

# Post-Closure Care Plan

Columbia Dry Ash Disposal Facility

Phase 1 Module 1

Phase 1 Module 2

Phase 1 Module 3

Phase 1 Module 4

Phase 1 Module 5

Phase 1 Module 6

Prepared for:

Wisconsin Power and Light Company

Columbia Energy Center

W8375 Murray Road

Pardeeville, Wisconsin 53954

**SCS ENGINEERS**

25221134.00 | December 9, 2021

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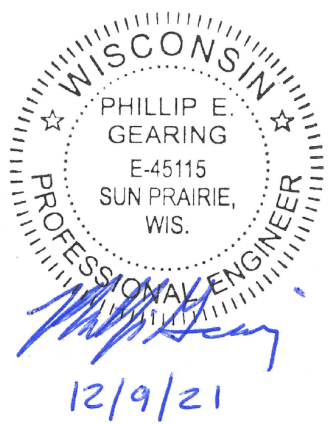
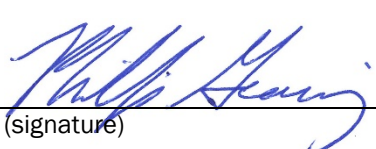
## Figures

- Figure 1. Site Location Map  
Figure 2. Post-Closure Care Plan

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Amendment\_Final.docx

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## PE CERTIFICATION

	<p>I, Phillip E. Gearing, hereby certify that this Post-Closure Care Plan meets the requirements of 40 CFR 257.104(d), 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.</p>
	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;">               (signature)         </div> <div style="text-align: center;">             December 9, 2021              (date)         </div> </div>
	<p style="text-align: center;">Phillip E. Gearing</p> (printed or typed name)
	<p>License number <u>    E-45115    </u></p> <p>My license renewal date is <u>    July 31, 2022    </u>.</p>
	<p>Pages or sheets covered by this seal:</p> <p>ALL</p>

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## 1.0 INTRODUCTION AND PROJECT SUMMARY

On behalf of Wisconsin Power and Light Company (WPL), SCS Engineers (SCS) has prepared this Post-Closure Plan for the Columbia (COL) Dry Ash Disposal Facility Phase 1 Modules 1 through 6 as required by 40 Code of Federal Regulations (CFR) 257.104, as stated below.

**40 CFR 257.104(d).** *“Written post-closure plan – (1) Content of the plan. The owner or operator of a CCR unit must prepare a written post-closure plan that includes, as a minimum, the information specified in paragraphs (d)(1)(i) through (iii) of this section.”*

The COL facility includes an active coal combustion residue (CCR) landfill, which currently consists of the following modules, all located in Phase 1 of the facility.

- **Phase 1, Module 1.** This module has received final cover over completed outer sideslope areas that will no longer receive additional CCR; intermediate cover has been placed over remaining areas. The final cover placed complies with the CCR Rule.
- **Phase 1, Module 2.** This module has received intermediate cover over a majority of the in-place CCR.
- **Phase 1, Module 3.** This module has received intermediate cover over a majority of the in-place CCR.
- **Phase 1, Module 4.** This module is currently being filled.
- **Phase 1, Module 5.** This module was constructed in 2021 and is approved by the Wisconsin Department of Natural Resources (WDNR) to receive CCR.
- **Phase 1, Module 6.** This module was constructed in 2021 and is approved by the WDNR to receive CCR.

Modules 1-3 were previously described as separate existing CCR landfills although they are contiguous and are managed as a single landfill by the facility and by the WDNR. WPL has clarified in the operating record for the Columbia facility that Modules 1-3 are one existing CCR landfill as defined in 40 CFR 257.53 of the federal CCR Rule. Modules 4-6 are considered to be a new CCR landfill that initiated construction after October 19, 2015, and is therefore managed as a separate CCR unit under the CCR Rule even though they are contiguous to the existing CCR landfill (Modules 1-3).

Future CCR landfill modules (Phase 2, Modules 7 through 13) are permitted with the WDNR, but have not been developed. As these modules are developed, they will be considered lateral expansions of the new CCR landfill currently comprised of Modules 4-6. Future lateral expansions are not addressed by this plan and are not discussed further herein. The site location is shown on **Figure 1**. **Figure 2** shows proposed final cover grades and monitoring locations.

