2019 Annual Groundwater Monitoring and Corrective Action Report - Boiler Slag Pond

NIPSCO LLC Michigan City Generating Station

Prepared Pursuant to 40 CFR §257.90(e) and Corresponding Regulations under 329 Indiana Administrative Code 10-9-1

Submitted to:

Northern Indiana Public Service Company LLC
Michigan City Generating Station
Michigan City, Indiana

Submitted by:

Golder Associates Inc.
670 North Commercial Street, Suite 103
Manchester, NH 03101
+1 603 668-0880

191-21568

January 31, 2020

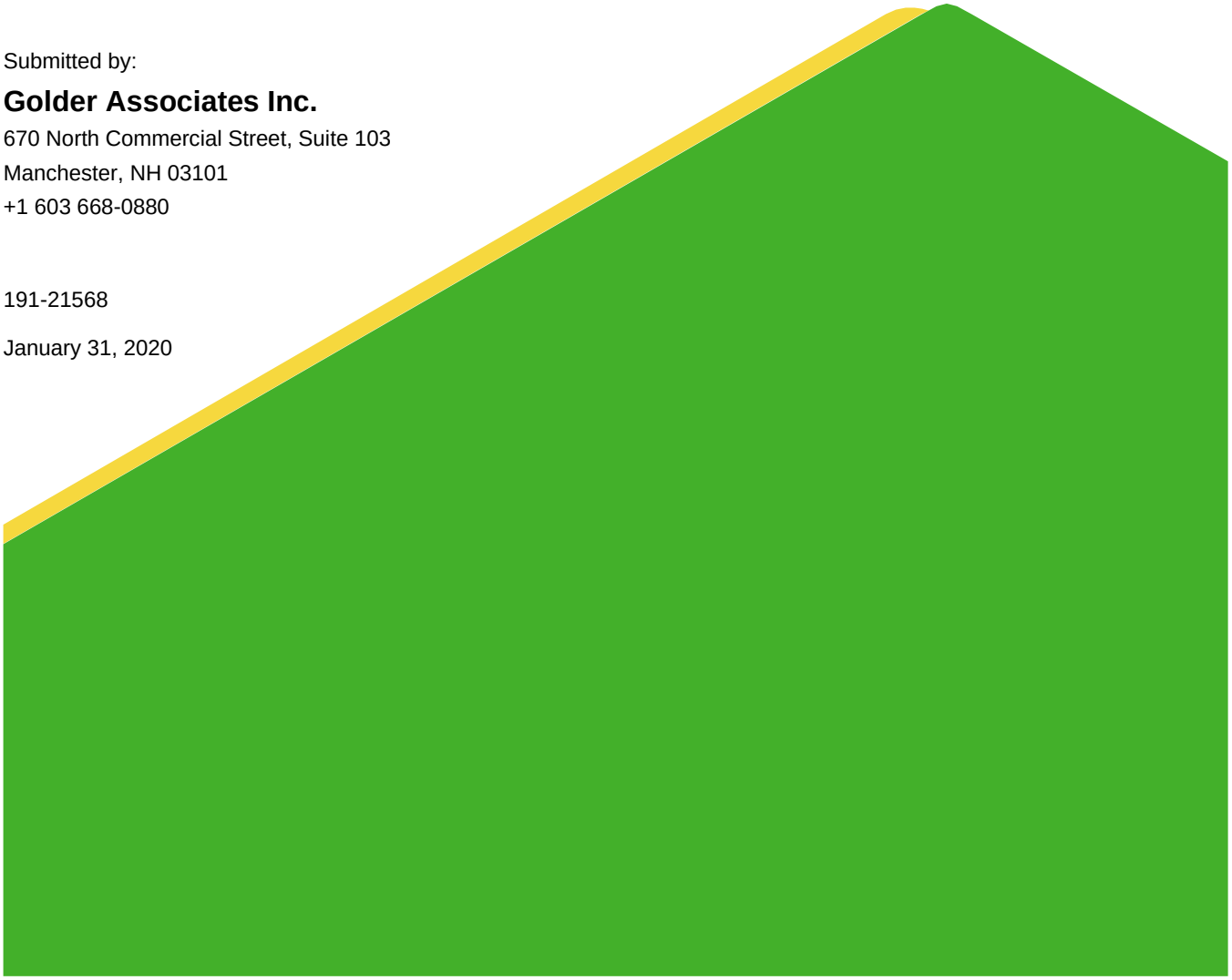


Table of Contents

1.0 INTRODUCTION

On behalf of Northern Indiana Public Service Company LLC (NIPSCO LLC), Golder Associates Inc. (Golder) prepared this 2019 Annual Groundwater Monitoring and Corrective Action Report (2019 Annual Report) for the Michigan City Generating Station (MCGS) Boiler Slag Pond (BSP, the CCR Unit) located at 101 Wabash Street, Michigan City, LaPorte County, Indiana (Latitude 41° 43' 15" N and Longitude 86° 54' 30" W, see Figure 1). The BSP is an approximately 2.5-acre unlined impoundment/materials dewatering area, as shown in Figure 2. Golder prepared the 2019 Annual Report in accordance with 40 Code of Federal Regulations (CFR) Parts 257 and 261, "Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals From Electric Utilities; Final Rule" (CCR Rule), as amended, and corresponding regulations under 329 Indiana Administrative Code (IAC) 10-9-1.

Routine monitoring activities performed during the reporting period include inspection of wells for integrity and security, measurement of groundwater levels prior to sample collection to assess groundwater flow direction, and collection of samples for laboratory analysis.

In conformance with the applicable requirements of 40 CFR §257.90(e)(1) through (5) and corresponding State of Indiana requirements, the 2019 Annual Report:

- Documents the status of the groundwater monitoring and corrective action program
- Provides figures showing the CCR Unit and monitoring well locations
- Summarizes key CCR Rule groundwater activities completed during calendar year 2019
- Includes CCR Rule groundwater monitoring data obtained in calendar year 2019
- Describes any problems encountered during the monitoring activities
- Discusses actions taken to resolve the problems, if applicable
- Projects key activities for the upcoming year

2.0 GROUNDWATER MONITORING AND CORRECTIVE MEASURES PROGRAM STATUS

