



Consulting  
Engineers and  
Scientists

December 19, 2023  
Project 2103691

Mr. Eric Kovatch  
WEC Energy Group – Business Services, LLC  
333 W. Everett Street, A231  
Milwaukee, Wisconsin 53203

**Re: 2023 Landfill Inspection Report  
Caledonia Ash Landfill  
We Energies  
Town of Caledonia, Racine County Wisconsin**

Dear Mr. Kovatch:

GEI Consultants, Inc. (GEI) is pleased to provide this landfill inspection report for the We Energies Caledonia Ash Landfill. The inspection was completed to comply with *40 CFR 257 Subpart D – Standards for the Disposal of Coal Combustion Residuals (CCR) in Landfills and Surface Impoundments* and specifically with *§ 257.84(b) Annual inspections by a qualified professional engineer.*

***§ 257.84 Inspection Requirements for CCR Landfills***

***(b) Annual inspections by a qualified professional engineer.***

- (1) Existing and new CCR landfills and any lateral expansion of a CCR landfill must be inspected on a periodic basis by a qualified professional engineer to ensure that the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and accepted good engineering standards. The inspection must, at a minimum, include:
  - (i) A review of available information regarding the status and condition of the CCR unit, including, but not limited to, files available in the operating record (e.g., the results of inspections by a qualified person and results of previous annual inspections); and
  - (ii) A visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit.
- (2) *Inspection report.* The qualified professional engineer must prepare a report following each inspection that addresses the following:
  - (i) Any changes in geometry of the structure since the previous annual inspection;
  - (ii) The approximate volume of CCR contained in the unit at the time of the inspection;
  - (iii) Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit; and
  - (iv) Any other change(s) which may have affected the stability or operation of the CCR unit since the previous annual inspection.

## Background

The We Energies Caledonia Ash Landfill is in the North 1/2 of Section 1, Township 4 North, Range 22 East, Village of Caledonia, Racine County, Wisconsin. The landfill is permitted by the Wisconsin Department of Natural Resources (WDNR) under License Number 03232. Figure 1 - Site Location Figure, shows the location of the landfill relative to the Oak Creek Power Plant. The landfill was permitted by the WDNR on August 27, 1987, with the issuance of a Conditional Plan of Operation Approval. The facility is licensed and approved as a 45-acre, 4,050,000 cubic yard (cy) landfill. The landfill was divided into 18 sequential cells, 10 cells at base grade and 8 cells overlying the base grade cells. However, based upon the May 19, 2010, Plan of Operation Modification Approval, the landfill development plan has been revised to eliminate the overlying cells. Base grade cells 1, 2, 3, 4, 6, 8, and 10 have been constructed. Cells 12, 14, and 16 are permitted but have not been constructed. Cell 1 has been closed and the perimeter slopes of Cell 2 have been closed. The east perimeter slope of Cell 6 and Cell 8 was closed in late 2022 into early 2023 and has yet to be approved by the WDNR.

GEI was retained to perform an annual inspection of the landfill in compliance with § 257.84(b) *Annual inspections by a qualified professional engineer*. The inspection was performed on November 6, 2023. Copies of the site location figure, inspection form, and landfill inspection photo log are appended to this letter-report and constitute the entirety of the report.

## Site Inspection

The landfill site inspection was performed by Mr. John M. Trast, P.E., D.GE on November 6, 2023. The annual site inspection included an inspection of the perimeter berms, waste surfaces and slopes, final covers, interior and exterior storm water controls, the leachate collection lift station, the leachate storage and load-out controls, the leachate load-out pad, the site access road, and the cell entrance.

There were no signs or evidence of any distress or malfunction of the CCR unit, or any conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit. The perimeter berms and waste slopes did not show any evidence of structural weakness or instability. The leachate lift station and load-out facilities were operational. The interior and exterior storm water controls were free of obstruction and provided plenty of capacity for stormwater storage and conveyance. The access road, load-out pad, and cell entrance were clean and free of obstructions. The fugitive dust control plan is effective as there was no evidence of fugitive dust around the perimeter of the landfill and no observed dust from the screening and stockpiling operation.

At the time of the inspection there was approximately 1,665,000 cubic yards of CCR disposed of in the Caledonia Ash Landfill.

