

**STATE OF INDIANA**  
**DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
**PUBLIC NOTICE NO 20240319 – IN0002259– D**  
**DATE OF NOTICE: March 19, 2024**  
**DATE RESPONSE DUE: April 19, 2024**

The Office of Water Quality proposes the following DRAFT NPDES PERMIT:

**MAJOR – Modification :**

**SIGECO F.B. CULLEY GENERATING STATION**, Permit No. IN0002259, WARRICK COUNTY, 3711 Darlington Road, Newburgh, IN. This facility is a coal-fired steam electric generating plant with two (2) generating units. The permittee has requested to add a new outfall to the permit, Outfall 006 and to modify the description of internal Outfall 201. Outfall 006 is located at 37° 54' 29.01" N, -87° 19' 20.66" W and will discharge non-contact stormwater at a rate of 3.364 MGD to the Ohio River. Permit Manager: Nikki Gardner, 317/232-8707, [ngardner@idem.in.gov](mailto:ngardner@idem.in.gov). Posted online at <https://www.in.gov/idem/public-notices/>.

**PROCEDURES TO FILE A RESPONSE**

You are hereby notified of the availability of a 30-day public comment period regarding the referenced draft permit, in accordance with 327 IAC 5-3-9. The application and draft permit documents are available for inspection at IDEM, Office of Water Quality, Indiana Government Center North - Room 1255, 100 N. Senate Ave, Indianapolis, IN 46204 from 9:00 a.m. until 4:00 p.m., Monday thru Friday, (copies 10¢ per page). The Draft Permit is posted online on the above-referenced IDEM public notice web page. A courtesy copy has also been sent via email to the local County Health Department. Please tell others whom you think would be interested in this matter. For more information about public participation including your rights & responsibilities, please see <https://www.in.gov/idem/public-notices/>. You may want to consult our online Citizens' Guide to IDEM: <https://www.in.gov/idem/resources/citizens-guide-to-idem/>.

**Comments:** The proposed decision to issue a permit is tentative. Interested persons are invited to submit written comments on the draft permit. All comments must be delivered to IDEM or postmarked no later than the Response Due Date noted to be considered in the decision to issue a final permit. Deliver or mail all requests or comments to the attention of the Permit Manager at the above address.

**To Request a Public Hearing:** Any person may request a public hearing. A written request must be submitted to the above address on or before the Response Due Date. The written request shall include: the name and address of the person making the request, the interest of the person making the request, persons represented by the person making the request, the reason for the request and the issues proposed for consideration at the hearing. The Department will determine whether to hold a public hearing based upon the comments and the rationale for the request. Public Notice of such a hearing will be circulated in at least one newspaper in the geographical area of the discharge and to those persons submitting comments and/or on the mailing list at least 30 days prior to the hearing.



# INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

*We Protect Hoosiers and Our Environment.*

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**Eric J. Holcomb**  
Governor

**Brian C. Rockensuess**  
Commissioner

March 19, 2024

VIA ELECTRONIC MAIL - [wayne.games@centerpointenergy.com](mailto:wayne.games@centerpointenergy.com)

Mr. Wayne Games  
CenterPoint Energy  
P.O. Box 209  
Evansville, IN 47702

Dear Mr. Games:

Re: NPDES Permit No. IN0002259  
Draft Permit Modification  
SIGECO F.B. Culley Generating Station  
Newburgh, IN – Warrick County

Your request for a permit modification has been reviewed and processed in accordance with rules adopted under 327 IAC 5. Enclosed is a copy of the draft permit modification.

Pursuant to IC 13-15-5-1, IDEM will publish the draft permit document online at <https://www.in.gov/idem/public-notices/>. Additional information on public participation can be found in the "Citizens' Guide to IDEM", available at <https://www.in.gov/idem/resources/citizens-guide-to-idem/>. A 30-day comment period is available to solicit input from interested parties, including the public.

Please review this draft permit modification and associated documents carefully to become familiar with the proposed terms and conditions. Comments concerning the draft permit modification should be submitted in accordance with the procedure outlined in the enclosed public notice form. We suggest that you meet with us to discuss major concerns or objections you may have with the draft permit modification. Questions concerning this draft permit modification may be addressed to Nikki Gardner, at 317/232-8707 or [ngardner@idem.in.gov](mailto:ngardner@idem.in.gov).

Sincerely,

Richard Hamblin, Chief  
Industrial NPDES Permits Section  
Office of Water Quality

## Enclosures

cc: Chief, Permits Section, U.S. EPA, Region 5  
Warrick County Health Department  
Angela Casbon-Scheller, CenterPoint Energy  
Jeremy Ferguson, IDEM  
Stacey Cochran, ORSANCO



A State that Works

STATE OF INDIANA  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
AMENDED AUTHORIZATION TO DISCHARGE UNDER THE  
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Federal Water Pollution Control Act, as amended, (33 U.S.C. 1251 et seq., the "Clean Water Act" or "CWA"), and IDEM's permitting authority under IC 13-15,

SOUTHERN INDIANA GAS AND ELECTRIC COMPANY (SIGECO)

is authorized to discharge from the F.B. Culley Generating Station, a coal-fired steam electric generating plant, that is located at 3711 Darlington Road, Newburgh, Indiana, to receiving waters identified as the Ohio River and Little Pigeon Creek near its confluence with the Ohio River in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, and III hereof.

The permit, as issued on February 1, 2023, and subsequently modified on July 6, 2023, and August 30, 2023, is hereby amended, as contained herein. The amended provisions shall become effective \_\_\_\_\_. All terms and conditions of the permit not modified at this time remain in effect. Further, any existing condition or term affected by the amendments will remain in effect until the amended provisions become effective. This permit may be revoked for the nonpayment of applicable fees in accordance with IC 13-18-20.

This permit and the authorization to discharge, as amended, shall expire at midnight February 29, 2028. In order to receive authorization to discharge beyond the date of expiration, the permittee shall submit such information and forms as are required by the Indiana Department of Environmental Management no later than 180 days prior to the date of expiration.

Issued on \_\_\_\_\_ for the Indiana Department of Environmental Management.

Jerry Dittmer, Chief  
Permits Branch  
Office of Water Quality

PART I

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

- The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 001[21], located at Latitude 37° 54' 35.39", Longitude -87° 19' 37.99". The discharge is limited to condenser cooling unit wastewater, contact stormwater pond discharge (internal Outfall 101 - low volume wastewater, coal pile run-off, treated metal cleaning wastewater from internal outfall 401, bottom ash transport water filtrate, East Ash Pond water (filtrate), and stormwater), and East Ash Pond perimeter gradient control wells (internal Outfall 201). Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Ohio River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2][12][13][16][17]  
 Outfall 001

Parameter	Quantity or Loading		Units	Quality or Concentration			Monitoring Requirements	
	Monthly Average	Daily Maximum		Monthly Average	Daily Maximum	Units	Measurement Frequency	Sample Type
Flow[18]	Report	Report	MGD	----	----	----	1 X Daily	24-Hour Total
Plant Capacity Factor	----	----	----	Report	----	%daily average	1 X Daily	Report
Temperature								
Intake	----	----	----	Report	Report	°F	1 X Hourly[11]	Grab
Effluent[22]	----	----	----	Report	Report	°F	1 X Hourly[11]	Grab
Mixed River[9][10][22]	----	----	----	Report	Report	°F	1 X Daily[23]	Grab
ORSANCO[25]								
Interim	----	----	----	----	Report	°F	1 X Daily	Report
Final	----	----	----	----	110	°F	1 X Daily	Report
Total Residual Oxidants (Bromine)[5][6]	----	----	----	0.75	2	µg/l	1 X Daily	Grab
TRC-Continuous [5][6][14]	----	----	----	0.02	0.04	mg/l	1 X Daily	Grab
Duration/Day	----	----	----	----	120	minutes/day	1 X Daily	Report
TRC - Intermittent[15][19]	----	----	----	Report	0.2	mg/l	1 X Daily	Grab
Frequency	----	----	----	----	4	times/day	1 X Daily	Report
Dose Duration----	----	----	----	----	40	minutes/dose	1 X Daily	Report
Duration/Day	----	----	----	----	120	minutes/day	1 X Daily	Report
Cadmium[4]	----	----	----	2.1	3.9	µg/l	2 X Monthly	24 Hr. Comp.
Mercury[4][6]	----	----	----	12	20	ng/l	6 X Annually[7]	Grab
Copper[4]	----	----	----	31	63	µg/l	2 X Monthly	24 Hr. Comp.
Iron[4]	----	----	----	Report	Report	µg/l	2 X Monthly	24 Hr. Comp.
Silver[4][6][24]								
Interim	----	----	----	Report	Report	µg/l	2 X Monthly	24 Hr. Comp.
Final	----	----	----	3.8	6.6	µg/l	2 X Monthly	24 Hr. Comp.
Nickel[4]	----	----	----	Report	Report	µg/l	1 X Monthly	24 Hr. Comp.
Aluminum[4]	----	----	----	Report	Report	mg/l	1 X Monthly	24 Hr. Comp.
Arsenic[4][6]	----	----	----	Report	Report	mg/l	1 X Monthly	24 Hr. Comp.
Selenium[4][6]	----	----	----	Report	Report	mg/l	1 X Monthly	24 Hr. Comp.
Zinc[4]	----	----	----	Report	Report	mg/l	1 X Monthly	24 Hr. Comp.
Free Cyanide[6]----	----	----	----	Report	Report	mg/l	1 X Monthly	Grab

