

Consulting  
Engineers and  
Scientists

December 10, 2021  
Project 2103691

Mr. Robert J. Meidl  
WEC Energy Group – Business Services  
333 West Everett Street, A231  
Milwaukee, Wisconsin 53203

**Re: Landfill Inspection Report for the  
Weston Disposal Site No. 3  
Wisconsin Public Service Corporation  
Town of Knowlton, Marathon County, Wisconsin**

Dear Mr. Meidl:

GEI Consultants, Inc. (GEI) is pleased to provide this landfill inspection report for the Wisconsin Public Service Corporation (WPS) Weston Disposal Site No. 3. 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 generally 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 landfill, located in the E 1/2 of the NW 1/4 and W 1/2 of the NE 1/4, Section 23, Township 26 North, Range 7 East, Town of Knowlton, Marathon County, Wisconsin, is permitted by the Wisconsin Department of Natural Resources (WDNR) under License No. 3067. Figure 1 - Site Location Figure, shows the location of the landfill relative to the Weston Power Plant. The landfill was permitted by the WDNR on December 11, 2014, with the issuance of a Conditional Plan of Operation Approval. The facility is licensed and approved as a 57.6-acre, 4,075,500 cubic yard (cy) landfill. Cells 1 and 2 were constructed during the 2015 construction season. Construction included the new landfill cells and installation of a leachate force main, storage tank, and load-out system in late December 2015. The construction of Cells 1 and 2 was approved by WDNR on April 22, 2016, and Cell 2 was placed into service on June 27, 2016. WPS has filled Cell 2 episodically since it was placed into service and has constructed approximately 3.5 acres of final cover system over the exterior slopes of Cell 2.

On August 26, 2021, Cell 1 was placed into service after a notification was submitted to the WDNR. Prior to placing the frost protection layer in Cell 1, vegetation was stripped from the sand drainage layer and thickness checks were performed to ensure there was a minimum of 12 inches of sand over the liner system. On August 25, 2021, two vibrating wire piezometers were installed to record leachate depth in the liner system. Additionally, the Cell 1 leachate collection piping was tied into Cell 2 and the entire leachate collection system was jetted and televised in November 2021 to ensure the system is functioning as originally designed.

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 11, 2021. Copies of the site location figure 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 Trast, P.E. on November 10, 2021. The inspection included a meeting with the landfill operator, River View Construction to discuss the landfill operations; observation of landfill cells, observation and inspection of the ongoing Cell 2 partial final cover construction, the Cell 2 partial final cover slopes, the Cell 1 frost protection layer placement, and storm water management features for the site. The following are the observed conditions as of the date of the annual inspection:

- (i) Cell 1 was placed into service on August 26, 2021, with the placement of the frost protection layer. As of December 10, 2021, approximately 57,200 cy of CCR have been disposed of in Cell 1. CCR placement consists of the 4-foot frost protection layer on the floor of the cell.
- (ii) Cell 2 was placed into service on June 27, 2016. As of December 10, 2021, approximately 389,000 cy of CCR have been disposed of in Cell 2. CCR placement consists of the 4-foot frost protection layer on the floor of the cell and CCR placed to final waste grades. Permanent final cover has been constructed over approximately 3.5 acres of the perimeter slopes of Cell 2 in 2016 and 2020; the remainder of the cell has CCR placed in accordance with the waste filling and storm water management plans.

(iii) The perimeter slopes of Cells 1 and 2, and the final cover slopes of Cell 2 appear to be in excellent condition with no signs of instability, structural weakness, significant erosion, woody vegetation, or animal burrows.

### Conclusion

On November 10, 2021, a GEI licensed professional engineer completed an annual inspection of the WPS Weston Disposal Site No. 3 in compliance with § 257.84(b) *Annual inspections by a qualified professional engineer*. Cell 2 of the landfill is operational and received approximately 13,200 cy of CCR during 2021. Cell 1 is operational and received approximately 57,200 cy of CCR during 2021. The perimeter slopes of Cell 2 appear to be in excellent condition with no significant erosion, no woody vegetation, no animal burrows, and no areas of instability or structural weakness. Approximately 3.5 acres of permanent final cover was constructed in 2016 and 2020 which included the south perimeter slope, southeast corner, and east perimeter slope of Cell 2. At the time of the inspection the permanent final cover constructed in 2016 and 2020 is in excellent condition. The vegetation is well established with no erosion, no woody vegetation, no animal burrows, and no areas of instability or structural weakness.

- ✓ The inspection was completed by John, M. Trast, P.E. 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 me at 920-455-8299.

Sincerely,

GEI CONSULTANTS, INC.



Andrew Schwoerer  
Project Professional



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

### Attachments:

Figure 1 - Site Location Figure  
Landfill Inspection Photo Log

AJS:cah

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WPS\_WDS3 2021 CCR Landfill Inspection Rpt\_12-10-2021.docx





WISCONSIN PUBLIC SERVICE  
TOWN OF KNOWLTON, WISCONSIN



WESTON DISPOSAL SITE NO. 3  
SITE LOCATION FIGURE

Project 1803049

December 5, 2018

Fig. 1

<i>Photo No. 1 – Looking north showing the Cell 2 active filling area.</i>	<u>1</u>
<i>Photo No. 2 - Along cell 2-3 intercell berm.</i>	<u>1</u>
<i>Photo No. 3 – Along south perimeter berm near Leachate Extraction Vault P2B.</i>	<u>2</u>
<i>Photo No. 4 – Looking at the south perimeter slope from the top of the final cover.</i>	<u>2</u>
<i>Photo No. 5 - From top of Cell 2 partial final cover at Stormwater Basin 2 and Stormwater Basin 3.</i>	<u>3</u>
<i>Photo No. 6 - From top of Cell 2 partial final cover at Stormwater Basin 2.</i>	<u>3</u>
<i>Photo No. 7 - Placing and spreading the frost protection layer in August. Vegetation was stripped before placement.</i>	<u>4</u>
<i>Photo No. 8 - Looking north to the Cell 1 active filling area showing frost protection layer</i>	<u>4</u>
<i>Photo No. 9 - Looking east at Cell 1 perimeter slopes showing the frost protection layer.</i>	<u>5</u>
<i>Photo No. 10 - Looking at north ash slope in Cell 2 and frost protection layer in Cell 1.</i>	<u>5</u>
<i>Photo No. 11 - Looking south at the east stormwater control ditch.</i>	<u>6</u>
<i>Photo No. 12 – Leachate collection tank and loadout facility.</i>	<u>6</u>



Photo 1 – Looking north showing the Cell 2 active filling area.



Photo 2 - Along Cell 2-3 intercell berm.



Photo 3 – Along south perimeter berm near Leachate Extraction Vault P2B.



Photo 4 – Looking at the south perimeter slope from the top of the final cover.



Photo 5 - From top of Cell 2 partial final cover at Stormwater Basin 2 and Stormwater Basin 3.



Photo 6 - From top of Cell 2 partial final cover at Stormwater Basin 2.





Photo 7 – Placing and spreading the frost protection layer in August. Vegetation was stripped before placement.



Photo 8 – Looking north to the Cell 1 active filling area showing frost protection layer.



Photo 9 - Looking east at Cell 1 perimeter slopes showing the frost protection layer.



Photo 10 - Looking at north ash slope in Cell 2 and frost protection layer in Cell 1.



Photo 11 - Looking south at the east stormwater control ditch.



Photo 12 – Leachate collection tank and loadout facility.