Annual CCR Landfill Inspection

Columbia Dry Ash Disposal Facility

Prepared for:

Wisconsin Power and Light Company
W8375 Murray Road
Pardeeville, Wisconsin 53954

SCS ENGINEERS

25225067.00 | December 9, 2025

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PE CERTIFICATION

	I, Phillip E. Gearing, hereby certify that this Annual CCR Landfill Inspection Report meets the requirements of 40 CFR 257.84(b)(2), was prepared by me or under my direct supervision, and that I am a duly licensed Professional Engineer under the laws of the State of Wisconsin. 12/9/2025 (signature) (date) Phillip Gearing (printed or typed name) License number E-45115 My license renewal date is July 31, 2026. Pages or sheets covered by this seal: 12/9/2025 All – Annual CCR Landfill Inspection – Columbia Dry Ash Disposal Facility

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1.0 INTRODUCTION

1.1 PURPOSE

On July 14, 2025, SCS Engineers (SCS) completed an annual inspection of the Wisconsin Power and Light Company (WPL) Columbia Dry Ash Disposal Facility (COL) in Pardeeville, Wisconsin. The annual inspection was completed in accordance with the U.S. Environmental Protection Agency (U.S. EPA) coal combustion residuals (CCR) rule, 40 Code of Federal Regulations (CFR) 257 Subpart D, in particular 257.84(b)(1). According to 40 CFR 257.84(b)(1), an annual inspection by a qualified professional engineer is required for all existing and new CCR landfills, and any lateral expansion of a CCR landfill. The purpose of the annual inspection is 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:

- 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

- A visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit.

This report has been prepared in accordance with 40 CFR 257.84(b)(2) to document the annual inspection.

1.2 BACKGROUND

The COL facility includes an active CCR landfill, which currently consists of the following CCR units:

- Module 1 through Module 3 (existing CCR landfill per 40 CFR 257.53).
- Module 4 through Module 6, Module 10, and Module 11 (new CCR landfill per 40 CFR 257.53).

Modules 1 through 3 are one existing CCR landfill under the federal CCR Rule. Modules 4, 5, 6, 10, and 11 are a new CCR landfill that initiated construction after October 19, 2015, and is therefore identified as a separate CCR unit under the CCR Rule. The existing and new CCR landfills are contiguous and managed as a single landfill by the facility and licensed as a single landfill by the Wisconsin Department of Natural Resources (DNR). Modules 12 and 13 were constructed in 2024; however, they had not received CCR or become operational, at the time of the inspection. Modules 12 and 13 became operational after concurrence was received from the Wisconsin DNR on August 13, 2025. Modules 7, 8, and 9 are permitted by the State of Wisconsin, but have not yet been developed.

The inspection requirements in 40 CFR 257.84(b)(1) apply to all the CCR units listed above.

At the time of the inspection, the active CCR landfill units were in various stages of development or use, as described in the table below.

Disposal Phase	Unit	CCR Rule Status	Basis for Status
Phase 1	Modules 1 - 3	Existing CCR Landfill. Currently accepting CCR.	Final or interim grades have been reached. Final cover has been completed on portions of the CCR unit. Final closure per 257.102 will not be completed until final grades are reached throughout the CCR unit. CCR overlay from Module 10 was occurring onto Module 3.
Phase 1/ Phase 2	Modules 4 - 6, Module 10, and Module 11	New CCR Landfill. Currently accepting CCR.	CCR placement began on November 5, 2018, in the unit. Intermediate cover has been placed over most of Modules 4 through 6 and final cover over a western portion of Module 4. CCR overlay from Module 11 was occurring onto Module 4.

2.0 SUMMARY OF RESULTS AND RECOMMENDATIONS

SCS identified no deficiencies or releases during the annual inspection of the CCR units at COL. Deficiencies and releases must be remedied by the owner or operator as soon as feasible and the remedy documented.

SCS did identify additional conditions during the annual inspection that are not considered deficiencies but have the potential to become a deficiency if left unaddressed. Each condition and the recommendations provided by SCS to address them are summarized in the table below. These conditions and recommendations are described in further detail in Section 4.0.

