

December 16, 2021

Mr. Leif Tolokken  
Manager, Water and Waste Programs  
Dairyland Power Cooperative  
3200 East Avenue South  
La Crosse, WI 54601

Subject: Alma Off-Site Disposal Facility – Phase IV Landfill  
2021 Annual Inspection by a Professional Engineer

Dear Mr. Tolokken:

This letter presents the results of the inspection of the Alma Off-Site Disposal Facility – Phase IV Landfill located in the town of Belvidere, Buffalo County, Wisconsin. Prior to the inspection TRC reviewed the permitting documents, the weekly inspection forms, the operational plans, and the documents posted on the publicly accessible website.

On November 10, 2021, Jonathan Hotstream, P.E., P.G., of TRC Environmental Corporation performed an on-site inspection of Dairyland Power Cooperative's (DPC) coal combustion residual landfill with Leif Tolokken and Brian Kalvelage of DPC. Attached to this letter are the inspection report and a photographic log to document the observed conditions.

Based on the documents reviewed and the site inspection, the landfill is designed, constructed, operated, and maintained consistent with good engineering practices. The site was being operated in a safe manner and there were no indications of structural weakness at the time of the inspection.

Sincerely,

TRC



Digitally signed by Jonathan  
Hotstream  
Location: TRC - Madison, WI  
Contact Info: 608-852-7044  
Date: 2021.12.16  
17:22:36-06'00'

Jonathan Hotstream, P.E., P.G.  
Senior Engineer

Attachments: Landfill Inspection Checklist  
Photographic Log

cc: Todd Martin – TRC

708 Heartland Trail, Suite 3000 (53717) Madison, WI 608.826.3600

PROJECT/PROPOSAL NAME	PREPARED		CHECKED		PROJECT/PROPOSAL NO.
	By:	Date:	By:	Date:	
Dairyland Power Cooperative Phase IV, Alma Off-site Disposal Facility	J. Hotstream	11.10.2021	T. Martin	12/2/21	421717.0000

## Landfill Annual Inspection Report

**Purpose:**

This inspection checklist has been developed to meet the requirements for inspections by a qualified professional engineer for a coal combustion residual (CCR) landfill. This checklist exceeds the requirements for 40 Code of Federal Regulations 257.84(b). This inspection of the Alma Off-Site Disposal Facility Phase IV Landfill was performed by TRC Environmental Corporation on behalf of Dairyland Power Cooperative (DPC).

The goal of the inspection is to ensure that the design, construction, operation, and maintenance is consistent with recognized good engineering practices. In addition, the inspection looked for conditions of structural weakness or conditions that may affect the safe operation of the CCR unit.

The following were performed for the inspection of the CCR unit.

**Review of Available Information:**

The following documents were reviewed in preparation of the site visit.

- Health and Safety Plan
- Fugitive Dust Control Plan (12/17/2018)
- Groundwater Monitoring Program (10/2017)
- Dust Control Report (12/11/2020)
- Post-Closure Plan (10/2016)
- Closure Plan (10/2016)
- Run-on and Run-off Control System Plan (10/2021)
- Annual Landfill Inspection Report (12/17/2020)
- Location Restrictions (5/2018)
- Weekly inspections performed by qualified personnel (11/19/2020 through 11/5/2021)

Comments on the Operating Record:

Electronic system that is well organized and accessible from the office at the landfill. Able to access weekly inspections, reports, and records of government notifications.

**Summary of the Site Conditions (based on document review):**

DPC operates a CCR landfill (Alma Off-Site Disposal Facility Phase IV Landfill) located in the NE 1/4 of the NE 1/4 of Section 19 and portions of Sections 18 and 20, T21N, R12W, Town of Belvidere, Buffalo County, Wisconsin. The location of the Phase IV landfill is in a valley including 3 phases of non-contiguous closed landfills. This inspection addresses the Phase IV landfill, because the Phase 1, II, and III landfills were closed prior to the promulgation of the federal CCR rule (40 Code of Federal Regulations 257.50 through 107).





