ENVIRONMENTAL CONSULTING & MANAGEMENT
ROUX ASSOCIATES INC
209 SHAFTER STREET
ISLANDIA, NEW YORK 11749 TEL 631-232-2600 FAX 631-232-9898

DRAFT

March 2, 2016

Michael Cirian, P.E.
USEPA
108 East 9th Street
Libby, Montana 59923

Re: Summary of Lead Delineation near Paste Plant
Columbia Falls Aluminum Company
Columbia Falls, Montana

Dear Mr. Cirian:

On behalf of Columbia Falls Aluminum Company (CFAC), Roux Associates, Inc. (Roux Associates) is submitting this letter report summarizing investigation activities completed to evaluate the potential presence of, and delineation of, an area of surface soil containing leachable lead at concentrations exceeding the Resource Conservation and Recovery Act (RCRA) criteria for definition of a hazardous waste. The investigation activities were completed in accordance with the Lead Delineation Sampling and Analysis Plan (Work Plan) dated January 29, 2016. The USEPA concurred with the Scope of Work presented in the Work Plan via email correspondence dated January 29, 2016.

Background

As described in the Work Plan, the need for the lead delineation activities was determined based upon information provided to CFAC by Calbag Resources (Calbag). Calbag is conducting ongoing demolition activities of the CFAC Main Plant buildings. In support of the ongoing demolition activities, Calbag collected numerous surface soil samples adjacent to buildings to evaluate the baseline conditions and industrial hygiene considerations for the demolition activities. These sampling activities were conducted solely for Calbag's use in planning the demolition work and were not conducted under the RI/FS Work Plan and/or Sampling and Analysis Plan prepared by Roux Associates and CFAC.

On December 18, 2015, Calbag notified CFAC that one of the surface soil samples (identified as sample PLD-172) contained leachable lead, determined via the Toxicity Characteristic Leaching Procedure (TCLP), at a concentration which exceeded the 5 mg/L Resource Conservation and Recovery Act (RCRA) criteria for definition of hazardous waste. Calbag provided CFAC and Roux Associates with the laboratory sample results which indicated a concentration of 24.2 ppm for TCLP lead. Calbag also provided a map which indicated the sample location was located approximately 15 feet north of the Paste Plant. Calbag indicated that sample PLD-172 was the only soil sample Calbag collected out of an approximate 15 samples around the Paste Plant that had exceeded the RCRA TCLP criteria.

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Sample Collection

Soil samples were collected by Hydrometrics on February 10 and 12, 2016 and were submitted to Energy Labs in Billings, Montana for analysis on February 11 and 12, 2016. All sampling activities were conducted in accordance with the Work Plan and were also conducted in accordance with the RI/FS Work Plan and Phase I Sampling and Analysis Plan (Phase I SAP) (Roux Associates, both dated November 23, 2015); the Site-Specific Health and Safety Plan (Roux Associates, December 22, 2015); and the Draft Investigation-Derived Waste Management Plan (Roux Associates, February 2, 2016).

Soil samples were collected at each location shown on the attached Figure 1 except that Sample SB-140 was re-located approximately 1-foot north of proposed location to avoid a concrete platform present on the surface. A summary of the soil sampling methods is described below:

- All sampling locations were covered with approximately three (3) inches of snow and ice. Snow and ice was removed by shoveling prior to soil excavation and sampling.
- Samples were collected by hand digging with spud bar, shovel, and stainless steel spoon to a total depth of 24 inches.
- Bulk composite samples from each boring were collected from two depth intervals (0 to 6-inches and 6 to 24-inches) and placed in Ziploc plastic bags.
- The composite samples were mixed well in the plastic bags and a sample aliquot was removed and placed in glass sample jars provided by Energy Labs.
- Samples were placed in a cooler on ice under Chain-of-Custody.
- All excavated soil was returned to the excavations and no excess soil was generated.
- Sample locations were marked with labeled wooden laths.
- All tools were decontaminated by soap and water washing, brushing and deionized water rinsing prior to use and between each sampling interval and boring.
- Decontamination water from wash and rinse buckets were mixed and a sample of the water was collected in laboratory-supplied bottles, preserved, and placed on ice in a cooler under Chain-of-Custody.
- Decontamination water was sealed in 5-gallon plastic buckets and labeled as Investigation Derived Waste and stored pending analytical results (see below).
- Soil and water samples were shipped to Energy Labs for analysis.

Field sampling notes, field forms and chain-of-custody documentation is included in Attachment 1.

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Sample Results

Soils encountered during excavation of borings consisted of moist to wet (or frozen) gravel with sand and cobbles. Man-made materials such as coal tar pitch, metal balls or bearings, nuts and bolts, metal wires, and grease pencils were present throughout the excavated materials; therefore the material is indicative of fill or other disturbed soil material rather than native in-place soils.

Samples collected at PLD-172 and at locations 5 feet away from PLD-172 (SB-134, SB-135, SB-136, and SB-137) were analyzed for TCLP lead and total lead. Laboratory analytical reports for soil chemical analyses are in Attachment 2. A summary of total lead and TCLP lead results is provided in Table 1.

Results from the analysis of the 5-foot delineation samples indicate no TCLP concentrations exceeding the RCRA hazardous waste limit of 5 mg/L. Total lead results suggest that lead is present in soil within both the surface (0-0.5 ft-bls) and shallow subsurface intervals (0.5-2 ft-bls). The results also indicate that surface samples generally have higher total lead concentrations relative to deeper soil samples.

Table 1. Soil Results

Sample Location	Sample Depth (feet bgs)	Sample Number	Total Lead (mg/kg)	TCLP Lead (mg/L)
SB-134	0-0.5	CFSB-134-SO/0-0.5	165	0.3
SB-134	0.5-2.0	CFSB-134-SO/0.5-2.0	28	<0.1
SB-135	0-0.5	CFSB-135-SO/0-0.5	2,140	1.5
SB-135	0.5-2.0	CFSB-135-SO/0.5-2.0	77	<0.1
SB-136	0-0.5	CFSB-136-SO/0-0.5	366	1.4
SB-136	0.5-2.0	CFSB-136-SO/0.5-2.0	207	<0.1
SB-137	0-0.5	CFSB-137-SO/0-0.5	143	0.3
SB-137	0.5-2.0	CFSB-137-SO/0.5-2.0	71	0.1
SB-138	0-0.5	CFSB-138-SO/0-0.5	NA	NA
SB-138	0.5-2.0	CFSB-138-SO/0.5-2.0	NA	NA
SB-139	0-0.5	CFSB-139-SO/0-0.5	NA	NA
SB-139	0.5-2.0	CFSB-139-SO/0.5-2.0	NA	NA
SB-140	0-0.5	CFSB-140-SO/0-0.5	NA	NA
SB-140	0.5-2.0	CFSB-140-SO/0.5-2.0	NA	NA
PLD-172	0-0.5	CFSB-PLD172-SO/0-0.5	152	<0.1
PLD-172	0.5-2.0	CFSB-PLD172-SO/0.5-2.0	62	<0.1
Average Total Lead for surface samples			593.2	
Average Total Lead for shallow subsurface samples			89.0	
EPA TCLP Limit[1]				5

1. 40 CFR 261.24 (b) Table 1-Maximum Concentration of Contaminants for the Toxicity Characteristic
2. NA = Not Analyzed

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Conclusions

None of delineation samples collected at and around PLD-172 contained lead at concentrations exceeding the RCRA TCLP limit. The results indicate that preparation of plans for additional soil sampling, or removal of soil within the vicinity of the Paste Plant, are not necessary at this time.

The data presented in this letter report will undergo the data validation process and will be incorporated into the RI/FS database. The data will be included as part of the overall soil data evaluated during the RI/FS activities described in the RI/FS Work Plan and Phase I SAP.

Please contact us if you have any questions or comments on the results described in this letter.

Sincerely,

ROUX ASSOCIATES, INC.

Michael Ritorto
Senior Hydrogeologist
RI Manager

Andrew Baris
Principal Hydrogeologist / Vice President
RI/FS Manager

Attachments:

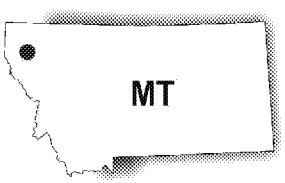
Figure 1 –Sampling Locations
Attachment 1 – Field Sampling Notes, Field Forms, and Chain-of-Custody
Attachment 2 – Laboratory Data

cc: John Stroiazzo, Glencore
Steve Wright, CFAC
Lisa DeWitt, Montana Department of Environmental Quality

V:\GIS\Projects\2476Y\0001Y\100\2476.0001Y100.118\2476.0001Y100.118.mxd

Legend

- Approximate location of Sample PLD-172 Collected by Calbag
- 5' Delineation Sampling Locations
- Contingency 10' Sampling Locations



N

5 0 5 10
Feet

Title:

SAMPLING LOCATIONS FOR LEAD DELINEATION

2000 ALUMINUM DRIVE
COLUMBIA FALLS, MONTANA

Prepared For:
COLUMBIA FALLS ALUMINUM COMPANY, LLC

ROUX
ROUX ASSOCIATES, INC.
Environmental Consulting & Management

Compiled by: A.M.	Date: 29FEB2016	FIGURE
Prepared by: A.M.	Scale: 1 "= 28 '	1
Project Mgr: A.B.	Office: NY	
File: 2476.0001Y100.118	Project: 2476.0001Y002	

Field Sampling Notes, Field Forms and Chain-of-Custody

Soil / Sediment Sample Sheet

Site Name: CFAC

Project Number: 15042

Date: 2-10-2016

Sampler: GD, CA, SM

Weather: Clear, Dry, ~25°F

Latitude:

Longitude:

Coordinate system:

Boring ID: SB-137

Sample Interval (ft-bls): 0-0.5, 0.5-2

Grab [ ]

Composite [X]

Visual Observations: sandy gravel w/ cobbles, coal tar pitch & odor, metallic wires in the soil boring, frozen-s. moist

Laboratory Name: Energy Labs - Billings

Sample ID: CFSB-137-S0/0-0.5 CFSB-137-S0/0.5-2

Sample Time: 1008

Analysis	
Soil TCL VOCS 8260	
Soil TCL SVOCs 8270	
Soil TAL Metals 6010	
Soil TCL PCBs 8082	
Soil TCL Pesticides 8081	
Soil Total Cyanide 9012	
Soil Fluoride 300	
Soil PCDD/ PCDF 8290	
Grain Size Analysis/ bulk density/ moisture content	
Total Organic Carbon	

Quality Control (QC) sample	
Field duplicate	
Matrix Spike	
Matrix Spike Duplicate	

Additional Notes:

Analysis: Total Lead
TCLP Lead

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2476.0001Y000-SAMPLE SHEET

Soil / Sediment Sample Sheet

Site Name: CFAC

Project Number: 15042

Date: 2-10-2016

Sampler: GD, SM, CA

Weather: Clear, dry, 25°F

Latitude:

Longitude:

Coordinate system:

Boring ID: ~~CFSB-134-SO/0-0.5~~ GD 2-10-16 SB-134

Sample Interval (ft-bls): 0-0.5, 0.5-2

Grab [ ]

Composite [X]

Visual Observations: Sandy gravel w/ cobbles, worn "bearings"? on surface

Laboratory Name: Energy Labs - Billings

Sample ID: CFSB-134-SO/0-0.5 CFSB-134-SO/0.5-2

Sample Time: 1045

Analysis	
Soil TCL VOCS 8260	
Soil TCL SVOCs 8270	
Soil TAL Metals 6010	
Soil TCL PCBs 8082	
Soil TCL Pesticides 8081	
Soil Total Cyanide 9012	
Soil Fluoride 300	
Soil PCDD/ PCDF 8290	
Grain Size Analysis/ bulk density/ moisture content	
Total Organic Carbon	

Quality Control (QC) sample	
Field duplicate	
Matrix Spike	
Matrix Spike Duplicate	

Additional Notes:

Analysis: Total Lead
TCLP Lead

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2476.0001Y000-SAMPLE SHEET

Soil / Sediment Sample Sheet

Site Name: CFAc

Project Number: 15042

Date: 2-10-2016

Sampler: GD, SM, CA

Weather: Clear, dry, 25°F

Latitude:

Longitude:

Coordinate system:

Boring ID: SB-135

Sample Interval (ft-bls): 0-0.5, 0.5-2

Grab [ ]

Composite [X]

Visual Observations: Sandy gravel w/ cobbles, coal tar pitch noted

Laboratory Name: Energy Labs - Billings

Sample ID: CFSB-135-S0/0-0.5 CFSB-135-S0/0.5-2

Sample Time: 1150

Analysis	
Soil TCL VOCS 8260	
Soil TCL SVOCs 8270	
Soil TAL Metals 6010	
Soil TCL PCBs 8082	
Soil TCL Pesticides 8081	
Soil Total Cyanide 9012	
Soil Fluoride 300	
Soil PCDD/ PCDF 8290	
Grain Size Analysis/ bulk density/ moisture content	
Total Organic Carbon	

Quality Control (QC) sample	
Field duplicate	
Matrix Spike	
Matrix Spike Duplicate	

Additional Notes:

Analysis: Total Lead
TCLP Lead
0-0.5 in the 8 oz jar
0.5-2 in two 4 oz jars

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2476.0001Y000-SAMPLE SHEET

Soil / Sediment Sample Sheet

Site Name: CFAC

Project Number: 15042

Date: 2-10-2016

Sampler: GD, SM, CA

Weather: Clear, dry, 28°F

Latitude:

Longitude:

Coordinate system:

Boring ID: SB-136

Sample Interval (ft-bls): 0-0.5, 0.5-2

Grab [ ]

Composite [X]

Visual Observations: Sandy gravel w/ cobbles, coal tar pitch & debris noted (wire and one nut)

Laboratory Name: Energy Labs - Billings

Sample ID: CFSB-136-So/0-0.5 CFSB-136-So/0.5-2

Sample Time: 1313

Analysis	
Soil TCL VOCS 8260	
Soil TCL SVOCs 8270	
Soil TAL Metals 6010	
Soil TCL PCBs 8082	
Soil TCL Pesticides 8081	
Soil Total Cyanide 9012	
Soil Fluoride 300	
Soil PCDD/ PCDF 8290	
Grain Size Analysis/ bulk density/ moisture content	
Total Organic Carbon	

Quality Control (QC) sample	
Field duplicate	
Matrix Spike	
Matrix Spike Duplicate	

Additional Notes:

Analysis: Total Lead
TCLP Lead
Two 4oz bottles filled per interval.

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2476.0001Y000-SAMPLE SHEET

Soil / Sediment Sample Sheet

Site Name: CFAC

Project Number: 15042

Date: 2-10-2016

Sampler: GD, CA, SM

Weather: Clear, dry, calm, 28°F

Latitude:

Longitude:

Coordinate system:

Boring ID: SB-138

Sample Interval (ft-bls): 0-0.5, 0.5-2

Grab [ ]

Composite [X]

Visual Observations: Sandy gravel w/cobbles (fill), less gravel more sand than previous, looser, debris

Laboratory Name: Energy Labs - Billings

Sample ID: CFSB-138-S0/0-0.5 CFSB-138-S0/0.5-2

Sample Time: 1340

Analysis	
Soil TCL VOCS 8260	
Soil TCL SVOCs 8270	
Soil TAL Metals 6010	
Soil TCL PCBs 8082	
Soil TCL Pesticides 8081	
Soil Total Cyanide 9012	
Soil Fluoride 300	
Soil PCDD/ PCDF 8290	
Grain Size Analysis/ bulk density/ moisture content	
Total Organic Carbon	

Quality Control (QC) sample	
Field duplicate	
Matrix Spike	
Matrix Spike Duplicate	

Additional Notes:

Analysis: Total Lead

TCLP Lead

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2476.0001Y000-SAMPLE SHEET

Soil / Sediment Sample Sheet

Site Name: CFAC

Project Number: 15042

Date: 2-10-2016

Sampler: GD, SM, CA

Weather: Clear, dry, calm, 28°F

Latitude:

Longitude:

Coordinate system:

Boring ID: SB-139

Sample Interval (ft-bls): 0-0.5, 0.5-2

Grab [ ]

Composite [X]

Visual Observations: Coal tar pitch & debris, sandy gravel w/cobbles

Laboratory Name: Energy Labs - Billings

Sample ID: CFSB-139-S0/0-0.5 CFSB-139-S0/0.5-2

Sample Time: 1427

Analysis	
Soil TCL VOCS 8260	
Soil TCL SVOCs 8270	
Soil TAL Metals 6010	
Soil TCL PCBs 8082	
Soil TCL Pesticides 8081	
Soil Total Cyanide 9012	
Soil Fluoride 300	
Soil PCDD/ PCDF 8290	
Grain Size Analysis/ bulk density/ moisture content	
Total Organic Carbon	

Quality Control (QC) sample	
Field duplicate	
Matrix Spike	
Matrix Spike Duplicate	

Additional Notes:

Analysis: Total Lead
TCLP Lead
Filled two 4oz amber bottles per interval.

ROUX ASSOCIATES, INC

2476.0001Y000-SAMPLE SHEET

Soil / Sediment Sample Sheet

Site Name: CFAC

Project Number: 15042

Date: 2-10-2016

Sampler: GD, CA, SM

Weather: Clear, dry, calm, 28°F

Latitude:

Longitude:

Coordinate system:

Boring ID: SB-140

Sample Interval (ft-bls): 0-0.5, 0.5-2

Grab [ ]

Composite [X]

Visual Observations: Sandy gravel w/ cobbles

Laboratory Name: Energy Labs - Billings

Sample ID: CFSB-140-S0/0-0.5 CFSB-140-S0/0.5-2

Sample Time: 1521

Analysis	
Soil TCL VOCS 8260	
Soil TCL SVOCs 8270	
Soil TAL Metals 6010	
Soil TCL PCBs 8082	
Soil TCL Pesticides 8081	
Soil Total Cyanide 9012	
Soil Fluoride 300	
Soil PCDD/ PCDF 8290	
Grain Size Analysis/ bulk density/ moisture content	
Total Organic Carbon	

Quality Control (QC) sample	
Field duplicate	
Matrix Spike	
Matrix Spike Duplicate	

Additional Notes:

Analysis: Total Lead
TCLP Lead
Filled two 4oz. amber jars per interval.

ROUX ASSOCIATES, INC

2476.0001Y000-SAMPLE SHEET

Soil / Sediment Sample Sheet

Site Name: CFAC

Project Number: 15042

Date: 2-12-2016

Sampler: GD & SM

Weather: Overcast, dry, 38°F

Latitude:

Longitude:

Coordinate system:

Boring ID: PLD-172

Sample Interval (ft-bls): 0-0.5, 0.5-2

Grab [ ]

Composite [X]

Visual Observations: Sandy gravel w/cobbles, saw wire and coal tar pitch.

Laboratory Name: Energy Labs - Billings

Sample ID: CFPLD-172-So/0-0.5 CFPLD-172-So/0.5-2

Sample Time: 1405

Analysis	
Soil TCL VOCS 8260	
Soil TCL SVOCs 8270	
Soil TAL Metals 6010	
Soil TCL PCBs 8082	
Soil TCL Pesticides 8081	
Soil Total Cyanide 9012	
Soil Fluoride 300	
Soil PCDD/ PCDF 8290	
Grain Size Analysis/ bulk density/ moisture content	
Total Organic Carbon	

Quality Control (QC) sample	
Field duplicate	
Matrix Spike	
Matrix Spike Duplicate	

Additional Notes:

Analysis: Total Lead
TCLP Lead

ROUX ASSOCIATES, INC

2476.0001Y000-SAMPLE SHEET

February 10, 2016

Soil Sampling - Lead Delineation
Hydrometries - S. Mason, C. Arendt, G. Davis

0825: 23°F, Clear, No precip.
Onsite at the north side of the paste plant. Delineation sampling around PLD-172.

Site: SB-137
Sample Code: CFSB-137-SO/0-0.5
CFSB-137-SO/0.5-2
Sample Time: 1008

Bottles

Size	Preserv.	Analysis
8 oz.	None	Total Lead
		TCLP Lead

[illegible] sandy gravel w/ cobbles, saw wire [illegible] the excavation and coal tar pitch [illegible] coal tar odor. One bottle filled [illegible] each interval.

57 2-10-16

Site: SB-134

Sample Code: CFSB-134-SO/0-0.5'
CFSB-134-SO/0.5-2

Sample Time: 1045

Bottles

#	size	Preserv.	Analysis
1	8oz	None	Total Lead TCLP Lead

Note: worn "bearings"? on the surface
One bottle filled for each interval.

Site: SB-135

Sample Code: CFSB-135-SO/0-0.5
CFSB-135-SO/0.5-2

Sample Time: 1150

Bottles

#	size	Preserv.	Analysis
1	8 oz (0-0.5)	None	Total Lead TCLP Lead
2	4 oz (0.5-2)	None	Total Lead TCLP Lead

2-10-16 58

Site: SB-136

Sample Code: CFSB-136-SO/0-0.5
CFSB-136-SO/0.5-2

Sample Time: 1313

Bottles:

#	size	Preserv.	Analysis
2	4oz	None	Total Lead TCLP Lead

Note: Same sandy gravel w/cobbles, noted coal tar pitch and two wires, one nut - fill? Fill two 4oz bottles per interval.

