



## REPORT

# Northern Indiana Public Service Company Michigan City Generating Station Primary Settling Pond Number 2 *2018 Annual RCRA CCR Unit Inspection Report*

Submitted to:

**Northern Indiana Public Service Company (NIPSCO)**

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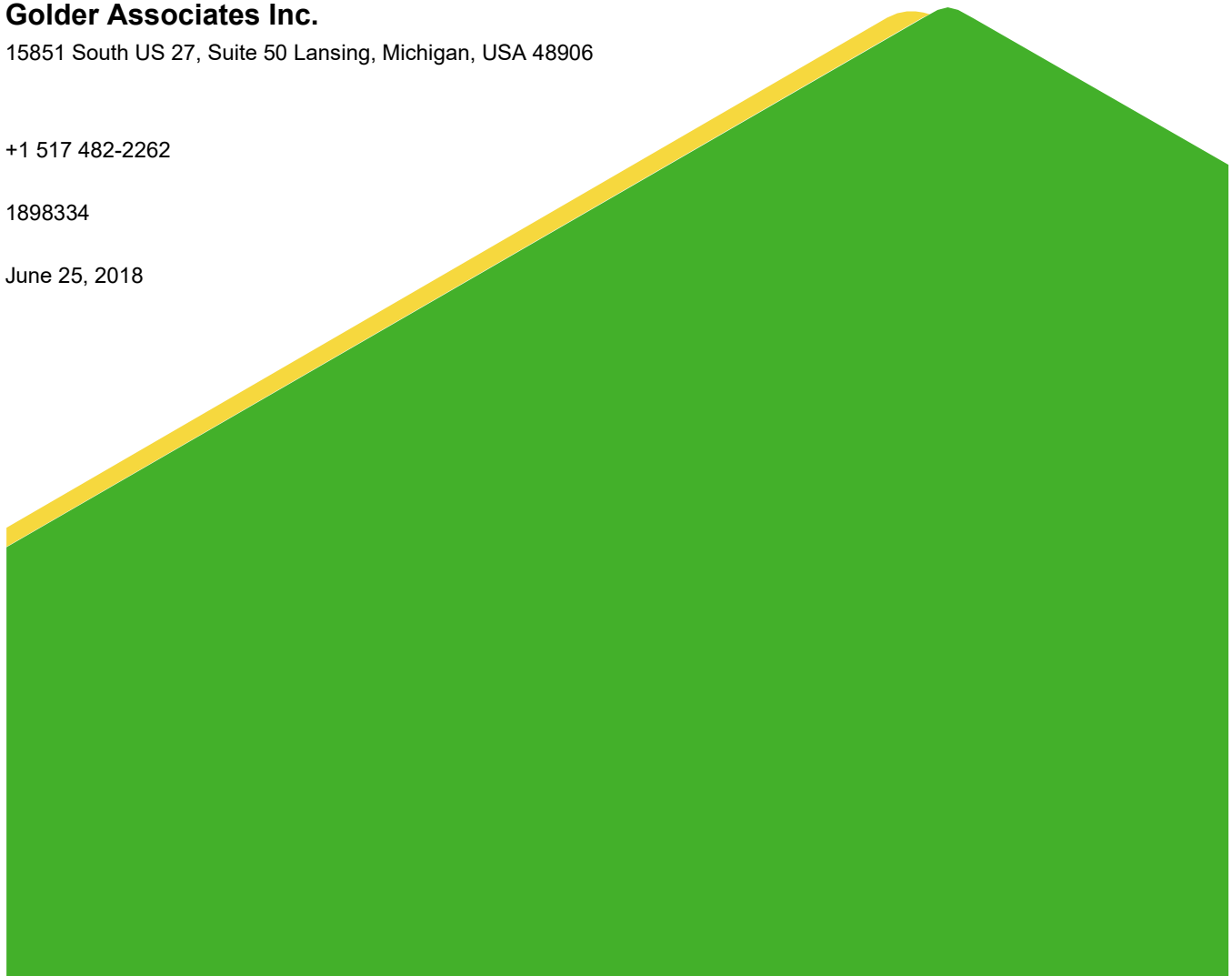
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## 1.0 INTRODUCTION