Starting in 2016 following the installation of a groundwater monitoring system and throughout calendar year 2017, Golder collected background groundwater samples and performed the first Detection Monitoring sampling event pursuant to the requirements of 40 CFR §257.94. In April 2018, Golder performed the second Detection Monitoring sampling event. In October 2018, Golder performed the first Assessment Monitoring sampling event pursuant to the requirements of 40 CFR §257.95. Following the first Assessment Monitoring event, including verification sampling in February 2019, NIPSCO LLC posted a notification to the publicly-assessible website that there were detections of Appendix IV parameters downgradient of the BSP above applicable groundwater protection standards (GWPS). Consequently, NIPSCO LLC initiated the assessment of corrective measures process. In 2019, Golder performed the second and third Assessment Monitoring sampling events.

2.1 Key Actions Completed - 2019

NIPSCO LLC completed the following key actions relative to CCR Rule groundwater monitoring at the BSP during calendar year 2019:

- Preparation of the 2018 Groundwater Monitoring and Corrective Action Annual Report in January 2019 (2018 Annual Report, 40 CFR §257.90(e))
- Performance of the first Assessment Monitoring verification sampling event in February 2019 (40 CFR §257.95)
- Performance of the second Assessment Monitoring event in April 2019 (40 CFR §257.95)
- Establishment of GWPS and evaluation of the results of the first Assessment Monitoring verification event in May 2019 (40 CFR §257.95(d))
- Notification that constituents in 40 CFR Part 257 Appendix IV exceeded the GWPS in June 2019 (40 CFR §257.95(g))
- Evaluation of the results of the second Assessment Monitoring event in July 2019 (40 CFR §257.95)
- Notification that constituents in 40 CFR Part 257 Appendix IV exceeded the GWPS in August 2019 (40 CFR §257.95(g))
- Initiation of the Assessment of Corrective Measures in August 2019 (40 CFR §257.96(a))
- Performance of the third Assessment Monitoring event in October 2019 (40 CFR §257.95)
- Completion and certification of the demonstration that an additional 60 days was needed to complete the Assessment of Corrective Measures in November 2019 (40 CFR §257.96(a), Appendix A)

2.2 Monitoring System Modification

The groundwater monitoring system did not require any modifications in 2019 (see Figure 2). Attached Table 1 provides a summary of the well rationale/purpose and date of installation. An overview of the groundwater monitoring network is provided in the embedded table below.