## Conclusion

On November 6, 2023, a GEI licensed professional engineer completed an annual inspection of the Caledonia Ash Landfill in compliance with § 257.84(b) *Annual inspections by a qualified professional engineer*. The landfill appeared to be in excellent condition. On the exterior slopes the vegetation is well established with no significant erosion, no woody vegetation, no animal burrows, and no areas of instability or structural weakness. On the interior of the landfill the ash is graded and compacted with no significant erosion rills observed. Contact stormwater is routed,

as designed to the designated infiltration area, and there was no water observed or ponded within the disposal area. The beneficial use stockpiles and processing area is neat and orderly, graded to drain, and no visible dust was observed during the inspection of the landfill or evidence of fugitive dust outside the limits of the landfill.

The inspection was completed by John M. Trast, P.E., D.GE

*"I am a licensed professional engineer in the State of Wisconsin in accordance with the requirements of Chapter A-E 4, Wisconsin Administrative Code; that this document has been prepared in accordance with the Rules of Professional Conduct in Chapter A-E 8, Wisconsin Administrative Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in Chapters NR 500 to 538, Wisconsin Administrative Code and 40 CFR 257."*

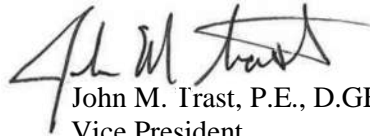
If you have any questions regarding this report, please contact John Trast at 920-455-8299.

Sincerely,

GEI CONSULTANTS, INC.



Andrew J. Schwoerer, P.G.  
Project Professional



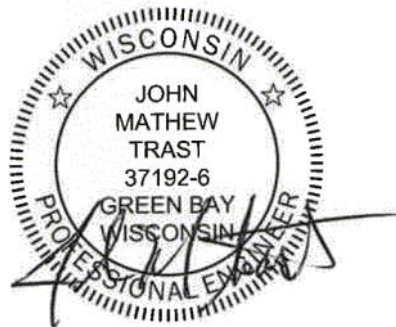
John M. Trast, P.E., D.GE  
Vice President

Attachments:

- Figure 1 – Site Location Figure
- Caledonia Ash Landfill CCR Compliance – Annual Inspection Form
- Caledonia Ash Landfill CCR Inspection – Photo Log

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WEC\_Caledonia 2022 CCR Landfill Inspection Rpt.docx





OAK CREEK,  
WISCONSIN

PRIVATE HAUL ROAD

ASH LANDFILL

OAK CREEK  
POWER PLANT

NOT TO SCALE

Landfill Inspection Report  
Caledonia Ash Landfill  
Caledonia, Wisconsin

WEC Business Services, LLC  
Milwaukee, Wisconsin



CALEDONIA ASH LANDFILL  
SITE LOCATION FIGURE

Project 2103691

December 2023

Fig. 1

## CALEDONIA ASH LANDFILL CCR COMPLIANCE - ANNUAL INSPECTION FORM

INSPECTOR: John M. Trast, P.E., D.GE

INSPECTION DATE/TIME: 11/6/23 10:00 AM

### WEATHER:

Temperature: 45° F  
 Conditions: Sunny  
 Wind: Moderate  
 Wind Direction: E  
 Precipitation: None

### LEACHATE COLLECTION SYSTEM:

Load-out Facility:	South Tank	North Tank	Lift Station:
High level alarms:	No	No	Pump #1: <span style="background-color: #90EE90;">Green</span>
Low level alarms:	No	No	Pump #2: <span style="background-color: #90EE90;">Green</span>
Leak alarms:	No	No	Control Panel: <span style="background-color: #90EE90;">Green</span>
Levels:	Empty	1/4	Inlet Pipes: Exposed
Pump:	<span style="background-color: #90EE90;">Green</span>	<span style="background-color: #90EE90;">Green</span>	
Pad Condition:	Good		

**Visual inspection of all leachate manhole inverts performed on Monday, November 6, 2023**

**Note: Pumps alternating between South Tank and North Tank.**

### WETLAND CONTROL

Pump station operational :	Yes	Pump Discharge:	Yes
Wetland level below culvert inlet :	Yes	Note: If wetland level is above culvert inlet, make sure pump is discharging into ditch on east side of access road	
Culvert inlet clear :	Yes		
<b>Comments :</b> Normal Operation			

