Consulting Engineers and Scientists

December 19, 2023
Project 2103683

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

Re: 2023 Landfill Inspection Report
Pleasant Prairie Power Plant Ash Landfill
We Energies
Pleasant Prairie, Kenosha County, Wisconsin

Dear Mr. Kovatch:

GEI Consultants, Inc. (GEI) is pleased to provide this landfill inspection report for the Pleasant Prairie Power Plant (PPPP) Ash Landfill. The inspection was completed to comply with *40 CFR 257 Subpart D – Standards for the Disposal of Coal Combustion Residuals 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

GEI Consultants, Inc.
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920.455.8200

(iv) Any other change(s) which may have affected the stability or operation of the CCR unit since the previous annual inspection.

Background

We Energies owns and operates a solid waste disposal facility adjacent to PPPP in Section 9, Township 1 North, Range 22 East, in the village of Pleasant Prairie, Kenosha County, Wisconsin. The landfill property is bounded on the north by State Highway 50 (75th Street), on the south by Bain Station Road, and on the east and west by active rail lines. The We Energies PPPP Ash Landfill is regulated as an industrial waste landfill by the Wisconsin Department of Natural Resources (WDNR) under the provisions of Chapter 289 Wisconsin State Statues, and all applicable requirement of Chapters NR 500 of the Wisconsin Administrative Code.

The design, construction, operation, closure, and post-closure care requirements are specified in the WDNR conditionally approved Plan of Operation, License No. 2786, FID# 230056310. Cell 1 of the PPPP Ash Landfill was reconstructed in 2013-2014 with an area of 7.4 acres and a design airspace capacity of 199,200 cy. Figure 1 - Site Location Figure, shows the location of the PPPP Ash Landfill.

On August 31, 2018, a Plan of Operation Modification was submitted to the WDNR for the premature closure of Cell 1. The Plan of Operation Modification included a proposal to modify the final waste grades of Cell 1 to 5% to allow construction of the final cover. Premature closure of Cell 1 occurred to reduce leachate production and operational expenses of the landfill due to the decommissioning of the power plant. Final cover over Cell 1 was constructed over a period of three phases, with the first phase (eastern 2.6 acres) approved by the WDNR on July 18, 2019, the second phase (central 3.2 acres) approved by the WDNR on March 15, 2021, and the third phase (western 1.3 acres) approved by the WDNR on July 17, 2022. The We Energies PPPP Ash Landfill contains approximately 113,000 cubic yards of CCR, is closed, and will begin its post closure care period once receiving its closure licensing from 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, landfill inspection form, and landfill inspection photo log are appended to this letter-report and constitute the entirety of the report.

Site Inspections

The landfill site inspection was performed by Mr. Andrew Schwoerer, P.G. and Mr. John M. Trast, P.E., D.GE on November 6, 2023, and December 15, 2023. The annual site inspection included an inspection of the perimeter berms, slopes, final cover, exterior storm water controls, the leachate collection sump controls, 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 safety of the CCR unit. The perimeter berms did not show any evidence of structural weakness, erosion, or instability. The leachate sump and load-out facilities were operational and being properly maintained. The exterior storm water controls were free of obstruction and are operational. The access road, load-out pad, and cell entrance were clean and free of obstructions. The overall final cover had a good growth of vegetation, with no visual bare areas.

Conclusion

On November 6, 2023, and December 15, 2023 a GEI licensed professional engineer completed an annual inspection of the We Energies PPPP Ash Landfill in compliance with *§ 257.84(b) Annual inspections by a qualified professional engineer*. Overall, the landfill appeared to be in very good 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. The leachate system is functioning as designed and the landfill operators are keeping up with leachate hauling. Based on observations and discussions with We Energies, the landfill has been constructed and is being operated in accordance with WDNR License No. 2786.

