Prepared by:

BAILLY GENERATING STATION
BOILER SLAG POND
CLOSURE PLAN &
POST-CLOSURE PLAN

1 February 2022

Certified by:

Wood Environment & Infrastructure Solutions, Inc.

11003 Bluegrass Parkway, Suite 690

Louisville, KY 40299

Version 3

Northern Indiana Public Service Company LLC (NIPSCO LLC) prepared this closure plan for the Boiler Slag Pond coal combustion residuals (CCR) surface impoundment at the Bailly Generating Station (BGS) pursuant to the requirements of 40 Code of Federal Regulations (CFR § 257.102(b) of the Disposal of CCR from Electric Utilities Rule, 80 Fed. Reg. 21302 (17 April 2015). NIPSCO LLC retained Wood Environment & Infrastructure Solutions, Inc. (Wood) to certify this closure plan meets 40 CFR § 257.102 requirements. The Boiler Slag Pond, is located in Porter County, Indiana, on property owned by NIPSCO LLC. This closure plan was originally posted to the NIPSCO LLC operating record 17 October 2016 and has been revised to update the in-place CCR inventory in Section 3 and update the closure schedule and closure initiation date for the Boiler Slag Pond. This closure plan may be additionally amended pursuant to 40 CFR § 257.102(b)(3) requirements. Presented below are:

1. Narrative of closure activities
2. Procedures to remove CCR
3. Final cover system
4. Estimate of in-place CCR inventory
5. Estimate of largest area requiring final cover
6. Closure schedule
7. Summary of closure plan amendments
8. Post-closure plan
9. Qualified professional engineer certification.

1.0 NARRATIVE OF CLOSURE ACTIVITIES

The purpose of this closure plan is to describe the steps required to close the Boiler Slag Pond at the BGS in accordance with recognized and generally accepted good engineering practices. Closure is designed to reduce the need for long-term maintenance and control post-closure release of constituents into environmental pathways (i.e., air, surface water, and groundwater).

The Boiler Slag Pond will be closed through the closure by removal* method with removal of CCR material and the existing liner system. Excavated material will be managed or disposed of properly according to approved plans and/or local, state, and federal regulations.

**As used in this closure plan, "removal" does not mean closure as contemplated by 40 CFR 257.102(c). "Removal" as used herein is intended to have its commonly understood, everyday meaning, and is not intended as a term of art.*

2.0 PROCEDURES TO REMOVE CCR

NIPSCO LLC will be closing this surface impoundment through removing the CCR, but to proactively address the potential that groundwater standards described in §257.102(c) are not met within the regulatory timeframe outlined in §257.102(f), NIPSCO LLC will be removing the CCR and also meeting the performance standard for closure-in-place found in § 257.102(d). The Indiana Department of Environmental Management (IDEM) therefore required that a two-foot final soil cover layer be placed over the excavation limits after CCR removal to provide a physical barrier and limit infiltration into the former impoundment subsurface. This closure plan now includes a post-closure plan, which will not apply if the groundwater meets the regulatory criteria within the appropriate timeframe.

Wood prepared a closure application which was submitted to IDEM on 3 February 2021. The closure application included closure methodology and permit-level closure drawings establishing the site conditions and proposed closure approach.

The BGS surface impoundment will be closed by excavating the CCR materials, placing the CCR materials in highway dump trucks, and transporting over a pre-determined route to the NIPSCO LLC onsite landfill at the Rollin M. Schahfer Generating Station for disposal. Removing free water and dewatering the impoundment subgrade will be required to allow construction equipment to excavate and load the CCR material effectively and safely.

Sargent & Lundy design drawings, showing the impoundment configuration, identify the excavation limits for closure construction. Visual observation will be used during excavation to monitor the CCR material removal. Visual verification and field surveys will be performed upon completion of the BGS surface impoundment CCR and bottom liner material excavation, to document removal of the CCR and bottom liner materials.

