REPORT

Applicability Report - Former Ash Pond 4

Inactive D. H. Mitchell Generating Station

Submitted to:

Northern Indiana Public Service Company LLC

Submitted by:

WSP USA Inc.

10 Al Paul Lane, Suite 103,

Merrimack, NH 03054

603 324-0894

31406779.002

November 8, 2024

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1.0 INTRODUCTION

Northern Indiana Public Service Company LLC (NIPSCO) owns the inactive Dean H. Mitchell Generating Station (DHMGS, or Site), located at 1 North Clark Road, Gary, Lake County, Indiana (Latitude 41° 38' 19" N and Longitude 87° 24' 29" W, see Figure 1). The owner contact is Joseph E. Kutch, NIPSCO, 2755 Raystone Drive, Valparaiso, IN 46383, whose business phone number is (219) 476-1511 and email is jkutch@nisource.com. DHMGS occupies an approximately 125-acre parcel located along the southern shoreline of Lake Michigan in a heavily industrialized area of Gary, Indiana. On behalf of NIPSCO, WSP USA Inc. (WSP), prepared this Legacy Coal Combustion Residual (CCR) Surface Impoundment Applicability Report (Applicability Report) for the Legacy Surface Impoundment referred to as the Former Ash Pond #4 (see Figure 2) in accordance with 40 Code of Federal Regulations (CFR) §257.100(f)(1)(i). In conformance with the applicable requirements of 40 CFR §257.100(f)(1)(i)(A) through (E) this report includes:

- The name and address of the person(s) owning and operating the legacy CCR surface impoundment;
- The name associated with the legacy CCR surface impoundment;
- Information to identify the legacy CCR surface impoundment, including a figure of the facility and where the unit is located within the facility boundary;
- The identification number of the legacy CCR surface impoundment, if one has been assigned by the state; and
- A description of the current site conditions, including the current use of the inactive facility.

2.0 CURRENT SITE CONDITIONS

The facility is an inactive, decommissioned 500-megawatt (MW) capacity coal-fired, steam-turbine electric generating station that includes areas formerly dedicated to power generation and transmission, coal storage and handling, and CCR management operations. Remaining infrastructure on-Site includes a locked main gate and outside perimeter security fence to control access; a formerly used guard's office; a perimeter rail loop located within the security fence; paved and unpaved roadways throughout the facility; an approximately 3-acre stormwater retention/infiltration pond; an operating substation; a radio communications tower and access-controlled support building; and water intake and discharge channels at Lake Michigan. The mostly vacant Site is currently secured and maintained by NIPSCO.

3.0 LEGACY COAL COMBUSTION RESIDUAL SURFACE IMPOUNDMENT

Former Ash Pond #4, located in the northeastern corner of the Site near the adjacent United States Steel (USS) property, was approximately 420 feet long and 325 feet wide and constructed circa late 1970s. No identification number for the former Ash Pond #4 has been assigned by the state. The former impoundment was primarily incised (i.e., excavated) into the ground surface except for the northern side, which was contained by a berm comprised of steel slag, kiln brick, and other non-native, steel production waste material.

