	10:35:00
% Moisture :				% Solids :	92.7		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.00018	J*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW1	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP002-01	pH:	1.	Sample Date:	03/04/2016	Sample Time:	10:35:00
% Moisture :				% Solids :	92.7		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25.0	U	mg/L	0.048	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.73	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	0.65	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.0054	JD	5	Yes	S3VEM
Lead	Target	38.0		mg/L	38.0	D	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	0.013	JD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0021	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW2	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP003-01	pH:	1.	Sample Date:	03/07/2016	Sample Time:	09:56:00
% Moisture :				% Solids :	97.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.000085	J*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW2	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP003-01	pH:	1.	Sample Date:	03/07/2016	Sample Time:	09:56:00
% Moisture :				% Solids :	97.4		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25.0	U	mg/L	25.0	UD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.17	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	0.061	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.024	JD	5	Yes	S3VEM
Lead	Target	25.0	U	mg/L	4.9	JD	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	0.058	JD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0039	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW3	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP004-01	pH:	1.	Sample Date:	03/07/2016	Sample Time:	14:50:00
% Moisture :				% Solids :	98.5		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.000089	J*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW3	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP004-01	pH:	1.	Sample Date:	03/07/2016	Sample Time:	14:50:00
% Moisture :				% Solids :	98.5		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25.0	U	mg/L	0.020	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.070	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	0.091	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.0096	JD	5	Yes	S3VEM
Lead	Target	26.1		mg/L	26.1	D	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	5.0	UD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0035	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW4	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP005-01	pH:	1.	Sample Date:	03/07/2016	Sample Time:	16:00:00
% Moisture :				% Solids :	95.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.00024		mg/L	0.00024	*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW4	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP005-01	pH:	1.	Sample Date:	03/07/2016	Sample Time:	16:00:00
% Moisture :				% Solids :	95.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25.0	U	mg/L	0.0078	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.15	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	0.016	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.0062	JD	5	Yes	S3VEM
Lead	Target	25.0	U	mg/L	2.4	JD	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	0.011	JD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0087	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW5	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP006-01	pH:	1.	Sample Date:	03/07/2016	Sample Time:	16:15:00
% Moisture :				% Solids :	99.1		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.00019	J*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW5	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP006-01	pH:	1.	Sample Date:	03/07/2016	Sample Time:	16:15:00
% Moisture :				% Solids :	99.1		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25.0	U	mg/L	25.0	UD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.24	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	0.0067	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.0082	JD	5	Yes	S3VEM
Lead	Target	25.0	U	mg/L	3.1	JD	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	5.0	UD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0042	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW6	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP007-01	pH:	1.	Sample Date:	03/07/2016	Sample Time:	16:38:00
% Moisture :				% Solids :	97.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.00011	J*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW6	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP007-01	pH:	1.	Sample Date:	03/07/2016	Sample Time:	16:38:00
% Moisture :				% Solids :	97.6		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25.0	U	mg/L	0.013	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.22	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	0.061	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.0052	JD	5	Yes	S3VEM
Lead	Target	25.0	U	mg/L	0.63	JD	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	5.0	UD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0056	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW7	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CS01-TCLP001-01	pH:	1.	Sample Date:	03/02/2016	Sample Time:	14:25:00
% Moisture :				% Solids :	93.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25.0	U	mg/L	0.014	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.19	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	0.16	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.0057	JD	5	Yes	S3VEM
Lead	Target	25.0	U	mg/L	2.3	JD	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	0.027	JD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.035	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW7	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CS01-TCLP001-01	pH:	1.	Sample Date:	03/02/2016	Sample Time:	14:25:00
% Moisture :				% Solids :	93.8		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0013		mg/L	0.0013	*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW8	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CS01-TCLP002-01	pH:	1.	Sample Date:	03/03/2016	Sample Time:	15:55:00
% Moisture :				% Solids :	86.0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25.0	U	mg/L	0.043	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.055	JD*	5	Yes	S3VEM
Cadmium	Target	16.2		mg/L	16.2	D	15	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.021	JD	5	Yes	S3VEM
Lead	Target	40.2		mg/L	40.2	D	5	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	0.11	JD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.018	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW8	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CS01-TCLP002-01	pH:	1.	Sample Date:	03/03/2016	Sample Time:	15:55:00
% Moisture :				% Solids :	86.0		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.000061	J*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW9	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP008-01	pH:	1.	Sample Date:	03/09/2016	Sample Time:	08:40:00
% Moisture :				% Solids :	99.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.00018	J*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW9	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP008-01	pH:	1.	Sample Date:	03/09/2016	Sample Time:	08:40:00
% Moisture :				% Solids :	99.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25.0	U	mg/L	0.025	JD	5	Yes	S3VEM
Barium	Target	500	UJ	mg/L	0.023	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	0.48	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	25.0	UD	5	Yes	S3VEM
Lead	Target	189		mg/L	189	D	10	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	5.0	UD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0041	JD	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBT1	Lab Code: BON

