



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

Beneficial Use ID#: -BUD-

DNR Certified Lab: Eurofins Cedar Falls

Lab Report Date: 11/07/2024

By-Product Generator: MidAmerican Energy Energy Center Walter Scott

City: Council Bluffs State: IA Zip: 51501

By-Product Name: Fall Unit 3 Fly Ash / 310-293323-1

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) 201-8272.

ANALYTICAL TESTING RESULTS

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

Table with 7 columns: Required, Contaminant, MCL, 10 X MCL, Test Result, Regulatory Limit, Test Result. Lists various contaminants like Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Fluoride, Lead, Lithium, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium, Zinc.

*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	0.0300	mg/L	<input type="checkbox"/>	Benzene	0.5 mg/L	0.0140	mg/L
<input type="checkbox"/>	Barium	100.0 mg/L	3.52	mg/L	<input type="checkbox"/>	Carbon Tetrachloride	0.5 mg/L	0.0130	mg/L
<input type="checkbox"/>	Cadmium	1.0 mg/L	0.00390	mg/L	<input type="checkbox"/>	Chlorobenzene	100.0 mg/L	0.0120	mg/L
<input type="checkbox"/>	Chromium	5.0 mg/L	0.342	mg/L	<input type="checkbox"/>	Chloroform	6.0 mg/L	0.0360	mg/L
<input type="checkbox"/>	Lead	5.0 mg/L	0.0370	mg/L	<input type="checkbox"/>	1,2-Dichloroethane	0.5 mg/L	0.0100	mg/L
<input type="checkbox"/>	Mercury	0.2 mg/L	0.00110	mg/L	<input type="checkbox"/>	1,1-Dichloroethylene	0.7 mg/L	0.0110	mg/L
<input type="checkbox"/>	Selenium	1.0 mg/L	0.223	mg/L	<input type="checkbox"/>	Methyl ethyl ketone	200.0 mg/L	1.50	mg/L
<input type="checkbox"/>	Silver	5.0 mg/L	0.0160	mg/L	<input type="checkbox"/>	Tetrachloroethylene	0.7 mg/L	0.0870	mg/L
					<input type="checkbox"/>	Trichloroethylene	0.5 mg/L	0.0820	mg/L
					<input type="checkbox"/>	Vinyl Chloride	0.2 mg/L	0.0190	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	0.00500	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	0.00380	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	0.00650	mg/L
<input type="checkbox"/>	Toxaphene	0.5 mg/L		mg/L	<input type="checkbox"/>	2,4-Dinitrotoluene	0.13 mg/L	0.00540	mg/L
					<input type="checkbox"/>	Hexachlorobenzene	0.13 mg/L	0.00690	mg/L
					<input type="checkbox"/>	Hexachlorobutadiene	0.5 mg/L	0.00600	mg/L
					<input type="checkbox"/>	Hexachloroethane	3.0 mg/L	0.00640	mg/L
Herbicides					<input type="checkbox"/>	Nitrobenzene	2.0 mg/L	0.00530	mg/L
*	Contaminant	Regulatory Limit	Test Result		<input type="checkbox"/>	Pentachlorophenol	100.0 mg/L	0.0150	mg/L
<input type="checkbox"/>	2,4-D	10.0 mg/L		mg/L	<input type="checkbox"/>	Pyridine	5.0 mg/L	0.00740	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	0.00530	mg/L
					<input type="checkbox"/>	2,4,6-Trichlorophenol	2.0 mg/L	0.00590	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: 2/26/26
 Printed Name: Scott Burns Title: Env Analyst



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

Beneficial Use ID#: -BUD-
DNR Certified Lab: Eurofins Cedar Falls
Lab Report Date: 11/07/2024
By-Product Generator: Mid American Walter Scott Energy Center
City: Council Bluffs State: IA Zip: 51501
By-Product Name: Fall Unit 4 Bottom / 310-293323-2

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Metals					Volatile Organic Compounds				
*	Contaminant	Regulatory Limit	Test Result		*	Contaminant	Regulatory Limit	Test Result	
<input type="checkbox"/>	Arsenic	5.0 mg/L	0.0300	mg/L	<input type="checkbox"/>	Benzene	0.5 mg/L	0.0140	mg/L
<input type="checkbox"/>	Barium	100.0 mg/L	1.04	mg/L	<input type="checkbox"/>	Carbon Tetrachloride	0.5 mg/L	0.0130	mg/L
<input type="checkbox"/>	Cadmium	1.0 mg/L	0.00390	mg/L	<input type="checkbox"/>	Chlorobenzene	100.0 mg/L	0.0120	mg/L
<input type="checkbox"/>	Chromium	5.0 mg/L	0.00910	mg/L	<input type="checkbox"/>	Chloroform	6.0 mg/L	0.0360	mg/L
<input type="checkbox"/>	Lead	5.0 mg/L	0.0370	mg/L	<input type="checkbox"/>	1,2-Dichloroethane	0.5 mg/L	0.0100	mg/L
<input type="checkbox"/>	Mercury	0.2 mg/L	0.00110	mg/L	<input type="checkbox"/>	1,1-Dichloroethylene	0.7 mg/L	0.0110	mg/L
<input type="checkbox"/>	Selenium	1.0 mg/L	0.0290	mg/L	<input type="checkbox"/>	Methyl ethyl ketone	200.0 mg/L	1.50	mg/L
<input type="checkbox"/>	Silver	5.0 mg/L	0.0160	mg/L	<input type="checkbox"/>	Tetrachloroethylene	0.7 mg/L	0.0870	mg/L
					<input type="checkbox"/>	Trichloroethylene	0.5 mg/L	0.0820	mg/L
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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	0.00500	mg/L
<input type="checkbox"/>	Endrin	0.02 mg/L		mg/L	<input type="checkbox"/>	m-Cresol	200.0 mg/L		mg/L
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<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	0.00650	mg/L
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Signature:  Date: 2/26/26
 Printed Name: Scott Bues Title: Env Analyst



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

Beneficial Use ID#: -BUD-
DNR Certified Lab: Eurofins Cedar Falls
Lab Report Date: 05/09/2025
By-Product Generator: MidAmerican Energy Walter Scott Energy Center
City: Council Bluffs State: IA Zip: 51501
By-Product Name: Spring Unit 3 FlyAsh / 310-305210-1

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<input type="checkbox"/>	Lead	5.0 mg/L	0.0370	mg/L	<input type="checkbox"/>	1,2-Dichloroethane	0.5 mg/L		mg/L
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<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
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Signature:  Date: 2/26/26
 Printed Name: Scott Bures Title: Env Analyst

SOLID BY-PRODUCT MANAGEMENT PLAN

FOR

WALTER SCOTT JR. ENERGY CENTER

7215 NAVAJO STREET

COUNCIL BLUFFS, IA 51501

TELEPHONE: 712-366-5300

Introduction

This management plan is prepared for coal combustion residue generated at the Walter Scott, Jr. Energy Center in accordance with 567 Iowa Administrative Code (IAC), Chapter 108.6(2), which establishes requirements for the beneficial use of solid by-products.

Management Plan

1. Facility Information

The facility is a pulverized coal-fired steam electric plant with two operational units, Units 3 & 4. Two other previously operational units, Units 1 & 2, were permanently shut down in March 2015 and dismantled in 2021. Coal burned at this facility is the sub-bituminous type mined in Wyoming's Powder River Basin. MidAmerican Energy Company (MEC) is the majority owner and operator of the facility. MidAmerican retains a contractor to manage and market coal combustion residue (CCR) generated at this location.

Walter Scott, Jr. Energy Center (WSEC) began operating a dry flue gas desulfurization scrubber (FGD) and baghouse on Unit 3 May 15, 2009. The scrubber and baghouse replaced the electrostatic precipitator as the control equipment for opacity. WSEC continues to operate the electrostatic precipitator on Unit 3, upstream of the FGD scrubber and baghouse, in order to collect fly ash for sale as beneficial re-use material. The waste ash collected in the baghouse is disposed of in the on-site Monofill, as is any unsold fly ash collected from the precipitator.

Unit 4 uses a dry FGD system and a baghouse with selective catalytic reduction (SCR) and activated carbon injection. All of Unit 4's FGD waste ash and bottom ash is disposed in the Monofill at this time.

The Unit 3 bottom ash system was converted to a submerged drag chain system in May of 2018. All bottom ash from Unit 3 is disposed of in the Monofill.

2. Periodic Testing Procedures

In accordance with IAC 567 Chapter 108, WSEC conducts semi-annual testing to include TCLP, SPLP, and total metals including thallium, of each CCR material to confirm compliance with Iowa's beneficial use regulations and WSEC's Monofill permit. Records of all tests are retained in the WSEC files.

3. CCR Management and Storage Procedures

(A) Storage and disposal

Walter Scott, Jr. Energy Center stores CCR products in the permitted Monofill (Permit #78-SDP-26-06P) located at the facility. The Monofill receives fly ash, bottom ash, boiler slag, and FGD materials from Unit 3 and Unit 4

CCR moved off-site is weighed, and a record of the scale ticket is filed by the ash contractor along with a reference to the customer receiving the coal combustion residue. The ash contractor will provide copies of the following records to the facility manager and MidAmerican's Generation Services and Environmental Services departments:

- Scale tickets showing weight of coal combustion residue moved off-site;
- Customers, addresses and tons moved per customer; and
- Analytical records.

CCR is marketed primarily to the construction industry, and sale of product typically occurs during the warm months. Sales reflect construction trends in the region of the generating facility. WSEC collects fly ash from Unit 3 and offers it for sale for as an encapsulated concrete supplement. MEC continues to explore additional beneficial re-use markets for fly and waste ash generated at the facility.

(B) Measures to minimize uncontrolled dispersion of CCRs

WSEC's ash contractor takes appropriate precautions to minimize dust created during fly ash loading and unloading activities at Unit 3. The unloading process involves the use of a double spout (constructed as a pipe within a pipe) that is inserted into the fill port of the receiving ash truck. The inner spout drops ash into the truck and the outer spout pulls a vacuum to collect and transport dust back into the fly ash silo. Fly ash trucks are the end-dump or belly-dump type trucks. Any fly ash that is disposed of in the Monofill is wetted during unloading.

WSEC's ash contractor takes appropriate precautions to minimize dust created during waste ash loading and unloading activities at Units 3 & 4. The loading process involves the use of a pug mill that raises the moisture content to at least 20 percent to control fugitive dust. The waste ash material is loaded to side or end-dump trucks and transported to the CCR Monofill for disposal. Additionally, a water truck is used at the Monofill for dust suppression and when CCR material is being hauled, a street sweeper is used to clean plant and haul roads.

(C) Maximum anticipated inventory

Monofill Cells 1-9 are expected to reach capacity at 10,281,330 tons. Mills County future expansion (Cells 10-17) will reach capacity at 16,818,627 tons of CCR material. The total site capacity for CCR material is 27,099,957 tons.

(D) Run-on and run-off controls

WSEC implements Condition 3 of Special Provision X of the CCR Monofill permit, No. 78-SDP-26-06P, to control storm water run-on and run-off from materials disposed in the CCR Monofill. Surface water is diverted around the fill area of each cell, and surface drainage is provided at the toe of the working face. WSEC also operates a leachate control system in accordance with its approved Leachate Control Plan. Finally, WSEC manages CCR stockpiles within the CCR Monofill boundaries with storm water controls pursuant to the Iowa Department of Natural Resources General Permit #1 for the facility as a whole.

4. Record Keeping and Reporting

The facility will maintain a copy of all records related to the solid by-product management plan for a minimum of five years, as mandated in 567 IAC 108.7(2).

A copy of this plan, and subsequent revisions, will be provided to the Iowa Department of Natural Resources and the field office with jurisdiction over the facility whenever the plan is revised or within 60 days of the end of the calendar year, whichever is earlier.

5. Summarization of Beneficial Use – January 1, 2025 through December 31, 2025

Facility	Cement Replacement (tons)	Direct Soil Stabilization (tons)	Bottom Ash Sold (tons)	C-Stone From Fly Ash Sales (tons)	Total tons Beneficially Reused (tons)
WSEC	59,254.65	0	0	0	59,254.65

6. Facility Contacts and Responsibilities

Name	Title	Responsibilities	Telephone
Rich Parker	General Manager, WSEC	Safe and efficient operation of plant	712-366-5484
Scott Burns	Sr. Environmental Analyst	Maintain coal combustion residue records, including beneficial use and analytical records, daily operation and maintenance of CCR landfill	712-366-5331

PREPARER

Preparer \ Site Name Address City State Comment
 Scott Burn MidAmeric 7215 Nav: COUNCIL Fall Unit 3 Fly Ash

PREPARER INPUT

Chemical	CASRN	Exposure	Site-Specific Background Soil Level* (mg/kg)
Antimony	007440-3f		7.58
Arsenic, Ir	007440-3f		13.1
Barium	007440-3f		5190
Beryllium	007440-4j		3.37
Boron Anc	007440-4z		569
Cadmium	007440-4z		1.06
Chromium	016065-83-1		
Chromium	018540-29-9		
Chromium	007440-4j		54
Cobalt	007440-4f		23.3
Copper	007440-5f		141
Fluoride	007681-4f		51.3
Lead and	007439-9z		29.1
Lithium	007439-9z		36.6
Manganes	007439-9f		164
Mercury	007439-9z		23
Molybdent	007439-9f		9.43
Nickel	007440-0z		48.7
Selenium	007782-4f		11.8
Silver	007440-2z		0.258
Thallium	007440-2f		4.21
Vanadium	007440-6z		215
Zinc	007440-6f		90.3

CANCER OUTPUT

Chemical	CASRN	Resident	Site Worker Soil
Arsenic, Ir	007440-3f	0.34	0.07
Chromium	018540-29-9		
Lead and	007439-9z	NQ	NQ
TOTALS:	Å	0.34	0.07

Cumulative Cancer Risk Site Resident: 0.34

Cumulative Cancer Risk Site Worker: 0.07

All cancer risk values are x 10^-4

SITE RESIDENT - NON CANCER OUTPUT BY TARGET ORGAN

Chemical	CASRN	Media	Heart	Liver	Blood	Kidney	Skin	Endoc	Eye	Immu	Nerve	GenUr	Respi	Other	Devel	Gastro
Antimony	007440-3f	Å														
		Soil			0.25									0.25		
Arsenic, Ir	007440-3f	Å														
		Soil		3.03				3.03								
Barium	007440-3f	Å														
		Soil		0.35			0.35									
Beryllium	007440-4j	Å														0.03
		Soil														
Boron Anc	007440-4z	Å														
		Soil										0.04			0.04	
Cadmium	007440-4z	Å														
		Soil					0.02					0.02		0.02		
Chromium	016065-83-1	Å														
		Soil														
Chromium	018540-29-9	Å														
		Soil														
Chromium	007440-4j	Å														
		Soil												0.28		
Cobalt	007440-4f	Å														
		Soil				1										
Copper	007440-5f	Å														
		Soil			0.05		0.05									0.05
Fluoride	007681-4f	Å														
		Soil												0.01		
Lead and	007439-9z	Å														
		Soil		0.07			0.07								0.07	
Lithium	007439-9z	Å														
		Soil												0		
Manganes	007439-9f	Å														
		Soil									0.02					
Mercury	007439-9z	Å														
		Soil					0.98									
Molybdent	007439-9f	Å														
		Soil			0.02							0.02		0.02		
Nickel	007440-0z	Å														
		Soil												0.03		
Selenium	007782-4f	Å														
		Soil		0.03			0.03							0.03		

PREPARER

Preparer \ Site Name Address City State Comment
 Scott Burn MidAmeric 7215 Nav: COUNCIL Spring Unit 3 Fly Ash