**Note: Free of debris/floatables.**

### STORMWATER / EROSION CONTROLS / SLOPE STABILITY

Landfill Perimeter Ditches:	<input checked="" type="checkbox"/>		
Ditch Check Dams :	<input checked="" type="checkbox"/>		
Silt Fence @ Soil Stockpiles :	<input type="checkbox"/>		
Diversion Berms, Ditches & Check Dams @ Clay Stockpile :	<input checked="" type="checkbox"/>		
Culverts (Inlets & Outlets) :	<input checked="" type="checkbox"/>	<b>Stability/Erosion of Covers &amp; Waste Slopes:</b>	
		Appear stable & no significant erosion:	Yes
Comments : Soil stockpile has been vegetated and does not have a silt fence.			
<b>Is this a special inspection after a rainfall event of greater than 0.5"?</b> <b>No</b>			
<b>on:</b>			

**Note: Check mark indicates that the stormwater controls are adequate.**

### LANDFILL OPERATIONS:

Fugitive Dust Control:	In-Cell Stormwater Management		
Tracking Pads :	<input checked="" type="checkbox"/>	Upper Ditch :	<input checked="" type="checkbox"/>
Cattle Guards :	<input checked="" type="checkbox"/>	Lower Ditch :	<input checked="" type="checkbox"/>
Wheel Wash :	<input checked="" type="checkbox"/>	Down Flume :	<input checked="" type="checkbox"/>
Access Road Clean:	<input checked="" type="checkbox"/>	Culverts :	<input checked="" type="checkbox"/>
Landfill Surfaces Groomed:	<input checked="" type="checkbox"/>	Reservoirs :	<input checked="" type="checkbox"/>
Airbourne Dust Visible:	No	Sediment :	Good
Sign of Recent Dust Deposition:	No	Standing Water :	No
<b>Comments:</b> None			

**Note: Check mark indicates that the features are acceptable.**

# Caledonia Ash Landfill CCR Inspection –

## Photo Log

Date: 11/06/2023

Project No.: 2103691

Client: We Energies



<i>Photo No. 1 – Looking north at active cells.</i>	2
<i>Photo No. 2 – Stockpiled CCR inside Cell 2.</i>	2
<i>Photo No. 3 – Leachate collection ditch behind Cell 6 and 8 partial cover.</i>	3
<i>Photo No. 4 – West perimeter berm and stormwater collection ditch, looking north.</i>	3
<i>Photo No. 5 – South perimeter berm looking northeast.</i>	4
<i>Photo No. 6 – East perimeter berm and stormwater ditch, looking north.</i>	4
<i>Photo No. 7 – Vegetation on Cell 6 and 8 perimeter slope.</i>	5
<i>Photo No. 8 – Cover drain outlet at the toe of the Cell 6 and 8 slope.</i>	5
<i>Photo No. 9 – Leachate load-out facility.</i>	6
<i>Photo No. 10 – Leachate tank control panel.</i>	6
<i>Photo No. 11 – Fully vegetated cover soil stockpile located north of the landfill.</i>	7

# Caledonia Ash Landfill CCR Inspection – Photo Log

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Photo No. 1 – Looking north at active cells.



Photo No. 2 – Stockpiled CCR inside Cell 2.

# Caledonia Ash Landfill CCR Inspection – Photo Log

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Photo No. 3 – Leachate collection ditch behind Cell 6 and 8 partial cover.