# INSPECTION REPORT

SHEET 2 OF 4

708 Heartland Trail, Suite 3000 (53717) Madison, WI 608.826.3600

PROJECT/PROPOSAL NAME	PREPARED		CHECKED		PROJECT/PROPOSAL NO.
	By:	Date:	By:	Date:	
Dairyland Power Cooperative Phase IV, Alma Off-site Disposal Facility	J. Hotstream	11.10.2021	T. Martin	12/2/21	421717.0000

The Phase IV landfill is permitted through the State of Wisconsin (License #4126). To date, the liner system for Cells 1, 2A, 2B, 3A and 3B have been constructed. Final cover has been installed over a portion of Cells 1, 2A, and 2B. There is an interim geosynthetic cover over a portion of the CCR in Cells 2B, 3A and 3B. Cell 3B, the most recently constructed cell of the Phase IV landfill, was constructed during May through August 2015. The landfill construction includes a composite liner system, composite cover system, leachate collection system, leachate storage tank, and storm water controls (diversion berms, sedimentation basin, ditching, and downslope flumes).

### Changes to the unit since the previous report:

Since the inspection in 2020, there has been continued placement of CCR into Cells 2B, 3A, and 3B. Temporary geosynthetic cover has been placed on a portion of the Cell 2B and 3B north slope.

Approximate volume of CCR in the unit at the time of the inspection: Approximately 1,253,000 cubic yards of CCR have been placed in the Phase IV landfill based on the November 4, 2021 topographic survey.

### Visual Inspection:

A site visit and visual inspection were performed by Jonathan Hotstream (TRC Environmental Corporation) on November 10, 2021

Time arrived on site: 10:30 a.m.

Time departed from site: 12:30 p.m.

DPC Personnel Present: Leif Tolokken & Brian Kalvelage

Weather Conditions: sunny, clear, 50s

Summary of Items Visually Inspected: Electronic operating record, weekly inspection forms, sedimentation basin, perimeter/access road, perimeter run-on controls including stormwater channels, outlets, culverts; final cover areas including diversion berms and vegetation; working area conditions; surface condition at the leachate collection tank and leachate transfer manholes, flow into leachate tank; and leachate depth display.

Site Operations during Inspection: No CCR placement, a water truck was observed spraying the working area for dust control during the site visit.

### Appearance of structural conditions:

#### Final Cover Conditions (Cell 1, 2A, and 2B areas):

Vegetation Condition: Dense, well-established stand of native prairie vegetation present.

Evidence of Erosion: Yes:      None: X

Evidence of slumping, sloughing, or slope distress: Yes:      None: X

Evidence of seepage: Yes:      None: X



# INSPECTION REPORT

SHEET 3 OF 4

708 Heartland Trail, Suite 3000 (53717) Madison, WI 608.826.3600

PROJECT/PROPOSAL NAME Dairyland Power Cooperative Phase IV, Alma Off-site Disposal Facility	PREPARED		CHECKED		PROJECT/PROPOSAL NO. 421717.0000
	By: J. Hotstream	Date: 11.10.2021	By: T. Martin	Date: 12/2/21	

Comments: Well maintained.

### **Perimeter Berm:**

Vegetation Condition: Dense vegetation, native prairie.

Evidence of Erosion: Yes:      None: X

Cracking along crest: Access Road along crest Yes:      None: X

Evidence of slumping, sloughing, or slope distress: Yes:      None: X

Evidence of seepage: Yes:      None: X

Phase Delineation Berms: Exposed geomembrane in good condition, sufficient clearance for containing runoff within the cell.

Comments: Exposed geomembrane not showing signs of deterioration or damage.

### **Stormwater Controls:**

Run-on Controls: Diversion berms and grading provide adequate drainage away from open areas.

Perimeter Drainage Ditches: Erosion prevented by vegetation, areas around inlets are clear and protected by stone.

Comments: Continue to keep drainage ditches clear. No concerns at this time.

Run-off Controls: Final Cover

Diversion Berms: Good condition. Well-maintained with good vegetative cover, no erosion observed, and clear of obstructions.

Downslope Flumes: Well-maintained; outlets were cleared of vegetation and good rock protection present. Drains down to perimeter ditches clear.

Ditching: No erosion observed, clear, good slope. No standing water observed.

Comments: Stormwater controls are well-maintained at the site. Good drainage and conveyance to the sedimentation basin, no obstructions observed. Check dams along perimeter ditching in good condition. Good stand of vegetation in diversion berms and perimeter ditching.

Sedimentation Basin No. 1:

Outlets Operational: Yes, clear, no debris and not deformed; stone filter visible at base

Culverts Operational: Yes, clear, inlet and outlet protection for culverts

Comments: Dry conditions at site, no standing water in sedimentation basin.