Site: SB-138

Sample Code: CFSB-138-SO/0-0.5
CFSB-138-SO/0.5-2

Sample Time: 1340

Bottles:

#	size	Preserv.	Analysis
1	8 oz	None	Total Lead TCLP Lead

Note: Looser, sandier material, also contains debris. One 8oz per interval.

ED_002345B_00008795-00016

Site: SB-139
Sample Code: CFSB-139-S0/0-0.5
CFSB-139-S0/0.5-2
Sample Time: 1427

Bottles:

#	size	Preserv.	Analysis
2	4oz	None	Total Lead
			TCLP Lead

Note: Same sandy gravel w/ cobbles w/ coal tar pitch and debris.

Site: SD-140
Sample Code: CFSB-140-S0/0-0.5
CFSB-140-S0/0.5-2
Sample Time: 1521

Note: sandy gravel w/cobbles. Filled two 4 oz. amber jars per interva

GPS Coordinates for our estimated location for PLD-172.
N 48.39554°
W 114.13628°

Decontamination Water Characterization Sample.
Sample Code: CFIDW-001-DW
Sample Time: 1545

Bottles

#	size	Preserv.	Analysis
1	500mL	UF/Raw	Alkalinity
			Anions
1	250 mL	UF/HNO_3	Metals
			Hardness
1	500 mL	UF/NaOH	T. Cyanide
3	40 mL	UF/HCl	VOCs
2	1 L	UF/Raw	SVOCs

ED_002345B_00008795-00017

February 12, 2016
Soil Sampling - Lead Delineation
Hydrometrics - S. Mason & G. Davis

1311 Onsite at the north side of the paste plant to collect a sample from the PLD-172 location for verification of the original sample.

38°F, overcast, currently not ~~raing~~ raining - intermittent showers.

Site: PLD-172
Sample Code: CFPLD-172-SO/0-0.5
CFPLD-172-SO/0.5-2
Sample Time: 1405

Note: sandy gravel w/ cobbles, saw wire and coal tar pitch. Snow melt was draining into the hole.

gd 2-12-16

ED_002345B_00008795-00018

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: Hydrometrics	Project Name, PWS, Permit, Etc.: CFAC Paste Plant Soil	Sample Origin State: MT	EPA/State Compliance: Yes ☒ No ☐
Report Mail Address (Required): cc: Juneka@hydrometrics	Contact Name: Scott Mason Phone/Fax: 257-4209	Cell: 471-8625	Sampler: (Please Print) Mason
☒ No Hard Copy Email: smason@hydrometrics.com	Invoice Contact & Phone: Marta Peters 443-4150	Purchase Order:	Quote/Bottle Order: 63775

Invoice Address (Required):

☒ No Hard Copy Email: Mpeters@hydrometrics

Special Report/Formats:

- ☐ DW
- ☐ POTW/WWTP
- ☐ State: _____
- ☐ Other: _____
- ☒ EDD/EDT (Electronic Data) Format: HydroEMS
- ☒ LEVEL IV
- ☐ NELAC

ANALYSIS REQUESTED

RUSH: Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by:

Cooler ID(s):

Receipt Temp ____ °C

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N

Intact Y N

Signature Match Y N

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	Total Lead	TCLP Lead	Hold for Future	SEE ATTACHED	Standard Turnaround (TAT)
1 CFSB-134-S0/0-0.5	2/10	1045	S	X				✓
2 CFSB-134-S0/0.5-2.0		1045		X				✓
3 CFSB-135-S0/0-0.5		1150		X				✓
4 CFSB-135-S0/0.5-2.0		1150		X				✓
5 CFSB-136-S0/0-0.5		1313		X				✓
6 CFSB-136-S0/0.5-2.0		1313		X				✓
7 CFSB-137-S0/0-0.5		1008		X				✓
8 CFSB-137-S0/0.5-2.0		1008		X				✓
9 CFSB-138-S0/0-0.5		1340			X			
10 CFSB-138-S0/0.5-2.0	✓	1340	✓		X			

Custody Record MUST be Signed

Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
Scott Mason	2/11/06	1900 Scott Mason			

Received by Laboratory: Date/Time: Signature:

Sample Disposal: Return to Client: _____ Lab Disposal: ✓

LABORATORY USE ONLY

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ED_002345B_00008795-00019

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: Hydrometrics

Project Name, PWS, Permit, Etc.: CFAC Paste Plant Soil

Sample Origin State: MT

EPA/State Compliance: Yes ☒ No ☐

Report Mail Address (Required):

Contact Name: Scott Mason

Phone/Fax: 257-4204

Cell:

Sampler: (Please Print) Mason

☐ No Hard Copy Email:

Invoice Contact & Phone:

Purchase Order:

Quote/Bottle Order: B3775

Invoice Address (Required):

☐ No Hard Copy Email:

Special Report/Formats:

☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☒ EDD/EDT (Electronic Data) Format: Hydro EDMS
☒ LEVEL IV
☐ NELAC

ANALYSIS REQUESTED

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids
Vegetation Bioassay Other
DW - Drinking Water

SEE ATTACHED

Standard Turnaround (TAT)

RUSH → Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	Total Lead	TCLP Lead	Hold for Future	8260 VOCs	SVOCs 8270	Total Cyanide	F Alkalinity	Metals				Comments
1 CFSB-139-S0/0.5-2.0	2/10	1427	15			X									
2 CFSB-139-S0/0-0.5	↓	1427	15			X									
3 CFSB-140-S0/0-0.5	↓	1521	15			X									
4 CFSB-140-S0/0.5-2.0	↓	1521	15			X									
5 CF1DW-001-DW	✓	1545	DW				3	2	1	1	1			✓	See Table 8 for analyte list for water
6															
7															
8															
9															
10															

LABORATORY USE ONLY

Shipped by:

Cooler ID(s):

Receipt Temp °C

On Ice: Y N

Custody Seal
On Bottle Y N
On Cooler Y N

Intact Y N

Signature Match Y N

Custody Record MUST be Signed

Relinquished by (print): Scott Mason Date/Time: 2-11-16 (1700) Signature: Scott Mason

Relinquished by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature

Received by (print): Date/Time: Signature

Received by Laboratory: Date/Time: Signature:

Sample Disposal: Return to Client: Lab Disposal: ✓

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

ED_002345B_00008795-00020

Hydrometrics, Inc.

CHAIN OF CUSTODY RECORD

3020 Bozeman Ave. • Helena, MT 59601 • (406) 443-4150

PROJ. NO.: 15042

PROJECT NAME: CFAC Paste Plant Soil

SAMPLERS: (Signature) Scott Mann

DATE	TIME	COMP	GRAB	SAMPLE NUMBER	NO. OF CONTAINERS	Commons UF / RAW	Nutrients UF / H_2SO_4	Diss. Metal F / HNO_3	CN UF / NaOH	Total Metals UF / HNO_3	Total Recoverable Metals UF / HNO_3	BTEX	TPH	Total Lead	TCLP Lead						REMARKS
2/12	1405	✓		CFPLD-172-S010-0.5	2 S									✓	✓						
2/12	1405	✓		CFPLD-172-S010.5-2.0	2 S									✓	✓						

Relinquished (Signature)	Date / Time	Received by (Signature)	Lab	P.O. #	Shipped via: Bus FedEx UPS
Scott Mann	2/12 1000		EL - Billings		Other Air Bill #
Relinquished (Signature)	Date / Time	Received by (Signature)	Remarks Level IV Data Package in EQuIS Hydro Format		
Relinquished (Signature)	Date / Time	Received for Laboratory by (Signature)	Date / Time	Enclosed: ☐ Parameter sheet w/detection limits ☐ QA / AC standard mixing instructions ☒ Cover letter ☐ Other	

Split Samples:
☐ Accepted ☐ Declined
Signature

Return results & electronic copy to:
QA / QC Dept. at address at top of page

HFORM-1 07/11
Action Print 406-442-7595

ED_002345B_00008795-00021

Laboratory Data

ANALYTICAL SUMMARY REPORT

February 29, 2016

Hydrometrics Inc
33 2nd Street East Suite 8B
Kalispell, MT 59901-6108

Work Order: B16021024 Quote ID: B3775 - CFAC

Project Name: CFAC Paste Plant Soil

Energy Laboratories Inc Billings MT received the following 10 samples for Hydrometrics Inc on 2/12/2016 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B16021024-001	CFSB-134-SO/0-0.5	02/10/16 10:45	02/12/16	Soil	Metals by ICP/ICPMS, Total or Soluble Metals by ICP/ICPMS, TCLP pH, TCLP Digestion, Total Metals TCLP Extraction, Non-volatiles Digestion, Total Metals
B16021024-002	CFSB-134-SO/0.5-2.0	02/10/16 10:45	02/12/16	Soil	Same As Above
B16021024-003	CFSB-135-SO/0-0.5	02/10/16 11:50	02/12/16	Soil	Same As Above
B16021024-004	CFSB-135-SO/0.5-2.0	02/10/16 11:50	02/12/16	Soil	Same As Above
B16021024-005	CFSB-136-SO/0-0.5	02/10/16 13:13	02/12/16	Soil	Same As Above
B16021024-006	CFSB-136-SO/0.5-2.0	02/10/16 13:13	02/12/16	Soil	Same As Above
B16021024-007	CFSB-137-SO/0-0.5	02/10/16 10:08	02/12/16	Soil	Same As Above
B16021024-008	CFSB-137-SO/0.5-2.0	02/10/16 10:08	02/12/16	Soil	Same As Above
B16021024-015	CF1DW-001-DW	02/10/16 15:45	02/12/16	Aqueous	Metals by ICP/ICPMS, Total Alkalinity Mineral Balance Review Cyanide, Total Mercury, Total Hardness as CaCO3 Anions by Ion Chromatography Digestion, Total Metals Digestion, Mercury by CVAA Separatory Funnel Liquid-Liquid Ext. Semi-Volatile Organic Compounds, Extended List 8260-Volatile Organic Compounds-Extended List
B16021024-016	Trip Blank Lot020216 B-PF SHP0267	02/10/16 15:45	02/12/16	Trip Blank	8260-Volatile Organic Compounds-Extended List

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Client Sample ID: CFSB-134-SO/0-0.5
Project: CFAC Paste Plant Soil
Matrix: Soil

Lab ID: B16021024-001
Collection Date: 02/10/16 10:45
DateReceived: 02/12/16
Report Date: 02/29/16

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS, TCLP EXTRACTABLE												
Lead	0.3	mg/L		0.1	5	SW6010B	02/18/16 15:23 / jjw	02/17/16 09:24	SW3010A	ICP203-B_160218A	111	96990
METALS, TOTAL - EPA SW846												
Lead	165	mg/kg		1		SW6010B	02/16/16 19:31 / jjw	02/16/16 08:45	SW3050 B	ICP203-B_160216A	189	96935
TCLP EXTRACTABLE CONSTITUENTS												
pH	5.4	s.u.		0.1		SW1311	02/17/16 09:25 / jh			RION 720A HZW_160217A	1	R256868

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Client Sample ID: CFSB-134-SO/0.5-2.0
Project: CFAC Paste Plant Soil
Matrix: Soil

Lab ID: B16021024-002
Collection Date: 02/10/16 10:45
DateReceived: 02/12/16
Report Date: 02/29/16

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS, TCLP EXTRACTABLE												
Lead	ND	mg/L		0.1	5	SW6010B	02/18/16 15:33 / jjw	02/17/16 09:24	SW3010A	ICP203-B_160218A	114	96990
METALS, TOTAL - EPA SW846												
Lead	28	mg/kg		1		SW6010B	02/16/16 19:35 / jjw	02/16/16 08:45	SW3050 B	ICP203-B_160216A	190	96935
TCLP EXTRACTABLE CONSTITUENTS												
pH	6.0	s.u.		0.1		SW1311	02/17/16 09:25 / jh			RION 720A HZW_160217A	2	R256868

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Client Sample ID: CFSB-135-SO/0-0.5
Project: CFAC Paste Plant Soil
Matrix: Soil

Lab ID: B16021024-003
Collection Date: 02/10/16 11:50
DateReceived: 02/12/16
Report Date: 02/29/16

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS, TCLP EXTRACTABLE												
Lead	1.5	mg/L		0.1	5	SW6010B	02/18/16 15:41 / jjw	02/17/16 09:24	SW3010A	ICP203-B_160218A	116	96990
METALS, TOTAL - EPA SW846												
Lead	2140	mg/kg		1		SW6010B	02/16/16 19:38 / jjw	02/16/16 08:45	SW3050 B	ICP203-B_160216A	191	96935
TCLP EXTRACTABLE CONSTITUENTS												
pH	5.5	s.u.		0.1		SW1311	02/17/16 09:25 / jh			RION 720A HZW_160217A	3	R256868

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Client Sample ID: CFSB-135-SO/0.5-2.0
Project: CFAC Paste Plant Soil
Matrix: Soil

Lab ID: B16021024-004
Collection Date: 02/10/16 11:50
DateReceived: 02/12/16
Report Date: 02/29/16

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS, TCLP EXTRACTABLE												
Lead	ND	mg/L		0.1	5	SW6010B	02/18/16 15:48 / jjw	02/17/16 09:24	SW3010A	ICP203-B_160218A	118	96990
METALS, TOTAL - EPA SW846												
Lead	77	mg/kg		1		SW6010B	02/16/16 19:42 / jjw	02/16/16 08:45	SW3050 B	ICP203-B_160216A	192	96935
TCLP EXTRACTABLE CONSTITUENTS												
pH	5.7	s.u.		0.1		SW1311	02/17/16 09:25 / jh			RION 720A HZW_160217A	4	R256868

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Client Sample ID: CFSB-136-SO/0-0.5
Project: CFAC Paste Plant Soil
Matrix: Soil

Lab ID: B16021024-005
Collection Date: 02/10/16 13:13
DateReceived: 02/12/16
Report Date: 02/29/16

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS, TCLP EXTRACTABLE												
Lead	1.4	mg/L		0.1	5	SW6010B	02/18/16 16:03 / jjw	02/17/16 09:24	SW3010A	ICP203-B_160218A	122	96990
METALS, TOTAL - EPA SW846												
Lead	366	mg/kg		1		SW6010B	02/16/16 19:46 / jjw	02/16/16 08:45	SW3050 B	ICP203-B_160216A	193	96935
TCLP EXTRACTABLE CONSTITUENTS												
pH	5.2	s.u.		0.1		SW1311	02/17/16 09:25 / jh			RION 720A HZW_160217A	5	R256868

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Client Sample ID: CFSB-136-SO/0.5-2.0
Project: CFAC Paste Plant Soil
Matrix: Soil

Lab ID: B16021024-006
Collection Date: 02/10/16 13:13
DateReceived: 02/12/16
Report Date: 02/29/16

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS, TCLP EXTRACTABLE												
Lead	ND	mg/L		0.1	5	SW6010B	02/18/16 16:10 / jjw	02/17/16 09:24	SW3010A	ICP203-B_160218A	124	96990
METALS, TOTAL - EPA SW846												
Lead	207	mg/kg		1		SW6010B	02/16/16 19:49 / jjw	02/16/16 08:45	SW3050 B	ICP203-B_160216A	194	96935
TCLP EXTRACTABLE CONSTITUENTS												
pH	6.0	s.u.		0.1		SW1311	02/17/16 09:25 / jh			RION 720A HZW_160217A	6	R256868

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Client Sample ID: CFSB-137-SO/0-0.5
Project: CFAC Paste Plant Soil
Matrix: Soil

Lab ID: B16021024-007
Collection Date: 02/10/16 10:08
DateReceived: 02/12/16
Report Date: 02/29/16

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS, TCLP EXTRACTABLE												
Lead	0.3	mg/L		0.1	5	SW6010B	02/18/16 16:17 / jjw	02/17/16 09:24	SW3010A	ICP203-B_160218A	126	96990
METALS, TOTAL - EPA SW846												
Lead	143	mg/kg		1		SW6010B	02/16/16 19:52 / jjw	02/16/16 08:45	SW3050 B	ICP203-B_160216A	195	96935
TCLP EXTRACTABLE CONSTITUENTS												
pH	5.5	s.u.		0.1		SW1311	02/17/16 09:25 / jh			RION 720A HZW_160217A	7	R256868

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Client Sample ID: CFSB-137-SO/0.5-2.0
Project: CFAC Paste Plant Soil
Matrix: Soil

Lab ID: B16021024-008
Collection Date: 02/10/16 10:08
DateReceived: 02/12/16
Report Date: 02/29/16

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
METALS, TCLP EXTRACTABLE												
Lead	0.1	mg/L		0.1	5	SW6010B	02/18/16 16:25 / jjw	02/17/16 09:24	SW3010A	ICP203-B_160218A	128	96990
METALS, TOTAL - EPA SW846												
Lead	71	mg/kg		1		SW6010B	02/16/16 19:56 / jjw	02/16/16 08:45	SW3050 B	ICP203-B_160216A	196	96935
TCLP EXTRACTABLE CONSTITUENTS												
pH	5.4	s.u.		0.1		SW1311	02/17/16 09:25 / jh			RION 720A HZW_160217A	8	R256868

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Client Sample ID: CF1DW-001-DW
Project: CFAC Paste Plant Soil
Matrix: Aqueous

Lab ID: B16021024-015
Collection Date: 02/10/16 15:45
DateReceived: 02/12/16
Report Date: 02/29/16

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
INORGANICS												
Alkalinity, Total as CaCO3	194	mg/L		4		A2320 B	02/12/16 18:17 / cn			MAN-TECH_160212B	24	R256506
Bicarbonate as HCO3	237	mg/L		4		A2320 B	02/12/16 18:17 / cn			MAN-TECH_160212B	24	R256506
Carbonate as CO3	ND	mg/L		4		A2320 B	02/12/16 18:17 / cn			MAN-TECH_160212B	24	R256506
Fluoride	0.9	mg/L		0.2		E300.0	02/23/16 12:09 / am			IC METROHM 2_160223A	8	R256933
Cyanide, Total	ND	mg/L		0.005		Kelada-01	02/16/16 16:28 / jpv			SFA-201-B_160216A	20	R256593
Hardness as CaCO3	152	mg/L		1		A2340 B	02/17/16 18:37 / klc			MISC-WC CALC_160224A	3	R256989
METALS, TOTAL												
Aluminum	5.52	mg/L		0.03		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
Antimony	ND	mg/L		0.001		SW6020	02/23/16 11:25 / ma	02/16/16 09:20	SW3010A	ICPMS206-B_160223A	20	96949
Arsenic	0.005	mg/L		0.001		SW6020	02/23/16 11:25 / ma	02/16/16 09:20	SW3010A	ICPMS206-B_160223A	20	96949
Barium	0.23	mg/L		0.05		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
Beryllium	ND	mg/L		0.001		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
Cadmium	ND	mg/L		0.001		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
Calcium	36	mg/L		1		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
Chromium	0.011	mg/L		0.005		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
Cobalt	ND	mg/L		0.005		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
Copper	0.021	mg/L		0.005		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
Iron	5.84	mg/L		0.03		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
Lead	0.056	mg/L		0.001		SW6020	02/23/16 11:25 / ma	02/16/16 09:20	SW3010A	ICPMS206-B_160223A	20	96949
Magnesium	15	mg/L		1		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
Manganese	0.184	mg/L		0.001		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
Mercury	ND	mg/L		0.0001		SW7470A	02/17/16 15:18 / ser	02/17/16 09:57	SW7470A	HGCV202-B_160217A	14	96994
Nickel	0.009	mg/L		0.005		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
Potassium	25	mg/L		1		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
Selenium	ND	mg/L		0.001		SW6020	02/23/16 11:25 / ma	02/16/16 09:20	SW3010A	ICPMS206-B_160223A	20	96949
Silver	ND	mg/L		0.001		SW6020	02/23/16 11:25 / ma	02/16/16 09:20	SW3010A	ICPMS206-B_160223A	20	96949
Sodium	79	mg/L		1		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
Thallium	ND	mg/L		0.005		SW6020	02/23/16 11:25 / ma	02/16/16 09:20	SW3010A	ICPMS206-B_160223A	20	96949
Vanadium	ND	mg/L		0.01		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
Zinc	0.65	mg/L		0.01		SW6010B	02/17/16 18:37 / jjw	02/16/16 09:20	SW3010A	ICP203-B_160217A	171	96949
VOLATILE ORGANIC COMPOUNDS												
Acetone	ND	ug/L		2000		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Benzene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Client Sample ID: CF1DW-001-DW
Project: CFAC Paste Plant Soil
Matrix: Aqueous

Lab ID: B16021024-015
Collection Date: 02/10/16 15:45
DateReceived: 02/12/16
Report Date: 02/29/16

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Bromochloromethane	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Bromodichloromethane	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Bromoform	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Bromomethane	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Carbon disulfide	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Carbon tetrachloride	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Chlorobenzene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Chlorodibromomethane	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Chloroethane	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Chloroform	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Chloromethane	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
1,2-Dibromo-3-chloropropane	ND	ug/L		200		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
1,2-Dibromoethane	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
1,2-Dichlorobenzene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
1,3-Dichlorobenzene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
1,4-Dichlorobenzene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Dichlorodifluoromethane	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
1,1-Dichloroethane	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
1,2-Dichloroethane	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
1,1-Dichloroethene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
cis-1,2-Dichloroethene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
trans-1,2-Dichloroethene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
1,2-Dichloropropane	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
cis-1,3-Dichloropropene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Cyclohexane	ND	ug/L		200		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
trans-1,3-Dichloropropene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
1,4-Dioxane	ND	ug/L		50000		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Ethylbenzene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
2-Hexanone	ND	ug/L		2000		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Isopropylbenzene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Methyl tert-butyl ether (MTBE)	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Methyl ethyl ketone	ND	ug/L		2000		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Methyl isobutyl ketone	ND	ug/L		2000		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067
Methylene chloride	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B	7	R257067