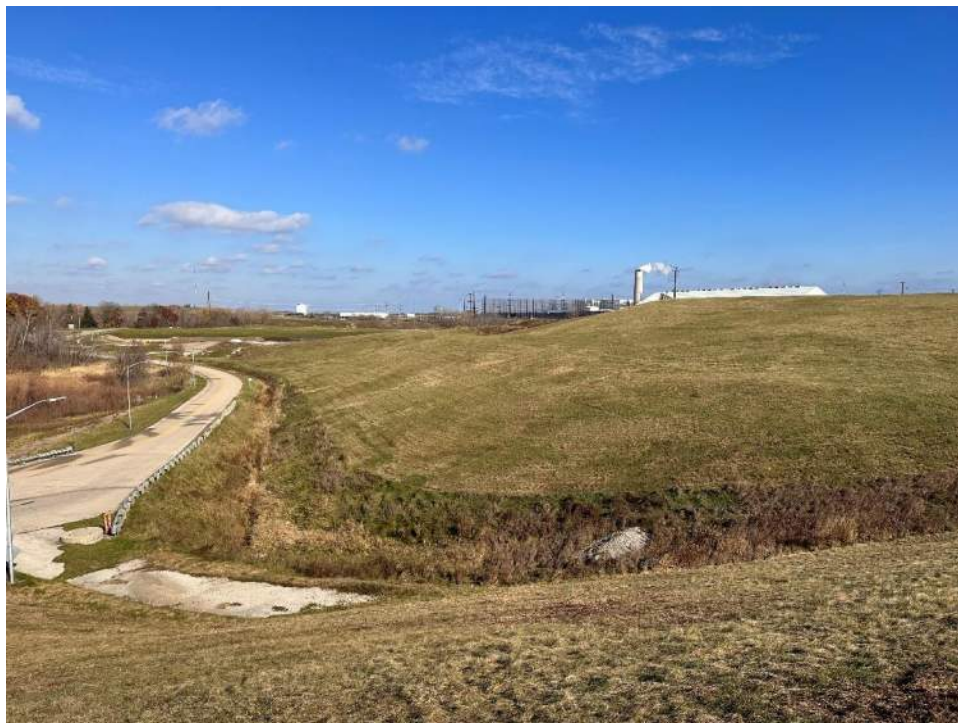


Photo No. 4 – West perimeter berm and stormwater collection ditch, looking north.



# Caledonia Ash Landfill CCR Inspection – Photo Log

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Photo No. 5 – South perimeter berm looking northeast.



Photo No. 6 – East perimeter berm and stormwater ditch, looking north.

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Photo No. 7 – Vegetation on Cell 6 and 8 perimeter slope.

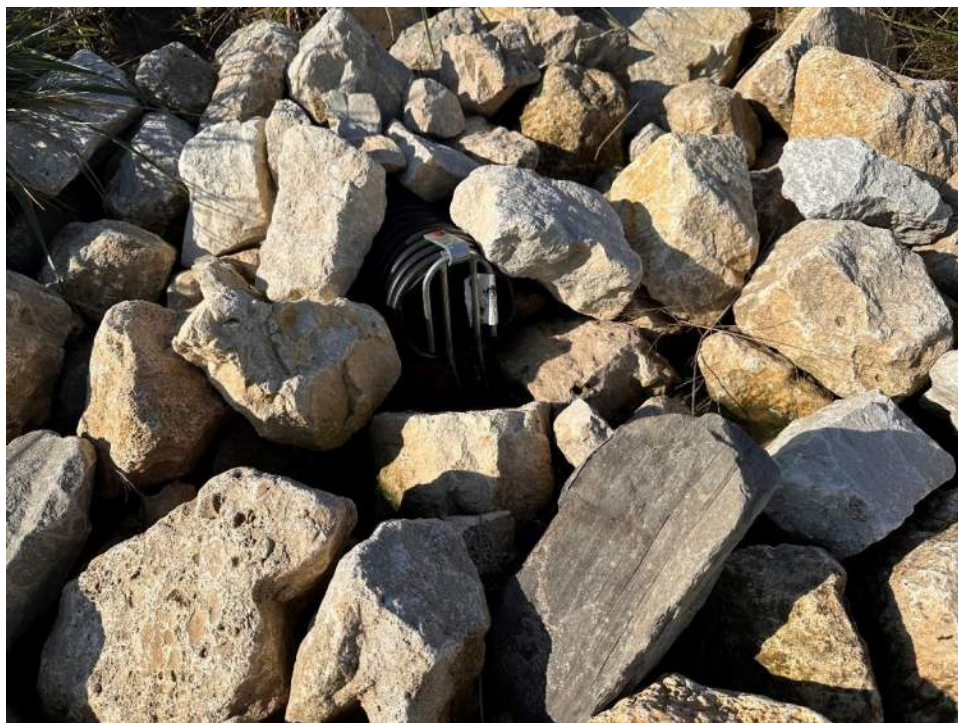


Photo No. 8 – Cover drain outlet at the toe of the Cell 6 and 8 slope.

# Caledonia Ash Landfill CCR Inspection – Photo Log

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Photo No. 9 – Leachate load-out facility.



Photo No. 10 – Leachate tank control panel.

# Caledonia Ash Landfill CCR Inspection – Photo Log

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Photo No. 11 – Fully vegetated cover soil stockpile located north of the landfill.