Background Monitoring Wells	Downgradient Monitoring Wells
GAMW-05, GAMW-12, GAMW-18	GAMW-10, GAMW-11, GMMW-2

2.3 Background Monitoring (2016 to 2017)

Per the requirements of 40 CFR §257.94, Golder collected eight independent background groundwater samples from each background and downgradient well between July 2016 and August 2017. Golder used the results of the background monitoring phase to develop appropriate, statistically valid background values for each constituent/monitoring well. Golder submitted the samples to a contract laboratory, in accordance with chain of custody and quality assurance/quality control procedures, for analysis of 40 CFR Part 257 Appendix III and Appendix IV constituents. In addition, Golder personnel measured field water quality parameters including specific conductance, temperature, dissolved oxygen, turbidity, oxidation-reduction potential, and pH. The background data set is included in the 2017 CCR Annual Groundwater Monitoring and Corrective Action Report, dated January 31, 2018 (2017 Annual Report).

2.4 Detection Monitoring

Golder performed the first Detection Monitoring event in October 2017, followed by a statistical evaluation and data analysis in January 2018. Golder collected groundwater samples from the BSP background and downgradient monitoring wells for analysis of Appendix III constituents per 40 CFR §257.94 and included the results in the 2017 Annual Report. Following receipt and validation of laboratory results, Golder evaluated the results of the first Detection Monitoring sampling event to compare the concentration of 40 CFR Part 257 Appendix III constituents relative to facility background concentrations. Using Sanitas™ software, Golder pooled the background data to calculate prediction limits and compared the October 2017 results to the calculated prediction limits to determine statistically significant increases (SSIs). There were no SSIs identified from the October 2017 sampling event.

Golder performed the second Detection Monitoring event in April 2018 and follow-up pH verification sampling in May, June, and July 2018. Golder performed a statistical evaluation and data analysis in July 2018. Based on SSIs identified in the second Detection Monitoring event, NIPSCO LLC established an Assessment Monitoring program in August 2018.

2.5 Assessment Monitoring

Golder performed the first Assessment Monitoring event (i.e. Assessment and Verification sampling) in October 2018 (Assessment) and February 2019 (Verification). Golder collected groundwater samples from each background and downgradient monitoring well for analysis of Appendix III and Appendix IV constituents per 40 CFR §257.95 in October 2018. In February 2019, Golder collected detected Appendix IV constituents per 40 CFR §257.95. Golder developed GWPS to use as a comparison against the Assessment Monitoring results in May 2019. Following receipt and validation of laboratory results, Golder evaluated the Appendix IV constituent results relative to CCR Unit-specific GWPS (see Table 4). At the time of the statistical evaluation the GWPS was the higher value of either the Maximum Contaminant Level (MCL) or the CCR Unit-specific background concentration for each analyte based on a tolerance/prediction limit procedure under 40 CFR §257.95(h)(2). Results from the downgradient monitoring wells were evaluated by comparing the lower confidence limit (LCL) to the CCR Unit-specific GWPS for each Appendix IV analyte at each well. If the LCL exceeds the GWPS, there is statistical evidence of a statistically significant level (SSL). Golder determined that an SSL existed for arsenic at well GAMW-10 in May 2019 and initiated the assessment of corrective measures in August 2019.

Golder performed the second Assessment monitoring event in April 2019 by collecting groundwater samples from each background and downgradient monitoring well for analysis of Appendix III and detected Appendix IV constituents per 40 CFR §257.95. Golder performed the statistical evaluation of the analytical results of the second Assessment Monitoring sampling event in July 2019. The results confirmed the SSL for arsenic at well GAMW-10.

Golder performed the third Assessment Monitoring event in October 2019 by collecting groundwater samples from each background and downgradient monitoring well for analysis of Appendix III and Appendix IV constituents per 40 CFR §257.95. Golder will perform the statistical evaluation of the analytical results of the third Assessment Monitoring sampling event in February 2020.

The sampling dates, number of groundwater samples collected from each background and downgradient well, and the purpose of sampling are provided in Table 2. The analytical results are presented in Table 3.

2.6 Corrective Measures

NIPSCO LLC is evaluating the feasibility and design of potential groundwater remedial alternatives. The evaluation will be presented in the Assessment of Corrective Measures (ACM) report that will be completed in January 2020 and posted to the public website in February 2020.