PREPARER INPUT

Chemical	CASRN	Exposure	Site-Specific Background Soil Level* (mg/kg)
Antimony	007440-3f		6.54
Arsenic, Ir	007440-3f		15.1
Barium	007440-3f		4390
Beryllium	007440-4j		3.33
Boron Anc	007440-4z		625
Cadmium	007440-4z		2.76
Chromium	016065-83-1		
Chromium	018540-29-9		
Chromium	007440-4j		59.7
Cobalt	007440-4f		17.8
Copper	007440-5f		147
Fluoride	007681-4f		3.6
Lead and	007439-9z		26.3
Lithium	007439-9z		29.1
Manganes	007439-9f		213
Mercury	007439-9j		0.31
Molybdent	007439-9f		9.07
Nickel	007440-0z		44.3
Selenium	007782-4f		14.9
Silver	007440-2z		2.76
Thallium	007440-2f		0.323
Vanadium	007440-6z		198
Zinc	007440-6f		94.7

CANCER OUTPUT

Chemical	CASRN	Resident	Site Worker Soil
Arsenic, Ir	007440-3f	0.39	0.09
Chromium	018540-29-9		
Lead and	007439-9z	NQ	NQ
TOTALS:	Å	0.39	0.09

Cumulative Cancer Risk Site Resident: 0.39

Cumulative Cancer Risk Site Worker: 0.09

All cancer risk values are x 10^-4

SITE RESIDENT - NON CANCER OUTPUT BY TARGET ORGAN

Chemical	CASRN	Media	Heart	Liver	Blood	Kidney	Skin	Endoc	Eye	Immu	Nerve	GenUr	Respi	Other	Devel	Gastro
Antimony	007440-3f	Å														
		Soil			0.21									0.21		
Arsenic, Ir	007440-3f	Å														
		Soil		3.49				3.49								
Barium	007440-3f	Å														
		Soil		0.29			0.29									
Beryllium	007440-4j	Å														0.03
		Soil														
Boron Anc	007440-4z	Å														
		Soil										0.04			0.04	
Cadmium	007440-4z	Å														
		Soil					0.04					0.04		0.04		
Chromium	016065-83-1	Å														
		Soil														
Chromium	018540-29-9	Å														
		Soil														
Chromium	007440-4j	Å														
		Soil												0.31		
Cobalt	007440-4f	Å														
		Soil				0.76										
Copper	007440-5f	Å														
		Soil			0.05		0.05									0.05
Fluoride	007681-4f	Å														
		Soil												0		
Lead and	007439-9z	Å														
		Soil		0.07			0.07								0.07	
Lithium	007439-9z	Å														
		Soil												0		
Manganes	007439-9f	Å														
		Soil									0.02					
Mercury	007439-9j	Å														
		Soil					0.01									
Molybdent	007439-9f	Å														
		Soil			0.02							0.02		0.02		
Nickel	007440-0z	Å														
		Soil												0.03		
Selenium	007782-4f	Å														
		Soil		0.04			0.04							0.04		



ANALYTICAL REPORT

PREPARED FOR

Attn: Scott Burns
MidAmerican Energy Company
Walter Scott Energy Center
7215 Navajo Street
Council Bluffs, Iowa 51501

Generated 11/7/2024 9:13:49 AM

JOB DESCRIPTION

Beneficial Use
CE-415

JOB NUMBER

310-293323-1

Eurofins Cedar Falls

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Authorized for release by
Conner Calhoun, Client Service Manager
Conner.Calhoun@et.eurofinsus.com
(319)277-2401



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Case Narrative

Client: MidAmerican Energy Company
Project: Beneficial Use

Job ID: 310-293323-1

Job ID: 310-293323-1

Eurofins Cedar Falls

Job Narrative 310-293323-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 10/22/2024 9:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.2°C.

GC/MS VOA

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

GC/MS Semi VOA

Method 8270E - TCLP: Surrogate recovery for the following samples were outside the upper control limit: Unit 3 Fly Ash (310-293323-1) and Unit 4 Bottom (310-293323-2). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method 8270E - TCLP: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 310-437377 and analytical batch 310-437570 recovered outside control limits for the following analytes: Pyridine.

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

HPLC/IC

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

Metals

Method 6010D - TCLP: The continuing calibration verification (CCV) associated with batch 310-438609 recovered above the upper control limit for Silver. 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.

General Chemistry

Method 9045D - Soluble: Sample Unit 3 Fly Ash (310-293323-1) was over the top standard for pH.

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

Eurofins Cedar Falls

Sample Summary

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-293323-1	Unit 3 Fly Ash	Solid	10/21/24 10:00	10/22/24 09:00
310-293323-2	Unit 4 Bottom	Solid	10/21/24 11:00	10/22/24 09:00

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Detection Summary

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Client Sample ID: Unit 3 Fly Ash

Lab Sample ID: 310-293323-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	51.3		19.4	7.27	mg/Kg	10		9056A	Soluble
Fluoride	2.88		1.00	0.415	mg/L	5		9056A	SPLP
Barium	3.52		0.200	0.0400	mg/L	1		6010D	TCLP
Chromium	0.342		0.0200	0.00600	mg/L	1		6010D	TCLP
Selenium	0.223		0.100	0.0290	mg/L	1		6010D	TCLP
Arsenic	13.1		0.842	0.354	mg/Kg	5	✖	6020B	Total/NA
Barium	5190		16.8	8.42	mg/Kg	100	✖	6020B	Total/NA
Boron	569	J	842	421	mg/Kg	100	✖	6020B	Total/NA
Cadmium	1.06		0.421	0.160	mg/Kg	5	✖	6020B	Total/NA
Chromium	54.0		1.26	0.547	mg/Kg	5	✖	6020B	Total/NA
Cobalt	23.3		0.421	0.194	mg/Kg	5	✖	6020B	Total/NA
Copper	141		1.26	0.513	mg/Kg	5	✖	6020B	Total/NA
Lead	29.1		2.10	0.657	mg/Kg	5	✖	6020B	Total/NA
Lithium	36.6	J	42.1	12.1	mg/Kg	100	✖	6020B	Total/NA
Manganese	164		2.10	1.01	mg/Kg	5	✖	6020B	Total/NA
Molybdenum	9.43		0.842	0.455	mg/Kg	5	✖	6020B	Total/NA
Nickel	48.7		25.3	11.4	mg/Kg	100	✖	6020B	Total/NA
Selenium	11.8		1.26	0.631	mg/Kg	5	✖	6020B	Total/NA
Silver	0.258	J	0.421	0.185	mg/Kg	5	✖	6020B	Total/NA
Vanadium	215		25.3	7.74	mg/Kg	100	✖	6020B	Total/NA
Zinc	90.3		4.21	2.02	mg/Kg	5	✖	6020B	Total/NA
Barium	8.25		0.200	0.0640	mg/L	4		6020B	SPLP West
Chromium	0.0728	J	0.100	0.0440	mg/L	4		6020B	SPLP West
Mercury	0.483		0.0794	0.0325	mg/Kg	5		7471B	Total/NA
Flashpoint	>201		65.0	65.0	Degrees F	1		D92	Total/NA
pH	11.7	HF	1.0	1.0	SU	1		9045D	Soluble

Client Sample ID: Unit 4 Bottom

Lab Sample ID: 310-293323-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	1.04		0.200	0.0400	mg/L	1		6010D	TCLP
Chromium	0.00910	J	0.0200	0.00600	mg/L	1		6010D	TCLP
Arsenic	7.12		0.854	0.358	mg/Kg	5	✖	6020B	Total/NA
Barium	3920		8.54	4.27	mg/Kg	50	✖	6020B	Total/NA
Beryllium	2.72	J	4.27	1.71	mg/Kg	50	✖	6020B	Total/NA
Boron	342	J	427	213	mg/Kg	50	✖	6020B	Total/NA
Cadmium	0.215	J	0.427	0.162	mg/Kg	5	✖	6020B	Total/NA
Chromium	32.5		1.28	0.555	mg/Kg	5	✖	6020B	Total/NA
Cobalt	17.3		0.427	0.196	mg/Kg	5	✖	6020B	Total/NA
Copper	79.2		1.28	0.521	mg/Kg	5	✖	6020B	Total/NA
Lead	6.93		2.13	0.666	mg/Kg	5	✖	6020B	Total/NA
Lithium	29.5		21.3	6.15	mg/Kg	50	✖	6020B	Total/NA
Manganese	124		2.13	1.02	mg/Kg	5	✖	6020B	Total/NA
Molybdenum	5.79		0.854	0.461	mg/Kg	5	✖	6020B	Total/NA
Nickel	41.7		12.8	5.80	mg/Kg	50	✖	6020B	Total/NA
Selenium	2.86		1.28	0.640	mg/Kg	5	✖	6020B	Total/NA
Vanadium	149		1.28	0.393	mg/Kg	5	✖	6020B	Total/NA
Zinc	36.3		4.27	2.05	mg/Kg	5	✖	6020B	Total/NA
Barium	0.286		0.200	0.0640	mg/L	4		6020B	SPLP West
Flashpoint	>201		65.0	65.0	Degrees F	1		D92	Total/NA
pH	9.3	HF	1.0	1.0	SU	1		9045D	Soluble

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Client Sample ID: Unit 3 Fly Ash

Lab Sample ID: 310-293323-1

Date Collected: 10/21/24 10:00

Matrix: Solid

Date Received: 10/22/24 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	<0.0110		0.100	0.0110	mg/L			10/30/24 13:03	20
1,2-Dichloroethane	<0.0100		0.100	0.0100	mg/L			10/30/24 13:03	20
2-Butanone (MEK)	<1.50		5.00	1.50	mg/L			10/30/24 13:03	20
Benzene	<0.0140		0.100	0.0140	mg/L			10/30/24 13:03	20
Carbon tetrachloride	<0.0130		0.100	0.0130	mg/L			10/30/24 13:03	20
Chlorobenzene	<0.0120		0.100	0.0120	mg/L			10/30/24 13:03	20
Chloroform	<0.0360		0.100	0.0360	mg/L			10/30/24 13:03	20
Tetrachloroethene	<0.0870		0.200	0.0870	mg/L			10/30/24 13:03	20
Trichloroethene	<0.0820		0.200	0.0820	mg/L			10/30/24 13:03	20
Vinyl chloride	<0.0190		0.100	0.0190	mg/L			10/30/24 13:03	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	113		80 - 125		10/30/24 13:03	20
Toluene-d8 (Surr)	98		80 - 120		10/30/24 13:03	20
4-Bromofluorobenzene (Surr)	103		80 - 120		10/30/24 13:03	20

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.00650		0.0500	0.00650	mg/L		10/24/24 10:15	10/25/24 19:39	1
2,4,5-Trichlorophenol	<0.00530		0.0500	0.00530	mg/L		10/24/24 10:15	10/25/24 19:39	1
2,4,6-Trichlorophenol	<0.00590		0.0500	0.00590	mg/L		10/24/24 10:15	10/25/24 19:39	1
2,4-Dinitrotoluene	<0.00540		0.0500	0.00540	mg/L		10/24/24 10:15	10/25/24 19:39	1
2-Methylphenol	<0.00500		0.0500	0.00500	mg/L		10/24/24 10:15	10/25/24 19:39	1
4-Methylphenol (and/or 3-Methylphenol)	<0.00380		0.0500	0.00380	mg/L		10/24/24 10:15	10/25/24 19:39	1
Hexachlorobenzene	<0.00690		0.0500	0.00690	mg/L		10/24/24 10:15	10/25/24 19:39	1
Hexachlorobutadiene	<0.00600		0.0500	0.00600	mg/L		10/24/24 10:15	10/25/24 19:39	1
Hexachloroethane	<0.00640		0.0500	0.00640	mg/L		10/24/24 10:15	10/25/24 19:39	1
Nitrobenzene	<0.00530		0.0500	0.00530	mg/L		10/24/24 10:15	10/25/24 19:39	1
Pentachlorophenol	<0.0150		0.0500	0.0150	mg/L		10/24/24 10:15	10/25/24 19:39	1
Pyridine	<0.00740	*1	0.0500	0.00740	mg/L		10/24/24 10:15	10/25/24 19:39	1
Total Cresols	<0.00500		0.0500	0.00500	mg/L		10/24/24 10:15	10/25/24 19:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	94		25 - 110	10/24/24 10:15	10/25/24 19:39	1
Phenol-d5 (Surr)	87		21 - 110	10/24/24 10:15	10/25/24 19:39	1
Nitrobenzene-d5 (Surr)	129		45 - 129	10/24/24 10:15	10/25/24 19:39	1
2-Fluorobiphenyl (Surr)	102		39 - 118	10/24/24 10:15	10/25/24 19:39	1
2,4,6-Tribromophenol (Surr)	105		27 - 136	10/24/24 10:15	10/25/24 19:39	1
Terphenyl-d14 (Surr)	151	S1+	12 - 144	10/24/24 10:15	10/25/24 19:39	1

Method: SW846 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	51.3		19.4	7.27	mg/Kg			10/24/24 13:38	10

Method: SW846 9056A - Anions, Ion Chromatography - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	2.88		1.00	0.415	mg/L			10/27/24 12:01	5

Client Sample Results

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Client Sample ID: Unit 3 Fly Ash

Lab Sample ID: 310-293323-1

Date Collected: 10/21/24 10:00

Matrix: Solid

Date Received: 10/22/24 09:00

Method: SW846 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0300		0.100	0.0300	mg/L		10/25/24 09:00	11/04/24 13:36	1
Barium	3.52		0.200	0.0400	mg/L		10/25/24 09:00	11/04/24 13:36	1
Cadmium	<0.00390		0.0200	0.00390	mg/L		10/25/24 09:00	11/04/24 13:36	1
Chromium	0.342		0.0200	0.00600	mg/L		10/25/24 09:00	11/04/24 13:36	1
Lead	<0.0370		0.100	0.0370	mg/L		10/25/24 09:00	11/04/24 13:36	1
Selenium	0.223		0.100	0.0290	mg/L		10/25/24 09:00	11/04/24 13:36	1
Silver	<0.0160	^+	0.0500	0.0160	mg/L		10/25/24 09:00	11/04/24 13:36	1

Method: SW846 6020B - Metals (ICP/MS) - SPLP West

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0324		0.0400	0.0324	mg/L		10/29/24 10:00	10/31/24 16:45	4
Arsenic	<0.0204		0.0400	0.0204	mg/L		10/29/24 10:00	10/31/24 16:45	4
Barium	8.25		0.200	0.0640	mg/L		10/29/24 10:00	10/31/24 16:45	4
Beryllium	<0.00680		0.0200	0.00680	mg/L		10/29/24 10:00	10/31/24 16:45	4
Cadmium	<0.00280		0.0100	0.00280	mg/L		10/29/24 10:00	10/31/24 16:45	4
Chromium	0.0728	J	0.100	0.0440	mg/L		10/29/24 10:00	10/31/24 16:45	4
Copper	<0.0360		0.100	0.0360	mg/L		10/29/24 10:00	10/31/24 16:45	4
Lead	<0.00760		0.0200	0.00760	mg/L		10/29/24 10:00	10/31/24 16:45	4
Selenium	<0.0332		0.100	0.0332	mg/L		10/29/24 10:00	10/31/24 16:45	4
Thallium	<0.0116		0.0200	0.0116	mg/L		10/29/24 10:00	10/31/24 16:45	4

Method: SW846 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00110		0.00200	0.00110	mg/L		10/28/24 14:30	10/29/24 11:04	1

Method: SW846 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		10/28/24 14:30	10/29/24 13:19	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.483		0.0794	0.0325	mg/Kg		10/29/24 16:35	10/30/24 13:48	5

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (ASTM D92)	>201		65.0	65.0	Degrees F			10/23/24 16:31	1
Percent Moisture (EPA Moisture)	0.2		0.1	0.1	%			10/22/24 17:17	1
Percent Solids (EPA Moisture)	99.8		0.1	0.1	%			10/22/24 17:17	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9045D)	11.7	HF	1.0	1.0	SU			10/24/24 15:11	1