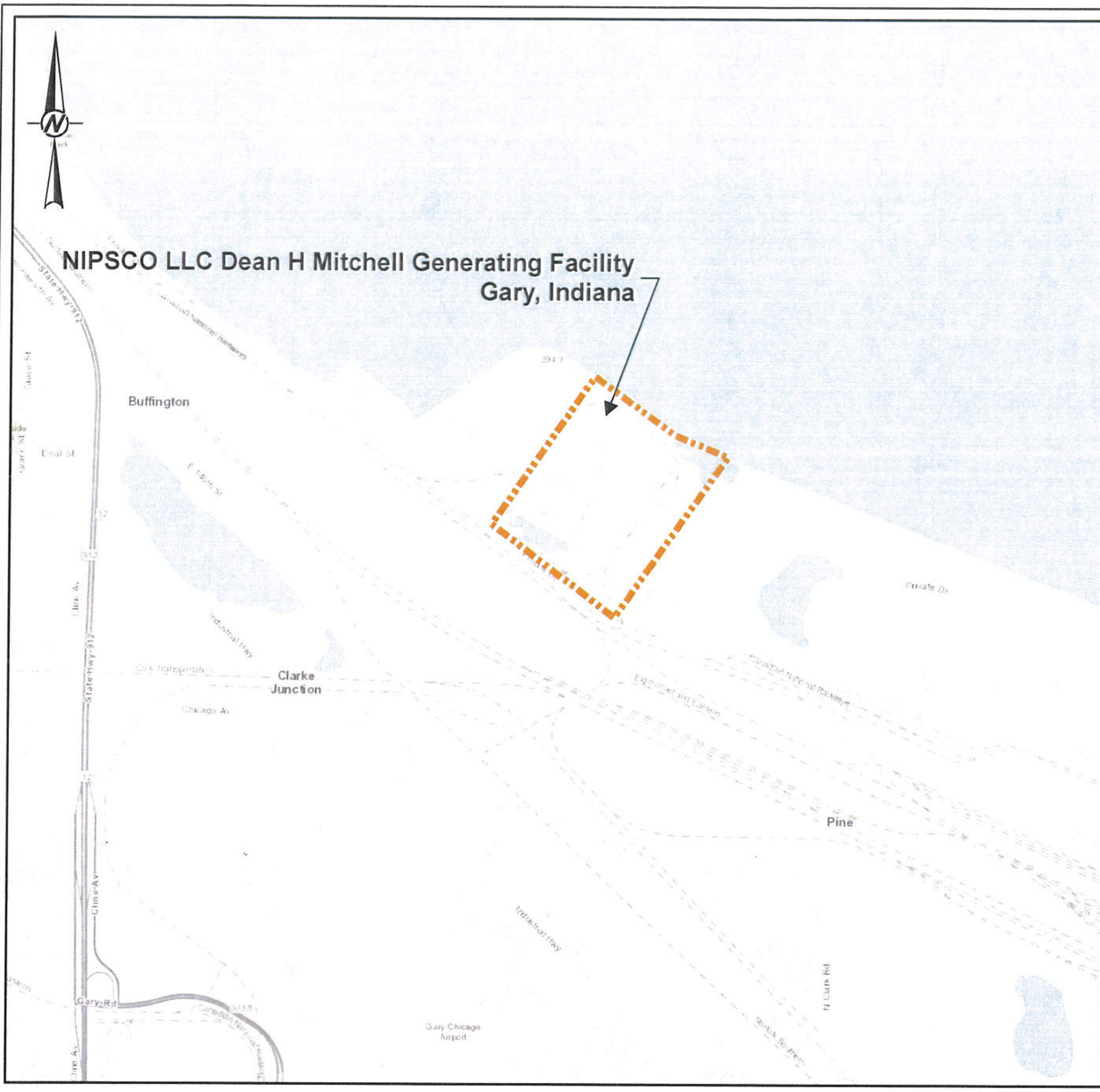
NIPSCO and the Indiana Department of Environmental Management (IDEM) executed a Corrective Action Agreed Order (Agreed Order) on February 26, 2014 in settlement of Cause H-13871 for the DHMGS. In compliance with the Agreed Order and in accordance with the conditions of a Closure Plan approved by IDEM on May 13 and June 10, 2022, the Former Ash Pond #4 was closed in place by in-situ soil stabilization/solidification (ISS) that was covered with a 40-mil HDPE geomembrane with a permeability less than or equal to $1x10^{-7}$ cm/sec. The geomembrane was covered with a minimum of 18 inches of vegetative soil cover and 6 inches of topsoil designed to protect the geomembrane and support vegetative cover consisting of pollinator habitat. Post-construction dimensions of Former Ash Pond #4 are approximately 435 feet long by 330 feet wide. The final cover system was designed in accordance with 40 CFR §257.102 – criteria for conducting the closure or retrofit of CCR Units. In accordance with 40 CFR §257.102(d)(1)(i), the cover was designed to control, minimize, or eliminate, to the maximum extent feasible, infiltration of surface water to the stabilized ash. Likewise, the chosen ISS approach was designed to produce a solid monolith achieving a field-verified $1x10^{-5}$ to $1x10^{-6}$ cm/sec permeability or less, thereby also eliminating the flow of groundwater laterally or vertically through the closed CCR Unit to the maximum extent feasible. The ISS achieved an average permeability of $7.40x10^{-7}$ cm/sec. Closure was completed in August 2024. In accordance with the Agreed Order, a long-term, post-construction operations and maintenance plan was developed for the final cover system maintenance and monitoring. Additionally, groundwater monitoring is being performed quarterly for two years following closure, then semi-annually thereafter until the end of the post-closure period for all CCR Rule Appendix III and Appendix IV parameters, except radium. Currently, the results are submitted quarterly to IDEM. In accordance with, §257.100(i)(8), the November 2024 "Notification of Closure Completion" (Haley & Aldrich, 2024) demonstrating that the Former Ash Pond 4 closure met the performance standards in §257.102(d) is included in Appendix A.

