



Beneficial Use Determination: Solid By-Product Management Plan Analytical Testing Report

Beneficial Use ID#: 29 -BUD- 09 - 04X
 DNR Certified Lab: Test America
 Lab Report Date: 10/22/2020
 By-Product Generator: IPL Burlington Generating Station
 City: Burlington State: IA Zip: 52601
 By-Product Name: Pozzostone

Send completed report form(s), laboratory analytics, and supplemental Solid By-Product Management Plan (SBMP) documentation to:
 Iowa Department of Natural Resources
 Land Quality Bureau
 Solid Waste Section
 502 E 9th St
 Des Moines, IA 50319-0034
 For questions concerning this report form please contact the DNR at (515) 725-8351.

ANALYTICAL TESTING RESULTS

Test Methods for Evaluating Solid Waste: Physical/Chemical Methods ([SW-846](#)).

Required		Synthetic Precipitation Leaching Procedure (EPA Test Method 1312)			Total Metals		
*	Contaminant	MCL	10 X MCL	Test Result	Regulatory Limit	Test Result	
<input type="checkbox"/>	Antimony	0.006 mg/L	0.06 mg/L	<0.00290 mg/L	31 mg/kg	0.824	mg/kg
<input type="checkbox"/>	Arsenic	0.010 mg/L	0.10 mg/L	<0.00440 mg/L	17 mg/kg	24.4	mg/kg
<input type="checkbox"/>	Barium	2.0 mg/L	20.0 mg/L	0.175 mg/L	15,000 mg/kg	4560	mg/kg
<input type="checkbox"/>	Beryllium	0.004 mg/L	0.04 mg/L	<0.00140 mg/L	110 mg/kg	2.36	mg/kg
<input type="checkbox"/>	Boron				16,000 mg/kg	323	mg/kg
<input type="checkbox"/>	Cadmium	0.005 mg/L	0.05 mg/L	<0.00100 mg/L	70 mg/kg	0.856	mg/kg
<input type="checkbox"/>	Chromium	0.1 mg/L	1.0 mg/L	0.00959 mg/L	** (Total)	37.7	mg/kg
					(Hexavalent - VI)	210 mg/kg	mg/kg
					(Trivalent - III)	97,000 mg/kg	mg/kg
<input type="checkbox"/>	Cobalt				23 mg/kg	13.8	mg/kg
<input type="checkbox"/>	Copper	1.3 mg/L	13.0 mg/L	<0.0160 mg/L	15,000 mg/kg	95.0	mg/kg
<input type="checkbox"/>	Fluoride	4.0 mg/L	40.0 mg/L	0.911 mg/L	4,700 mg/kg	<8.13	mg/kg
<input type="checkbox"/>	Lead	0.015 mg/L	0.15 mg/L	<0.00140 mg/L	400 mg/kg	22.6	mg/kg
<input type="checkbox"/>	Lithium				160 mg/kg	29.7	mg/kg
<input type="checkbox"/>	Manganese				10,000 mg/kg	189	mg/kg
<input type="checkbox"/>	Mercury	0.002 mg/L	0.02 mg/L	<0.00110 mg/L	23 mg/kg	0.0636	mg/kg
<input type="checkbox"/>	Molybdenum				390 mg/kg	2.72	mg/kg
<input type="checkbox"/>	Nickel				1,500 mg/kg	38.8	mg/kg
<input type="checkbox"/>	Selenium	0.05 mg/L	0.5 mg/L	0.00909 mg/L	390 mg/kg	6.12	mg/kg
<input type="checkbox"/>	Silver				370 mg/kg	0.279	mg/kg
<input type="checkbox"/>	Thallium	0.002 mg/L	0.02 mg/L	0.00244 mg/L	0.78 mg/kg	0.411	mg/kg
<input type="checkbox"/>	Vanadium				350 mg/kg	141	mg/kg
<input type="checkbox"/>	Zinc				23,000 mg/kg	78.9	mg/kg

*Required contaminant

**If Total Chromium ≥210 mg/kg, further analysis shall be conducted to determine hexavalent and trivalent results.

Toxicity Characteristic Leaching Procedure (EPA Test Method 1311) - Regulatory Limits

