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December 20, 2018

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 - Annual Inspection by a Professional Engineer

Dear Mr. Tolokken:

This letter presents the results of the inspection of the Phase IV Alma Off-Site Disposal Facility located in Alma, 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 15, 2018, 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 Environmental Corporation

*Jonathan Hotstream*

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

Attachments: Landfill Inspection Checklist  
Photographic Log

cc: Todd Martin - TRC





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PROJECT/PROPOSAL NAME	PREPARED		CHECKED		PROJECT/PROPOSAL NO.
Dairyland Power Cooperative; Phase IV Alma Off-site Disposal Facility	By: J. Hotstream	Date: 11/15/2018	By: T. Martin	Date: 12/13/2018	243332.0004

### 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 (12/19/2016)
- Groundwater Monitoring Program (10/2017)
- Dust Control Report (12/5/2016)
- Post-Closure Plan (10/2016)
- Closure Plan (10/2016)
- Run-on and Run-off Control System Plan (10/2016)
- Annual Landfill Inspection Report (12/22/2017)
- Location Restrictions (5/2018)
- Weekly inspections performed by qualified personnel (11/10/2017 through 11/7/2018)

Comments on the Operating Record: Electronic system, well organized, accessible in office at landfill, confirmed this year’s documents in electronic operating record (e.g., location restrictions)



# INSPECTION REPORT

SHEET 2 OF 5

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### 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 (see Figure 1). 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).

The Phase IV landfill is permitted through the state of Wisconsin. To date the liner system Cells 1, 2A, 2B, 3A and 3B have been constructed with final cover installed over a portion of Cells 1, 2A, and 2B. Cell 3B 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 2017, there has been continued placement of CCR into Cell 3A and 3B.

Approximate volume of CCR in the unit at the time of the inspection: Approximately 1,131,600 cubic yards of CCR have been placed in the Phase IV landfill based on the November 28, 2018, topographic survey.

### Visual Inspection:

A site visit and visual inspection were performed by Jonathan Hotstream (TRC Environmental Corporation) on November 15, 2018

Time arrived on site: 9:45 a.m.

Time departed from site: 11:50 a.m.

DPC Personnel Present: Leif Tolokken & Brian Kalvelage

Weather Conditions: Clear, cool, mid to low 40s, windy 15+ mph

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 depth display.



# INSPECTION REPORT

SHEET 3 OF 5

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Site Operations during Inspection: Ash trucks delivering to landfill, placement in cell trucking & dozer, access road sweeping and water truck conditioning top of waste. Compaction was not observed, however, a compactor was on-site.

### Appearance of structural conditions:

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

Vegetation Condition: Dense, Good Standing Native Prairie Vegetation Present

Evidence of Erosion: Yes:  None:

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

Evidence of seepage: Yes:  None:

Comments: Well maintained. Some drainage discharge through final cover drains.

#### Perimeter Berm:

Vegetation Condition: Dense vegetation, native prairie

Evidence of Erosion: Yes:  None:

Cracking along crest: Access road along crest Yes:  None:

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

Evidence of seepage: Yes:  None:

Phase Delineation Berms: Geomembrane cover in good condition, sufficient clearance for native prairie mix.

Comments: \_\_\_\_\_

#### Stormwater Controls:

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

Perimeter Drainage Ditches: Clear, erosion prevented by vegetation, areas around inlets clear.

Comments: Well-maintained. No concerns at this time.



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## 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 and recently maintenance.

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

Comments: Stormwater controls are well-maintained at the site. Good drainage and conveyance to the sedimentation basin, no obstructions observed. Recent reconstruction of check dams along perimeter ditching.

## Sedimentation Basin No. 1:

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

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

Comments: Thin accumulation of frozen water at base. Outlet appears to be functioning properly.

## Operating Conditions:

Changes in Operation since the previous annual inspection:

- Replaced double culverts with box 4'x6' to control storm water in perimeter ditch on north side of site
- Jetting of leachate collection system performed (3 times) to maintain leachate collection system

No significant changes in site operations

## Access Road Conditions:

Durable paved, well groomed. Minor tracking from site. Implementing sweeping and water.

## Landfill Operations:

Temporary Storm Water Controls: Good diversions and water bars to prevent runoff, slopes maintained to provide sufficient freeboard to maintain containment.

Working Face Conditions: Placing and spreading with dozer.



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SHEET 5 OF 5

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Access roads: Good condition; sweeping; not spraying due to temperature

Fugitive Dust Observed: Yes: X No:     

Comments: Minor implementing

Leachate Management: No leachate observed. Leachate tank level monitor indicates additional capacity available.

Ash Tracked Out on Access Road? Yes:      None: X (cleaning in progress)

Leachate Collection System: Well maintained at surface.

Pipe Cleanouts: Jetted multiple times – clear according to weekly reports, accessible, protected by bollards

Tank: Controls are accessible and appear operational

Loadout Area: Accessible and operational

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

Client Name:		Site Location:	Project No.:
Dairyland Power Cooperative		Phase IV Landfill, Alma Off-Site Disposal Facility	243332.0004
Photo No.	Date		
1	11/15/2018		
<b>Description:</b> Asphalt paved site entrance road looking south. Water truck mobilized to moisture condition top of waste.			
Photo No.	Date		
2	11/15/2018		
<b>Description:</b> Sedimentation Basin 1 outlet. Vegetation established in the base. Gravel placed surrounding base of outlet pipe.			







## Photographic Log

Client Name:		Site Location:	Project No.:
Dairyland Power Cooperative		Phase IV Landfill, Alma Off-Site Disposal Facility	243332.0004
Photo No.	Date		
3	11/15/2018		
<b>Description:</b> Vegetation established on Area 1 and Area 2 final cover.			
Photo No.	Date		
4	11/15/2018		
<b>Description:</b> CCR filling area showing Cell 3 delineation berm. Sufficient space and berm height provided to control runoff within the landfill.			





## Photographic Log

Client Name:		Site Location:	Project No.:
Dairyland Power Cooperative		Phase IV Landfill, Alma Off-Site Disposal Facility	243332.0004
Photo No.	Date		
5	11/15/2018		
Description			
Perimeter drainage ditch with rock check dam. Rock check dams recently restored.			
Photo No.	Date		
6	11/15/2018		
Description:			
Recently installed box culvert to improve storm water conveyance around perimeter of site.			