Phase 1, Module 1 has been partially closed with a final cover as described in the Initial Closure Plan for the existing CCR landfill. The remaining open areas of this module will be closed when CCR materials reach final waste grades, as described in the Plan of Operations approved by the WDNR. The future final cover system is planned to be the same as the existing final cover system. Following the closure of the CCR units at COL, WPL will conduct post-closure care in accordance with 40 CFR 257.104(b) for the required 30 years.

## 2.0 MONITORING AND MAINTENANCE ACTIVITIES

**40 CFR 257.104(d)(1)(i).** “A description of the monitoring and maintenance activities required in paragraph (b) of this section for the CCR unit, and the frequency at which these activities will be performed.”

Monitoring and Maintenance Activities	Frequency
Mowing	Semi-Annually
Inspections by Owner/Operator	Monthly
Repair to Final Cover for Erosion Concerns	As needed, determined by inspection
Sedimentation Basin Cleaning	As needed, determined by inspection
Leachate Collection Line Cleaning	Annually
Environmental Monitoring (groundwater, leachate)	Semi-Annually

The owner/operator will perform monthly inspections of the landfill surface, leachate control system, and groundwater monitoring systems. If issues are noticed during the inspection, action will be taken to remedy the situation. Eroded areas will be repaired and reseeded. Repairs or replacement will be performed on the groundwater monitoring system as needed.

### 2.1 FINAL COVER MAINTENANCE

Mowing will be performed semi-annually during the growing season unless additional mowing is required in response to the vegetation growth rate. During monthly inspections, if eroded areas are noted, WPL will repair and reseed the area.

### 2.2 LEACHATE COLLECTION AND REMOVAL SYSTEM MAINTENANCE

Phase 1, Modules 1 through 3 at the COL facility is an existing CCR landfill as defined in 40 CFR 257.53 and is not subject to the requirements of 257.70; therefore, leachate collection and removal system maintenance is not required for this unit. However, the leachate collection and removal system for this unit will be maintained to meet state requirements.

Phase 1, Module 4 was constructed and opened in 2018. Module 4 is a new CCR landfill as defined in 40 CFR 257.53. Phase 1, Modules 5 and 6 were constructed in 2021. These modules are defined as lateral expansions of the new CCR landfill. Phase 1, Module 4, 5, and 6 are in compliance with the requirements of 40 CFR 257.70, as demonstrated in the Liner and Leachate Collection System Design Compliance Demonstrations.

## 2.3 GROUNDWATER MONITORING AND SYSTEM MAINTENANCE

Groundwater monitoring wells MW-33AR, MW-34A, MW-84A, MW-301, MW-302, MW-309, MW-310, and MW-311 will be maintained and sampled semi-annually for the parameters listed in Appendix III to Part 257 and in accordance with 40 CFR 257.90-98.

## 3.0 POST-CLOSURE PERIOD CONTACTS

**40 CFR 257.104(d)(1)(ii).** *“The name, address, telephone number, and email address of the person or office to contact about the facility during the post-closure period.”*

The contact information for COL during the post-closure period is as follows:

Columbia Energy Center  
Attn: Plant Manager  
W8375 Murray Road  
Pardeeville, WI 53954  
(608) 742-0711  
[CCRProgram@alliantenergy.com](mailto:CCRProgram@alliantenergy.com)

## 4.0 POST-CLOSURE PERIOD SITE USE

**40 CFR 257.104(d)(1)(iii).** *“A description of the planned uses of the property during the post-closure period. Post-closure use of the property shall not disturb the integrity of the final cover, liner(s), or any other component of the containment system or the function of the monitoring systems unless necessary to comply with the requirements of the subpart...”*

The final use of the COL Dry Ash Disposal Facility will be privately owned green space. With this use, there will be no disturbance of the final cover or any other landfill-related components.

## 5.0 CERTIFICATIONS

**40 CFR 257.104(d)(4).** *“The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the initial and any amendment of the written post-closure plan meets the requirements of this section.”*

Phillip Gearing, PE, a licensed profession engineer in the State of Wisconsin, has overseen the preparation of this Post-Closure Care Plan. A certification statement is provided on **page iii** of this plan.