Metals					Volatile Organic Compounds				
*	Contaminant	Regulatory Limit	Test Result		*	Contaminant	Regulatory Limit	Test Result	
<input type="checkbox"/>	Arsenic	5.0 mg/L	<0.039	mg/L	<input type="checkbox"/>	Benzene	0.5 mg/L		mg/L
<input type="checkbox"/>	Barium	100.0 mg/L	1.13	mg/L	<input type="checkbox"/>	Carbon tetrachloride	0.5 mg/L		mg/L
<input type="checkbox"/>	Cadmium	1.0 mg/L	<0.004 40	mg/L	<input type="checkbox"/>	Chlorobenzene	100.0 mg/L		mg/L
<input type="checkbox"/>	Chromium	5.0 mg/L	0.0125	mg/L	<input type="checkbox"/>	Chloroform	6.0 mg/L		mg/L
<input type="checkbox"/>	Lead	5.0 mg/L	<0.031 0	mg/L	<input type="checkbox"/>	1,2-Dichloroethane	0.5 mg/L		mg/L
<input type="checkbox"/>	Mercury	0.2 mg/L	<0.001 10	mg/L	<input type="checkbox"/>	1,1-Dichloroethylene	0.7 mg/L		mg/L
<input type="checkbox"/>	Selenium	1.0 mg/L	<0.040 0	mg/L	<input type="checkbox"/>	Methyl ethyl ketone	200.0 mg/L		mg/L
<input type="checkbox"/>	Silver	5.0 mg/L	<0.007 30	mg/L	<input type="checkbox"/>	Tetrachloroethylene	0.7 mg/L		mg/L
					<input type="checkbox"/>	Trichloroethylene	0.5 mg/L		mg/L
					<input type="checkbox"/>	Vinyl chloride	0.2 mg/L		mg/L
Pesticides					Semi-Volatile Organic Compounds				
*	Contaminant	Regulatory Limit	Test Result		*	Contaminant	Regulatory Limit	Test Result	
<input type="checkbox"/>	Chlordane	0.03 mg/L		mg/L	<input type="checkbox"/>	o-Cresol	200.0 mg/L		mg/L
<input type="checkbox"/>	Endrin	0.02 mg/L		mg/L	<input type="checkbox"/>	m-Cresol	200.0 mg/L		mg/L
<input type="checkbox"/>	Heptachlor (and its epoxide)	0.008 mg/L		mg/L	<input type="checkbox"/>	p-Cresol	200.0 mg/L		mg/L
<input type="checkbox"/>	Lindane	0.4 mg/L		mg/L	<input type="checkbox"/>	Cresol	200.0 mg/L		mg/L
<input type="checkbox"/>	Methoxychlor	10.0 mg/L		mg/L	<input type="checkbox"/>	1,4-Dichlorobenzene	7.5 mg/L		mg/L
<input type="checkbox"/>	Toxaphene	0.5 mg/L		mg/L	<input type="checkbox"/>	2,4-Dinitrotoluene	0.13 mg/L		mg/L
					<input type="checkbox"/>	Hexachlorobenzene	0.13 mg/L		mg/L
					<input type="checkbox"/>	Hexachlorobutadiene	0.5 mg/L		mg/L
					<input type="checkbox"/>	Hexachloroethane	3.0 mg/L		mg/L
Herbicides					<input type="checkbox"/>	Nitrobenzene	2.0 mg/L		mg/L
*	Contaminant	Regulatory Limit	Test Result		<input type="checkbox"/>	Pentachlorophenol	100.0 mg/L		mg/L
<input type="checkbox"/>	2,4-D	10.0 mg/L		mg/L	<input type="checkbox"/>	Pyridine	5.0 mg/L		mg/L
<input type="checkbox"/>	2,4,5-TP (Silvex)	1.0 mg/L		mg/L	<input type="checkbox"/>	2,4,5- Trichlorophenol	400.0 mg/L		mg/L
					<input type="checkbox"/>	2,4,6- Trichlorophenol	2.0 mg/L		mg/L

*Required contaminant

BY-PRODUCT GENERATOR CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Signature: _____ **Date:** _____

Printed Name: _____ **Title:** _____

PREPARER

<i>Preparer Name</i>	<i>Site Name</i>	<i>Comment</i>
Ashley Pike	Burlington Generating Station	Semi-Annual Pozzostone

PREPARER INPUT

<i>Chemical</i>	<i>CASRN</i>	<i>Exposure Point Concentration for Soil(mg/kg)</i>
Antimony	007440-36-0	0.824
Arsenic, Inorganic	007440-38-2	24.4
Barium	007440-39-3	4560
Beryllium (soil/water)	007440-41-7	2.36
Boron And Borates Only	007440-42-8	323
Cadmium (soil)	007440-43-9	0.856
Chromium (III)	016065-83-1	37.7
Chromium (VI)	018540-29-9	
Cobalt	007440-48-4	13.8
Copper	007440-50-8	95
Fluoride	007681-49-4	8.13
Lead and Compounds	007439-92-1	22.6
Lithium	007439-93-2	29.7
Manganese	007439-96-5	189
Mercury	007439-97-6	0.0636
Molybdenum	007439-98-7	2.72
Nickel	007440-02-0	38.8
Selenium	007782-49-2	6.12
Silver	007440-22-4	0.279
Thallium	007440-28-0	0.411
Vanadium	007440-62-2	141
Zinc	007440-66-6	78.9

CANCER OUTPUT

<i>Chemical</i>	<i>CASRN</i>	<i>Resident Soil</i>	<i>Site Worker Soil</i>
Arsenic, Inorganic	007440-38-2	0.63	0.14
Lead and Compounds	007439-92-1	NQ	NQ
TOTALS:	∑	0.63	0.14

Cumulative Cancer Risk Site Resident: 0.63

Cumulative Cancer Risk Site Worker: 0.14

All cancer risk values are x 10⁻⁴

SITE RESIDENT - NON CANCER OUTPUT BY TARGET ORGAN																
Chemical Name	CASRN	Media	Heart	Liver	Blood	Kidney	Skin	Endoc	Eye	Immu	Nerve	GenUr	Respi	Other	Devel	Gastro
Antimony	007440-36-0	Soil			0.03									0.03		
Arsenic, Inorganic	007440-38-2	Soil	1.13				1.13									
Barium	007440-39-3	Soil	0.3			0.3										
Beryllium (soil/water)	007440-41-7	Soil														0.02
Boron And Borates Only	007440-42-8	Soil										0.02			0.02	
Cadmium (soil)	007440-43-9	Soil				0.01						0.01		0.01		
Chromium (III)	016065-83-1	Soil												0		
Chromium (VI)	018540-29-9	Soil														
Cobalt	007440-48-4	Soil			0.59											
Copper	007440-50-8	Soil		0.01		0.01										0.01
Fluoride	007681-49-4	Soil												0		
Lead and Compounds	007439-92-1	Soil	0.06			0.06									0.06	
Lithium	007439-93-2	Soil												0		
Manganese	007439-96-5	Soil									0.02					
Mercury	007439-97-6	Soil				0										
Molybdenum	007439-98-7	Soil			0.01							0.01		0.01		
Nickel	007440-02-0	Soil												0.03		
Selenium	007782-49-2	Soil	0.02				0.02							0.02		
Silver	007440-22-4	Soil					0									
Thallium	007440-28-0	Soil		0.53	0.53	0.53	0.53									0.53
Vanadium	007440-62-2	Soil			0.4											
Zinc	007440-66-6	Soil			0											
Sum:			1.51	0.54	1.56	0.91	1.68	0	0	0	0.02	0.04	0	0.1	0.08	0.56

