

**STATE OF INDIANA**  
**DEPARTMENT OF ENVIRONMENTAL MANAGEMENT**  
**PUBLIC NOTICE NO. 20260904 – IN0053201 – PH/RD**  
**DATE OF NOTICE: September 4, 2026**  
**DATE OF HEARING: October 7, 2026**  
**RESPONSE DUE DATE: October 22, 2026**

The Office of Water Quality proposes the following NPDES DRAFT PERMIT and announces a virtual public hearing:

**MAJOR– RENEWAL**

**Northern Indiana Public Service Company LLC, R.M. Schahfer Generating Station (RMSGs)**  
Permit No. IN0053201, JASPER COUNTY, 2723 East 1500 North, Wheatfield, Indiana. RMSGs is a natural gas and coal-fired power steam electric generating facility. IDEM has received a renewal application for the NPDES permit for this facility, which discharges 22.0 MGD of non-process wastewater, process wastewater, stormwater and treated sanitary wastewater via the following locations in the following table.

| Outfall                                         | Coordinates                | Receiving Water                   |
|-------------------------------------------------|----------------------------|-----------------------------------|
| Outfall 001<br>(Entry to the Kankakee)          | Latitude: 41° 15' 2.34"    | Kankakee River                    |
|                                                 | Longitude: -87° 01' 40.55" |                                   |
| Outfall 001<br>(Monitoring Location)            | Latitude: 41° 13' 46.3"    |                                   |
|                                                 | Longitude: -87° 01' 40.04" |                                   |
| Outfall 002<br>(Outfall 001 Emergency Overflow) | Latitude: 41° 13' 35.87"   | Kankakee River via<br>Davis Ditch |
|                                                 | Longitude: -87° 01' 18.43" |                                   |
| Newly Proposed<br>Outfall 014                   | Latitude: 41° 13' 9.36"    | Stahlbaum Ditch                   |
|                                                 | Longitude: -87° 00' 6.80"  |                                   |
| Outfall 003S                                    | Latitude: 41° 13' 8.55"    | Stahlbaum Ditch                   |
|                                                 | Longitude: -87° 00' 20"    |                                   |
| Outfall 004S                                    | Latitude: 41° 12' 22"      | Davis Ditch                       |
|                                                 | Longitude: -87° 01' 38"    |                                   |
| Outfall 005S                                    | Latitude: 41° 12' 31"      | Davis Ditch                       |
|                                                 | Longitude: -87° 01' 38"    |                                   |
| Outfall 006S                                    | Latitude: 41° 13' 31"      | Davis Ditch                       |
|                                                 | Longitude: -87° 01' 36"    |                                   |
| Outfall 007S                                    | Latitude: 41° 12' 17.46"   | Davis Ditch                       |
|                                                 | Longitude: -87° 01' 47.3"  |                                   |

**Public Hearing:** IDEM plans to hold a Virtual Public Hearing for this draft NPDES permit based on potential public interest. The hearing will occur on October 7, 2026 at 5:00 pm EDT / 4:00 pm CDT via Microsoft Teams Meeting, <https://teams.microsoft.com/meet/275326011285168?p=R72SH2yD42AJyoymCM> or

Meeting ID: 275 326 011 285 168

Passcode D7KV7gt9.

**Here is the access information to Dial in by phone**

[+1 317-552-1674](tel:+13175521674), [19789957](tel:+19789957)# United States, Indianapolis

[Find a local number](#)

Phone conference ID: 197 899 57#

The purpose of the hearing is to allow public participation in the determination of the terms and conditions of the NPDES permit. Interested parties will have the opportunity to provide oral comments to the IDEM representatives at the hearing.

**Comments:** IDEM is required, by 327 IAC 5-3-9, to publish this notice and solicit public comment. The draft NPDES permit renewal, the fact sheet, and supporting documents are posted online with the public notice document. The proposed decision to issue a permit is tentative. Interested persons are invited to submit written comments regarding the draft permit. **All written comments must be postmarked or received no later than the Response Due Date of this Notice to be considered in the decision to issue a final permit.** Comments must be submitted to IDEM, to the attention of the Permit Manager, whose contact information is listed below. You may submit comments to IDEM via email at [HEtter@idem.IN.gov](mailto:HEtter@idem.IN.gov). Otherwise, please deliver or mail comments to the address below:

**Permit Manager:** Attn: Heidi Etter  
IDEM, Office of Water Quality  
Industrial NPDES Permits Section  
100 N. Senate Ave, 12<sup>th</sup> Floor East  
Indianapolis, IN 46204-2251

Telephone number: (317) 233-4903

Email address: [Hetter@idem.in.gov](mailto:Hetter@idem.in.gov).

Notices of subsequent permit action will ONLY be sent to persons who provide their contact mailing address or Email address and cannot be made to persons who fail to request such notifications.

For your rights & responsibilities see: Public Notices at <https://www.in.gov/idem/public-notices/>. For more information, please visit our Online Citizens' Guide: <https://www.in.gov/idem/resources/citizens-guide-to-idem/>. Please tell others whom you think would be interested in this matter.



## INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

100 N. Senate Avenue • Indianapolis, IN 46204  
(800) 451-6027 • (317) 232-8603 • Fax (317) 233-6647 • [www.idem.IN.gov](http://www.idem.IN.gov)

Mike Braun  
Governor

Clint Woods  
Commissioner

August 4, 2026

VIA ELECTRONIC MAIL

Rockey L. Pollard II, Director Station Chemistry & Environmental Compliance  
Northern Indiana Public Service Company LLC  
801 E. 86th Avenue  
Merrillville, IN 46410

Dear Rockey L. Pollard II:

Re: NPDES Permit No. IN0053201  
Draft Permit  
Northern Indiana Public Service Company LLC  
R.M. Schahfer Generating Station  
Wheatfield, IN – Jasper County

Your application and supporting documents have been reviewed and processed in accordance with rules adopted under 327 IAC 5. Enclosed is a copy of the draft NPDES Permit.

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 and associated documents carefully to become familiar with the proposed terms and conditions. Comments concerning the draft permit 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.

Questions concerning this draft permit may be addressed to Heidi Etter of my staff at 317/233-4903 or [hetter@idem.in.gov](mailto:hetter@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  
Jasper County Health Department  
Ariel Rozwara, NIPSCO  
Paul Frohnapple, NIPSCO  
Jackie Backus, Ramboll  
Nick Ream, IDEM  
Troy Weaver, IDEM  
Shyamala Raman, IDEM



STATE OF INDIANA  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
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 authority under IC 13-15,

NORTHERN INDIANA PUBLIC SERVICE COMPANY LLC  
R.M. SCHAHFER GENERATING STATION

is authorized to discharge from a natural gas and coal-fired electric generating facility, as well as an adjacent data center, that is located at 2723 East 1500 North, Wheatfield, Indiana to receiving waters identified as Davis Ditch, Stahlbaum Ditch, and Kankakee River in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III, and IV hereof. This permit may be revoked for the nonpayment of applicable fees in accordance with IC 13-18-20.

Effective Date: \_\_\_\_\_

Expiration Date: \_\_\_\_\_

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 Outfalls 001 and 002, located at Latitude 41° 15' 2.34", Longitude -87° 01' 40.55" and Latitude 41° 13' 35.87", Longitude -87° 01' 18.43", respectively. The discharge from the Final Basin (Outfall 001) and the Final Basin Overflow (Outfall 002) is limited to treated sanitary wastewater from Internal Outfall 101, treated landfill leachate and stormwater from Internal Outfall 201, cooling tower blowdown (including cooling tower blowdown from Internal Outfall 401), low volume waste sources (including low volume waste sources from Internal Outfall 501), strainer backwash and direct evaporative cooler blowdown, flue gas desulfurization (FGD) blowdown wastewaters [17], bottom ash transport water [17], coal pile runoff, coal combustion residuals (CCR) impoundment dewatering water, construction dewatering water, "startup" waters (e.g., hydrostatic test water and pipe flushing water) from the adjacent data center and the CCGT facility, and 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 Kankakee River. Such discharge shall be limited and monitored by the permittee as specified below:

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

Outfalls 001 [14] and 002

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 [5]             | Report              | Report        | MGD    | ----                     | ----          | ----  | 1 X Daily               | Continuous   |
| Intake Flow          | Report              | Report        | MGD    | ----                     | ----          | ----  | 1 X Daily               | Continuous   |
| Intake Velocity      | ----                | 0.5           | fps    | ----                     | ----          | ----  | 1 X Daily               | [21]         |
| Cycles of Conc.      | Report              | Report        | number | ----                     | ----          | ----  | 1 X Daily               | Report       |
| Temperature [13][28] | ----                | ----          | ----   | Report                   | Report        | °F    | 1 X Weekly              | Grab         |
| TSS [16]             | ----                | ----          | ----   | 29                       | 95            | mg/l  | 1 X Weekly              | 24-Hr. Comp. |
| O&G [16]             | ----                | ----          | ----   | 6.1                      | 8.1           | mg/l  | 1 X Weekly              | Grab         |
| Chromium [6]         | ----                | ----          | ----   | 0.2                      | 0.2           | mg/l  | 1 X Monthly             | Grab         |
| Zinc [6]             | ----                | ----          | ----   | 0.301                    | 0.604         | mg/l  | 1 X Monthly             | Grab         |
| Mercury [6,7,8]      | ----                | ----          | ----   | 12                       | 20            | ng/l  | 6 X Yearly              | Grab         |
| Sulfate              | ----                | ----          | ----   | 748                      | 1,501         | mg/l  | 1 X Weekly              | Grab         |

| Parameter                          | Monthly Average | Daily Maximum | Units | Monthly Average | Daily Maximum | Units     | Measurement Frequency | Sample Type  |
|------------------------------------|-----------------|---------------|-------|-----------------|---------------|-----------|-----------------------|--------------|
| TRC [8][9]                         |                 |               |       |                 |               |           |                       |              |
| Continuous [10]                    | ----            | ----          | ----  | 0.02            | 0.04          | mg/l      | 1 X Daily             | Grab         |
| Intermittent [11]                  | ----            | ----          | ----  | ----            | 0.2           | mg/l      | 1 X Daily             | Grab         |
| Chlorination [11][12]              |                 |               |       |                 |               |           |                       |              |
| Frequency                          | ----            | ----          | ----  | ----            | 4             | times/day | 1 X Daily             | Grab         |
| Duration                           | ----            | ----          | ----  | ----            | 40            | min/dose  | 1 X Daily             | Grab         |
| Iron [6]                           | ----            | ----          | ----  | Report          | Report        | mg/l      | 2 X Monthly           | 24-Hr. Comp. |
| Ammonia (as N)                     | ----            | ----          | ----  | Report          | Report        | mg/l      | 2 X Monthly           | Grab         |
| Arsenic [6][8]                     | ----            | ----          | ----  | Report          | Report        | µg/l      | 1 X Weekly            | Grab         |
| Boron [6]                          | ----            | ----          | ----  | Report          | Report        | µg/l      | 1 X Weekly            | Grab         |
| Chloride                           | ----            | ----          | ----  | Report          | Report        | mg/l      | 2 X Monthly           | Grab         |
| Manganese [6]                      | ----            | ----          | ----  | Report          | Report        | mg/l      | 1 X Weekly            | Grab         |
| Selenium [6][8]                    | ----            | ----          | ----  | Report          | Report        | µg/l      | 1 X Weekly            | Grab         |
| Nitrate/Nitrite                    | ----            | ----          | ----  | Report          | Report        | mg/l      | 1 X Weekly            | Grab         |
| Cadmium [6]                        | ----            | ----          | ----  | Report          | Report        | mg/l      | 2 X Monthly [19]      | 24-Hr. Comp. |
| Lead [6]                           | ----            | ----          | ----  | Report          | Report        | mg/l      | 2 X Monthly [19]      | 24-Hr. Comp. |
| Calcium [6]                        | ----            | ----          | ----  | Report          | Report        | mg/l      | 2 X Monthly [19]      | 24-Hr. Comp. |
| Total Dissolved Solids (TDS)       | ----            | ----          | ----  | Report          | Report        | mg/l      | 2 X Monthly [19]      | 24-Hr. Comp. |
| Fluoride [6][8]                    | ----            | ----          | ----  | Report          | Report        | mg/l      | 2 X Monthly [19]      | 24-Hr. Comp. |
| Antimony [6][8]                    | ----            | ----          | ----  | Report          | Report        | mg/l      | 2 X Monthly [19]      | 24-Hr. Comp. |
| Barium [6][8]                      | ----            | ----          | ----  | Report          | Report        | mg/l      | 2 X Monthly [19]      | 24-Hr. Comp. |
| Beryllium [6][8]                   | ----            | ----          | ----  | Report          | Report        | mg/l      | 2 X Monthly [19]      | 24-Hr. Comp. |
| Cobalt [6][8]                      | ----            | ----          | ----  | Report          | Report        | mg/l      | 2 X Monthly [19]      | 24-Hr. Comp. |
| Lithium [6][8]                     | ----            | ----          | ----  | Report          | Report        | mg/l      | 2 X Monthly [19]      | 24-Hr. Comp. |
| Molybdenum [6][8]                  | ----            | ----          | ----  | Report          | Report        | mg/l      | 2 X Monthly [19]      | 24-Hr. Comp. |
| Thallium [6][8]                    | ----            | ----          | ----  | Report          | Report        | mg/l      | 2 X Monthly [19]      | 24-Hr. Comp. |
| Radium 226 and 228 combined [6][8] | ----            | ----          | ----  | Report          | Report        | pCi/L     | 2 X Monthly [19]      | 24-Hr. Comp. |
| Whole Effluent Toxicity (WET) [20] |                 |               |       |                 |               |           |                       |              |

Table 2

| Parameter | Quality or Concentration |                 |               |       | Monitoring Requirements |             |
|-----------|--------------------------|-----------------|---------------|-------|-------------------------|-------------|
|           | Daily Minimum            | Monthly Average | Daily Maximum | Units | Measurement Frequency   | Sample Type |
| pH [15]   | 6.0                      | ----            | 9.0           | s.u.  | 1 X Weekly              | 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-forms-list/>.