Sulfate	----	----	----	Report	Report	mg/l	1 X Quarterly[8] 24 Hr. Comp.
Boron	----	----	----	Report	Report	mg/l	1 X Quarterly[8] 24 Hr. Comp.
Chloride	----	----	----	Report	Report	mg/l	1 X Quarterly[8] 24 Hr. Comp.
Fluoride	----	----	----	Report	Report	mg/l	1 X Quarterly[8] 24 Hr. Comp.
Bromide	----	----	----	Report	Report	mg/l	1 X Quarterly[8] 24 Hr. Comp.
Whole Effluent Toxicity Testing[20]							

Table 2

Parameter	Quality or Concentration		Units	Monitoring Requirements	
	Daily Minimum	Daily Maximum		Measurement Frequency	Sample Type
pH[3]	6.0	9.0	s.u.	1 X Monthly	Grab

- [1] See Part I.B. of the permit for the minimum narrative limitations.
- [2] In the event that a new water treatment additive is to be used that will contribute to this Outfall, or changes are to be made in the use of water treatment additives, including dosage, the permittee must apply for and receive approval from IDEM prior to such discharge. Discharges of any such additives must meet Indiana water quality standards. The permittee must apply for permission to use water treatment additives by completing and submitting State Form 50000 (Application for Approval to Use Water Treatment Additives) currently available at: <https://www.in.gov/idem/forms/idem-agency-forms/>.
- [3] If the permittee collects more than one grab sample on a given day for pH, the values shall not be averaged for reporting daily maximums or daily minimums. The permittee must report the individual minimum and the individual maximum pH value of any sample during the month on the Monthly Monitoring Report form.
- [4] The permittee shall measure and report the identified metal as total recoverable metal.
- [5] The water quality-based effluent limits (WQBEL) for bromine and TRC are less than the limit of quantitation (LOQ) as specified in footnote [6]. Compliance with this permit will be demonstrated if the effluent concentrations measured are less than the respective LOQ. If the measured concentration of bromine or TRC is greater than the water quality-based effluent limitations and above the respective LOD specified in footnote [6] in any three (3) consecutive analyses, or any five (5) out of nine (9) analyses, then the discharger shall:
  - (1) Determine the source of the parameter through an evaluation of sampling techniques, analytical/laboratory procedures, and waste streams (including internal waste streams). Re-examine the chlorination /dechlorination procedures or re-examine the bromination /de-bromination procedures, as applicable.

- (2) The sampling and analysis for bromine or TRC shall be increased to 2 X Daily and remain at this increased sampling frequency until:
- (a) The increased sampling frequency for bromine or TRC has been in place for at least five (5) days;
  - (b) At least nine (9) samples have been taken under this increased sampling frequency; and
  - (c) The measured concentration of bromine or TRC is less than the LOD specified in footnote [6] in at least seven (7) out of the nine (9) most recent analyses.

[6] The following EPA approved test methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM and EPA, if applicable.

<u>Parameter</u>	<u>Test Method</u>	<u>LOD</u>	<u>LOQ</u>
Mercury	1631E	0.2 ng/l	0.5 ng/l
Arsenic	3113 B-2004	1 µg/l	3.2 µg/l
Arsenic	200.9, Rev. 2.2 (1994)	0.5 µg/l	1.6 µg/l
Arsenic	200.8, Rev. 5.4 (1994)	0.4 µg/l	1.3 µg/l
Selenium	3113 B-2004 or 3114 B-2009	2 µg/l	6.4 µg/l
Selenium	200.8, Rev. 5.4 (1994)	2.1 µg/l	6.7 µg/l
Selenium	200.9, Rev. 2.2 (1994)	0.6 µg/l	1.9 µg/l
Silver	200.8, Rev 5.4 (1994) Selection Ion Monitoring	0.005 µg/l	0.016 µg/l
Chlorine, Total residual	4500-CI D-2000, E-2000 or G-2000	0.02 mg/l	0.06 mg/l
Cyanide, Available**	4500-CN-G-1999	5 µg/l	16 µg/l
Cyanide, Available**	OIA-1677-09 (available)	0.5 µg/l	1.6 µg/l
Cyanide, Available**	Kelada-01 (available)	0.5 µg/l	1.6 µg/l
Oxidants, Total Residual (Bromine)	4500-CI D-2000, E-2000 or G-2000	0.02 mg/l	0.06 mg/l
**Free cyanide shall be reported as free cyanide but measured using one of the EPA approved test methods above for available cyanide.			

#### Case-Specific LOD/LOQ

The permittee may determine and use a case-specific LOD or LOQ using the analytical method specified above, or any other analytical method which is approved by the Commissioner, and EPA if applicable, prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

- [7] Mercury monitoring shall be conducted 6 X annually in the months of February, April, June, August, October, and December of each year for the term of the permit using EPA Test Method 1631, Revision E.
- [8] Samples shall be taken once at any time during each of the four annual quarters:
- (A) January-February-March;
  - (B) April-May-June;
  - (C) July-August-September; and
  - (D) October-November-December.

For quarterly monitoring, in the first quarter for example, the permittee may conduct sampling within the month of January, February or March. The result from this reporting timeframe shall be reported on the March DMR, regardless of which of the months within the quarter the sample was taken.

- [9] At no time shall the water temperature of the discharge from Outfall 001, as determined at the edge of the mixing zone described in 327 IAC 2-1-4, exceed the maximum limits in the following table during more than one percent (1%) of the hours in the twelve (12) month period ending with any month and by more than three degrees Fahrenheit (3°F) (one and seven-tenths degrees Celsius (1.7°C)). Water temperatures shall not exceed the following average temperature limitations (these are averages of the daily maximums for each day in the period).

<b>Month</b>	<b>Average °F(°C)</b>	<b>Maximum °F(°C)</b>
January	49.3 (9.6)	50 (10.0)
February	48.6 (9.2)	50 (10.0)
March	55.0 (12.8)	60 (15.6)
April	63.2 (17.3)	70 (21.1)
May	71.4 (21.9)	80 (26.7)
June 1-15	77.6 (25.3)	87 (30.6)
June 16-30	87.0 (30.6)	
July	89.0 (31.7)	89 (31.7)
August	89.0 (31.7)	89 (31.7)
September 1-15	87.0 (30.6)	87 (30.7)
September 16-30	82.6 (28.1)	
October	75.5 (24.2)	78 (25.6)
November	66.1 (19.0)	70 (21.1)
December	56.7 (13.7)	57 (14.0)

- [10] The permittee will have the option of either meeting the above limits at the end of pipe, or by meeting the limits with a mixed river temperature that takes into account the mixing zone allowed by 327 IAC 2-1-6(b). The mixed river temperature is to be determined by employing the following mathematical model:

$$TMR = TU + \frac{QE * (TE - TU)}{0.5 * (Q7,10 - QI) + QE}$$

where:

- TMR = mixed river temperature (°F)
- TU = upstream river temperature (°F)
- TE = effluent temperature (°F)
- QE = effluent flow (MGD)
- QI = intake flow (MGD)
- Q7,10 = 5,920 MGD

- [11] Temperature shall be monitored and measurements recorded every hour. The highest single recorded measurement for each day shall be reported on the state monthly monitoring report for each day. The highest single recorded daily measurement shall be reported on the federal discharge monitoring report as the maximum daily temperature for that month. The monthly average shall be reported on the state monthly monitoring and the federal discharge monitoring report as the average of all measured values for the calendar month.
- [12] The permittee shall post a permanent marker on the stream bank at each outfall discharging directly to the Ohio River. The marker shall consist at a minimum of the name of the establishment to which the permit was issued, the permit number, and the outfall number. The information shall be printed in letters not less than two inches in height. The marker shall be a minimum of 2 feet by 2 feet and shall be a minimum of 3 feet above the ground.
- [13] The Stormwater Monitoring and Non-Numeric Effluent Limits and the Stormwater Pollution Prevention Plan (SWPPP) requirements can be found in Part I.D. and I.E. of this permit.
- [14] Continuous chlorination is considered as all occurrences that do not meet the definition of intermittent chlorination, as described in 327 IAC 2-1-6 Table 1, Footnote [a]. These water quality based effluent limits (WQBELs) are applicable any time that the discharge of chlorine does not meet this intermittent definition.
- [15] This daily maximum limit for total residual chlorine is only applicable if the discharge of chlorine is intermittent. As required by 327 IAC 2-1-6 Table 1, Footnote [a], to be considered an intermittent discharge, total residual chlorine shall not be detected in the discharge for a period of more than forty (40) minutes in duration, and such periods shall be separated by at least five (5) hours. Simultaneous multi-unit chlorination is permitted.
- [16] Beginning December 31, 2025, there shall be no discharge of bottom ash transport water from Unit 2. The discharge of bottom ash transport water from Unit 3 was prohibited as of December 31, 2020.