Condition	CCR Unit / Area	Recommendation(s) / [STATUS]	Report Section
Vegetation growth in down chute, which could eventually affect final cover	Grouted Down Chutes (Module 1 Final Cover)	Remove vegetation. **[COMPLETED]** Continue to observe and remove existing / future vegetation, as necessary. Monitor during 7-day inspections.	4.3.2
Vegetation growth at outlet, which could eventually compromise leachate drainage	Module 1 Leachate Pipe Outlet	Remove vegetation. **[COMPLETED]** Continue to observe and remove vegetation, as necessary to provide outlet operation. Monitor during 7-day inspections.	4.3.2

Condition	CCR Unit / Area	Recommendation(s) / [STATUS]	Report Section
Woody and overgrown vegetation growth near access road and leachate clean outs	West of Contact Water/Leachate Pond and east of Module 2	Remove woody growth or other unwanted vegetation. **[COMPLETED]** Continue to observe and remove vegetation, as necessary. Monitor during 7-day inspections.	4.3.2
Vegetation growth at final cover and intermediate cover inlets, which could impede flow and affect final cover	Final Cover and Intermediate Cover Inlets	Remove overgrown vegetation at inlets. **[COMPLETED]** Continue to observe and remove vegetation, as necessary to maintain inlet flow and protect cover. Monitor during 7-day inspections.	4.3.2
Accumulated sediment in storm water culverts, outlets, and swales, which could restrict flow and cause ponding water	Storm Water Culverts, Outlets, and Swales – West of Contact Water/Leachate Pond, Module 2 Outlet, North of Module 6, East of Modules 10 and 11	Remove accumulated sediment in culverts, piping, and at outlets. **[COMPLETED]** Regrade storm water swale areas with standing water. Re-seed and install erosion mat, as necessary, after grading. **[COMPLETED]** Monitor during 7-day inspections.	4.3.4
Erosion and bare areas on intermediate cover slopes and storm water inlets, which could lead to sediment migration	Intermediate Cover Areas – Module 2 (SW of Contact Water Area), Module 4/5 (West Landfill Slope), Module 4 (Top of Landfill to West Slope), Module 6 (Northeast Slopes and Inlet)	Seed, add topsoil, and place erosion mat on exposed intermediate cover. **[COMPLETED]** Install erosion control best management practices (BMPs) (e.g., sediment logs) until vegetation is established. **[COMPLETED]** Add riprap to armor high flow areas, as necessary. **[COMPLETED]** Monitor during 7-day inspections.	4.3.4
Sediment migration into storm water inlets from road aggregate and intermediate cover	Northern Access Road – Module 6	Add additional riprap at inlets and place sediment logs before riprap to prevent sediment migration. **[COMPLETED]** Continue to observe and maintain as necessary. Monitor during 7-day inspections.	4.3.4

3.0 ANNUAL INSPECTION

Mr. Phillip Gearing of SCS completed an annual inspection of active CCR landfill areas at COL, including Modules 1 through 3, Modules 4 through 6, and Modules 10 and 11 on July 14, 2025. Mr. Gearing is a licensed professional engineer in Wisconsin and holds a Bachelor of Science degree in Geological Engineering. He has over 19 years of experience in the design, construction, and operation of solid waste disposal facilities. The scope of the annual inspection is described in Sections 3.1 and 3.2. The results of the annual inspection are discussed in Section 4.0.

3.1 OPERATING RECORD REVIEW

SCS reviewed the available information in the operating record for COL. Information reviewed by SCS included operating record materials provided by WPL, and the information posted on Alliant Energy's CCR Rule Compliance Data and Information website for the COL facility.

3.2 VISUAL INSPECTION

SCS completed a visual inspection of Modules 1 through 3, Modules 4 through 6, and Modules 10 and 11 to identify signs of distress or malfunction of the CCR units.