Client Sample Results

Client: MidAmerican Energy Company
 Project/Site: Beneficial Use

Job ID: 310-293323-1
 SDG: CE-415

Client Sample ID: Unit 3 Fly Ash

Lab Sample ID: 310-293323-1

Date Collected: 10/21/24 10:00

Matrix: Solid

Date Received: 10/22/24 09:00

Percent Solids: 99.8

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<7.58		16.8	7.58	mg/Kg	☼	11/01/24 10:30	11/05/24 14:35	100
Arsenic	13.1		0.842	0.354	mg/Kg	☼	11/01/24 10:30	11/04/24 16:12	5
Barium	5190		16.8	8.42	mg/Kg	☼	11/01/24 10:30	11/05/24 14:35	100
Beryllium	<3.37		8.42	3.37	mg/Kg	☼	11/01/24 10:30	11/05/24 14:35	100
Boron	569 J		842	421	mg/Kg	☼	11/01/24 10:30	11/06/24 15:27	100
Cadmium	1.06		0.421	0.160	mg/Kg	☼	11/01/24 10:30	11/04/24 16:12	5
Chromium	54.0		1.26	0.547	mg/Kg	☼	11/01/24 10:30	11/04/24 16:12	5
Cobalt	23.3		0.421	0.194	mg/Kg	☼	11/01/24 10:30	11/04/24 16:12	5
Copper	141		1.26	0.513	mg/Kg	☼	11/01/24 10:30	11/04/24 16:12	5
Lead	29.1		2.10	0.657	mg/Kg	☼	11/01/24 10:30	11/04/24 16:12	5
Lithium	36.6 J		42.1	12.1	mg/Kg	☼	11/01/24 10:30	11/05/24 14:35	100
Manganese	164		2.10	1.01	mg/Kg	☼	11/01/24 10:30	11/04/24 16:12	5
Molybdenum	9.43		0.842	0.455	mg/Kg	☼	11/01/24 10:30	11/04/24 16:12	5
Nickel	48.7		25.3	11.4	mg/Kg	☼	11/01/24 10:30	11/05/24 14:35	100
Selenium	11.8		1.26	0.631	mg/Kg	☼	11/01/24 10:30	11/04/24 16:12	5
Silver	0.258 J		0.421	0.185	mg/Kg	☼	11/01/24 10:30	11/04/24 16:12	5
Thallium	<4.21		8.42	4.21	mg/Kg	☼	11/01/24 10:30	11/06/24 15:27	100
Vanadium	215		25.3	7.74	mg/Kg	☼	11/01/24 10:30	11/05/24 14:35	100
Zinc	90.3		4.21	2.02	mg/Kg	☼	11/01/24 10:30	11/04/24 16:12	5

Client Sample Results

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Client Sample ID: Unit 4 Bottom

Lab Sample ID: 310-293323-2

Date Collected: 10/21/24 11:00

Matrix: Solid

Date Received: 10/22/24 09:00

Method: SW846 8260D - Volatile Organic Compounds by GC/MS - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	<0.0110		0.100	0.0110	mg/L			10/30/24 13:25	20
1,2-Dichloroethane	<0.0100		0.100	0.0100	mg/L			10/30/24 13:25	20
2-Butanone (MEK)	<1.50		5.00	1.50	mg/L			10/30/24 13:25	20
Benzene	<0.0140		0.100	0.0140	mg/L			10/30/24 13:25	20
Carbon tetrachloride	<0.0130		0.100	0.0130	mg/L			10/30/24 13:25	20
Chlorobenzene	<0.0120		0.100	0.0120	mg/L			10/30/24 13:25	20
Chloroform	<0.0360		0.100	0.0360	mg/L			10/30/24 13:25	20
Tetrachloroethene	<0.0870		0.200	0.0870	mg/L			10/30/24 13:25	20
Trichloroethene	<0.0820		0.200	0.0820	mg/L			10/30/24 13:25	20
Vinyl chloride	<0.0190		0.100	0.0190	mg/L			10/30/24 13:25	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	113		80 - 125					10/30/24 13:25	20
Toluene-d8 (Surr)	97		80 - 120					10/30/24 13:25	20
4-Bromofluorobenzene (Surr)	102		80 - 120					10/30/24 13:25	20

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	<0.00650		0.0500	0.00650	mg/L		10/24/24 10:15	10/25/24 20:06	1
2,4,5-Trichlorophenol	<0.00530		0.0500	0.00530	mg/L		10/24/24 10:15	10/25/24 20:06	1
2,4,6-Trichlorophenol	<0.00590		0.0500	0.00590	mg/L		10/24/24 10:15	10/25/24 20:06	1
2,4-Dinitrotoluene	<0.00540		0.0500	0.00540	mg/L		10/24/24 10:15	10/25/24 20:06	1
2-Methylphenol	<0.00500		0.0500	0.00500	mg/L		10/24/24 10:15	10/25/24 20:06	1
4-Methylphenol (and/or 3-Methylphenol)	<0.00380		0.0500	0.00380	mg/L		10/24/24 10:15	10/25/24 20:06	1
Hexachlorobenzene	<0.00690		0.0500	0.00690	mg/L		10/24/24 10:15	10/25/24 20:06	1
Hexachlorobutadiene	<0.00600		0.0500	0.00600	mg/L		10/24/24 10:15	10/25/24 20:06	1
Hexachloroethane	<0.00640		0.0500	0.00640	mg/L		10/24/24 10:15	10/25/24 20:06	1
Nitrobenzene	<0.00530		0.0500	0.00530	mg/L		10/24/24 10:15	10/25/24 20:06	1
Pentachlorophenol	<0.0150		0.0500	0.0150	mg/L		10/24/24 10:15	10/25/24 20:06	1
Pyridine	<0.00740	*1	0.0500	0.00740	mg/L		10/24/24 10:15	10/25/24 20:06	1
Total Cresols	<0.00500		0.0500	0.00500	mg/L		10/24/24 10:15	10/25/24 20:06	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
2-Fluorophenol (Surr)	93		25 - 110				10/24/24 10:15	10/25/24 20:06	1
Phenol-d5 (Surr)	88		21 - 110				10/24/24 10:15	10/25/24 20:06	1
Nitrobenzene-d5 (Surr)	128		45 - 129				10/24/24 10:15	10/25/24 20:06	1
2-Fluorobiphenyl (Surr)	108		39 - 118				10/24/24 10:15	10/25/24 20:06	1
2,4,6-Tribromophenol (Surr)	107		27 - 136				10/24/24 10:15	10/25/24 20:06	1
Terphenyl-d14 (Surr)	149	S1+	12 - 144				10/24/24 10:15	10/25/24 20:06	1

Method: SW846 9056A - Anions, Ion Chromatography - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<7.28		19.4	7.28	mg/Kg			10/24/24 13:53	10

Method: SW846 9056A - Anions, Ion Chromatography - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.415		1.00	0.415	mg/L			10/27/24 12:17	5

Client Sample Results

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Client Sample ID: Unit 4 Bottom

Lab Sample ID: 310-293323-2

Date Collected: 10/21/24 11:00

Matrix: Solid

Date Received: 10/22/24 09:00

Method: SW846 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0300		0.100	0.0300	mg/L		10/25/24 09:00	11/04/24 13:38	1
Barium	1.04		0.200	0.0400	mg/L		10/25/24 09:00	11/04/24 13:38	1
Cadmium	<0.00390		0.0200	0.00390	mg/L		10/25/24 09:00	11/04/24 13:38	1
Chromium	0.00910	J	0.0200	0.00600	mg/L		10/25/24 09:00	11/04/24 13:38	1
Lead	<0.0370		0.100	0.0370	mg/L		10/25/24 09:00	11/04/24 13:38	1
Selenium	<0.0290		0.100	0.0290	mg/L		10/25/24 09:00	11/04/24 13:38	1
Silver	<0.0160	^+	0.0500	0.0160	mg/L		10/25/24 09:00	11/04/24 13:38	1

Method: SW846 6020B - Metals (ICP/MS) - SPLP West

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.0324		0.0400	0.0324	mg/L		10/29/24 10:00	10/31/24 16:47	4
Arsenic	<0.0204		0.0400	0.0204	mg/L		10/29/24 10:00	10/31/24 16:47	4
Barium	0.286		0.200	0.0640	mg/L		10/29/24 10:00	10/31/24 16:47	4
Beryllium	<0.00680		0.0200	0.00680	mg/L		10/29/24 10:00	10/31/24 16:47	4
Cadmium	<0.00280		0.0100	0.00280	mg/L		10/29/24 10:00	10/31/24 16:47	4
Chromium	<0.0440		0.100	0.0440	mg/L		10/29/24 10:00	10/31/24 16:47	4
Copper	<0.0360		0.100	0.0360	mg/L		10/29/24 10:00	10/31/24 16:47	4
Lead	<0.00760		0.0200	0.00760	mg/L		10/29/24 10:00	10/31/24 16:47	4
Selenium	<0.0332		0.100	0.0332	mg/L		10/29/24 10:00	10/31/24 16:47	4
Thallium	<0.0116		0.0200	0.0116	mg/L		10/29/24 10:00	10/31/24 16:47	4

Method: SW846 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00110		0.00200	0.00110	mg/L		10/28/24 14:30	10/29/24 11:07	1

Method: SW846 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		10/28/24 14:30	10/29/24 13:21	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00655		0.0160	0.00655	mg/Kg		11/01/24 15:25	11/02/24 14:29	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (ASTM D92)	>201		65.0	65.0	Degrees F			10/23/24 16:31	1
Percent Moisture (EPA Moisture)	10.2		0.1	0.1	%			10/22/24 17:17	1
Percent Solids (EPA Moisture)	89.8		0.1	0.1	%			10/22/24 17:17	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9045D)	9.3	HF	1.0	1.0	SU			10/24/24 15:13	1

Client Sample Results

Client: MidAmerican Energy Company
 Project/Site: Beneficial Use

Job ID: 310-293323-1
 SDG: CE-415

Client Sample ID: Unit 4 Bottom

Lab Sample ID: 310-293323-2

Date Collected: 10/21/24 11:00

Matrix: Solid

Date Received: 10/22/24 09:00

Percent Solids: 89.8

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<3.84		8.54	3.84	mg/Kg	✳	11/01/24 10:30	11/05/24 14:37	50
Arsenic	7.12		0.854	0.358	mg/Kg	✳	11/01/24 10:30	11/04/24 16:16	5
Barium	3920		8.54	4.27	mg/Kg	✳	11/01/24 10:30	11/05/24 14:37	50
Beryllium	2.72	J	4.27	1.71	mg/Kg	✳	11/01/24 10:30	11/05/24 14:37	50
Boron	342	J	427	213	mg/Kg	✳	11/01/24 10:30	11/06/24 15:41	50
Cadmium	0.215	J	0.427	0.162	mg/Kg	✳	11/01/24 10:30	11/04/24 16:16	5
Chromium	32.5		1.28	0.555	mg/Kg	✳	11/01/24 10:30	11/04/24 16:16	5
Cobalt	17.3		0.427	0.196	mg/Kg	✳	11/01/24 10:30	11/04/24 16:16	5
Copper	79.2		1.28	0.521	mg/Kg	✳	11/01/24 10:30	11/04/24 16:16	5
Lead	6.93		2.13	0.666	mg/Kg	✳	11/01/24 10:30	11/04/24 16:16	5
Lithium	29.5		21.3	6.15	mg/Kg	✳	11/01/24 10:30	11/05/24 14:37	50
Manganese	124		2.13	1.02	mg/Kg	✳	11/01/24 10:30	11/04/24 16:16	5
Molybdenum	5.79		0.854	0.461	mg/Kg	✳	11/01/24 10:30	11/04/24 16:16	5
Nickel	41.7		12.8	5.80	mg/Kg	✳	11/01/24 10:30	11/05/24 14:37	50
Selenium	2.86		1.28	0.640	mg/Kg	✳	11/01/24 10:30	11/04/24 16:16	5
Silver	<0.188		0.427	0.188	mg/Kg	✳	11/01/24 10:30	11/04/24 16:16	5
Thallium	<2.13		4.27	2.13	mg/Kg	✳	11/01/24 10:30	11/06/24 15:41	50
Vanadium	149		1.28	0.393	mg/Kg	✳	11/01/24 10:30	11/04/24 16:16	5
Zinc	36.3		4.27	2.05	mg/Kg	✳	11/01/24 10:30	11/04/24 16:16	5

Definitions/Glossary

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Qualifiers

GC/MS VOA

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.

GC/MS Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

Metals

Qualifier	Qualifier Description
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

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

Surrogate Summary

Client: MidAmerican Energy Company
 Project/Site: Beneficial Use

Job ID: 310-293323-1
 SDG: CE-415

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		DBFM (80-125)	TOL (80-120)	BFB (80-120)
310-293323-1	Unit 3 Fly Ash	113	98	103
310-293323-2	Unit 4 Bottom	113	97	102
LB 310-437289/1-A	Method Blank	110	98	103
LCS 310-437289/2-A	Lab Control Sample	94	101	99

Surrogate Legend

DBFM = Dibromofluoromethane (Surr)
 TOL = Toluene-d8 (Surr)
 BFB = 4-Bromofluorobenzene (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (25-110)	PHL (21-110)	NBZ (45-129)	FBP (39-118)	TBP (27-136)	TPHL (12-144)
LCS 310-437377/2-A	Lab Control Sample	77	71	101	92	104	116
LCS 310-437377/3-A	Lab Control Sample Dup	85	80	99	93	102	125
MB 310-437377/1-A	Method Blank	61	54	82	72	75	91

Surrogate Legend

2FP = 2-Fluorophenol (Surr)
 PHL = Phenol-d5 (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 FBP = 2-Fluorobiphenyl (Surr)
 TBP = 2,4,6-Tribromophenol (Surr)
 TPHL = Terphenyl-d14 (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: TCLP

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (25-110)	PHL (21-110)	NBZ (45-129)	FBP (39-118)	TBP (27-136)	TPHL (12-144)
310-293323-1	Unit 3 Fly Ash	94	87	129	102	105	151 S1+
310-293323-2	Unit 4 Bottom	93	88	128	108	107	149 S1+
LB 310-437290/1-B	Method Blank	78	73	100	85	83	128

Surrogate Legend

2FP = 2-Fluorophenol (Surr)
 PHL = Phenol-d5 (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 FBP = 2-Fluorobiphenyl (Surr)
 TBP = 2,4,6-Tribromophenol (Surr)
 TPHL = Terphenyl-d14 (Surr)

QC Sample Results

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: LB 310-437289/1-A
Matrix: Solid
Analysis Batch: 438031

Client Sample ID: Method Blank
Prep Type: TCLP

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,1-Dichloroethene	<0.0110		0.100	0.0110	mg/L			10/30/24 09:05	20
1,2-Dichloroethane	<0.0100		0.100	0.0100	mg/L			10/30/24 09:05	20
2-Butanone (MEK)	<1.50		5.00	1.50	mg/L			10/30/24 09:05	20
Benzene	<0.0140		0.100	0.0140	mg/L			10/30/24 09:05	20
Carbon tetrachloride	<0.0130		0.100	0.0130	mg/L			10/30/24 09:05	20
Chlorobenzene	<0.0120		0.100	0.0120	mg/L			10/30/24 09:05	20
Chloroform	<0.0360		0.100	0.0360	mg/L			10/30/24 09:05	20
Tetrachloroethene	<0.0870		0.200	0.0870	mg/L			10/30/24 09:05	20
Trichloroethene	<0.0820		0.200	0.0820	mg/L			10/30/24 09:05	20
Vinyl chloride	<0.0190		0.100	0.0190	mg/L			10/30/24 09:05	20

Surrogate	LB LB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Dibromofluoromethane (Surr)	110		80 - 125		10/30/24 09:05	20
Toluene-d8 (Surr)	98		80 - 120		10/30/24 09:05	20
4-Bromofluorobenzene (Surr)	103		80 - 120		10/30/24 09:05	20