- [17] There shall be no discharge of polychlorinated biphenyl (PCB) compounds attributable to facility operations such as those historically used in transformer fluids. In order to determine compliance with the PCB discharge prohibition, the permittee shall provide the following PCB data with the next NPDES permit renewal application for at least one sample taken from Outfall 001. The corresponding facility water intake(s) shall be monitored at the same time as the final outfall.

Parameter	Test Method	LOD	LOQ
*Total PCBs	608	0.1 µg/l	0.3 µg/l
*Total PCBs is the sum of the following aroclors: PCB-1016, PCB-1221, PCB-1232, PCB-1242, PCB-1248, PCB-1254, and PCB-1260.			

- [18] Flow is to be measured continuously using a flow measuring device. The permittee may use engineering calculations to measure flow as approved by the commissioner.
- [19] Chlorination reporting requirements for frequency and dose duration apply only when the facility is chlorinating intermittently.
- [20] See Part I.F. of the permit for Whole Effluent Toxicity Testing requirements.
- [21] The facility must submit a new comprehensive facility-wide water balance diagram with the next permit modification application or permit renewal application, whichever occurs first.
- [22] The following conditions apply for Temperature outside the mixing zone:
- (1) There shall be no abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions.
  - (2) The normal daily and seasonal temperature fluctuations that existed before the addition of heat due to other than natural causes shall be maintained.
  - (3) The maximum temperature rise at any time or place above natural shall not exceed five (5) degrees Fahrenheit (two and eight-tenths (2.8) degrees Celsius) in streams.
- [23] The mixed river temperature shall be calculated each hour (or more frequently if temperature is recorded more frequently than hourly). The highest single calculated result for each day shall be reported on the state monthly monitoring report for each day. The highest single calculated daily result for a month shall be reported on the federal discharge monitoring report as the mixed river temperature maximum daily temperature for that month. The monthly average shall be reported on the state monthly monitoring and the federal discharge monitoring report as the average of all calculated daily maximums for the calendar month.

- [24] This limit will become effective nine months after the effective date of the permit. Prior to the limit becoming effective, silver data shall be reported at a minimum of 2 X Monthly.
  
- [25] The limit will become effective nine (9) months after the effective date of the permit. The limit is applicable at a location where public access is possible. The permittee must submit a report within six (6) months of the permit effective date that delineates in-river where public contact is possible and provides accompanying modeling and calculations that will be used to support reporting of temperatures at that location.

2. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 101, located at Latitude 37° 54' 44.36", Longitude -87° 19' 50.81". The discharge is limited to contact stormwater pond discharge (low volume wastewater, coal pile run-off, treated metal cleaning wastewater from new internal outfall 401, bottom ash transport water filtrate[3], East Ash Pond water (filtrate), and stormwater). Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to mixing with any other wastestreams. Such discharge shall be limited and monitored by the permittee as specified below:

**DISCHARGE LIMITATIONS [1][3][4]**

Outfall 101

Table 1

Parameter	Quantity or Loading			Quality or Concentration			Monitoring Requirements	
	Monthly Average Report	Daily Maximum Report	Units MGD	Monthly Average	Daily Maximum	Units	Measurement Frequency	Sample Type
Flow	----	----	----	----	----	----	1 X Daily	24-Hour Total
TSS[6]	----	----	----	23	74	mg/l	1 X Weekly	24 Hr. Comp.
O&G[6]	----	----	----	8[5]	11[5]	mg/l	1 X Weekly	Grab
COD	----	----	----	----	Report	mg/l	Semi-Annually	Grab
CBOD <sub>5</sub>	----	----	----	----	Report	mg/l	Semi-Annually	Grab
Total Kjeldahl Nitrogen	----	----	----	----	Report	mg/l	Semi-Annually	Grab
Nitrate + Nitrite Nitrogen	----	----	----	----	Report	mg/l	Semi-Annually	Grab
Total Phosphorus	----	----	----	----	Report	mg/l	Semi-Annually	Grab

Table 2

Parameter	Quality or Concentration			Monitoring Requirements	
	Daily Minimum	Daily Maximum	Units	Measurement Frequency	Sample Type
pH[2]	6.0	9.0	s.u.	1 X Daily	Grab

[1] In the event that a new water treatment additive is to be used that will contribute to this Outfall, or changes are to be made in the use of water treatment additives, including dosage, the permittee must apply for and receive approval from IDEM prior to such discharge. Discharges of any such additives must meet Indiana water quality standards. The permittee must apply for permission to use water treatment additives by completing and submitting State Form 50000 (Application for Approval to Use Water Treatment Additives) currently available at: <https://www.in.gov/idem/forms/idem-agency-forms/>.

[2] If the permittee collects more than one grab sample on a given day for pH, the values shall not be averaged for reporting daily maximums or daily minimums. The permittee must report the individual minimum and the individual maximum pH value of any sample during the month on the Monthly Monitoring Report form.

[3] Fly ash and FGD wastewater are prohibited from being discharged.

Bottom ash transport water from Unit 3 is prohibited from being discharged.

Beginning December 31, 2025, bottom ash transport water from Unit 2 will be prohibited from being discharged.

[4] Monitoring at Internal Outfall 101 is only required when the outfall is discharging to the discharge tunnel which leads to Outfall 001.

[5] Footnote removed (July 2023 permit modification).

[6] The TSS and O&G limits must be reevaluated during the next permit renewal. If the permittee wants TSS and/or O&G allocations for unregulated wastestreams, the following must be submitted with the next permit renewal application:

- (a) Average flow rates for each regulated, unregulated and dilution wastestream before combining with a wastestream of a different category (regulated, unregulated and dilution),
- (b) Beginning at least 24 months prior to the next permit renewal application due date, collect analytical data at least 1 x Month for the parameter contributed by each unregulated wastestream prior to combining with a wastestream of a different category for which the permittee wants an allocation, and
- (c) Analytical data for the parameter for each wastestream which discharges directly to the Contact Stormwater Pond shall be collected prior to entering the Contact Stormwater Pond.

The permittee should submit a sampling plan to IDEM for review and approval prior to initiating the monitoring described above.

3. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 201, located at Latitude 37° 54' 34.49", Longitude -87° 19' 27.59". The discharge is limited to East Ash Pond perimeter gradient control well discharge. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to mixing with any other wastestreams. Such discharge shall be limited and monitored by the permittee as specified below:

**DISCHARGE LIMITATIONS [1][3][4]**  
 Outfall 201

<u>Parameter</u>	<u>Quantity or Loading</u>			<u>Quality or Concentration</u>			<u>Monitoring Requirements</u>	
	<u>Monthly</u>	<u>Daily</u>	<u>Units</u>	<u>Monthly</u>	<u>Daily</u>	<u>Units</u>	<u>Measurement</u>	<u>Sample</u>
Flow	<u>Average</u>	<u>Maximum</u>	MGD	<u>Average</u>	<u>Maximum</u>		<u>Frequency</u>	<u>Type</u>
O&G	Report	Report	----	----	----	----	1 X Daily	24-Hour Total
TSS	----	----	----	15	20	mg/l	1 X Weekly	Grab
	----	----	----	30	70	mg/l	1 X Weekly	24 Hr. Comp.

<u>Parameter</u>	<u>Quality or Concentration</u>			<u>Monitoring Requirements</u>	
	<u>Daily</u>	<u>Daily</u>	<u>Units</u>	<u>Measurement</u>	<u>Sample</u>
pH[2]	<u>Minimum</u>	<u>Maximum</u>	s.u.	<u>Frequency</u>	<u>Type</u>
	6.0	9.0		1 X Daily	Grab

- [1] In the event that a new water treatment additive is to be used that will contribute to this Outfall, or changes are to be made in the use of water treatment additives, including dosage, the permittee must apply for and receive approval from IDEM prior to such discharge. Discharges of any such additives must meet Indiana water quality standards. The permittee must apply for permission to use water treatment additives by completing and submitting State Form 50000 (Application for Approval to Use Water Treatment Additives) currently available at: <https://www.in.gov/idem/forms/idem-agency-forms/>.
- [2] If the permittee collects more than one grab sample on a given day for pH, the values shall not be averaged for reporting daily maximums or daily minimums. The permittee must report the individual minimum and the individual maximum pH value of any sample during the month on the Monthly Monitoring Report form.
- [3] Monitoring at Internal Outfall 201 is only required when the outfall is discharging to the discharge tunnel which leads to Outfall 001.
- [4] Bottom ash, fly ash, and FGD wastewater are prohibited from being discharged.

4. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 401, located at Latitude 37° 54' 34.78", Longitude -87° 19' 28.98". The discharge is limited to metal cleaning wastewater. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to mixing with any other wastestreams. Such discharge shall be limited and monitored by the permittee as specified below:

**DISCHARGE LIMITATIONS [1][3]**  
 Outfall 401

Table 1

Parameter	Quantity or Loading			Quality or Concentration			Monitoring Requirements	
	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units	Measurement Frequency	Sample Type
Flow	Report	Report	MGD	----	----	----	1 X Daily	24-Hour Total
O&G	----	----	----	15	20	mg/l	1 X Weekly	Grab
TSS	----	----	----	30	100	mg/l	1 X Weekly	24 Hr. Comp.
Copper[4]	----	----	----	1.0	1.0	mg/l	1 X Daily	24 Hr. Comp.
Iron[4]	----	----	----	1.0	1.0	mg/l	1 X Daily	24 Hr. Comp.

Table 2

Parameter	Quality or Concentration			Monitoring Requirements	
	Daily Minimum	Daily Maximum	Units	Measurement Frequency	Sample Type
pH[2]	6.0	9.0	s.u.	1 X Daily	Grab

- [1] In the event that a new water treatment additive is to be used that will contribute to this Outfall, or changes are to be made in the use of water treatment additives, including dosage, the permittee must apply for and receive approval from IDEM prior to such discharge. Discharges of any such additives must meet Indiana water quality standards. The permittee must apply for permission to use water treatment additives by completing and submitting State Form 50000 (Application for Approval to Use Water Treatment Additives) currently available at: <https://www.in.gov/idem/forms/idem-agency-forms/>.
- [2] If the permittee collects more than one grab sample on a given day for pH, the values shall not be averaged for reporting daily maximums or daily minimums. The permittee must report the individual minimum and the individual maximum pH value of any sample during the month on the Monthly Monitoring Report form.
- [3] Monitoring at Internal Outfall 401 is only required when metal cleaning wastewater is being discharged to a yard drain or other conveyance that eventually discharges to the Ohio River. Samples should be collected after treatment, if any, and prior to entering a yard drain or other conveyance.
- [4] The permittee shall measure and report the identified metal as total recoverable metal.

5. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 004, located at Latitude 37° 54' 38.36", Longitude -87° 19' 35.09". The discharge is limited to sanitary wastewater package plant discharge. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Ohio River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2][4]  
Outfall 004

Parameter	Quantity or Loading			Quality or Concentration			Monitoring Requirements	
	Monthly	Daily	Units	Monthly	Daily	Units	Measurement	Sample
	<u>Average</u>	<u>Maximum</u>		<u>Average</u>	<u>Maximum</u>		<u>Frequency</u>	<u>Type</u>
Flow	Report	Report	MGD	----	----	----	2 X Monthly	24-Hour Total
TSS	----	----	----	30	45	mg/l	2 X Monthly	24 Hr. Comp.
TBOD <sub>5</sub>	----	----	----	30	45	mg/l	2 X Monthly	24 Hr. Comp.
E. coli[5]	----	----	----	125[6]	235[7]	count/100 ml	2 X Monthly	Grab
Fecal Coliform[8][9]								
Interim	----	----	----	Report	----	count/100 ml	2 X Monthly	Grab
Final	----	----	----	2000	----	count/100 ml	2 X Monthly	Grab

Parameter	Quality or Concentration			Monitoring Requirements	
	Daily	Daily	Units	Measurement	Sample
	<u>Minimum</u>	<u>Maximum</u>		<u>Frequency</u>	<u>Type</u>
pH[3]	6.0	9.0	s.u.	2 X Monthly	Grab

- [1] See Part I.B. of the permit for the minimum narrative limitations.
- [2] In the event that a new water treatment additive is to be used that will contribute to this Outfall, or changes are to be made in the use of water treatment additives, including dosage, the permittee must apply for and receive approval from IDEM prior to such discharge. Discharges of any such additives must meet Indiana water quality standards. The permittee must apply for permission to use water treatment additives by completing and submitting State Form 50000 (Application for Approval to Use Water Treatment Additives) currently available at: <https://www.in.gov/idem/forms/idem-agency-forms/>.
- [3] If the permittee collects more than one grab sample on a given day for pH, the values shall not be averaged for reporting daily maximums or daily minimums. The permittee must report the individual minimum and the individual maximum pH value of any sample during the month on the Monthly Monitoring Report form.

- [4] The permittee shall post a permanent marker on the stream bank at each outfall discharging directly to the Ohio River. The marker shall consist at a minimum of the name of the establishment to which the permit was issued, the permit number, and the outfall number. The information shall be printed in letters not less than two inches in height. The marker shall be a minimum of 2 feet by 2 feet and shall be a minimum of 3 feet above the ground.
- [5] The limits and monitoring requirements for *E. coli* apply from April 1 through October 31. The effluent shall be disinfected on a continuous basis such that violations of the applicable bacteriological limitations do not occur from April 1 through October 31 annually.
- [6] The monthly average *E. coli* value shall be calculated as a geometric mean. Per 327 IAC 5-10-6, the concentration of *E. coli* shall not exceed one hundred twenty-five (125) cfu or mpn per 100 milliliters as a geometric mean of the effluent samples taken in a calendar month. No samples may be excluded when calculating the monthly geometric mean.
- [7] If less than ten samples are taken and analyzed for *E. coli* in a calendar month, no samples may exceed two hundred thirty-five (235) cfu or mpn as a daily maximum. However, when ten (10) or more samples are taken and analyzed for *E. coli* in a calendar month, not more than ten percent (10%) of those samples may exceed two hundred thirty-five (235) cfu or mpn as a daily maximum. When calculating ten percent, the result must not be rounded up. In reporting for compliance purposes on the Discharge Monitoring Report (DMR) form, the permittee shall record the highest non-excluded value for the daily maximum.
- [8] In order to comply with ORSANCO requirements, in accordance with 327 IAC 5-10-6(b), fecal coliform is limited to a monthly average of 2,000 count per 100 ml from November 1 through March 31. The monthly average for fecal coliform shall be calculated using a geometric mean.
- [9] This limit will become effective nine months after the effective date of the permit. Prior to the limit becoming effective, Fecal coliform results shall be reported as a geometric mean from November 1 through March 31.



6. The permittee is authorized to discharge stormwater from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 005, located at Latitude 37° 54' 42.40", Longitude -87° 19' 51.49". Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Ohio River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2][4][5]

Outfall 005

<u>Parameter</u>	<u>Daily Maximum</u>	<u>Units</u>	<u>Monitoring Requirements</u>	
			<u>Measurement Frequency[3]</u>	<u>Sample Type</u>
Flow	Report	MGD	Semi-Annually	Estimate Total
Total Suspended Solids	Report	mg/l	Semi-Annually	Grab
pH	Report	s.u.	Semi-Annually	Grab
O&G	Report	mg/l	Semi-Annually	Grab
COD	Report	mg/l	Semi-Annually	Grab
CBOD <sub>5</sub>	Report	mg/l	Semi-Annually	Grab
Total Kjeldahl Nitrogen	Report	mg/l	Semi-Annually	Grab
Nitrate plus Nitrite Nitrogen	Report	mg/l	Semi-Annually	Grab
Total Phosphorus	Report	mg/l	Semi-Annually	Grab

[1] The Stormwater Monitoring and Non-Numeric Effluent Limits and the Stormwater Pollution Prevention Plan (SWPPP) requirements can be found in Part I.D. and I.E. of this permit.

[2] All samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. There shall be a minimum of three (3) months between reported sampling events.

For each sample taken, the permittee shall record the duration and total rainfall of the storm event, the number of hours between beginning of the storm measured and the end of the previous measurable rain event, and the outside temperature at the time of sampling. A grab sample shall be taken during the first thirty (30) minutes of the discharge (or as soon thereafter as practicable).

[3] The first sampling event is to occur between January and June and the associated DMR / MMR submitted no later than July 28<sup>th</sup>. The second sampling event is to occur between July and December and the associated DMR / MMR submitted no later than January 28<sup>th</sup>.

[4] See Part I.B. of the permit for the minimum narrative limitations.

- [5] The permittee shall post a permanent marker on the stream bank at each outfall discharging directly to the Ohio River. The marker shall consist at a minimum of the name of the establishment to which the permit was issued, the permit number, and the outfall number. The information shall be printed in letters not less than two inches in height. The marker shall be a minimum of 2 feet by 2 feet and shall be a minimum of 3 feet above the ground.

7. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfall 006 [10], located at Latitude 37° 54' 29.01", Longitude -87° 19' 20.66". The discharge is limited to East Ash Pond perimeter gradient control wells and noncontact stormwater. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into the Little Pigeon Creek near its confluence with the Ohio River. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2][3][4]

Outfall 006

Table 1

<u>Parameter</u>	<u>Quantity or Loading</u>		<u>Units</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Requirements</u>	
	<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Monthly Average</u>	<u>Daily Maximum</u>		<u>Measurement Frequency</u>	<u>Sample Type</u>
Flow	Report	Report	MGD	----	----	----	1 X Daily	24-Hour Total
Total Dissolved Solids (TDS)	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Total Suspended Solids (TSS)	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Antimony [5][9]	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Arsenic [5][9]	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Barium [5][9]	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Boron	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Cadmium [5]	----	----	----	Report	Report	µg/l	2 X Monthly	24 Hr. Comp.
Chloride	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Chromium, Hexavalent [7][9]	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Chromium, Total [5]----	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Cobalt [5][9]	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Fluoride [9]	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Lithium [5][9]	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Lead [5]	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Mercury [5][6][9]----	----	----	----	Report	Report	ng/l	6 X Annually	Grab
Molybdenum [5][9]----	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Selenium [5][9]	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Sulfate	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Thallium [5][9]	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.
Zinc [5]	----	----	----	Report	Report	mg/l	2 X Monthly	24 Hr. Comp.

Table 2

<u>Parameter</u>	<u>Quality or Concentration</u>		<u>Units</u>	<u>Monitoring Requirements</u>	
	<u>Daily Minimum</u>	<u>Daily Maximum</u>		<u>Measurement Frequency</u>	<u>Sample Type</u>
pH[8]	6.0	9.0	s.u.	2 X Monthly	Grab

- [1] See Part I.B. of the permit for the minimum narrative limitations.
- [2] In the event that a new water treatment additive is to be used that will contribute to this Outfall, or changes are to be made in the use of water treatment additives, including dosage, the permittee must apply for and receive approval from IDEM prior to such discharge. Discharges of any such additives must meet Indiana water quality standards. The permittee must apply for permission to use water treatment additives by completing and submitting State Form 50000 (Application for Approval to Use Water Treatment Additives) currently available at: <https://www.in.gov/idem/forms/idem-agency-forms/>.
- [3] The permittee shall post a permanent marker on the stream bank at each outfall discharging directly to the Ohio River. The marker shall consist at a minimum of the name of the establishment to which the permit was issued, the permit number, and the outfall number. The information shall be printed in letters not less than two inches in height. The marker shall be a minimum of 2 feet by 2 feet and shall be a minimum of 3 feet above the ground.
- [4] The Stormwater Monitoring and Non-Numeric Effluent Limits and the Stormwater Pollution Prevention Plan (SWPPP) requirements can be found in Parts I.D. and I.E. of this permit.
- [5] The permittee shall measure and report the identified metal as total recoverable metal.
- [6] Mercury monitoring shall be conducted 6 X annually in the months of February, April, June, August, October, and December of each year for the term of the permit using EPA Test Method 1631, Revision E.
- [7] Hexavalent chromium shall be measured and reported as dissolved metal. The hexavalent chromium sample type shall be by grab method. The maximum holding time for a hexavalent chromium sample is 28 days under 40 CFR 136.3(e), Table II. However, as noted in footnote 20 of Table II, to achieve the 28-day holding time, the ammonium sulfate buffer solution specified in EPA Method 218.6 must be used. This holding time allowance of 28-days supersedes the preservation and holding time requirements in the approved hexavalent chromium methods, unless this supersession would compromise the measurement, in which case the preservation and holding time requirements [the sample must be analyzed within 24 hours of collection] in the method must be followed.
- [8] If the permittee collects more than one grab sample on a given day for pH, the values shall not be averaged for reporting daily maximums or daily minimums. The permittee must report the individual minimum and the individual maximum pH value of any sample during the month on the Monthly Monitoring Report form.

- [9] The following EPA approved test methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM and EPA, if applicable.

Parameter	Test Method	LOD	LOQ
Antimony	200.8	0.13 µg/l	1.0 µg/l
Antimony	200.7	3 µg/l	6 µg/l
Arsenic	3113 B-2004	1 µg/l	3.2 µg/l
Arsenic	200.9, Rev. 2.2 (1994)	0.5 µg/l	1.6 µg/l
Arsenic	200.8, Rev. 5.4 (1994)	0.4 µg/l	1.3 µg/l
Barium	200.8	4.9 µg/l	15.6 µg/l
Barium	200.7	25 µg/l	50 µg/l
Cobalt	200.8	0.086 µg/l	1.0 µg/l
Cobalt	200.7	5 µg/l	10 µg/l
Fluoride	SM 4500F/C	0.021 mg/l	0.10 mg/l
Fluoride	300.0	0.05 mg/l	0.1 mg/l
Hexavalent Chromium	218.6	0.04 µg/l	0.1 µg/l
Lithium	200.7	4.1 µg/l	20.0 µg/l
Mercury	1631E	0.2 ng/l	0.5 ng/l
Molybdenum	200.8	0.48 µg/l	5.0 µg/l
Molybdenum	200.7	25 µg/l	50 µg/l
Selenium	3113 B-2004 or 3114 B-2009	2 µg/l	6.4 µg/l
Selenium	200.8, Rev. 5.4 (1994)	0.35 µg/l	1.0 µg/l
Selenium	200.9, Rev. 2.2 (1994)	0.6 µg/l	1.9 µg/l
Thallium	200.8	0.073 µg/l	1.0 µg/l
Thallium	200.7	5 µg/l	10 µg/l

Case-Specific LOD/LOQ

The permittee may determine and use a case-specific LOD or LOQ using the analytical method specified above, or any other analytical method which is approved by the Commissioner, and EPA if applicable, prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

- [10] This outfall will discharge from the perimeter gradient control system located outside the perimeter of the East Ash Pond. Following the cessation of pumping from the perimeter gradient control wells, Outfall 006 will discharge noncontact stormwater from the former East Ash Pond and adjacent green areas surrounding the pond.

8. The permittee is required to collect intake water samples in conjunction with certain discharge samples. The intake structure is designated as 000 on the Discharge Monitoring Report (DMR) forms. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the intake water characteristics. Such samples shall be monitored by the permittee as specified below:

**DISCHARGE LIMITATIONS**

Intake Structures 000

Parameter	Quantity or Loading		Units	Quality or Concentration		Units	Monitoring Requirements	
	Monthly Average	Daily Maximum		Monthly Average	Daily Maximum		Measurement Frequency	Sample Type
Flow Intake 1[3] Report	Report	Report	MGD	----	----	----	1 X Daily	24-Hour Total
Flow Intake 2[3] Report	Report	Report	MGD	----	----	----	1 X Daily	24-Hour Total
Flow Intake 3[3] Report	Report	Report	MGD	----	----	----	1 X Daily	24-Hour Total
Mercury[1][2]	----	----	----	Report	Report	ng/l	1 X Monthly	Grab
Arsenic[2]	----	----	----	Report	Report	mg/l	1 X Monthly	24 Hr. Comp.
Cadmium[1]	----	----	----	Report	Report	ug/l	1 X Monthly	24 Hr. Comp.
Selenium[1][2]	----	----	----	Report	Report	mg/l	1 X Monthly	24 Hr. Comp.
Nickel[1]	----	----	----	Report	Report	mg/l	1 X Monthly	24 Hr. Comp.
Aluminum[1]	----	----	----	Report	Report	mg/l	1 X Monthly	24 Hr. Comp.
Silver[1][2]	----	----	----	Report	Report	ug/l	1 X Monthly	24 Hr. Comp.
Zinc[1]	----	----	----	Report	Report	mg/l	1 X Monthly	24 Hr. Comp.
Copper[1]	----	----	----	Report	Report	ug/l	1 X Monthly	24 Hr. Comp.
Iron[1]	----	----	----	Report	Report	mg/l	1 X Monthly	24 Hr. Comp.

[1] The permittee shall measure and report the identified metal as total recoverable metal.

[2] The following EPA approved test methods and associated LODs and LOQs are to be used in the analysis of the effluent samples. Alternative methods may be used if first approved by IDEM and EPA, if applicable.