The visual inspection included observations of the following:

- CCR placement areas including active filling areas, intermediate cover areas, final cover areas, and exterior non-CCR berms or slopes.
- Leachate collection and removal system components including visible leachate drainage layer materials.
- Leachate and contact water run-off management features including internal contact water drainage features, leachate collection system discharge pipe, and the leachate/surface water pond.
- Non-contact storm water run-on and run-off control features including swales located adjacent to active fill areas, on intermediate/final cover slopes, and outside the landfill limits and the south sedimentation basin.

4.0 INSPECTION RESULTS

The results of the annual inspection, along with a description of any deficiencies or releases identified during the visual inspection, are summarized in the following sections.

4.1 CHANGES IN GEOMETRY

No apparent changes in geometry were noted that would indicate distress or malfunction of the CCR units at the facility since the previous annual inspection at the COL facility completed under 40 CFR 257.84(b)(1). Changes in geometry observed during the annual inspection were the result of planned CCR filling in the current CCR units.

As noted in Section 1.2, CCR placement occurs in Module 10 and Module 11, with overlay into Module 3 and Module 4. Final cover or intermediate cover is established along portions of Modules 1 through 3 and Modules 4 through 6. Modules 12 and 13 were constructed but were not

operational during the 2025 inspection. Vegetation is established or becoming established on all final and intermediate cover areas.

4.2 CCR VOLUMES

The approximate volume of CCR contained in each of the active units near the time of the inspection is summarized below. Note that the inspection was performed on July 14, 2025, and a survey of CCR was performed on July 22, 2025. A description of how the estimate was developed is summarized below.

Disposal Phase	Unit	Estimated Volume of CCR in Place	Basis for Estimate and Source
Phase 1	Modules 1-3	1,084,100 cubic yards	There was CCR overlay onto Module 3 at the time of the inspection. Estimated volume based on a survey performed on 7/22/2025 compared to documented base grades. Estimated volume excludes final cover or intermediate cover material installed at time of survey. Estimated volume considers a vertical boundary at the Module 3 limit to Module 4 and Module 10.
Phase1/ Phase 2	Modules 4 - 6, Module 10, and Module 11	1,017,000 cubic yards	CCR placement was occurring in Modules 10 and 11 and overlayed onto Modules 3 and 4 at the time of the inspection. CCR volume placed in Modules 4 - 6, 10, and 11 was estimated based on a survey performed on 7/22/2025 compared to documented top of leachate drainage layer grades. Estimated volume considers a vertical boundary at the Module 4 limit to Module 3 and Module 10 limit to Module 3.

4.3 APPEARANCE OF STRUCTURAL WEAKNESS

The inspection included a review of the appearance of an actual or potential structural weakness of the CCR unit. The visual inspection included a review of CCR fill areas including the top slopes, internal side slopes, external side slopes, and internal ramps/haul roads for the presence of the following conditions:

- Signs of surface movement or instability:
  - Sloughing, slumping, or sliding
  - Surface cracking
  - Slopes greater than three horizontal to one vertical (3H:1V)
  - Toe of slope bench movement
  - Evidence of inadequate compaction of exposed CCR

- Inappropriate vegetation growth

- Animal burrows
- Erosion damage
- Unusual surface damage caused by vehicle traffic

4.3.1 Signs of Surface Movement or Instability

No signs of surface movement or instability were noted during the inspection.

4.3.2 Inappropriate Vegetation Growth

No inappropriate vegetation growth impacting the CCR unit was noted during the inspection. The following items have the potential to become a deficiency if left unaddressed:

- Vegetation was observed in the southwest grouted riprap down chutes located on the Module 1 Final Cover. WPL should remove existing vegetation before it becomes established and impacts the final cover. Continued removal of future vegetation as necessary and monitoring during 7-day inspections is recommended.

- Woody vegetation was observed to the west of the contact water/leachate pond, off the edge of the access road. WPL should remove woody vegetation growth before it becomes established. The vegetative growth was not impacting the stability of the CCR landfill at the time of the inspection. Continued vegetation removal and monitoring during 7-day inspections is recommended.

- Vegetation made it difficult to observe the leachate outlet from Module 1. The location was staked so it could be located. No issues with the current operation of the outlet were observed. WPL should monitor vegetation during 7-day inspections and keep the area maintained to allow for the effective observation of flow from the pipe outlet.