Sample Number:	MBCBW9D	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:		pH:	1.	Sample Date:	03/09/2016	Sample Time:	08:40:00
% Moisture :				% Solids :	99.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.00019		mg/L	0.00019	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBT1	Lab Code: BON

Sample Number:	MBCBW9D	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:		pH:	1.	Sample Date:	03/09/2016	Sample Time:	08:40:00
% Moisture :				% Solids :	99.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	0.021		mg/L	0.021	JD	5	Yes	S3VEM
Barium	Target	0.021		mg/L	0.021	JD	5	Yes	S3VEM
Cadmium	Target	0.45		mg/L	0.45	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	25.0	UD	5	Yes	S3VEM
Lead	Target	190		mg/L	190	D	10	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	5.0	UD	5	Yes	S3VEM
Silver	Target	0.0040		mg/L	0.0040	JD	5	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBT1	Lab Code: BON

Sample Number: MBCBW9L	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location:	pH: 1.	Sample Date:	Sample Time:
% Moisture :		% Solids : 99.9	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	0.018	J	mg/L	0.018	JD	25	Yes	S3VEM
Barium	Target	0.013	J	mg/L	0.013	JD*	25	Yes	S3VEM
Cadmium	Target	0.49	J	mg/L	0.49	JD*	25	Yes	S3VEM
Chromium	Target	125	U	mg/L	125	UD	25	Yes	S3VEM
Lead	Target	196	J	mg/L	196	JD	50	Yes	S3VEM
Selenium	Target	25.0	U	mg/L	25.0	UD	25	Yes	S3VEM
Silver	Target	0.015	J	mg/L	0.015	JD	25	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW9S	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:		pH:	1.	Sample Date:	03/09/2016	Sample Time:	08:40:00
% Moisture :				% Solids :	99.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Spike	0.0015		mg/L	0.0015	*	1	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBW9S	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:		pH:	1.	Sample Date:	03/09/2016	Sample Time:	08:40:00
% Moisture :				% Solids :	99.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Spike	0.066	J	mg/L	0.066	JD	5	Yes	S3VEM
Barium	Spike	2.3	J	mg/L	2.3	JD	5	Yes	S3VEM
Cadmium	Spike	0.60	J	mg/L	0.60	JD	5	Yes	S3VEM
Chromium	Spike	0.21	J	mg/L	0.21	JD	5	Yes	S3VEM
Lead	Spike	198		mg/L	198	D	10	Yes	S3VEM
Selenium	Spike	0.12	J	mg/L	0.12	JD	5	Yes	S3VEM
Silver	Spike	0.057	J	mg/L	0.057	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBX0	Method:	Metals by ICP-AES	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP008-02	pH:	1.	Sample Date:	03/09/2016	Sample Time:	08:40:00
% Moisture :				% Solids :	99.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	25.0	U	mg/L	0.066	JD	5	Yes	S3VEM
Barium	Target	500	U	mg/L	0.061	JD*	5	Yes	S3VEM
Cadmium	Target	5.0	U	mg/L	0.53	JD	5	Yes	S3VEM
Chromium	Target	25.0	U	mg/L	0.0023	JD	5	Yes	S3VEM
Lead	Target	153		mg/L	153	D	10	Yes	S3VEM
Selenium	Target	5.0	U	mg/L	5.0	UD	5	Yes	S3VEM
Silver	Target	25.0	U	mg/L	0.0024	JD	5	Yes	S3VEM