Parameter	Test Method	LOD	LOQ
Mercury	1631E	0.2 ng/l	0.5 ng/l
Arsenic	3113 B-2004	1 µg/l	3.2 µg/l
Arsenic	200.9, Rev. 2.2 (1994)	0.5 µg/l	1.6 µg/l
Arsenic	200.8, Rev. 5.4 (1994)	0.4 µg/l	1.3 µg/l
Selenium	3113 B-2004 or 3114 B-2009	2 µg/l	6.4 µg/l
Selenium	200.8, Rev. 5.4 (1994)	0.35 µg/l	1.0 µg/l
Selenium	200.9, Rev. 2.2 (1994)	0.6 µg/l	1.9 µg/l
Silver	200.8, Rev 5.4 (1994) Selection Ion Monitoring	0.005 µg/l	0.016 µg/l

Case-Specific LOD/LOQ

The permittee may determine and use a case-specific LOD or LOQ using the analytical method specified above, or any other analytical method which is approved by the Commissioner, and EPA if applicable, prior to use. The LOD shall be derived by the procedure specified for method detection limits contained in 40 CFR Part 136, Appendix B, and the LOQ shall be set equal to 3.18 times the LOD. Other methods may be used if first approved by the Commissioner.

- [3] The permittee shall report 24-hour total intake flow as an estimated flow using pump hours of operation. Within 24 months of the effective date of the permit, the permittee shall report the 24-hour total intake flow as measured from a flow meter or other IDEM approved methodology.

## B. MINIMUM NARRATIVE LIMITATIONS

At all times the discharge from any and all point sources specified within this permit shall not cause receiving waters:

1. including waters within the mixing zone, to contain substances, materials, floating debris, oil, scum attributable to municipal, industrial, agricultural, and other land use practices, or other discharges that do any of the following:
  - a. will settle to form putrescent or otherwise objectionable deposits;
  - b. are in amounts sufficient to be unsightly or deleterious;
  - c. produce color, visible oil sheen, odor, or other conditions in such degree as to create a nuisance;
  - d. are in amounts sufficient to be acutely toxic to , or to otherwise severely injure or kill aquatic life, other animals, plants, or humans;
  - e. are in concentrations or combinations that will cause or contribute to the growth of aquatic plants or algae to such a degree as to create a nuisance, be unsightly, or otherwise impair the designated uses.
2. outside the mixing zone, to contain substances in concentrations that on the basis of available scientific data are believed to be sufficient to injure, be chronically toxic to, or be carcinogenic, mutagenic, or teratogenic to humans, animals, aquatic life, or plants.

## C. MONITORING AND REPORTING

### 1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge flow and shall be taken at times which reflect the full range and concentration of effluent parameters normally expected to be present. Samples shall not be taken at times to avoid showing elevated levels of any parameters.

### 2. Monthly Reporting

The permittee shall submit monitoring reports to the Indiana Department of Environmental Management (IDEM) containing results obtained during the previous month and shall be submitted no later than the 28th day of the month following each completed monitoring period. The first report shall be submitted by the 28th day of the month following the month in which the permit becomes effective.





**National Pollutant Discharge Elimination System  
Fact Sheet for**

**SIGECO F.B. Culley Generating Station**

**Draft modification: March 2024  
Final modification: TBD**

**Indiana Department of Environmental Management**

100 North Senate Avenue  
Indianapolis, Indiana 46204  
(317) 232-8603  
Toll Free (800) 451-6027  
[www.idem.IN.gov](http://www.idem.IN.gov)

<b>Permittee:</b>	Southern Indiana Gas and Electric Company (SIGECO) d/b/a CenterPoint Energy Indiana South (CEIS) P.O. Box 209 Evansville, IN 47702
<b>Existing Permit Information:</b>	Permit Number: IN0002259 Expiration Date: February 29, 2028
<b>Facility Contact:</b>	Angela Casbon-Scheller (812) 491-4787; Angela.Casbon-Scheller@centerpointenergy.com
<b>Facility Location:</b>	F.B. Culley Generating Station 3711 Darlington Road Newburgh, IN 47630 Warrick County
<b>Receiving Stream:</b>	Ohio River, Little Pigeon Creek near its confluence with the Ohio River
<b>GLI/Non-GLI:</b>	Non-GLI
<b>Proposed Permit Action:</b>	Modify
<b>Date Application Received:</b>	February 9, 2024
<b>Source Category</b>	NPDES Major – Industrial
<b>Permit Writer:</b>	Nikki Gardner (317) 232-8707; <a href="mailto:ngardner@idem.in.gov">ngardner@idem.in.gov</a>

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## 1.0 INTRODUCTION

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The Indiana Department of Environmental Management (IDEM) received a request from the permittee on February 9, 2024, to modify National Pollutant Discharge Elimination System (NPDES) Permit IN0002259. The current five-year permit was issued with an effective date of March 1, 2023, in accordance with 327 IAC 5-2-6(a). The permit was subsequently modified on July 6, 2023, and August 30, 2023.

The Federal Water Pollution Control Act (more commonly known as the Clean Water Act), as amended, (Title 33 of the United States Code (U.S.C.) Section 1251 et seq.), requires an NPDES permit for the discharge of pollutants into surface waters. Furthermore, Indiana law requires a permit to control or limit the discharge of any contaminants into state waters or into a publicly owned treatment works. This proposed permit action by IDEM complies with and implements these federal and state requirements.

In accordance with Title 40 of the Code of Federal Regulations (CFR) Sections 124.8 and 124.56, as well as Title 327 of the Indiana Administrative Code (IAC) Article 5-3-8, a Fact Sheet is required for certain NPDES permits. This document fulfills the requirements established in these regulations. This Fact Sheet was prepared in order to document the factors considered in the development of NPDES Permit effluent limitations. The technical basis for the Fact Sheet may consist of evaluations of promulgated effluent guidelines, existing effluent quality, receiving water conditions, Indiana water quality standards-based wasteload allocations, and other information available to IDEM. Decisions to award variances to Water Quality Standards or promulgated effluent guidelines are justified in the Fact Sheet where necessary. This Fact Sheet also identifies the modified pages of the permit as issued on February 1, 2023, and subsequently modified on July 6, 2023, and August 30, 2023.

## 2.0 FACILITY DESCRIPTION

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### 2.1 General

The SIGECO F.B. Culley Generating Station is classified under Standard Industrial Classification (SIC) Code 4911 - Electric Services.

The facility is a coal-fired steam electric generating plant with two (2) generating units; Unit 2 (100 MW) and Unit 3 (270 MW). The permittee has proposed to retire Unit 2 by the end of 2025. The design flow (highest monthly average) based on the most recent 2 years of data is 295 MGD.

The Ohio River accounts for approximately 99% of the facility's intake water with groundwater accounting for the remainder. The design intake flow is 360 MGD.

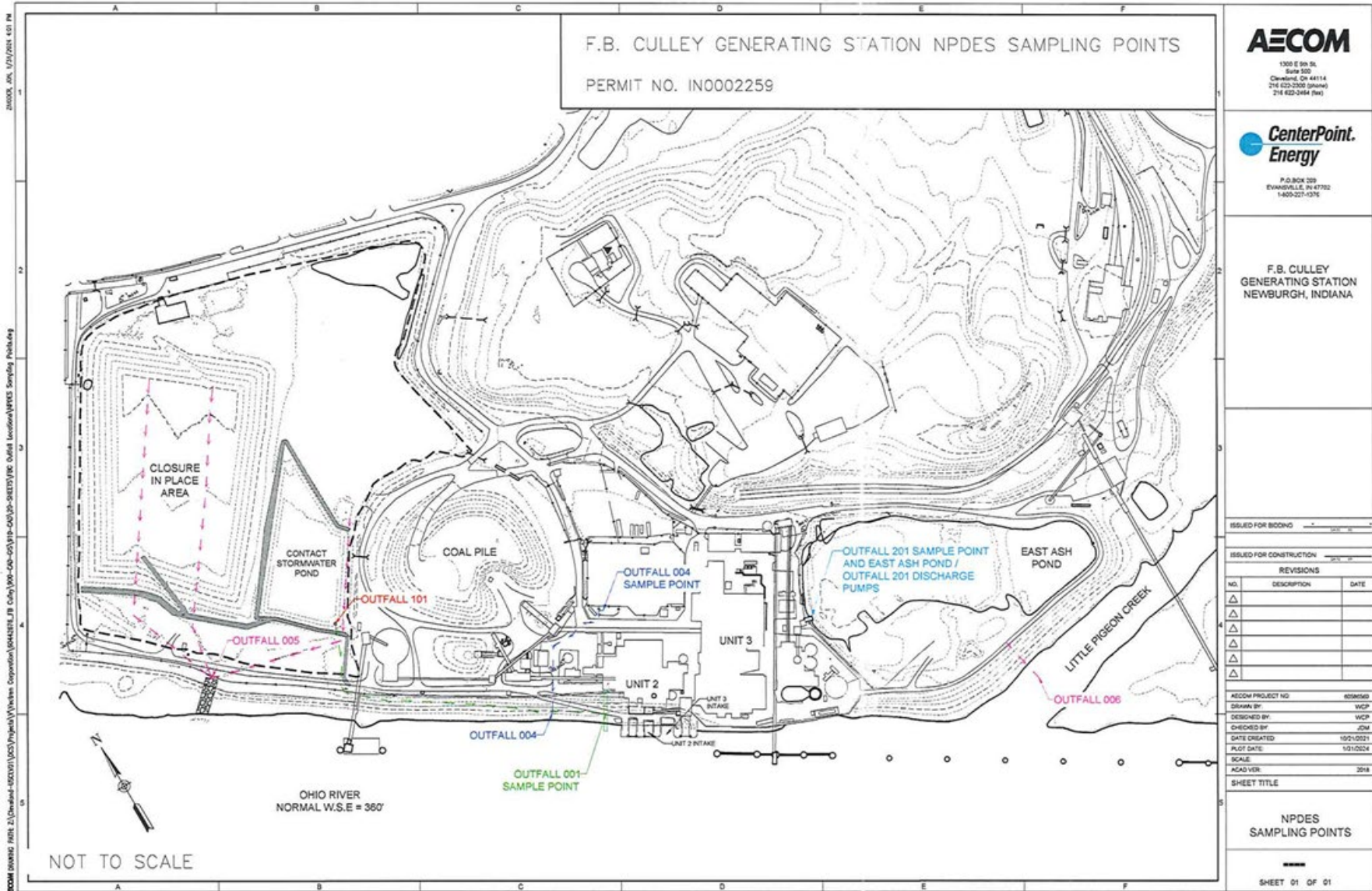
A map showing the location of the facility is included as Figure 1. A map showing locations of the outfalls/sampling locations is included as Figure 2.