Vegetation growth was discussed with plant staff. Maintenance and removal of vegetation has occurred post the inspection based on observations performed by SCS during COL construction activities and weekly inspections.

4.3.3 Animal Burrows

No animal burrows were noted during the inspection.

4.3.4 Erosion Damage

The following erosion damage was noted during the inspection:

- Areas of bare soil were observed on the intermediate cover on the east slopes of Modules 2 and 3. Bare soil may erode, eventually exposing CCR if not addressed. Bare soil areas should have seed and erosion mat or hydromulch added to promote vegetation growth on the intermediate cover. WPL should continue to monitor this during 7-day inspections.

- Sediment accumulation was observed in the following areas due to erosion of intermediate cover materials: storm water swales and culverts; Module 2 contact water piping outlets; and the contact water/leachate pond east of Module 2 contact water

piping outlets. WPL should remove the accumulated sediment and continue to monitor it during 7-day inspections.

The bare soil and sediment accumulation areas were discussed with plant staff after the inspection was performed. Erosion was addressed with restoration activities and sediment accumulation areas were addressed with sediment removal post the inspection based on observations performed by SCS during COL construction activities and weekly inspections.

While these conditions are not currently considered deficiencies, WPL should continue to actively observe these areas during 7-day inspections to prevent future erosion or sediment migration impacting CCR stability.

4.3.5 Unusual Surface Damage Caused by Vehicle Traffic

No unusual surface damage caused by vehicle traffic was noted during the inspection.

4.4 DISRUPTIVE CONDITIONS

4.4.1 Existing Disruptive Conditions

No disruptive conditions exist.

4.4.1.1 Current Inspection

No existing conditions that were disrupting the operation and safety of the CCR units were noted during the annual inspection.

4.4.1.2 Previous Inspection

No existing conditions that were disrupting the operation and safety of the CCR units were noted during the previous inspection.

4.4.2 Potentially Disruptive Conditions

4.4.2.1 Current Inspection

No potentially disruptive conditions were observed during the current inspection.

4.4.2.2 Previous Inspection

Potentially disruptive conditions observed during the previous inspection included the following:

- Module 2 leachate pipe outlet blockage due to sediment and debris from large rain event.
- Module 1 toe drain outlet blockage due to sediment from large rain event.
- Limited contact water capacity along the southern limit of Module 10.
- LH-2, LH-5, and LH-6 leachate headwell transducers and pond level sensor communication issues due to damaged solar panel affecting the signal repeater.

The above conditions were addressed previously and not observed during the current inspection.

4.5 OTHER CHANGES SINCE PREVIOUS ANNUAL INSPECTION

No changes to site conditions that appear to have the potential to affect the stability or operation of the facility were noted during the inspection.

5.0 FUTURE INSPECTIONS

5.1 EXISTING CCR LANDFILL

As stated in 40 CFR 257.84(b)(4), the owner or operator of the CCR unit must conduct the inspection required by paragraphs (b)(1) and (2) of this section on an annual basis. The date of completing the inspection report is the basis for establishing the deadline to complete the next subsequent inspection. Any required inspection may be conducted prior to the required deadline, provided the owner or operator places the completed inspection report into the facility's operating record within a reasonable amount of time. In all cases, the deadline for completing subsequent inspection reports is based on the date of completing the previous inspection report. The owner or operator has completed an inspection when the inspection report has been placed in the facility's operating record.

The next annual inspection of CCR units Modules 1 through 3, Modules 4 through 6, and Modules 10 and 11, must be completed within 1 year of the placement of this inspection report in the operating record for the COL facility.

5.2 NEW CCR LANDFILLS AND LATERAL EXPANSIONS

For any newly constructed modules (e.g., Modules 12 and 13), the initial annual inspection must be completed within 14 months of the first receipt of CCR in the module, in accordance with 40 CFR 257.84(b)(4). Construction and placement activities should be documented, and preventive measures for drainage, erosion, and vegetation should be implemented before the initial inspection. The initial inspection for Modules 12 and 13 will need to occur before October 18, 2026 based on receipt of CCR in the modules in 2025.