Lab Sample ID: LCS 310-437289/2-A
Matrix: Solid
Analysis Batch: 438031

Client Sample ID: Lab Control Sample
Prep Type: TCLP

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,1-Dichloroethene	2.00	1.715		mg/L		86	47 - 120
1,2-Dichloroethane	2.00	1.769		mg/L		88	62 - 120
2-Butanone (MEK)	4.00	4.497	J	mg/L		112	50 - 150
Benzene	2.00	1.877		mg/L		94	69 - 120
Carbon tetrachloride	2.00	1.868		mg/L		93	64 - 120
Chlorobenzene	2.00	1.869		mg/L		93	70 - 120
Chloroform	2.00	1.797		mg/L		90	64 - 120
Tetrachloroethene	2.00	1.867		mg/L		93	64 - 120
Trichloroethene	2.00	1.948		mg/L		97	69 - 120
Vinyl chloride	2.00	1.321		mg/L		66	36 - 120

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Dibromofluoromethane (Surr)	94		80 - 125
Toluene-d8 (Surr)	101		80 - 120
4-Bromofluorobenzene (Surr)	99		80 - 120

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 310-437377/1-A
Matrix: Solid
Analysis Batch: 437570

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 437377

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dichlorobenzene	<0.00650		0.0500	0.00650	mg/L		10/24/24 10:15	10/25/24 12:20	1
2,4,5-Trichlorophenol	<0.00530		0.0500	0.00530	mg/L		10/24/24 10:15	10/25/24 12:20	1
2,4,6-Trichlorophenol	<0.00590		0.0500	0.00590	mg/L		10/24/24 10:15	10/25/24 12:20	1
2,4-Dinitrotoluene	<0.00540		0.0500	0.00540	mg/L		10/24/24 10:15	10/25/24 12:20	1

Eurofins Cedar Falls

QC Sample Results

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 310-437377/1-A

Matrix: Solid

Analysis Batch: 437570

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 437377

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
2-Methylphenol	<0.00500		0.0500	0.00500	mg/L		10/24/24 10:15	10/25/24 12:20	1
4-Methylphenol (and/or 3-Methylphenol)	<0.00380		0.0500	0.00380	mg/L		10/24/24 10:15	10/25/24 12:20	1
Hexachlorobenzene	<0.00690		0.0500	0.00690	mg/L		10/24/24 10:15	10/25/24 12:20	1
Hexachlorobutadiene	<0.00600		0.0500	0.00600	mg/L		10/24/24 10:15	10/25/24 12:20	1
Hexachloroethane	<0.00640		0.0500	0.00640	mg/L		10/24/24 10:15	10/25/24 12:20	1
Nitrobenzene	<0.00530		0.0500	0.00530	mg/L		10/24/24 10:15	10/25/24 12:20	1
Pentachlorophenol	<0.0150		0.0500	0.0150	mg/L		10/24/24 10:15	10/25/24 12:20	1
Pyridine	<0.00740		0.0500	0.00740	mg/L		10/24/24 10:15	10/25/24 12:20	1
Total Cresols	<0.00500		0.0500	0.00500	mg/L		10/24/24 10:15	10/25/24 12:20	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorophenol (Surr)	61		25 - 110	10/24/24 10:15	10/25/24 12:20	1
Phenol-d5 (Surr)	54		21 - 110	10/24/24 10:15	10/25/24 12:20	1
Nitrobenzene-d5 (Surr)	82		45 - 129	10/24/24 10:15	10/25/24 12:20	1
2-Fluorobiphenyl (Surr)	72		39 - 118	10/24/24 10:15	10/25/24 12:20	1
2,4,6-Tribromophenol (Surr)	75		27 - 136	10/24/24 10:15	10/25/24 12:20	1
Terphenyl-d14 (Surr)	91		12 - 144	10/24/24 10:15	10/25/24 12:20	1

Lab Sample ID: LCS 310-437377/2-A

Matrix: Solid

Analysis Batch: 437570

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 437377

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
1,4-Dichlorobenzene	0.125	0.07539		mg/L		60	32 - 110
2,4,5-Trichlorophenol	0.125	0.1261		mg/L		101	35 - 133
2,4,6-Trichlorophenol	0.125	0.1293		mg/L		103	28 - 139
2,4-Dinitrotoluene	0.125	0.1172		mg/L		94	47 - 137
2-Methylphenol	0.125	0.1135		mg/L		91	47 - 118
4-Methylphenol (and/or 3-Methylphenol)	0.125	0.1064		mg/L		85	46 - 117
Hexachlorobenzene	0.125	0.1406		mg/L		112	48 - 119
Hexachlorobutadiene	0.125	0.08793		mg/L		70	32 - 110
Hexachloroethane	0.125	0.07285		mg/L		58	31 - 110
Nitrobenzene	0.125	0.1134		mg/L		91	47 - 116
Pentachlorophenol	0.250	0.2209		mg/L		88	26 - 133
Pyridine	0.250	0.04452	J	mg/L		18	10 - 110

Surrogate	LCS	LCS	Limits
	%Recovery	Qualifier	
2-Fluorophenol (Surr)	77		25 - 110
Phenol-d5 (Surr)	71		21 - 110
Nitrobenzene-d5 (Surr)	101		45 - 129
2-Fluorobiphenyl (Surr)	92		39 - 118
2,4,6-Tribromophenol (Surr)	104		27 - 136
Terphenyl-d14 (Surr)	116		12 - 144

QC Sample Results

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 310-437377/3-A
Matrix: Solid
Analysis Batch: 437570

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 437377

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
1,4-Dichlorobenzene	0.125	0.06524		mg/L		52	32 - 110	14	35	
2,4,5-Trichlorophenol	0.125	0.1029		mg/L		82	35 - 133	20	35	
2,4,6-Trichlorophenol	0.125	0.1040		mg/L		83	28 - 139	22	35	
2,4-Dinitrotoluene	0.125	0.09435		mg/L		75	47 - 137	22	35	
2-Methylphenol	0.125	0.09731		mg/L		78	47 - 118	15	35	
4-Methylphenol (and/or 3-Methylphenol)	0.125	0.09642		mg/L		77	46 - 117	10	35	
Hexachlorobenzene	0.125	0.1215		mg/L		97	48 - 119	15	35	
Hexachlorobutadiene	0.125	0.08091		mg/L		65	32 - 110	8	35	
Hexachloroethane	0.125	0.06780		mg/L		54	31 - 110	7	35	
Nitrobenzene	0.125	0.09298		mg/L		74	47 - 116	20	35	
Pentachlorophenol	0.250	0.1856		mg/L		74	26 - 133	17	35	
Pyridine	0.250	0.07080	*1	mg/L		28	10 - 110	46	35	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2-Fluorophenol (Surr)	85		25 - 110
Phenol-d5 (Surr)	80		21 - 110
Nitrobenzene-d5 (Surr)	99		45 - 129
2-Fluorobiphenyl (Surr)	93		39 - 118
2,4,6-Tribromophenol (Surr)	102		27 - 136
Terphenyl-d14 (Surr)	125		12 - 144

Lab Sample ID: LB 310-437290/1-B
Matrix: Solid
Analysis Batch: 437570

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 437377

Analyte	LB		RL	MDL	Unit	D	Prepared		Analyzed		Dil Fac
	Result	Qualifier									
1,4-Dichlorobenzene	<0.00650		0.0500	0.00650	mg/L		10/24/24 10:15	10/25/24 19:12		1	
2,4,5-Trichlorophenol	<0.00530		0.0500	0.00530	mg/L		10/24/24 10:15	10/25/24 19:12		1	
2,4,6-Trichlorophenol	<0.00590		0.0500	0.00590	mg/L		10/24/24 10:15	10/25/24 19:12		1	
2,4-Dinitrotoluene	<0.00540		0.0500	0.00540	mg/L		10/24/24 10:15	10/25/24 19:12		1	
2-Methylphenol	<0.00500		0.0500	0.00500	mg/L		10/24/24 10:15	10/25/24 19:12		1	
4-Methylphenol (and/or 3-Methylphenol)	<0.00380		0.0500	0.00380	mg/L		10/24/24 10:15	10/25/24 19:12		1	
Hexachlorobenzene	<0.00690		0.0500	0.00690	mg/L		10/24/24 10:15	10/25/24 19:12		1	
Hexachlorobutadiene	<0.00600		0.0500	0.00600	mg/L		10/24/24 10:15	10/25/24 19:12		1	
Hexachloroethane	<0.00640		0.0500	0.00640	mg/L		10/24/24 10:15	10/25/24 19:12		1	
Nitrobenzene	<0.00530		0.0500	0.00530	mg/L		10/24/24 10:15	10/25/24 19:12		1	
Pentachlorophenol	<0.0150		0.0500	0.0150	mg/L		10/24/24 10:15	10/25/24 19:12		1	
Pyridine	<0.00740		0.0500	0.00740	mg/L		10/24/24 10:15	10/25/24 19:12		1	
Total Cresols	<0.00500		0.0500	0.00500	mg/L		10/24/24 10:15	10/25/24 19:12		1	

Surrogate	LB		Limits	Prepared		Analyzed		Dil Fac
	%Recovery	Qualifier						
2-Fluorophenol (Surr)	78		25 - 110	10/24/24 10:15	10/25/24 19:12		1	
Phenol-d5 (Surr)	73		21 - 110	10/24/24 10:15	10/25/24 19:12		1	
Nitrobenzene-d5 (Surr)	100		45 - 129	10/24/24 10:15	10/25/24 19:12		1	
2-Fluorobiphenyl (Surr)	85		39 - 118	10/24/24 10:15	10/25/24 19:12		1	
2,4,6-Tribromophenol (Surr)	83		27 - 136	10/24/24 10:15	10/25/24 19:12		1	

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QC Sample Results

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LB 310-437290/1-B
Matrix: Solid
Analysis Batch: 437570

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 437377

Surrogate	LB %Recovery	LB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	128		12 - 144	10/24/24 10:15	10/25/24 19:12	1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 310-437354/1-A
Matrix: Solid
Analysis Batch: 437699

Client Sample ID: Method Blank
Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<7.45		19.9	7.45	mg/Kg			10/24/24 17:32	10

Lab Sample ID: LCS 310-437354/2-A
Matrix: Solid
Analysis Batch: 437699

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	199	194.6		mg/Kg		98	90 - 110

Lab Sample ID: LB 310-437512/1-A
Matrix: Solid
Analysis Batch: 438082

Client Sample ID: Method Blank
Prep Type: SPLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.415		1.00	0.415	mg/L			10/27/24 10:43	5

Lab Sample ID: LCS 310-437512/2-A
Matrix: Solid
Analysis Batch: 438082

Client Sample ID: Lab Control Sample
Prep Type: SPLP

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	10.0	9.691		mg/L		97	90 - 110

Method: 6010D - Metals (ICP)

Lab Sample ID: LB 310-437290/1-D
Matrix: Solid
Analysis Batch: 438609

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 437391

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0300		0.100	0.0300	mg/L		10/25/24 09:00	11/04/24 13:14	1
Barium	<0.0400		0.200	0.0400	mg/L		10/25/24 09:00	11/04/24 13:14	1
Cadmium	<0.00390		0.0200	0.00390	mg/L		10/25/24 09:00	11/04/24 13:14	1
Chromium	<0.00600		0.0200	0.00600	mg/L		10/25/24 09:00	11/04/24 13:14	1
Lead	<0.0370		0.100	0.0370	mg/L		10/25/24 09:00	11/04/24 13:14	1
Selenium	<0.0290		0.100	0.0290	mg/L		10/25/24 09:00	11/04/24 13:14	1
Silver	<0.0160		0.0500	0.0160	mg/L		10/25/24 09:00	11/04/24 13:14	1

QC Sample Results

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 310-437290/2-B
Matrix: Solid
Analysis Batch: 438609

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 437391

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Arsenic	4.00	4.511		mg/L		113	80 - 120
Barium	2.00	2.203		mg/L		110	80 - 120
Cadmium	2.00	2.115		mg/L		106	80 - 120
Chromium	2.00	2.160		mg/L		108	80 - 120
Lead	4.00	4.162		mg/L		104	80 - 120
Selenium	8.00	8.923		mg/L		112	80 - 120
Silver	2.00	2.362	^+	mg/L		118	80 - 120

Lab Sample ID: 310-293323-2 MS
Matrix: Solid
Analysis Batch: 438609

Client Sample ID: Unit 4 Bottom
Prep Type: TCLP
Prep Batch: 437391

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	%Rec Limits
				Result	Qualifier				
Arsenic	<0.0300		4.00	4.761		mg/L		119	75 - 125
Barium	1.04		2.00	3.285		mg/L		112	75 - 125
Cadmium	<0.00390		2.00	2.136		mg/L		107	75 - 125
Chromium	0.00910	J	2.00	2.254		mg/L		112	75 - 125
Lead	<0.0370		4.00	4.226		mg/L		106	75 - 125
Selenium	<0.0290		8.00	9.270		mg/L		116	75 - 125
Silver	<0.0160	^+	2.00	2.485	^+	mg/L		124	75 - 125

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-437397/1-A ^5
Matrix: Solid
Analysis Batch: 438659

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 437397

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.387		0.922	0.387	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Barium	<0.461		0.922	0.461	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Beryllium	<0.184		0.461	0.184	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Boron	<23.0		46.1	23.0	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Cadmium	<0.175		0.461	0.175	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Chromium	<0.599		1.38	0.599	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Cobalt	<0.212		0.461	0.212	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Copper	<0.562		1.38	0.562	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Lead	<0.719		2.30	0.719	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Lithium	<0.664		2.30	0.664	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Manganese	<1.11		2.30	1.11	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Molybdenum	<0.498		0.922	0.498	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Nickel	<0.627		1.38	0.627	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Selenium	<0.691		1.38	0.691	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Silver	<0.203		0.461	0.203	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Thallium	<0.230		0.461	0.230	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Vanadium	<0.424		1.38	0.424	mg/Kg		11/01/24 10:30	11/04/24 14:54	5
Zinc	<2.21		4.61	2.21	mg/Kg		11/01/24 10:30	11/04/24 14:54	5

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QC Sample Results

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

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

Lab Sample ID: MB 310-437397/1-A ^5
Matrix: Solid
Analysis Batch: 438812

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 437397

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.415		0.922	0.415	mg/Kg		11/01/24 10:30	11/05/24 13:59	5

Lab Sample ID: MB 310-437397/1-A ^5
Matrix: Solid
Analysis Batch: 438898

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 437397

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	<0.230		0.461	0.230	mg/Kg		11/01/24 10:30	11/06/24 15:15	5

Lab Sample ID: LCS 310-437397/2-A ^20
Matrix: Solid
Analysis Batch: 438659

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 437397

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	190	192.7		mg/Kg		101	80 - 120
Barium	95.2	88.74		mg/Kg		93	80 - 120
Beryllium	95.2	91.24		mg/Kg		96	80 - 120
Boron	190	175.8	J	mg/Kg		92	80 - 120
Cadmium	95.2	85.35		mg/Kg		90	80 - 120
Chromium	95.2	93.73		mg/Kg		98	80 - 120
Cobalt	95.2	89.39		mg/Kg		94	80 - 120
Copper	190	177.3		mg/Kg		93	80 - 120
Lead	190	181.0		mg/Kg		95	80 - 120
Manganese	95.2	88.77		mg/Kg		93	80 - 120
Molybdenum	190	172.9		mg/Kg		91	80 - 120
Nickel	190	187.9		mg/Kg		99	80 - 120
Selenium	381	332.4		mg/Kg		87	80 - 120
Silver	95.2	101.0		mg/Kg		106	80 - 120
Vanadium	95.2	89.18		mg/Kg		94	80 - 120
Zinc	190	167.3		mg/Kg		88	80 - 120

Lab Sample ID: LCS 310-437397/2-A ^20
Matrix: Solid
Analysis Batch: 438812

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 437397

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	190	203.5		mg/Kg		107	80 - 120