- [3] 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.
- [4] See Permit Part III (Other Requirements) and Permit Part IV (Intake Structure Requirements) for additional requirements.
- [5] Pump hour flow meter calculations are adequate to monitor the discharge flow in lieu of an electronic continuous monitoring device at Outfall 001. Outfall 002 is an emergency overflow outfall only. In the event of an emergency overflow discharge at Outfall 002, the flow reporting may be an estimate based upon flow duration and estimated discharge rate and parameters normally requiring 24-hour composite sampling may be monitored by grab sample instead.
- [6] The permittee shall measure and report the identified metal as total recoverable metal.
- [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] 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.

| <b>Parameter</b>            | <b>Test Method</b>               | <b>LOD</b>  | <b>LOQ</b>  |
|-----------------------------|----------------------------------|-------------|-------------|
| 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    |
| Chlorine, Total residual    | 4500-Cl D-2000, E-2000 or G-2000 | 0.02 mg/l   | 0.06 mg/l   |
| Radium 226 and 228 combined | 903.0                            | 0.253 pCi/L | 0.805 pCi/L |
| Thallium                    | 200.8                            | 0.073 µg/l  | 1.0 µg/l    |
| Thallium                    | 200.7                            | 5 µg/l      | 10 µg/l     |
| Molybdenum                  | 200.8                            | 0.48 µg/l   | 5.0 µg/l    |
| Molybdenum                  | 200.7                            | 25 µg/l     | 50 µg/l     |
| Lithium                     | 200.7                            | 4.1 µg/l    | 20.0 µg/l   |
| Cobalt                      | 200.8                            | 0.086 µg/l  | 1.0 µg/l    |
| Cobalt                      | 200.7                            | 5 µg/l      | 10 µg/l     |

| <b><u>Parameter</u></b> | <b><u>Test Method</u></b> | <b><u>LOD</u></b> | <b><u>LOQ</u></b> |
|-------------------------|---------------------------|-------------------|-------------------|
| Beryllium               | 200.8                     | 0.033 µg/l        | 0.20 µg/l         |
| Barium                  | 200.8                     | 4.9 µg/l          | 15.6 µg/l         |
| Barium                  | 200.7                     | 25 µg/l           | 50 µg/l           |
| Antimony                | 200.8                     | 0.13 µg/l         | 1.0 µg/l          |
| Antimony                | 200.7                     | 3 µg/l            | 6 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          |

#### 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.

- [9] The chlorine limits are applicable when chlorine may be expected to be in the effluent. Chlorine monitoring is required on days when chlorination occurs and shall be commenced on such days within an hour of initial chlorination.
- [10] The water quality based effluent limit (WQBEL) for TRC is less than the limit of quantitation (LOQ) as specified in footnote [8]. Compliance with this permit will be demonstrated if the effluent concentrations measured are less than the LOQ.

If the measured concentration of TRC is greater than the water quality based effluent limitations and above the respective LOD specified in footnote [8] 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); and re-examine the chlorination /dechlorination procedures.
- (2) The sampling and analysis for TRC shall be increased to 2 X Daily and remain at this increased sampling frequency until:
  - (a) The increased sampling frequency for TRC has been in place for at least two weeks.
  - (b) At least nine (9) samples have been taken under this increased sampling frequency; and



- (c) The measured concentration of TRC is less than the LOD specified in footnote [8] in at least seven (7) out of the nine (9) most recent analyses.

- [11] The limit is based on 327 IAC 2-1-6 Table 6-1. "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".
- [12] Reporting requirements for chlorination frequency and duration apply only when the facility is chlorinating intermittently, as defined in footnote [11].
- [13] 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.
- [14] The discharge of cooling tower blowdown is regulated by the 40 CFR 423.13(d). 40 CFR 423.13(d)(1) prohibits the discharge of the 126 priority pollutants listed in Appendix A of this regulation in detectable amounts with the exception of total zinc and total chromium which have specific numeric limits. In accordance with 423.13(d)(3), instead of the monitoring specified in 40 CFR 122.48(b), compliance with the limitations for the 126 priority pollutants in paragraph (d)(1) of 40 CFR 423.13 may be determined by engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical methods in 40 CFR part 136. However, compliance with the above limitations for the 126 priority pollutants (with the exception of zinc and chromium) in paragraph (d)(1) of 40 CFR 423.13 must be reported each time there is a change in the chemicals added for cooling tower maintenance.
- [15] 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.
- [16] The limitations included have been calculated using the Building Block Approach for combined ELG and non-ELG wastestreams.

- [17] Per 40 CFR 423.13(g)(2)(i) and 40 CFR 423.13(k)(2)(ii), where a unit has certified that it will cease combustion of coal pursuant to 40 CFR 423.19(g) and such unit has permanently ceased coal combustion by December 31, 2028, there shall be no discharge of pollutants in FGD wastewater and bottom ash transport water after April 30, 2029.
- [18] The “daily maximum” means the highest temperature value measured for any calendar day.
- [19] In order to obtain representative samples of the discharge, sampling must include periods in which CCR impoundment dewatering is being discharged through Outfall 001/002.
- [20] The Whole Effluent Toxicity requirements are established in Part I.F of this permit.
- [21] The permittee must monitor the velocity at the traveling screens at a minimum frequency of daily. In lieu of velocity monitoring at the screen face of the traveling screens, the permittee may calculate the through-screen velocity using water flow, water depth, and the screen open areas. The location and method used to determine the maximum velocities shall be included in the annual report required to be submitted under Part IV.B.6 of the Permit. If the permittee uses the calculation method to determine the velocities, the input values and calculation for each day shall be included in this annual report.

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 Internal Outfall 101, located at Latitude 41° 13' 5.67", Longitude -87° 01' 2.65". The discharge is limited to sanitary wastewater. 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 Final Basin. Such discharge shall be limited and monitored by the permittee as specified below:

**DISCHARGE LIMITATIONS [1]**

Internal Outfall 101

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 [2]              | Report              | Report        | MGD   | ----                     | ----          | ----       | 2 X Monthly             | 24-Hr. Total |
| CBOD <sub>5</sub>     | ----                | ----          | ----  | 25                       | 40            | mg/l       | 2 X Monthly             | 24-Hr. Comp. |
| TSS                   | ----                | ----          | ----  | 30                       | 45            | mg/l       | 2 X Monthly             | Grab         |
| <i>E. coli</i> [3][4] | ----                | ----          | ----  | 125                      | 235           | cfu/100 ml | 2 X Monthly             | Grab         |

- [1] Discharge from Internal Outfall 101, which flows to the Final Basin, is limited solely to sanitary wastewater, free from process or other wastewater discharges.
- [2] Pump hour flow meter calculations are adequate to monitor the discharge flow at Internal Outfall 101.
- [3] The *E. coli* limitations and monitoring requirements apply from April 1 through October 31 annually. IDEM has specified the following methods as allowable for the detection and enumeration of *Escherichia coli* (*E. coli*):
1. Coliscan MF® Method
  2. EPA Method 1603 Modified m-TEC agar
  3. mColi Blue-24®.
  4. Colilert® MPN Method or Colilert-18® MPN Method

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 nonexcluded value for the daily maximum.

- [4] 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.

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 Internal Outfall 201, located at Latitude 41° 13' 4.57", Longitude -87° 01' 7.91". The discharge is limited to treated landfill leachate and 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 Final Basin. Such discharge shall be limited and monitored by the permittee as specified below:

**DISCHARGE LIMITATIONS**

Internal Outfall 201

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   | ----                     | ----          | ----  | 2 X Monthly             | 24-Hr. Total |
| TSS               | ----                | ----          | ----  | 30                       | 100           | mg/l  | 2 X Monthly             | 24-Hr. Comp. |
| Oil and Grease    | ----                | ----          | ----  | 15                       | 20            | mg/l  | 2 X Monthly             | Grab         |
| Arsenic [1][3]    |                     |               |       |                          |               |       |                         |              |
| Interim           | ----                | ----          | ----  | Report                   | Report        | µg/l  | 1 X Monthly             | Grab         |
| Final [5]         | ----                | ----          | ----  | 8                        | 11            | µg/l  | 1 X Monthly             | Grab         |
| Mercury [1][2][3] |                     |               |       |                          |               |       |                         |              |
| Interim           | ----                | ----          | ----  | Report                   | Report        | ng/l  | 6 X Yearly              | Grab         |
| Final [5]         | ----                | ----          | ----  | 356                      | 788           | ng/l  | 6 X Yearly              | Grab         |

Table 2

| Parameter | Quality or Concentration |                 |               |       | Monitoring Requirements |             |
|-----------|--------------------------|-----------------|---------------|-------|-------------------------|-------------|
|           | Daily Minimum            | Monthly Average | Daily Maximum | Units | Measurement Frequency   | Sample Type |
| pH [4]    | 6.0                      | ----            | 9.0           | s.u.  | 1 X Weekly              | Grab        |

- [1] The permittee shall measure and report the identified metal as total recoverable metal.
- [2] 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.
- [3] 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.

| <b><u>Parameter</u></b> | <b><u>Test Method</u></b> | <b><u>LOD</u></b> | <b><u>LOQ</u></b> |
|-------------------------|---------------------------|-------------------|-------------------|
| 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          |

#### 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.

- [4] 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.
- [5] The permittee must comply with the limits established under 40 CFR 423.13(l)(2)(i)(A) for Internal Outfall 201 as soon as possible beginning 120 days after the facility permanently ceases coal combustion, but no later than April 30, 2035. The permittee must notify IDEM, Office of Water Quality, Compliance Data Section within 30 days of the facility permanently ceasing coal combustion.

4. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit [6]. The permittee is authorized to discharge from Internal Outfall 401. The discharge is limited to cooling tower blowdown from the CCGT facility and temporary and intermittent discharges of hydrostatic test water and pipe flushing water during startup of the CCGT facility. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to commingling with another wastestream. Such discharge shall be limited and monitored by the permittee as specified below:

**DISCHARGE LIMITATIONS [5]**

Internal 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 [1]                             | Report              | Report        | MGD    | ----                     | ----          | ----    | 1 X Daily               | Continuous  |
| Cycles of Conc.                      | Report              | Report        | number | ----                     | ----          | ----    | 1 X Daily               | Report      |
| Free Available Chlorine [2]          | ----                | ----          | ----   | 0.2                      | 0.5           | mg/l    | 1 X Daily               | Grab        |
| Chlorination [2]<br>Duration per Day | ----                | ----          | ----   | ----                     | 120           | min/day | 1 X Daily               | Report      |
| Total Chromium [3]                   | ----                | ----          | ----   | 0.2                      | 0.2           | mg/l    | 2 X Monthly             | Grab        |
| Total Zinc [3]                       | ----                | ----          | ----   | 1.0                      | 1.0           | mg/l    | 2 X Monthly             | Grab        |

Table 2

| Parameter | Quality or Concentration |                 |               |       | Monitoring Requirements |             |
|-----------|--------------------------|-----------------|---------------|-------|-------------------------|-------------|
|           | Daily Minimum            | Monthly Average | Daily Maximum | Units | Measurement Frequency   | Sample Type |
| pH [4]    | 6.0                      | ----            | 9.0           | s.u.  | 1 X Weekly              | Grab        |

- [1] Flow is to be measured continuously using a flow measuring device.
- [2] Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the permitting authority that discharge for more than two hours is required for macroinvertebrate and biological control. Simultaneous multi-unit chlorination is permitted.

- [3] The permittee shall measure and report the identified metal as total recoverable metal.
- [4] 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.
- [5] The discharge of cooling tower blowdown is regulated by 40 CFR 423.15(b)(10). 40 CFR 423.15(b)(10)(i) prohibits the discharge of the 126 priority pollutants listed in Appendix A of this regulation in detectable amounts with the exception of total zinc and total chromium which have specific numeric limits. In accordance with 40 CFR 423.15(b)(10)(iii), instead of the monitoring specified in 40 CFR 122.48(b), compliance with the limitations for the 126 priority pollutants in paragraph (b)(10)(i) of 40 CFR 423.15 may be determined by engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical methods in 40 CFR part 136. However, compliance with the above limitations for the 126 priority pollutants (with the exception of zinc and chromium) in paragraph (b)(10)(i) of 40 CFR 423.15 must be reported each time there is a change in the chemicals added for cooling tower maintenance.
- [6] The permittee must notify IDEM, Office of Water Quality, Compliance Data Section 30 days before discharge of wastewater from the CCGT facility.



5. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit [3]. The permittee is authorized to discharge from Internal Outfall 501. The discharge is limited to low volume waste sources from the CCGT facility and temporary and intermittent discharges of hydrostatic test water and pipe flushing water during startup of the CCGT facility. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to commingling with another wastestream. Such discharge shall be limited and monitored by the permittee as specified below:

**DISCHARGE LIMITATIONS**

Internal Outfall 501

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 [1]       | Report              | Report        | MGD   | ----                     | ----          | ----  | 1 X Daily               | 24-Hr. Total |
| TSS            | ----                | ----          | ----  | 30                       | 100           | mg/l  | 2 X Monthly             | 24-Hr. Comp. |
| Oil and Grease | ----                | ----          | ----  | 15                       | 20            | mg/l  | 2 X Monthly             | Grab         |

Table 2

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

- [1] Flow is to be measured continuously using a flow measuring device.
- [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] The permittee must notify IDEM, Office of Water Quality, Compliance Data Section 30 days before discharge of wastewater from the CCGT facility.

6. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit, effective when discharge commences from the new Peaker Plant through the expiration of the permit [6]. The permittee is authorized to discharge from Outfall 014, located at Latitude 41° 13' 9.36", Longitude -87° 00' 6.80". The discharge is limited to untreated Greensand filter backwash, oil separator treated miscellaneous uses wastewaters, untreated RO associated wastewaters, untreated evaporative cooler blowdown, and 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 Stalbaum Ditch. Such discharge shall be limited and monitored by the permittee as specified below:

**DISCHARGE LIMITATIONS [4][5]**  
Outfall 014

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-Hr. Total |
| TSS               | ----                | ----          | ----  | 30                       | 100           | mg/l  | 2 X Monthly             | Grab         |
| Oil and Grease    | ----                | ----          | ----  | 15                       | 20            | mg/l  | 2 X Monthly             | Grab         |
| Manganese [1]     | ----                | ----          | ----  | Report                   | Report        | mg/l  | 2 X Monthly             | Grab         |
| Boron             | ----                | ----          | ----  | Report                   | Report        | mg/l  | 2 X Monthly             | Grab         |
| Chloride          | ----                | ----          | ----  | Report                   | Report        | mg/l  | 2 X Monthly             | Grab         |
| Sulfate           | ----                | ----          | ----  | Report                   | Report        | mg/l  | 2 X Monthly             | Grab         |
| Lithium [1][2]    | ----                | ----          | ----  | Report                   | Report        | mg/l  | 2 X Monthly             | Grab         |
| Molybdenum [1][2] | ----                | ----          | ----  | Report                   | Report        | mg/l  | 2 X Monthly             | Grab         |

Table 2

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

- [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.

| <b><u>Parameter</u></b> | <b><u>Test Method</u></b> | <b><u>LOD</u></b> | <b><u>LOQ</u></b> |
|-------------------------|---------------------------|-------------------|-------------------|
| Lithium                 | 200.7                     | 4.1 µg/l          | 20.0 µg/l         |
| Molybdenum              | 200.8                     | 0.48 µg/l         | 5.0 µg/l          |
| Molybdenum              | 200.7                     | 25 µg/l           | 50 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] 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 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.
- [5] See Permit Part III (Other Requirements) for additional requirements.
- [6] The permittee must notify IDEM, Office of Water Quality, Compliance Data Section 30 days before discharge of wastewater from the Peaker Plant.