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Client Sample ID: CF1DW-001-DW
Project: CFAC Paste Plant Soil
Matrix: Aqueous

Lab ID: B16021024-015
Collection Date: 02/10/16 15:45
DateReceived: 02/12/16
Report Date: 02/29/16

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Methylcyclohexane	ND	ug/L		200		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
Styrene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
1,1,2,2-Tetrachloroethane	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
Tetrachloroethene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
Toluene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
1,2,3-Trichlorobenzene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
1,2,4-Trichlorobenzene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
1,1,1-Trichloroethane	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
1,1,2-Trichloroethane	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
Trichloroethene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
Trichlorofluoromethane	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L		200		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
Vinyl chloride	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
m+p-Xylenes	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
o-Xylene	ND	ug/L		100		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
Surr: 1,2-Dichloroethane-d4	112	%REC		70-130		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
Surr: Dibromofluoromethane	101	%REC		77-126		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
Surr: p-Bromofluorobenzene	104	%REC		76-127		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
Surr: Toluene-d8	109	%REC		79-122		SW8260B	02/22/16 22:31 / sbd			VOA5975C.I_160222B : 7		R257067
- The reporting limit reflects a 200 times dilution. The sample was diluted due to foaming.												
SEMI-VOLATILE ORGANIC COMPOUNDS												
1,2,4,5-Tetrachlorobenzene	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B : 23		96934
2,3,4,6-Tetrachlorophenol	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B : 23		96934
2,4,5-Trichlorophenol	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B : 23		96934
2,4,6-Trichlorophenol	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B : 23		96934
2,4-Dichlorophenol	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B : 23		96934
2,4-Dimethylphenol	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B : 23		96934
2,4-Dinitrophenol	ND	ug/L		50		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B : 23		96934
2,4-Dinitrotoluene	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B : 23		96934
2,6-Dinitrotoluene	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B : 23		96934
2-Chloronaphthalene	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B : 23		96934
2-Chlorophenol	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B : 23		96934
2-Methylnaphthalene	2.9	ug/L	J	10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B : 23		96934
2-Nitroaniline	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B : 23		96934

Report Definitions:
RL - Analyte reporting limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
J - Estimated value. The analyte was present but less than the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Client Sample ID: CF1DW-001-DW
Project: CFAC Paste Plant Soil
Matrix: Aqueous

Lab ID: B16021024-015
Collection Date: 02/10/16 15:45
DateReceived: 02/12/16
Report Date: 02/29/16

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
SEMI-VOLATILE ORGANIC COMPOUNDS												
2-Nitrophenol	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
3,3'-Dichlorobenzidine	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
3-Nitroaniline	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
4,6-Dinitro-2-methylphenol	ND	ug/L		50		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
4-Bromophenyl phenyl ether	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
4-Chloro-3-methylphenol	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
4-Chlorophenyl phenyl ether	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
4-Nitroaniline	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
4-Nitrophenol	ND	ug/L		50		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Acenaphthene	9.2	ug/L	J	10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Acenaphthylene	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Acetophenone	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Anthracene	17	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Atrazine	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Benzaldehyde	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Benzo(a)anthracene	30	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Benzo(a)pyrene	34	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Benzo(b)fluoranthene	40	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Benzo(g,h,i)perylene	24	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Benzo(k)fluoranthene	15	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
bis(-2-chloroethoxy)Methane	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
bis(-2-chloroethyl)Ether	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
bis(2-chloroisopropyl)Ether	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
bis(2-ethylhexyl)Phthalate	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Butylbenzylphthalate	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Caprolactam	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Carbazole	9.4	ug/L	J	10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Chrysene	33	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Dibenzo(a,h)anthracene	8.9	ug/L	J	10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Dibenzofuran	4.7	ug/L	J	10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Diethyl phthalate	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Dimethyl phthalate	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Di-n-butyl phthalate	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Di-n-octyl phthalate	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934

Report Definitions:
RL - Analyte reporting limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
J - Estimated value. The analyte was present but less than the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Client Sample ID: CF1DW-001-DW
Project: CFAC Paste Plant Soil
Matrix: Aqueous

Lab ID: B16021024-015
Collection Date: 02/10/16 15:45
DateReceived: 02/12/16
Report Date: 02/29/16

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
SEMI-VOLATILE ORGANIC COMPOUNDS												
Fluoranthene	66	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Fluorene	8.2	ug/L	J	10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Hexachlorobenzene	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Hexachlorobutadiene	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Hexachlorocyclopentadiene	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Hexachloroethane	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Indeno(1,2,3-cd)pyrene	24	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Isophorone	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
m+p-Cresols	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Naphthalene	12	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Nitrobenzene	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
n-Nitroso-di-n-propylamine	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
n-Nitrosodiphenylamine	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
o-Cresol	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
p-Chloroaniline	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Phenanthrene	55	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Phenol	ND	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Pyrene	58	ug/L		10		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Surr: 2-Fluorobiphenyl	18.0	%REC	S	28-107		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Surr: 2-Fluorophenol	32.0	%REC		20-56		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Surr: Nitrobenzene-d5	53.0	%REC		32-94		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Surr: Phenol-d5	28.0	%REC		19-45		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934
Surr: Terphenyl-d14	20.0	%REC	S	32-122		SW8270C	02/18/16 10:10 / ds	02/16/16 09:52	SW3510C	SV5973N.I_160217B	23	96934

- Due to low surrogate recovery, this sample was re-extracted and re-analyzed. The surrogate recoveries were again low and are attributed to the sample matrix. The result of the re-analysis is included in the QA/QC Summary Report as a Duplicate Sample.

Report Definitions:
RL - Analyte reporting limit.
J - Estimated value. The analyte was present but less than the reporting limit.
MCL - Maximum contaminant level.
S - Spike recovery outside of advisory limits.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Client Sample ID: Trip Blank Lot020216 B-PF SHP0267
Project: CFAC Paste Plant Soil
Matrix: Trip Blank

Lab ID: B16021024-016
Collection Date: 02/10/16 15:45
DateReceived: 02/12/16
Report Date: 02/29/16

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Acetone	ND	ug/L		20		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Benzene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Bromochloromethane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Bromodichloromethane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Bromoform	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Bromomethane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Carbon disulfide	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Carbon tetrachloride	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Chlorobenzene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Chlorodibromomethane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Chloroethane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Chloroform	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Chloromethane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,2-Dibromo-3-chloropropane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,2-Dibromoethane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,2-Dichlorobenzene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,3-Dichlorobenzene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,4-Dichlorobenzene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Dichlorodifluoromethane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,1-Dichloroethane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,2-Dichloroethane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,1-Dichloroethene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
cis-1,2-Dichloroethene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
trans-1,2-Dichloroethene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,2-Dichloropropane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
cis-1,3-Dichloropropene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Cyclohexane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
trans-1,3-Dichloropropene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,4-Dioxane	ND	ug/L		250		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Ethylbenzene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
2-Hexanone	ND	ug/L		20		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Isopropylbenzene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Methyl tert-butyl ether (MTBE)	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Methyl ethyl ketone	ND	ug/L		20		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Client Sample ID: Trip Blank Lot020216 B-PF SHP0267
Project: CFAC Paste Plant Soil
Matrix: Trip Blank

Lab ID: B16021024-016
Collection Date: 02/10/16 15:45
DateReceived: 02/12/16
Report Date: 02/29/16

Analyses	Result	Units	QUAL	RL	MCL	Method	Analysis Date / By	Prep Date	Prep Method	RunID	Run Order	BatchID
VOLATILE ORGANIC COMPOUNDS												
Methyl isobutyl ketone	ND	ug/L		20		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Methylene chloride	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Methylcyclohexane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Styrene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,1,2,2-Tetrachloroethane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Tetrachloroethene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Toluene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,2,3-Trichlorobenzene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,2,4-Trichlorobenzene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,1,1-Trichloroethane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,1,2-Trichloroethane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Trichloroethene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Trichlorofluoromethane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Vinyl chloride	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
m+p-Xylenes	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
o-Xylene	ND	ug/L		1.0		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Surr: 1,2-Dichloroethane-d4	118	%REC		70-130		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Surr: Dibromofluoromethane	109	%REC		77-126		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Surr: p-Bromofluorobenzene	107	%REC		76-127		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067
Surr: Toluene-d8	103	%REC		79-122		SW8260B	02/22/16 20:08 / sbd			VOA5975C.I_160222B	6	R257067

Report Definitions: RL - Analyte reporting limit. MCL - Maximum contaminant level. ND - Not detected at the reporting limit.

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R256506

Date: *01-Mar-16*

Run ID :Run Order: **MAN-TECH_160212B: 7** SampType: **Method Blank** Lab ID: **MBLK** Method: **A2320 B**
Analysis Date: **02/12/16 17:03** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total as CaCO3	ND	2									

Associated samples: **B16021024-015A**

Run ID :Run Order: **MAN-TECH_160212B: 8** SampType: **Laboratory Control Sample** Lab ID: **LCS** Method: **A2320 B**
Analysis Date: **02/12/16 17:10** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total as CaCO3	101	4.0	100	0	101	90	110				

Associated samples: **B16021024-015A**

Run ID :Run Order: **MAN-TECH_160212B: 17** SampType: **Sample Matrix Spike** Lab ID: **B16020980-001AMS** Method: **A2320 B**
Analysis Date: **02/12/16 17:49** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total as CaCO3	1010	4.0	171	859.1	87	80	120				

Associated samples: **B16021024-015A**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R256933

Date: *01-Mar-16*

Run ID :Run Order: **IC METROHM 2_160223A: 2** SampType: **Method Blank** Lab ID: **MB** Method: **E300.0**
Analysis Date: **02/23/16 10:08** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	ND	0.006									

Associated samples: **B16021024-015A**

Run ID :Run Order: **IC METROHM 2_160223A: 3** SampType: **Initial Calibration Verification Standard** Lab ID: **ICV** Method: **E300.0**
Analysis Date: **02/23/16 10:22** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.10	0.20	1.125	0	97	90	110				

Associated samples: **B16021024-015A**

Run ID :Run Order: **IC METROHM 2_160223A: 4** SampType: **Laboratory Fortified Blank** Lab ID: **LFB** Method: **E300.0**
Analysis Date: **02/23/16 10:35** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	3.02	0.20	3	0	101	90	110				

Associated samples: **B16021024-015A**

Run ID :Run Order: **IC METROHM 2_160223A: 24** SampType: **Initial Calibration Verification Standard** Lab ID: **ICV** Method: **E300.0**
Analysis Date: **02/23/16 10:22** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	1.10	0.20	1.125	0	97	90	110				

Associated samples: **B16021024-015A**

Run ID :Run Order: **IC METROHM 2_160223A: 25** SampType: **Laboratory Fortified Blank** Lab ID: **LFB** Method: **E300.0**
Analysis Date: **02/23/16 10:35** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	3.02	0.20	3	0	101	90	110				

Associated samples: **B16021024-015A**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R256933

Date: *01-Mar-16*

Run ID :Run Order: **IC METROHM 2_160223A: 65** SampType: **Sample Matrix Spike** Lab ID: **B16021618-002AMS** Method: **E300.0**

Analysis Date: **02/23/16 22:46** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	17.8	0.20	15	2.325	103	90	110				

Associated samples: **B16021024-015A**

Run ID :Run Order: **IC METROHM 2_160223A: 66** SampType: **Sample Matrix Spike Duplicate** Lab ID: **B16021618-002AMSD** Method: **E300.0**

Analysis Date: **02/23/16 23:00** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	18.1	0.20	15	2.325	105	90	110	17.81	1.7	20	

Associated samples: **B16021024-015A**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R256593

Date: *01-Mar-16*

Run ID :Run Order: **SFA-201-B_160216A: 7** SampType: **Initial Calibration Verification Standard** Lab ID: **ICV** Method: **Kelada-01**
Analysis Date: **02/16/16 15:47** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide, Total	0.108	0.0050	0.1	0	107	90	110				

Associated samples: **B16021024-015C**

Run ID :Run Order: **SFA-201-B_160216A: 8** SampType: **Method Blank** Lab ID: **ICB** Method: **Kelada-01**
Analysis Date: **02/16/16 15:50** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide, Total	ND	0.001									

Associated samples: **B16021024-015C**

Run ID :Run Order: **SFA-201-B_160216A: 9** SampType: **Laboratory Fortified Blank** Lab ID: **LFB** Method: **Kelada-01**
Analysis Date: **02/16/16 15:52** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide, Total	0.108	0.0050	0.1	0	108	90	110				

Associated samples: **B16021024-015C**

Run ID :Run Order: **SFA-201-B_160216A: 10** SampType: **Laboratory Control Sample** Lab ID: **LCS1-K4Fe(CN)6** Method: **Kelada-01**
Analysis Date: **02/16/16 15:55** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide, Total	0.205	0.0050	0.2	0	103	90	110				

Associated samples: **B16021024-015C**

Run ID :Run Order: **SFA-201-B_160216A: 18** SampType: **Sample Matrix Spike** Lab ID: **B16020982-001AMS** Method: **Kelada-01**
Analysis Date: **02/16/16 16:22** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide, Total	0.106	0.0050	0.1	0	106	90	110				

Associated samples: **B16021024-015C**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R256593

Date: *01-Mar-16*

Run ID :Run Order: **SFA-201-B_160216A: 19** SampType: **Sample Matrix Spike Duplicate** Lab ID: **B16020982-001AMSD** Method: **Kelada-01**

Analysis Date: **02/16/16 16:25** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide, Total	0.108	0.0050	0.1	0	108	90	110	0.1061	1.8	20	

Associated samples: **B16021024-015C**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96935

Date: *01-Mar-16*

Run ID :Run Order: **ICP203-B_160216A: 180** SampType: **Method Blank** Lab ID: **MB-96935** Method: **SW6010B**
Analysis Date: **02/16/16 19:00** Units: **mg/kg** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3050 B**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.8									

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160216A: 181** SampType: **Standard Reference Material** Lab ID: **SRM2-96935** Method: **SW6010B**
Analysis Date: **02/16/16 19:03** Units: **mg/kg** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3050 B**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	92.9	5.0	100	0	93	70	130				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160216A: 182** SampType: **Standard Reference Material** Lab ID: **SRM3-96935** Method: **SW6010B**
Analysis Date: **02/16/16 19:07** Units: **mg/kg** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3050 B**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	99.1	5.0	105	0	94	74	120				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160216A: 200** SampType: **Serial Dilution** Lab ID: **B16021092-007ADIL** Method: **SW6010B**
Analysis Date: **02/16/16 20:10** Units: **mg/kg** **Prep Info:** Prep Date: **2/16/2016** Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	8.2		0		0	0	0		10	

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160216A: 201** SampType: **Post Digestion/Distillation Spike** Lab ID: **B16021092-007APDS** Method: **SW6010B**
Analysis Date: **02/16/16 20:13** Units: **mg/kg** **Prep Info:** Prep Date: **2/16/2016** Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	86.0	1.7	100.9	0	85	75	125				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96935

Date: *01-Mar-16*

Run ID :Run Order: **ICP203-B_160216A: 202** SampType: **Sample Matrix Spike** Lab ID: **B16021092-007AMS3** Method: **SW6010B**

Analysis Date: **02/16/16 20:17** Units: **mg/kg** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3050 B**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	78.4	1.6	97.4	0	81	75	125				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160216A: 203** SampType: **Sample Matrix Spike Duplicate** Lab ID: **B16021092-007AMSD3** Method: **SW6010B**

Analysis Date: **02/16/16 20:20** Units: **mg/kg** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3050 B**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	84.6	1.6	96.9	0	87	75	125	78.42	7.6	20	

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96949

Date: *01-Mar-16*

Run ID :Run Order: **ICP203-B_160217A: 169** SampType: **Method Blank** Lab ID: **MB-96949** Method: **SW6010B**

Analysis Date: **02/17/16 18:30** Units: **mg/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	0.02	0.007									
Barium	ND	0.0002									
Beryllium	ND	9E-05									
Cadmium	0.0005	0.0004									
Calcium	ND	0.01									
Chromium	ND	0.003									
Cobalt	0.002	0.0008									
Copper	ND	0.005									
Iron	ND	0.004									
Magnesium	0.004	0.002									
Manganese	ND	0.0004									
Nickel	ND	0.002									
Potassium	ND	0.06									
Sodium	ND	0.008									
Vanadium	ND	0.003									
Zinc	ND	0.002									

Associated samples: **B16021024-015B**

Run ID :Run Order: **ICP203-B_160217A: 170** SampType: **Laboratory Control Sample** Lab ID: **LCS-96949** Method: **SW6010B**

Analysis Date: **02/17/16 18:34** Units: **mg/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	2.49	0.10	2.5	0.01618	99	80	120				
Barium	5.64	0.10	5.5	0	103	80	120				
Beryllium	0.233	0.010	0.25	0	93	80	120				
Cadmium	0.221	0.010	0.25	0.00046	88	80	120				
Calcium	24.5	1.0	25	0	98	80	120				
Chromium	0.493	0.050	0.5	0	99	80	120				
Cobalt	0.446	0.020	0.5	0.00161	89	80	120				
Copper	0.493	0.010	0.5	0	99	80	120				
Iron	2.43	0.030	2.5	0	97	80	120				
Magnesium	23.9	1.0	25	0.00419	96	80	120				
Manganese	2.42	0.010	2.5	0	97	80	120				
Nickel	0.478	0.050	0.5	0	96	80	120				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96949

Date: *01-Mar-16*

Run ID :Run Order: **ICP203-B_160217A: 170** SampType: **Laboratory Control Sample** Lab ID: **LCS-96949** Method: **SW6010B**
Analysis Date: **02/17/16 18:34** Units: **mg/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	23.8	1.0	25	0	95	80	120				
Sodium	23.2	1.0	25	0	93	80	120				
Vanadium	0.470	0.10	0.5	0	94	80	120				
Zinc	0.453	0.010	0.5	0	91	80	120				

Associated samples: **B16021024-015B**

Run ID :Run Order: **ICP203-B_160217A: 174** SampType: **Serial Dilution** Lab ID: **B16021024-015BDIL** Method: **SW6010B**
Analysis Date: **02/17/16 18:48** Units: **mg/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	6.02	0.055		0		0	0	5.515	8.7	10	
Barium	0.242	0.050		0		0	0	0.2279	6.2	10	
Beryllium	ND	0.0010		0		0	0	0.00015		10	
Cadmium	ND	0.0021		0		0	0	0		10	
Calcium	39.5	1.0		0		0	0	35.87	9.5	10	
Chromium	0.0215	0.013		0		0	0	0.01068		10	N
Cobalt	0.00866	0.0050		0		0	0	0.00133		10	N
Copper	0.0302	0.025		0		0	0	0.02124		10	N
Iron	6.29	0.030		0		0	0	5.842	7.4	10	
Magnesium	16.9	1.0		0		0	0	15.18	11	10	R
Manganese	0.198	0.0021		0		0	0	0.1838	7.7	10	
Nickel	ND	0.0095		0		0	0	0.00945		10	
Potassium	26.6	1.0		0		0	0	24.91	6.7	10	
Sodium	85.1	1.6		0		0	0	79.09	7.3	10	
Vanadium	ND	0.014		0		0	0	0.00504		10	
Zinc	0.711	0.012		0		0	0	0.6522	8.6	10	

Associated samples: **B16021024-015B**

Run ID :Run Order: **ICP203-B_160217A: 175** SampType: **Post Digestion/Distillation Spike** Lab ID: **B16021024-015BPDS** Method: **SW6010B**
Analysis Date: **02/17/16 18:51** Units: **mg/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	9.56	0.030	5.15	5.515	79	75	125				
Barium	1.19	0.050	1.03	0.2279	93	75	125				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96949

Date: *01-Mar-16*

Run ID :Run Order: **ICP203-B_160217A: 175** SampType: **Post Digestion/Distillation Spike** Lab ID: **B16021024-015BPDS** Method: **SW6010B**

Analysis Date: **02/17/16 18:51** Units: **mg/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Beryllium	0.440	0.0010	0.515	0.00015	85	75	125				
Cadmium	0.406	0.0010	0.515	0	79	75	125				
Calcium	81.6	1.0	51.5	35.87	89	75	125				
Chromium	0.934	0.0050	1.03	0.01068	90	75	125				
Cobalt	0.820	0.0050	1.03	0.00133	79	75	125				
Copper	0.942	0.0051	1.03	0.02124	89	75	125				
Iron	10.4	0.030	5.15	5.842	88	75	125				
Magnesium	60.6	1.0	51.5	15.18	88	75	125				
Manganese	4.70	0.0010	5.15	0.1838	88	75	125				
Nickel	0.883	0.0050	1.03	0.00945	85	75	125				
Potassium	68.8	1.0	51.5	24.91	85	75	125				
Sodium	125	1.0	51.5	79.09	89	75	125				
Vanadium	0.893	0.010	1.03	0.00504	86	75	125				
Zinc	1.49	0.010	1.03	0.6522	82	75	125				

Associated samples: **B16021024-015B**

Run ID :Run Order: **ICP203-B_160217A: 176** SampType: **Sample Matrix Spike** Lab ID: **B16021024-015BMS3** Method: **SW6010B**