Lab Sample ID: LCS 310-437397/2-A ^20
Matrix: Solid
Analysis Batch: 438898

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 437397

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thallium	95.2	107.4		mg/Kg		113	80 - 120

QC Sample Results

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

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

Lab Sample ID: LB 310-437511/1-B ^4
Matrix: Solid
Analysis Batch: 438319

Client Sample ID: Method Blank
Prep Type: SPLP West
Prep Batch: 437598

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.0324		0.0400	0.0324	mg/L		10/29/24 10:00	10/31/24 16:23	4
Arsenic	<0.0204		0.0400	0.0204	mg/L		10/29/24 10:00	10/31/24 16:23	4
Barium	<0.0640		0.200	0.0640	mg/L		10/29/24 10:00	10/31/24 16:23	4
Beryllium	<0.00680		0.0200	0.00680	mg/L		10/29/24 10:00	10/31/24 16:23	4
Cadmium	<0.00280		0.0100	0.00280	mg/L		10/29/24 10:00	10/31/24 16:23	4
Chromium	<0.0440		0.100	0.0440	mg/L		10/29/24 10:00	10/31/24 16:23	4
Copper	<0.0360		0.100	0.0360	mg/L		10/29/24 10:00	10/31/24 16:23	4
Lead	<0.00760		0.0200	0.00760	mg/L		10/29/24 10:00	10/31/24 16:23	4
Selenium	<0.0332		0.100	0.0332	mg/L		10/29/24 10:00	10/31/24 16:23	4

Lab Sample ID: LB 310-437511/1-B ^4
Matrix: Solid
Analysis Batch: 438523

Client Sample ID: Method Blank
Prep Type: SPLP West
Prep Batch: 437598

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Thallium	<0.0116		0.0200	0.0116	mg/L		10/29/24 10:00	11/01/24 12:24	4

Lab Sample ID: LCS 310-437511/2-B ^4
Matrix: Solid
Analysis Batch: 438319

Client Sample ID: Lab Control Sample
Prep Type: SPLP West
Prep Batch: 437598

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Antimony	1.00	1.103		mg/L		110	80 - 120	
Arsenic	1.00	1.096		mg/L		110	80 - 120	
Barium	0.500	0.5436		mg/L		109	80 - 120	
Beryllium	0.500	0.4913		mg/L		98	80 - 120	
Cadmium	0.500	0.5343		mg/L		107	80 - 120	
Chromium	0.500	0.5300		mg/L		106	80 - 120	
Copper	1.00	1.035		mg/L		104	80 - 120	
Lead	1.00	1.077		mg/L		108	80 - 120	
Selenium	2.00	2.052		mg/L		103	80 - 120	

Lab Sample ID: LCS 310-437511/2-B ^4
Matrix: Solid
Analysis Batch: 438523

Client Sample ID: Lab Control Sample
Prep Type: SPLP West
Prep Batch: 437598

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits	
Thallium	0.500	0.5581		mg/L		112	80 - 120	

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LB 310-437290/1-E
Matrix: Solid
Analysis Batch: 437963

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 437449

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.00110		0.00200	0.00110	mg/L		10/28/24 14:30	10/29/24 10:43	1

QC Sample Results

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

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

Lab Sample ID: LCS 310-437290/2-C
Matrix: Solid
Analysis Batch: 437963

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 437449

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.0167	0.01738		mg/L		104	80 - 120

Lab Sample ID: LB 310-437511/1-C
Matrix: Solid
Analysis Batch: 437963

Client Sample ID: Method Blank
Prep Type: SPLP West
Prep Batch: 437768

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00110		0.00200	0.00110	mg/L		10/28/24 14:30	10/29/24 13:10	1

Lab Sample ID: LCS 310-437511/2-C
Matrix: Solid
Analysis Batch: 437963

Client Sample ID: Lab Control Sample
Prep Type: SPLP West
Prep Batch: 437768

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.0167	0.01752		mg/L		105	80 - 120

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 310-437808/1-A
Matrix: Solid
Analysis Batch: 438109

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 437808

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00783		0.0191	0.00783	mg/Kg		10/29/24 16:35	10/30/24 11:42	1

Lab Sample ID: LCS 310-437808/2-A
Matrix: Solid
Analysis Batch: 438109

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 437808

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.164	0.1671		mg/Kg		102	80 - 120

Lab Sample ID: MB 310-438377/1-A
Matrix: Solid
Analysis Batch: 438565

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 438377

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00730		0.0178	0.00730	mg/Kg		11/01/24 15:25	11/02/24 13:20	1

Lab Sample ID: LCS 310-438377/2-A
Matrix: Solid
Analysis Batch: 438565

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 438377

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.143	0.1401		mg/Kg		98	80 - 120

QC Sample Results

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Method: 9045D - pH

Lab Sample ID: LCS 310-437455/1

Matrix: Solid

Analysis Batch: 437455

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		100	98 - 102

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QC Association Summary

Client: MidAmerican Energy Company
 Project/Site: Beneficial Use

Job ID: 310-293323-1
 SDG: CE-415

GC/MS VOA

Leach Batch: 437289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	TCLP	Solid	1311	
310-293323-2	Unit 4 Bottom	TCLP	Solid	1311	
LB 310-437289/1-A	Method Blank	TCLP	Solid	1311	
LCS 310-437289/2-A	Lab Control Sample	TCLP	Solid	1311	

Analysis Batch: 438031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	TCLP	Solid	8260D	437289
310-293323-2	Unit 4 Bottom	TCLP	Solid	8260D	437289
LB 310-437289/1-A	Method Blank	TCLP	Solid	8260D	437289
LCS 310-437289/2-A	Lab Control Sample	TCLP	Solid	8260D	437289

GC/MS Semi VOA

Leach Batch: 437290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	TCLP	Solid	1311	
310-293323-2	Unit 4 Bottom	TCLP	Solid	1311	
LB 310-437290/1-B	Method Blank	TCLP	Solid	1311	

Prep Batch: 437377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	TCLP	Solid	3510C	437290
310-293323-2	Unit 4 Bottom	TCLP	Solid	3510C	437290
LB 310-437290/1-B	Method Blank	TCLP	Solid	3510C	437290
MB 310-437377/1-A	Method Blank	Total/NA	Solid	3510C	
LCS 310-437377/2-A	Lab Control Sample	Total/NA	Solid	3510C	
LCSD 310-437377/3-A	Lab Control Sample Dup	Total/NA	Solid	3510C	

Analysis Batch: 437570

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	TCLP	Solid	8270E	437377
310-293323-2	Unit 4 Bottom	TCLP	Solid	8270E	437377
LB 310-437290/1-B	Method Blank	TCLP	Solid	8270E	437377
MB 310-437377/1-A	Method Blank	Total/NA	Solid	8270E	437377
LCS 310-437377/2-A	Lab Control Sample	Total/NA	Solid	8270E	437377
LCSD 310-437377/3-A	Lab Control Sample Dup	Total/NA	Solid	8270E	437377

HPLC/IC

Leach Batch: 437354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	Soluble	Solid	DI Leach	
310-293323-2	Unit 4 Bottom	Soluble	Solid	DI Leach	
MB 310-437354/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 310-437354/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

Leach Batch: 437512

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	SPLP	Solid	1312	
310-293323-2	Unit 4 Bottom	SPLP	Solid	1312	
LB 310-437512/1-A	Method Blank	SPLP	Solid	1312	

Eurofins Cedar Falls

QC Association Summary

Client: MidAmerican Energy Company
 Project/Site: Beneficial Use

Job ID: 310-293323-1
 SDG: CE-415

HPLC/IC (Continued)

Leach Batch: 437512 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-437512/2-A	Lab Control Sample	SPLP	Solid	1312	

Analysis Batch: 437699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	Soluble	Solid	9056A	437354
310-293323-2	Unit 4 Bottom	Soluble	Solid	9056A	437354
MB 310-437354/1-A	Method Blank	Soluble	Solid	9056A	437354
LCS 310-437354/2-A	Lab Control Sample	Soluble	Solid	9056A	437354

Analysis Batch: 438082

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	SPLP	Solid	9056A	437512
310-293323-2	Unit 4 Bottom	SPLP	Solid	9056A	437512
LB 310-437512/1-A	Method Blank	SPLP	Solid	9056A	437512
LCS 310-437512/2-A	Lab Control Sample	SPLP	Solid	9056A	437512

Metals

Leach Batch: 437290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	TCLP	Solid	1311	
310-293323-2	Unit 4 Bottom	TCLP	Solid	1311	
LB 310-437290/1-D	Method Blank	TCLP	Solid	1311	
LB 310-437290/1-E	Method Blank	TCLP	Solid	1311	
LCS 310-437290/2-B	Lab Control Sample	TCLP	Solid	1311	
LCS 310-437290/2-C	Lab Control Sample	TCLP	Solid	1311	
310-293323-2 MS	Unit 4 Bottom	TCLP	Solid	1311	

Prep Batch: 437391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	TCLP	Solid	3010A	437290
310-293323-2	Unit 4 Bottom	TCLP	Solid	3010A	437290
LB 310-437290/1-D	Method Blank	TCLP	Solid	3010A	437290
LCS 310-437290/2-B	Lab Control Sample	TCLP	Solid	3010A	437290
310-293323-2 MS	Unit 4 Bottom	TCLP	Solid	3010A	437290

Prep Batch: 437397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	Total/NA	Solid	3050B	
310-293323-2	Unit 4 Bottom	Total/NA	Solid	3050B	
MB 310-437397/1-A ^5	Method Blank	Total/NA	Solid	3050B	
LCS 310-437397/2-A ^20	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 437449

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	TCLP	Solid	7470A	437290
310-293323-2	Unit 4 Bottom	TCLP	Solid	7470A	437290
LB 310-437290/1-E	Method Blank	TCLP	Solid	7470A	437290
LCS 310-437290/2-C	Lab Control Sample	TCLP	Solid	7470A	437290

QC Association Summary

Client: MidAmerican Energy Company
 Project/Site: Beneficial Use

Job ID: 310-293323-1
 SDG: CE-415

Metals

Leach Batch: 437511

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	SPLP West	Solid	1312	
310-293323-2	Unit 4 Bottom	SPLP West	Solid	1312	
LB 310-437511/1-B ^4	Method Blank	SPLP West	Solid	1312	
LB 310-437511/1-C	Method Blank	SPLP West	Solid	1312	
LCS 310-437511/2-B ^4	Lab Control Sample	SPLP West	Solid	1312	
LCS 310-437511/2-C	Lab Control Sample	SPLP West	Solid	1312	

Prep Batch: 437598

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	SPLP West	Solid	3010A	437511
310-293323-2	Unit 4 Bottom	SPLP West	Solid	3010A	437511
LB 310-437511/1-B ^4	Method Blank	SPLP West	Solid	3010A	437511
LCS 310-437511/2-B ^4	Lab Control Sample	SPLP West	Solid	3010A	437511

Prep Batch: 437768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	SPLP West	Solid	7470A	437511
310-293323-2	Unit 4 Bottom	SPLP West	Solid	7470A	437511
LB 310-437511/1-C	Method Blank	SPLP West	Solid	7470A	437511
LCS 310-437511/2-C	Lab Control Sample	SPLP West	Solid	7470A	437511

Prep Batch: 437808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	Total/NA	Solid	7471B	
MB 310-437808/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 310-437808/2-A	Lab Control Sample	Total/NA	Solid	7471B	

Analysis Batch: 437963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	SPLP West	Solid	7470A	437768
310-293323-1	Unit 3 Fly Ash	TCLP	Solid	7470A	437449
310-293323-2	Unit 4 Bottom	SPLP West	Solid	7470A	437768
310-293323-2	Unit 4 Bottom	TCLP	Solid	7470A	437449
LB 310-437290/1-E	Method Blank	TCLP	Solid	7470A	437449
LB 310-437511/1-C	Method Blank	SPLP West	Solid	7470A	437768
LCS 310-437290/2-C	Lab Control Sample	TCLP	Solid	7470A	437449
LCS 310-437511/2-C	Lab Control Sample	SPLP West	Solid	7470A	437768

Analysis Batch: 438109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	Total/NA	Solid	7471B	437808
MB 310-437808/1-A	Method Blank	Total/NA	Solid	7471B	437808
LCS 310-437808/2-A	Lab Control Sample	Total/NA	Solid	7471B	437808

Analysis Batch: 438319

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	SPLP West	Solid	6020B	437598
310-293323-2	Unit 4 Bottom	SPLP West	Solid	6020B	437598
LB 310-437511/1-B ^4	Method Blank	SPLP West	Solid	6020B	437598
LCS 310-437511/2-B ^4	Lab Control Sample	SPLP West	Solid	6020B	437598

QC Association Summary

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Metals

Prep Batch: 438377

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-2	Unit 4 Bottom	Total/NA	Solid	7471B	
MB 310-438377/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 310-438377/2-A	Lab Control Sample	Total/NA	Solid	7471B	

Analysis Batch: 438523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LB 310-437511/1-B ^4	Method Blank	SPLP West	Solid	6020B	437598
LCS 310-437511/2-B ^4	Lab Control Sample	SPLP West	Solid	6020B	437598

Analysis Batch: 438565

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-2	Unit 4 Bottom	Total/NA	Solid	7471B	438377
MB 310-438377/1-A	Method Blank	Total/NA	Solid	7471B	438377
LCS 310-438377/2-A	Lab Control Sample	Total/NA	Solid	7471B	438377

Analysis Batch: 438609

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	TCLP	Solid	6010D	437391
310-293323-2	Unit 4 Bottom	TCLP	Solid	6010D	437391
LB 310-437290/1-D	Method Blank	TCLP	Solid	6010D	437391
LCS 310-437290/2-B	Lab Control Sample	TCLP	Solid	6010D	437391
310-293323-2 MS	Unit 4 Bottom	TCLP	Solid	6010D	437391

Analysis Batch: 438659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	Total/NA	Solid	6020B	437397
310-293323-2	Unit 4 Bottom	Total/NA	Solid	6020B	437397
MB 310-437397/1-A ^5	Method Blank	Total/NA	Solid	6020B	437397
LCS 310-437397/2-A ^20	Lab Control Sample	Total/NA	Solid	6020B	437397

Analysis Batch: 438812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	Total/NA	Solid	6020B	437397
310-293323-2	Unit 4 Bottom	Total/NA	Solid	6020B	437397
MB 310-437397/1-A ^5	Method Blank	Total/NA	Solid	6020B	437397
LCS 310-437397/2-A ^20	Lab Control Sample	Total/NA	Solid	6020B	437397

Analysis Batch: 438898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	Total/NA	Solid	6020B	437397
310-293323-2	Unit 4 Bottom	Total/NA	Solid	6020B	437397
MB 310-437397/1-A ^5	Method Blank	Total/NA	Solid	6020B	437397
LCS 310-437397/2-A ^20	Lab Control Sample	Total/NA	Solid	6020B	437397

General Chemistry

Analysis Batch: 437142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	Total/NA	Solid	Moisture	
310-293323-2	Unit 4 Bottom	Total/NA	Solid	Moisture	

QC Association Summary

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

General Chemistry

Analysis Batch: 437306

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	Total/NA	Solid	D92	
310-293323-2	Unit 4 Bottom	Total/NA	Solid	D92	

Leach Batch: 437385

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	Soluble	Solid	DI Leach	
310-293323-2	Unit 4 Bottom	Soluble	Solid	DI Leach	

Analysis Batch: 437455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-293323-1	Unit 3 Fly Ash	Soluble	Solid	9045D	437385
310-293323-2	Unit 4 Bottom	Soluble	Solid	9045D	437385
LCS 310-437455/1	Lab Control Sample	Total/NA	Solid	9045D	

Lab Chronicle

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Client Sample ID: Unit 3 Fly Ash