7. The permittee is authorized to discharge stormwater from the outfalls listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from Outfalls 003S, 004S, 005S, 006S, and 007S. The permittee shall also sample Stream Monitoring Sites 010S, 011S (both from Davis Ditch), 012S, and 013S (both from Stalbaum Ditch). The location of each of these outfalls is listed below:

003S: Latitude 41° 13' 8.55", Longitude -87° 00' 20"  
 004S: Latitude 41° 12' 22", Longitude -87° 01' 38"  
 005S: Latitude 41° 12' 31", Longitude -87° 01' 38"  
 006S: Latitude 41° 13' 31", Longitude -87° 01' 36"  
 007S: Latitude 41° 12' 17.46", Longitude -87° 01' 47.3"  
 010S: Latitude 41° 12' 5.22", Longitude -87° 00' 56.4"  
 011S: Latitude 41° 13' 19.21", Longitude -87° 01' 47.3"  
 012S: Latitude 41° 12' 29.88", Longitude -87° 00' 3.9"  
 013S: Latitude 41° 13' 24.52", Longitude -87° 01' 21.3"

Such discharge shall be limited and monitored by the permittee as specified below:

**DISCHARGE LIMITATIONS [1][2][3]**  
 Stormwater Outfalls 003S, 004S [4], 007S  
 Stream Monitoring Sites 010S, 011S, 012S, 013S

| <u>Parameter</u>       | <u>Daily<br/>Maximum</u> | <u>Units</u> | <u>Monitoring Requirements</u>   |                        |
|------------------------|--------------------------|--------------|----------------------------------|------------------------|
|                        |                          |              | <u>Measurement<br/>Frequency</u> | <u>Sample<br/>Type</u> |
| Flow                   | Report                   | MGD          | Annually                         | Estimate Total         |
| Total Suspended Solids | Report                   | mg/l         | Annually                         | Grab                   |
| pH                     | Report                   | s.u.         | Annually                         | Grab                   |
| Oil & Grease           | Report                   | mg/l         | Annually                         | Grab                   |
| Arsenic [5]            | Report                   | mg/l         | Annually                         | Grab                   |
| Cadmium [5]            | Report                   | mg/l         | Annually                         | Grab                   |
| Chromium [5]           | Report                   | mg/l         | Annually                         | Grab                   |
| Copper [5]             | Report                   | mg/l         | Annually                         | Grab                   |
| Lead [5]               | Report                   | mg/l         | Annually                         | Grab                   |
| Nickel [5]             | Report                   | mg/l         | Annually                         | Grab                   |
| Selenium [5]           | Report                   | mg/l         | Annually                         | Grab                   |
| Zinc [5]               | Report                   | mg/l         | Annually                         | Grab                   |
| Sulfate [5]            | Report                   | mg/l         | 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).

The permittee shall conduct a visual inspection at the outfall(s) on an annual basis. During visual inspections the permittee shall report the presence of turbidity, color, foam, solids, floatables, and oil sheen. The results of the visual inspections shall be recorded and maintained as part of the SWPPP plan. Visual inspections should allow for timely adjustments to be made to the SWPPP. If BMPs are performing ineffectively, corrective action must be implemented. A set of tracking or follow-up procedures must be used to ensure that appropriate actions are taken in response to the examinations.

- [3] See Part I.B. of the permit for the minimum narrative limitations.
- [4] Outfall 004S discharge shall be representative of discharge from Outfalls 005S and 006S.
- [5] The permittee shall measure and report the identified metal as total recoverable metal.

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.

8. 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. These reports shall include, but not necessarily be

limited to, the Discharge Monitoring Report (DMR) and the Monthly Monitoring Report (MMR). All reports shall be submitted electronically by using the NetDMR application, upon registration, receipt of the NetDMR Subscriber Agreement, and IDEM approval of the proposed NetDMR Signatory. Access the NetDMR website (for initial registration and DMR/MMR submittal) via CDX at: <https://cdx.epa.gov/>. The Regional Administrator may request the permittee to submit monitoring reports to the Environmental Protection Agency if it is deemed necessary to assure compliance with the permit. See Part II.C.10 of this permit for Future Electronic Reporting Requirements.

- a. Calculations that require averaging of measurements of daily values (both concentrations and mass) shall use an arithmetic mean, except the monthly average for *E. coli* shall be calculated as a geometric mean.
- b. Daily effluent values (both mass and concentration) that are less than the LOQ that are used to determine the monthly average effluent level shall be accommodated in calculation of the average using statistical methods that have been approved by the Commissioner.
- c. Effluent concentrations less than the LOD shall be reported on the Discharge Monitoring Report (DMR) forms as < (less than) the value of the LOD. For example, if a substance is not detected at a concentration of 0.1 µg/l, report the value as <0.1 µg/l.
- d. Effluent concentrations greater than or equal to the LOD and less than the LOQ that are reported on a DMR shall be reported as the actual value and annotated on the DMR to indicate that the value is not quantifiable.
- e. Mass discharge values which are calculated from concentrations reported as less than the value of the limit of detection shall be reported as less than the corresponding mass discharge value.
- f. Mass discharge values that are calculated from effluent concentrations greater than the limit of detection shall be reported as the calculated value.

### 3. Definitions

- a. "Monthly Average" means the total mass or flow-weighted concentration of all daily discharges during a calendar month on which daily discharges are sampled or measured, divided by the number of daily discharges sampled and/or measured during such calendar month.

The monthly average discharge limitation is the highest allowable average monthly discharge for any calendar month.

- b. "Daily Discharge" means the total mass of a pollutant discharged during the calendar day or, in the case of a pollutant limited in terms other than mass pursuant to 327 IAC 5-2-11(e), the average concentration or other measurement of the pollutant specified over the calendar day or any twenty-four-hour period that reasonably represents the calendar day for the purposes of sampling.
- c. "Daily Maximum" means the maximum allowable daily discharge for any calendar day.
- d. A "24-hour composite sample" means a sample consisting of at least three (3) individual flow-proportioned samples of wastewater, taken by the grab sample method or by an automatic sampler, which are taken at approximately equally spaced time intervals for the duration of the discharge within a 24-hour period and which are combined prior to analysis. A flow-proportioned composite sample may be obtained by following the procedure as follows:
  - (1) recording the discharge flow rate at the time each individual sample is taken,
  - (2) adding together the discharge flow rates recorded from each individual sampling time to formulate the "total flow" value,
  - (3) the discharge flow rate of each individual sampling time is divided by the total flow value to determine its percentage of the total flow value,
  - (4) then multiply the volume of the total composite sample by each individual sample's percentage to determine the volume of that individual sample which will be included in the total composite sample.
- e. "Concentration" means the weight of any given material present in a unit volume of liquid. Unless otherwise indicated in this permit, concentration values shall be expressed in milligrams per liter (mg/l).
- f. The "Regional Administrator" is defined as the Region 5 Administrator, U.S. EPA, located at 77 West Jackson Boulevard, Chicago, IL 60604.



- g. The "Commissioner" is defined as the Commissioner of the Indiana Department of Environmental Management, which is located at the following address: 100 North Senate Avenue, Indianapolis, IN 46204.
- h. "Limit of Detection" or "LOD" means the minimum concentration of a substance that can be measured and reported with ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) for a particular analytical method and sample matrix.
- i. "Limit of Quantitation" or "LOQ" means a measurement of the concentration of a contaminant obtained by using a specified laboratory procedure calibrated at a specified concentration above the method detection level. It is considered the lowest concentration at which a particular contaminant can be quantitatively measured using a specified laboratory procedure for monitoring of the contaminant. This term is also sometimes called limit of quantification or quantification level.
- j. "Method Detection Level" or "MDL" means the minimum concentration of an analyte (substance) that can be measured and reported with a ninety-nine percent (99%) confidence that the analyte concentration is greater than zero (0) as determined by procedure set forth in 40 CFR 136, Appendix B. The method detection level or MDL is equivalent to the LOD.
- k. "Grab Sample" means a sample which is taken from a wastestream on a one-time basis without consideration of the flow rate of the wastestream and without considerations of time.

4. Test Procedures

The analytical and sampling methods used shall conform to the version of 40 CFR 136 incorporated by reference in 327 IAC 5. Different but equivalent methods are allowable if they receive the prior written approval of the Commissioner and the U.S. Environmental Protection Agency. When more than one test procedure is approved for the purposes of the NPDES program under 40 CFR 136 for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive as defined at 40 CFR 122.21(e)(3) and 122.44(i)(1)(iv).

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall maintain records of all monitoring information and monitoring activities, including:

- a. The date, exact place and time of sampling or measurement(s);
- b. The person(s) who performed the sampling or measurement(s);
- c. The date(s) analyses were performed;
- d. The person(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of such measurements and analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of this monitoring shall be included in the calculation and reporting of the values required in the monthly Discharge Monitoring Report (DMR) and Monthly Monitoring Report (MMR). Such increased frequency shall also be indicated. Other monitoring data not specifically required in this permit (such as internal process or internal waste stream data) which is collected by or for the permittee need not be submitted unless requested by the Commissioner.

7. Records Retention

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recording from continuous monitoring instrumentation, shall be retained for a minimum of three (3) years. In cases where the original records are kept at another location, a copy of all such records shall be kept at the permitted facility. The three years shall be extended:

- a. automatically during the course of any unresolved litigation regarding the discharge of pollutants by the permittee or regarding promulgated effluent guidelines applicable to the permittee; or
- b. as requested by the Regional Administrator or the Indiana Department of Environmental Management.

D. STORMWATER MONITORING AND NON-NUMERIC EFFLUENT LIMITS

The permittee shall implement the non-numeric permit conditions in this Section of the permit for the entire site as it relates to stormwater associated with industrial activity regardless which outfall the stormwater is discharged from.

1. Control Measures and Effluent Limits

In the technology-based limits included in Part D.2-4., the term “minimize” means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.

2. Control Measures

Select, design, install, and implement control measures (including best management practices) to address the selection and design considerations in Part D.3 to meet the non-numeric effluent limits in Part D.4. The selection, design, installation, and implementation of these control measures must be in accordance with good engineering practices and manufacturer’s specifications. Any deviation from the manufacturer’s specifications shall be documented. If the control measures are not achieving their intended effect in minimizing pollutant discharges, the control measures must be modified as expeditiously as practicable. Regulated stormwater discharges from the facility include stormwater run-on that commingles with stormwater discharges associated with industrial activity at the facility.

3. Control Measure Selection and Design Considerations

When selecting and designing control measures consider the following:

- a. preventing stormwater from coming into contact with polluting materials is generally more effective, and cost-effective, than trying to remove pollutants from stormwater;
- b. use of control measures in combination is more effective than use of control measures in isolation for minimizing pollutants in stormwater discharge;
- c. assessing the type and quantity of pollutants, including their potential to impact receiving water quality, is critical to designing effective control measures that will achieve the limits in this permit;
- d. minimizing impervious areas at your facility and infiltrating runoff onsite (including bioretention cells, green roofs, and pervious pavement, among other approaches), can reduce runoff and improve groundwater recharge and stream base flows in local streams, although care must be taken to avoid groundwater contamination;

- e. flow can be attenuated by use of open vegetated swales and natural depressions;
- f. conservation and/or restoration of riparian buffers will help protect streams from stormwater runoff and improve water quality; and
- g. use of treatment interceptors (e.g. swirl separators and sand filters) may be appropriate in some instances to minimize the discharge of pollutants.

4. Technology-Based Effluent Limits (BPT/BAT/BCT): Non-Numeric Effluent Limits:

a. Minimize Exposure

Minimize the exposure of raw, final, or waste materials to rain, snow, snowmelt, and runoff. To the extent technologically available and economically practicable and achievable, either locate industrial materials and activities inside or protect them with storm resistant coverings in order to minimize exposure to rain, snow, snowmelt, and runoff (although significant enlargement of impervious surface area is not recommended). In minimizing exposure, pay particular attention to the following areas:

Loading and unloading areas: locate in roofed or covered areas where feasible; use grading, berming, or curbing around the loading area to divert run-on; locate the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems.

Material storage areas: locate them indoors or in roofed or covered areas where feasible; install berms/dikes around these areas; use dry cleanup methods.

Note: Industrial materials do not need to be enclosed or covered if stormwater runoff from affected areas will not be discharged to receiving waters.

b. Good Housekeeping

Keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals, keeping materials orderly and labeled, and stowing materials in appropriate containers.

As part of the developed good housekeeping program, include a cleaning and maintenance program for all impervious areas of the

facility where particulate matter, dust, or debris may accumulate, especially areas where material loading and unloading, storage, handling, and processing occur; and where practicable, the paving of areas where vehicle traffic or material storage occur but where vegetative or other stabilization methods are not practicable (institute a sweeping program in these areas too). For unstabilized areas where sweeping is not practicable, consider using stormwater management devices such as sediment traps, vegetative buffer strips, filter fabric fence, sediment filtering boom, gravel outlet protection, or other equivalent measures that effectively trap or remove sediment.

c. Maintenance

Maintain all control measures which are used to achieve the effluent limits required by this permit in effective operating condition. Nonstructural control measures must also be diligently maintained (e.g., spill response supplies available, personnel appropriately trained). If control measures need to be replaced or repaired, make the necessary repairs or modifications as expeditiously as practicable.

d. Spill Prevention and Response Procedures

You must minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. At a minimum, you must implement all of the following:

- (1) Procedures for plainly labeling containers (e.g., "Used Oil", "Spent Solvents", "Fertilizers and Pesticides", etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;
- (2) Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;
- (3) Procedures for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases. Employees who may cause, detect or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of your stormwater pollution prevention team;
- (4) Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies. State

or local requirements may necessitate reporting spills or discharges to local emergency response, public health, or drinking water supply agencies. Contact information must be in locations that are readily accessible and available;

(5) Procedures for documenting where potential spills and leaks could occur that could contribute pollutants to stormwater discharges, and the corresponding outfalls that would be affected by such spills and leaks; and

(6) A procedure for documenting all significant spills and leaks of oil or toxic or hazardous pollutants that actually occurred at exposed areas, or that drained to a stormwater conveyance.

e. Erosion and Sediment Controls

Through the use of structural and/or non-structural control measures stabilize, and contain runoff from, exposed areas to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants. Among other actions to meet this limit, place flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion and/or settle out pollutants. In selecting, designing, installing, and implementing appropriate control measures, you are encouraged to check out information from both the State and EPA websites. The following two websites are given as information sources:

<https://www.in.gov/idem/stormwater/resources/indiana-storm-water-quality-manual/>

and

<https://www.epa.gov/npdes/stormwater-discharges-industrial-activities>

f. Management of Runoff

Divert, infiltrate, reuse, contain or otherwise reduce stormwater runoff, to minimize pollutants in the discharge.

g. Salt Storage Piles or Piles Containing Salt

Enclose or cover storage piles of salt, or piles containing salt, used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces. You must implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. Piles do not need to be enclosed or covered if stormwater runoff from the piles is not discharged.

h. Waste, Garbage, and Floatable Debris

Ensure that waste, garbage, and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged.

i. Employee Training

Train all employees who work in areas where industrial material or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your Pollution Prevention Team. Training must cover the specific control measures used to achieve the effluent limits in this part, and monitoring, inspection, planning, reporting, and documentation requirements in other parts of this permit.

j. Non-Stormwater Discharges

You must determine if any non-stormwater discharges not authorized by an NPDES permit exist. Any non-stormwater discharges discovered must either be eliminated or modified into this permit. The following non-storm water discharges are authorized and must be documented in the Stormwater Pollution Prevention Plan:

- Discharges from fire-fighting activities;
- Fire Hydrant flushings;
- Potable water, including water line flushings;
- Uncontaminated condensate from air conditioners, coolers, and other compressors and from the outside storage of refrigerated gases or liquids;
- Irrigation drainage;
- Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with the approved labeling;
- Pavement wash water where no detergents are used and no spills or leaks of toxic or hazardous material have occurred (unless all spilled material has been removed);
- Routine external building washdown that does not use detergents;
- Uncontaminated groundwater or spring water;
- Foundation or footing drains where flows are not contaminated with process materials;
- Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional

discharges from cooling towers (e.g., "piped cooling tower blowdown or drains);  
Vehicle wash- waters where uncontaminated water without detergents or solvents is utilized; and  
Runoff from the use of dust suppressants approved for use by IDEM.

k. Dust Generation and Vehicle Tracking of Industrial Materials

You must minimize generation of dust and off-site tracking of raw, final, or waste materials.

l. Fugitive Dust Emission.