SITE WORKER - NON CANCER OUTPUT BY TARGET ORGAN

Chemical Name	CASRN	Media	Heart	Liver	Blood	Kidney	Skin	Endoc	Eye	Immu	Nerve	GenUr	Respi	Other	Devel	Gastro
Antimony	007440-36-0	Soil			0.01									0.01		
Arsenic, Inorganic	007440-38-2	Soil	0.22				0.22									
Barium	007440-39-3	Soil	0.06			0.06										
Beryllium (soil/water)	007440-41-7	Soil														0
Boron And Borates Only	007440-42-8	Soil								0					0	
Cadmium (soil)	007440-43-9	Soil				0				0		0				
Chromium (III)	016065-83-1	Soil												0		
Chromium (VI)	018540-29-9	Soil														
Cobalt	007440-48-4	Soil			0.12											
Copper	007440-50-8	Soil		0		0										0
Fluoride	007681-49-4	Soil												0		
Lead and Compounds	007439-92-1	Soil	0.018			0.018									0.018	
Lithium	007439-93-2	Soil												0		
Manganese	007439-96-5	Soil									0					
Mercury	007439-97-6	Soil				0										
Molybdenum	007439-98-7	Soil			0							0		0		
Nickel	007440-02-0	Soil												0.01		
Selenium	007782-49-2	Soil	0				0							0		
Silver	007440-22-4	Soil					0									
Thallium	007440-28-0	Soil		0.11	0.11	0.11	0.11									0.11
Vanadium	007440-62-2	Soil			0.08											
Zinc	007440-66-6	Soil				0										
		Sum:	0.298	0.11	0.32	0.188	0.33	0	0	0	0	0	0	0.02	0.018	0.11

ANALYTICAL REPORT

Eurofins TestAmerica, Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Tel: (319)277-2401

Laboratory Job ID: 310-192798-1
Client Project/Site: Beneficial Use Testing

For:
Alliant Energy Corporation
4282 Sullivan Slough Rd
Burlington, Iowa 52601

Attn: Robin Nelson



Authorized for release by:
10/22/2020 5:04:38 PM

Brian Graettinger, Client Service Manager
(319)595-2012
Brian.Graettinger@Eurofinset.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:

www.eurofinsus.com/Env

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Sample Summary	4
Detection Summary	5
Client Sample Results	6
Definitions	8
QC Sample Results	9
QC Association	13
Chronicle	16
Certification Summary	17
Method Summary	18
Chain of Custody	19
Receipt Checklists	21

Case Narrative

Client: Alliant Energy Corporation
Project/Site: Beneficial Use Testing

Job ID: 310-192798-1

Job ID: 310-192798-1

Laboratory: Eurofins TestAmerica, Cedar Falls

Narrative

Job Narrative 310-192798-1

Comments

No additional comments.

Receipt

The sample was received on 10/9/2020 8:35 AM; the sample arrived on ice. The temperature of the cooler at receipt was 7.5° C.

Receipt Exceptions

The following sample was received at the laboratory outside the required temperature criteria: BGS Pozzostone (310-192798-1). The client was contacted regarding this issue and the laboratory was instructed to proceed with analysis.

HPLC/IC

Method 9056A: The laboratory control sample (LCS) for preparation batch 310-295173 and analytical batch 310-295749 recovered outside control limits for the following analytes: Fluoride. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 9056A: The continuing calibration verification (CCV) associated with batch 310-295749 recovered above the upper control limit for Fluoride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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

Metals

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

General Chemistry

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

Organic Prep

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



Sample Summary

Client: Alliant Energy Corporation
Project/Site: Benefical Use Testing

Job ID: 310-192798-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
310-192798-1	BGS Pozzostone	Solid	10/08/20 11:00	10/09/20 08:35	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