Lab Sample ID: 310-293323-1

Date Collected: 10/21/24 10:00

Matrix: Solid

Date Received: 10/22/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			437289	U8FK	EET CF	10/23/24 15:01 - 10/24/24 07:01 ¹
TCLP	Analysis	8260D		20	438031	WSE8	EET CF	10/30/24 13:03
TCLP	Leach	1311			437290	U8FK	EET CF	10/23/24 15:01 - 10/24/24 07:01 ¹
TCLP	Prep	3510C			437377	AYK7	EET CF	10/24/24 10:15
TCLP	Analysis	8270E		1	437570	L0FS	EET CF	10/25/24 19:39
Soluble	Leach	DI Leach			437354	WZC8	EET CF	10/24/24 08:58
Soluble	Analysis	9056A		10	437699	HE7K	EET CF	10/24/24 13:38
SPLP	Leach	1312			437512	U8FK	EET CF	10/24/24 15:28 - 10/25/24 07:28 ¹
SPLP	Analysis	9056A		5	438082	HE7K	EET CF	10/27/24 12:01
TCLP	Leach	1311			437290	U8FK	EET CF	10/23/24 15:01 - 10/24/24 07:01 ¹
TCLP	Prep	3010A			437391	F5MW	EET CF	10/25/24 09:00
TCLP	Analysis	6010D		1	438609	ZRI4	EET CF	11/04/24 13:36
SPLP West	Leach	1312			437511	U8FK	EET CF	10/24/24 15:28 - 10/25/24 07:28 ¹
SPLP West	Prep	3010A			437598	F5MW	EET CF	10/29/24 10:00
SPLP West	Analysis	6020B		4	438319	A6US	EET CF	10/31/24 16:45
SPLP West	Leach	1312			437511	U8FK	EET CF	10/24/24 15:28 - 10/25/24 07:28 ¹
SPLP West	Prep	7470A			437768	QTZ5	EET CF	10/28/24 14:30
SPLP West	Analysis	7470A		1	437963	QTZ5	EET CF	10/29/24 13:19
TCLP	Leach	1311			437290	U8FK	EET CF	10/23/24 15:01 - 10/24/24 07:01 ¹
TCLP	Prep	7470A			437449	QTZ5	EET CF	10/28/24 14:30
TCLP	Analysis	7470A		1	437963	QTZ5	EET CF	10/29/24 11:04
Total/NA	Prep	7471B			437808	QTZ5	EET CF	10/29/24 16:35
Total/NA	Analysis	7471B		5	438109	QTZ5	EET CF	10/30/24 13:48
Soluble	Leach	DI Leach			437385	HE7K	EET CF	10/24/24 10:59
Soluble	Analysis	9045D		1	437455	HE7K	EET CF	10/24/24 15:11
Total/NA	Analysis	D92		1	437306	WZC8	EET CF	10/23/24 16:31
Total/NA	Analysis	Moisture		1	437142	A3GU	EET CF	10/22/24 17:17

Client Sample ID: Unit 3 Fly Ash

Lab Sample ID: 310-293323-1

Date Collected: 10/21/24 10:00

Matrix: Solid

Date Received: 10/22/24 09:00

Percent Solids: 99.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			437397	F5MW	EET CF	11/01/24 10:30
Total/NA	Analysis	6020B		5	438659	NFT2	EET CF	11/04/24 16:12
Total/NA	Prep	3050B			437397	F5MW	EET CF	11/01/24 10:30
Total/NA	Analysis	6020B		100	438812	NFT2	EET CF	11/05/24 14:35
Total/NA	Prep	3050B			437397	F5MW	EET CF	11/01/24 10:30
Total/NA	Analysis	6020B		100	438898	A6US	EET CF	11/06/24 15:27

Lab Chronicle

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Client Sample ID: Unit 4 Bottom

Lab Sample ID: 310-293323-2

Date Collected: 10/21/24 11:00

Matrix: Solid

Date Received: 10/22/24 09:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			437289	U8FK	EET CF	10/23/24 15:01 - 10/24/24 07:01 ¹
TCLP	Analysis	8260D		20	438031	WSE8	EET CF	10/30/24 13:25
TCLP	Leach	1311			437290	U8FK	EET CF	10/23/24 15:01 - 10/24/24 07:01 ¹
TCLP	Prep	3510C			437377	AYK7	EET CF	10/24/24 10:15
TCLP	Analysis	8270E		1	437570	L0FS	EET CF	10/25/24 20:06
Soluble	Leach	DI Leach			437354	WZC8	EET CF	10/24/24 08:58
Soluble	Analysis	9056A		10	437699	HE7K	EET CF	10/24/24 13:53
SPLP	Leach	1312			437512	U8FK	EET CF	10/24/24 15:28 - 10/25/24 07:28 ¹
SPLP	Analysis	9056A		5	438082	HE7K	EET CF	10/27/24 12:17
TCLP	Leach	1311			437290	U8FK	EET CF	10/23/24 15:01 - 10/24/24 07:01 ¹
TCLP	Prep	3010A			437391	F5MW	EET CF	10/25/24 09:00
TCLP	Analysis	6010D		1	438609	ZRI4	EET CF	11/04/24 13:38
SPLP West	Leach	1312			437511	U8FK	EET CF	10/24/24 15:28 - 10/25/24 07:28 ¹
SPLP West	Prep	3010A			437598	F5MW	EET CF	10/29/24 10:00
SPLP West	Analysis	6020B		4	438319	A6US	EET CF	10/31/24 16:47
SPLP West	Leach	1312			437511	U8FK	EET CF	10/24/24 15:28 - 10/25/24 07:28 ¹
SPLP West	Prep	7470A			437768	QTZ5	EET CF	10/28/24 14:30
SPLP West	Analysis	7470A		1	437963	QTZ5	EET CF	10/29/24 13:21
TCLP	Leach	1311			437290	U8FK	EET CF	10/23/24 15:01 - 10/24/24 07:01 ¹
TCLP	Prep	7470A			437449	QTZ5	EET CF	10/28/24 14:30
TCLP	Analysis	7470A		1	437963	QTZ5	EET CF	10/29/24 11:07
Total/NA	Prep	7471B			438377	QTZ5	EET CF	11/01/24 15:25
Total/NA	Analysis	7471B		1	438565	QTZ5	EET CF	11/02/24 14:29
Soluble	Leach	DI Leach			437385	HE7K	EET CF	10/24/24 10:59
Soluble	Analysis	9045D		1	437455	HE7K	EET CF	10/24/24 15:13
Total/NA	Analysis	D92		1	437306	WZC8	EET CF	10/23/24 16:31
Total/NA	Analysis	Moisture		1	437142	A3GU	EET CF	10/22/24 17:17

Client Sample ID: Unit 4 Bottom

Lab Sample ID: 310-293323-2

Date Collected: 10/21/24 11:00

Matrix: Solid

Date Received: 10/22/24 09:00

Percent Solids: 89.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			437397	F5MW	EET CF	11/01/24 10:30
Total/NA	Analysis	6020B		5	438659	NFT2	EET CF	11/04/24 16:16
Total/NA	Prep	3050B			437397	F5MW	EET CF	11/01/24 10:30
Total/NA	Analysis	6020B		50	438812	NFT2	EET CF	11/05/24 14:37
Total/NA	Prep	3050B			437397	F5MW	EET CF	11/01/24 10:30
Total/NA	Analysis	6020B		50	438898	A6US	EET CF	11/06/24 15:41

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

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

Accreditation/Certification Summary

Client: MidAmerican Energy Company
Project/Site: Beneficial Use

Job ID: 310-293323-1
SDG: CE-415

Laboratory: Eurofins 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	12-01-25

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
8270E	3510C	Solid	Pyridine
8270E	3510C	Solid	Total Cresols
D92		Solid	Flashpoint
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: MidAmerican Energy Company
 Project/Site: Beneficial Use

Job ID: 310-293323-1
 SDG: CE-415

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
8270E	Semivolatile Organic Compounds (GC/MS)	SW846	EET CF
9056A	Anions, Ion Chromatography	SW846	EET CF
6010D	Metals (ICP)	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
7471B	Mercury (CVAA)	SW846	EET CF
9045D	pH	SW846	EET CF
D92	Flashpoint	ASTM	EET CF
Moisture	Percent Moisture	EPA	EET CF
1311	TCLP Extraction	SW846	EET CF
1311	TCLP Zero Headspace Extraction	SW846	EET CF
1312	SPLP Extraction	SW846	EET CF
3010A	Preparation, Total Metals	SW846	EET CF
3050B	Preparation, Metals	SW846	EET CF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF
7471B	Preparation, Mercury	SW846	EET CF
DI Leach	Deionized Water Leaching Procedure	ASTM	EET 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:

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



Environment Testing
America



310-293323 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client: <u>Mid American</u>			
City/State:	CITY <u>Council Bluffs</u>	STATE <u>IA</u>	Project:
Receipt Information			
Date/Time Received:	DATE <u>10/22/24</u>	TIME <u>9:00</u>	Received By: <u>PH</u>
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: _____	
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: <u>P</u>		Correction Factor (°C): <u>0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C): <u>1.2</u>		Corrected Temp (°C): <u>1.2</u>	
• Sample Container Temperature			
Container(s) used:	<u>CONTAINER 1</u>	<u>CONTAINER 2</u>	
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			

Client Name MidAmerican Energy Client # _____
 Address 7215 Navajo st
 City/State/Zip Code Council Bluffs IA
 Project Manager Scott Bury State _____
 Email Address scott.bury@midamerican.com
 Telephone Number 712-366-5331
 Sampler Name (Print Name) Scott Bury PO# _____
 Sampler Signature [Signature]

TAT Standard Rush (surcharges may apply)	Date Needed:	FAX Results: Y N	Email Results Y N	SAMPLE ID	Date Sampled	Time Sampled	G = Grab, C = Composite	Field Filtered	Matrix Preservation & # of Containers							Analyze For	QC Deliverables	REMARKS						
									SL - Sludge DW - Drinking Water	GW - Groundwater S - Soil/Solid	WV - Wastewater Specify, Other	HNO ₃	HCl	NaOH	H ₂ SO ₄				Methanol	None	Other (Specify)			
					Unit 3 Fish Ash	10/21	10:00	C										X PH	X Total metals	X Total metals	X Total Flourish	X Fresh paint		
					Unit 4 Bottom	10/21	11:00	C										X PH	X Total metals	X Total metals	X Total Flourish	X Fresh paint		

Special Instructions: Please test for requirement for Iowa Beneficial use
use Return cooler

Relinquished By: [Signature] Date: 10-21 Time: 2:03pm Received By: _____ Date: _____ Time: _____

Relinquished By: _____ Date: _____ Time: _____ Received By: _____ Date: 10/21/21 Time: AM



Login Sample Receipt Checklist

Client: MidAmerican Energy Company

Job Number: 310-293323-1

SDG Number: CE-415

Login Number: 293323

List Number: 1

Creator: Homolar, Dana J

List Source: Eurofins Cedar Falls

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.	True	
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.	True	
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	





ANALYTICAL REPORT

PREPARED FOR

Attn: Scott Burns
MidAmerican Energy Company
Walter Scott Energy Center
7215 Navajo Street
Council Bluffs, Iowa 51501

Generated 5/9/2025 4:18:52 PM

JOB DESCRIPTION

WSEC Benefical Use

JOB NUMBER

310-305210-1

Eurofins Cedar Falls

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



Generated
5/9/2025 4:18:52 PM

Authorized for release by
Conner Calhoun, Client Service Manager
Conner.Calhoun@et.eurofinsus.com
(319)277-2401



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Case Narrative

Client: MidAmerican Energy Company
Project: WSEC Beneficial Use

Job ID: 310-305210-1

Job ID: 310-305210-1

Eurofins Cedar Falls

Job Narrative 310-305210-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The sample was received on 4/29/2025 9:27 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 11.4°C.

Receipt Exceptions

The following sample was received at the laboratory outside the required temperature criteria: Unit 3 FlyAsh (310-305210-1).

Metals

Method 6010D - TCLP: The continuing calibration verification (CCV) associated with batch 310-453444 recovered above the upper control limit for Silver. 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.

General Chemistry

Method 9045D - Soluble: pH exceeds pH>11

Unit 3 FlyAsh (310-305210-1)

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

Eurofins Cedar Falls

Sample Summary

Client: MidAmerican Energy Company
Project/Site: WSEC Benefical Use

Job ID: 310-305210-1

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
310-305210-1	Unit 3 FlyAsh	Solid	04/28/25 10:00	04/29/25 09:27

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

Detection Summary

Client: MidAmerican Energy Company
 Project/Site: WSEC Benefical Use

Job ID: 310-305210-1

Client Sample ID: Unit 3 FlyAsh

Lab Sample ID: 310-305210-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	10.2		0.200	0.0400	mg/L	1		6010D	TCLP
Chromium	0.169		0.0200	0.00600	mg/L	1		6010D	TCLP
Arsenic	15.1		14.5	6.10	mg/Kg	100	✳	6020B	Total/NA
Barium	4390		14.5	6.68	mg/Kg	100	✳	6020B	Total/NA
Beryllium	3.33	J	7.26	2.91	mg/Kg	100	✳	6020B	Total/NA
Chromium	59.7		21.8	7.56	mg/Kg	100	✳	6020B	Total/NA
Cobalt	17.8		0.363	0.131	mg/Kg	5	✳	6020B	Total/NA
Copper	147		21.8	11.6	mg/Kg	100	✳	6020B	Total/NA
Lead	26.3		1.82	0.567	mg/Kg	5	✳	6020B	Total/NA
Lithium	29.1	J	36.3	14.4	mg/Kg	100	✳	6020B	Total/NA
Manganese	213		36.3	17.4	mg/Kg	100	✳	6020B	Total/NA
Molybdenum	9.07	J	14.5	5.96	mg/Kg	100	✳	6020B	Total/NA
Nickel	44.3		21.8	8.72	mg/Kg	100	✳	6020B	Total/NA
Selenium	14.9	J	21.8	10.9	mg/Kg	100	✳	6020B	Total/NA
Thallium	0.323	J	0.363	0.138	mg/Kg	5	✳	6020B	Total/NA
Vanadium	198		21.8	7.70	mg/Kg	100	✳	6020B	Total/NA
Zinc	94.7		72.6	47.9	mg/Kg	100	✳	6020B	Total/NA
Antimony	0.00476	J	0.00800	0.00400	mg/L	4		6020B	SPLP West
Barium	15.1		0.100	0.0140	mg/L	10		6020B	SPLP West
Chromium	0.00917	J	0.0200	0.00720	mg/L	4		6020B	SPLP West
Lead	0.00354	J	0.00400	0.00132	mg/L	4		6020B	SPLP West
Selenium	0.00622	J	0.0200	0.00560	mg/L	4		6020B	SPLP West
Thallium	0.00228	J	0.00400	0.00220	mg/L	4		6020B	SPLP West
Mercury	0.310		0.0182	0.00744	mg/Kg	1		7471B	Total/NA
Flashpoint	>201		65.0	65.0	Degrees F	1		D92	Total/NA
Fluoride	3.80		0.984	0.482	mg/Kg	1	✳	4500 F C-2011	Soluble
pH	12.2	HF	1.0	1.0	SU	1		9045D	Soluble
Fluoride	6.12		0.200	0.0790	mg/L	1		4500 F C-2011	SPLP

This Detection Summary does not include radiochemical test results.