Case No:	46023	Contract:	EPW14029	SDG No:	MBCBT1	Lab Code:	BON

Sample Number:	MBCBX0	Method:	Mercury by Cold Vapor	Matrix:	Water	MA Number:	
Sample Location:	BRC001-CM01-TCLP008-02	pH:	1.	Sample Date:	03/09/2016	Sample Time:	08:40:00
% Moisture :				% Solids :	99.9		

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.0002	U	mg/L	0.00011	J*	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBT1	Lab Code: BON

Sample Number: PBW01	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.000052	J	mg/L	0.000052	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBT1	Lab Code: BON

Sample Number: PBW01	Method: Metals by ICP-AES	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Arsenic	Target	5.0	U	mg/L	5.0	U	1	Yes	S3VEM
Barium	Target	100	U	mg/L	100	U	1	Yes	S3VEM
Cadmium	Target	1.0	U	mg/L	1.0	U	1	Yes	S3VEM
Chromium	Target	5.0	U	mg/L	5.0	U	1	Yes	S3VEM
Lead	Target	0.0024	J	mg/L	0.0024	J	1	Yes	S3VEM
Selenium	Target	1.0	U	mg/L	1.0	U	1	Yes	S3VEM
Silver	Target	0.00041	J	mg/L	0.00041	J	1	Yes	S3VEM

Case No: 46023	Contract: EPW14029	SDG No: MBCBT1	Lab Code: BON

Sample Number: PBW02	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids :	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.00020	U	mg/L	0.00020	U	1	Yes	S3VEM