Client: Alliant Energy Corporation
Project/Site: Beneficial Use Testing

Job ID: 310-192798-1

Client Sample ID: BGS Pozzostone

Lab Sample ID: 310-192798-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	0.911		0.200	0.0750	mg/L	1		9056A	SPLP
Barium	1.13		0.500	0.110	mg/L	1		6010C	TCLP
Chromium	0.0125	J	0.0200	0.00870	mg/L	1		6010C	TCLP
Antimony	0.824		0.539	0.140	mg/Kg	5	✳	6020B	Total/NA
Arsenic	24.4		0.539	0.205	mg/Kg	5	✳	6020B	Total/NA
Barium	4560		10.8	3.99	mg/Kg	50	✳	6020B	Total/NA
Beryllium	2.36		0.270	0.0820	mg/Kg	5	✳	6020B	Total/NA
Boron	323		27.0	16.2	mg/Kg	5	✳	6020B	Total/NA
Cadmium	0.856		0.270	0.0377	mg/Kg	5	✳	6020B	Total/NA
Chromium	37.7		1.62	0.302	mg/Kg	5	✳	6020B	Total/NA
Cobalt	13.8		0.270	0.162	mg/Kg	5	✳	6020B	Total/NA
Copper	95.0		1.62	0.474	mg/Kg	5	✳	6020B	Total/NA
Lead	22.6		0.270	0.108	mg/Kg	5	✳	6020B	Total/NA
Lithium	29.7		27.0	7.33	mg/Kg	50	✳	6020B	Total/NA
Manganese	189		2.70	0.809	mg/Kg	5	✳	6020B	Total/NA
Molybdenum	2.72		0.539	0.194	mg/Kg	5	✳	6020B	Total/NA
Nickel	38.8		1.62	0.992	mg/Kg	5	✳	6020B	Total/NA
Selenium	6.12		1.62	0.334	mg/Kg	5	✳	6020B	Total/NA
Silver	0.279		0.270	0.0615	mg/Kg	5	✳	6020B	Total/NA
Thallium	0.411		0.270	0.0755	mg/Kg	5	✳	6020B	Total/NA
Vanadium	141		16.2	2.26	mg/Kg	50	✳	6020B	Total/NA
Zinc	78.9		5.39	1.62	mg/Kg	5	✳	6020B	Total/NA
Barium	0.175		0.100	0.0200	mg/L	1		6020B	SPLP West
Chromium	0.00959	J	0.0250	0.00650	mg/L	1		6020B	SPLP West
Selenium	0.00909	J	0.0250	0.00500	mg/L	1		6020B	SPLP West
Thallium	0.00244	J	0.00500	0.00130	mg/L	1		6020B	SPLP West
Mercury	0.0636		0.0229	0.00916	mg/Kg	1	✳	7471B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Cedar Falls

Client Sample Results

Client: Alliant Energy Corporation
Project/Site: Beneficial Use Testing

Job ID: 310-192798-1

Client Sample ID: BGS Pozzostone

Lab Sample ID: 310-192798-1

Date Collected: 10/08/20 11:00

Matrix: Solid

Date Received: 10/09/20 08:35

Method: 9056A - Anions, Ion Chromatography - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.911		0.200	0.0750	mg/L			10/22/20 08:52	1

Method: 6010C - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0390		0.100	0.0390	mg/L		10/16/20 09:52	10/17/20 14:33	1
Barium	1.13		0.500	0.110	mg/L		10/16/20 09:52	10/17/20 14:33	1
Cadmium	<0.00440		0.0200	0.00440	mg/L		10/16/20 09:52	10/17/20 14:33	1
Chromium	0.0125	J	0.0200	0.00870	mg/L		10/16/20 09:52	10/17/20 14:33	1
Lead	<0.0310		0.100	0.0310	mg/L		10/16/20 09:52	10/17/20 14:33	1
Selenium	<0.0400		0.100	0.0400	mg/L		10/16/20 09:52	10/17/20 14:33	1
Silver	<0.00730		0.0200	0.00730	mg/L		10/16/20 09:52	10/17/20 14:33	1

Method: 6020B - Metals (ICP/MS) - SPLP West

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00290		0.0100	0.00290	mg/L		10/19/20 08:00	10/20/20 21:03	1
Arsenic	<0.00440		0.0100	0.00440	mg/L		10/19/20 08:00	10/20/20 21:03	1
Barium	0.175		0.100	0.0200	mg/L		10/19/20 08:00	10/20/20 21:03	1
Beryllium	<0.00140		0.00500	0.00140	mg/L		10/19/20 08:00	10/20/20 21:03	1
Cadmium	<0.00100		0.00500	0.00100	mg/L		10/19/20 08:00	10/20/20 21:03	1
Chromium	0.00959	J	0.0250	0.00650	mg/L		10/19/20 08:00	10/20/20 21:03	1
Copper	<0.0160		0.0500	0.0160	mg/L		10/19/20 08:00	10/20/20 21:03	1
Lead	<0.00140		0.00500	0.00140	mg/L		10/19/20 08:00	10/20/20 21:03	1
Selenium	0.00909	J	0.0250	0.00500	mg/L		10/19/20 08:00	10/20/20 21:03	1
Thallium	0.00244	J	0.00500	0.00130	mg/L		10/19/20 08:00	10/20/20 21:03	1

Method: 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00110		0.00200	0.00110	mg/L		10/15/20 09:47	10/15/20 14:59	1

Method: 7470A - Mercury (CVAA) - SPLP West

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00110		0.00200	0.00110	mg/L		10/20/20 12:53	10/21/20 09:21	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	18.5		0.1	0.1	%			10/12/20 18:21	1
Percent Solids	81.5		0.1	0.1	%			10/12/20 18:21	1

Client Sample Results

Client: Alliant Energy Corporation
 Project/Site: Benefical Use Testing

Job ID: 310-192798-1

Client Sample ID: BGS Pozzostone

Lab Sample ID: 310-192798-1

Date Collected: 10/08/20 11:00

Matrix: Solid

Date Received: 10/09/20 08:35

Percent Solids: 81.5

Method: 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<8.13	*	12.1	8.13	mg/Kg	☼		10/15/20 18:40	10

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.824		0.539	0.140	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5
Arsenic	24.4		0.539	0.205	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5
Barium	4560		10.8	3.99	mg/Kg	☼	10/17/20 11:30	10/20/20 15:41	50
Beryllium	2.36		0.270	0.0820	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5
Boron	323		27.0	16.2	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5
Cadmium	0.856		0.270	0.0377	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5
Chromium	37.7		1.62	0.302	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5
Cobalt	13.8		0.270	0.162	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5
Copper	95.0		1.62	0.474	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5
Lead	22.6		0.270	0.108	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5
Lithium	29.7		27.0	7.33	mg/Kg	☼	10/17/20 11:30	10/20/20 15:41	50
Manganese	189		2.70	0.809	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5
Molybdenum	2.72		0.539	0.194	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5
Nickel	38.8		1.62	0.992	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5
Selenium	6.12		1.62	0.334	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5
Silver	0.279		0.270	0.0615	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5
Thallium	0.411		0.270	0.0755	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5
Vanadium	141		16.2	2.26	mg/Kg	☼	10/17/20 11:30	10/20/20 15:41	50
Zinc	78.9		5.39	1.62	mg/Kg	☼	10/17/20 11:30	10/20/20 15:25	5