Minimize fugitive dust emissions from coal handling areas. To minimize the tracking of coal dust offsite, consider procedures such as installing specially designed tires or washing vehicles in a designated area before they leave the site and controlling the wash water.

m. Delivery Vehicles

Minimize contamination of stormwater runoff from delivery vehicles arriving at the plant site. Consider procedures to inspect delivery vehicles arriving at the plant site and ensure overall integrity of the body or container and procedures to deal with leakage or spillage from vehicles or containers.

n. Fuel Oil Unloading Areas

Minimize contamination of precipitation or surface runoff from fuel oil unloading areas. Consider using containment curbs in unloading areas, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and using spill and overflow protection devices (e.g., drip pans, drip diapers, or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors).

o. Chemical Loading and Unloading

Minimize contamination of precipitation or surface runoff from chemical loading and unloading areas. Consider using containment curbs at chemical loading and unloading areas to contain spills, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills



are immediately contained and cleaned up, and loading and unloading in covered areas and storing chemicals indoors.

p. Miscellaneous Loading and Unloading Areas

Minimize contamination of precipitation or surface runoff from loading and unloading areas. Consider covering the loading area; grading, berming, or curbing around the loading area to divert run-on; locating the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems; or equivalent procedures.

q. Liquid Storage Tanks

Minimize contamination of surface runoff from aboveground liquid storage tanks. Consider protective guards around tanks, containment curbs, spill and overflow protection, dry cleanup methods, or equivalent measures.

r. Large Bulk Fuel Storage Tanks

Minimize contamination of surface runoff from large bulk fuel storage tanks. Consider containment berms (or their equivalent). You must also comply with applicable State and Federal laws, including Spill Prevention, Control and Countermeasure (SPCC) Plan requirements.

s. Spill Reduction Measures

Minimize the potential for an oil or chemical spill, or reference the appropriate part of your SPCC plan. Visually inspect as part of your routine facility inspection the structural integrity of all aboveground tanks, pipelines, pumps, and related equipment that may be exposed to stormwater, and make any necessary repairs immediately.

t. Oil-Bearing Equipment in Switchyards

Minimize contamination of surface runoff from oil-bearing equipment in switchyard areas. Consider using level grades and gravel surfaces to retard flows and limit the spread of spills, or collecting runoff in perimeter ditches.

u. Residue-Hauling Vehicles

Inspect all residue-hauling vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the container body.

Repair vehicles without load covering or adequate gate sealing, or with leaking containers or beds.

v. Ash Loading Areas

Reduce or control the tracking of ash and residue from ash loading areas. Clear the ash building floor and immediately adjacent roadways of spillage, debris, and excess water before departure of each loaded vehicle.

w. Areas Adjacent to Disposal Ponds or Landfills

Minimize contamination of surface runoff from areas adjacent to disposal ponds or landfills. Reduce ash residue that may be tracked on to access roads traveled by residue handling vehicles, and reduce ash residue on exit roads leading into and out of residue handling areas.

x. Landfills, Scrap yards, Surface Impoundments, Open Dumps, General Refuse Sites

Minimize the potential for contamination of runoff from these areas.

5. Annual Review

At least once every twelve (12) months, you must review the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limitations in this permit. You must document the results of your review in a report that shall be retained within the SWPPP. You must also submit the report to the Industrial NPDES Permit Section, as well as the Compliance Branch, on an annual basis. The report may be submitted by email to the Industrial NPDES Permit Section at [OWQWWPER@idem.in.gov](mailto:OWQWWPER@idem.in.gov) and to the Compliance Branch at [wwReports@idem.in.gov](mailto:wwReports@idem.in.gov). The email subject line should include the NPDES Permit # and the type of report being submitted (Annual Stormwater Report). The permittee's first annual review report will be due twelve (12) months from the effective date of the permit. All subsequent annual review reports will be due no later than the anniversary of the effective date of the permit.

6. Corrective Actions – Conditions Requiring Review

- a. If any of the following conditions occur, you must review and revise the selection, design, installation, and implementation of your control measures to ensure that the condition is eliminated and will not be repeated:

- (1) an unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this NPDES permit) occurs at this facility;
  - (2) it is determined that your control measures are not stringent enough for the discharge to meet applicable water quality standards;
  - (3) it is determined in your routine facility inspection, an inspection by EPA or IDEM, comprehensive site evaluation, or the Annual Review required in Part D.5 that modifications to the control measures are necessary to meet the effluent limits in this permit or that your control measures are not being properly operated and maintained; or
  - (4) Upon written notice by the Commissioner that the control measures prove to be ineffective in controlling pollutants in stormwater discharges exposed to industrial activity.
- b. If construction or a change in design, operation, or maintenance at your facility significantly changes the nature of pollutants discharged in stormwater from your facility, or significantly increases the quantity of pollutants discharged, you must review and revise the selection, design, installation, and implementation of your control measures to determine if modifications are necessary to meet the effluent limits in this permit.

7. Corrective Action Deadlines

You must document your discovery of any of the conditions listed in Part I.D.6 within thirty (30) days of making such discovery. Subsequently, within one-hundred and twenty (120) days of such discovery, you must document any corrective action(s) to be taken to eliminate or further investigate the deficiency or if no corrective action is needed, the basis for that determination. Specific documentation required within 30 and 120 days is detailed below. If you determine that changes to your control measures are necessary following your review, any modifications to your control measures must be made before the next storm event if possible, or as soon as practicable following that storm event. These time intervals are not grace periods, but schedules considered reasonable for the documenting of your findings and for making repairs and improvements. They are included in this permit to ensure that the conditions prompting the need for these repairs and improvements are not allowed to persist indefinitely.

8. Corrective Action Report

- a. Within 30 days of a discovery of any condition listed in Part I.D.6, you must document the following information:
  - (1) Brief description of the condition triggering corrective action;
  - (2) Date condition identified; and
  - (3) How deficiency identified.
- b. Within 120 days of discovery of any condition listed in Part I.D.6, you must document the following information:
  - (1) Summary of corrective action taken or to be taken (or, for triggering events identified in Part I.D.6.b.(1), where you determine that corrective action is not necessary, the basis for this determination)
  - (2) Notice of whether SWPPP modifications are required as a result of this discovery or corrective action;
  - (3) Date corrective action initiated; and
  - (4) Date corrective action completed or expected to be completed.

9. Inspections

The inspections in this Part must be conducted at this facility when the facility is operating. Any corrective action required as a result of an inspection or evaluation conducted under Part I.D.9. must be performed consistent with Part I.D.6 of this permit.

a. Monthly Site Compliance Inspection

The following areas shall be inspected monthly: coal handling areas, loading or unloading areas, switchyards, fueling areas, bulk storage areas, ash handling areas, areas adjacent to disposal ponds and landfills, maintenance areas, liquid storage tanks, and long term and short term material storage areas.

Areas contributing to a stormwater discharge associated with industrial activity shall be visually inspected for evidence of, or the potential for, pollutants entering the drainage system. Measures to reduce pollutant loadings shall be evaluated to determine whether they are adequate and properly implemented in accordance with the

terms of the permit or whether additional control measures are needed. Structural stormwater management measures, sediment and erosion control measures, and other structural pollution prevention measures identified in the plan shall be observed to ensure that they are operating correctly. A visual inspection of equipment needed to implement the plan, such as spill response equipment, shall be made.

b. Quarterly Routine Facility Inspections

At least once during the calendar year, a routine facility inspection must be conducted while a discharge is occurring.

1. Routine Facility Inspection - At a minimum, quarterly routine inspections of the stormwater management measures and stormwater run-off conveyances. The routine inspections must be performed by qualified personnel with at least one member of your stormwater pollution prevention team.
2. Routine Facility Inspection Documentation – You must document the findings of each routine facility inspection performed and maintain this documentation within your SWPPP or have the on-site record keeping location referenced in the SWPPP. At a minimum, your documentation must include:
  - (A) The inspection date and time;
  - (B) The name(s) and signature(s) of the inspectors;
  - (C) Weather information and a description of any discharges occurring at the time of the inspection;
  - (D) Any previously unidentified discharges of pollutants from the site;
  - (E) Any control measures needing maintenance or repairs;
  - (F) Any failed control measures that need replacement;
  - (G) Any incidents of noncompliance observed; and
  - (H) Any additional control measures needed to comply with the permit requirements.

c. Annual Comprehensive Site Inspections

Comprehensive Site Inspection - Qualified personnel and at least one member of your Pollution Prevention Team shall conduct a

comprehensive site inspection, at least once per calendar year, to confirm the accuracy of the description of potential pollution sources contained in the plan, determine the effectiveness of the plan, and assess compliance with the permit. Each Comprehensive Site Inspection shall include:

1. Each Comprehensive Site Inspection shall address all potential sources of pollutants, including (if applicable) air pollution control equipment (e.g., baghouses, electrostatic precipitator, scrubbers, and cyclones), for any signs of degradation (e.g., leaks, corrosion, or improper operation) that could limit their efficiency and lead to excessive emissions. Considering monitoring air flow at inlets and outlets (or use equivalent measures) to check for leaks (e.g., particulate deposition) or blockage in ducts. Also inspect all process and material handling equipment (e.g., conveyors, cranes, and vehicles) for leaks, drips, or the potential loss of material; and material storage areas (e.g., piles, bins, or hoppers for storing coke, coal, scrap, or slag, as well as chemicals stored in tanks and drums) for signs of material loss due to wind or stormwater runoff.
2. Based on the results of the inspection, the description of potential pollutant sources identified in the SWPPP in accordance with Part I.E.2.b of this permit and pollution prevention measures and controls identified in the SWPPP in accordance with Part I.D.4. of this permit shall be revised as appropriate within the timeframes contained in Part I.D.7 of this permit.
3. A report summarizing the scope of the inspection, personnel conducting the inspection, the date(s) of the inspection, major observations relating to the implementation of the stormwater pollution prevention plan, and actions taken in accordance with the above paragraph must be documented and either contained in, or have on-site record keeping location referenced in, the SWPPP at least 3 years after the date of the inspection. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the stormwater pollution prevention plan and this permit. The report shall be signed in accordance with the signatory requirements of Part II.C.6 of this permit.

4. Where the inspection schedules overlap under this section, the Comprehensive Site Inspection may be conducted in place of one such inspection.

E. STORMWATER POLLUTION PREVENTION PLAN

1. Development of Plan

Within 12 months from the effective date of this permit, the permittee is required to revise and update the current Stormwater Pollution Prevention Plan (SWPPP) for the permitted facility. The plan shall at a minimum include the following:

- a. Identify potential sources of pollution, which may reasonably be expected to affect the quality of stormwater discharges associated with industrial activity from the facility. Stormwater associated with industrial activity (defined in 40 CFR 122.26(b)(14)) includes, but is not limited to, the discharge from any conveyance which is used for collecting and conveying stormwater and which is directly related to manufacturing, processing or materials storage areas at an industrial plant;
- b. Describe practices and measure to be used in reducing the potential for pollutants to be exposed to stormwater; and
- c. Assure compliance with the terms and conditions of this permit.

2. Contents

The plan shall include, at a minimum, the following items:

- a. Pollution Prevention Team -The plan shall list, by position title, the member or members of the facility organization as members of a Stormwater Pollution Prevention Team who are responsible for developing the stormwater pollution prevention plan (SWPPP) and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each stormwater pollution prevention team member. Each member of the stormwater pollution prevention team must have ready access to either an electronic or paper copy of applicable portions of this permit and your SWPPP.
- b. Description of Potential Pollutant Sources – The plan shall provide a description of areas at the site exposed to industrial activity and have a reasonable potential for stormwater to be exposed to pollutants. The plan shall identify all activities and significant materials (defined in

40 CFR 122.26(b)), which may potentially be significant pollutant sources. As a minimum, the plan shall contain the following:

- (1) A soils map indicating the types of soils found on the facility property and showing the boundaries of the facility property.
- (2) A graphical representation, such as an aerial photograph or site layout maps, drawn to an appropriate scale, which contains a legend and compass coordinates, indicating, at a minimum, the following:
  - (A) All on-site stormwater drainage and discharge conveyances, which may include pipes, ditches, swales, and erosion channels, related to a stormwater discharge.
  - (B) Known adjacent property drainage and discharge conveyances, if directly associated with run-off from the facility.
  - (C) All on-site and known adjacent property water bodies, including wetlands and springs.
  - (D) An outline of the drainage area for each outfall.
  - (E) An outline of the facility property, indicating directional flows, via arrows, of surface drainage patterns.
  - (F) An outline of impervious surfaces, which includes pavement and buildings, and an estimate of the impervious and pervious surface square footage for each drainage area placed in a map legend.
  - (G) On-site injection wells, as applicable.
  - (H) On-site wells used as potable water sources, as applicable.
  - (I) All existing major structural control measures to reduce pollutants in stormwater run-off.
  - (J) All existing and historical underground or aboveground storage tank locations, as applicable.
  - (K) All permanently designated plowed or dumped snow storage locations.