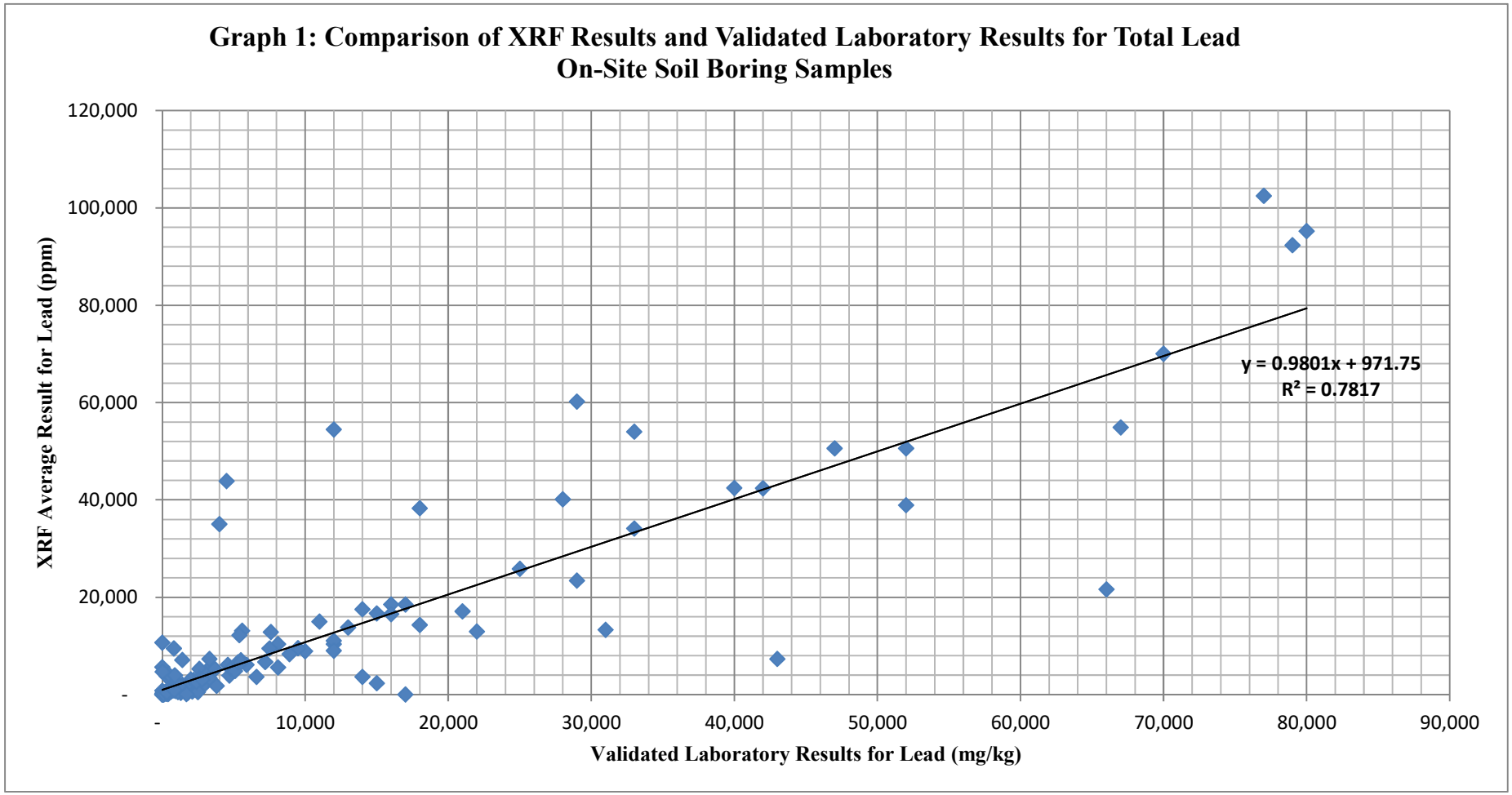
ATTACHMENT G

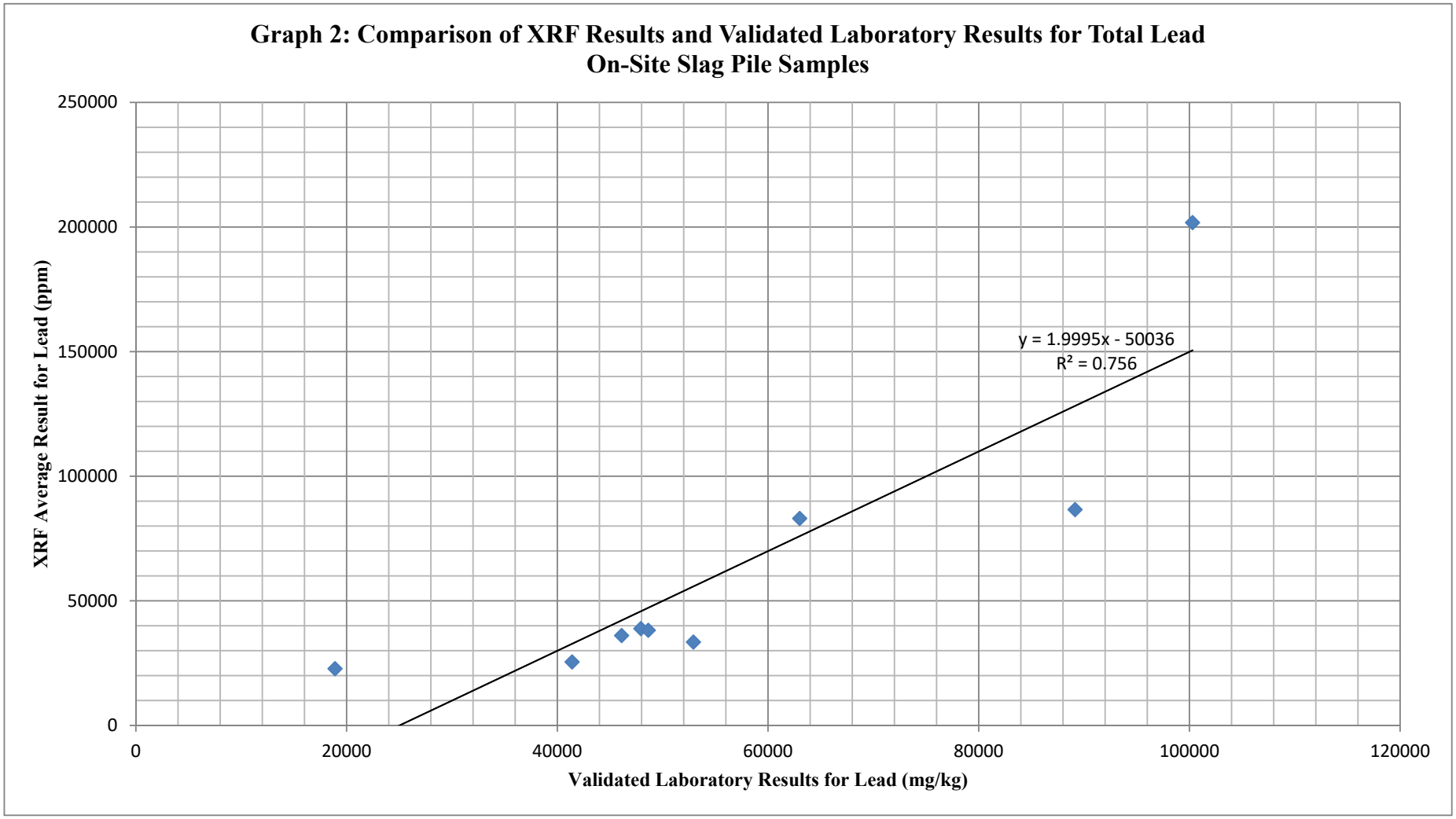
Graphs

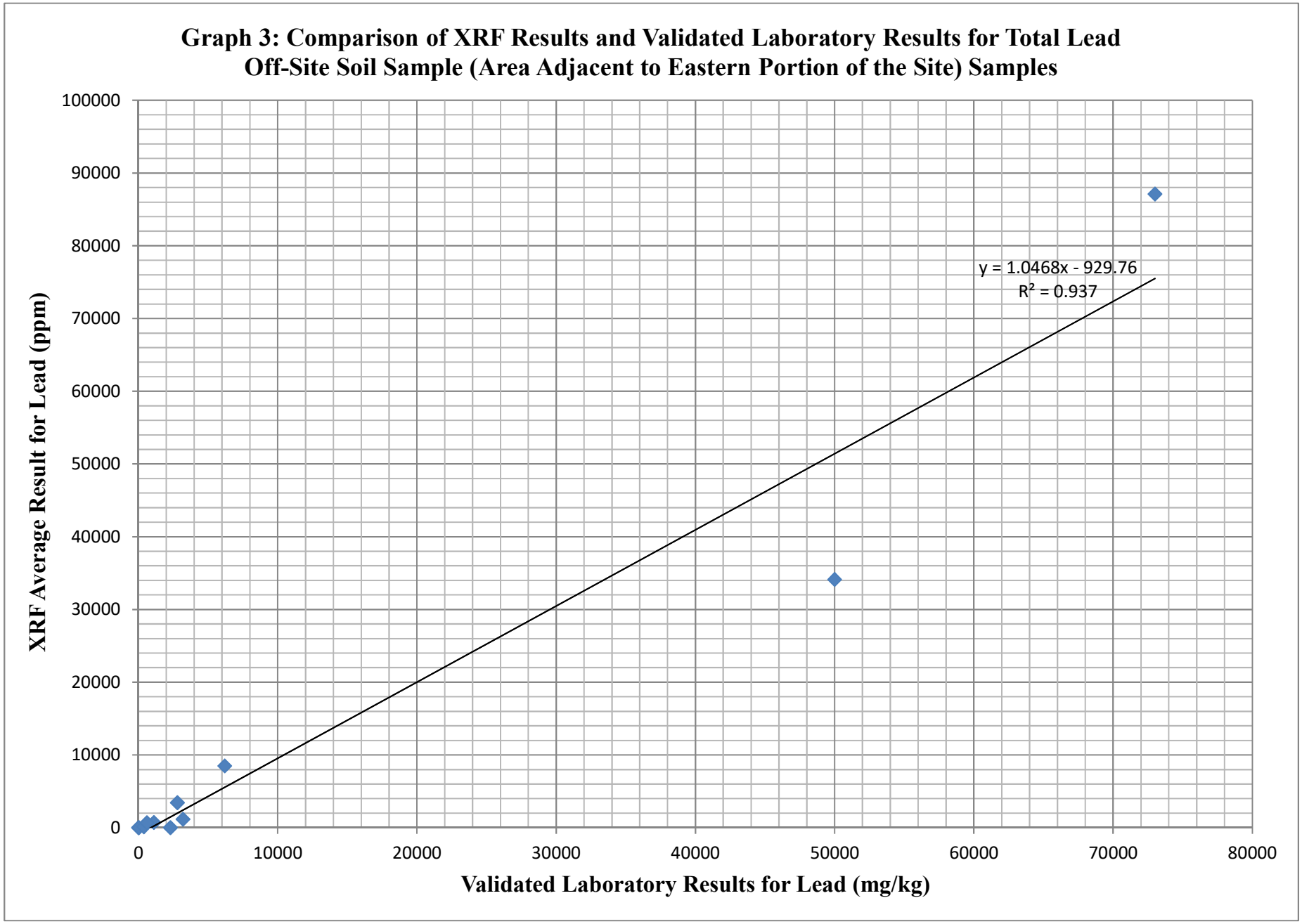
Graph 1: Comparison of XRF Results and Validated Laboratory Results for Total Lead - On-Site Soil Boring Samples

Graph 2: Comparison of XRF Results and Validated Laboratory Results for Total Lead - On-Site Slag Pile Samples

Graph 3: Comparison of XRF Results and Validated Laboratory Results for Total Lead – Off-Site Soil Sample (Area Adjacent to Eastern Portion of the Site) Samples