2.7 Statistical Evaluation

Subsequent to each monitoring event, Golder assessed the analytical data for outliers, anomalies, and trends that may be an indication of a sampling or analytical error. Outliers and anomalies are generally defined as inconsistently large or small values that can occur as a result of sampling, laboratory, transportation, or transcription errors, or even by chance alone. Significant trends may indicate natural geochemical variability, a source of systematic error, influence of an upgradient/off-site source, or an actual occurrence of CCR Unit influence upon groundwater quality. Appropriate statistical methods are used to remove outliers from the database and manage trends with detrending routines, prior to the calculation of statistical limits. To assess the data for outliers, anomalies, and trends, Golder assessed the data using time vs. concentration graphs, and statistical routines included in the Sanitas™ statistical analysis software package.

In addition to the outliers identified in the 2018 Annual Groundwater Monitoring and Corrective Action Report (2018 Annual Report), Golder identified the April 2019 cobalt, field pH, lithium, sulfate, and total dissolved solids results from background monitoring well GAMW-12 as an outlier and removed this datum from the data set for the following reasons:

- Statistical testing, including the Dixon outlier test, identified these results as outliers; and
- Trend charts indicated that these results from the April 2019 monitoring event were inconsistent with other concentrations detected in this monitoring well.

Golder evaluated the background data for trends using Sanitas™ software. Golder will continue to monitor trends and will perform detrending routines before using this data to calculate GWPS. Golder identified the following 40 CFR Part 257 Appendix IV parameter trends in background monitoring wells:

- Cobalt concentrations detected in groundwater samples collected from well GAMW-05 show an increasing trend; however, all results are below the MCL, therefore, the GWPS is equal to the MCL. No detrending routines are required.
- Fluoride concentrations detected in groundwater samples collected from well GAMW-12 show a decreasing trend; however, all results are below the MCL, therefore, the GWPS is equal to the MCL. No detrending routines are required.
- Molybdenum concentrations detected in groundwater samples collected from well GAMW-12 show a decreasing trend with the 95% lower confidence band below the MCL. No detrending routines are required.

2.8 Problems Encountered and Follow-Up Corrective Actions

No problems were encountered in 2019.

3.0 KEY ACTIVITIES PROJECTED FOR 2020

During calendar year 2020, NIPSCO anticipates conducting the following key CCR Rule groundwater monitoring activities for the BSP:

- Prepare and submit the appropriate notifications according to the CCR Rule;
- Continue semi-annual Assessment Monitoring groundwater sampling per CCR Rule requirements;
- Complete the assessment of corrective measures; and
- Inspect and maintain monitoring system including wells, pumps, and equipment.

4.0 REFERENCES

Golder Associates, “2017 Annual Groundwater Monitoring and Corrective Action Report- Boiler Slag Pond NIPSCO Michigan City Generating Station”, January 31, 2017.

Golder Associates, “2018 Annual Groundwater Monitoring and Corrective Action Report- Boiler Slag Pond NIPSCO Michigan City Generating Station”, January 31, 2018.

Tables

Table 1: Monitoring Well Network
CCR Unit Michigan City Boiler Slag Pond
NIPSCO LLC Michigan City Generating Station
Michigan City, Indiana

CCR Unit	Well Purpose	Monitoring Well ID	Installation Date (If Applicable)	Decommission Date (If Applicable)	Basis For Action
Boiler Slag Pond	Background Monitoring Well	GAMW-05	-	-	Installed for Groundwater Quality Monitoring[(1)]
		GAMW-12	6/14/2016	-	
		GAMW-18	6/14/2016	-	
	Downgradient Monitoring Well	GAMW-10	6/14/2016	-	
		GAMW-11	6/14/2016	-	
		GMMW-2	-	-	

1) Per 40 CFR §257.93 , Golder collected eight rounds of background data prior to October 17, 2017.