- (L) All loading and unloading areas for solid and liquid bulk materials.
  - (M) All existing and historical outdoor storage areas for raw materials, intermediary products, final products, and waste materials. Include materials handled at the site that potentially may be exposed to precipitation or runoff, areas where deposition of particulate matter from process air emissions or losses during material-handling activities.
  - (N) All existing or historical outdoor storage areas for fuels, processing equipment, and other containerized materials, for example, in drums and totes.
  - (O) Outdoor processing areas.
  - (P) Dust or particulate generating process areas.
  - (Q) Outdoor assigned waste storage or disposal areas.
  - (R) Pesticide or herbicide application areas.
  - (S) Vehicular access roads.
  - (T) Identify any storage or disposal of wastes such as spent solvents and baths, sand, slag and dross; liquid storage tanks and drums; processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw material such as coal, coke, scrap, sand, fluxes, refractories, or metal in any form. In addition, indicate where an accumulation of significant amounts of particulate matter could occur from such sources as furnace or oven emissions, losses from coal and coke handling operation, etc., and could result in a discharge of pollutants.
  - (U) The mapping of historical locations is only required if the historical locations have a reasonable potential for stormwater exposure to historical pollutants.
- (3) An area site map that indicates:
- (A) The topographic relief or similar elevations to determine surface drainage patterns;

- (B) The facility boundaries;
- (C) All receiving waters;
- (D) All known drinking water wells; and

Includes at a minimum, the features in clauses (A), (C), and (D) within a one-fourth (1/4) mile radius beyond the property boundaries of the facility. This map must be to scale and include a legend and compass coordinates.

- (4) A narrative description of areas that generate stormwater discharges exposed to industrial activity including descriptions for any existing or historical areas listed in subdivision 2.b.(2)(J) through (T) of this Part, and any other areas thought to generate stormwater discharges exposed to industrial activity. The narrative descriptions for each identified area must include the following:
  - (A) Type and typical quantity of materials present in the area.
  - (B) Methods of storage, including presence of any secondary containment measures.
  - (C) Any remedial actions undertaken in the area to eliminate pollutant sources or exposure of stormwater to those sources. If a corrective action plan was developed, the type of remedial action and plan date shall be referenced.
  - (D) Any significant release or spill history dating back a period of three (3) years from the effective date of this permit, in the identified area, for materials spilled outside of secondary containment structures and impervious surfaces in excess of their reportable quantity, including the following:
    - i. The date and type of material released or spilled.
    - ii. The estimated volume released or spilled.
    - iii. A description of the remedial actions undertaken, including disposal or treatment.

Depending on the adequacy or completeness of the remedial actions, the spill history shall be used to determine additional pollutant sources that may be exposed to stormwater. In subsequent permit terms, the history shall date back for a period of five (5) years from the date of the permit renewal application.

(E) Where the chemicals or materials have the potential to be exposed to stormwater discharges, the descriptions for each identified area must include a risk identification analysis of chemicals or materials stored or used within the area. The analysis must include the following:

- i. Toxicity data of chemicals or materials used within the area, referencing appropriate material safety data sheet information locations.
- ii. The frequency and typical quantity of listed chemicals or materials to be stored within the area.
- iii. Potential ways in which stormwater discharges may be exposed to listed chemicals and materials.
- iv. The likelihood of the listed chemicals and materials to come into contact with water.

(5) A narrative description of existing and planned management practices and measures to improve the quality of stormwater run-off entering a water of the state. Descriptions must be created for existing or historical areas listed in subdivision 2.b.(2)(J) through (T) and any other areas thought to generate stormwater discharges exposed to industrial activity. The description must include the following:

- (A) Any existing or planned structural and nonstructural control practices and measures.
- (B) Any treatment the stormwater receives prior to leaving the facility property or entering a water of the state.
- (C) The ultimate disposal of any solid or fluid wastes collected in structural control measures other than by discharge.

- (D) Describe areas that due to topography, activities, or other factors have a high potential for significant soil erosion.
  - (E) Document the location of any storage piles containing salt used for deicing.
  - (F) Information or other documentation required under Part I.E.2(d) of this permit.
- (6) The results of stormwater monitoring. The monitoring data must include completed field data sheets, chain-of-custody forms, and laboratory results. If the monitoring data are not placed into the facility's SWPPP, the on-site location for storage of the information must be reference in the SWPPP.
- (7) Drainage Area Site Map. Document in your SWPPP the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: storage tanks, scrap yards, and general refuse areas; short- and long-term storage of general materials (including but not limited to supplies, construction materials, paint equipment, oils, fuels, used and unused solvents, cleaning materials, paint, water treatment chemicals, fertilizer, and pesticides); landfills and construction sites; and stock pile areas (e.g., coal or limestone piles).
- (8) Documentation of Good Housekeeping Measures. You must document in your SWPPP the good housekeeping measures implemented to meet the effluent limits in Part I.D.4 of this NPDES permit.
- c. Non-Stormwater Discharges – You must document that you have evaluated for the presence of non-stormwater discharges not authorized by an NPDES permit. Any non-stormwater discharges have either been eliminated or incorporated into this permit. Documentation of non-stormwater discharges shall include:
- (1) A written non-stormwater assessment, including the following:
    - (A) A certification letter stating that stormwater discharges entering a water of the state have been evaluated for the presence of illicit discharges and non-stormwater contributions.

- (B) Detergent or solvent-based washing of equipment or vehicles that would allow washwater additives to enter any stormwater only drainage system shall not be allowed at this facility unless appropriately permitted under this NPDES permit.
  - (C) All interior maintenance area floor drains with the potential for maintenance fluids or other materials to enter stormwater only storm sewers must be either sealed, connected to a sanitary sewer with prior authorization, or appropriately permitted under this NPDES permit. The sealing, sanitary sewer connecting, or permitting of drains under this item must be documented in the written non-stormwater assessment program.
  - (D) The certification shall include a description of the method used, the date of any testing, and the on-site drainage points that were directly observed during the test.
- d. General Requirements – The SWPPP must meet the following general requirements:
- (1) The plan shall be certified by a qualified professional. The term qualified professional means an individual who is trained and experienced in water treatment techniques and related fields as may be demonstrated by state registration, professional certification, or completion of course work that enable the individual to make sound, professional judgments regarding stormwater control/treatment and monitoring, pollutant fate and transport, and drainage planning.
  - (2) The plan shall be retained at the facility and be available for review by a representative of the Commissioner upon request. IDEM may provide access to portions of your SWPPP to the public.
  - (3) The plan must be revised and updated as required. Revised and updated versions of the plan must be implemented on or before three hundred sixty-five (365) days from the effective date of this permit. The Commissioner may grant an extension of this time frame based on a request by the person showing reasonable cause.
  - (4) If the permittee has other written plans, required under applicable federal or state law, such as operation and

maintenance, spill prevention control and countermeasures (SPCC), or risk contingency plans, which fulfill certain requirements of an SWPPP, these plans may be referenced, at the permittee's discretion, in the appropriate sections of the SWPPP to meet those section requirements.

- (5) The permittee may combine the requirements of the SWPPP with another written plan if:
  - (A) The plan is retained at the facility and available for review;
  - (B) All the requirements of the SWPPP are contained within the plan; and
  - (C) A separate, labeled section is utilized in the plan for the SWPPP requirements.

#### F. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

To adequately assess the effects of the effluent on aquatic life, the permittee is required by this section of the permit to conduct chronic whole effluent toxicity (WET) testing. Part I.F.1. of this permit describes the testing procedures and Part I.F.2. describes the toxicity reduction evaluation (TRE) which is only required if the effluent demonstrates toxicity in two (2) consecutive toxicity tests as described in Part I.F.1.g.

##### 1. Whole Effluent Toxicity (WET) Tests

The permittee must conduct the series of aquatic toxicity tests specified in Part I.F.1.d. using freshwater aquatic organisms as the test species to monitor the acute and chronic toxicity of the effluent discharged from Outfall 001.

If toxicity is demonstrated in two (2) consecutive toxicity tests, as described in Part I.F.1.g., with any test species during the term of the permit, the permittee is required to conduct a TRE under Part I.F.2.

##### a. Toxicity Test Procedures and Data Analysis

- (1) All test organisms, test procedures and quality assurance criteria used must be in accordance with the Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, Fourth Edition, Section 11, Fathead Minnow (*Pimephales promelas*) Larval Survival and Growth Test Method 1000.0, and Section 13,

Daphnid (*Ceriodaphnia dubia*) Survival and Reproduction Test Method 1002.0, EPA 821-R-02-013, October 2002 (hereinafter "Chronic Toxicity Test Method"), or most recent update that conforms to the version of 40 CFR 136 incorporated by reference in 327 IAC 5. [References to specific portions of the Chronic Toxicity Test Method contained in this Part I.F. are provided for informational purposes. If the Chronic Toxicity Test Method is updated, the corresponding provisions of that updated method would be applicable.]

- (2) Any circumstances not covered by the above methods, or that require deviation from the specified methods must first be approved by the IDEM Office of Water Quality, Industrial NPDES Permits Section.
- (3) The determination of acute and chronic endpoints of toxicity (LC<sub>50</sub>, NOEC and IC<sub>25</sub> values) must be made in accordance with the procedures in Section 9, "Chronic Toxicity Test Endpoints and Data Analysis" and the Data Analysis procedures as outlined in Section 11 for Fathead Minnow (Test Method 1000.0; see flowcharts in Figures 5, 6 and 9) and Section 13 for *Ceriodaphnia dubia* (Test Method 1002.0; see flowcharts in Figures 4 and 6) of the Chronic Toxicity Test Method. The IC<sub>25</sub> value together with 95% confidence intervals calculated by the Linear Interpolation and Bootstrap Methods in Appendix M of the Chronic Toxicity Test Method must be determined in addition to the NOEC value.

b. Types of Whole Effluent Toxicity Tests

- (1) Chronic toxicity tests include a 3-brood (7-day) definitive static-renewal daphnid (*Ceriodaphnia dubia*) survival and reproduction toxicity test and a 7-day definitive static-renewal Fathead Minnow (*Pimephales promelas*) larval survival and growth toxicity test.
- (2) All tests must be conducted using 24-hour composite samples of final effluent. For each test, three effluent samples are to be collected on alternate days (e.g., collected on days one, three and five). The first effluent sample will be used for test initiation and for test solution renewal on day 2. The second effluent sample will be used for test solution renewal on days 3 and 4. The third effluent sample will be used for test solution renewal on days 5, 6 and 7. If shipping problems are encountered with the second effluent sample after a test has been initiated, the test must be repeated. However, if shipping problems are

encountered with the third effluent sample, the second effluent sample may continue to be used for test renewal on day 5. The third effluent sample will then be used for test solution renewal on days 6 and 7.

- (3) The whole effluent dilution series for the definitive test must include a control and at least five effluent concentrations with a minimum dilution factor of 0.5. The effluent concentrations selected must include and, if practicable, bracket the effluent concentrations associated with the determinations of acute and chronic toxicity provided in Part I.F.1.f. Guidance on selecting effluent test concentrations is included in Section 8.10 of the Chronic Toxicity Test Method. The use of an alternate procedure for selecting test concentrations must first be approved by the IDEM Office of Water Quality, Industrial NPDES Permits Section.
- (4) If, in any control, more than 10% of the test organisms die in the first 48 hours with a daphnid species or the first 96 hours with Fathead Minnow, or more than 20% of the test organisms die in 7 days, that test is considered invalid and the toxicity test must be repeated. In addition, if in the *Ceriodaphnia dubia* survival and reproduction test, the average number of young produced per surviving female in the control group is less than 15, or if 60% of surviving control females have less than three broods; and in the Fathead Minnow (*Pimephales promelas*) survival and growth test, if the mean dry weight of surviving fish in the control group is less than 0.25 mg, that test is considered invalid and must also be repeated. All other test conditions and test acceptability criteria for the Fathead Minnow (*Pimephales promelas*) and *Ceriodaphnia dubia* chronic toxicity tests must be in accordance with the test requirements in Section 11 (Test Method 1000.0), Table 1 and Section 13 (Test Method 1002.0), Table 3, respectively, of the Chronic Toxicity Test Method.

c. Effluent Sample Collection and Chemical Analysis

- (1) Whole effluent samples taken for the purposes of toxicity testing must be 24-hour composite samples collected at a point that is representative of the final effluent, but prior to discharge. Effluent sampling for the toxicity testing may be coordinated with other permit sampling requirements as appropriate to avoid duplication. First use of the whole effluent toxicity testing samples must not exceed 36 hours after termination of the 24-hour composite sample collection and must not be used for longer than 72 hours after first use. For discharges of less than



24 hours in duration, composite samples must be collected for the duration of the discharge within a 24-hour period (see "24-hour composite sample" definition in Part I.C.3. of this permit).

- (2) Chemical analysis must coincide with, and if test methods allow, be conducted on each effluent sample taken for toxicity testing, including each sample taken for the repeat testing as outlined in Part I.F.1.f.(3). The chemical analysis detailed in Part I.A.1 for TSS and Mercury must be conducted for the effluent sample in accordance with Part I.C.4. of this permit. The results from these chemical analyses must be included with the full whole effluent toxicity (WET) test laboratory report submitted pursuant to Part I.F.1.e.(3).

d. Toxicity Testing Species, Frequency and Duration

Within 90 days of the effective date of the permit, the permittee must initiate chronic toxicity testing for *Ceriodaphnia dubia* and Fathead Minnow (*Pimephales promelas*). The testing, including any repeat tests required under Part I.F.f.(3), must be conducted monthly for an initial period of three (3) consecutive months.

If no toxicity is demonstrated in two (2) consecutive tests as described in Part I.F.1.g., with either species during these three (3) months of testing, the permittee must then conduct chronic toxicity testing for *Ceriodaphnia dubia* and Fathead Minnow (*Pimephales promelas*) once every six (6) months, as calculated from six (6) months after the effective date of the permit, for the duration of the permit.

At any time following the initial period of testing, the permittee may request a reduction in the number of species tested to only include the species demonstrated to be most sensitive to the toxicity in the effluent. The permittee must submit this request to the IDEM Office of Water Quality, Compliance Data Section under Part I.F.1.e. IDEM will then make a determination on species sensitivity to effluent toxicity and notify the permittee of its decision. If a reduction in species is approved, the Compliance Data Section will modify the toxicity testing requirements to reduce the number of species.