Analysis Date: **02/17/16 18:55** Units: **mg/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	10.4	0.030	2.5	5.515	196	75	125				S
Barium	5.83	0.050	5.5	0.2279	102	75	125				
Beryllium	0.226	0.0010	0.25	0.00015	90	75	125				
Cadmium	0.218	0.0010	0.25	0	87	75	125				
Calcium	60.8	1.0	25	35.87	100	75	125				
Chromium	0.493	0.0050	0.5	0.01068	96	75	125				
Cobalt	0.438	0.0050	0.5	0.00133	87	75	125				
Copper	0.493	0.0050	0.5	0.02124	94	75	125				
Iron	8.64	0.030	2.5	5.842	112	75	125				
Magnesium	39.2	1.0	25	15.18	96	75	125				
Manganese	2.54	0.0010	2.5	0.1838	94	75	125				
Nickel	0.475	0.0050	0.5	0.00945	93	75	125				
Potassium	49.6	1.0	25	24.91	99	75	125				
Sodium	105	1.0	25	79.09	105	75	125				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96949

Date: *01-Mar-16*

Run ID :Run Order: **ICP203-B_160217A: 176** SampType: **Sample Matrix Spike** Lab ID: **B16021024-015BMS3** Method: **SW6010B**

Analysis Date: **02/17/16 18:55** Units: **mg/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vanadium	0.468	0.010	0.5	0.00504	93	75	125				
Zinc	1.12	0.010	0.5	0.6522	93	75	125				

Associated samples: **B16021024-015B**

Run ID :Run Order: **ICP203-B_160217A: 177** SampType: **Sample Matrix Spike Duplicate** Lab ID: **B16021024-015BMSD3** Method: **SW6010B**

Analysis Date: **02/17/16 18:58** Units: **mg/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	10.4	0.030	2.5	5.515	194	75	125	10.42	0.5	20	S
Barium	5.77	0.050	5.5	0.2279	101	75	125	5.83	1.0	20	
Beryllium	0.229	0.0010	0.25	0.00015	92	75	125	0.226	1.4	20	
Cadmium	0.216	0.0010	0.25	0	86	75	125	0.2182	1.1	20	
Calcium	61.9	1.0	25	35.87	104	75	125	60.8	1.8	20	
Chromium	0.492	0.0050	0.5	0.01068	96	75	125	0.4926	0.2	20	
Cobalt	0.438	0.0050	0.5	0.00133	87	75	125	0.4382	0.0	20	
Copper	0.493	0.0050	0.5	0.02124	94	75	125	0.4932	0.0	20	
Iron	8.66	0.030	2.5	5.842	113	75	125	8.637	0.3	20	
Magnesium	39.8	1.0	25	15.18	99	75	125	39.24	1.4	20	
Manganese	2.55	0.0010	2.5	0.1838	95	75	125	2.537	0.5	20	
Nickel	0.471	0.0050	0.5	0.00945	92	75	125	0.4755	1.0	20	
Potassium	49.5	1.0	25	24.91	98	75	125	49.64	0.3	20	
Sodium	106	1.0	25	79.09	108	75	125	105.3	0.7	20	
Vanadium	0.466	0.010	0.5	0.00504	92	75	125	0.4684	0.5	20	
Zinc	1.12	0.010	0.5	0.6522	93	75	125	1.119	0.3	20	

Associated samples: **B16021024-015B**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R256532

Date: *01-Mar-16*

Run ID :Run Order: **ICP203-B_160216A: 19** SampType: **Initial Calibration Verification Standard** Lab ID: **QCS** Method: **SW6010B**

Analysis Date: **02/16/16 09:35** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.788	0.050	0.8	0	98	90	110				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160216A: 20** SampType: **Interference Check Sample A** Lab ID: **ICSA** Method: **SW6010B**

Analysis Date: **02/16/16 09:38** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.0247	0.050		0							

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160216A: 21** SampType: **Interference Check Sample AB** Lab ID: **ICSAB** Method: **SW6010B**

Analysis Date: **02/16/16 09:42** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.902	0.050	1	0	90	80	120				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R256614

Date: *01-Mar-16*

Run ID :Run Order: **ICP203-B_160217A: 19** SampType: **Initial Calibration Verification Standard** Lab ID: **QCS** Method: **SW6010B**

Analysis Date: **02/17/16 09:34** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	4.01	0.10	4	0	100	90	110				
Barium	0.811	0.10	0.8	0	101	90	110				
Beryllium	0.400	0.010	0.4	0	100	90	110				
Cadmium	0.376	0.010	0.4	0	94	90	110				
Calcium	42.7	1.0	40	0	107	90	110				
Chromium	0.792	0.050	0.8	0	99	90	110				
Cobalt	0.756	0.021	0.8	0	94	90	110				
Copper	0.783	0.010	0.8	0	98	90	110				
Iron	4.01	0.030	4	0	100	90	110				
Magnesium	42.6	1.0	40	0	106	90	110				
Manganese	3.82	0.010	4	0	96	90	110				
Nickel	0.777	0.050	0.8	0	97	90	110				
Potassium	41.4	1.0	40	0	104	90	110				
Sodium	41.8	1.0	40	0	105	90	110				
Vanadium	0.786	0.10	0.8	0	98	90	110				
Zinc	0.774	0.010	0.8	0	97	90	110				

Associated samples: **B16021024-015B**

Run ID :Run Order: **ICP203-B_160217A: 20** SampType: **Interference Check Sample A** Lab ID: **ICSA** Method: **SW6010B**

Analysis Date: **02/17/16 09:38** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	490	0.10	500	0	98	80	120				
Barium	-0.000460	0.10		0							
Beryllium	3.00E-05	0.010		0							
Cadmium	-0.00266	0.010		0							
Calcium	480	1.0	500	0	96	80	120				
Chromium	-0.000240	0.050		0							
Cobalt	-0.00685	0.021		0							
Copper	0.00244	0.010		0							
Iron	177	0.030	200	0	89	80	120				
Magnesium	516	1.0	500	0	103	80	120				
Manganese	-0.0117	0.010		0							
Nickel	0.00267	0.050		0							

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R256614

Date: *01-Mar-16*

Run ID :Run Order: **ICP203-B_160217A: 20** SampType: **Interference Check Sample A** Lab ID: **ICSA** Method: **SW6010B**

Analysis Date: **02/17/16 09:38** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Potassium	ND	1.0		0							
Sodium	0.00330	1.0		0							
Vanadium	0.00146	0.10		0							
Zinc	0.00191	0.010		0							

Associated samples: **B16021024-015B**

Run ID :Run Order: **ICP203-B_160217A: 21** SampType: **Interference Check Sample AB** Lab ID: **ICSAB** Method: **SW6010B**

Analysis Date: **02/17/16 09:41** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	505	0.10	500	0	101	80	120				
Barium	0.481	0.10	0.5	0	96	80	120				
Beryllium	0.466	0.010	0.5	0	93	80	120				
Cadmium	0.937	0.010	1	0	94	80	120				
Calcium	496	1.0	500	0	99	80	120				
Chromium	0.461	0.050	0.5	0	92	80	120				
Cobalt	0.434	0.021	0.5	0	87	80	120				
Copper	0.461	0.010	0.5	0	92	80	120				
Iron	182	0.030	200	0	91	80	120				
Magnesium	530	1.0	500	0	106	80	120				
Manganese	0.420	0.010	0.5	0	84	80	120				
Nickel	0.885	0.050	1	0	89	80	120				
Potassium	20.4	1.0	20	0	102	80	120				
Sodium	20.7	1.0	20	0	104	80	120				
Vanadium	0.448	0.10	0.5	0	90	80	120				
Zinc	0.914	0.010	1	0	91	80	120				

Associated samples: **B16021024-015B**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R256699

Date: *01-Mar-16*

Run ID :Run Order: **ICP203-B_160218A: 19** SampType: **Initial Calibration Verification Standard** Lab ID: **QCS** Method: **SW6010B**

Analysis Date: **02/18/16 09:44** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.817	0.050	0.8	0	102	90	110				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160218A: 20** SampType: **Interference Check Sample A** Lab ID: **ICSA** Method: **SW6010B**

Analysis Date: **02/18/16 09:48** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.0388	0.050		0							

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160218A: 21** SampType: **Interference Check Sample AB** Lab ID: **ICSAB** Method: **SW6010B**

Analysis Date: **02/18/16 09:51** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.963	0.050	1	0	96	80	120				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96949

Date: *01-Mar-16*

Run ID :Run Order: **ICPMS206-B_160223A: 17** SampType: **Method Blank** Lab ID: **MB-96949** Method: **SW6020**
Analysis Date: **02/23/16 11:15** Units: **mg/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.0003									
Arsenic	ND	0.0007									
Lead	ND	8E-05									
Selenium	ND	0.0004									
Silver	9E-05	5E-05									
Thallium	ND	5E-05									

Associated samples: **B16021024-015B**

Run ID :Run Order: **ICPMS206-B_160223A: 18** SampType: **Laboratory Control Sample** Lab ID: **LCS-96949** Method: **SW6020**
Analysis Date: **02/23/16 11:19** Units: **mg/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.44	0.0010	0.5	0	87	80	120				
Arsenic	0.45	0.0010	0.5	0	89	80	120				
Lead	0.50	0.0010	0.5	0	101	80	120				
Selenium	0.41	0.0010	0.5	0	83	80	120				
Silver	0.23	0.0010	0.25	0.00009	93	80	120				
Thallium	0.51	0.0010	0.5	0	101	80	120				

Associated samples: **B16021024-015B**

Run ID :Run Order: **ICPMS206-B_160223A: 21** SampType: **Serial Dilution** Lab ID: **B16021024-015BDIL** Method: **SW6020**
Analysis Date: **02/23/16 11:28** Units: **mg/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.0013		0		0	0	0.0008927		10	
Arsenic	0.00539	0.0037		0		0	0	0.005416		10	N
Lead	0.0553	0.0010		0		0	0	0.0556	0.6	10	
Selenium	ND	0.0018		0		0	0	0.0008058		10	
Silver	ND	0.0010		0		0	0	0.0001952		10	
Thallium	0.000302	0.0050		0		0	0	0.0002204		10	N

Associated samples: **B16021024-015B**

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96949

Date: *01-Mar-16*

Run ID :Run Order: **ICPMS206-B_160223A: 22** SampType: **Post Digestion/Distillation Spike** Lab ID: **B16021024-015BPDS1** Method: **SW6020**

Analysis Date: **02/23/16 11:32** Units: **mg/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.0441	0.0010	0.05	0.0008927	86	75	125				
Arsenic	0.0514	0.0010	0.05	0.005416	92	75	125				
Lead	0.103	0.0010	0.05	0.0556	94	75	125				
Selenium	0.0455	0.0010	0.05	0.0008058	89	75	125				
Silver	0.0184	0.0010	0.02	0.0001952	91	75	125				
Thallium	0.0490	0.0050	0.05	0.0002204	97	75	125				

Associated samples: **B16021024-015B**

Run ID :Run Order: **ICPMS206-B_160223A: 23** SampType: **Sample Matrix Spike** Lab ID: **B16021024-015BMS3** Method: **SW6020**

Analysis Date: **02/23/16 11:35** Units: **mg/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.430	0.0010	0.5	0.0008927	86	75	125				
Arsenic	0.468	0.0010	0.5	0.005416	93	75	125				
Lead	0.562	0.0010	0.5	0.0556	101	75	125				
Selenium	0.438	0.0010	0.5	0.0008058	88	75	125				
Silver	0.235	0.0010	0.25	0.0001952	94	75	125				
Thallium	0.501	0.0050	0.5	0.0002204	100	75	125				

Associated samples: **B16021024-015B**

Run ID :Run Order: **ICPMS206-B_160223A: 27** SampType: **Sample Matrix Spike Duplicate** Lab ID: **B16021024-015BMSD3** Method: **SW6020**

Analysis Date: **02/23/16 11:48** Units: **mg/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.431	0.0010	0.5	0.0008927	86	75	125	0.4297	0.2	20	
Arsenic	0.470	0.0010	0.5	0.005416	93	75	125	0.468	0.5	20	
Lead	0.566	0.0010	0.5	0.0556	102	75	125	0.5623	0.7	20	
Selenium	0.454	0.0010	0.5	0.0008058	91	75	125	0.4384	3.6	20	
Silver	0.236	0.0010	0.25	0.0001952	94	75	125	0.2347	0.7	20	
Thallium	0.502	0.0050	0.5	0.0002204	100	75	125	0.5008	0.3	20	

Associated samples: **B16021024-015B**

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R256939

Date: *01-Mar-16*

Run ID :Run Order: **ICPMS206-B_160223A: 41** SampType: **Initial Calibration Verification Standard** Lab ID: **QCS** Method: **SW6020**

Analysis Date: **02/23/16 10:40** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.0475	0.0010	0.05	0	95	90	110				
Arsenic	0.0527	0.0010	0.05	0	105	90	110				
Lead	0.0496	0.0010	0.05	0	99	90	110				
Selenium	0.0507	0.0010	0.05	0	101	90	110				
Silver	0.0253	0.0010	0.025	0	101	90	110				
Thallium	0.0496	0.0010	0.05	0	99	90	110				

Associated samples: **B16021024-015B**

Run ID :Run Order: **ICPMS206-B_160223A: 42** SampType: **Interference Check Sample A** Lab ID: **ICSA** Method: **SW6020**

Analysis Date: **02/23/16 10:47** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	0.000164	0.0010		0							
Arsenic	-0.000277	0.0010		0							
Lead	0.000167	0.0010		0							
Selenium	0.000164	0.0010		0							
Silver	0.000144	0.0010		0							
Thallium	6.53E-05	0.0010		0							

Associated samples:

Run ID :Run Order: **ICPMS206-B_160223A: 43** SampType: **Interference Check Sample AB** Lab ID: **ICSAB** Method: **SW6020**

Analysis Date: **02/23/16 10:50** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	7.62E-05	0.0010		0		0	0				
Arsenic	0.00953	0.0010	0.01	0	95	70	130				
Lead	9.57E-05	0.0010		0		0	0				
Selenium	0.00934	0.0010	0.01	0	93	70	130				
Silver	0.0200	0.0010	0.02	0	100	70	130				
Thallium	6.34E-06	0.0010		0		0	0				

Associated samples:

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 160217A

Date: *01-Mar-16*

Run ID :Run Order: **HGCV202-B_160217A: 40** SampType: **Initial Calibration Verification Standard** Lab ID: **ICV** Method: **SW7470A**

Analysis Date: **02/17/16 15:09** Units: **mg/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00203	0.00010	0.002	0	101	90	110				

Associated samples: **B16021024-015B**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96994

Date: *01-Mar-16*

Run ID :Run Order: **HGCV202-B_160217A: 12** SampType: **Method Blank** Lab ID: **MB-96994** Method: **SW7470A**
Analysis Date: **02/17/16 15:15** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW7470A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	4E-06									

Associated samples: **B16021024-015B**

Run ID :Run Order: **HGCV202-B_160217A: 13** SampType: **Laboratory Control Sample** Lab ID: **LCS-96994** Method: **SW7470A**
Analysis Date: **02/17/16 15:17** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW7470A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00194	0.00010	0.002	0	97	80	120				

Associated samples: **B16021024-015B**

Run ID :Run Order: **HGCV202-B_160217A: 15** SampType: **Serial Dilution** Lab ID: **B16021024-015BDIL** Method: **SW7470A**
Analysis Date: **02/17/16 15:20** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW7470A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.00050		0		0	0	0.0000614		10	

Associated samples: **B16021024-015B**

Run ID :Run Order: **HGCV202-B_160217A: 16** SampType: **Sample Matrix Spike** Lab ID: **B16021024-015BMS** Method: **SW7470A**
Analysis Date: **02/17/16 15:22** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW7470A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00382	0.00010	0.004	0.0000614	94	75	125				

Associated samples: **B16021024-015B**

Run ID :Run Order: **HGCV202-B_160217A: 17** SampType: **Sample Matrix Spike Duplicate** Lab ID: **B16021024-015BMSD** Method: **SW7470A**
Analysis Date: **02/17/16 15:24** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW7470A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00382	0.00010	0.004	0.0000614	94	75	125	0.003822	0.2	20	

Associated samples: **B16021024-015B**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96990

Date: *01-Mar-16*

Run ID :Run Order: **ICP203-B_160218A: 104** SampType: **Method Blank** Lab ID: **MB-96990** Method: **SW6010B**
Analysis Date: **02/18/16 14:57** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.02	0.02									

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160218A: 105** SampType: **Laboratory Control Sample** Lab ID: **LCS-96990** Method: **SW6010B**
Analysis Date: **02/18/16 15:01** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.489	0.10	0.5	0.02195	93	80	120				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160218A: 106** SampType: **Laboratory Control Sample Duplicate** Lab ID: **LCSD-96990** Method: **SW6010B**
Analysis Date: **02/18/16 15:05** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.424	0.10	0.5	0.02195	80	80	120	0.4889	14	20	

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160218A: 110** SampType: **Sample Matrix Spike** Lab ID: **B16020867-001AMS3** Method: **SW6010B**
Analysis Date: **02/18/16 15:19** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.463	0.10	0.5	0.06625	79	75	125				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160218A: 112** SampType: **Serial Dilution** Lab ID: **B16021024-001ADIL** Method: **SW6010B**
Analysis Date: **02/18/16 15:26** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.472	0.10		0		0	0	0.3425		10	N

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96990

Date: *01-Mar-16*

Run ID :Run Order: **ICP203-B_160218A: 113** SampType: **Sample Matrix Spike** Lab ID: **B16021024-001AMS3** Method: **SW6010B**
Analysis Date: **02/18/16 15:30** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.783	0.10	0.5	0.3425	88	75	125				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160218A: 115** SampType: **Sample Matrix Spike** Lab ID: **B16021024-002AMS3** Method: **SW6010B**
Analysis Date: **02/18/16 15:37** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.472	0.10	0.5	0.03999	86	75	125				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160218A: 117** SampType: **Sample Matrix Spike** Lab ID: **B16021024-003AMS3** Method: **SW6010B**
Analysis Date: **02/18/16 15:45** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	2.00	0.10	0.5	1.546	91	75	125				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160218A: 121** SampType: **Sample Matrix Spike** Lab ID: **B16021024-004AMS3** Method: **SW6010B**
Analysis Date: **02/18/16 15:59** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.490	0.10	0.5	0.07411	83	75	125				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160218A: 123** SampType: **Sample Matrix Spike** Lab ID: **B16021024-005AMS3** Method: **SW6010B**
Analysis Date: **02/18/16 16:06** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	1.82	0.10	0.5	1.389	87	75	125				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96990

Date: *01-Mar-16*

Run ID :Run Order: **ICP203-B_160218A: 125** SampType: **Sample Matrix Spike** Lab ID: **B16021024-006AMS3** Method: **SW6010B**
Analysis Date: **02/18/16 16:14** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.446	0.10	0.5	0.02985	83	75	125				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160218A: 127** SampType: **Sample Matrix Spike** Lab ID: **B16021024-007AMS3** Method: **SW6010B**
Analysis Date: **02/18/16 16:21** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.711	0.10	0.5	0.2832	86	75	125				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160218A: 129** SampType: **Sample Matrix Spike** Lab ID: **B16021024-008AMS3** Method: **SW6010B**
Analysis Date: **02/18/16 16:28** Units: **mg/L** **Prep Info:** Prep Date: **2/17/2016** Prep Method: **SW3010A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	0.591	0.10	0.5	0.1312	92	75	125				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96935

Date: *01-Mar-16*

Run ID :Run Order: **ICP203-B_160216A: 180** SampType: **Method Blank** Lab ID: **MB-96935** Method: **SW6010B**
Analysis Date: **02/16/16 19:00** Units: **mg/kg** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3050 B**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	0.8									

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160216A: 181** SampType: **Standard Reference Material** Lab ID: **SRM2-96935** Method: **SW6010B**
Analysis Date: **02/16/16 19:03** Units: **mg/kg** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3050 B**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	92.9	5.0	100	0	93	70	130				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160216A: 182** SampType: **Standard Reference Material** Lab ID: **SRM3-96935** Method: **SW6010B**
Analysis Date: **02/16/16 19:07** Units: **mg/kg** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3050 B**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	99.1	5.0	105	0	94	74	120				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160216A: 200** SampType: **Serial Dilution** Lab ID: **B16021092-007ADIL** Method: **SW6010B**
Analysis Date: **02/16/16 20:10** Units: **mg/kg** **Prep Info:** Prep Date: **2/16/2016** Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	ND	8.2		0		0	0	0		10	

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160216A: 201** SampType: **Post Digestion/Distillation Spike** Lab ID: **B16021092-007APDS** Method: **SW6010B**
Analysis Date: **02/16/16 20:13** Units: **mg/kg** **Prep Info:** Prep Date: **2/16/2016** Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	86.0	1.7	100.9	0	85	75	125				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96935

Date: *01-Mar-16*

Run ID :Run Order: **ICP203-B_160216A: 202** SampType: **Sample Matrix Spike** Lab ID: **B16021092-007AMS3** Method: **SW6010B**

Analysis Date: **02/16/16 20:17** Units: **mg/kg** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3050 B**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	78.4	1.6	97.4	0	81	75	125				

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Run ID :Run Order: **ICP203-B_160216A: 203** SampType: **Sample Matrix Spike Duplicate** Lab ID: **B16021092-007AMSD3** Method: **SW6010B**