3.0 FINAL COVER SYSTEM

Approved soil backfill material will be used to regrade the former surface impoundment to facilitate positive surface drainage after the overlying soil cover is placed. This cover will consist of a minimum depth of 2 feet (18 inches of soil cover with a minimum permeability of 1×10^{-5} centimeters per second [cm/sec]) beneath 6 inches of vegetative cover (i.e., topsoil).

Existing appurtenant structures such as ditches, culverts, and miscellaneous piping will be cleaned and be abandoned in place or removed and disposed of in a permitted disposal facility. Cleaning procedures may consist of pressure washing, scrubbing, or other generally accepted cleaning procedures.

Pursuant to 40 CFR § 257.102(d), the CCR unit will be closed in a manner that will control or minimize post-closure infiltration and releases to the environment; preclude the probability of future impoundment of water, sediment, or slurry; provide for major slope stability during the post-closure care period; and minimize the need for further former CCR surface impoundment unit maintenance. NIPSCO LLC will, in accordance with 40 CFR § 257.102(f)(3) and 102(h), provide closure notification within 30 days of closure completion, including certification from a qualified professional engineer verifying closure has been completed in accordance with the closure application and CCR Rule requirements. A notation to the property deed will be recorded and notification provided within 30 days of the recording pursuant to 40 CFR § 257.102(i).

4.0 ESTIMATE OF IN-PLACE CCR INVENTORY

The volume of CCR present in the Boiler Slag Pond was calculated to be 22,700 cubic yards, pursuant to 40 CFR § 257.102(b)(1)(iv). The estimate is based on a March 2021 bathymetric survey and historical topography.

5.0 ESTIMATE OF LARGEST AREA REQUIRING FINAL COVER

The area of the CCR unit inside the Sargent & Lundy boundary requiring a closure cap has been estimated to be 1.2 acres.

6.0 CLOSURE SCHEDULE

Closure of the Boiler Slag Pond will be initiated pursuant to 40 CFR § 257.102(e) and is anticipated to be completed within 5 years of closure commencement pursuant to 40 CFR § 257.102(f)(1)(ii).

Prior to commencing closure construction, design documents will be prepared to support applications for any required local, state, and federal permits. Closure construction design documents will include construction drawings, technical specifications, and quality assurance testing work plans. The permits required for closure construction activities will be evaluated at the time of closure and are anticipated to include permits from IDEM. Current preliminary time frames of anticipated closure activities are included below in Table 1.

Table 1. Estimated Time Frames for Closure Activities

Closure activity	Scheduled start	Scheduled completion
Submit closure application to IDEM		3 February 2021
Public outreach meeting		To Be Determined
IDEM closure approval period	3 February 2021	To Be Determined
Prepare closure construction documents, bid, and award	1 March 2021	To Be Determined (Dependent on IDEM approval)
Estimated surface impoundments closure	Q2 2024	Q3 2025

7.0 SUMMARY OF CLOSURE PLAN AMENDMENTS

NIPSCO LLC will amend the closure plan in the future in accordance with 40 CFR § 257.102(b)(3). A summary record of amendments will continue to be tracked as provided in Table 2.

Table 2. Summary of Closure Plan Revisions

Version	Date	Description of Changes
1	12 October 2016	Initial issue
2	7 February 2019	Bailly Coal-Fired Units Retirement in 2018
3	4 October 2021	Update closure approach and schedule

The latest version number of the closure plan will be noted on the front cover of the closure plan.

8.0 POST-CLOSURE PLAN

In accordance with 40 CFR 257.104(d)(1)(i), post-closure care for the surface impoundment will address the following systems as required under 40 CFR 257.104(b), along with the frequencies for the identified monitoring and maintenance activities:

- Final cover system
- Groundwater monitoring system.