Prepared by: KMC
Checked by: AMH
Reviewed by: MAH

Table 2: Summary of Sampling Events
CCR Unit Michigan City Boiler Slag Pond
NIPSCO LLC Michigan City Generating Station
Michigan City, Indiana

Well Purpose	Monitoring Well ID	Sample Event #11	Sample Event #12	Sample Event #13	Total Number of Samples
Purpose of Sample		Verification Sampling	Semi-Annual Assessment Monitoring	Annual Assessment Monitoring	
Sample Parameters		Appendix IV	Appendix III and Appendix IV	Appendix III and Appendix IV	
Background Monitoring Well	GAMW-05	NS	4/2/2019	10/22/2019	2
	GAMW-12	NS	4/2/2019	10/23/2019	2
	GAMW-18	NS	4/2/2019	10/18/2019	2
Downgradient Monitoring Well	GAMW-10	2/4/2019	4/2/2019	10/22/2019	3
	GAMW-11	2/4/2019	4/2/2019	10/22/2019	3
	GMMW-2	2/4/2019	4/2/2019	10/15/2019	3
Total Number of Samples		3	6	6	15

Notes:

Sample counts do not include QA/QC samples.

NS= not sampled

(1) Sample events #1-#10 and the first Assessment Monitoring sample event (considered part of Sample Event #11), were completed prior to 2019. The purpose, sample parameters, and sample dates are included in the 2017 and 2018 Annual Reports.

(2) Semi-annual assessment monitoring parameters did not include radium

Prepared by: KMC
Checked by: AMH
Reviewed by: MAH

Table 3: Analytical Data
CCR Unit Michigan City Boiler Slag Pond
NIPSCO LLC Michigan City Generating Station
Michigan City, Indiana

Analyte	Unit	GAMW-05			GAMW-10				GAMW-11			GAMW-12		GAMW-18		GMMW-02		
		2019-04-02	2019-10-22		2019-02-04	2019-04-02		2019-10-22	2019-02-04	2019-04-02	2019-10-22	2019-04-02	2019-10-23	2019-04-02	2019-10-18	2019-02-04	2019-04-02	2019-10-15
		N	FD	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	N
CCR Appendix III																		
Boron	mg/L	0.47	0.53	0.54		0.67	0.67	0.87		0.35	0.32	1.7	0.68	2.1	3.2		0.67	1.1
Calcium	mg/L	170	200	200		190	200	270		100	89	230	300	230	180		60	73
Chloride	mg/L	280	270	270		140	140	260		85	89	220	160	62	96		63	42
Fluoride	mg/L	0.97	1.5	1.5	0.67	0.58	0.59	0.35	0.61	0.63	0.87	0.13	0.4	0.9	0.77	0.89	0.78	0.74
pH	pH units	6.8		7.42	7.97		7.95	8.07	7.02	7.07	7.44	5.7 O	6.04	6.67	7.07	7.31	7.93	8.98
Sulfate	mg/L	760	530	540		550	590	950		190	140	1800 O	2500	990	880		81	150
Total Dissolved Solids	mg/L	1600	1300	1200		1200	1200	1800		590	530	2700 O	3100	1500	1600		380	440
CCR Appendix IV																		
Antimony	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.00063 J	0.002 U	0.00069 J	0.002 U	0.002 U	0.002 U	0.002 U	0.00058 J	0.002 U	0.0011 J
Arsenic	mg/L	0.005 U	0.005 U	0.005 U	0.02	0.015	0.014	0.027	0.0058	0.0018 J	0.0025 J	0.012	0.01	0.0022 J	0.0035 J	0.0096	0.011	0.013
Barium	mg/L	0.052	0.031	0.032	0.057	0.09	0.088	0.18	0.025	0.031	0.033	0.051	0.035	0.12	0.1	0.076	0.068	0.11
Beryllium	mg/L	0.001 U	0.001 U	0.001 U	0.0008 J	0.001 U	0.002	0.001 U	0.0004 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0015	0.00043 J
Cadmium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00027 J	0.001 U	0.001 U	0.001 U	0.001 U	0.0016	0.0015	0.001 U	0.001 U	0.0012	0.0012	0.00099 J
Chromium	mg/L	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U	0.002 U
Cobalt	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00027 J	0.001 U	0.0013	0.0014	0.00044 J	0.084 O	0.056	0.0015	0.00082 J	0.001 U	0.0002 J	0.001 U
Fluoride	mg/L	0.97	1.5	1.5	0.67	0.58	0.59	0.35	0.61	0.63	0.87	0.13	0.4	0.9	0.77	0.89	0.78	0.74
Lead	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Lithium	mg/L	0.041	0.017	0.018	0.038	0.033	0.033	0.12	0.019	0.017	0.02	0.17 O	0.076	0.089	0.077	0.013	0.012	0.018
Mercury	mg/L	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U	0.0002 U
Molybdenum	mg/L	0.01 U	0.01 U	0.01 U	0.01	0.0075 J	0.0075 J	0.01 U	0.0069 J	0.0058 J	0.01 U	0.0032 J	0.016	0.02	0.057	0.018	0.013	0.03
Radium, Total	pci/L		0.632	0.514				0.983			0.248		0.43		1.55			0.475 U
Radium-226	pci/L		0.273	0.155				0.329			0.0733		0.175		0.57			0.18 U
Radium-228	pci/L		0.359	0.359				0.654			0.175		0.255		0.979			0.475 U
Selenium	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.0014 J	0.005 U	0.001 J	0.005 U	0.001 J	0.0026 J	0.0041 J	0.0017 J	0.0016 J	0.002 J
Thallium	mg/L	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00022 J	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.00025 J	0.001 U	0.001 U	0.0016	0.0015	0.0019
Sample Parameters																		
DO	mg/L	1.51		0.59	0.33		0.85	0.19	0.72	0.97	0.17	1.4	0.23	1.4	0.65	0.45	1.65	0.27
ORP	millivolts	-104.9		-107.9	-103.9		-163.4	-151.8	-126.4	-60.6	-53	29.9	49.1	25.9	-184.1	179.1	56.3	-64.9
pH	SU	6.8		7.42	7.97		7.95	8.07	7.02	7.07	7.44 O	5.7	6.04	6.67	7.07	7.31	7.93	8.98
SC	uS/cm	1847		1958	1084		1290	2559	946	675	813	2469	3543	1475	1651	756	459	562
Temperature	deg C	12.8		16.96	12.9		11.3	19.09	9.89	8.9	18.55	12.2	15.42	13.3	17.8	10.4	10	20.1
Turbidity	NTU	2.52		0.32	4.41		3.82	0.23	2.94	2.7	0.71	0.43	0.25	0.42	1.1	0.83	0.23	0.87