Analysis Date: **02/16/16 20:20** Units: **mg/kg** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3050 B**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Lead	84.6	1.6	96.9	0	87	75	125	78.42	7.6	20	

Associated samples: **B16021024-001A, B16021024-002A, B16021024-003A, B16021024-004A, B16021024-005A, B16021024-006A, B16021024-007A, B16021024-008A**

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R257067

Date: *29-Feb-16*

Run ID :Run Order: **VOA5975C.I_160222B: 1** SampType: **MS Tuning File** Lab ID: **bfb022916_** Method: **SW8260B**

Analysis Date: **02/22/16 16:28** Units: **%** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
95, Base Peak	100		100	0	100	0	100				
50, % of mass 95	22.8		100	0	22.8	15	40				
75, % of mass 95	57.4		100	0	57.4	30	60				
96, % of mass 95	5.78		100	0	5.78	5	9				
173, % of mass 174	ND		100	0	0	0	1.99				
174, % of mass 95	80.6		100	0	80.6	50	99.99				
175, % of mass 174	7.67		100	0	7.67	5	9				
176, % of mass 174	101		100	0	101	95	101				
177, % of mass 176	7.24		100	0	7.24	5	9				

Associated samples: **B16021024-015E, B16021024-016A**

Run ID :Run Order: **VOA5975C.I_160222B: 2** SampType: **Continuing Calibration Verification Standar** Lab ID: **ccv022916_** Method: **SW8260B**

Analysis Date: **02/22/16 17:08** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	49.6	10	50	0	99	70	130				
Benzene	4.92	0.50	5	0	98	70	130				
Bromochloromethane	5.28	0.50	5	0	106	70	130				
Bromodichloromethane	4.92	0.50	5	0	98	70	130				
Bromoform	4.48	0.50	5	0	90	70	130				
Bromomethane	5.36	0.50	5	0	107	70	130				
Carbon disulfide	5.40	0.50	5	0	108	70	130				
Carbon tetrachloride	4.68	0.50	5	0	94	70	130				
Chlorobenzene	4.92	0.50	5	0	98	70	130				
Chlorodibromomethane	4.76	0.50	5	0	95	70	130				
Chloroethane	4.56	0.50	5	0	91	70	130				
Chloroform	5.12	0.50	5	0	102	80	120				
Chloromethane	4.80	0.50	5	0	96	70	130				
Cyclohexane	5.44	1.0	5	0	109	70	130				
1,2-Dibromo-3-chloropropane	4.88	1.0	5	0	98	70	130				
1,2-Dibromoethane	5.20	0.50	5	0	104	70	130				
1,2-Dichlorobenzene	4.60	0.50	5	0	92	70	130				
1,3-Dichlorobenzene	4.68	0.50	5	0	94	70	130				
1,4-Dichlorobenzene	4.64	0.50	5	0	93	70	130				
Dichlorodifluoromethane	4.64	0.50	5	0	93	70	130				
1,1-Dichloroethane	5.28	0.50	5	0	106	70	130				
1,2-Dichloroethane	4.32	0.50	5	0	86	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R257067

Date: *29-Feb-16*

Run ID :Run Order: **VOA5975C.I_160222B: 2** SampType: **Continuing Calibration Verification Standar** Lab ID: **ccv022916_** Method: **SW8260B**

Analysis Date: **02/22/16 17:08** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1-Dichloroethene	5.08	0.50	5	0	102	80	120				
trans-1,2-Dichloroethene	5.28	0.50	5	0	106	70	130				
1,2-Dichloropropane	5.08	0.50	5	0	102	80	120				
cis-1,3-Dichloropropene	4.44	0.50	5	0	89	70	130				
trans-1,3-Dichloropropene	4.84	0.50	5	0	97	70	130				
1,4-Dioxane	1100	250	1250	0	88	70	130				
Ethylbenzene	4.84	0.50	5	0	97	80	120				
2-Hexanone	50.4	10	50	0	101	70	130				
Isopropylbenzene	4.68	0.50	5	0	94	70	130				
Methylcyclohexane	5.28	1.0	5	0	106	70	130				
Methyl tert-butyl ether (MTBE)	5.04	0.50	5	0	101	70	130				
Methyl ethyl ketone	51.2	10	50	0	102	70	130				
Methyl isobutyl ketone	50.4	10	50	0	101	70	130				
Methylene chloride	5.12	0.50	5	0	102	70	130				
Styrene	4.72	0.50	5	0	94	70	130				
1,1,2,2-Tetrachloroethane	5.04	0.50	5	0	101	70	130				
Tetrachloroethene	5.00	0.50	5	0	100	70	130				
Toluene	5.24	0.50	5	0	105	80	120				
1,2,3-Trichlorobenzene	4.24	0.50	5	0	85	70	130				
1,2,4-Trichlorobenzene	4.16	0.50	5	0	83	70	130				
1,1,1-Trichloroethane	4.68	0.50	5	0	94	70	130				
1,1,2-Trichloroethane	4.96	0.50	5	0	99	70	130				
Trichloroethene	4.76	0.50	5	0	95	70	130				
Trichlorofluoromethane	5.20	0.50	5	0	104	70	130				
1,1,2-Trichloro-1,2,2-trifluoroethane	5.44	0.50	5	0	109	70	130				
Vinyl chloride	5.16	0.50	5	0	103	80	120				
m+p-Xylenes	10.2	0.50	10	0	102	70	130				
o-Xylene	4.76	0.50	5	0	95	70	130				
Surr: 1,2-Dichloroethane-d4	10.9	0.50	10	0	109	70	130				
Surr: Dibromofluoromethane	10.6	0.50	10	0	106	77	126				
Surr: p-Bromofluorobenzene	10.5	0.50	10	0	105	76	127				
Surr: Toluene-d8	11.5	0.50	10	0	115	79	122				

Associated samples: **B16021024-015E, B16021024-016A**

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R257067

Date: *29-Feb-16*

Run ID :Run Order: **VOA5975C.I_160222B: 3** SampType: **Laboratory Control Sample** Lab ID: **lcs022916_** Method: **SW8260B**

Analysis Date: **02/22/16 17:45** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	40.8	10	50	0	82	62	130				
Benzene	5.28	0.50	5	0	106	71	133				
Bromochloromethane	4.76	0.50	5	0	95	68	131				
Bromodichloromethane	5.16	0.50	5	0	103	67	138				
Bromoform	5.04	0.50	5	0	101	64	136				
Bromomethane	5.00	0.50	5	0	100	60	138				
Carbon disulfide	5.40	0.50	5	0	108	46	145				
Carbon tetrachloride	4.80	0.50	5	0	96	61	144				
Chlorobenzene	4.92	0.50	5	0	98	78	136				
Chlorodibromomethane	5.28	0.50	5	0	106	72	136				
Chloroethane	4.08	0.50	5	0	82	64	136				
Chloroform	4.68	0.50	5	0	94	69	133				
Chloromethane	4.40	0.50	5	0	88	63	149				
Cyclohexane	4.96	1.0	5	0	99	69	133				
1,2-Dibromo-3-chloropropane	5.64	1.0	5	0	113	63	125				
1,2-Dibromoethane	5.44	0.50	5	0	109	75	131				
1,2-Dichlorobenzene	4.84	0.50	5	0	97	78	129				
1,3-Dichlorobenzene	4.96	0.50	5	0	99	79	132				
1,4-Dichlorobenzene	4.72	0.50	5	0	94	78	131				
Dichlorodifluoromethane	4.28	0.50	5	0	86	55	141				
1,1-Dichloroethane	4.84	0.50	5	0	97	72	130				
1,2-Dichloroethane	5.24	0.50	5	0	105	57	146				
1,1-Dichloroethene	4.88	0.50	5	0	98	66	142				
cis-1,2-Dichloroethene	4.72	0.50	5	0	94	74	133				
trans-1,2-Dichloroethene	4.84	0.50	5	0	97	76	138				
1,2-Dichloropropane	5.16	0.50	5	0	103	72	135				
cis-1,3-Dichloropropene	4.68	0.50	5	0	94	75	132				
trans-1,3-Dichloropropene	5.52	0.50	5	0	110	77	145				
1,4-Dioxane	1090	250	1250	0	87	27	178				
Ethylbenzene	4.80	0.50	5	0	96	78	131				
2-Hexanone	48.4	10	50	0	97	72	131				
Isopropylbenzene	4.84	0.50	5	0	97	72	135				
Methylcyclohexane	4.64	1.0	5	0	93	70	130				
Methyl tert-butyl ether (MTBE)	4.60	0.50	5	0	92	58	151				
Methyl ethyl ketone	47.2	10	50	0	94	55	145				
Methyl isobutyl ketone	48.8	10	50	0	98	73	129				
Methylene chloride	5.00	0.50	5	0	100	73	126				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R257067

Date: *29-Feb-16*

Run ID :Run Order: **VOA5975C.I_160222B: 3** SampType: **Laboratory Control Sample** Lab ID: **lcs022916_** Method: **SW8260B**

Analysis Date: **02/22/16 17:45** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Styrene	4.76	0.50	5	0	95	76	134				
1,1,2,2-Tetrachloroethane	5.36	0.50	5	0	107	72	132				
Tetrachloroethene	5.04	0.50	5	0	101	78	137				
Toluene	5.24	0.50	5	0	105	78	134				
1,2,3-Trichlorobenzene	4.72	0.50	5	0	94	42	152				
1,2,4-Trichlorobenzene	4.44	0.50	5	0	89	58	142				
1,1,1-Trichloroethane	4.52	0.50	5	0	90	64	141				
1,1,2-Trichloroethane	5.12	0.50	5	0	102	72	133				
Trichloroethene	5.12	0.50	5	0	102	75	138				
Trichlorofluoromethane	4.40	0.50	5	0	88	58	139				
1,1,2-Trichloro-1,2,2-trifluoroethane	5.80	0.50	5	0	116	60	140				
Vinyl chloride	4.84	0.50	5	0	97	66	140				
m+p-Xylenes	10.0	0.50	10	0	100	78	133				
o-Xylene	4.68	0.50	5	0	94	79	136				
Surr: 1,2-Dichloroethane-d4	10.3	0.50	10	0	103	70	130				
Surr: Dibromofluoromethane	10.1	0.50	10	0	101	77	126				
Surr: p-Bromofluorobenzene	10.5	0.50	10	0	105	76	127				
Surr: Toluene-d8	11.3	0.50	10	0	113	79	122				

Associated samples: **B16021024-015E, B16021024-016A**

Run ID :Run Order: **VOA5975C.I_160222B: 4** SampType: **Continuing Calibration Verification Standar** Lab ID: **ccva022916_** Method: **SW8260B**

Analysis Date: **02/22/16 18:22** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
cis-1,2-Dichloroethene	5.20	0.50	5	0	104	70	130				
Surr: 1,2-Dichloroethane-d4	12.2	0.50	10	0	122	70	130				
Surr: Dibromofluoromethane	11.4	0.50	10	0	114	77	126				
Surr: p-Bromofluorobenzene	10.4	0.50	10	0	104	76	127				
Surr: Toluene-d8	10.4	0.50	10	0	104	79	122				

Associated samples: **B16021024-015E, B16021024-016A**

Run ID :Run Order: **VOA5975C.I_160222B: 5** SampType: **Method Blank** Lab ID: **blk022916_** Method: **SW8260B**

Analysis Date: **02/22/16 19:32** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	ND	10									
Benzene	ND	0.50									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R257067

Date: *29-Feb-16*

Run ID :Run Order: **VOA5975C.I_160222B: 5** SampType: **Method Blank** Lab ID: **blk022916_** Method: **SW8260B**

Analysis Date: **02/22/16 19:32** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromochloromethane	ND	0.50									
Bromodichloromethane	ND	0.50									
Bromoform	ND	0.50									
Bromomethane	ND	0.50									
Carbon disulfide	ND	0.50									
Carbon tetrachloride	ND	0.50									
Chlorobenzene	ND	0.50									
Chlorodibromomethane	ND	0.50									
Chloroethane	ND	0.50									
Chloroform	ND	0.50									
Chloromethane	ND	0.50									
Cyclohexane	ND	1.0									
1,2-Dibromo-3-chloropropane	ND	1.0									
1,2-Dibromoethane	ND	0.50									
1,2-Dichlorobenzene	ND	0.50									
1,3-Dichlorobenzene	ND	0.50									
1,4-Dichlorobenzene	ND	0.50									
Dichlorodifluoromethane	ND	0.50									
1,1-Dichloroethane	ND	0.50									
1,2-Dichloroethane	ND	0.50									
1,1-Dichloroethene	ND	0.50									
cis-1,2-Dichloroethene	ND	0.50									
trans-1,2-Dichloroethene	ND	0.50									
1,2-Dichloropropane	ND	0.50									
cis-1,3-Dichloropropene	ND	0.50									
trans-1,3-Dichloropropene	ND	0.50									
1,4-Dioxane	ND	250									
Ethylbenzene	ND	0.50									
2-Hexanone	ND	10									
Isopropylbenzene	ND	0.50									
Methylcyclohexane	ND	1.0									
Methyl tert-butyl ether (MTBE)	ND	0.50									
Methyl ethyl ketone	ND	10									
Methyl isobutyl ketone	ND	10									
Methylene chloride	ND	0.50									
Styrene	ND	0.50									
1,1,2,2-Tetrachloroethane	ND	0.50									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R257067

Date: *29-Feb-16*

Run ID :Run Order: **VOA5975C.I_160222B: 5** SampType: **Method Blank** Lab ID: **blk022916_** Method: **SW8260B**

Analysis Date: **02/22/16 19:32** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Tetrachloroethene	ND	0.50									
Toluene	ND	0.50									
1,2,3-Trichlorobenzene	ND	0.50									
1,2,4-Trichlorobenzene	ND	0.50									
1,1,1-Trichloroethane	ND	0.50									
1,1,2-Trichloroethane	ND	0.50									
Trichloroethene	ND	0.50									
Trichlorofluoromethane	ND	0.50									
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	0.50									
Vinyl chloride	ND	0.50									
m+p-Xylenes	ND	0.50									
o-Xylene	ND	0.50									
Surr: 1,2-Dichloroethane-d4	11.9	0.50	10	0	119	70	130				
Surr: Dibromofluoromethane	11.1	0.50	10	0	111	77	126				
Surr: p-Bromofluorobenzene	10.6	0.50	10	0	106	76	127				
Surr: Toluene-d8	10.5	0.50	10	0	105	79	122				

Associated samples: **B16021024-015E, B16021024-016A**

Run ID :Run Order: **VOA5975C.I_160222B: 9** SampType: **Sample Matrix Spike** Lab ID: **B16021024-015Ems** Method: **SW8260B**

Analysis Date: **02/22/16 23:07** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	11500	2000	10000	0	115	62	130				
Benzene	1150	100	1000	0	115	71	133				
Bromochloromethane	1190	100	1000	0	119	68	131				
Bromodichloromethane	1090	100	1000	0	109	67	138				
Bromoform	984	100	1000	0	98	64	136				
Bromomethane	920	100	1000	0	92	60	138				
Carbon disulfide	1320	100	1000	0	132	46	145				
Carbon tetrachloride	1170	100	1000	0	117	61	144				
Chlorobenzene	984	100	1000	0	98	78	136				
Chlorodibromomethane	1160	100	1000	0	116	72	136				
Chloroethane	944	100	1000	0	94	64	136				
Chloroform	1070	100	1000	0	107	69	133				
Chloromethane	1000	100	1000	0	100	63	149				
Cyclohexane	1240	200	1000	0	124	69	133				
1,2-Dibromo-3-chloropropane	1190	200	1000	0	119	63	125				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R257067

Date: *29-Feb-16*

Run ID :Run Order: **VOA5975C.I_160222B: 9** SampType: **Sample Matrix Spike** Lab ID: **B16021024-015Ems** Method: **SW8260B**

Analysis Date: **02/22/16 23:07** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dibromoethane	1180	100	1000	0	118	75	131				
1,2-Dichlorobenzene	960	100	1000	0	96	78	129				
1,3-Dichlorobenzene	960	100	1000	0	96	79	132				
1,4-Dichlorobenzene	952	100	1000	0	95	78	131				
Dichlorodifluoromethane	1040	100	1000	0	104	55	141				
1,1-Dichloroethane	1110	100	1000	0	111	72	130				
1,2-Dichloroethane	1150	100	1000	0	115	57	146				
1,1-Dichloroethene	1170	100	1000	0	117	66	142				
cis-1,2-Dichloroethene	1110	100	1000	0	111	74	133				
trans-1,2-Dichloroethene	1110	100	1000	0	111	76	138				
1,2-Dichloropropane	1070	100	1000	0	107	72	135				
cis-1,3-Dichloropropene	992	100	1000	0	99	75	132				
trans-1,3-Dichloropropene	1190	100	1000	0	119	77	145				
1,4-Dioxane	282000	50000	250000	0	113	27	178				
Ethylbenzene	928	100	1000	0	93	78	131				
2-Hexanone	11600	2000	10000	0	116	72	131				
Isopropylbenzene	872	100	1000	0	87	72	135				
Methylcyclohexane	1140	200	1000	0	114	70	130				
Methyl tert-butyl ether (MTBE)	1180	100	1000	0	118	58	151				
Methyl ethyl ketone	12900	2000	10000	0	129	55	145				
Methyl isobutyl ketone	11300	2000	10000	0	113	73	129				
Methylene chloride	1160	100	1000	0	116	73	126				
Styrene	984	100	1000	0	98	76	134				
1,1,2,2-Tetrachloroethane	1120	100	1000	0	112	72	132				
Tetrachloroethene	1030	100	1000	0	103	78	137				
Toluene	1030	100	1000	0	103	78	134				
1,2,3-Trichlorobenzene	1000	100	1000	0	100	42	152				
1,2,4-Trichlorobenzene	888	100	1000	0	89	58	142				
1,1,1-Trichloroethane	1070	100	1000	0	107	64	141				
1,1,2-Trichloroethane	1100	100	1000	0	110	72	133				
Trichloroethene	1000	100	1000	0	100	75	138				
Trichlorofluoromethane	1040	100	1000	0	104	58	139				
1,1,2-Trichloro-1,2,2-trifluoroethane	1430	100	1000	0	143	60	140				S
Vinyl chloride	1140	100	1000	0	114	66	140				
m+p-Xylenes	1960	100	2000	0	98	78	133				
o-Xylene	920	100	1000	0	92	79	136				
Surr: 1,2-Dichloroethane-d4	2660	100	2000	0	133	70	130				S

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R257067

Date: *29-Feb-16*

Run ID :Run Order: **VOA5975C.I_160222B: 9** SampType: **Sample Matrix Spike** Lab ID: **B16021024-015Ems** Method: **SW8260B**

Analysis Date: **02/22/16 23:07** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Dibromofluoromethane	2370	100	2000	0	118	77	126				
Surr: p-Bromofluorobenzene	1970	100	2000	0	98	76	127				
Surr: Toluene-d8	2200	100	2000	0	110	79	122				

Associated samples: **B16021024-015E, B16021024-016A**

Run ID :Run Order: **VOA5975C.I_160222B: 10** SampType: **Sample Matrix Spike Duplicate** Lab ID: **B16021024-015Emsd** Method: **SW8260B**

Analysis Date: **02/22/16 23:43** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acetone	9280	2000	10000	0	93	62	130	11520	22	20	R
Benzene	920	100	1000	0	92	71	133	1152	22	20	R
Bromochloromethane	952	100	1000	0	95	68	131	1192	22	20	R
Bromodichloromethane	1100	100	1000	0	110	67	138	1088	0.7	20	
Bromoform	912	100	1000	0	91	64	136	984	7.6	20	
Bromomethane	824	100	1000	0	82	60	138	920	11	20	
Carbon disulfide	1100	100	1000	0	110	46	145	1320	18	20	
Carbon tetrachloride	888	100	1000	0	89	61	144	1168	27	20	R
Chlorobenzene	944	100	1000	0	94	78	136	984	4.1	20	
Chlorodibromomethane	1090	100	1000	0	109	72	136	1160	6.4	20	
Chloroethane	816	100	1000	0	82	64	136	944	15	20	
Chloroform	832	100	1000	0	83	69	133	1072	25	20	R
Chloromethane	856	100	1000	0	86	63	149	1000	16	20	
Cyclohexane	960	200	1000	0	96	69	133	1240	25	20	R
1,2-Dibromo-3-chloropropane	1140	200	1000	0	114	63	125	1192	4.8	20	
1,2-Dibromoethane	1250	100	1000	0	125	75	131	1184	5.3	20	
1,2-Dichlorobenzene	904	100	1000	0	90	78	129	960	6.0	20	
1,3-Dichlorobenzene	928	100	1000	0	93	79	132	960	3.4	20	
1,4-Dichlorobenzene	904	100	1000	0	90	78	131	952	5.2	20	
Dichlorodifluoromethane	848	100	1000	0	85	55	141	1040	20	20	R
1,1-Dichloroethane	928	100	1000	0	93	72	130	1112	18	20	
1,2-Dichloroethane	952	100	1000	0	95	57	146	1152	19	20	
1,1-Dichloroethene	992	100	1000	0	99	66	142	1168	16	20	
cis-1,2-Dichloroethene	904	100	1000	0	90	74	133	1112	21	20	R
trans-1,2-Dichloroethene	952	100	1000	0	95	76	138	1112	16	20	
1,2-Dichloropropane	1160	100	1000	0	116	72	135	1072	7.9	20	
cis-1,3-Dichloropropene	1110	100	1000	0	111	75	132	992	11	20	
trans-1,3-Dichloropropene	1250	100	1000	0	125	77	145	1192	4.6	20	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R257067