## 6.0 RECORDKEEPING AND REPORTING

**40 CFR 257.104(b)(2)(iii).** *“The owner or operator has completed the written post-closure plan when the plan including the certification required by paragraph (d)(4) of this section, has been placed in the facility’s operating record as required by Section 257.105(i)(4).”*

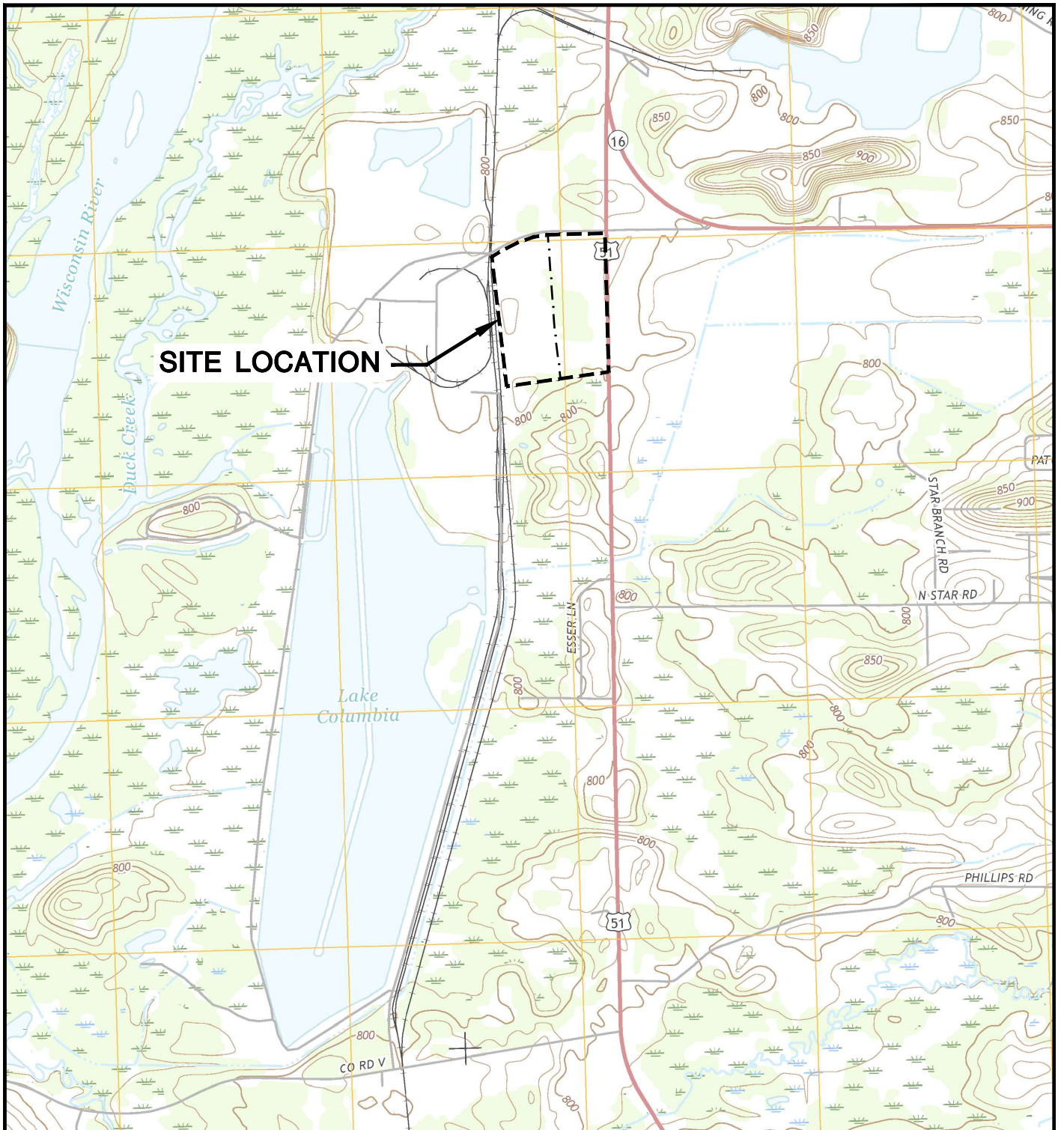
The Post-Closure Care Plan will be placed in the facility’s operating record and on Alliant Energy’s CCR Rule Compliance Data and Information website, as will all amendments.