8.1 Final cover system

The site will be visually inspected periodically for the duration of the Boiler Slag Pond post-closure care period. Maintenance or other corrective measures needed to prevent closure cap system deterioration will be identified during the inspections. The cover system will be maintained for a minimum of 30 years following the Boiler Slag Pond final closure. Cover system integrity and effectiveness will be maintained by making repairs as necessary to correct potential effects of subsidence and erosion, as well as preventing run-on and run-off from eroding or otherwise significantly damaging the cap system. The cover will be re-graded if settlement or other structural problems occur in the final cover system. Vegetative cover will be inspected to maintain a healthy stand of vegetation. Sediment transport will be retarded by temporary silt fences and other appropriate temporary sediment control measures until final cover vegetation is fully established.

8.2 Groundwater monitoring system

The groundwater monitoring system will be designed and maintained in accordance with the United States Environmental Protection Agency (USEPA) Final CCR Rule, 40 CFR 257.90 through 98. Groundwater monitoring locations will be inspected periodically when sampled. Repairs will be made as needed.

8.3 Contact information

The primary NIPSCO LLC person who can be contacted during the post-closure care period and who is responsible for post-closure care maintenance and monitoring is:

Contact Name:	Jeff Neumeier
Contact Physical Address:	246 Bailly Station Road, Chesterton, Indiana 46304
Contact Telephone Number:	(219) 787-7298 (BGS office)
	(219) 873-7337 (Michigan City Generating Station office)

8.4 Planned uses

The surface impoundment will be used for green space after closure. The vegetative cover will be inspected periodically to maintain a healthy stand of vegetation, and site inspections will be required to evaluate stressed vegetation. There are no current plans for future use of the property and it is anticipated that the property will not be accessible to the public following The Boiler Slag Pond development and closure. Property post-closure use will not disturb the final cover integrity, or the monitoring systems function unless necessary to comply with USEPA Final CCR Rule under 40 CFR Part 257 requirements or approval from IDEM is obtained. NIPSCO LLC has no current future plans for long-term use of the property where the former surface impoundment is located but reserves the right to use this area at a future time, if a use for this area is determined. Other disturbance is allowed if the CCR unit owner or

operator demonstrates that final cover disturbance will not increase the potential threat to human health or the environment. A qualified professional engineer must certify the demonstration, and notification shall be provided to the State Director that the demonstration has been placed in the operating record and on the owner's or operator's publicly accessible Internet site.

8.5 Post-closure plan amendment

The owner or operator may amend the post-closure plan at any time and must do so at least 60 days prior to any planned change in the CCR unit operation that would substantially affect the written post-closure plan in effect. The post-closure plan must also be amended no later than 60 days after unanticipated events necessitate a revision of the written post-closure plan (30 days after, if the triggering event takes place after post-closure activities have commenced). The amended post-closure plan requires a new certification from a qualified professional engineer that it meets 40 CFR 257.104 requirements.

8.6 Post-closure plan certification

A qualified professional engineer has provided a written certification stating that the post-closure plan meets 40 CFR 257.104 requirements.

8.7 Notification of post-closure care period completion

The CCR unit owner or operator must prepare a notification verifying that post-closure care has been completed no later than 60 days following post-closure care period completion. The notification must include a certification by a qualified professional engineer verifying that post-closure care has been completed in accordance with the post-closure plan and 40 CFR 257.104 requirements. The owner or operator has completed the notification when it has been placed in the facility's operating record.

9.0 QUALIFIED PROFESSIONAL ENGINEER CERTIFICATION

I, John W. Storm, being a registered professional engineer in the state of Indiana, do hereby certify to the best of my knowledge, information, and belief, that the information contained in this written closure plan and post-closure plan dated 1 February 2022, was developed pursuant to the requirements of 40 CFR § 257.102 and § 257.104, respectively, and has been prepared in accordance with recognized and generally accepted good engineering practices.

PRINTED NAME **John W. Storm** **DATE** **February 1, 2022**