Date: *29-Feb-16*

Run ID :Run Order: **VOA5975C.I_160222B: 10** SampType: **Sample Matrix Spike Duplicate** Lab ID: **B16021024-015Emsd** Method: **SW8260B**

Analysis Date: **02/22/16 23:43** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,4-Dioxane	265000	50000	250000	0	106	27	178	282400	6.4	20	
Ethylbenzene	920	100	1000	0	92	78	131	928	0.9	20	
2-Hexanone	10900	2000	10000	0	109	72	131	11600	6.4	20	
Isopropylbenzene	840	100	1000	0	84	72	135	872	3.7	20	
Methylcyclohexane	1110	200	1000	0	111	70	130	1136	2.1	20	
Methyl tert-butyl ether (MTBE)	960	100	1000	0	96	58	151	1176	20	20	R
Methyl ethyl ketone	10200	2000	10000	0	102	55	145	12880	24	20	R
Methyl isobutyl ketone	12500	2000	10000	0	125	73	129	11280	10	20	
Methylene chloride	960	100	1000	0	96	73	126	1160	19	20	
Styrene	984	100	1000	0	98	76	134	984	0.0	20	
1,1,2,2-Tetrachloroethane	1070	100	1000	0	107	72	132	1120	4.4	20	
Tetrachloroethene	1000	100	1000	0	100	78	137	1032	3.1	20	
Toluene	1060	100	1000	0	106	78	134	1032	2.3	20	
1,2,3-Trichlorobenzene	976	100	1000	0	98	42	152	1000	2.4	20	
1,2,4-Trichlorobenzene	880	100	1000	0	88	58	142	888	0.9	20	
1,1,1-Trichloroethane	816	100	1000	0	82	64	141	1072	27	20	R
1,1,2-Trichloroethane	1120	100	1000	0	112	72	133	1096	2.2	20	
Trichloroethene	1150	100	1000	0	115	75	138	1000	14	20	
Trichlorofluoromethane	848	100	1000	0	85	58	139	1040	20	20	R
1,1,2-Trichloro-1,2,2-trifluoroethane	1190	100	1000	0	119	60	140	1432	18	20	
Vinyl chloride	968	100	1000	0	97	66	140	1136	16	20	
m+p-Xylenes	1950	100	2000	0	98	78	133	1960	0.4	20	
o-Xylene	904	100	1000	0	90	79	136	920	1.8	20	
Surr: 1,2-Dichloroethane-d4	2020	100	2000	0	101	70	130	0			
Surr: Dibromofluoromethane	1930	100	2000	0	96	77	126	0			
Surr: p-Bromofluorobenzene	1980	100	2000	0	99	76	127	0			
Surr: Toluene-d8	2330	100	2000	0	116	79	122	0			

Associated samples: **B16021024-015E, B16021024-016A**

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96934

Date: *29-Feb-16*

Run ID :Run Order: **SV5973N.I_160217B: 11** SampType: **Method Blank** Lab ID: **MB-96934** Method: **SW8270C**

Analysis Date: **02/18/16 04:16** Units: **ug/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3510C**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4,5-Tetrachlorobenzene	ND	10									
2,3,4,6-Tetrachlorophenol	ND	10									
2,4,5-Trichlorophenol	ND	10									
2,4,6-Trichlorophenol	ND	10									
2,4-Dichlorophenol	ND	10									
2,4-Dimethylphenol	ND	10									
2,4-Dinitrophenol	ND	50									
2,4-Dinitrotoluene	ND	10									
2,6-Dinitrotoluene	ND	10									
2-Chloronaphthalene	ND	10									
2-Chlorophenol	ND	10									
2-Methylnaphthalene	ND	10									
2-Nitroaniline	ND	10									
2-Nitrophenol	ND	10									
3,3´-Dichlorobenzidine	ND	10									
3-Nitroaniline	ND	10									
4,6-Dinitro-2-methylphenol	ND	50									
4-Bromophenyl phenyl ether	ND	10									
4-Chloro-3-methylphenol	ND	10									
4-Chlorophenyl phenyl ether	ND	10									
4-Nitroaniline	ND	10									
4-Nitrophenol	ND	50									
Acenaphthene	ND	10									
Acenaphthylene	ND	10									
Acetophenone	ND	10									
Anthracene	ND	10									
Atrazine	ND	10									
Benzaldehyde	ND	10									
Benzo(a)anthracene	ND	10									
Benzo(a)pyrene	ND	10									
Benzo(b)fluoranthene	ND	10									
Benzo(g,h,i)perylene	ND	10									
Benzo(k)fluoranthene	ND	10									
bis(-2-chloroethoxy)Methane	ND	10									
bis(-2-chloroethyl)Ether	ND	10									
bis(2-chloroisopropyl)Ether	ND	10									
bis(2-ethylhexyl)Phthalate	ND	10									

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96934

Date: *29-Feb-16*

Run ID :Run Order: **SV5973N.I_160217B: 11** SampType: **Method Blank** Lab ID: **MB-96934** Method: **SW8270C**

Analysis Date: **02/18/16 04:16** Units: **ug/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3510C**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Butylbenzylphthalate	ND	10									
Caprolactam	ND	10									
Carbazole	ND	10									
Chrysene	ND	10									
Dibenzo(a,h)anthracene	ND	10									
Dibenzofuran	ND	10									
Diethyl phthalate	ND	10									
Dimethyl phthalate	ND	10									
Di-n-butyl phthalate	ND	10									
Di-n-octyl phthalate	ND	10									
Fluoranthene	ND	10									
Fluorene	ND	10									
Hexachlorobenzene	ND	10									
Hexachlorobutadiene	ND	10									
Hexachlorocyclopentadiene	ND	10									
Hexachloroethane	ND	10									
Indeno(1,2,3-cd)pyrene	ND	10									
Isophorone	ND	10									
m+p-Cresols	ND	10									
Naphthalene	ND	10									
Nitrobenzene	ND	10									
n-Nitroso-di-n-propylamine	ND	10									
n-Nitrosodiphenylamine	ND	10									
o-Cresol	ND	10									
p-Chloroaniline	ND	10									
Phenanthrene	ND	10									
Phenol	ND	10									
Pyrene	ND	10									
Surr: 2,4,6-Tribromophenol	155	10	200	0	78	21	130				
Surr: 2-Fluorobiphenyl	65.3	10	100	0	65	28	107				
Surr: 2-Fluorophenol	80.7	10	200	0	40	20	56				
Surr: Nitrobenzene-d5	61.0	10	100	0	61	32	94				
Surr: Phenol-d5	69.5	10	200	0	35	19	45				
Surr: Terphenyl-d14	58.6	10	100	0	59	32	122				

Associated samples: **B16021024-015D**

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96934

Date: *29-Feb-16*

Run ID :Run Order: **SV5973N.I_160217B: 12** SampType: **Laboratory Control Sample** Lab ID: **LCS-96934** Method: **SW8270C**

Analysis Date: **02/18/16 04:45** Units: **ug/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3510C**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	73.8	10	100	0	74	27	100				
2,4,6-Trichlorophenol	71.9	10	100	0	72	21	130				
2,4-Dichlorophenol	69.5	10	100	0	70	35	86				
2,4-Dimethylphenol	63.2	10	100	0	63	33	92				
2,4-Dinitrophenol	49.0	50	100	0	49	10	112				
2,4-Dinitrotoluene	83.0	10	100	0	83	44	110				
2,6-Dinitrotoluene	83.4	10	100	0	83	40	113				
2-Chloronaphthalene	72.0	10	100	0	72	38	100				
2-Chlorophenol	58.6	10	100	0	59	30	77				
2-Methylnaphthalene	71.6	10	100	0	72	36	89				
2-Nitroaniline	79.4	10	100	0	79	38	98				
2-Nitrophenol	66.7	10	100	0	67	31	94				
3,3´-Dichlorobenzidine	56.5	10	100	0	56	29	110				
3-Nitroaniline	77.2	10	100	0	77	33	86				
4,6-Dinitro-2-methylphenol	60.6	50	100	0	61	10	118				
4-Bromophenyl phenyl ether	73.6	10	100	0	74	36	109				
4-Chloro-3-methylphenol	72.7	10	100	0	73	36	95				
4-Chlorophenyl phenyl ether	69.2	10	100	0	69	38	107				
4-Nitroaniline	79.7	10	100	0	80	34	102				
4-Nitrophenol	28.8	50	100	0	29	10	49				
Acenaphthene	75.1	10	100	0	75	43	97				
Acenaphthylene	72.6	10	100	0	73	45	94				
Anthracene	76.6	10	100	0	77	50	106				
Benzo(a)anthracene	79.4	10	100	0	79	39	121				
Benzo(a)pyrene	74.5	10	100	0	75	42	109				
Benzo(b)fluoranthene	82.2	10	100	0	82	32	124				
Benzo(g,h,i)perylene	78.9	10	100	0	79	42	117				
Benzo(k)fluoranthene	68.7	10	100	0	69	46	104				
bis(-2-chloroethoxy)Methane	66.4	10	100	0	66	33	93				
bis(-2-chloroethyl)Ether	59.9	10	100	0	60	28	91				
bis(2-chloroisopropyl)Ether	59.8	10	100	0	60	33	87				
bis(2-ethylhexyl)Phthalate	65.6	10	100	0	66	13	127				
Butylbenzylphthalate	73.5	10	100	0	74	31	118				
Carbazole	84.3	10	100	0	84	42	109				
Chrysene	78.1	10	100	0	78	47	110				
Dibenzo(a,h)anthracene	82.8	10	100	0	83	44	114				
Dibenzofuran	75.2	10	100	0	75	44	90				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96934

Date: *29-Feb-16*

Run ID :Run Order: **SV5973N.I_160217B: 12** SampType: **Laboratory Control Sample** Lab ID: **LCS-96934** Method: **SW8270C**

Analysis Date: **02/18/16 04:45** Units: **ug/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3510C**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diethyl phthalate	73.4	10	100	0	73	38	109				
Dimethyl phthalate	76.3	10	100	0	76	36	110				
Di-n-butyl phthalate	73.8	10	100	0	74	33	117				
Di-n-octyl phthalate	67.3	10	100	0	67	25	123				
Fluoranthene	76.2	10	100	0	76	45	117				
Fluorene	75.9	10	100	0	76	42	104				
Hexachlorobenzene	68.3	10	100	0	68	36	109				
Hexachlorobutadiene	53.9	10	100	0	54	27	83				
Hexachlorocyclopentadiene	56.8	10	100	0	57	30	85				
Hexachloroethane	53.8	10	100	0	54	28	72				
Indeno(1,2,3-cd)pyrene	79.8	10	100	0	80	35	123				
Isophorone	71.2	10	100	0	71	36	99				
m+p-Cresols	58.9	10	100	0	59	24	83				
Naphthalene	67.2	10	100	0	67	37	88				
Nitrobenzene	72.6	10	100	0	73	35	86				
n-Nitroso-di-n-propylamine	76.2	10	100	0	76	34	102				
n-Nitrosodiphenylamine	68.4	10	100	0	68	33	106				
o-Cresol	62.8	10	100	0	63	22	88				
p-Chloroaniline	60.6	10	100	0	61	20	80				
Phenanthrene	76.8	10	100	0	77	38	113				
Phenol	32.2	10	100	0	32	18	48				
Pyrene	76.7	10	100	0	77	39	115				
Surr: 2,4,6-Tribromophenol	162	10	200	0	81	21	130				
Surr: 2-Fluorobiphenyl	62.8	10	100	0	63	28	107				
Surr: 2-Fluorophenol	79.1	10	200	0	40	20	56				
Surr: Nitrobenzene-d5	62.1	10	100	0	62	32	94				
Surr: Phenol-d5	71.0	10	200	0	36	19	45				
Surr: Terphenyl-d14	69.9	10	100	0	70	32	122				

Associated samples: **B16021024-015D**

Run ID :Run Order: **SV5973N.I_160217B: 23** SampType: **Sample Matrix Spike** Lab ID: **B16021068-001BMS** Method: **SW8270C**

Analysis Date: **02/18/16 06:14** Units: **ug/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3510C**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	74.4	10	100	0	74	27	100				
2,4,6-Trichlorophenol	73.6	10	100	0	74	21	130				
2,4-Dichlorophenol	67.2	10	100	0	67	35	86				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96934

Date: *29-Feb-16*

Run ID :Run Order: **SV5973N.I_160217B: 23** SampType: **Sample Matrix Spike** Lab ID: **B16021068-001BMS** Method: **SW8270C**

Analysis Date: **02/18/16 06:14** Units: **ug/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3510C**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4-Dimethylphenol	61.4	10	100	0	61	33	92				
2,4-Dinitrophenol	52.0	50	100	0	52	10	112				
2,4-Dinitrotoluene	84.4	10	100	0	84	44	110				
2,6-Dinitrotoluene	86.2	10	100	0	86	40	113				
2-Chloronaphthalene	74.8	10	100	0	75	38	100				
2-Chlorophenol	59.4	10	100	0	59	30	77				
2-Methylnaphthalene	74.4	10	100	0	74	36	89				
2-Nitroaniline	80.8	10	100	0	81	38	98				
2-Nitrophenol	67.6	10	100	0	68	31	94				
3,3´-Dichlorobenzidine	62.8	10	100	0	63	29	110				
3-Nitroaniline	75.0	10	100	0	75	33	86				
4,6-Dinitro-2-methylphenol	65.2	50	100	0	65	10	118				
4-Bromophenyl phenyl ether	79.0	10	100	0	79	36	109				
4-Chloro-3-methylphenol	74.4	10	100	0	74	36	95				
4-Chlorophenyl phenyl ether	74.2	10	100	0	74	38	107				
4-Nitroaniline	78.2	10	100	0	78	34	102				
4-Nitrophenol	31.0	50	100	0	31	10	49				
Acenaphthene	78.8	10	100	0	79	43	97				
Acenaphthylene	74.0	10	100	0	74	45	94				
Anthracene	84.2	10	100	0	84	50	106				
Benzo(a)anthracene	85.0	10	100	0	85	39	121				
Benzo(a)pyrene	78.8	10	100	0	79	42	109				
Benzo(b)fluoranthene	83.6	10	100	0	84	32	124				
Benzo(g,h,i)perylene	83.8	10	100	0	84	42	117				
Benzo(k)fluoranthene	83.0	10	100	0	83	46	104				
bis(-2-chloroethoxy)Methane	66.0	10	100	0	66	33	93				
bis(-2-chloroethyl)Ether	59.8	10	100	0	60	28	91				
bis(2-chloroisopropyl)Ether	62.0	10	100	0	62	33	87				
bis(2-ethylhexyl)Phthalate	78.0	10	100	0	78	13	127				
Butylbenzylphthalate	83.6	10	100	0	84	31	118				
Carbazole	80.6	10	100	0	81	42	109				
Chrysene	85.2	10	100	0	85	47	110				
Dibenzo(a,h)anthracene	89.0	10	100	0	89	44	114				
Dibenzofuran	80.6	10	100	0	81	44	90				
Diethyl phthalate	78.2	10	100	0	78	38	109				
Dimethyl phthalate	78.6	10	100	0	79	36	110				
Di-n-butyl phthalate	84.0	10	100	0	84	33	117				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96934

Date: *29-Feb-16*

Run ID :Run Order: **SV5973N.I_160217B: 23** SampType: **Sample Matrix Spike** Lab ID: **B16021068-001BMS** Method: **SW8270C**

Analysis Date: **02/18/16 06:14** Units: **ug/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3510C**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Di-n-octyl phthalate	79.2	10	100	0	79	25	123				
Fluoranthene	82.6	10	100	0	83	45	117				
Fluorene	78.4	10	100	0	78	42	104				
Hexachlorobenzene	75.8	10	100	0	76	36	109				
Hexachlorobutadiene	52.8	10	100	0	53	27	83				
Hexachlorocyclopentadiene	57.2	10	100	0	57	30	85				
Hexachloroethane	55.4	10	100	0	55	28	72				
Indeno(1,2,3-cd)pyrene	78.4	10	100	0	78	35	123				
Isophorone	72.8	10	100	0	73	36	99				
m+p-Cresols	60.4	10	100	0	60	24	83				
Naphthalene	68.8	10	100	0	69	37	88				
Nitrobenzene	69.6	10	100	0	70	35	86				
n-Nitroso-di-n-propylamine	77.8	10	100	0	78	34	102				
n-Nitrosodiphenylamine	76.0	10	100	0	76	33	106				
o-Cresol	64.2	10	100	0	64	22	88				
p-Chloroaniline	61.4	10	100	0	61	20	80				
Phenanthrene	80.0	10	100	0	80	38	113				
Phenol	31.6	10	100	0	32	18	48				
Pyrene	85.6	10	100	0	86	39	115				
Surr: 2,4,6-Tribromophenol	166	10	200	0	83	21	130				
Surr: 2-Fluorobiphenyl	67.4	10	100	0	67	28	107				
Surr: 2-Fluorophenol	78.0	10	200	0	39	20	56				
Surr: Nitrobenzene-d5	59.2	10	100	0	59	32	94				
Surr: Phenol-d5	71.6	10	200	0	36	19	45				
Surr: Terphenyl-d14	73.6	10	100	0	74	32	122				

Associated samples: **B16021024-015D**

Run ID :Run Order: **SV5973N.I_160222A: 14** SampType: **Sample Duplicate** Lab ID: **B16021024-015D** Method: **SW8270C**

Analysis Date: **02/23/16 00:03** Units: **ug/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3510C**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2,4,5-Tetrachlorobenzene	ND	10		0				0		40	
2,3,4,6-Tetrachlorophenol	ND	10		0				0		40	
2,4,5-Trichlorophenol	ND	10		0				0		40	
2,4,6-Trichlorophenol	ND	10		0				0		40	
2,4-Dichlorophenol	ND	10		0				0		40	
2,4-Dimethylphenol	ND	10		0				0		40	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96934

Date: *29-Feb-16*

Run ID :Run Order: **SV5973N.I_160222A: 14** SampType: **Sample Duplicate** Lab ID: **B16021024-015D** Method: **SW8270C**

Analysis Date: **02/23/16 00:03** Units: **ug/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3510C**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4-Dinitrophenol	ND	50		0				0		40	
2,4-Dinitrotoluene	ND	10		0				0		40	
2,6-Dinitrotoluene	ND	10		0				0		40	
2-Chloronaphthalene	ND	10		0				0		40	
2-Chlorophenol	ND	10		0				0		40	
2-Methylnaphthalene	1.87	10		0				2.894		40	
2-Nitroaniline	ND	10		0				0		40	
2-Nitrophenol	ND	10		0				0		40	
3,3´-Dichlorobenzidine	ND	10		0				0		40	
3-Nitroaniline	ND	10		0				0		40	
4,6-Dinitro-2-methylphenol	ND	50		0				0		40	
4-Bromophenyl phenyl ether	ND	10		0				0		40	
4-Chloro-3-methylphenol	ND	10		0				0		40	
4-Chlorophenyl phenyl ether	ND	10		0				0		40	
4-Nitroaniline	ND	10		0				0		40	
4-Nitrophenol	ND	50		0				0		40	
Acenaphthene	6.15	10		0				9.234		40	
Acenaphthylene	ND	10		0				0		40	
Acetophenone	ND	10		0				0		40	
Anthracene	10.5	10		0				16.56	45	40	R
Atrazine	ND	10		0				0		40	
Benzaldehyde	ND	10		0				0		40	
Benzo(a)anthracene	20.2	10		0				30.46	41	40	R
Benzo(a)pyrene	24.5	10		0				34.18	33	40	
Benzo(b)fluoranthene	29.9	10		0				40.08	29	40	
Benzo(g,h,i)perylene	17.4	10		0				23.99	32	40	
Benzo(k)fluoranthene	14.2	10		0				15.04	5.9	40	
bis(-2-chloroethoxy)Methane	ND	10		0				0		40	
bis(-2-chloroethyl)Ether	ND	10		0				0		40	
bis(2-chloroisopropyl)Ether	ND	10		0				0		40	
bis(2-ethylhexyl)Phthalate	ND	10		0				0		40	
Butylbenzylphthalate	ND	10		0				0		40	
Caprolactam	ND	10		0				0		40	
Carbazole	7.09	10		0				9.377		40	
Chrysene	23.4	10		0				32.94	34	40	
Dibenzo(a,h)anthracene	5.64	10		0				8.901		40	
Dibenzofuran	2.99	10		0				4.722		40	

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: 96934

Date: *29-Feb-16*

Run ID :Run Order: **SV5973N.I_160222A: 14** SampType: **Sample Duplicate** Lab ID: **B16021024-015D** Method: **SW8270C**

Analysis Date: **02/23/16 00:03** Units: **ug/L** **Prep Info:** Prep Date: **2/16/2016** Prep Method: **SW3510C**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diethyl phthalate	ND	10		0				0		40	
Dimethyl phthalate	ND	10		0				0		40	
Di-n-butyl phthalate	ND	10		0				0		40	
Di-n-octyl phthalate	ND	10		0				0		40	
Fluoranthene	42.8	10		0				65.97	43	40	R
Fluorene	5.20	10		0				8.187		40	
Hexachlorobenzene	ND	10		0				0		40	
Hexachlorobutadiene	ND	10		0				0		40	
Hexachlorocyclopentadiene	ND	10		0				0		40	
Hexachloroethane	ND	10		0				0		40	
Indeno(1,2,3-cd)pyrene	20.4	10		0				24.37	18	40	
Isophorone	ND	10		0				0		40	
m+p-Cresols	ND	10		0				0		40	
Naphthalene	8.39	10		0				12.09		40	
Nitrobenzene	ND	10		0				0		40	
n-Nitroso-di-n-propylamine	ND	10		0				0		40	
n-Nitrosodiphenylamine	ND	10		0				0		40	
o-Cresol	ND	10		0				0		40	
p-Chloroaniline	ND	10		0				0		40	
Phenanthrene	32.9	10		0				54.55	49	40	R
Phenol	ND	10		0				0		40	
Pyrene	35.9	10		0				57.5	46	40	R
Surr: 2,4,6-Tribromophenol	90.7	10	190.4	0	48	21	130	0	0.0	40	
Surr: 2-Fluorobiphenyl	16.6	10	95.2	0	17	28	107	0	0.0	40	S
Surr: 2-Fluorophenol	62.3	10	190.4	0	33	20	56	0	0.0	40	
Surr: Nitrobenzene-d5	52.9	10	95.2	0	56	32	94	0	0.0	40	
Surr: Phenol-d5	53.6	10	190.4	0	28	19	45	0	0.0	40	
Surr: Terphenyl-d14	20.7	10	95.2	0	22	32	122	0	0.0	40	S

Associated samples: **B16021024-015D**

The extraction prep hold time was exceeded by 4.66 days.