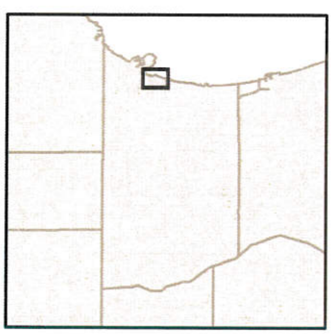
4.0 CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this demonstration and all attached documents, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

11/7/2024

Joseph Kutch
Northern Indiana Public Service Company LLC





0 2,100 4,200

1 " = 2,100 Feet Feet

REFERENCE(S)

1. COORDINATE SYSTEM: NAD 1983 STATEPLANE INDIANA WEST FIPS 1302 FEET
2. IMAGERY SOURCES: ESRI, HERE, GARMIN, INTERMAP, INCREMENT P CORP., GEBCO, USGS, FAO, NPS, NRCAN, GEOBASE, IGN, KADASTER NL, ORDNANCE SURVEY, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY
3. APPROXIMATE PROPERTY LINES OBTAINED FROM THE LAPORTE COUNTY, IN ASSESSORS OFFICE WEB SITE (WWW.LAPORTECOUNTY.ORG)

CLIENT

NORTHERN INDIANA PUBLIC SERVICE COMPANY LLC

LEGEND

Approximate Property Line

PROJECT

NIPSCO LLC DEAN H. MITCHELL GENERATING STATION
GARY, INDIANA

CONSULTANT

YYYY-MM-DD	11/13/2023
DESIGNED	TDH
PREPARED	EMM
REVIEWED	DFSC
APPROVED	MAH

TITLE

SITE LOCATION MAP

PROJECT NO.	CONTROL	REV	FIGURE
31406779.001	-	-	1

LEGEND

- Former Ash Pond 4
- Approximate Property Line

FIGURE NARRATIVE
THIS FIGURE DEPICTS THE APPROXIMATE LOCATION OF THE COAL COMBUSTION RESIDUAL LEGACY UNIT THE FORMER ASH POND #4.

NOTE(S)

REFERENCE(S)
SERVICE LAYER CREDITS: AIRBUS APRIL, 2024

CLIENT
NORTHERN INDIANA PUBLIC SERVICE COMPANY LLC

PROJECT
DEAN H.MITCHELL GENERATING STATION
GARY, INDIANA

TITLE
CCR LEGACY SURFACE IMPOUNDMENT – FORMER ASH POND #4

CONSULTANT
wsp

YYYY-MM-DD	2024-10-30
DESIGNED	DFSC
PREPARED	EMM
REVIEWED	DFSC
APPROVED	MAH

PROJECT NO.	CONTROL	REV.	FIGURE
31406779	-	-	2

APPENDIX A

Notification and Certification of Closure Completion

HALEY & ALDRICH, INC.
3 Bedford Farms Dr.
Bedford, NH 03110
603.625.5353

TECHNICAL MEMORANDUM

7 November 2024
File No. 129201-013

TO:	Northern Indiana Public Service Company, LLC Attn: Jeff Loewe, Manager, Environmental Remediation
FROM:	Haley & Aldrich, Inc. Jeffery A. Miller, P.E., Associate | Senior Engineer William J. Haswell, P.E., Principal
SUBJECT:	Notification of Closure Completion Former Dean H. Mitchell Generating Station Inactive Ash Pond #4

Haley & Aldrich, Inc. (Haley & Aldrich) has prepared this memorandum (memo) to document the completion of closure of Inactive Ash Pond #4 at the former Dean H. Mitchell Generating Station (DHMGS) in Gary, Indiana. The closure was performed between May 2023 and August 2024, with vegetation successfully restored by late October 2024. This memo summarizes the framework under which the closure was authorized, provides a summary of key aspects of the closure, and details plans for post-closure care.

Background

SITE DESCRIPTION

The former DHMGS, operational from 1956 to 2001, occupies an approximately 125-acre parcel along the southern shoreline of Lake Michigan in Gary, Indiana. Following the generating station's retirement, Northern Indiana Public Service Company, LLC (NIPSCO) completed demolition of the electrical generation structures and ancillary equipment. Remaining infrastructure on the Site includes perimeter fencing and locked gates, a guard shack, an internal rail loop, paved and unpaved roadways, an approximately 3-acre stormwater retention pond, an operating substation, a radio communications building, and water intake and discharge channels at Lake Michigan.

INACTIVE ASH POND #4 CLOSURE APPROACH

NIPSCO and the Indiana Department of Environmental Management (IDEM) executed a Corrective Action Agreed Order (Agreed Order) on 26 February 2014 in settlement of Cause H-13871 for the Dean H. Mitchell Generating Station, 1 North Clark Road, Gary, Lake County, Indiana ("DHMGS" or the "Site").

In compliance with the Agreed Order, a Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) was completed for the solid waste management units (SWMUs) as required by IDEM, culminating in a preliminary RFI Report (Investigation Report) submitted to IDEM on 19 June 2015. In a 16 December 2015 meeting, representatives of IDEM and NIPSCO discussed findings of the Investigation Report and alternatives for completing closure of former ash-containing surface impoundments, including the use of RCRA Corrective Action Interim Measures (IMs) and proactive source control measures to mitigate or prevent releases to soil or groundwater as an acceptable programmatic approach.