Eurofins Cedar Falls

Client Sample Results

Client: MidAmerican Energy Company
Project/Site: WSEC Beneficial Use

Job ID: 310-305210-1

Client Sample ID: Unit 3 FlyAsh

Lab Sample ID: 310-305210-1

Date Collected: 04/28/25 10:00

Matrix: Solid

Date Received: 04/29/25 09:27

Method: SW846 6010D - Metals (ICP) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.0300		0.100	0.0300	mg/L		05/01/25 09:00	05/01/25 15:37	1
Barium	10.2		0.200	0.0400	mg/L		05/01/25 09:00	05/01/25 15:37	1
Cadmium	<0.00390		0.0200	0.00390	mg/L		05/01/25 09:00	05/01/25 15:37	1
Chromium	0.169		0.0200	0.00600	mg/L		05/01/25 09:00	05/01/25 15:37	1
Lead	<0.0370		0.100	0.0370	mg/L		05/01/25 09:00	05/01/25 15:37	1
Selenium	<0.0290		0.100	0.0290	mg/L		05/01/25 09:00	05/01/25 15:37	1
Silver	<0.0160	^+	0.0500	0.0160	mg/L		05/01/25 09:00	05/01/25 15:37	1

Method: SW846 6020B - Metals (ICP/MS) - SPLP West

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.00476	J	0.00800	0.00400	mg/L		05/07/25 09:30	05/08/25 15:50	4
Arsenic	<0.00220		0.00800	0.00220	mg/L		05/07/25 09:30	05/08/25 15:50	4
Barium	15.1		0.100	0.0140	mg/L		05/07/25 09:30	05/09/25 12:57	10
Beryllium	<0.00132		0.00400	0.00132	mg/L		05/07/25 09:30	05/08/25 15:50	4
Cadmium	<0.000400		0.00200	0.000400	mg/L		05/07/25 09:30	05/08/25 15:50	4
Chromium	0.00917	J	0.0200	0.00720	mg/L		05/07/25 09:30	05/08/25 15:50	4
Copper	<0.0128		0.0400	0.0128	mg/L		05/07/25 09:30	05/08/25 15:50	4
Lead	0.00354	J	0.00400	0.00132	mg/L		05/07/25 09:30	05/08/25 15:50	4
Selenium	0.00622	J	0.0200	0.00560	mg/L		05/07/25 09:30	05/08/25 15:50	4
Thallium	0.00228	J	0.00400	0.00220	mg/L		05/07/25 09:30	05/08/25 15:50	4

Method: SW846 7470A - Mercury (CVAA) - TCLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00120		0.00200	0.00120	mg/L		05/02/25 13:45	05/05/25 09:47	1

Method: SW846 7470A - Mercury (CVAA) - SPLP West

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00120	F1	0.00200	0.00120	mg/L		05/06/25 11:53	05/07/25 09:45	1

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.310		0.0182	0.00744	mg/Kg		05/06/25 13:47	05/08/25 09:56	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Flashpoint (ASTM D92)	>201		65.0	65.0	Degrees F			05/08/25 17:12	1
Percent Moisture (EPA Moisture)	0.2		0.1	0.1	%			04/29/25 11:24	1
Percent Solids (EPA Moisture)	99.8		0.1	0.1	%			04/29/25 11:24	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH (SW846 9045D)	12.2	HF	1.0	1.0	SU			04/29/25 15:36	1

General Chemistry - SPLP

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C-2011)	6.12		0.200	0.0790	mg/L			05/08/25 21:15	1

Client Sample Results

Client: MidAmerican Energy Company
 Project/Site: WSEC Beneficial Use

Job ID: 310-305210-1

Client Sample ID: Unit 3 FlyAsh

Lab Sample ID: 310-305210-1

Date Collected: 04/28/25 10:00

Matrix: Solid

Date Received: 04/29/25 09:27

Percent Solids: 99.8

Method: SW846 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<6.54		14.5	6.54	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100
Arsenic	15.1		14.5	6.10	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100
Barium	4390		14.5	6.68	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100
Beryllium	3.33	J	7.26	2.91	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100
Boron	<625		726	625	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100
Cadmium	<2.76		7.26	2.76	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100
Chromium	59.7		21.8	7.56	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100
Cobalt	17.8		0.363	0.131	mg/Kg	✳	05/05/25 10:00	05/05/25 20:49	5
Copper	147		21.8	11.6	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100
Lead	26.3		1.82	0.567	mg/Kg	✳	05/05/25 10:00	05/05/25 20:49	5
Lithium	29.1	J	36.3	14.4	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100
Manganese	213		36.3	17.4	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100
Molybdenum	9.07	J	14.5	5.96	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100
Nickel	44.3		21.8	8.72	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100
Selenium	14.9	J	21.8	10.9	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100
Silver	<2.76		7.26	2.76	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100
Thallium	0.323	J	0.363	0.138	mg/Kg	✳	05/05/25 10:00	05/05/25 20:49	5
Vanadium	198		21.8	7.70	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100
Zinc	94.7		72.6	47.9	mg/Kg	✳	05/05/25 10:00	05/06/25 19:45	100

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SM 4500 F C-2011)	3.80		0.984	0.482	mg/Kg	✳		05/02/25 14:26	1

Definitions/Glossary

Client: MidAmerican Energy Company
Project/Site: WSEC Beneficial Use

Job ID: 310-305210-1

Qualifiers

Metals

Qualifier	Qualifier Description
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
HF	Parameter with a holding time of 15 minutes. Test performed by laboratory at client's request. Sample was analyzed outside of hold time.

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: MidAmerican Energy Company
Project/Site: WSEC Beneficial Use

Job ID: 310-305210-1

Method: 6010D - Metals (ICP)

Lab Sample ID: LB 310-453093/1-C
Matrix: Solid
Analysis Batch: 453444

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 453223

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.0300		0.100	0.0300	mg/L		05/01/25 09:00	05/01/25 15:25	1
Barium	<0.0400		0.200	0.0400	mg/L		05/01/25 09:00	05/01/25 15:25	1
Cadmium	<0.00390		0.0200	0.00390	mg/L		05/01/25 09:00	05/01/25 15:25	1
Chromium	<0.00600		0.0200	0.00600	mg/L		05/01/25 09:00	05/01/25 15:25	1
Lead	<0.0370		0.100	0.0370	mg/L		05/01/25 09:00	05/01/25 15:25	1
Selenium	<0.0290		0.100	0.0290	mg/L		05/01/25 09:00	05/01/25 15:25	1
Silver	<0.0160	^+	0.0500	0.0160	mg/L		05/01/25 09:00	05/01/25 15:25	1

Lab Sample ID: LCS 310-453093/2-B
Matrix: Solid
Analysis Batch: 453444

Client Sample ID: Lab Control Sample
Prep Type: TCLP
Prep Batch: 453223

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Arsenic	4.00	4.310		mg/L		108	80 - 120
Barium	2.00	2.117		mg/L		106	80 - 120
Cadmium	2.00	1.912		mg/L		96	80 - 120
Chromium	2.00	1.930		mg/L		97	80 - 120
Lead	4.00	3.812		mg/L		95	80 - 120
Selenium	8.00	8.556		mg/L		107	80 - 120
Silver	2.00	2.126	^+	mg/L		106	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-453041/1-A ^5
Matrix: Solid
Analysis Batch: 453796

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 453041

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Barium	<0.426		0.927	0.426	mg/Kg		05/05/25 10:00	05/05/25 19:38	5
Cadmium	<0.176		0.463	0.176	mg/Kg		05/05/25 10:00	05/05/25 19:38	5
Lead	<0.723		2.32	0.723	mg/Kg		05/05/25 10:00	05/05/25 19:38	5
Thallium	<0.176		0.463	0.176	mg/Kg		05/05/25 10:00	05/05/25 19:38	5

Lab Sample ID: MB 310-453041/1-A ^5
Matrix: Solid
Analysis Batch: 453930

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 453041

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.417		0.927	0.417	mg/Kg		05/05/25 10:00	05/06/25 18:30	5
Arsenic	<0.389		0.927	0.389	mg/Kg		05/05/25 10:00	05/06/25 18:30	5
Beryllium	<0.185		0.463	0.185	mg/Kg		05/05/25 10:00	05/06/25 18:30	5
Boron	<39.9		46.3	39.9	mg/Kg		05/05/25 10:00	05/06/25 18:30	5
Chromium	<0.482		1.39	0.482	mg/Kg		05/05/25 10:00	05/06/25 18:30	5
Cobalt	<0.167		0.463	0.167	mg/Kg		05/05/25 10:00	05/06/25 18:30	5
Copper	<0.741		1.39	0.741	mg/Kg		05/05/25 10:00	05/06/25 18:30	5
Lithium	<0.918		2.32	0.918	mg/Kg		05/05/25 10:00	05/06/25 18:30	5
Manganese	<1.11		2.32	1.11	mg/Kg		05/05/25 10:00	05/06/25 18:30	5
Molybdenum	<0.380		0.927	0.380	mg/Kg		05/05/25 10:00	05/06/25 18:30	5
Nickel	<0.556		1.39	0.556	mg/Kg		05/05/25 10:00	05/06/25 18:30	5

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QC Sample Results

Client: MidAmerican Energy Company
Project/Site: WSEC Beneficial Use

Job ID: 310-305210-1

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

Lab Sample ID: MB 310-453041/1-A ^5
Matrix: Solid
Analysis Batch: 453930

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 453041

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Selenium	<0.695		1.39	0.695	mg/Kg		05/05/25 10:00	05/06/25 18:30	5
Silver	<0.176		0.463	0.176	mg/Kg		05/05/25 10:00	05/06/25 18:30	5
Vanadium	<0.491		1.39	0.491	mg/Kg		05/05/25 10:00	05/06/25 18:30	5
Zinc	<3.06		4.63	3.06	mg/Kg		05/05/25 10:00	05/06/25 18:30	5

Lab Sample ID: LCS 310-453041/2-A ^20
Matrix: Solid
Analysis Batch: 453796

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 453041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	95.1	84.55		mg/Kg		89	80 - 120
Lead	190	197.2		mg/Kg		104	80 - 120
Thallium	95.1	77.25		mg/Kg		81	80 - 120

Lab Sample ID: LCS 310-453041/2-A ^20
Matrix: Solid
Analysis Batch: 453930

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 453041

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	190	174.3		mg/Kg		92	80 - 120
Beryllium	95.1	82.25		mg/Kg		87	80 - 120
Boron	190	192.4		mg/Kg		101	80 - 120
Chromium	95.1	89.30		mg/Kg		94	80 - 120
Cobalt	95.1	92.09		mg/Kg		97	80 - 120
Copper	190	169.6		mg/Kg		89	80 - 120
Manganese	95.1	84.68		mg/Kg		89	80 - 120
Molybdenum	190	170.2		mg/Kg		90	80 - 120
Nickel	190	181.7		mg/Kg		96	80 - 120
Selenium	380	343.2		mg/Kg		90	80 - 120
Silver	95.1	99.03		mg/Kg		104	80 - 120
Vanadium	95.1	88.20		mg/Kg		93	80 - 120
Zinc	190	165.6		mg/Kg		87	80 - 120

Lab Sample ID: LB 310-453715/1-C ^4
Matrix: Solid
Analysis Batch: 454189

Client Sample ID: Method Blank
Prep Type: SPLP West
Prep Batch: 453854

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	<0.00400		0.00800	0.00400	mg/L		05/07/25 09:30	05/08/25 15:45	4
Arsenic	<0.00220		0.00800	0.00220	mg/L		05/07/25 09:30	05/08/25 15:45	4
Barium	<0.00560		0.0400	0.00560	mg/L		05/07/25 09:30	05/08/25 15:45	4
Beryllium	<0.00132		0.00400	0.00132	mg/L		05/07/25 09:30	05/08/25 15:45	4
Cadmium	<0.000400		0.00200	0.000400	mg/L		05/07/25 09:30	05/08/25 15:45	4
Chromium	<0.00720		0.0200	0.00720	mg/L		05/07/25 09:30	05/08/25 15:45	4
Copper	<0.0128		0.0400	0.0128	mg/L		05/07/25 09:30	05/08/25 15:45	4
Lead	<0.00132		0.00400	0.00132	mg/L		05/07/25 09:30	05/08/25 15:45	4
Selenium	<0.00560		0.0200	0.00560	mg/L		05/07/25 09:30	05/08/25 15:45	4

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QC Sample Results

Client: MidAmerican Energy Company
Project/Site: WSEC Beneficial Use

Job ID: 310-305210-1

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

Lab Sample ID: LB 310-453715/1-C ^4
Matrix: Solid
Analysis Batch: 454189

Client Sample ID: Method Blank
Prep Type: SPLP West
Prep Batch: 453854

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Thallium	<0.00220		0.00400	0.00220	mg/L		05/07/25 09:30	05/08/25 15:45	4

Lab Sample ID: LCS 310-453715/2-C ^4
Matrix: Solid
Analysis Batch: 454189

Client Sample ID: Lab Control Sample
Prep Type: SPLP West
Prep Batch: 453854

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec Limits
		Result	Qualifier				
Antimony	4.00	3.879	E	mg/L		97	80 - 120
Arsenic	4.00	3.364		mg/L		84	80 - 120
Barium	2.00	1.802		mg/L		90	80 - 120
Beryllium	2.00	1.709		mg/L		85	80 - 120
Cadmium	2.00	1.722		mg/L		86	80 - 120
Chromium	2.00	1.841		mg/L		92	80 - 120
Copper	4.00	3.992		mg/L		100	80 - 120
Lead	4.00	3.761		mg/L		94	80 - 120
Selenium	8.00	6.577	E	mg/L		82	80 - 120
Thallium	2.00	1.848	E	mg/L		92	80 - 120

Lab Sample ID: 310-305210-1 MS
Matrix: Solid
Analysis Batch: 454189

Client Sample ID: Unit 3 FlyAsh
Prep Type: SPLP West
Prep Batch: 453854

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Antimony	0.00476	J	4.00	4.013	E	mg/L		100	75 - 125
Arsenic	<0.00220		4.00	3.540		mg/L		88	75 - 125
Beryllium	<0.00132		2.00	1.753		mg/L		88	75 - 125
Cadmium	<0.000400		2.00	1.802		mg/L		90	75 - 125
Chromium	0.00917	J	2.00	1.886		mg/L		94	75 - 125
Copper	<0.0128		4.00	4.013		mg/L		100	75 - 125
Lead	0.00354	J	4.00	3.880		mg/L		97	75 - 125
Selenium	0.00622	J	8.00	6.833	E	mg/L		85	75 - 125
Thallium	0.00228	J	2.00	1.912	E	mg/L		95	75 - 125

Lab Sample ID: 310-305210-1 MS
Matrix: Solid
Analysis Batch: 454330

Client Sample ID: Unit 3 FlyAsh
Prep Type: SPLP West
Prep Batch: 453854

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec Limits
	Result	Qualifier		Result	Qualifier				
Barium	15.1		2.00	17.74	4	mg/L		132	75 - 125

Method: 7470A - Mercury (CVAA)

Lab Sample ID: LB 310-453093/1-E
Matrix: Solid
Analysis Batch: 453745

Client Sample ID: Method Blank
Prep Type: TCLP
Prep Batch: 453415

Analyte	LB LB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	<0.00120		0.00200	0.00120	mg/L		05/02/25 13:45	05/05/25 09:38	1

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QC Sample Results

Client: MidAmerican Energy Company
 Project/Site: WSEC Beneficial Use

Job ID: 310-305210-1

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

Lab Sample ID: LCS 310-453093/2-C
 Matrix: Solid
 Analysis Batch: 453745

Client Sample ID: Lab Control Sample
 Prep Type: TCLP
 Prep Batch: 453415

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.0167	0.01768		mg/L		106	80 - 120

Lab Sample ID: LB 310-453715/1-B
 Matrix: Solid
 Analysis Batch: 454008

Client Sample ID: Method Blank
 Prep Type: SPLP West
 Prep Batch: 453824

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00120		0.00200	0.00120	mg/L		05/06/25 11:53	05/07/25 09:40	1

Lab Sample ID: LCS 310-453715/2-B
 Matrix: Solid
 Analysis Batch: 454008

Client Sample ID: Lab Control Sample
 Prep Type: SPLP West
 Prep Batch: 453824

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.0167	0.01709		mg/L		103	80 - 120