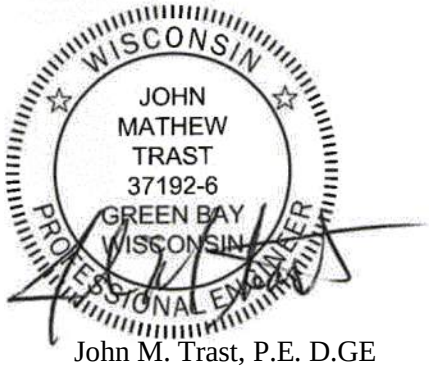
The inspection was completed by John M. Trast, P.E., D.GE

"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
PPPP Ash Landfill CCR Compliance – Annual Inspection Form
Pleasant Prairie Power Plant Ash Landfill CCR Inspection – Photo Log

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Landfill Inspection Report Pleasant Prairie Power Plant Ash Landfill Pleasant Prairie, Wisconsin	GEI Consultants	PLEASANT PRAIRIE POWER PLANT ASH LANDFILL SITE LOCATION FIGURE
WEC Business Services, LLC Milwaukee, Wisconsin	Project 2103683	December 2023 Fig. 1

Form Date: 11/30/2020

PPPP ASH LANDFILL CCR COMPLIANCE - ANNUAL INSPECTION

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

INSPECTION DATE/TIME: 11/6/2023, 12:30 PM

WEATHER:

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

LEACHATE COLLECTION SYSTEM:

Load-out Facility:

High level alarms:	No
Low level alarms:	No
Leak alarms	No
Level Sensor 1:	1.6 ft
Ultrasonic Level Volume:	9040 gallons
Pump:	Available
Pad Condition:	Good

Sump:

Pump #1:	Available
Pump #2:	Available
Control Panel:	Available
Level:	P1=12" / P2=9"

Note: 50" sump level equates to 12" of head on base liner

Comments: Leachate collection system is in good working condition. Leachate levels are being maintained in compliance with the operating license requirements.

STABILITY/EROSION OF FINAL COVERS & WASTE SLOPES:

Final Covers: ☑

~~Waste Slopes:~~ ☐

Comments : The eastern 2.6 acres were closed in late 2018, the middle 3.2 acres were closed in late 2020 and western 1.3 acres closed in 2022. The final cover slopes appear stable with no observed instability, no significant erosion, no woody vegetation, or no animal burrows. Everything with the crest appeared to be in good condition with no observed instability or significant erosion.

Note: Check mark indicates slope appears stable and no significant erosion.

LANDFILL OPERATIONS:

Fugitive Dust Control:

~~Tracking Pads:~~	☐
~~Cattle Guards:~~	☐
Access Road Clean:	☑
~~Landfill Surfaces Groomed:~~	☐
Airbourne Dust Visible:	No
Sign of Recent Dust Deposition:	No

Stormwater Management

Exterior Ditches:	☑
~~Interior Ditches:~~	☐

Comments: The landfill currently does not have an active landfill surface and does not intend to create additional airspace with a lateral expansion. The landfill is in the proess of becoming administratively close and will subsequently begin its post closure care period.

Note: Check mark indicates that the features are acceptable.

Pleasant Prairie Power Plant Ash Landfill CCR Inspection – Photo Log

Date: 11/06/2023
Project No.: 2103683
Client: We Energies

Pleasant Prairie Power Plant Ash Landfill
CCR Inspection – Photo Log

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Photo No. 1 – Looking southeast at underground leachate storage tanks.

Photo No. 2 – Leachate sump collection vault.

Pleasant Prairie Power Plant Ash Landfill
CCR Inspection – Photo Log

Date: 11/06/2023
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Photo No. 3 – Looking west from the Cell 1 cover at the leachate loadout pad.

Photo No. 4 – North slope of Cell 1, looking southeast, showing thick vegetation.

Pleasant Prairie Power Plant Ash Landfill
CCR Inspection – Photo Log

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Photo No. 5 – East slope of Cell 1, looking northwest.

Photo No. 6 – Cleanout and leachate headwell on the east end of Cell 1.

Pleasant Prairie Power Plant Ash Landfill
CCR Inspection – Photo Log

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Photo No. 7 – South slope of Cell 1 and perimeter stormwater ditch.

Photo No. 8 – Final cover drain pipe outlet on the south slope.

Pleasant Prairie Power Plant Ash Landfill
CCR Inspection – Photo Log

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Photo No. 9 – Top of Cell 1 cover, looking northwest.

Photo No. 10 – Top of Cell 1 cover, looking east.

Pleasant Prairie Power Plant Ash Landfill
CCR Inspection – Photo Log

Date: 11/06/2023
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Photo No. 11 – Top of Cell 1 cover, looking south.