Note:
mg/L = milligrams per liter
uS/cm = micro Siemens per centimeter
deg C = degrees Celsius
NTU = Nephelometric Turbidity Units
SU = Standard Units
pCi/L = picocuries per liter
"U" = Indicates the result was not detected above the method detection limit (MDL) for the sample; the quantitation limit (RL) is provided.
"J" = Indicates the result is estimated.
"O" = Indicates the result is an outlier.

Prepared by: AMH
Checked by: DFS
Reviewed by: MAH

Table 4: Groundwater Protection Standards
CCR Unit Michigan City Boiler Slag Pond
NIPSCO LLC Michigan City Generating Station
Michigan City, Indiana

Analyte	MCL (mg/L)	GWPS (mg/L)
Antimony	0.006	0.006
Arsenic	0.01	0.014
Barium	2	2
Beryllium	0.004	0.004
Cadmium	0.005	0.005
Chromium	0.1	0.1
Cobalt(1)	0.006	0.006
Fluoride	4	4
Lead(1)	0.015	0.015
Lithium(1)	0.04	0.098
Mercury	0.002	0.002
Molybdenum(1)	0.1	0.15
Radium 226+228	5	5
Selenium	0.05	0.05
Thallium	0.002	0.002

Notes:

MCL= Environmental Protection Agency Maximum Contaminant Level

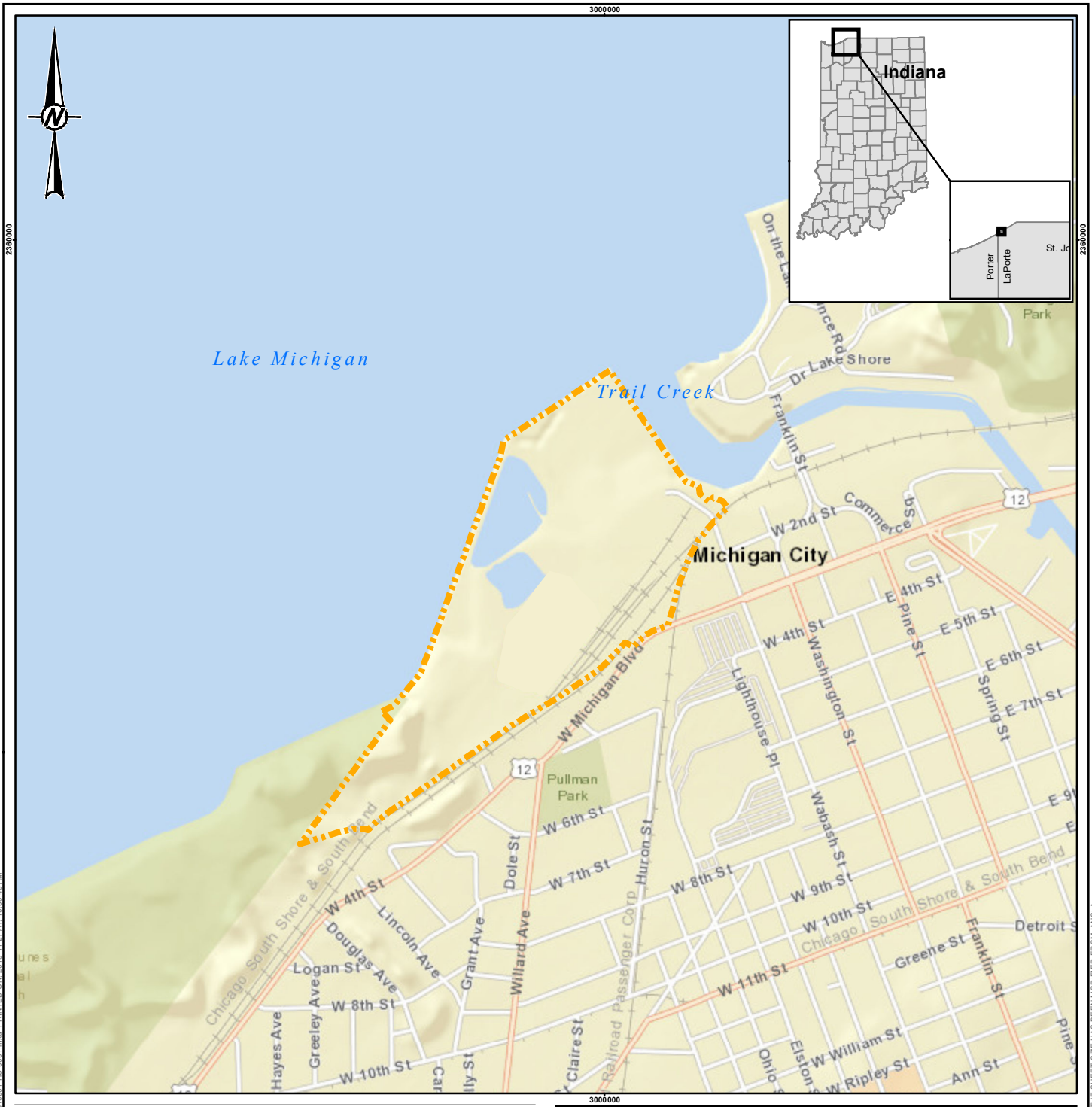
GWPS= Groundwater Protection Standard, calculated in May 2019