Graph 1: Comparison of XRF Results and Validated Laboratory Results for Total Lead
On-Site Soil Boring Samples
XRF Average Result for Lead (ppm)
120,000
100,000
80,000
60,000
40,000
20,000
-
-
10,000
20,000
30,000
40,000
50,000
60,000
70,000
80,000
90,000
Validated Laboratory Results for Lead (mg/kg)
y = 0.9801x + 971.75
R² = 0.7817


Graph 2: Comparison of XRF Results and Validated Laboratory Results for Total Lead
On-Site Slag Pile Samples
XRF Average Result for Lead (ppm)
250000
200000
150000
100000
50000
0
0
20000
40000
60000
80000
100000
120000
Validated Laboratory Results for Lead (mg/kg)
y = 1.9995x - 50036
R² = 0.756


Graph 3: Comparison of XRF Results and Validated Laboratory Results for Total Lead
Off-Site Soil Sample (Area Adjacent to Eastern Portion of the Site) Samples
y = 1.0468x - 929.76
R² = 0.937
XRF Average Result for Lead (ppm)
Validated Laboratory Results for Lead (mg/kg)
0
10000
20000
30000
40000
50000
60000
70000
80000
90000
100000

ATTACHMENT H

Digital Photographs (Hard Copy only - On Disk)