WPL will amend the Post-Closure Care Plan if there is a change in operation of the CCR unit that affects the written Post-Closure Care Plan or, if after post-closure activities have started, unexpected events cause a revision of the plan.

WPL will provide notification of completion of the post-closure care no later than 60 days following the completion of the post-closure care period. The notification will include certification by a qualified professional engineer verifying that post-closure care has been completed in accordance with the plan. The notification will be placed in the facility’s operating record and on the website.

## Figures

- 1 Site Location Map
- 2 Post-Closure Care Plan



POYNETTE QUADRANGLE  
 WISCONSIN-COLUMBIA CO.  
 7.5 MINUTE SERIES (TOPOGRAPHIC)  
 2016  
 SCALE: 1" = 2,000'

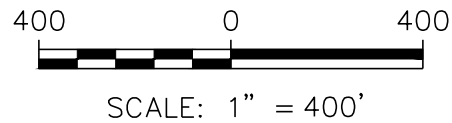


CLIENT	WISCONSIN POWER AND LIGHT COLUMBIA ENERGY CENTER W8375 MURRAY ROAD PARDEEVILLE, WISCONSIN 53954		SITE	POST CLOSURE CARE PLAN COLUMBIA DRY ASH DISPOSAL FACILITY TOWN OF PACIFIC, WISCONSIN		ENGINEER	SITE LOCATION MAP	
	PROJECT NO.	25221134.00		DRAWN BY:	AHB		<b>SCS ENGINEERS</b> 2830 DAIRY DRIVE MADISON, WI 53718-6751 PHONE: (608) 224-2830	FIGURE
	DRAWN:	08/09/2016		CHECKED BY:	RJG			1
REVISED:	11/30/2021	APPROVED BY:	PEG 12/09/21					

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LEGEND	
	ASH DISPOSAL FACILITY LIMITS
	APPROVED LIMITS OF ASH FILL
	PHASE/MODULE LIMIT
	EXISTING GRADE (10' CONTOUR)
	EXISTING GRADE (2' CONTOUR)
	PAVED ROAD
	UNPAVED ROAD
	RAILROAD TRACKS
	VEGETATION
	FENCE
	SWALE
	EDGE OF WATER
	APPROXIMATE LIMITS OF EXISTING LEACHATE/SURFACE WATER POND LINER
	CULVERT
	TRANSMISSION TOWER
	WATER SUPPLY WELL
	WATER TABLE WELL
	PIEZOMETER
	SURFACE WATER SAMPLE LOCATION
	LYSIMETER
	LEACHATE HEADWELL
	BENCHMARK
	PROPOSED FINAL GRADES (10' CONTOUR)

- NOTES:
1. BASE MAP CREATED FROM AERIAL SURVEY BY KBM, FLOWN DECEMBER 1, 2014, AND GROUND SURVEYS BY SCS ENGINEERS IN MAY 2016, JUNE 2016, OCTOBER 2016, NOVEMBER 2016, APRIL 2017, NOVEMBER 2017, JULY 2018, AUGUST 2018, AND NOVEMBER 2021.
  2. MONITORING WELL LOCATIONS AND ELEVATIONS SURVEYED BY WISCONSIN POWER AND LIGHT, INC. IN DECEMBER 1994, NOVEMBER 1996, APRIL 2003, AUGUST 2012, JANUARY 2016, AND BY SCS ENGINEERS IN FEBRUARY 2018.



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CLIENT WISCONSIN POWER AND LIGHT COLUMBIA ENERGY CENTER W6375 MURRAY ROAD PARDEEVILLE, WISCONSIN 53954	PROJECT NO.	25221134.00	ENGINEER	FIGURE	2
	DRAWN BY:	12/18/2017	BJM/KP	POST-CLOSURE CARE PLAN	
REVISD BY:	11/30/2021	PEG	ENGINEER	POST-CLOSURE CARE PLAN	
APPROVED BY:		PEG 12/09/21		COLUMBIA DRY ASH DISPOSAL FACILITY	
				TOWN OF PACIFIC, WISCONSIN	