mg/L= milligrams per liter

1) As of August 29, 2018, these four constituents have health-based standards that can be used when calculating the GWPS, these health-based standards are not MCLs but are provided in the MCL column.

Prepared by: DFS
Checked by: AMH
Reviewed by: MAH

Figures



LEGEND

Approximate Property Line

0 1,250 2,500

1 " = 1,250 feet Feet

REFERENCE(S)

SERVICE LAYER CREDITS: SOURCES: ESRI, HERE, GARMIN, USGS, INTERMAP, INCREMENT P, NRCAN, ESRI JAPAN, METI, ESRI CHINA (HONG KONG), ESRI KOREA, ESRI (THAILAND), NGCC, (C) OPENSTREETMAP CONTRIBUTORS, AND THE GIS USER COMMUNITY

CLIENT

NORTHERN INDIANA PUBLIC SERVICE COMPANY LLC

PROJECT

MICHIGAN CITY GENERATING STATION
MICHIGAN CITY, INDIANA

TITLE

SITE LOCATION MAP

CONSULTANT

GOLDER

YYYY-MM-DD	11/15/2019
DESIGNED	DFS
PREPARED	SHL
REVIEWED	JSP
APPROVED	MAH

PROJECT NO.	CONTROL	REV.	FIGURE
164817101	A	0	1

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI A

PATH: V:\001\GIS Projects\NIPSCO\MichiganCity\69_PROJ\164817101_EA\40_PROD\0001_EA\164817101-A0001-HS-0001.mxd PRINTED ON: 2019-11-27 AT: 10:59:46 AM