Lab Sample ID: 310-305210-1 MS
 Matrix: Solid
 Analysis Batch: 454008

Client Sample ID: Unit 3 FlyAsh
 Prep Type: SPLP West
 Prep Batch: 453824

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	<0.00120	F1	0.0167	0.01195	F1	mg/L		72	80 - 120

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 310-453561/1-A
 Matrix: Solid
 Analysis Batch: 454133

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 453561

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.00811		0.0198	0.00811	mg/Kg		05/06/25 13:47	05/08/25 09:33	1

Lab Sample ID: LCS 310-453561/2-A
 Matrix: Solid
 Analysis Batch: 454133

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 453561

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.148	0.1315		mg/Kg		89	80 - 120

Method: 4500 F C-2011 - Fluoride (Ion-selective Electrode)

Lab Sample ID: MB 310-453437/1-A
 Matrix: Solid
 Analysis Batch: 453564

Client Sample ID: Method Blank
 Prep Type: Soluble

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.486		0.991	0.486	mg/Kg			05/02/25 13:31	1

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QC Sample Results

Client: MidAmerican Energy Company
Project/Site: WSEC Beneficial Use

Job ID: 310-305210-1

Method: 4500 F C-2011 - Fluoride (Ion-selective Electrode) (Continued)

Lab Sample ID: LCS 310-453437/2-A
Matrix: Solid
Analysis Batch: 453564

Client Sample ID: Lab Control Sample
Prep Type: Soluble

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	19.8	20.34		mg/Kg		103	90 - 110

Lab Sample ID: LB 310-453716/1-A
Matrix: Solid
Analysis Batch: 454205

Client Sample ID: Method Blank
Prep Type: SPLP

Analyte	LB Result	LB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	<0.0790		0.200	0.0790	mg/L			05/08/25 21:08	1

Lab Sample ID: LCS 310-453716/2-A
Matrix: Solid
Analysis Batch: 454205

Client Sample ID: Lab Control Sample
Prep Type: SPLP

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.00	2.070		mg/L		104	90 - 110

Lab Sample ID: 310-305210-1 MS
Matrix: Solid
Analysis Batch: 454205

Client Sample ID: Unit 3 FlyAsh
Prep Type: SPLP

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	6.12		1.00	7.181	4	mg/L		106	75 - 125

Lab Sample ID: 310-305210-1 MSD
Matrix: Solid
Analysis Batch: 454205

Client Sample ID: Unit 3 FlyAsh
Prep Type: SPLP

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	6.12		1.00	6.976	4	mg/L		85	75 - 125	3	20

Method: 9045D - pH

Lab Sample ID: LCS 310-453111/1
Matrix: Solid
Analysis Batch: 453111

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH	7.00	7.0		SU		101	98 - 102

Method: D92 - Flashpoint

Lab Sample ID: 310-305210-1 DU
Matrix: Solid
Analysis Batch: 454191

Client Sample ID: Unit 3 FlyAsh
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Flashpoint	>201		>201.0		Degrees F		NC	16

QC Association Summary

Client: MidAmerican Energy Company
 Project/Site: WSEC Beneficial Use

Job ID: 310-305210-1

Metals

Prep Batch: 453041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	Total/NA	Solid	3050B	
MB 310-453041/1-A ^5	Method Blank	Total/NA	Solid	3050B	
LCS 310-453041/2-A ^20	Lab Control Sample	Total/NA	Solid	3050B	

Leach Batch: 453093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	TCLP	Solid	1311	
LB 310-453093/1-C	Method Blank	TCLP	Solid	1311	
LB 310-453093/1-E	Method Blank	TCLP	Solid	1311	
LCS 310-453093/2-B	Lab Control Sample	TCLP	Solid	1311	
LCS 310-453093/2-C	Lab Control Sample	TCLP	Solid	1311	

Prep Batch: 453223

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	TCLP	Solid	3010A	453093
LB 310-453093/1-C	Method Blank	TCLP	Solid	3010A	453093
LCS 310-453093/2-B	Lab Control Sample	TCLP	Solid	3010A	453093

Prep Batch: 453415

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	TCLP	Solid	7470A	453093
LB 310-453093/1-E	Method Blank	TCLP	Solid	7470A	453093
LCS 310-453093/2-C	Lab Control Sample	TCLP	Solid	7470A	453093

Analysis Batch: 453444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	TCLP	Solid	6010D	453223
LB 310-453093/1-C	Method Blank	TCLP	Solid	6010D	453223
LCS 310-453093/2-B	Lab Control Sample	TCLP	Solid	6010D	453223

Prep Batch: 453561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	Total/NA	Solid	7471B	
MB 310-453561/1-A	Method Blank	Total/NA	Solid	7471B	
LCS 310-453561/2-A	Lab Control Sample	Total/NA	Solid	7471B	

Leach Batch: 453715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	SPLP West	Solid	1312	
LB 310-453715/1-B	Method Blank	SPLP West	Solid	1312	
LB 310-453715/1-C ^4	Method Blank	SPLP West	Solid	1312	
LCS 310-453715/2-B	Lab Control Sample	SPLP West	Solid	1312	
LCS 310-453715/2-C ^4	Lab Control Sample	SPLP West	Solid	1312	
310-305210-1 MS	Unit 3 FlyAsh	SPLP West	Solid	1312	

Analysis Batch: 453745

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	TCLP	Solid	7470A	453415
LB 310-453093/1-E	Method Blank	TCLP	Solid	7470A	453415
LCS 310-453093/2-C	Lab Control Sample	TCLP	Solid	7470A	453415

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QC Association Summary

Client: MidAmerican Energy Company
 Project/Site: WSEC Beneficial Use

Job ID: 310-305210-1

Metals

Analysis Batch: 453796

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	Total/NA	Solid	6020B	453041
MB 310-453041/1-A ^5	Method Blank	Total/NA	Solid	6020B	453041
LCS 310-453041/2-A ^20	Lab Control Sample	Total/NA	Solid	6020B	453041

Prep Batch: 453824

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	SPLP West	Solid	7470A	453715
LB 310-453715/1-B	Method Blank	SPLP West	Solid	7470A	453715
LCS 310-453715/2-B	Lab Control Sample	SPLP West	Solid	7470A	453715
310-305210-1 MS	Unit 3 FlyAsh	SPLP West	Solid	7470A	453715

Prep Batch: 453854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	SPLP West	Solid	3010A	453715
LB 310-453715/1-C ^4	Method Blank	SPLP West	Solid	3010A	453715
LCS 310-453715/2-C ^4	Lab Control Sample	SPLP West	Solid	3010A	453715
310-305210-1 MS	Unit 3 FlyAsh	SPLP West	Solid	3010A	453715

Analysis Batch: 453930

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	Total/NA	Solid	6020B	453041
MB 310-453041/1-A ^5	Method Blank	Total/NA	Solid	6020B	453041
LCS 310-453041/2-A ^20	Lab Control Sample	Total/NA	Solid	6020B	453041

Analysis Batch: 454008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	SPLP West	Solid	7470A	453824
LB 310-453715/1-B	Method Blank	SPLP West	Solid	7470A	453824
LCS 310-453715/2-B	Lab Control Sample	SPLP West	Solid	7470A	453824
310-305210-1 MS	Unit 3 FlyAsh	SPLP West	Solid	7470A	453824

Analysis Batch: 454133

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	Total/NA	Solid	7471B	453561
MB 310-453561/1-A	Method Blank	Total/NA	Solid	7471B	453561
LCS 310-453561/2-A	Lab Control Sample	Total/NA	Solid	7471B	453561

Analysis Batch: 454189

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	SPLP West	Solid	6020B	453854
LB 310-453715/1-C ^4	Method Blank	SPLP West	Solid	6020B	453854
LCS 310-453715/2-C ^4	Lab Control Sample	SPLP West	Solid	6020B	453854
310-305210-1 MS	Unit 3 FlyAsh	SPLP West	Solid	6020B	453854

Analysis Batch: 454330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	SPLP West	Solid	6020B	453854
310-305210-1 MS	Unit 3 FlyAsh	SPLP West	Solid	6020B	453854

QC Association Summary

Client: MidAmerican Energy Company
 Project/Site: WSEC Beneficial Use

Job ID: 310-305210-1

General Chemistry

Analysis Batch: 453008

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	Total/NA	Solid	Moisture	

Leach Batch: 453089

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	Soluble	Solid	DI Leach	

Analysis Batch: 453111

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	Soluble	Solid	9045D	453089
LCS 310-453111/1	Lab Control Sample	Total/NA	Solid	9045D	

Leach Batch: 453437

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	Soluble	Solid	DI Leach	
MB 310-453437/1-A	Method Blank	Soluble	Solid	DI Leach	
LCS 310-453437/2-A	Lab Control Sample	Soluble	Solid	DI Leach	

Analysis Batch: 453564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	Soluble	Solid	4500 F C-2011	453437
MB 310-453437/1-A	Method Blank	Soluble	Solid	4500 F C-2011	453437
LCS 310-453437/2-A	Lab Control Sample	Soluble	Solid	4500 F C-2011	453437

Leach Batch: 453716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	SPLP	Solid	1312	
LB 310-453716/1-A	Method Blank	SPLP	Solid	1312	
LCS 310-453716/2-A	Lab Control Sample	SPLP	Solid	1312	
310-305210-1 MS	Unit 3 FlyAsh	SPLP	Solid	1312	
310-305210-1 MSD	Unit 3 FlyAsh	SPLP	Solid	1312	

Analysis Batch: 454191

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	Total/NA	Solid	D92	
310-305210-1 DU	Unit 3 FlyAsh	Total/NA	Solid	D92	

Analysis Batch: 454205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-305210-1	Unit 3 FlyAsh	SPLP	Solid	4500 F C-2011	453716
LB 310-453716/1-A	Method Blank	SPLP	Solid	4500 F C-2011	453716
LCS 310-453716/2-A	Lab Control Sample	SPLP	Solid	4500 F C-2011	453716
310-305210-1 MS	Unit 3 FlyAsh	SPLP	Solid	4500 F C-2011	453716
310-305210-1 MSD	Unit 3 FlyAsh	SPLP	Solid	4500 F C-2011	453716

Lab Chronicle

Client: MidAmerican Energy Company
Project/Site: WSEC Beneficial Use

Job ID: 310-305210-1

Client Sample ID: Unit 3 FlyAsh

Lab Sample ID: 310-305210-1

Date Collected: 04/28/25 10:00

Matrix: Solid

Date Received: 04/29/25 09:27

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
TCLP	Leach	1311			453093	U8FK	EET CF	04/29/25 14:30 - 04/30/25 07:00 ¹
TCLP	Prep	3010A			453223	QTZ5	EET CF	05/01/25 09:00
TCLP	Analysis	6010D		1	453444	ZRI4	EET CF	05/01/25 15:37
SPLP West	Leach	1312			453715	U8FK	EET CF	05/05/25 12:00 - 05/06/25 07:00 ¹
SPLP West	Prep	3010A			453854	QTZ5	EET CF	05/07/25 09:30
SPLP West	Analysis	6020B		10	454330	NFT2	EET CF	05/09/25 12:57
SPLP West	Leach	1312			453715	U8FK	EET CF	05/05/25 12:00 - 05/06/25 07:00 ¹
SPLP West	Prep	3010A			453854	QTZ5	EET CF	05/07/25 09:30
SPLP West	Analysis	6020B		4	454189	ZRI4	EET CF	05/08/25 15:50
SPLP West	Leach	1312			453715	U8FK	EET CF	05/05/25 12:00 - 05/06/25 07:00 ¹
SPLP West	Prep	7470A			453824	QTZ5	EET CF	05/06/25 11:53
SPLP West	Analysis	7470A		1	454008	F5MW	EET CF	05/07/25 09:45
TCLP	Leach	1311			453093	U8FK	EET CF	04/29/25 14:30 - 04/30/25 07:00 ¹
TCLP	Prep	7470A			453415	F5MW	EET CF	05/02/25 13:45
TCLP	Analysis	7470A		1	453745	F5MW	EET CF	05/05/25 09:47
Total/NA	Prep	7471B			453561	F5MW	EET CF	05/06/25 13:47
Total/NA	Analysis	7471B		1	454133	F5MW	EET CF	05/08/25 09:56
SPLP	Leach	1312			453716	U8FK	EET CF	05/05/25 12:00 - 05/06/25 07:00 ¹
SPLP	Analysis	4500 F C-2011		1	454205	WZC8	EET CF	05/08/25 21:15
Soluble	Leach	DI Leach			453089	T5AC	EET CF	04/29/25 13:55
Soluble	Analysis	9045D		1	453111	T5AC	EET CF	04/29/25 15:36
Total/NA	Analysis	D92		1	454191	ENB7	EET CF	05/08/25 17:12
Total/NA	Analysis	Moisture		1	453008	W9YR	EET CF	04/29/25 11:24

Client Sample ID: Unit 3 FlyAsh

Lab Sample ID: 310-305210-1

Date Collected: 04/28/25 10:00

Matrix: Solid

Date Received: 04/29/25 09:27

Percent Solids: 99.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			453041	QTZ5	EET CF	05/05/25 10:00
Total/NA	Analysis	6020B		5	453796	NFT2	EET CF	05/05/25 20:49
Total/NA	Prep	3050B			453041	QTZ5	EET CF	05/05/25 10:00
Total/NA	Analysis	6020B		100	453930	NFT2	EET CF	05/06/25 19:45
Soluble	Leach	DI Leach			453437	T5AC	EET CF	05/01/25 15:16
Soluble	Analysis	4500 F C-2011		1	453564	WZC8	EET CF	05/02/25 14:26

¹ This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Laboratory References:

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

Accreditation/Certification Summary

Client: MidAmerican Energy Company
Project/Site: WSEC Benefical Use

Job ID: 310-305210-1

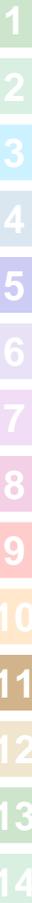
Laboratory: Eurofins Cedar Falls

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

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-25

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
4500 F C-2011		Solid	Fluoride
6020B	3050B	Solid	Lithium
D92		Solid	Flashpoint
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids



Method Summary

Client: MidAmerican Energy Company
Project/Site: WSEC Beneficial Use

Job ID: 310-305210-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
7471B	Mercury (CVAA)	SW846	EET CF
4500 F C-2011	Fluoride (Ion-selective Electrode)	SM	EET CF
9045D	pH	SW846	EET CF
D92	Flashpoint	ASTM	EET CF
Moisture	Percent Moisture	EPA	EET CF
1311	TCLP Extraction	SW846	EET CF
1312	SPLP Extraction	SW846	EET CF
3010A	Preparation, Total Metals	SW846	EET CF
3050B	Preparation, Metals	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF
7471B	Preparation, Mercury	SW846	EET CF
DI Leach	Deionized Water Leaching Procedure	ASTM	EET CF

Protocol References:

ASTM = ASTM International

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

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

Laboratory References:

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



Environment Testing
America



310-305210 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information			
Client <u>Madamerica</u>			
City/State:	<u>Council Bluffs IA</u>	Project.	
Receipt Information			
Date/Time Received:	<u>4/29/25</u>	<u>0830</u>	Received By: <u>[Signature]</u>
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 _____	
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 checked="" type="checkbox"/> Other <u>multia</u> <input type="checkbox"/> NONE		
Thermometer ID:	<u>R</u>	Correction Factor (°C): <u>to 0</u>	
• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature			
Uncorrected Temp (°C):	<u>6.9</u>	Corrected Temp (°C): <u>6.9</u>	
• Sample Container Temperature			
Container(s) used:	<u>Other client out</u>	<u>CONTAINER 2</u>	
Uncorrected Temp (°C):	<u>11.4</u>		
Corrected Temp (°C):	<u>11.4</u>		
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: MidAmerican Energy Company

Job Number: 310-305210-1

SDG Number:

Login Number: 305210

List Number: 1

Creator: Homolar, Dana J

List Source: Eurofins Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is \leq 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.	True	
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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	