**Figure 1: Facility Location**



3711 Darlington Road  
Newburgh, IN 47630  
Warrick County

Figure 2: Outfalls/Sampling Location Map



## 2.2 Outfall Locations

All outfalls are listed here, with the new outfall in **BOLD**. Only the new outfall is affected by the proposed permit modification.

<u>Outfall #</u>	<u>Location</u>	<u>Corresponding Permit Table</u>
Outfall 001	Latitude 37° 54' 35.39" Longitude -87° 19' 37.99"	Part I.A.1
Outfall 101	Latitude 37° 54' 44.36" Longitude -87° 19' 50.81"	Part I.A.2
Outfall 201	Latitude 37° 54' 34.49" Longitude -87° 19' 27.59"	Part I.A.3
Outfall 401	Latitude 37° 54' 34.78" Longitude -87° 19' 28.98"	Part I.A.4
Outfall 004	Latitude 37° 54' 38.36" Longitude -87° 19' 35.09"	Part I.A.5
Outfall 005	Latitude 37° 54' 42.40" Longitude -87° 19' 51.49"	Part I.A.6
<b>Outfall 006</b>	<b>Latitude 37° 54' 29.01"</b> <b>Longitude -87° 19' 20.66"</b>	<b>Part I.A.7</b>
Outfall 000	Administrative Outfall	Part I.A.8

## 3.0 PERMIT MODIFICATION

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### 3.1 Modification Request

Southern Indiana Gas and Electric Company (SIGECO) is requesting permit language modifications to the F.B. Culley Generating Station NPDES Permit (No. IN0002259) for activities and changes related to future water management and the temporary perimeter gradient control wells that were added to the facility NPDES permit during a prior modification. The East Ash Pond is currently in the closure process to comply with the Coal Combustion Residuals (CCR) Part A Final Rule. Closure of the East Ash Pond will include removal of the CCR material, verification of the removal of the CCR material, stabilization of disturbed areas (topsoil and vegetative cover), and the installation of a storm water discharge channel that will discharge to the Little Pigeon Creek near its confluence with the Ohio River. The water discharge channel will serve two purposes, as follows:

1. To enable safe construction activities during the closure of the East Ash Pond, a temporary perimeter gradient control well system will be installed outside the limits of the pond. The perimeter gradient control well system will consist of a series of wells which will function for approximately 18-months during construction activities to limit intrusion of Ohio River water into the sides and base of the East Ash Pond. The lower portion of the discharge channel will first be constructed to manage discharge of water collected from the perimeter gradient control well system. The lower portion of the discharge channel will extend from the current Ohio River water surface elevation to a point up the existing embankment to an elevation higher than the seasonal high-water of the Ohio River to allow for the perimeter gradient control well system outlet pipes to remain above the Ohio River during construction activities.
2. The remaining portions of the discharge channel will be constructed following completion of pond excavation activities. The ultimate function of the discharge channel will be to manage noncontact stormwater collected in the former footprint of the East Ash Pond as well as any river water that may enter this area during seasonal high river levels.

A new Outfall 006 is requested for discharge of temporary flows from the perimeter gradient control well system during the ash pond closure process and to manage post-closure noncontact storm and river water flows.

In addition to the request to add a new Outfall 006, a modification of the description to Internal Outfall 201 is requested. In the previous permit modification dated June 21, 2023, the description of Internal Outfall 201 was modified for re-routing of flows away from Internal Outfall 201. These modifications included ceasing discharges from the East Ash Pond, while Internal Outfall 201 would remain in the permit for discharging water from the perimeter gradient control system. Further development of the perimeter gradient control system has identified the need to temporarily discharge higher flows to Internal Outfall 201 than provided in the previous modification request. In addition to the increased flow rate to Internal Outfall 201, flows in excess of Internal Outfall 201's system capacity are anticipated and will be diverted to the new Outfall 006 described previously.

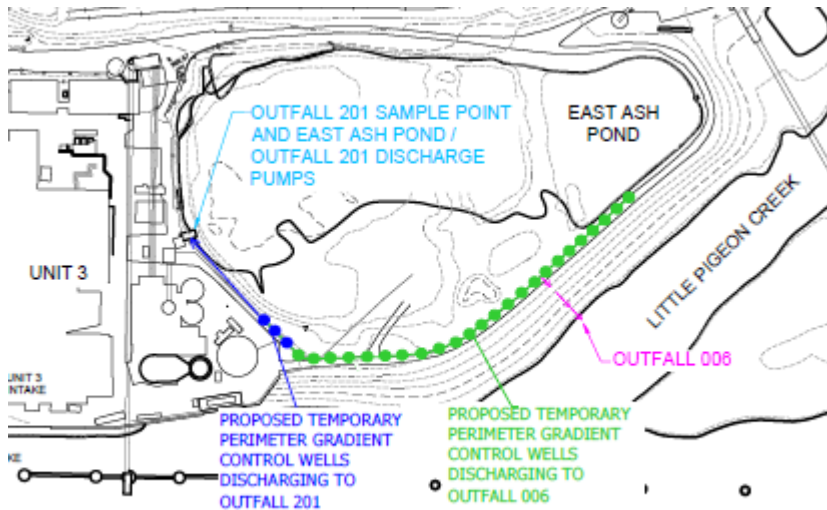
An updated facility water balance diagram is included as Figure 3.

Outfall 201 and proposed Outfall 006 are shown in Figure 4.





**Figure 4: Outfall 201 and proposed Outfall 006**



### 3.2 IDEM’s Proposed Modification

The requested permit modification is approved. The following changes have been made:

1. Outfall 006 (Permit Part I.A.6; pages 17-19 of 79)

Outfall 006 is a new outfall proposed to regulate flows from the perimeter gradient control well system during the East ash pond closure process and to manage post-closure noncontact stormwater flows. This outfall will have sampling requirements consistent with similar NPDES permits issued in Indiana.

#### **Flow**

The effluent flow is to be monitored in accordance with 327 IAC 5-2-13(a)(2).

#### **pH**

Discharges to waters of the state are limited to the range of 6.0-9.0 s.u., in accordance with 327 IAC 2-1-6(b)(2).

**Total Dissolved Solids, Total Suspended Solids (TSS), Antimony, Arsenic, Barium, Boron, Cadmium, Chloride, Chromium (Hexavalent), Chromium (Total), Cobalt, Fluoride, Lithium, Lead, Mercury, Molybdenum, Selenium, Sulfate, Thallium, and Zinc**

This facility is a coal-fired steam electric generating plant which has historically used unlined ash ponds. The West Ash Pond was closed prior to the 2023 permit renewal and the East Ash Pond is currently being closed to comply with the Coal Combustion Residuals (CCR) Part A Final Rule.

Unlined ash ponds are potential sources of pollutants associated with coal ash, which could be present in groundwater. Monitoring is proposed to evaluate the presence of these pollutants, and data collected will be used to determine if any of the pollutants have reasonable potential to exceed (RPE) water quality criteria, where a water quality standard has been established and included in 327 IAC 2-1-6.

Fluoride, sulfate, and TDS were selected for monitoring based on the list of constituents for detection monitoring of CCR contaminants found in 40 CFR 257 Appendix III. Antimony, arsenic, barium, cadmium, cobalt, lead, lithium, molybdenum, selenium, and thallium were selected for monitoring based on the list of constituents for assessment monitoring of CCR contaminants found in 40 CFR 257 Appendix IV. Hexavalent chromium was selected for monitoring based on 329 IAC 10 under the discretion of IDEM OLQ.