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R256717

Date: *29-Feb-16*

Run ID :Run Order: **SV5973N.I_160217B: 1** SampType: **MS Tuning File** Lab ID: **17-Feb-16_TUNE_18** Method: **SW8270C**

Analysis Date: **02/17/16 23:29** Units: **%** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
198, Base Peak	100	0.010	100	0	100	100	100				
51, % of mass 198	36.4	0.010	100	0	36.4	30	60				
68, % of mass 69	ND	0.010	100	0	0	0	1.99				
69, % Relative Abundance	41.9	0.010	100	0	41.9	0.01	99.99				
70, % of mass 69	0.270	0.010	100	0	0.27	0	1.99				
127, % of mass 198	47.9	0.010	100	0	47.9	40	60				
197, % of mass 198	0.900	0.010	100	0	0.9	0	0.99				
199, % of mass 198	6.18	0.010	100	0	6.18	5	9				
275, % of mass 198	26.6	0.010	100	0	26.6	10	30				
365, % of mass 198	3.26	0.010	100	0	3.26	1	99.99				
441, % of mass 443	78.1	0.010	100	0	78.1	0.01	99.99				
442, % of mass 198	78.0	0.010	100	0	78	40	100				
443, % of mass 442	19.9	0.010	100	0	19.9	17	23				

Associated samples: **B16021024-015D**

Run ID :Run Order: **SV5973N.I_160217B: 2** SampType: **Continuing Calibration Verification Standar** Lab ID: **17-Feb-16_CCV_19** Method: **SW8270C**

Analysis Date: **02/17/16 23:50** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,5-Trichlorophenol	79.2	10	75	0	106	70	130				
2,4,6-Trichlorophenol	71.4	10	75	0	95	80	120				
2,4-Dichlorophenol	71.7	10	75	0	96	80	120				
2,4-Dimethylphenol	71.5	10	75	0	95	70	130				
2,4-Dinitrophenol	71.4	50	75	0	95	70	130				
2,4-Dinitrotoluene	72.9	10	75	0	97	70	130				
2,6-Dinitrotoluene	75.7	10	75	0	101	70	130				
2-Chloronaphthalene	73.1	10	75	0	97	70	130				
2-Chlorophenol	71.2	10	75	0	95	70	130				
2-Methylnaphthalene	69.4	10	75	0	93	70	130				
2-Nitroaniline	75.7	10	75	0	101	70	130				
2-Nitrophenol	71.8	10	75	0	96	80	120				
3,3´-Dichlorobenzidine	68.0	10	75	0	91	70	130				
3-Nitroaniline	74.5	10	75	0	99	70	130				
4,6-Dinitro-2-methylphenol	76.8	50	75	0	102	70	130				
4-Bromophenyl phenyl ether	72.9	10	75	0	97	70	130				
4-Chloro-3-methylphenol	73.4	10	75	0	98	80	120				
4-Chlorophenyl phenyl ether	71.3	10	75	0	95	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R256717

Date: *29-Feb-16*

Run ID :Run Order: **SV5973N.I_160217B: 2** SampType: **Continuing Calibration Verification Standar** Lab ID: **17-Feb-16_CCV_19** Method: **SW8270C**

Analysis Date: **02/17/16 23:50** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
4-Nitroaniline	77.3	10	75	0	103	70	130				
4-Nitrophenol	79.0	50	75	0	105	70	130				
Acenaphthene	71.7	10	75	0	96	80	120				
Acenaphthylene	71.2	10	75	0	95	70	130				
Anthracene	71.2	10	75	0	95	70	130				
Benzo(a)anthracene	68.6	10	75	0	91	70	130				
Benzo(a)pyrene	76.9	10	75	0	103	80	120				
Benzo(b)fluoranthene	75.3	10	75	0	100	70	130				
Benzo(g,h,i)perylene	77.0	10	75	0	103	70	130				
Benzo(k)fluoranthene	75.2	10	75	0	100	70	130				
bis(-2-chloroethoxy)Methane	70.7	10	75	0	94	70	130				
bis(-2-chloroethyl)Ether	71.0	10	75	0	95	70	130				
bis(2-chloroisopropyl)Ether	72.0	10	75	0	96	70	130				
bis(2-ethylhexyl)Phthalate	69.0	10	75	0	92	70	130				
Butylbenzylphthalate	71.2	10	75	0	95	70	130				
Carbazole	71.9	10	75	0	96	70	130				
Chrysene	71.0	10	75	0	95	70	130				
Dibenzo(a,h)anthracene	73.9	10	75	0	99	70	130				
Dibenzofuran	73.1	10	75	0	97	70	130				
Diethyl phthalate	72.2	10	75	0	96	70	130				
Dimethyl phthalate	71.3	10	75	0	95	70	130				
Di-n-butyl phthalate	74.0	10	75	0	99	70	130				
Di-n-octyl phthalate	76.0	10	75	0	101	80	120				
Fluoranthene	72.4	10	75	0	97	80	120				
Fluorene	72.5	10	75	0	97	70	130				
Hexachlorobenzene	71.2	10	75	0	95	70	130				
Hexachlorobutadiene	68.2	10	75	0	91	80	120				
Hexachlorocyclopentadiene	76.3	10	75	0	102	70	130				
Hexachloroethane	70.8	10	75	0	94	70	130				
Indeno(1,2,3-cd)pyrene	70.9	10	75	0	95	70	130				
Isophorone	74.9	10	75	0	100	70	130				
m+p-Cresols	72.0	10	75	0	96	70	130				
Naphthalene	74.6	10	75	0	99	70	130				
Nitrobenzene	68.8	10	75	0	92	70	130				
n-Nitroso-di-n-propylamine	74.8	10	75	0	100	70	130				
n-Nitrosodiphenylamine	73.0	10	75	0	97	80	120				
o-Cresol	78.0	10	75	0	104	70	130				

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Client: Hydrometrics Inc
Work Order: B16021024
Project: CFAC Paste Plant Soil

ANALYTICAL QC SUMMARY REPORT

Prepared by Billings, MT Branch

BatchID: R256717

Date: *29-Feb-16*

Run ID :Run Order: **SV5973N.I_160217B: 2** SampType: **Continuing Calibration Verification Standar** Lab ID: **17-Feb-16_CCV_19** Method: **SW8270C**

Analysis Date: **02/17/16 23:50** Units: **ug/L** **Prep Info:** Prep Date: Prep Method:

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
p-Chloroaniline	74.3	10	75	0	99	70	130				
Phenanthrene	72.4	10	75	0	97	70	130				
Phenol	67.3	10	75	0	90	80	120				
Pyrene	69.7	10	75	0	93	70	130				
Surr: 2,4,6-Tribromophenol	71.1	10	75	0	95	70	130				
Surr: 2-Fluorobiphenyl	71.0	10	75	0	95	70	130				
Surr: 2-Fluorophenol	72.3	10	75	0	96	70	130				
Surr: Nitrobenzene-d5	72.8	10	75	0	97	70	130				
Surr: Phenol-d5	72.4	10	75	0	97	70	130				
Surr: Terphenyl-d14	67.8	10	75	0	90	70	130				

Associated samples: **B16021024-015D**

Qualifiers: ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limit
R - RPD outside accepted recovery limits
N - Analyte concentration was not sufficiently high to calculate RPD
A - Analyte concentration greater than four times the spike amount

Work Order Receipt Checklist

Hydrometrics Inc

B16021024

Login completed by: Leslie S. Cadreau
Reviewed by: BL2000\cindy
Reviewed Date: 2/16/2016

Date Received: 2/12/2016
Received by: qej
Carrier name: Return-UPS Ground

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	1.1°C On Ice		
Water - VOA vials have zero headspace?	Yes ☑	No ☐	Not Applicable ☐
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Only analyze sample CF1DW-001-DW for Alkalinity, Fluoride, Metals, Hardness, Cyanide, SVOC 8270 and VOC 8260 as listed in quote 3775. All other analyses listed on Table 8 are not needed for this sample per Shari Endy, Project Manager.

TCLP pH added to soil samples per Wynn Pippin, Project Manager, on 02/22/16.

ENERGY LABORATORIES

Chain of Custody and Analytical Request Record

PLEASE PRINT (Provide as much information as possible.)

Company Name: Hydrometrics

Project Name, PWS, Permit, Etc.: CFAC Paste Plant Soil

Sample Origin State: MT

EPA/State Compliance: Yes ☒ No ☐

Report Mail Address (Required): cc: Jvanek@hydrometrics

Contact Name: Scott Mason Phone/Fax: 257-4204 Cell: 471-8635

Sampler: (Please Print) Mason

☒ No Hard Copy Email: Smason@hydrometrics.com

Invoice Contact & Phone: Marta Peters 443-4150

Purchase Order:

Quote/Bottle Order: B3775

Invoice Address (Required):

☒ No Hard Copy Email: Mpeters@hydrometrics

Special Report/Formats:

☐ DW ☒ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format: Hydro EQuis
☐ State: ☒ LEVEL IV
☐ Other: ☐ NELAC

Number of Containers
Sample Type: A W S V B O DW
Air Water Soils/Solids
Vegetation Bioassay Other
DW - Drinking Water

ANALYSIS REQUESTED

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Shipped by: Rtn UPS Grnd

Cooler ID(s):

Receipt Temp 1.1 °C TB

On Ice: (Y) N

Custody Seal On Bottle Y (N) On Cooler (Y) N

Intact (Y) N

Signature Match (Y) N

Comments:

	SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX	Total Lead	TCLP Lead	Hold for future	SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments	LABORATORY USE ONLY
1	CFSB-134-SO/0-0.5	2/10	1045	15	X				✓		B16021024	-001
2	CFSB-134-SO/0.5-2.0	↓	1045	↓	X				✓			-002
3	CFSB-135-SO/0-0.5		1150		X				✓			-003
4	CFSB-135-SO/0.5-2.0		1150		X				✓			-004
5	CFSB-136-SO/0-0.5		1313		X				✓			-005
6	CFSB-136-SO/0.5-2.0		1313		X				✓			-006
7	CFSB-137-SO/0-0.5		1008		X				✓			-007
8	CFSB-137-SO/0.5-2.0		1008		X				✓			-008
9	CFSB-138-SO/0-0.5		1340				X					-009
10	CFSB-138-SO/0.5-2.0	↓	1340	↓			X					-010

Custody Record MUST be Signed

Relinquished by (print):	Date/Time:	Signature:	Received by (print):	Date/Time:	Signature:
Scott Mason	2/11/16 (1700)	Scott Mason			

Sample Disposal: Return to Client: Lab Disposal: ✓

Received by Laboratory: Quincee Jones Date/Time: 2/12/16 09:10 Signature:

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

Chain of Custody and Analytical Request Record

ENERGY LABORATORIES

PLEASE PRINT (Provide as much information as possible.)

Company Name: Hydrometrics

Project Name, PWS, Permit, Etc: CFAC Paste Plant Soil

Sample Origin State: MT

EPA/State Compliance: Yes ☒ No ☐

Report Mail Address (Required):

Contact Name: Scott Mason Phone/Fax: 257-4204 Cell:

Sampler: (Please Print) Mason

☐ No Hard Copy Email:

Invoice Contact & Phone:

Purchase Order:

Quote/Bottle Order: B3775

Invoice Address (Required):

☐ No Hard Copy Email:

Special Report/Formats:

☐ DW
☐ POTW/WWTP
☐ State:
☐ Other:
☒ EDD/EDT (Electronic Data) Format: Hydro EQuIS
☒ LEVEL IV
☐ NELAC

ANALYSIS REQUESTED

Contact ELI prior to **RUSH** sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: RM-UPS Grnd

Cooler ID(s):

Receipt Temp 1.1 °C TB

On Ice: Y N

Custody Seal: On Bottle Y N; On Cooler Y N

Intact Y N

Signature Match Y N

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O DW; Air Water Soils/Solids Vegetation Bioassay Other DW - Drinking Water)	Total Lead	TCLP Lead	Hold for future	8260 VOCs	SVOCs 8270	Total Cyanide	F, Alkalinity	Metals			SEE ATTACHED	Standard Turnaround (TAT)	RUSH	Comments	LABORATORY USE ONLY
1 CFSB-139-S0/0.5-2.0	2/10	1427	1S			X											B16021024	-011
2 CFSB-139-S0/0-0.5	↓	1427	1S			X												-012
3 CFSB-140-S0/0-0.5		1521	1S			X												-013
4 CFSB-140-S0/0.5-2.0		1521	1S			X												-014
5 CF1DW-001-DW	↓	1545	8W				3	2	1	1	1				✓		see Table 8 for analyte list for water	-015
6 TB 2/2/16 B-PF SHP0267																		-016
7																		
8																		
9																		
10																		

Custody Record MUST be Signed

Relinquished by (print): Scott Mason Date/Time: 2-11-16 (1700) Signature: Scott Mason

Relinquished by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by (print): Date/Time: Signature:

Received by Laboratory: Quinnee Vaus Date/Time: 2/12/16 09:10 Signature:

Sample Disposal: Return to Client: Lab Disposal: ✓

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report.
Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

TABLE 8. Analyses of Groundwater Samples
Columbia Falls Aluminum Company, Montana

Parameter	EPA Analytical Method Reference Number	Target MDL (1)	Desired PQL (2)	DEQ-7 Aquatic Life Standard	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	EPA National Recommended Water Quality Criteria	Toxicological Benchmarks for Screening Potential (Suter 1996)	Canadian Water Quality Guidelines (CCME)
Target Compound List Volatile Organic Compounds (TCL VOCs) (ug/L)										
Dichlorodifluoromethane	8260B		20	--	1000	--	20	--	--	--
Chloromethane	8260B		19	--	30	--	19	--	--	--
Vinyl chloride	8260B		0.019	--	0.2	2	0.019	--	--	--
Bromomethane	8260B		0.75	--	10	--	0.75	--	--	--
Chloroethane	8260B		2100	--	--	--	2100	--	--	--
Trichlorofluoromethane	8260B		110	--	10000	--	110	--	--	--
1,1-Dichloroethene	8260B		7	--	7	--	--	--	>2800	--
1,1,2-Trichloro-1,2,2-trifluoroethane	8260B		5500	--	5500	--	5500	--	--	--
Acetone	8260B		1400	--	1400	--	1400	--	507640	--
Carbon disulfide	8260B		31	--	81	--	31	--	244	--
Methyl acetate	8260B		2000	--	2000	--	2000	--	--	--
Methylene chloride	8260B		5	--	5	5	11.4	--	42667	--
trans-1,2-Dichloroethene	8260B		100	--	100	--	--	--	--	--
Methyl tert-butyl ether	8260B		14	--	30(21)	--	14	--	--	10000
1,1-Dichloroethane	8260B		2.7	--	2.7	--	2.7	--	14680	--
cis-1,2-Dichloroethene	8260B		70	--	70	--	--	--	--	--
2-Butanone	8260B		560	--	560	--	560	--	282170	--
Bromochloromethane	8260B		8.3	--	8.3	--	8.3	--	--	--
Chloroform	8260B		0.22	--	70	80	0.22	--	1240	--
1,1,1-Trichloroethane	8260B		200	--	200	200	800	--	9400	--
Cyclohexane	8260B		1300	--	1300	--	1300	--	--	--
Carbon tetrachloride	8260B		0.45	--	3	5	0.45	--	1970	--
Benzene	8260B		0.45	--	5	5	0.45	--	525000	370
1,2-Dichloroethane	8260B		0.17	--	4	5	0.17	--	15200	5
Trichloroethene	8260B		5	--	5	--	--	--	7257	--
Methylcyclohexane	8260B		--	--	--	--	--	--	--	--
1,2-Dichloropropane	8260B		0.44	--	5	5	0.44	--	--	--
Bromodichloromethane	8260B		0.13	--	10	80	0.13	--	--	--
cis-1,3-Dichloropropene	8260B		4	--	4	--	--	--	--	--
4-Methyl-2-pentanone	8260B		120	--	120	--	120	--	77400	--
Toluene	8260B		2	--	1000	1000	110	--	1269	2
trans-1,3-Dichloropropene	8260B		2	--	2	--	--	--	--	--
1,1,2-Trichloroethane	8260B		3	--	3	--	--	--	--	--
Tetrachloroethene	8260B		5	--	5	--	--	--	750	--
2-Hexanone	8260B		3.8	--	3.8	--	3.8	--	32783	--
Dibromochloromethane	8260B		0.17	--	4	80	0.17	--	--	100
1,2-Dibromoethane	8260B		0.004	--	0.004	--	--	--	--	--
Chlorobenzene	8260B		7.8	--	100	100	7.8	--	1203	--
Ethylbenzene	8260B		1.5	--	700	700	1.5	--	>440	2.4
o-Xylene	8260B		19	--	10000	--	19	--	--	--
m,p-Xylene	8260B		19	--	10000	--	19	--	--	--
Styrene	8260B		72	--	100	100	120	--	--	72
Bromoform	8260B		3.3	--	80	80	3.3	--	--	--
Isopropylbenzene	8260B		--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	8260B		2	--	2	--	--	--	2400	--
1,3-Dichlorobenzene	8260B		150	--	600	--	--	--		150
1,4-Dichlorobenzene	8260B		0.48	--	75	75	0.48	--		26
1,2-Dichlorobenzene	8260B		30	--	600	600	30	--		--
1,2-Dibromo-3-chloropropane	8260B		0.00034	--	0.2	0.2	0.00034	--	--	--
1,2,4-Trichlorobenzene	8260B		0.7	--	70	--	0.7	--		24
1,2,3-Trichlorobenzene	8260B		0.4	--	0.7	70.00	0.4	--	--	8

TABLE 8. Analyses of Groundwater Samples
Columbia Falls Aluminum Company, Montana