Method: 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.0636		0.0229	0.00916	mg/Kg	☼	10/16/20 10:02	10/19/20 13:48	1

Definitions/Glossary

Client: Alliant Energy Corporation
Project/Site: Beneficial Use Testing

Job ID: 310-192798-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

QC Sample Results

Client: Alliant Energy Corporation
Project/Site: Beneficial Use Testing

Job ID: 310-192798-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: LB 310-295173/1-A
Matrix: Solid
Analysis Batch: 295749

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.668		0.998	0.668	mg/Kg			10/15/20 13:04	1

Lab Sample ID: LCS 310-295173/2-A
Matrix: Solid
Analysis Batch: 295749

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	9.98	11.42	*	mg/Kg		114	90 - 110

Lab Sample ID: LB 310-296387/1-A
Matrix: Solid
Analysis Batch: 296654

Client Sample ID: Method Blank
Prep Type: SPLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0750		0.200	0.0750	mg/L			10/22/20 07:50	1

Lab Sample ID: LCS 310-296387/2-A
Matrix: Solid
Analysis Batch: 296654

Client Sample ID: Lab Control Sample
Prep Type: SPLP

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Fluoride	2.00	1.869		mg/L		93	90 - 110

Method: 6010C - Metals (ICP)

Lab Sample ID: LB 310-295540/1-C
Matrix: Solid
Analysis Batch: 296078

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 295561

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0390		0.100	0.0390	mg/L		10/16/20 09:52	10/17/20 13:01	1
Barium	<0.110		0.500	0.110	mg/L		10/16/20 09:52	10/17/20 13:01	1
Cadmium	<0.00440		0.0200	0.00440	mg/L		10/16/20 09:52	10/17/20 13:01	1
Chromium	<0.00870		0.0200	0.00870	mg/L		10/16/20 09:52	10/17/20 13:01	1
Lead	<0.0310		0.100	0.0310	mg/L		10/16/20 09:52	10/17/20 13:01	1
Selenium	<0.0400		0.100	0.0400	mg/L		10/16/20 09:52	10/17/20 13:01	1
Silver	<0.00730		0.0200	0.00730	mg/L		10/16/20 09:52	10/17/20 13:01	1

Lab Sample ID: LCS 310-295540/2-C
Matrix: Solid
Analysis Batch: 296078

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 295561

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	4.00	4.302		mg/L		108	80 - 120
Barium	2.00	2.155		mg/L		108	80 - 120
Cadmium	2.00	1.939		mg/L		97	80 - 120
Chromium	2.00	1.840		mg/L		92	80 - 120
Lead	4.00	3.783		mg/L		95	80 - 120
Selenium	8.00	8.816		mg/L		110	80 - 120
Silver	2.00	2.319		mg/L		116	80 - 120

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Alliant Energy Corporation
 Project/Site: Beneficial Use Testing

Job ID: 310-192798-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-295632/1-A ^5
Matrix: Solid
Analysis Batch: 296500

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 295632

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.128		0.494	0.128	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Arsenic	<0.188		0.494	0.188	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Barium	<0.365		0.987	0.365	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Beryllium	<0.0750		0.247	0.0750	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Boron	<14.8		24.7	14.8	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Cadmium	<0.0346		0.247	0.0346	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Chromium	<0.276		1.48	0.276	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Cobalt	<0.148		0.247	0.148	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Copper	<0.434		1.48	0.434	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Lead	<0.0987		0.247	0.0987	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Lithium	<0.671		2.47	0.671	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Manganese	<0.740		2.47	0.740	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Molybdenum	<0.178		0.494	0.178	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Nickel	<0.908		1.48	0.908	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Selenium	<0.306		1.48	0.306	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Silver	<0.0563		0.247	0.0563	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Thallium	<0.0691		0.247	0.0691	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Vanadium	<0.207		1.48	0.207	mg/Kg		10/17/20 11:30	10/21/20 11:03	5
Zinc	<1.48		4.94	1.48	mg/Kg		10/17/20 11:30	10/21/20 11:03	5

Lab Sample ID: LCS 310-295632/2-A ^20
Matrix: Solid
Analysis Batch: 296398

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 295632

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	198	203.1		mg/Kg		103	80 - 120
Arsenic	198	198.3		mg/Kg		100	80 - 120
Barium	98.8	105.1		mg/Kg		106	80 - 120
Beryllium	98.8	98.36		mg/Kg		100	80 - 120
Boron	198	184.6		mg/Kg		93	80 - 120
Cadmium	98.8	101.4		mg/Kg		103	80 - 120
Chromium	98.8	94.75		mg/Kg		96	80 - 120
Cobalt	98.8	98.66		mg/Kg		100	80 - 120
Copper	198	212.9		mg/Kg		108	80 - 120
Lead	198	212.4		mg/Kg		107	80 - 120
Lithium	198	200.4		mg/Kg		101	80 - 120
Manganese	98.8	94.27		mg/Kg		95	80 - 120
Molybdenum	198	203.9		mg/Kg		103	80 - 120
Nickel	198	202.8		mg/Kg		103	80 - 120
Selenium	395	404.2		mg/Kg		102	80 - 120
Silver	98.8	103.9		mg/Kg		105	80 - 120
Vanadium	98.8	101.9		mg/Kg		103	80 - 120
Zinc	198	214.5		mg/Kg		109	80 - 120