The United States Environmental Protection Agency (EPA) promulgated the Resource Conservation and Recovery Act (RCRA) Coal Combustion Residuals (CCR) Rule (Rule) on April 17, 2015, with an effective date of October 19, 2015. The Rule requires owners or operators of existing CCR surface impoundments to have those units inspected on an annual basis by a qualified professional engineer in accordance with 40 CFR 257.83(b)(1). The annual qualified professional engineer inspections are required to be completed and the results documented in inspection reports (per 40 CFR 257.83(b)(2)) for CCR surface impoundments. Golder Associates Inc. (Golder) was retained by Northern Indiana Public Service Company (NIPSCO) to perform the annual inspection of the Primary Settling Pond Number 2 (Primary 2), a CCR surface impoundment located at the Michigan City Generating Station (MCGS, Site).

The CCR Rule establishes national minimum criteria and new CCR management obligations for existing, new, and lateral expansions of CCR disposal units. One of the new obligations pertains to inspections, specifically; CCR unit owners/operators must initiate the following activities:

- every 7-day inspections and every 30-day instrument monitoring of CCR Units by October 19, 2015; and
- annual inspections of CCR units by January 18, 2016, however Primary 2 was initially in the process of closure, therefore the next annual inspection for Primary 2 must be performed by July 15, 2018.

This report presents the results of the annual inspection of Primary 2 CCR surface impoundment unit at the MCGS, located in Michigan City, La Porte County, Indiana. Primary 2 is an above grade surface impoundment that is not currently regulated by the Indiana Department of Water Dam Regulations (IDOW). The inspection was conducted to comply with §257.83 of the new CCR Rule.

Per 40 CFR 257.83(b)(1), Golder reviewed available information regarding the status and condition of the CCR unit and performed an onsite visual inspection which was conducted on May 16, 2018. The objectives of the inspection included the following:

- Review of Operational Records (as applicable, see Section 3):
  - Design and construction information.
  - Results of previous structural stability assessments.
  - Results of previous annual inspections.
- A visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit and appurtenant structures.
- A visual inspection of hydraulic structures underlying the base of the CCR unit or passing through the dike of the CCR unit for structural integrity and continued safe and reliable operation.

In accordance with §257.83(b)(2), this inspection report has been prepared by a qualified professional engineer documenting the points listed above, and identifying the following since the previous annual inspection:

- Any changes in geometry of the CCR surface impoundment since the previous annual inspection.
- The location and type of existing instrumentation and the maximum recorded readings for each instrument since the previous annual inspection.

- The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection.
- The storage capacity of the impounding structure at the time of inspection.
- The approximate volume of the impounded water and CCR at the time of inspection.
- Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit and appurtenant structures.
- Any other change(s) which may have affected the stability or operation of the impounding structure since the previous annual inspection.

## 2.0 FACILITY DESCRIPTION

Primary 2 was designed by Sargent and Lundy Engineers (S&L) of Chicago, Illinois in 1972, and put into service in 1973 and has been continuously owned and operated by NIPSCO to the present time. Primary 2 is formed by an above grade embankment that is approximately 14 feet high on the outside and approximately 19 feet high on the inside.

The contractor who built Primary 2 is not known. Historical geotechnical data from hydrogeologic and geotechnical investigation reports completed at the site by others were provided to Golder. Drawings and numerous boring logs were available from the initial 1970s facility design/construction. Golder also completed a geotechnical investigation and embankment stability analyses in 2012.

Primary 2 currently receives air heater wash and boiler room sump water from the MCGS via above ground steel pipelines that discharge into Primary 2. Primary 2 is currently not accepting CCR materials. At the time of the inspection, Primary 2 was receiving discharges from the generating station. There is one discharge structure in Primary 2. The discharge structure is concrete and utilizes stop logs to control water elevation and currently discharges to the Final Settling Pond.

### 3.0 BACKGROUND AND DOCUMENT REVIEW SUMMARY

The existing reports reviewed for this assessment are summarized below.