NIPSCO ultimately chose to conduct an in-situ soil stabilization/solidification (ISS) closure-in-place (CIP) approach, creating a low-permeability monolith of the existing Pond 4 contents achieving an average permeability, based on the evaluation of quality control samples, of less than 1.0E-06 centimeters per second (cm/sec). The closure also included a geosynthetic final cover system that exhibits a permeability lower than the Coal Combustion Residuals (CCR) Rule 1.0E-05 cm/sec cover system and armoring of the cover system along the northern berm closest to Lake Michigan. The CIP approach includes previously agreed-upon 30-year post-closure care commitments, including long-term groundwater monitoring.

NIPSCO retained WSP USA Inc. (WSP), formerly Golder Associates, Inc. (Golder), to liaise with IDEM and work in collaboration with Haley & Aldrich, Inc. (Haley & Aldrich) to implement the *"RCRA Corrective Action Interim Measures In-Situ Soil Stabilization Closure Work Plan for Inactive Ash Pond #4"* (IM ISS Closure Plan; Golder and Haley & Aldrich, 2022), which was conditionally approved by IDEM on 13 May and 10 June 2022, with final approval on 15 July 2022. NIPSCO selected Haley & Aldrich to develop the ISS CIP technical approach, provide necessary engineering relative to the closure design, and perform construction management, including review of construction quality control data.

Following closure, NIPSCO will: 1) perform post-closure groundwater monitoring and Operations and Maintenance (O&M) obligations related to cover system maintenance; 2) complete facility-wide RCRA Corrective Action documentation and final RFI reporting; 3) coordinate with IDEM to demonstrate satisfaction of Agreed Order requirements; and 4) file appropriate environmental restriction covenants, allowing the DHMGS 2014 Agreed Order to be terminated.

This memorandum documents that the closure of Inactive Ash Pond #4 has met the requirements of:

- 329 Indiana Administrative Code (IAC) 10-23-2 (post-closure duties), 10-23-3 (post-closure plan), and 10-23-4 (post-closure certification), as applicable;
- 40 Code of Federal Regulations (CFR) §257.102(d), Compliance with the requirements of 40 CFR §257.102(f)(3); professional engineer certification), (g; notification of intent to close), (h; notification of closure), and (I; deed notifications), 40 CFR §257.104 (post-closure care requirements); and
- The IDEM approved Interim Measures Work Plan (IMWP) and the Quality Assurance Manual (QAM).

Summary

The construction activities completed by NIPSCO in 2023 and 2024 to close Inactive Ash Pond #4 are summarized below:

- Construction activities were performed safely and in conformance with the Site-specific Health and Safety Plans.
- Dust monitoring was conducted to measure and mitigate the intensity and duration of dust emissions to off-Site areas during construction in accordance with the Dust Monitoring and Control Plan prepared for the project.
- The construction activities were completed in accordance with the Technical Specifications and Design Drawings prepared for the project.
- Construction activities were performed in accordance with the terms of the permits and approvals required for this project.
- ISS was completed with bucket mixing and an as-built ISS volume of 51,500 cubic yards was calculated. The ISS achieved an average permeability of 7.40E-07 cm/sec.
- Following completion of ash stabilization, the Pond 4 area was backfilled to achieve subgrades, and a final cover system with a permeability of less than or equal to 1E-07 cm/sec was installed.
- The closure met the performance standards in 40 CFR §257.102(d).

The required post-closure O&M will be completed at Inactive Ash Pond #4, including evaluation of stormwater runoff, final cover maintenance, visual checks and maintenance of the pollinator habitat, and sampling and maintenance of the post-closure groundwater monitoring well network.

Closing

Consistent with the IDEM-approved IMWP and the performance standards in 40 CFR §257.102(d), NIPSCO successfully closed Inactive Ash Pond #4, with the work completed and the area successfully restored with vegetation by 24 October 2024. The closure followed the approved design and work plans and was completed under the review of a qualified Indiana-licensed Professional Engineer. Following completion of the closure, the project will now transition into a post-closure operations, maintenance, and monitoring phase of work intended to evaluate the effectiveness of the closure and the durability of the closure methods. The results of post-closure monitoring will be summarized and provided to IDEM annually.

Certification

I certify under penalty of law that this document and all plans, specifications, and technical data submitted were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The closure was completed in accordance with the approved IMWP. Based on my inquiring of the person or persons who directly gathered the referenced information, the information submitted is, to the best of my knowledge and belief, is true, accurate, and complete. I am aware that there are significant penalties for submitting false information.

Signed

Jeffery A. Miller, P.E.
Printed

11800217
Registration Number

7 November 2024
Date

JEFFERY A. MILLER
REGISTERED
7 Nov. 2024
No. 11800217
STATE OF
INDIANA
PROFESSIONAL ENGINEER

wsp.com