If a TRE is initiated during the term of the permit, after receiving notification under Part I.F.1.e, the Compliance Data Section will suspend the toxicity testing requirements above for the term of the TRE schedule described in Part I.F.2. After successful completion of the TRE, the toxicity tests established under Part I.F.2.c.(4) must be conducted once every six months, as calculated from the first day of

the first month following successful completion of the post-TRE toxicity tests (see Part I.F.2.c.(4)), for the remainder of the permit term.

e. Reporting

- (1) Requests to reduce the number of species tested to the one most sensitive to the toxicity in the effluent under Part I.F.1.d., or notifications of the failure of two (2) consecutive toxicity tests and the intent to begin the implementation of a toxicity reduction evaluation (TRE) under Part I.F.1.g. must be submitted in writing to the IDEM Office of Water Quality, Compliance Data Section.
- (2) Results of all toxicity tests, including invalid tests, must be reported to IDEM according to the general format and content recommended in the Chronic Toxicity Test Method, Section 10, "Report Preparation and Test Review". However, only the results of valid toxicity tests are to be reported on the discharge monitoring report (DMR). For the initial three (3) months of testing, the results of the toxicity tests and laboratory report are due by the 28<sup>th</sup> day of the month following the fourth, fifth and sixth months, as calculated from the effective date of the permit. Thereafter, the results of the toxicity tests and laboratory report are due by the earlier of 60 days after completion of the test or the 28<sup>th</sup> day of the month following the end of the testing period established in Part I.F.1.d.
- (3) The full whole effluent toxicity (WET) test laboratory report must be submitted electronically as an attachment to an e-mail to the IDEM Office of Water Quality, Compliance Data Section at [wwreports@idem.IN.gov](mailto:wwreports@idem.IN.gov). The results must also be submitted via NetDMR.
- (4) For quality control and ongoing laboratory performance, the laboratory report must include results from appropriate standard reference toxicant tests. This will consist of acute (LC<sub>50</sub> values), if available, and chronic (NOEC, LOEC and IC<sub>25</sub> values) endpoints of toxicity obtained from reference toxicant tests conducted within 30 days of the most current effluent toxicity tests and from similarly obtained historical reference toxicant data with mean values and appropriate ranges for each species tested for at least three months to one year. Toxicity test laboratory reports must also include copies of chain-of-custody records and laboratory raw data sheets.

- (5) Statistical procedures used to analyze and interpret toxicity data (e.g., Fisher's Exact Test and Steel's Many-one Rank Test for 7-day survival of test organisms; tests of normality (e.g., Shapiro-Wilk's Test) and homogeneity of variance (e.g., Bartlett's Test); appropriate parametric (e.g., Dunnett's Test) and non-parametric (e.g., Steel's Many-one Rank Test) significance tests and point estimates (IC<sub>25</sub>) of effluent toxicity, etc.; together with graphical presentation of survival, growth and reproduction of test organisms), including critical values, levels of significance and 95% confidence intervals, must be described and included as part of the toxicity test laboratory report.
- (6) For valid toxicity tests, the whole effluent toxicity (WET) test laboratory report must include a summary table of the results for each species tested as shown in the table presented below. This table will provide toxicity test results, reported in acute toxic units (TU<sub>a</sub>) and chronic toxic units (TU<sub>c</sub>), for evaluation under Part I.F.1.f. and reporting on the discharge monitoring report (DMR).

| Test Organism [1]          | Test Type                                                           | Endpoint [2]                  | Units           | Result     | Compliance Limit [6] | Pass/Fail [7] | Reporting                                           |
|----------------------------|---------------------------------------------------------------------|-------------------------------|-----------------|------------|----------------------|---------------|-----------------------------------------------------|
| <i>Ceriodaphnia dubia</i>  | 3-brood (7-day) Definitive Static-Renewal Survival and Reproduction | 48-hr. LC <sub>50</sub>       | %               | Report     |                      |               | Laboratory Report                                   |
|                            |                                                                     |                               | TU <sub>a</sub> | Report     |                      |               |                                                     |
|                            |                                                                     | NOEC Survival                 | %               | Report     |                      |               |                                                     |
|                            |                                                                     |                               | TU <sub>c</sub> | Report     |                      |               |                                                     |
|                            |                                                                     | NOEC Reproduction             | %               | Report     |                      |               |                                                     |
|                            |                                                                     |                               | TU <sub>c</sub> | Report     |                      |               |                                                     |
|                            |                                                                     | IC <sub>25</sub> Reproduction | %               | Report     |                      |               |                                                     |
|                            |                                                                     |                               | TU <sub>c</sub> | Report     |                      |               |                                                     |
| <i>Pimephales promelas</i> | 7-day Definitive Static-Renewal Larval Survival and Growth          | 96-hr. LC <sub>50</sub>       | %               | Report     |                      |               | Laboratory Report                                   |
|                            |                                                                     |                               | TU <sub>a</sub> | Report     |                      |               |                                                     |
|                            |                                                                     | NOEC Survival                 | %               | Report     |                      |               |                                                     |
|                            |                                                                     |                               | TU <sub>c</sub> | Report     |                      |               |                                                     |
|                            |                                                                     | NOEC Growth                   | %               | Report     |                      |               |                                                     |
|                            |                                                                     |                               | TU <sub>c</sub> | Report     |                      |               |                                                     |
|                            |                                                                     | IC <sub>25</sub> Growth       | %               | Report     |                      |               |                                                     |
|                            |                                                                     |                               | TU <sub>c</sub> | Report     |                      |               |                                                     |
|                            |                                                                     | Toxicity (acute) [3]          | TU <sub>a</sub> | Report [5] | 1.0                  | Report        | Laboratory Report and NetDMR (Parameter Code 61427) |
|                            |                                                                     | Toxicity (chronic) [4]        | TU <sub>c</sub> | Report [5] | 3.4                  | Report        | Laboratory Report and NetDMR (Parameter Code 61428) |

[1] For the whole effluent toxicity (WET) test laboratory report, eliminate from the table any species that was not tested.

[2] A separate acute test is not required. The endpoint of acute toxicity must be extrapolated from the chronic toxicity test.

[3] The toxicity (acute) endpoint for *Ceriodaphnia dubia* is the 48-hr. LC<sub>50</sub> result reported in acute toxic units (TU<sub>a</sub>). The toxicity (acute) endpoint for *Pimephales promelas* is the 96-hr. LC<sub>50</sub> result reported in acute toxic units (TU<sub>a</sub>).

[4] The toxicity (chronic) endpoint for *Ceriodaphnia dubia* is the higher of the NOEC Survival, NOEC Reproduction and IC<sub>25</sub> Reproduction values reported in chronic toxic units (TU<sub>c</sub>). The

toxicity (chronic) endpoint for *Pimephales promelas* is the higher of the NOEC Survival, NOEC Growth and IC<sub>25</sub> Growth values reported in chronic toxic units (TU<sub>c</sub>).

[5] Report the values for acute and chronic endpoints of toxicity determined in [3] and [4] for the corresponding species. These values are the ones that need to be reported on the discharge monitoring report (DMR).

[6] An exceedance of any of these values results in a demonstration of toxicity that requires the permittee to take the actions set forth in either Part I.F.1.f. or Part I.F.1.g., as applicable.

[7] If the toxicity result (in TUs) is less than or equal to the compliance limit, report "Pass". If the toxicity result (in TUs) exceeds the compliance limit, report "Fail".

f. Demonstration of Toxicity

- (1) Toxicity (acute) will be demonstrated if the effluent is observed to have exceeded 1.0 TU<sub>a</sub> (acute toxic units) for *Ceriodaphnia dubia* in 48 hours or in 96 hours for *Pimephales promelas*. For this purpose, a separate acute toxicity test is not required. The results for the acute toxicity demonstration must be extrapolated from the chronic toxicity test. For the purpose of selecting test concentrations under Part I.F.1.b.(3), the effluent concentration associated with acute toxicity is 100%.
- (2) Toxicity (chronic) will be demonstrated if the effluent is observed to have exceeded 3.4 TU<sub>c</sub> (chronic toxic units) for *Ceriodaphnia dubia* or *Pimephales promelas* from the chronic toxicity test. For the purpose of selecting test concentrations under Part I.F.1.b.(3), the effluent concentration associated with chronic toxicity is 29.4%.
- (3) If toxicity (acute) or toxicity (chronic) is demonstrated in any of the chronic toxicity tests specified at (1) or (2), above, a repeat chronic toxicity test using the procedures in Part I.F.1. of this permit and the same test species must be initiated within two (2) weeks of test failure, or as soon thereafter as practicable. During the sampling for any repeat tests, the permittee must also collect and preserve sufficient effluent samples for use in any toxicity identification evaluation (TIE) and/or toxicity reduction evaluation (TRE), if necessary.

g. Requirement to Conduct a Toxicity Reduction Evaluation

If any two (2) consecutive chronic toxicity tests, including any and all repeat tests, demonstrate acute or chronic toxicity for the same or the other test species under Part I.F.1.f., the permittee must notify the IDEM Office of Water Quality, Compliance Data Section under Part I.F.1.e. within 30 days of the date of termination of the second test, and begin the

implementation of a toxicity reduction evaluation (TRE) as described in Part I.F.2. After receiving notification from the permittee, the Compliance Data Section will suspend the whole effluent toxicity testing requirements in Part I.F.1. for the term of the TRE schedule.

h. Definitions

- (1) "Acute toxic unit" or "TU<sub>a</sub>" is defined as  $100/LC_{50}$  where the  $LC_{50}$  is expressed as a percent effluent in the test medium of an acute whole effluent toxicity (WET) test that is statistically or graphically estimated to be lethal to fifty percent (50%) of the test organisms.
- (2) "Chronic toxic unit" or "TU<sub>c</sub>" is defined as  $100/NOEC$  or  $100/IC_{25}$ , where the  $NOEC$  or  $IC_{25}$  are expressed as a percent effluent in the test medium.
- (3) "Inhibition concentration 25" or "IC<sub>25</sub>" means the toxicant (effluent) concentration that would cause a twenty-five percent (25%) reduction in a nonquantal biological measurement for the test population. For example, the  $IC_{25}$  is the concentration of toxicant (effluent) that would cause a twenty-five percent (25%) reduction in mean young per female or in growth for the test population.
- (4) "No observed effect concentration" or "NOEC" is the highest concentration of toxicant (effluent) to which organisms are exposed in a full life cycle or partial life cycle (short term) test, that causes no observable adverse effects on the test organisms, that is, the highest concentration of toxicant (effluent) in which the values for the observed responses are not statistically significantly different from the controls.

2. Toxicity Reduction Evaluation (TRE) Schedule

The development and implementation of a TRE is only required if toxicity is demonstrated in two (2) consecutive tests as described in Part I.F.1.g. The post-TRE toxicity testing requirements in Part I.F.2.c. must also be completed as part of the TRE schedule.

Milestone Dates: See a. through e. below for more detail on the TRE milestone dates.

| <b>Requirement</b>                      | <b>Deadline</b>                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Development and Submittal of a TRE Plan | Within 90 days of the date of two (2) consecutive failed toxicity tests (i.e., the date of termination of the second test).                                                                                                                                                                                                                                 |
| Initiate a TRE Study                    | Within 30 days of TRE Plan submittal.                                                                                                                                                                                                                                                                                                                       |
| Submit TRE Progress Reports             | Every 90 days beginning six (6) months from the date of two (2) consecutive failed toxicity tests (i.e., the date of termination of the second test).                                                                                                                                                                                                       |
| Post-TRE Toxicity Testing Requirements  | Immediately upon completion of the TRE, conduct three (3) consecutive months of toxicity tests with both test species; if no acute or chronic toxicity is shown with any test species, reduce toxicity tests to once every six (6) months for the remainder of the permit term. If post-TRE toxicity testing demonstrates toxicity, continue the TRE study. |
| Submit Final TRE Report                 | Within 90 days of successfully completing the TRE (including the post-TRE toxicity testing requirements), not to exceed three (3) years from the date that toxicity is initially demonstrated in two (2) consecutive toxicity tests (i.e., the date of termination of the second test).                                                                     |

a. Development of TRE Plan

Within 90 days of the date of two (2) consecutive failed toxicity tests (i.e., the date of termination of the second test), the permittee must submit plans for an effluent TRE to the IDEM Office of Water Quality, Compliance Data Section. The TRE plan must include appropriate measures to reduce toxicity in the effluent discharge to levels that demonstrate no toxicity with any test species as described in Part I.F.1.f. Guidance on conducting effluent toxicity reduction evaluations, including toxicity identification evaluations (TIEs) to characterize and identify the causative toxicants, if necessary, is available from EPA and from the EPA publications listed below:

(1) Methods for Aquatic Toxicity Identification Evaluations:

Phase I Toxicity Characterization Procedures, Second Edition (EPA/600/6-91/003), February 1991.

Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity (EPA/600/R-92/080), September 1993.

Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity (EPA/600/R-92/081), September 1993.

- (2) Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I (EPA/600/6-91/005F), May 1992.
- (3) Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs) (EPA/600/2-88/070), April 1989.
- (4) Clarifications Regarding Toxicity Reduction and Identification Evaluations in the National Pollutant Discharge Elimination System Program, U.S. EPA, March 27, 2001.

b. Conduct the TRE

Within 30 days after submittal of the TRE plan to the Compliance Data Section, the permittee must initiate the TRE consistent with the TRE plan.

c. Post-TRE Toxicity Testing Requirements

- (1) After completing the TRE, the permittee must conduct monthly post-TRE toxicity tests with the two (2) test species *Ceriodaphnia dubia* and Fathead Minnow (*Pimephales promelas*) for a period of three (3) consecutive months.
- (2) If the three (3) monthly tests demonstrate no toxicity with any test species as described in Part I.F.1.f.(1) and f.(2), the TRE will be considered successful. Otherwise, the TRE study must be continued.
- (3) The post-TRE toxicity tests must be conducted in accordance with the procedures in Part I.F.1. The results of these tests must be submitted as part of the final TRE Report required under Part I.F.2.d.
- (4) After successful completion of the TRE, the permittee must resume the chronic toxicity tests required in Part I.F.1. The permittee may request in the final TRE report under Part I.F.2.d.(2) a reduction in the number of species tested to only include the species demonstrated to be most sensitive to the toxicity in the effluent. IDEM will then make a determination on species sensitivity to effluent toxicity and notify the permittee of its decision as part of the TRE approval. The established



starting date for the frequency in Part I.F.1.d. is the first day of the first month following successful completion of the post-TRE toxicity tests.

d. Reporting

- (1) Progress reports must be submitted every 90 days to the IDEM Office of Water Quality, Compliance Data Section beginning six (6) months from the date of two (2) consecutive failed toxicity tests (i.e., the date of termination of the second test). Each TRE progress report must include a listing of proposed activities for the next quarter and a schedule to reduce toxicity in the effluent discharge to acceptable levels through control of the toxicant source or treatment of whole effluent.
- (2) Within 90 days of successfully completing the TRE, including the three (3) consecutive monthly tests required as part of the post-TRE toxicity testing requirements in Part I.F.2.c., the permittee must submit to the IDEM Office of Water Quality, Compliance Data Section a final TRE Report that includes the following:
  - (A) A discussion of the TRE results.
  - (B) The starting date established under Part I.F.2.c.(4) for the continuation of the toxicity testing required in Part I.F.1.
  - (C) If applicable, a request to reduce the number of species tested to the one most sensitive to the toxicity in the effluent under Part I.F.2.c.(4).

e. Compliance Date

The permittee must complete items a., b., c. and d. from Part I.F.2. and reduce toxicity in the effluent discharge to acceptable levels as soon as possible, but no later than three (3) years from the date that toxicity is initially demonstrated in two (2) consecutive toxicity tests (i.e., the date of termination of the second test) as described in Part I.F.1.f.g.