Parameter	EPA Analytical Method Reference Number	Target MDL (1)	Desired PQL (2)	DEQ-7 Aquatic Life Standard	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	EPA National Recommended Water Quality Criteria	Toxicological Benchmarks for Screening Potential (Suter 1996)	Canadian Water Quality Guidelines (CCME)
Target Compound List Semi-Volatile Organic Compounds (TCL SVOCs) (ug/L)										
1,4-Dioxane	8270D		0.46	--	0.78	--	0.46	--	--	--
Benzaldehyde	8270D		190	--	190	--	190	--	--	--
Phenol	8270D		2	--	300	--	580	--	<200	2
Bis(2-chloroethyl) ether	8270D		0.014	--	0.3	--	0.014	--	--	--
2-Chlorophenol	8270D		9.1	--	81	--	9.1	--	--	--
2-Methylphenol	8270D		489	--	--	--	--	--	489	--
3-Methylphenol	8270D		--	--	--	--	--	--	--	--
2,2'-Oxybis(1-chloropropane)	8270D		1400	--	1400	--	--	--	--	--
Acetophenone	8270D		190	--	190	--	190	--	--	--
4-Methylphenol	8270D		--	--	--	--	--	--	--	--
N-Nitroso-di-n propylamine	8270D		0.011	--	0.5	--	0.011	--	332	--
Hexachloroethane	8270D		0.33	--	30	--	0.33	--	--	--
Nitrobenzene	8270D		0.14	--	17	--	0.14	--	--	--
Isophorone	8270D		78	--	400	--	78	--	--	--
2-Nitrophenol	8270D		--	--	--	--	--	--	--	--
2,4-Dimethylphenol	8270D		36	--	380	--	36	--	--	--
Bis(2-chloroethoxy) methane	8270D		5.9	--	5.9	--	5.9	--	--	--
2,4-Dichlorophenol	8270D		4.6	--	77	--	4.6	--	--	--
Naphthalene	8270D		0.17	--	100	--	0.17	--	620	1.1
4-Chloroaniline	8270D		0.36	--	--	--	0.36	--	--	--
Hexachlorobutadiene	8270D		0.14	--	5	--	0.14	--	--	1.3
Caprolactam	8270D		990	--	990	--	990	--	--	--
4-Chloro-3-methylphenol	8270D		3000	--	3000	--	--	--	--	--
2-Methylnaphthalene	8270D		3.6	--	3.6	--	3.6	--	--	--
Hexachlorocyclopentadiene	8270D		0.041	--	3.1	50	0.041	--	--	--
2,4,6-Trichlorophenol	8270D		30	--	30	--	120	--	--	--
2,4,5-Trichlorophenol	8270D		1.2	--	1800	--	1.2	--	--	--
1,1'-Biphenyl	8270D		0.083	--	0.083	--	0.083	--	--	--
2-Chloronaphthalene	8270D		1000	--	1000	--	--	--	--	--
2-Nitroaniline	8270D		19	--	19	--	19	--	--	--
Dimethylphthalate	8270D		270000	--	270000	--	--	--	--	--
2,6-Dinitrotoluene	8270D		0.048	--	0.5	--	0.048	--	--	--
Acenaphthylene	8270D		--	--	--	--	--	--	--	--
3-Nitroaniline	8270D		--	--	--	--	--	--	--	--
Acenaphthene	8270D		5.8	--	670	--	53	--	74	5.8
2,4-Dinitrophenol	8270D		3.9	--	69	--	3.9	--	--	--
4-Nitrophenol	8270D		60	--	60	--	--	--	481	--
Dibenzofuran	8270D		0.79	--	0.79	--	0.79	--	1003	--
2,4-Dinitrotoluene	8270D		0.24	--	1.1	--	0.24	--	--	--
Diethylphthalate	8270D		17000	--	17000	--	--	--	85800	--
Fluorene	8270D		3	--	1100	--	29	--	--	3
4-Chlorophenyl-phenyl ether	8270D		--	--	--	--	--	--	--	--
4-Nitroaniline	8270D		3.8	--	3.8	--	3.8	--	--	--
4,6-Dinitro-2-methylphenol	8270D		13	--	13	--	--	--	--	--
N-Nitrosodiphenylamine	8270D		12	--	33	--	12	--	332	--
1,2,4,5-Tetrachlorobenzene	8270D		0.17	--	0.97	--	0.17	--	--	--
4-Bromophenyl-phenylether	8270D		--	--	--	--	--	--	--	--
Hexachlorobenzene	8270D		0.0098	--	0.2	1	0.0098	--	--	0.52
Atrazine	8270D		0.3	--	3	3	0.3	--	--	1.8
Pentachlorophenol	8270D		0.04	4 @ pH of 6.5 (14)	1	1	0.04	15	--	0.5

TABLE 8. Analyses of Groundwater Samples
Columbia Falls Aluminum Company, Montana

Parameter	EPA Analytical Method Reference Number	Target MDL (1)	Desired PQL (2)	DEQ-7 Aquatic Life Standard	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	EPA National Recommended Water Quality Criteria	Toxicological Benchmarks for Screening Potential (Suter 1996)	Canadian Water Quality Guidelines (CCME)
Phenanthrene	8270D		0.4	--	--	--	--	--	200	0.4
Anthracene	8270D		0.012	--	2100	--	180	--	0.09	0.012
Carbazole	8270D		--	--	--	--	--	--	--	--
Di-n-butylphthalate	8270D		19	--	2000	--	--	--	697	19
Fluoranthene	8270D		0.04	--	130	--	80	--	15	0.04
Pyrene	8270D		0.025	--	830	--	12	--	--	0.025
Butylbenzylphthalate	8270D		16	--	1500	--	16	--	--	--
3,3'-Dicholorobenzidine	8270D		0.12	--	0.21	--	0.12	--	--	--
Benzo(a)anthracene	8270D		0.018	--	.5 (29)	--	--	--	0.65	0.018
Chrysene	8270D		3.4	--	50 (29)	--	3.4	--	--	--
Bis(2-ethylhexyl) phthalate	8270D		5.6	--	6	6	5.6	--	912	--
Di-n-octylphthalate	8270D		20	--	20	--	20	--	706	--
Benzo(b) fluoranthene	8270D		0.034	--	.5 (29)	--	0.034	--	--	--
Benzo(k) fluoranthene	8270D		0.34	--	5 (29)	--	0.34	--	--	--
Benzo(a) pyrene	8270D		0.0034	--	0.05	0.2	0.0034	--	--	0.015
Indeno(1,2,3,-cd) pyrene	8270D		0.034	--	.5 (29)	--	0.034	--	--	--
Dibenzo(a,h) anthracene	8270D		0.0034	--	.05 (29)	--	0.0034	--	--	--
Benzo(g,h,i) perylene	8270D		--	--	--	--	--	--	--	--
2,3,4,6-Tetrachlorophenol	8270D		1	--	24	--	24	--	--	1
Target Analyte List Pesticides (ug/L)										
alpha-BHC	8081B		0.0071	--	0.026	--	0.0071	--	--	--
beta-BHC	8081B		0.025	--	0.091	--	0.025	--	--	--
delta-BHC	8081B		--	--	--	--	--	--	--	--
gamma-BHC (Lindane)	8081B		0.01	0.95	0.2	0.2	0.041	--	3.3	0.01
Heptachlor	8081B		0.0014	0.0038	0.08	0.4	0.0014	0.0038	1.26	0.01
Aldrin	8081B		0.00092	1.5	0.02	--	0.00092	--	--	0.004
Heptachlor epoxide	8081B		0.0014	0.0038	0.04	0.2	0.0014	0.0038	--	--
Endosulfan I	8081B		0.003	0.056	62	--	10	--		0.003
Dieldrin	8081B		0.0017	0.056	0.02	--	0.0017	0.056		--
4,4'-DDE	8081B		0.001	--	0.0022	--	0.046	--	--	0.001
Endrin	8081B		0.0023	0.036	2	2	0.23	0.036		0.0023
Endosulfan II	8081B		0.056	0.056	62	--	--	--		--
4,4'-DDD	8081B		0.001	--	0.0031	--	0.031	--	--	0.001
Endosulfan sulfate	8081B		62	--	62	--	--	--		--
4,4'-DDT	8081B		0.001	0.001	0.0032	--	0.23	0.001	--	0.001
Methoxychlor	8081B		0.03	0.03	40	40	3.7	0.03		--
Endrin ketone	8081B		--	--	--	--	--	--	--	--
Endrin aldehyde	8081B		0.29	--	0.29	--	--	--	--	--
cis-Chlordane	8081B		1	--	1	--	--	--	--	--
trans-Chlordane	8081B		--	--	--	--	--	--	--	--
Toxaphene	8081B		0.0002	0.0002	0.3	3	0.015	0.0002	--	0.008
Target Analyte List Polychlorinated Biphenyls (TAL PCBs) (ug/L)										
Aroclor-1016	8082A		0.014	0.014	0.5	--	0.14	--	--	--
Aroclor-1221	8082A		0.0046	0.014	0.5	--	0.0046	--	60	--
Aroclor-1232	8082A		0.0046	0.014	0.5	--	0.0046	--	124	--
Aroclor-1242	8082A		0.0078	0.014	0.5	--	0.0078	--	4.9	--
Aroclor-1248	8082A		0.0078	0.014	0.5	--	0.0078	--	--	--
Aroclor-1254	8082A		0.0078	0.014	0.5	--	0.0078	--	0.1	--
Aroclor-1260	8082A		0.0078	0.014	0.5	--	0.0078	--	2.3	--
Aroclor-1262	8082A		--	--	--	--	--	--	--	--
Aroclor-1268	8082A		0.014	0.014	0.5	--	--	--	--	--
Total PCBs (5)	8082A		0.001	--	--	--	--	0.014	0.01	0.001
Target Analyte List Metals and Cyanide (ug/L)										

TABLE 8. Analyses of Groundwater Samples
Columbia Falls Aluminum Company, Montana

Parameter	EPA Analytical Method Reference Number	Target MDL (1)	Desired PQL (2)	DEQ-7 Aquatic Life Standard	DEQ-7 Human Health Standards	EPA Risk Based Screening Level Drinking water MCL	EPA Risk Based Screening Level Tapwater RSL	EPA National Recommended Water Quality Criteria	Toxicological Benchmarks for Screening Potential (Suter 1996)	Canadian Water Quality Guidelines (CCME)
Aluminum	6010/6020		87	87	2000	--	2000	(pH 6.5-9.0) 87	460	--
Antimony	6010/6020		0.78	--	6	6	0.78	--	610	--
Arsenic	6010/6020		0.052	150	10	10	0.052	150	--	5
Barium	6010/6020		380	--	1000	2000	380	--		--
Beryllium	6010/6020		2.5	--	4	4	2.5	--	5.3	100
Cadmium	6010/6020		0.09	.097 @ 25 mg/L hardness *(12)	5	diet --, water 5	diet --, water 0.92	0.25	0.15	0.09
Calcium	6010/6020		116000	--	--	--	--	--	116000	1000000
Chromium	6010/6020		100	--	100	100 (total)	--	(III) 74, (VI) 11	--	--
Cobalt	6010/6020		0.6	--	0.6	--	0.6	--	5.1	50
Copper	6010/6020		0.23	2.85 @ 25 mg/L hardness *(12)	1300	1300	80	criteria requires utilizing Biotic Ligand Model (BLM) based on separate guidance	0.23	--
Iron	6010/6020		158	1000	1400	--	1400	1000	158	300
Lead	6010/6020		2.5	.545 @ 25 mg/L hardness *(12)	15	15 (and compounds)	15 (and compounds)	2.5	12.26	100
Magnesium	6010/6020		82000	--	--	--	--	--	82000	--
Manganese	6010/6020		43	--	43	Diet --, non-diet --	diet --, non-diet 43	--	<1100	200
Nickel	6010/6020		16.1	16.1 @ 25 mg/L hardness *(12)	100	--	--	--	--	200
Potassium	6010/6020		53000	--	--	--	--	--	53000	--
Selenium	6010/6020		1	5	50	50	10	5	88.32	1
Silver	6010/6020		0.12	.374 @ 25 mg/L hardness *(12)	100	--	9.4	--	0.12	0.25
Sodium	6010/6020		680000	--	--	--	--	--	680000	--
Thallium	6010/6020		0.02	--	2	2 (soluble salts)	0.02 (soluble salts)	--	57	0.8
Vanadium	6010/6020		8.6	--	--	--	8.6	--	80	100
Zinc	6010/6020		30	37 @ 25 mg/L hardness *(12)	2000	--	600	120	30	30
Mercury	7470A		0.026	0.91	2	2	0.063	0.77	<0.23	0.026
Cyanide	335.4		0.15	5.2	200	200	0.15	5.2	7.8	5
Anions (ug/L)										
Fluoride	300.0		80	--	4000	--	80	--	--	120
Chloride	300.0		120000	--	--	--	--	230000	--	120000
Nitrate, as N	353.2		1000	*(8)	10000	1000	--	--	--	13000
Nitrite, as N	353.2		60	*(8)	1000	1000	--	--	--	60
Ammonia nitrogen	350.3/350.1		--	*(7) (8)	--	--	--	--	--	--
Orthophosphate, as P	365.1		--	--	--	--	--	--	--	--
Alkalinity (carbonate and bicarbonate)	SM 2320B		20000	--	--	--	--	20000	--	6.5-9.0
Sulfate	300.0		--	--	--	--	--	--	--	--
Other (ug/L)										
Total Dissolved Solids (TDS)	SM 2540C		3000000	--	--	--	--	--	--	3000000
Total Suspended Solids (TSS)	SM 2540D		--	--	--	--	--	--	--	--

Notes:
(1) MDL = Method Detection Limit. Target MDLs will be based on the MDLs provided by the selected laboratory
(2) PQL = practical quantitation limit. Desired PQLs are maximum quantitation limits based on comparison to groundwater quality standards and risked based screening levels. PQLs given for analytes without risk-based criteria will be based on the reporting limits (RLs) provided by the selected laboratory
*values are dependent on field conditions and determined based on formulas provided in MT Circular DEQ-7

Hydrometrics, Inc.
consulting scientists and engineers

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Kalispell, MT 59901
(406) 257-4204
www.hydrometrics.com

February 11, 2016

Shari Endy
Energy Laboratories
Billings, Montana

RE: Analysis of CFAC Soil Samples

Dear Shari,

Please find enclosed, 14 soil samples and 1 water samples for analysis as described below.

Soil
Please note that 6 of the soil samples are to be archived for possible future analysis depending on the results of the 8 soil samples.

Soil Samples:

Sample Number	Total Lead	TCLP Lead
CFSB-134-SO/0-0.5	Yes	Yes
CFSB-134-SO/0.5-2.0	Yes	Yes
CFSB-135-SO/0-0.5	Yes	Yes
CFSB-135-SO/0.5-2.0	Yes	Yes
CFSB-136-SO/0-0.5	Yes	Yes
CFSB-136-SO/0.5-2.0	Yes	Yes
CFSB-137-SO/0-0.5	Yes	Yes
CFSB-137-SO/0.5-2.0	Yes	Yes
CFSB-138-SO/0-0.5	No, hold for future analysis	No, hold for future analysis
CFSB-138-SO/0.5-2.0	No, hold for future analysis	No, hold for future analysis
CFSB-139-SO/0-0.5	No, hold for future analysis	No, hold for future analysis
CFSB-139-SO/0.5-2.0	No, hold for future analysis	No, hold for future analysis
CFSB-140-SO/0-0.5	No, hold for future analysis	No, hold for future analysis
CFSB-140-SO/0.5-2.0	No, hold for future analysis	No, hold for future analysis

Water
Please analyze for VOCs, SVOCs, metals, total cyanide, fluoride and anions as described in the attached Table 8.

Data Format
Please note that data must meet Level IV requirements and be in Hydrometrics Equis format.

Thank your for your assistance on this project and please call if you have any questions about this request.

Scott Mason

Attachment – Table 8. Analyses of Groundwater Samples

ANALYTICAL SUMMARY REPORT

February 29, 2016

Hydrometrics Inc
33 2nd Street East Suite 8B
Kalispell, MT 59901-6108

Work Order: B16021180 Quote ID: B3775 - CFAC

Project Name: CFAC Paste Plant Soil

Energy Laboratories Inc Billings MT received the following 2 samples for Hydrometrics Inc on 2/16/2016 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B16021180-001	CFPLD-172-SO/0-0.5	02/12/16 14:05	02/16/16	Solid	Metals by ICP/ICPMS, Total or Soluble Metals by ICP/ICPMS, TCLP Digestion, Total Metals TCLP Extraction, Non-volatiles Digestion, Total Metals
B16021180-002	CFPLD-172-SO/0.5-2.0	02/12/16 14:05	02/16/16	Solid	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Project: CFAC Paste Plant Soil
Lab ID: B16021180-001
Client Sample ID: CFPLD-172-SO/0-0.5

Report Date: 02/29/16
Collection Date: 02/12/16 14:05
DateReceived: 02/16/16
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, TCLP EXTRACTABLE							
Lead	ND	mg/L		0.1	5	SW6010B	02/22/16 16:26 / rlh
METALS, TOTAL - EPA SW846							
Lead	152	mg/kg		1		SW6010B	02/22/16 17:36 / rlh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Project: CFAC Paste Plant Soil
Lab ID: B16021180-002
Client Sample ID: CFPLD-172-SO/0.5-2.0

Report Date: 02/29/16
Collection Date: 02/12/16 14:05
DateReceived: 02/16/16
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, TCLP EXTRACTABLE							
Lead	ND	mg/L		0.1	5	SW6010B	02/22/16 16:37 / rlh
METALS, TOTAL - EPA SW846							
Lead	62	mg/kg		1		SW6010B	02/22/16 17:40 / rlh

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Hydrometrics Inc
Project: CFAC Paste Plant Soil

Report Date: 02/23/16
Work Order: B16021180

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6010B									Analytical Run: ICP203-B_160222A	
Lab ID: QCS		Initial Calibration Verification Standard							02/22/16 09:48	
Lead		0.780	mg/L	0.050	98	90	110			
Lab ID: ICSA		Interference Check Sample A							02/22/16 09:52	
Lead		0.0473	mg/L	0.050						
Lab ID: ICSAB		Interference Check Sample AB							02/22/16 09:55	
Lead		0.955	mg/L	0.050	96	80	120			
Method: SW6010B									Batch: 97057	
Lab ID: MB-97057		Method Blank				Run: ICP203-B_160222A			02/22/16 16:08	
Lead		ND	mg/L	0.02						
Lab ID: LCS-97057		Laboratory Control Sample				Run: ICP203-B_160222A			02/22/16 16:12	
Lead		0.454	mg/L	0.10	91	80	120			
Lab ID: LCSD-97057		Laboratory Control Sample Duplicate				Run: ICP203-B_160222A			02/22/16 16:22	
Lead		0.446	mg/L	0.10	89	80	120	1.7	20	
Lab ID: B16021180-001ADIL		Serial Dilution				Run: ICP203-B_160222A			02/22/16 16:29	
Lead		ND	mg/L	0.16		0	0		10	
Lab ID: B16021180-001AMS3		Sample Matrix Spike				Run: ICP203-B_160222A			02/22/16 16:33	
Lead		0.550	mg/L	0.10	94	75	125			
Lab ID: B16021180-002AMS3		Sample Matrix Spike				Run: ICP203-B_160222A			02/22/16 16:40	
Lead		0.529	mg/L	0.10	106	75	125			
Method: SW6010B									Batch: 97077	
Lab ID: MB-97077		Method Blank				Run: ICP203-B_160222A			02/22/16 16:51	
Lead		ND	mg/kg	0.8						
Lab ID: SRM2-97077		Standard Reference Material				Run: ICP203-B_160222A			02/22/16 16:55	
Lead		104	mg/kg	5.0	104	70	130			
Lab ID: SRM3-97077		Standard Reference Material				Run: ICP203-B_160222A			02/22/16 17:30	
Lead		95.5	mg/kg	5.0	91	74	120			
Lab ID: B16021436-002ADIL		Serial Dilution				Run: ICP203-B_160222A			02/22/16 18:02	
Lead		ND	mg/kg	8.6		0	0		10	
Lab ID: B16021436-002APDS		Post Digestion/Distillation Spike				Run: ICP203-B_160222A			02/22/16 18:12	
Lead		97.9	mg/kg	1.8	90	75	125			
Lab ID: B16021436-002AMS3		Sample Matrix Spike				Run: ICP203-B_160222A			02/22/16 18:16	
Lead		94.4	mg/kg	1.7	90	75	125			
Lab ID: B16021436-002AMSD		Sample Matrix Spike Duplicate				Run: ICP203-B_160222A			02/22/16 18:19	
Lead		96.7	mg/kg	1.7	93	75	125	2.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Work Order Receipt Checklist

Hydrometrics Inc

B16021180

Login completed by: Gina McCartney
Reviewed by: BL2000\jmueller
Reviewed Date: 2/17/2016

Date Received: 2/16/2016
Received by: cmb
Carrier name: Return-UPS NDA

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	1.6°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	Not Applicable ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CHAIN OF CUSTODY RECORD

Hydrometrics, Inc.

3020 Bozeman Ave. • Helena, MT 59601 • (406) 443-4150

PROJ. NO. 15042

PROJECT NAME CFAC Paste Plant Soil

SAMPLERS: *(Signature)* Scott Mason

DATE	TIME	COMP	GRAB	SAMPLE NUMBER	NO. OF CON-TAINERS	Commons UF / RAW	Nutrients UF / H_2SO_4	Diss. Metal F / HNO_3	CN UF / NaOH	Total Metals UF / HNO_3	Total Recoverable Metals UF / HNO_3	BTEX	TPH	Total Lead	TCLP Lead						REMARKS
2/12	1405	✓		CFPLD-172-50/0-0.5	2 S									✓	✓						B16021180-001
2/12	1405	✓		CFPLD-172-50/0.5-2.0	2 S									✓	✓						↓ -002

Relinquished *(Signature)*	Date / Time	Received by *(Signature)*	Lab	P.O. #	Shipped via: Bus FedEx UPS
Scott Mason	2/12 1600	2/16/16 0800	EL - Billings		Other ____ Air Bill # ____
Relinquished *(Signature)*	Date / Time	Received by *(Signature)*	Remarks Level IV Data Package in EQUIS Hydro Format		
Relinquished *(Signature)*	Date / Time	Received for Laboratory by *(Signature)*	Date / Time 2.16.16 09:15	Enclosed: ☐ Parameter sheet w/detection limits ☐ QA / AC standard mixing instructions ☒ Cover letter ☐ Other ____	

Split Samples: ☐ Accepted ☐ Declined ____ Signature

HFORM-1 07/11
Action Print 406-442-7595

Return results & electronic copy to:
QA / QC Dept. at address at top of page

1.6 °C - TB
UPS NDA - Salt Del
custody seal on cooler

ED_002345B_00008795-00098

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consulting scientists and engineers

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February 12, 2016

Shari Endy
Energy Laboratories
Billings, Montana

RE: Analysis of CFAC Soil Samples

Dear Shari,

Please find enclosed, 2 additional soil samples for analysis as described below.

Soil

Soil Samples:

Sample Number	Total Lead	TCLP Lead
CFPLD-172-SO/0-0.5	Yes	Yes
CFPLD-172-SO/0.5-2.0	Yes	Yes

Data Format
Please note that data must meet Level IV requirements and be in Hydrometrics Equis format.

Thank your for your assistance on this project and please call if you have any questions about this request.

Scott Mason