



Consulting
Engineers and
Scientists

December 19, 2022
Project 2103691

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

**Re: 2022 Landfill Inspection Report for the
Weston Disposal Site No. 3
Wisconsin Public Service Corporation
Town of Knowlton, Marathon County, Wisconsin**

Dear Mr. Kovatch:

GEI Consultants, Inc. (GEI) is pleased to provide this landfill inspection report for the Wisconsin Public Service Corporation (WPS) Weston Disposal Site No. 3 (WDS3). 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 have a constructed area of 15.1 acres and an operational capacity of 667,900 cy. Both cells were constructed 2015 along with the installation of a leachate force main, storage tank, and load-out system. The construction of Cells 1 and 2 was approved by WDNR on April 22, 2016. WPS placed Cell 2 into service on June 27, 2016 and Cell 1 on August 16, 2021. WPS has filled the cells episodically since being placed into service and has constructed permanent final cover over approximately 3.5 acres of the Cell 2 exterior slopes after reaching final waste grades.

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 22, 2022. 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. William Butler, P.E. on November 22, 2022. The inspection included observation of Cells 1 and 2, observation and inspection of the Cell 2 partial final cover and perimeter slopes, and storm water management features for the site. Photographs taken during the site inspection are attached to this report. 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 November 22, 2022, 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 22, 2022, 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 at the time of the inspection had not received any additional CCR, however in early December 2022 the landfill

December 19, 2022

operator placed approximately 34,000 cy of CCR. Cell 1 is operational and did not receive any CCR during 2022. The perimeter slopes of Cell 2 appear to be in good condition with no significant erosion, no woody vegetation, no animal burrows, and no areas of instability or structural weakness. At the time of the inspection the permanent final cover constructed 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 William Butler, 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.

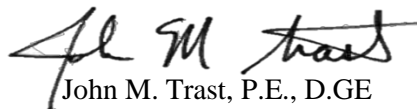
If you have any questions regarding this report, please contact me at 920-455-8299.

Sincerely,

GEI CONSULTANTS, INC.



William Butler, P.E.
Senior Geotechnical Engineer



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

Attachments:

- Figure 1 - Site Location Figure
- WPS3 Ash Landfill CCR Compliance – Annual Inspection
- Landfill Inspection Photo Log

LWB:jxt

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KNOWLTON, WISCONSIN

11 MILES TO WESTON POWER PLANT

BALSAM ROAD

I 39 / US HWY 51

PRIVATE ACCESS ROAD

CTH C

LEGNER ROAD

WESTON DISPOSAL SITE NO. 3

JOHNSON CREEK ROAD

MILL LANE



NOT TO SCALE

WISCONSIN PUBLIC SERVICE
TOWN OF KNOWLTON, WISCONSIN



WESTON DISPOSAL SITE NO. 3
SITE LOCATION FIGURE

Project 1803049

December 5, 2018

Fig. 1

WDS3 ASH LANDFILL CCR COMPLIANCE - ANNUAL INSPECTION**INSPECTOR:** William Butler, PE**INSPECTION DATE/TIME:** 11/22/2022**WEATHER:**

Temperature: 35° F
 Conditions: Sunny
 Wind: Mild
 Wind Direction: W
 Precipitation: Lt. Snow during the night

LEACHATE COLLECTION SYSTEM:**Load-out Facility:**

High level alarms: No
 Low level alarms: No
 Leak alarms: No
 Tank Level : 6.0 ft
 Tank Volume: 22350 gallons
 Pump: Available
 Pad Condition: Good

Sump:

Cell 1 Pump #1 Available 28.7 in Primary LCS Sump
 Cell 1 Pump #2 Available 29.2 in Primary LCS Sump
 Control Panel: Available
 Cell 2 Pump #1 Available 21.3 in Primary LCS Sump
 Cell 2 Pump #2 Available 24.0 in Primary LCS Sump
 Control Panel: Available

Comments: Leachate volume in the tank is being managed by certified operators to generally keep the volume less than 30,000 gallons (operating capacity is 104,800 gallons). Leachate levels in the sumps are being maintained in compliance with the operating license requirements (no alarms) of less than 1-foot of head on the liner.

STABILITY/EROSION OF FINAL COVERS & WASTE SLOPES:Final Covers: Waste Slopes:

Comments : The Cell 2 final cover slopes appear stable with no observed instability, no significant erosion, no woody vegetation, no animal burrows, or concerns regarding the final cover slopes. Everything 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 Vegetated:
 Airbourne Dust Visible: No
 Sign of Recent Dust Deposition: No

Stormwater Management

Exterior Ditches:
 Interior Ditches:
 Catch Basin:
 Culverts:

Comments: Cell 2 partial closures occurred in 2016 Southeast corner and 2020 East slope of the landfill. The remain uncovered area over Cell 2 was covered in 2022. In 2021 WEC opened Cell 1 of the landfill and placed the 4 feet frost protection layer. Leachate from Cells 1 and 2 is hauled from the on-site leachate collection tank to the Weston Power Plan for disposal.



Note: Check mark indicates that the features are acceptable.