QC Sample Results

Client: Alliant Energy Corporation
Project/Site: Beneficial Use Testing

Job ID: 310-192798-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 310-295632/2-A ^200
Matrix: Solid
Analysis Batch: 296398

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 295632
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Thallium	198	196.3		mg/Kg		99	80 - 120

Lab Sample ID: LB 310-295727/1-B
Matrix: Solid
Analysis Batch: 296398

Client Sample ID: Method Blank
Prep Type: SPLP West
Prep Batch: 296004

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00290		0.0100	0.00290	mg/L		10/19/20 08:00	10/20/20 20:44	1
Arsenic	<0.00440		0.0100	0.00440	mg/L		10/19/20 08:00	10/20/20 20:44	1
Barium	<0.0200		0.100	0.0200	mg/L		10/19/20 08:00	10/20/20 20:44	1
Beryllium	<0.00140		0.00500	0.00140	mg/L		10/19/20 08:00	10/20/20 20:44	1
Cadmium	<0.00100		0.00500	0.00100	mg/L		10/19/20 08:00	10/20/20 20:44	1
Chromium	<0.00650		0.0250	0.00650	mg/L		10/19/20 08:00	10/20/20 20:44	1
Copper	<0.0160		0.0500	0.0160	mg/L		10/19/20 08:00	10/20/20 20:44	1
Lead	<0.00140		0.00500	0.00140	mg/L		10/19/20 08:00	10/20/20 20:44	1
Selenium	<0.00500		0.0250	0.00500	mg/L		10/19/20 08:00	10/20/20 20:44	1
Thallium	<0.00130		0.00500	0.00130	mg/L		10/19/20 08:00	10/20/20 20:44	1

Lab Sample ID: LCS 310-295727/2-B ^4
Matrix: Solid
Analysis Batch: 296398

Client Sample ID: Lab Control Sample
Prep Type: SPLP West
Prep Batch: 296004
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	1.00	0.9577		mg/L		96	80 - 120
Arsenic	1.00	0.9654		mg/L		97	80 - 120
Barium	0.500	0.5131		mg/L		103	80 - 120
Beryllium	0.500	0.4772		mg/L		95	80 - 120
Cadmium	0.500	0.4998		mg/L		100	80 - 120
Chromium	0.500	0.4493		mg/L		90	80 - 120
Copper	1.00	1.001		mg/L		100	80 - 120
Lead	1.00	1.013		mg/L		101	80 - 120
Selenium	2.00	2.011		mg/L		101	80 - 120

Lab Sample ID: LCS 310-295727/2-B ^40
Matrix: Solid
Analysis Batch: 296398

Client Sample ID: Lab Control Sample
Prep Type: SPLP West
Prep Batch: 296004
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Thallium	1.00	0.9650		mg/L		97	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LB 310-295540/1-B
Matrix: Solid
Analysis Batch: 295664

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 295558

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00110		0.00200	0.00110	mg/L		10/15/20 09:47	10/15/20 14:25	1

Eurofins TestAmerica, Cedar Falls

QC Sample Results

Client: Alliant Energy Corporation
 Project/Site: Beneficial Use Testing

Job ID: 310-192798-1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 310-295540/2-B
Matrix: Solid
Analysis Batch: 295664

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 295558

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.0167	0.01902		mg/L		114	80 - 120

Lab Sample ID: LB 310-295727/1-C
Matrix: Solid
Analysis Batch: 296502

Client Sample ID: Method Blank
Prep Type: SPLP West
Prep Batch: 296287

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00110		0.00200	0.00110	mg/L		10/20/20 12:53	10/21/20 09:13	1

Lab Sample ID: LCS 310-295727/2-C
Matrix: Solid
Analysis Batch: 296502

Client Sample ID: Lab Control Sample
Prep Type: SPLP West
Prep Batch: 296287

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.0167	0.01653		mg/L		99	80 - 120

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 310-295775/1-A
Matrix: Solid
Analysis Batch: 296107

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 295775

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00773		0.0193	0.00773	mg/Kg		10/16/20 10:02	10/19/20 13:05	1

Lab Sample ID: LCS 310-295775/2-A
Matrix: Solid
Analysis Batch: 296107

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 295775

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	0.162	0.1594		mg/Kg		98	80 - 120

QC Association Summary

Client: Alliant Energy Corporation
Project/Site: Beneficial Use Testing

Job ID: 310-192798-1

HPLC/IC

Leach Batch: 295173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	Soluble	Solid	DI Leach	
LB 310-295173/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 310-295173/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

Analysis Batch: 295749

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	Soluble	Solid	9056A	295173
LB 310-295173/1-A	Method Blank	Soluble	Solid	9056A	295173
LCS 310-295173/2-A	Lab Control Sample	Soluble	Solid	9056A	295173

Leach Batch: 296387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	SPLP	Solid	1312	
LB 310-296387/1-A	Method Blank	SPLP	Solid	1312	
LCS 310-296387/2-A	Lab Control Sample	SPLP	Solid	1312	

Analysis Batch: 296654

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	SPLP	Solid	9056A	296387
LB 310-296387/1-A	Method Blank	SPLP	Solid	9056A	296387
LCS 310-296387/2-A	Lab Control Sample	SPLP	Solid	9056A	296387