G. REOPENING CLAUSES

This permit may be modified, or alternately, revoked and reissued, after public notice and opportunity for hearing:

1. to comply with any applicable effluent limitation or standard issued or approved under 301(b)(2)(C),(D) and (E), 304 (b)(2), and 307(a)(2) of the Clean Water Act, if the effluent limitation or standard so issued or approved:
  - a. contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
  - b. controls any pollutant not limited in the permit.
2. for any of the causes listed under 327 IAC 5-2-16.
3. to include a case-specific Limit of Detection (LOD) and/or Limit of Quantitation (LOQ). The permittee must demonstrate that such action is warranted in accordance with the procedures specified under Appendix B, 40 CFR Part 136, using the most sensitive analytical methods approved by EPA under 40 CFR Part 136, or approved by the Commissioner.
4. to include effluent limitations and requirements for a revised Stormwater Pollution Prevention Plan.
5. to comply with any applicable standards, regulations and requirements issued or approved under section 316(b) of the Clean Water Act. This includes but is not limited to any revisions needed to reflect a change in the selected impingement mortality BTA.
6. to incorporate applicable limits and/or requirements based on newly promulgated and effective Federal Effluent Limitation Guidelines for Steam Electric Generating Stations under 40 CFR 423.

## PART II

### STANDARD CONDITIONS FOR NPDES PERMITS

#### A. GENERAL CONDITIONS

##### 1. Duty to Comply

The permittee shall comply with all terms and conditions of this permit in accordance with 327 IAC 5-2-8(1) and all other requirements of 327 IAC 5-2-8. Any permit noncompliance constitutes a violation of the Clean Water Act and IC 13 and is grounds for enforcement action or permit termination, revocation and reissuance, modification, or denial of a permit renewal application.

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit.

##### 2. Duty to Mitigate

In accordance with 327 IAC 5-2-8(3), the permittee shall take all reasonable steps to minimize or correct any adverse impact to the environment resulting from noncompliance with this permit. During periods of noncompliance, the permittee shall conduct such accelerated or additional monitoring for the affected parameters, as appropriate or as requested by IDEM, to determine the nature and impact of the noncompliance.

##### 3. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must obtain and submit an application for renewal of this permit in accordance with 327 IAC 5-2-8(2). It is the permittee's responsibility to obtain and submit the application. In accordance with 327 IAC 5-2-3(c), the owner of the facility or operation from which a discharge of pollutants occurs is responsible for applying for and obtaining the NPDES permit, except where the facility or operation is operated by a person other than an employee of the owner in which case it is the operator's responsibility to apply for and obtain the permit. Pursuant to 327 IAC 5-3-2(a)(2), the application must be submitted at least 180 days before the expiration date of this permit. This deadline may be extended if all of the following occur:

- a. permission is requested in writing before such deadline;
- b. IDEM grants permission to submit the application after the deadline; and
- c. the application is received no later than the permit expiration date.

#### 4. Permit Transfers

In accordance with 327 IAC 5-2-8(4)(D), this permit is nontransferable to any person except in accordance with 327 IAC 5-2-6(c). This permit may be transferred to another person by the permittee, without modification or revocation and reissuance being required under 327 IAC 5-2-16(c)(1) or 16(e)(4), if the following occurs:

- a. the current permittee notified the Commissioner at least thirty (30) days in advance of the proposed transfer date;
- b. a written agreement containing a specific date of transfer of permit responsibility and coverage between the current permittee and the transferee (including acknowledgment that the existing permittee is liable for violations up to that date, and the transferee is liable for violations from that date on) is submitted to the Commissioner;
- c. the transferee certifies in writing to the Commissioner their intent to operate the facility without making such material and substantial alterations or additions to the facility as would significantly change the nature or quantities of pollutants discharged and thus constitute cause for permit modification under 327 IAC 5-2-16(d). However, the Commissioner may allow a temporary transfer of the permit without permit modification for good cause, e.g., to enable the transferee to purge and empty the facility's treatment system prior to making alterations, despite the transferee's intent to make such material and substantial alterations or additions to the facility; and
- d. the Commissioner, within thirty (30) days, does not notify the current permittee and the transferee of the intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

The Commissioner may require modification or revocation and reissuance of the permit to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act or state law.

#### 5. Permit Actions

- a. In accordance with 327 IAC 5-2-16(b) and 327 IAC 5-2-8(4), this permit may be modified, revoked and reissued, or terminated for cause, including, but not limited to, the following:
  - (1) Violation of any terms or conditions of this permit;
  - (2) Failure of the permittee to disclose fully all relevant facts or misrepresentation of any relevant facts in the application, or during the permit issuance process; or

- (3) A change in any condition that requires either a temporary or a permanent reduction or elimination of any discharge controlled by the permit, e.g., plant closure, termination of discharge by connection to a POTW, a change in state law that requires the reduction or elimination of the discharge, or information indicating that the permitted discharge poses a substantial threat to human health or welfare.
- b. Filing of either of the following items does not stay or suspend any permit condition: (1) a request by the permittee for a permit modification, revocation and reissuance, or termination, or (2) submittal of information specified in Part II.A.3 of the permit including planned changes or anticipated noncompliance.

The permittee shall submit any information that the permittee knows or has reason to believe would constitute cause for modification or revocation and reissuance of the permit at the earliest time such information becomes available, such as plans for physical alterations or additions to the permitted facility that:

- (1) could significantly change the nature of, or increase the quantity of pollutants discharged; or
- (2) the commissioner may request to evaluate whether such cause exists.
- c. In accordance with 327 IAC 5-1-3(a)(5), the permittee must also provide any information reasonably requested by the Commissioner.

## 6. Property Rights

Pursuant to 327 IAC 5-2-8(6) and 327 IAC 5-2-5(b), the issuance of this permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to persons or private property or invasion of other private rights, any infringement of federal, state, or local laws or regulations. The issuance of the permit also does not preempt any duty to obtain any other state, or local assent required by law for the discharge or for the construction or operation of the facility from which a discharge is made.

## 7. Severability

In accordance with 327 IAC 1-1-3, the provisions of this permit are severable and, if any provision of this permit or the application of any provision of this permit to any person or circumstance is held invalid, the invalidity shall not affect any other provisions or applications of the permit which can be given effect without the invalid provision or application.

8. Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject to under Section 311 of the Clean Water Act.

9. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state law or regulation under authority preserved by Section 510 of the Clean Water Act or state law.

10. Penalties for Violation of Permit Conditions

Pursuant to IC 13-30-4, a person who violates any provision of this permit, the water pollution control laws; environmental management laws; or a rule or standard adopted by the Environmental Rules Board is liable for a civil penalty not to exceed twenty-five thousand dollars (\$25,000) per day of any violation.

Pursuant to IC 13-30-5, a person who obstructs, delays, resists, prevents, or interferes with (1) the department; or (2) the department's personnel or designated agent in the performance of an inspection or investigation performed under IC 13-14-2-2 commits a class C infraction.

Pursuant to IC 13-30-10-1.5(e), a person who willfully or negligently violates any NPDES permit condition or filing requirement, or any applicable standards or limitations of IC 13-18-3-2.4, IC 13-18-4-5, IC 13-18-12, IC 13-18-14, IC 13-18-15, or IC 13-18-16, commits a Class A misdemeanor.

Pursuant to IC 13-30-10-1.5(i), an offense under IC 13-30-10-1.5(e) is a Level 4 felony if the person knowingly commits the offense and knows that the commission of the offense places another person in imminent danger of death or serious bodily injury. The offense becomes a Level 3 felony if it results in serious bodily injury to any person, and a Level 2 felony if it results in death to any person.

Pursuant to IC 13-30-10-1.5(g), a person who willfully or recklessly violates any applicable standards or limitations of IC 13-18-8 commits a Class B misdemeanor.

Pursuant to IC 13-30-10-1.5(h), a person who willfully or recklessly violates any applicable standards or limitations of IC 13-18-9, IC 13-18-10, or IC 13-18-10.5 commits a Class C misdemeanor.

Pursuant to IC 13-30-10-1, a person who knowingly or intentionally makes any false material statement, representation, or certification in any NPDES form, notice, or report commits a Class B misdemeanor.

11. Penalties for Tampering or Falsification

In accordance with 327 IAC 5-2-8(10), the permittee shall comply with monitoring, recording, and reporting requirements of this permit. The Clean Water Act, as well as IC 13-30-10-1, provides that any person who knowingly or intentionally (a) destroys, alters, conceals, or falsely certifies a record, (b) tampers with, falsifies, or renders inaccurate or inoperative a recording or monitoring device or method, including the data gathered from the device or method, or (c) makes a false material statement or representation in any label, manifest, record, report, or other document; all required to be maintained under the terms of a permit issued by the department commits a Class B misdemeanor.

12. Toxic Pollutants

If any applicable effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Clean Water Act for a toxic pollutant injurious to human health, and that standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be modified or revoked and reissued to conform to the toxic effluent standard or prohibition in accordance with 327 IAC 5-2-8(5). Effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants injurious to human health are effective and must be complied with, if applicable to the permittee, within the time provided in the implementing regulations, even absent permit modification.

13. Wastewater Treatment Plant and Certified Operators

Pursuant to IC 13-18-11-11 and 327 IAC 5-23-6, a permittee's wastewater treatment plant must be under the responsible charge of an operator certified by the Commissioner in a classification corresponding to the classification of the wastewater treatment plant as determined under 327 IAC 5-23-4.

A certified operator may be designated as being in responsible charge of more than one (1) wastewater treatment plant if the requirements under 327 IAC 5-23-7(b) are met. "Operator in responsible charge" is defined at 327 IAC 5-23-2(16).

Pursuant to 327 IAC 5-23-6(4)(A), the permittee shall notify IDEM when there is a change in the person serving as the certified operator in responsible charge of the wastewater treatment facility. The notification shall be made no later than thirty (30) days after a change in the operator and submitted via e-mail to the Compliance Data Section of the Office of Water Quality at [WWReports@idem.IN.gov](mailto:WWReports@idem.IN.gov).

14. Construction Permit

In accordance with IC 13-14-8-11.6, a discharger is not required to obtain a state permit for the modification or construction of a water pollution treatment or control facility if the discharger has an effective NPDES permit.

If the discharger modifies their existing water pollution treatment or control facility or constructs a new water pollution treatment or control facility for the treatment or control of any new influent pollutant or increased levels of any existing pollutant, then, within thirty (30) days after commencement of operation, the discharger shall file with the Department of Environment Management a notice of installation for the additional pollutant control equipment and a design summary of any modifications.

The notice and design summary shall be sent to the Office of Water Quality, Industrial NPDES Permits Section, 100 North Senate Avenue, Indianapolis, IN 46204-2251.

15. Inspection and Entry

In accordance with 327 IAC 5-2-8(8), the permittee shall allow the Commissioner, or an authorized representative, (including an authorized contractor acting as a representative of the Commissioner) upon the presentation of credentials and other documents as may be required by law, to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept pursuant to the conditions of this permit;
- b. Have access to and copy, at reasonable times, any records that must be kept under the terms and conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment or methods (including monitoring and control equipment), practices, or operations regulated or required pursuant to this permit; and
- d. Sample or monitor at reasonable times, any discharge of pollutants or internal wastestreams for the purposes of evaluating compliance with the permit or as otherwise authorized.

16. New or Increased Discharge of Pollutants

This permit prohibits the permittee from undertaking any 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 one of the following is completed prior to the commencement of the action:



- a. Information is submitted to the Commissioner demonstrating that the proposed new or increased discharges will not cause a significant lowering of water quality as defined under 327 IAC 2-1.3-2(50). Upon review of this information, the Commissioner may request additional information or may determine that the proposed increase is a significant lowering of water quality and require the submittal of an antidegradation demonstration.
- b. An antidegradation demonstration is submitted to and approved by the Commissioner in accordance with 327 IAC 2-1.3-5 and 327 IAC 2-1.3-6.

B. MANAGEMENT REQUIREMENTS

1. Proper Operation and Maintenance

The permittee shall at all times maintain in good working order and efficiently operate all facilities and systems (and related appurtenances) for the collection and treatment which are installed or used by the permittee and which are necessary for achieving compliance with the terms and conditions of this permit in accordance with 327 IAC 5-2-8(9).

Neither 327 IAC 5-2-8(9), nor this provision, shall be construed to require the operation of installed treatment facilities that are unnecessary for achieving compliance with the terms and conditions of the permit.

2. Bypass of Treatment Facilities

Pursuant to 327 IAC 5-2-8(12), the following are requirements for bypass:

- a. The following definitions:
  - (1) "Bypass" means the intentional diversion of a waste stream from any portion of a treatment facility.
  - (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
- b. The permittee may allow a bypass to occur that does not cause a violation of the effluent limitations contained in this permit, but only if it is also for essential maintenance to assure efficient operation. These bypasses are not subject to Part II.B.2.c. and d.
- c. The permittee must provide the Commissioner with the following notice:

- (1) If the permittee knows or should have known in advance of the need for a bypass (anticipated bypass), it shall submit prior written notice. If possible, such notice shall be provided at least ten (10) days before the date of the bypass for approval by the Commissioner.
- (2) As required by 327 IAC 5-2-8(11)(C), the permittee shall orally report an unanticipated bypass that exceeds any effluent limitations in the permit within twenty-four (24) hours from the time the permittee becomes aware of such noncompliance. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times; and if the cause of noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent recurrence of the noncompliance. If a complete report is submitted by e-mail within 24 hours of the noncompliance, then that e-mail report will satisfy both the oral and written reporting requirement. E-mails should be sent to [wwreports@idem.in.gov](mailto:wwreports@idem.in.gov).

d. The following provisions are applicable to bypasses:

- (1) Except as provided by Part II.B.2.b., bypass is prohibited, and the Commissioner may take enforcement action against a permittee for bypass, unless the following occur:
  - (A) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.
  - (B) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment down time. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance.
  - (C) The permittee submitted notices as required under Part II.B.2.c.
- (2) The Commissioner may approve an anticipated bypass, after considering its adverse effects, if the Commissioner determines that it will meet the conditions listed above in Part II.B.2.d.(1). The Commissioner may impose any conditions determined to be necessary to minimize any adverse effects.

- e. Bypasses that result in death or acute injury or illness to animals or humans must be reported in accordance with the "Spill Response and Reporting Requirements" in 327 IAC 2-6.1, including calling 888/233-7745 as soon as possible, but within two (2) hours of discovery. However, under 327 IAC 2-6.1-3(1), when the constituents of the bypass are regulated by this permit, and death or acute injury or illness to animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.

3. Upset Conditions

Pursuant to 327 IAC 5-2-8(13):

- a. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
- b. An upset shall constitute an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Paragraph c of this section, are met.
- c. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, that:
  - (1) An upset occurred and the permittee has identified the specific cause(s) of the upset;
  - (2) The permitted facility was at the time being properly operated;
  - (3) The permittee complied with any remedial measures required under Part II.A.2; and
  - (4) The permittee submitted notice of the upset as required in the "Twenty-Four Hour Reporting Requirements," Part II.C.3, or 327 IAC 2-6.1, whichever is applicable. However, under 327 IAC 2-6.1-3(1), when the constituents of the discharge are regulated by this permit, and death or acute injury or illness to animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.