LEGEND

- Background Groundwater Monitoring Well
- Downgradient Groundwater Monitoring Well
- Generalized Groundwater Flow Direction
- Existing Sheet Piles
- Approximate Property Line
- CCR Unit

0 100 200

1 " = 100 feet Feet

NOTE(S)

REFERENCE(S)

1. MARBACH, BRADY AND WEAVER, INC. SURVEYED THE BORING LOCATIONS JUNE, 2016
2. SERVICE LAYER CREDITS: © 2020 MICROSOFT CORPORATION © 2019 DIGITALGLOBE ©CNES (2019) DISTRIBUTION AIRBUS DS

CLIENT

NORTHERN INDIANA PUBLIC SERVICE COMPANY LLC

PROJECT

MICHIGAN CITY GENERATING STATION
MICHIGAN CITY, INDIANA

TITLE

WELL LOCATION MAP
BOILER SLAG POND

CONSULTANT

GOLDER

YYYY-MM-DD	1/24/2020
DESIGNED	DFS
PREPARED	SHL
REVIEWED	JSP
APPROVED	MAH

PROJECT NO.	CONTROL	REV.	FIGURE
19121568	A	0	2

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

PATH: V:\001 GIS Projects\NIPSCO\Michiganc\ity\99_PROJ\19121568_MCGSClosure\40_PROD\0002_AnnualReport\19121568-A0002-HS-0002.mxd PRINTED ON: 2020-01-24 AT: 11:28:34 AM

APPENDIX A

Extension of 60 Days to Complete Assessment of Corrective Measures

Wood Environment & Infrastructure Solutions, Inc.
11003 Bluegrass Parkway
Suite 690
Louisville, Kentucky 40299
USA
T: 502-267-0700
www.woodplc.com

8 November 2019

Mr. Joseph Kutch
Northern Indiana Public Service Company, LLC
801 E. 86th Avenue
Merrillville, IN 46410

Re: 60 Day Extension Demonstration – Assessment of Corrective Measures Report
Michigan City Generating Station – Boiler Slag Pond
Michigan City, Indiana
Wood Project No. 7382173270

Dear Mr. Kutch:

Wood Environment & Infrastructure Solutions, Inc. (Wood) is submitting this 60-day demonstration letter for the Assessment of Corrective Measures (ACM) Report at Boiler Slag Pond at Michigan City Generating Station.

Wood is in the process of preparing the referenced ACM report. Additional time to complete the ACM is required because the Boiler Slag Pond is located near groundwater impacts currently being investigated under a RCRA Agreed Order. These impacts, while distinct from releases from the CCR-regulated units, will influence most types of corrective actions being evaluated specifically for the CCR units. For example, non-CCR constituents associated with the RCRA units are co-mingled with CCR-impacts, and the evaluation of groundwater corrective action must be expanded to address all potential constituents of concern. We believe additional time will permit us to more accurately assess potential corrective measures in light of the multiple constituents present in the larger groundwater system. Based on these important considerations, we believe the extension is warranted and the ACM report will be completed and submitted to meet the extension period date of 8 January 2020.

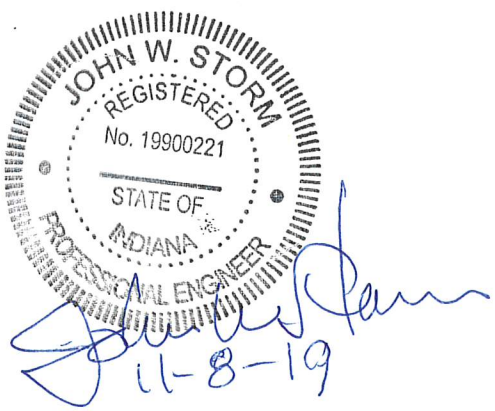
Wood certifies the requested extension demonstration to be accurate.

We appreciate this opportunity to provide environmental services to Northern Indiana Public Service Company, LLC. If you have questions regarding the ACM or associated extension, please contact us at 502-267-0700.

Sincerely
Wood Environment & Infrastructure Solutions, Inc.

John W. Storm PE
Project Manager, Principal Engineer

Russell A Johnson, LEP
Principal



golder.com