Metals

Leach Batch: 295540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	TCLP	Solid	1311	
LB 310-295540/1-B	Method Blank	TCLP	Solid	1311	
LB 310-295540/1-C	Method Blank	TCLP	Solid	1311	
LCS 310-295540/2-B	Lab Control Sample	TCLP	Solid	1311	
LCS 310-295540/2-C	Lab Control Sample	TCLP	Solid	1311	

Prep Batch: 295558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	TCLP	Solid	7470A	295540
LB 310-295540/1-B	Method Blank	TCLP	Solid	7470A	295540
LCS 310-295540/2-B	Lab Control Sample	TCLP	Solid	7470A	295540

Prep Batch: 295561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	TCLP	Solid	3010A	295540
LB 310-295540/1-C	Method Blank	TCLP	Solid	3010A	295540
LCS 310-295540/2-C	Lab Control Sample	TCLP	Solid	3010A	295540

Prep Batch: 295632

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	Total/NA	Solid	3050B	
MB 310-295632/1-A ^5	Method Blank	Total/NA	Solid	3050B	
LCS 310-295632/2-A ^20	Lab Control Sample	Total/NA	Solid	3050B	
LCS 310-295632/2-A ^200	Lab Control Sample	Total/NA	Solid	3050B	

Eurofins TestAmerica, Cedar Falls

QC Association Summary

Client: Alliant Energy Corporation
Project/Site: Beneficial Use Testing

Job ID: 310-192798-1

Metals

Analysis Batch: 295664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	TCLP	Solid	7470A	295558
LB 310-295540/1-B	Method Blank	TCLP	Solid	7470A	295558
LCS 310-295540/2-B	Lab Control Sample	TCLP	Solid	7470A	295558

Leach Batch: 295727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	SPLP West	Solid	1312	
LB 310-295727/1-B	Method Blank	SPLP West	Solid	1312	
LB 310-295727/1-C	Method Blank	SPLP West	Solid	1312	
LCS 310-295727/2-B ^4	Lab Control Sample	SPLP West	Solid	1312	
LCS 310-295727/2-B ^40	Lab Control Sample	SPLP West	Solid	1312	
LCS 310-295727/2-C	Lab Control Sample	SPLP West	Solid	1312	

Prep Batch: 295775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	Total/NA	Solid	7471B	
MB 310-295775/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 310-295775/2-A	Lab Control Sample	Total/NA	Solid	7471B	

Prep Batch: 296004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	SPLP West	Solid	3010A	295727
LB 310-295727/1-B	Method Blank	SPLP West	Solid	3010A	295727
LCS 310-295727/2-B ^4	Lab Control Sample	SPLP West	Solid	3010A	295727
LCS 310-295727/2-B ^40	Lab Control Sample	SPLP West	Solid	3010A	295727

Analysis Batch: 296078

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	TCLP	Solid	6010C	295561
LB 310-295540/1-C	Method Blank	TCLP	Solid	6010C	295561
LCS 310-295540/2-C	Lab Control Sample	TCLP	Solid	6010C	295561

Analysis Batch: 296107

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	Total/NA	Solid	7471B	295775
MB 310-295775/1-A	Method Blank	Total/NA	Solid	7471B	295775
LCS 310-295775/2-A	Lab Control Sample	Total/NA	Solid	7471B	295775

Prep Batch: 296287

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	SPLP West	Solid	7470A	295727
LB 310-295727/1-C	Method Blank	SPLP West	Solid	7470A	295727
LCS 310-295727/2-C	Lab Control Sample	SPLP West	Solid	7470A	295727

Analysis Batch: 296398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	SPLP West	Solid	6020B	296004
310-192798-1	BGS Pozzostone	Total/NA	Solid	6020B	295632
310-192798-1	BGS Pozzostone	Total/NA	Solid	6020B	295632
LB 310-295727/1-B	Method Blank	SPLP West	Solid	6020B	296004
LCS 310-295632/2-A ^20	Lab Control Sample	Total/NA	Solid	6020B	295632

Eurofins TestAmerica, Cedar Falls

QC Association Summary

Client: Alliant Energy Corporation
Project/Site: Beneficial Use Testing

Job ID: 310-192798-1

Metals (Continued)

Analysis Batch: 296398 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-295632/2-A ^200	Lab Control Sample	Total/NA	Solid	6020B	295632
LCS 310-295727/2-B ^4	Lab Control Sample	SPLP West	Solid	6020B	296004
LCS 310-295727/2-B ^40	Lab Control Sample	SPLP West	Solid	6020B	296004

Analysis Batch: 296500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 310-295632/1-A ^5	Method Blank	Total/NA	Solid	6020B	295632

Analysis Batch: 296502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	SPLP West	Solid	7470A	296287
LB 310-295727/1-C	Method Blank	SPLP West	Solid	7470A	296287
LCS 310-295727/2-C	Lab Control Sample	SPLP West	Solid	7470A	296287

General Chemistry

Analysis Batch: 295142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-192798-1	BGS Pozzostone	Total/NA	Solid	Moisture	