Photographic Log



Project: WDS3 Landfill Inspection
Client: WEC Energy Group

GEI Proj. No.: 2103691



PHOTOGRAPH NO: 1	DATE: November 22, 2022	LATITUDE: 44.7270139551537	LONGITUDE: -89.6428701756124
SITE LOCATION: WESTON, WISCONSIN			
DESCRIPTION: Leachate collection tank and loadout facility.			
PHOTO BY: BILL BUTLER			
PHOTOGRAPH NO: 2	DATE: November 22, 2022	LATITUDE: 44.7260192449485	LONGITUDE: -89.6371589722821
SITE LOCATION: WESTON, WISCONSIN			
DESCRIPTION: Storm water basin no.1 pond, taken on the north landfill berm, looking east.			
PHOTO BY: BILL BUTLER			

Photographic Log



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PHOTOGRAPH NO:	DATE:	LATITUDE:	LONGITUDE:
Delete photo from log	SITE LOCATION: WESTON, WISCONSIN		
<p>DESCRIPTION:</p> <p>Photo shows the extent of the placement of the 4-foot frost protection layer in cell 1. Photo taken north landfill berm, looking south.</p>			
<p>PHOTO BY:</p> <p>BILL BUTLER</p>			
PHOTOGRAPH NO: 3	DATE: November 22, 2022	LATITUDE: 44.7253545694234	LONGITUDE: -89.6357830654781
SITE LOCATION: WESTON, WISCONSIN			
<p>DESCRIPTION:</p> <p>In the foreground, shown is the extent of placement of the 4-foot frost protection layer in cell 1. In the background, is the north slope of cell 2. The photo was taken looking south.</p>			
<p>PHOTO BY:</p> <p>BILL BUTLER</p>			

Photographic Log



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PHOTOGRAPH NO: 4	DATE: November 22, 2022	LATITUDE: 44.7251201077746	LONGITUDE: -89.6352223288036
SITE LOCATION: WESTON, WISCONSIN			
DESCRIPTION: Construction equipment parked on the surface of the cell 1 frost protection layer.			
PHOTO BY: BILL BUTLER			
PHOTOGRAPH NO: 5	DATE: November 22, 2022	LATITUDE: 44.7250807341376	LONGITUDE: -89.6349439647108
SITE LOCATION: WESTON, WISCONSIN			
DESCRIPTION: Leachate collection system control panel for cell [redacted]. Panel located on east landfill berm.			
PHOTO BY: BILL BUTLER			

Photographic Log



Project: WDS3 Landfill Inspection
Client: WEC Energy Group

GEI Proj. No.: 2103691



PHOTOGRAPH NO: 6	DATE: November 22, 2022	LATITUDE: 44.7248623525963	LONGITUDE: -89.6349188504667
SITE LOCATION: WESTON, WISCONSIN			
DESCRIPTION: Stormwater basin no. 2 Photo taken from the east landfill berm looking south.			
PHOTO BY: BILL BUTLER			
PHOTOGRAPH NO:	DATE: November 22, 2022	LATITUDE: 44.7248439323228	LONGITUDE: -89.6349470482454
Delete photo from log SITE LOCATION: WESTON, WISCONSIN			
DESCRIPTION: Cell 2 leachate collection control panel east side of cell 2			
PHOTO BY: BILL BUTLER			

Photographic Log



Project: WDS3 Landfill Inspection
Client: WEC Energy Group

GEI Proj. No.: 2103691



PHOTOGRAPH NO:	DATE:	LATITUDE:	LONGITUDE:
Delete photo from log	SITE LOCATION: WESTON, WISCONSIN		
DESCRIPTION: Looking south at the west slope cell 2			
PHOTO BY: BILL BUTLER			
PHOTOGRAPH NO: 7	DATE:	LATITUDE:	LONGITUDE:
SITE LOCATION: WESTON, WISCONSIN			
DESCRIPTION: Shown is the north slope of cell 2. The cover was placed in 2022.			
PHOTO BY: BILL BUTLER			

Photographic Log



Project: WDS3 Landfill Inspection
Client: WEC Energy Group

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PHOTOGRAPH NO: 8	DATE: November 22, 2022	LATITUDE: 44.7249580390356	LONGITUDE: -89.6386231576116
SITE LOCATION: WESTON, WISCONSIN			
DESCRIPTION: Looking east at the west slope for cell 2.			
PHOTO BY: BILL BUTLER			
PHOTOGRAPH NO:	DATE: November 22, 2022	LATITUDE: 44.7232181095683	LONGITUDE: -89.6358991341884
Delete photo from log SITE LOCATION: WESTON, WISCONSIN			
DESCRIPTION: Future expansion area, taken from cell 2 crest looking west			
PHOTO BY: BILL BUTLER			

Photographic Log



Project: WDS3 Landfill Inspection
Client: WEC Energy Group

GEI Proj. No.: 2103691


PHOTOGRAPH NO: 9	DATE: November 22, 2022	LATITUDE: 44.7232676463016	LONGITUDE: -89.6357964522053
SITE LOCATION: WESTON, WISCONSIN			
DESCRIPTION: Taken from the south edge of cell 2, looking north at the final cover crest.			
PHOTO BY: BILL BUTLER			
PHOTOGRAPH NO: 10	DATE: November 22, 2022	LATITUDE: 44.7228513038638	LONGITUDE: -89.6349624394725
SITE LOCATION: WESTON, WISCONSIN			
DESCRIPTION: Looking at the east slope and storm water control ditch for cell 2. Photo taken at the southeast corner of cell 2.			
PHOTO BY: BILL BUTLER			

Photographic Log



Project: WDS3 Landfill Inspection
Client: WEC Energy Group

GEI Proj. No.: 2103691

PHOTOGRAPH NO:	DATE:	LATITUDE:	LONGITUDE:
Delete photo from log	SITE LOCATION: WESTON, WISCONSIN		
<p>DESCRIPTION:</p> <p>Cell 2 perimeter leachate collection vault and clean out southwest corner</p>			
<p>PHOTO BY:</p> <p>BILL BUTLER</p>			
PHOTOGRAPH NO: 11	DATE:	LATITUDE:	LONGITUDE:
	SITE LOCATION: WESTON, WISCONSIN		
<p>DESCRIPTION:</p> <p>Looking east at the cell 2 south slope. Photo taken at the southwest corner of cell 2.</p>			
<p>PHOTO BY:</p> <p>BILL BUTLER</p>			