**Table 1: Summary of Background Document Review**

Document	Date	Author
Various construction drawings	1972	Sargent & Lundy Engineers (S&L)
Draft Round 10 Dam Assessment Report, NIPSCO Michigan City Generation Station, Coal Ash Impoundments	March 2012	GZA GeoEnvironmental, Inc. (GZA) for the EPA
Final Report – Summary of Hydraulic Evaluation of Impoundments, Technical Memorandum, NIPSCO, Michigan City Generating Station, Michigan City, Indiana	August 2012	Golder Associates Inc.
2012 Geotechnical Investigation and Embankment Stability Analyses, NIPSCO Michigan City Generating Station, Michigan City, Indiana	August 2012	Golder Associates Inc.
2017 Initial Annual RCRA CCR Unit Inspection Report Primary Basin Number 2 – Surface Impoundment, NIPSCO, Michigan City Generating Station, Michigan City, Indiana	July 2017	Golder Associates Inc.
CCR Surface Impoundment - Primary 2 Inflow Design Flood Control System Plan, NIPSCO Michigan City Generating Station	April 2018	Golder Associates Inc.
Weekly Inspections, Primary Settling Pond #2, NIPSCO, Michigan City Generating Station, Michigan City, Indiana	July 2017 – May 2018	NIPSCO

## 4.0 2018 VISUAL INSPECTION

The 2018 onsite inspection of Primary 2 was performed by Tiffany Johnson, P.E. of Golder Associates Inc. (Golder) on May 16, 2018. Golder's inspector was accompanied by Mr. Joe Kutch, Coal Combustion Residuals Program Manager and Mr. Jeff Neumeier, Environmental Coordinator with NIPSCO MCGS for the inspection.

The visual inspection provides the following information as stipulated in 40 CFR 257.83(b)(2):

- Any changes in geometry of the CCR surface impoundment since the previous annual inspection.
  - There were no changes in the geometry of the Primary 2 since the last inspection.
- The location and type of existing instrumentation and the maximum recorded readings for each instrument since the previous annual inspection.
  - There is currently no instrumentation in place designed to monitor for the structural stability of the Primary.
- The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection.
  - Maximum: approximately 603 feet above mean sea level (from NIPSCO)
  - Minimum: approximately 601 feet above mean sea level (from NIPSCO)
  - Present Depth: approximately 11 feet (based on visual observation on May 16, 2018)
- The storage capacity of the impounding structure at the time of inspection.
  - Approximately 70,260 cubic yards (CY), based on previous inspection report information (GZA, 2012) and confirmed by NIPSCO.
- The approximate volume of the impounded water and CCR at the time of inspection.
  - Impounded water = approximately 500,000 gallons (confirmed by NIPSCO)
  - CCR = approximately 10,000 cubic yards (confirmed by NIPSCO)
- Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit and appurtenant structures.
  - None were observed.
- Any other change(s) which may have affected the stability or operation of the impounding structure since the previous annual inspection.
  - None were observed.

Based on a review of the historical reports listed in Table 1 and conditions noted during the annual inspection, Primary Settling Pond No. 2 is in acceptable condition. The following de minimus items were observed:

- Minor vegetation within the rip-rap observed along the north/northwestern downstream slope during the previous inspection was removed in June 2017 and has been well maintained.
- Sparse vegetation within the rip-rap lined slopes is managed a minimum of 2 times per year.
- Noted minor erosion on northern and southwestern inside slopes.
- Noted minor erosion under inflow structure pipes at the northern crest.

There is currently no instrumentation in place designed to monitor for the structural stability of Primary 2. At the time of the inspection and report, there are no plans for installation of stability monitoring instrumentation.

Based on visual observations made on May 16, 2018, the overall condition of Primary 2 is acceptable. No structural weaknesses or safety issues were observed within the upstream, downstream, crest or hydraulic structures of Primary 2. Based on visual observations made on May 16, 2018, there were no conditions visually identified that would likely impact the operation of Primary 2.

## 5.0 CLOSING

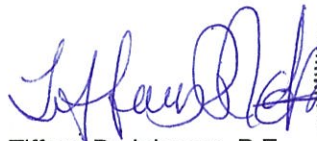
This report has been prepared in general accordance with normally accepted civil engineering practices to fulfill the Resource Conservation and Recovery Act (RCRA) reporting requirements in accordance with 40 CFR 257.83(b). Based on our review of the information provided by NIPSCO and on Golder's on-site visual inspection, the overall condition of Primary 2 is acceptable. Golder's assessment is limited to the information provided to us by NIPSCO and to the features that could be inspected visually in a safe manner. Golder cannot attest to the condition of subsurface or submerged structures.

## Signature Page

### Golder Associates Inc.



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