TSS, total chromium, mercury and zinc were selected because they are pollutants of concern in 40 CFR 423. Boron and chloride were selected because these pollutants are known to be associated with coal ash.

2. While only pages 1, 17, 18, and 19 of the permit have been modified, pages 1 through 21 are being provided to remove the blank pages of the permit.
3. Descriptions of Outfalls 001, 201, and 006 have been updated and changes are in **BOLD**. All facility outfalls are included here for the record.

#### Outfall 001:

Final Outfall 001 discharges to the Ohio River near river mile 773. According to the renewal application, the long-term average flow from the outfall is 181.6 MGD. Using data obtained from EPA ECHO, the design flow (highest monthly average) based on the most recent 2 years of data is 293 MGD. Treatment of the condenser cooling water includes the use of chlorine and bromine. Operations contributing to the flow include:

- Two (2) Condenser Cooling units (178.3 MGD). Includes Unit #2 and Unit #3.
- Unit #2 Boiler Make-Up Water (0.055 MGD).
- Contact Stormwater Pond discharge (1.805 MGD). See Outfall 101 description below.
- Perimeter gradient control wells (**3.816 MGD**). See Outfall 201 description below.
- Treated metal cleaning wastewater (0.05 – 0.07 MGD). See Outfall 401 below.

#### Outfall 101:

Internal Outfall 101 is an internal outfall and is the discharge from the Contact Stormwater Pond. Using data obtained from EPA ECHO, the design flow (highest monthly average) based on the most recent 2 years of data is 3.78 MGD. Flow from Outfall 101 ultimately discharges through Outfall 001. Treatment of the contact stormwater pond water consists of sedimentation. The Contact Stormwater Pond receives water from:

- Coal pile run-off.
- New Lined Pond (Unit 2 Bottom Ash Transport water filtrate, East Ash Pond water filtrate from removal of legacy ash pond water and stormwater).
- West yard sump. Includes Unit #1 basement sump & Unit #2 basement sump (which includes the Unit #2 floor drains).
- East side yard sump. Includes Unit #3 Oil Trap Tank, floor drains, greensand water treatment filters regenerant and backwash, softener regenerant streams, RO rejects, Unit #3 Boiler make-up (source is condensate storage), Unit #3 boiler sump pumps, air heater & boiler washes, clarified river water system backwash, and potable water pre-treatment system.
- Metal cleaning wastewater. See Outfall 401.

### **Outfall 201:**

Internal Outfall 201 is an internal outfall and will consist of discharge from the East Ash Pond perimeter gradient control wells. **As part of a previous permit modification issued August 30, 2023, the facility projected the flow from this outfall to be 1.0 MGD. As part of the current permit modification application, the facility has amended the projected flow to 3.816 MGD.** Current limits are being retained.

### **Outfall 401:**

Internal Outfall 401 is an internal outfall which consists of metal cleaning wastewater. Metal cleaning occurs approximately once every 18 months. Metal cleaning wastewater is containerized and treated using pH adjustment, coagulation, and settling prior to commingling with other wastestreams. The treated metal cleaning wastewater will primarily be reused in the FGD process. However, treated metal cleaning wastewater may also be discharged to the closest yard drain, which would then go to the East Yard Sump where it would be combined with other discharges prior to entering the Contact Storm Water Pond, which discharges to Outfall 001 via internal Outfall 101. A single metal cleaning discharge event has an estimated total of 50,000 – 70,000 gallons. Internal Outfall 401 was established as the compliance point for discharging treated metal cleaning wastewater. Because the location of this activity is variable, yet the discharge always passes through the East Yard Sump, the latitude and longitude of the East Yard Sump will be used as Outfall 401 for data entry purposes. Samples should be collected after treatment and prior to entering a yard drain.

### **Outfall 004:**

Final Outfall 004 consists of discharge from the sanitary wastewater package plant to the Ohio River. Treatment of the sanitary water consists of activated sludge and disinfection with ultraviolet light. Using data obtained from EPA ECHO, the design flow (highest monthly average) based on the most recent 2 years of data is 0.0249 MGD.

#### Outfall 005:

Final Outfall 005 consists of noncontact stormwater from the final cover system of the former West Ash Pond and adjacent green areas of the plant. The noncontact stormwater drains through a series of flow channels prior to discharging into the Ohio River via Outfall 005. The discharge from this outfall is not treated. Using data obtained from EPA ECHO, the maximum total flow reported during the most recent 2 years is 0.64 MGD. Flow will be variable due to the nature of the discharge.

#### Outfall 006:

**Final Outfall 006 is a proposed new outfall that will discharge from the perimeter gradient control wells (27.913 MGD) located outside the perimeter of the East Ash Pond to Little Pigeon Creek near its confluence with the Ohio River. Following the cessation of pumping from the perimeter gradient control wells, Outfall 006 will discharge noncontact storm water from the former footprint of the East Ash Pond and adjacent green areas surrounding the former footprint. The calculated peak discharge of noncontact stormwater is 3.364 MGD for the 100-yr design storm event.**

#### Outfall 000:

This is an administrative outfall for cooling water intake structure reporting.

### **3.3 Antibacksliding**

Indiana's prohibitions on backsliding under 327 IAC 5-2-10(a)(11) are applicable to BPJ case-by-case technology-based effluent limitations, when proposed to be increased based on subsequently promulgated effluent guidelines under Section 304(b) of the CWA, and limitations based on Indiana water quality standards or treatment standards (327 IAC 5-10). Prohibitions on other types of backsliding (e.g., backsliding from limitations derived from effluent guidelines, from existing case-by-case limitations to new case-by-case limitations, and from conditions such as monitoring requirements that are not effluent limitations) are covered under federal regulation at 40 CFR 122.44(l)(1).

Under 327 IAC 5-2-10(a)(11), unless an exception under 327 IAC 5-2-10(a)(11)(B) applies, a permit may not be renewed, reissued or modified to contain effluent limitations that are less stringent than the comparable effluent limitations in the previous permit. For effluent limitations based on Indiana water quality or treatment standards, less stringent effluent limitations may also be allowed if they are in compliance with Section 303(d)(4) of the CWA. Under 40 CFR 122.44(l)(1), a permit may not be renewed or reissued to contain less stringent interim effluent limitations, standards or conditions than the final effluent limitations, standards or conditions in the previous permit unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under 40 CFR 122.62.

None of the limits included in this permit are less stringent than the comparable effluent limitations in the previous permit, therefore, backsliding is not an issue in accordance with 327 IAC 5-2-10(a)(11) and 40 CFR 122.44(l)(1).

### **3.4 Antidegradation**

Indiana's Antidegradation Standards and Implementation procedures are outlined in 327 IAC 2-1.3. The antidegradation standards established by 327 IAC 2-1.3-3 apply to all surface waters of the state. The permittee is prohibited from undertaking any deliberate action that would result in a new or increased discharge of a bioaccumulative chemical of concern (BCC) or a new or increased permit limit for a regulated pollutant that is not a BCC unless information is submitted to the commissioner demonstrating that the proposed new or increased discharge will not cause a significant lowering of water quality, or an antidegradation demonstration submitted and approved in accordance 327 IAC 2-1.3-5 and 2-1.3-6.

The NPDES permit does not propose to establish a new or increased loading of a regulated pollutant; therefore, the Antidegradation Implementation Procedures in 327 IAC 2-1.3-5 and 2-1.3-6 do not apply to the permitted discharge.

### **3.5 Spill Response and Reporting Requirement**

Reporting requirements associated with the Spill Reporting, Containment, and Response requirements of 327 IAC 2-6.1 are included in Part II.B.2.(d), Part II.B.3.(c), and Part II.C.3. of the NPDES permit. Spills from the permitted facility meeting the definition of a spill under 327 IAC 2-6.1-4(15), the applicability requirements of 327 IAC 2-6.1-1, and the Reportable Spills requirements of 327 IAC 2-6.1-5 (other than those meeting an exclusion under 327 IAC 2-6.1-3 or the criteria outlined below) are subject to the Reporting Responsibilities of 327 IAC 2-6.1-7.

It should be noted that the reporting requirements of 327 IAC 2-6.1 do not apply to those discharges or exceedances that are under the jurisdiction of an applicable permit when the substance in question is covered by the permit and death or acute injury or illness to animals or humans does not occur. In order for a discharge or exceedance to be under the jurisdiction of this NPDES permit, the substance in question (a) must have been discharged in the normal course of operation from an outfall listed in this permit, and (b) must have been discharged from an outfall for which the permittee has authorization to discharge that substance.

### **3.6 Permit Processing/Public Comment**

Pursuant to IC 13-15-5-1, IDEM will publish the draft permit document online at <https://www.in.gov/idem/public-notices/>. Additional information on public participation can be found in the "Citizens' Guide to IDEM", available at <https://www.in.gov/idem/resources/citizens-guide-to-idem/>. A 30-day comment period is available to solicit input from interested parties, including the public.