Lab Chronicle

Client: Alliant Energy Corporation
Project/Site: Beneficial Use Testing

Job ID: 310-192798-1

Client Sample ID: BGS Pozzostone

Lab Sample ID: 310-192798-1

Date Collected: 10/08/20 11:00

Matrix: Solid

Date Received: 10/09/20 08:35

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
SPLP	Leach	1312			296387	10/20/20 14:00	ERT	TAL CF
SPLP	Analysis	9056A		1	296654	10/22/20 08:52	CJT	TAL CF
TCLP	Leach	1311			295540	10/14/20 14:10	JTA	TAL CF
TCLP	Prep	3010A			295561	10/16/20 09:52	HED	TAL CF
TCLP	Analysis	6010C		1	296078	10/17/20 14:33	CTB	TAL CF
SPLP West	Leach	1312			295727	10/15/20 14:30	JTA	TAL CF
SPLP West	Prep	3010A			296004	10/19/20 08:00	HED	TAL CF
SPLP West	Analysis	6020B		1	296398	10/20/20 21:03	SAD	TAL CF
SPLP West	Leach	1312			295727	10/15/20 14:30	JTA	TAL CF
SPLP West	Prep	7470A			296287	10/20/20 12:53	ACJ	TAL CF
SPLP West	Analysis	7470A		1	296502	10/21/20 09:21	ACJ	TAL CF
TCLP	Leach	1311			295540	10/14/20 14:10	JTA	TAL CF
TCLP	Prep	7470A			295558	10/15/20 09:47	HED	TAL CF
TCLP	Analysis	7470A		1	295664	10/15/20 14:59	ACJ	TAL CF
Total/NA	Analysis	Moisture		1	295142	10/12/20 18:21	SAS	TAL CF

Client Sample ID: BGS Pozzostone

Lab Sample ID: 310-192798-1

Date Collected: 10/08/20 11:00

Matrix: Solid

Date Received: 10/09/20 08:35

Percent Solids: 81.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			295173	10/15/20 10:00	CJT	TAL CF
Soluble	Analysis	9056A		10	295749	10/15/20 18:40	CJT	TAL CF
Total/NA	Prep	3050B			295632	10/17/20 11:30	HED	TAL CF
Total/NA	Analysis	6020B		5	296398	10/20/20 15:25	SAD	TAL CF
Total/NA	Prep	3050B			295632	10/17/20 11:30	HED	TAL CF
Total/NA	Analysis	6020B		50	296398	10/20/20 15:41	SAD	TAL CF
Total/NA	Prep	7471B			295775	10/16/20 10:02	CJT	TAL CF
Total/NA	Analysis	7471B		1	296107	10/19/20 13:48	ACJ	TAL CF

Laboratory References:

TAL CF = Eurofins TestAmerica, Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: Alliant Energy Corporation
Project/Site: Benefical Use Testing

Job ID: 310-192798-1

Laboratory: Eurofins TestAmerica, Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
6020B	3050B	Solid	Lithium
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids



Method Summary

Client: Alliant Energy Corporation
Project/Site: Beneficial Use Testing

Job ID: 310-192798-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	TAL CF
6010C	Metals (ICP)	SW846	TAL CF
6020B	Metals (ICP/MS)	SW846	TAL CF
7470A	Mercury (CVAA)	SW846	TAL CF
7471B	Mercury (CVAA)	SW846	TAL CF
Moisture	Percent Moisture	EPA	TAL CF
1311	TCLP Extraction	SW846	TAL CF
1312	SPLP Extraction	SW846	TAL CF
3010A	Preparation, Total Metals	SW846	TAL CF
3050B	Preparation, Metals	SW846	TAL CF
7470A	Preparation, Mercury	SW846	TAL CF
7471B	Preparation, Mercury	SW846	TAL CF
DI Leach	Deionized Water Leaching Procedure	ASTM	TAL CF

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CF = Eurofins TestAmerica, Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401



Environment Testing
TestAmerica



310-192798 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: ALLIANT ENERGY			
City/State:	CITY BURKINGTON STATE IA	Project: BGS POZZO STONE	
Receipt Information			
Date/Time Received:	DATE 10/9/20 TIME 0835	Received By: BM	
Delivery Type:	<input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> FedEx Ground <input type="checkbox"/> US Mail <input type="checkbox"/> Spee-Dee <input type="checkbox"/> Lab Courier <input type="checkbox"/> Lab Field Services <input type="checkbox"/> Client Drop-off <input type="checkbox"/> Other: _____		
Condition of Cooler/Containers			
Sample(s) received in Cooler?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If yes: Cooler ID: TA	
Multiple Coolers?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler # ____ of ____	
Cooler Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Cooler custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Sample Custody Seals Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Sample custody seals intact? <input type="checkbox"/> Yes <input type="checkbox"/> No	
Trip Blank Present?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If yes: Which VOA samples are in cooler? ↓	
Temperature Record			
Coolant:	<input checked="" type="checkbox"/> Wet ice <input type="checkbox"/> Blue ice <input type="checkbox"/> Dry ice <input type="checkbox"/> Other: _____ <input type="checkbox"/> NONE		
Thermometer ID:	M	Correction Factor (°C): +0.1	
Temp Blank Temperature - If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	7.4	Corrected Temp (°C): 7.5	
Sample Container Temperature			
Container(s) used:	CONTAINER 1	CONTAINER 2	
Uncorrected Temp (°C):			
Corrected Temp (°C):			
Exceptions Noted			
1) If temperature exceeds criteria, was sample(s) received same day of sampling? <input type="checkbox"/> Yes <input type="checkbox"/> No			
a) If yes: Is there evidence that the chilling process began? <input type="checkbox"/> Yes <input type="checkbox"/> No			
2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) <input type="checkbox"/> Yes <input type="checkbox"/> No			
NOTE: If yes, contact PM before proceeding. If no, proceed with login			
Additional Comments			

Login Sample Receipt Checklist

Client: Alliant Energy Corporation

Job Number: 310-192798-1

SDG Number:

Login Number: 192798

List Source: Eurofins TestAmerica, Cedar Falls

List Number: 1

Creator: Homolar, Dana J

Question	Answer	Comment
Radioactivity wasn't checked or is < /= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	Thermal Preservation not Required
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is < 6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