# INSPECTION REPORT

SHEET 4 OF 4

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	By: J. Hotstream	Date: 11.10.2021	By: T. Martin	Date: 12/2/21	

### **Operating Conditions:**

Changes in Operation since the previous annual inspection: No significant changes in site operations. Temporary geosynthetic cover installed on north slope of Cell 2B and 3B.

### Access Road Conditions:

Durable paved, well groomed. No tracking observed.

### **Landfill Operations:**

Temporary Storm Water Controls: Diversions and grading to prevent runoff, slopes maintained to provide sufficient freeboard to maintain containment.

Working Face Conditions: No waste placement occurring; operational face is well maintained. Water truck spraying working face to control dust.

Access roads: Good condition; no active waste placement conditions during inspection.

Fugitive Dust Observed: Yes:      No:   X  

Comments: Minor dusting with wind gusts contained within active area. Additional spraying by water truck to control dust.

Leachate Management: No leachate ponding observed within cell. Constructed vertical sand drains inside Cell 2B to connect leachate collection system to the surface. Leachate tank level monitor indicates additional capacity available. Leachate observed flowing into tank.

Ash Tracked Out on Access Road? Yes:      None:   X  

Leachate Collection System: Well maintained at surface.

Pipe Cleanouts: Clear according to weekly reports, accessible, protected by bollards, name tags in place.

Tank: Controls are accessible and appear operational

Loadout Area: Accessible and operational. Leachate was being hauled on day of inspection.

Comments: Appears to be a well-maintained system used for daily site operations.

**Conditions that may potentially impact safety:** None observed

**Observed Deficiencies and Proposed Corrective Actions:** None observed

### **Future Action:**

- Continue monitoring and maintenance of stormwater controls.
- Continued implementation of dust control practices.



## Photographic Log

<b>Client Name:</b> Dairyland Power Cooperative	<b>Site Location:</b> Phase IV Landfill, Alma Off-Site Disposal Facility	<b>Project No.:</b> 421717.0000
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<b>Photo No.</b> 1	<b>Date</b> 11/10/2021	
<b>Description:</b> Asphalt paved site entrance road looking towards the entrance to the facility.		

<b>Photo No.</b> 2	<b>Date</b> 11/10/2021	
<b>Description:</b> Sedimentation Basin 1 outlet. Vegetation established at the base. Gravel placed surrounding base of outlet pipe. No distressed vegetation observed in the sideslopes.		



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<b>Photo No.</b> 3	<b>Date</b> 11/10/2021	
<p><b>Description:</b> Perimeter road is well maintained and provides access around the landfill. Leachate headwell protected by bollards. In background of photo, vegetation established on Area 1 and Area 2 final cover.</p>		


<b>Photo No.</b> 4	<b>Date</b> 11/10/2021	
<p><b>Description:</b> CCR filling area showing Cell 3 delineation berm. Sufficient space and berm height provided to control runoff within the landfill. In the foreground of the photo, the temporary white geosynthetic cover is visible with ballast materials to protect from wind uplift.</p>		



### Photographic Log



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<b>Photo No.</b> 5	<b>Date</b> 11/10/2021	
<b>Description</b> Perimeter drainage ditch with rock check dam.		


<b>Photo No.</b> 6	<b>Date</b> 11/10/2021	
<b>Description:</b> Box culvert to improve storm water conveyance around perimeter of site. Grouted riprap protects sideslopes at transition. No obstructions observed in the perimeter ditch or at conveyance structures.		



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<b>Client Name:</b> Dairyland Power Cooperative		<b>Site Location:</b> Phase IV Landfill, Alma Off-Site Disposal Facility	<b>Project No.:</b> 421717.0000
<b>Photo No.</b> 7	<b>Date</b> 11/10/2021		
<b>Description:</b> Active filling area of the landfill (Cell 3A and 3B). Phase delineation berm in the foreground. No evidence of unstable conditions. No fugitive dust observed.			
<b>Photo No.</b> 8	<b>Date</b> 11/10/2021		
<b>Description:</b> Riprap ditch protection in perimeter ditch. Minor vegetative growth not impacting performance. Dense vegetation is established around ditch and ditch is clear of obstructions.			

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<b>Photo No.</b> 9	<b>Date</b> 11/10/2021		
<b>Description:</b> Asphalt paved access road at entrance filling area. No material observed tracked out of Phase IV.			

<b>Photo No.</b> 10	<b>Date</b> 11/10/2021		
<b>Description:</b> Leachate tank surface features; cleared, accessible, and in good working order.			