- d. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof pursuant to 40 CFR 122.41(n)(4).

4. Removed Substances

Solids, sludges, filter backwash, or other pollutants removed from or resulting from treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutant from such materials from entering waters of the State and to be in compliance with all Indiana statutes and regulations relative to liquid and/or solid waste disposal. The discharge of pollutants in treated wastewater is allowed in compliance with the applicable effluent limitations in Part I. of this permit.

C. REPORTING REQUIREMENTS

1. Planned Changes in Facility or Discharge

Pursuant to 327 IAC 5-2-8(11)(F), the permittee shall give notice to the Commissioner as soon as possible of any planned physical alterations or additions to the permitted facility. In this context, permitted facility refers to a point source discharge, not a wastewater treatment facility. Notice is required only when either of the following applies:

- a. The alteration or addition may meet one of the criteria for determining whether the facility is a new source as defined in 327 IAC 5-1.5.
- b. The alteration or addition could significantly change the nature of, or increase the quantity of, pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in Part I.A. nor to notification requirements in Part II.C.9. of this permit.

Following such notice, the permit may be modified to revise existing pollutant limitations and/or to specify and limit any pollutants not previously limited.

2. Monitoring Reports

Pursuant to 327 IAC 5-2-8(10) and 327 IAC 5-2-13 through 15, monitoring results shall be reported at the intervals and in the form specified in "Monthly Reporting", Part I.C.2.

3. Twenty-Four Hour Reporting Requirements

Pursuant to 327 IAC 5-2-8(11)(C), the permittee shall orally report to the Commissioner information on the following types of noncompliance within 24 hours from the time permittee becomes aware of such noncompliance. If the

noncompliance meets the requirements of item b (Part II.C.3.b) or 327 IAC 2-6.1, then the report shall be made within those prescribed time frames. However, under 327 IAC 2-6.1-3(1), when the constituents of the discharge that is in noncompliance are regulated by this permit, and death or acute injury or illness to animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.

- a. Any unanticipated bypass which exceeds any effluent limitation in the permit;
- b. Any noncompliance which may pose a significant danger to human health or the environment. Reports under this item shall be made as soon as the permittee becomes aware of the noncomplying circumstances;
- c. Any upset (as defined in Part II.B.3 above) that causes an exceedance of any effluent limitation in the permit; or
- d. Violation of a maximum daily discharge limitation for any of the following toxic pollutants or hazardous substances: Total Residual Chlorine, Chromium, Zinc, Mercury, Arsenic.

The permittee can make the oral reports by calling (317)232-8670 during regular business hours and asking for the Compliance Data Section or by calling (317) 233-7745 ((888)233-7745 toll free in Indiana) during non-business hours. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and, if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce and eliminate the noncompliance and prevent its recurrence. The Commissioner may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

Alternatively the permittee may submit a "Bypass/Overflow Report" (State Form 48373) or a "Noncompliance 24-Hour Notification Report" (State Form 52415), whichever is appropriate, to IDEM at (317) 232-8637 or [wwreports@idem.in.gov](mailto:wwreports@idem.in.gov). If a complete e-mail submittal is sent within 24 hours of the time that the permittee became aware of the occurrence, then the email report will satisfy both the oral and written reporting requirements.

4. Other Compliance/Noncompliance Reporting

Pursuant to 327 IAC 5-2-8(11)(D), the permittee shall report any instance of noncompliance not reported under the "Twenty-Four Hour Reporting Requirements" in Part II.C.3, or any compliance schedules at the time the pertinent Discharge Monitoring Report is submitted. The report shall contain the information specified in Part II.C.3;

The permittee shall also give advance notice to the Commissioner of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements; and

All reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

5. Other Information

Pursuant to 327 IAC 5-2-8(11)(E), where the permittee becomes aware of a failure to submit any relevant facts or submitted incorrect information in a permit application or in any report, the permittee shall promptly submit such facts or corrected information to the Commissioner.

6. Signatory Requirements

Pursuant to 327 IAC 5-2-22 and 327 IAC 5-2-8(15):

a. All reports required by the permit and other information requested by the Commissioner shall be signed and certified by a person described below or by a duly authorized representative of that person:

(1) For a corporation: by a responsible corporate officer. A "responsible corporate officer" means either of the following:

(A) A president, secretary, treasurer, any vice president of the corporation in charge of a principal business function, or any other person who performs similar policymaking or decision-making functions for the corporation; or

(B) The manager of one (1) or more manufacturing, production, or operating facilities provided the manager is authorized to make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty to make major capital investment recommendations, and initiating and

directing other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

- (2) For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
  - (3) For a Federal, State, or local governmental body or any agency or political subdivision thereof: by either a principal executive officer or ranking elected official.
- b. A person is a duly authorized representative only if:
  - (1) The authorization is made in writing by a person described above.
  - (2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.); and
  - (3) The authorization is submitted to the Commissioner.
- c. Electronic Signatures: If documents described in this section are submitted electronically by or on behalf of the NPDES-regulated facility, any person providing the electronic signature for such documents shall meet all relevant requirements of this section, and shall ensure that all of the relevant requirements of 40 CFR part 3 (including, in all cases, subpart D to part 3) (Cross-Media Electronic Reporting) and 40 CFR part 127 (NPDES Electronic Reporting Requirements) are met for that submission.
- d. Certification: Any person signing a document identified under Part II.C.6., shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather

and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

7. Availability of Reports

Except for data determined to be confidential under 327 IAC 12.1, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Indiana Department of Environmental Management and the Regional Administrator. As required by the Clean Water Act, permit applications, permits, and effluent data shall not be considered confidential.

8. Penalties for Falsification of Reports

IC 13-30 and 327 IAC 5-2-8(15) provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance, shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 180 days per violation, or by both.

9. Changes in Discharge of Toxic Substances

Pursuant to 327 IAC 5-2-9, the permittee shall notify the Commissioner as soon as it knows or has reason to know:

- a. That any activity has occurred or will occur which would result in the discharge of any toxic pollutant that is not limited in the permit if that discharge will exceed the highest of the following notification levels.
  - (1) One hundred micrograms per liter (100 µg/l);
  - (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
  - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
  - (4) A notification level established by the Commissioner on a case-by-case basis, either at the Commissioner's own initiative or



upon a petition by the permittee. This notification level may exceed the level specified in subdivisions (1), (2), or (3) but may not exceed the level which can be achieved by the technology-based treatment requirements applicable to the permittee under the CWA (see 327 IAC 5-5-2).

- b. That it has begun or expects to begin to use or manufacture, as an intermediate or final product or byproduct, any toxic pollutant that was not reported in the permit application under 40 CFR 122.21(g)(9). However, this subsection b. does not apply to the permittee's use or manufacture of a toxic pollutant solely under research or laboratory conditions.

10. Future Electronic Reporting Requirements

IDEM is currently developing the technology and infrastructure necessary to allow compliance with the EPA Phase 2 e-reporting requirements per 40 CFR 127.16 and to allow electronic reporting of applications, notices, plans, reports, and other information not covered by the federal e-reporting regulations. IDEM will notify the permittee when IDEM's e-reporting system is ready for use for one or more applications, notices, plans, reports, or other information. This IDEM notice will identify the specific applications, notices, plans, reports, or other information that are to be submitted electronically and the permittee will be required to use the IDEM electronic reporting system to submit the identified application(s), notice(s), plan(s), report(s), or other information. See Part I.C.2. of this permit for the current electronic reporting requirements for the submittal of monthly monitoring reports such as the Discharge Monitoring Report (DMR) and the Monthly Monitoring Report (MMR).

PART III  
Other Requirements

Polychlorinated Biphenyl

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 for Outfall 001 and Outfall 014 with the next NPDES permit renewal application for at least one sample taken from each final outfall. The corresponding facility water sources (the intake water for Outfall 001 and well water for Outfall 014) shall be monitored at the same time as the final outfalls.

| <u>Parameter</u> | <u>Test Method</u> | <u>LOD</u> | <u>LOQ</u> |
|------------------|--------------------|------------|------------|
| *Total PCBs      | 608                | 0.1 ug/l   | 0.3 ug/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.

#### Part IV Cooling Water Intake Structures

##### A. Best Technology Available (BTA) Determination

In accordance with 40 CFR 401.14, the location, design, construction and capacity of cooling water intake structures of any point source for which a standard is established pursuant to section 301 or 306 of the Act shall reflect the best technology available for minimizing adverse environmental impact.

The EPA promulgated a CWA section 316(b) regulation on August 15, 2014, which became effective on October 14, 2014. 79 Fed. Reg. 48300-439 (August 15, 2014). This regulation established application requirements and standards for cooling water intake structures. The regulation is applicable to point sources with a cumulative design intake flow (DIF) greater than 2 MGD where 25% or more of the water withdrawn (using the actual intake flow (AIF)) is used exclusively for cooling purposes. All existing facilities subject to these regulations must submit the information required by 40 CFR 122.21(r)(2)–(r)(8) and facilities with an actual intake flow of greater than 125 MGD must also submit the information required by 40 CFR 122.21(r)(9)–(r)(13). The regulation establishes best technology available standards to reduce impingement and entrainment of aquatic organisms at existing power generation and manufacturing facilities.

Based on available information, IDEM has made a Best Technology Available (BTA) impingement and entrainment determination.

IDEM has determined that, based on the information available to IDEM, operating a CWIS that has a maximum actual through-screen intake velocity of 0.5 fps (40 CFR 125.94(c)(3)) is the BTA for impingement mortality for the facility. The maximum velocity must be achieved under all conditions including during minimum ambient source water surface elevations and during periods of maximum head loss across the screens or other devices during normal operation of the intake structure.

Further, after considering all the factors that must and may be considered by the federal rules, IDEM has determined that the existing facility meets BTA for entrainment mortality. Primary in this entrainment BTA determination is that RMSGS intends to cease coal combustion by December 31, 2028, and that a closed-cycle recirculating system will be utilized by the CCGT facility and DEC will be utilized by Project Orion.

This determination will be reassessed at the next permit reissuance to ensure that the CWISs continue to meet the requirements of Section 316(b) of the federal Clean Water Act (33 U.S.C. section 1326).

B. Permit Requirements

The permittee shall comply with requirements below:

1. In accordance with 40 CFR 125.98(b)(1), nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.
2. The permittee must at all times properly operate and maintain the cooling water intake structure and associated intake equipment.
3. The permittee must inform IDEM of any proposed changes to the CWIS or proposed changes to operations at the facility that affect the information taken into account in the current BTA evaluation.
4. Any discharge of intake screen backwash must meet the Minimum Narrative Limitations contained in Part I.B of the permit. There must be no discharge of debris from intake screen washing which will settle to form objectionable deposits which are in amounts sufficient to be unsightly or deleterious, or which will produce colors or odors constituting a nuisance.
5. The permittee must either conduct visual inspections or employ remote monitoring devices during the period the cooling water intake structure is in operation as required by 40 CFR 125.96(e). The permittee must conduct such inspections at least weekly to ensure that any technologies operated to comply with 40 CFR 125.94 are maintained and operated to function as designed including those installed to protect Federally-listed threatened or endangered species or designated critical habitat. Alternative procedures can be approved if this requirement is not feasible (e.g., an offshore intake, velocity cap, or during periods of inclement weather).
6. In accordance with 40 CFR 125.97(c), by January 31 of each year, the permittee must submit to the Industrial NPDES Permit Section IDEM-OWQ an annual certification statement for the preceding calendar year signed by the responsible corporate officer as defined in 40 CFR 122.22 (see 327 IAC 5-2-22) subject to the following:
  - a. If the information contained in the previous year's annual certification is still pertinent, you may simply state as such in a letter to IDEM and the letter, along with any applicable data submission requirements specified in this section shall constitute the annual certification.
  - b. If you have substantially modified operation of any unit at your facility that impacts cooling water withdrawals or operation of your cooling water intake structures, you must provide a summary of those changes in the report. In addition, you must submit revisions to the information required at 40 CFR 122.21(r) in your next permit application.

7. BTA determinations for entrainment mortality and impingement mortality at cooling water intake structures will be made in each permit reissuance in accordance with 40 CFR 125.90-98. The permittee must submit all the information required by the applicable provisions of 40 CFR 122.21(r)(2) through (r)(8) with the next renewal application. Since the permittee has submitted the studies required by 40 CFR 122.21(r), the permittee may, in subsequent renewal applications pursuant to 40 CFR 125.95(c), request to reduce the information required if conditions at the facility and in the waterbody remain substantially unchanged since the previous application so long as the relevant previously submitted information remains representative of the current source water, intake structure, cooling water system, and operating conditions. Any habitat designated as critical or species listed as threatened or endangered after issuance of the current permit whose range of habitat or designated critical habitat includes waters where a facility intake is located constitutes potential for a substantial change that must be addressed by the owner/operator in subsequent permit applications, unless the facility received an exemption pursuant to 16 U.S.C. 1536(o) or a permit pursuant to 16 U.S.C. 1539(a) or there is no reasonable expectation of take. The permittee must submit the request for reduced cooling water intake structure and waterbody application information at least **two years and six months** prior to the expiration of the NPDES permit. The request must identify each element in this subsection that it determines has not substantially changed since the previous permit application and the basis for the determination. IDEM has the discretion to accept or reject any part of the request.
8. The permittee must submit an annual summary of the actual intake flows measured at the intake at a minimum frequency of daily. Further, the permittee shall submit an annual summary spreadsheet of the actual intake flows with the annual summary required in Part IV.B.6 of the permit above.
9. The permittee must monitor the velocity at the traveling screens at a minimum frequency of daily. In lieu of velocity monitoring at the screen face of the traveling screens, the permittee may calculate the through-screen velocity using water flow, water depth, and the screen open areas. These daily measurements must be reported on the MMR with the monthly results summarized on the DMRs that are submitted every month.
10. The permittee must monitor and report the cycles of concentration for the Unit 17, Unit 18, Units 21A/21B, and Units 22A/22B cooling towers at a minimum frequency of daily. Further, the permittee shall submit an annual summary spreadsheet of the cycles of concentration for each unit with the annual summary required in Part IV.B.6 of the permit above.
11. The permittee shall submit and maintain all the information required by the applicable provisions of 40 CFR 125.97.

12. The permittee must keep records of all submissions that are part of its permit application until the subsequent permit issued to document compliance with 40 CFR 125.95. If IDEM approves a request for reduced permit application studies under 40 CFR 125.95(a) or (c) or 40 CFR 125.98(g), the permittee must keep records of all submissions that are part of the previous permit application until the subsequent permit is issued.
13. All required reports must be submitted to the IDEM, Office of Water Quality, NPDES Permits Branch, Industrial NPDES Permit Section at [OWQWWPER@idem.in.gov](mailto:OWQWWPER@idem.in.gov) and the Compliance Branch at [wwReports@idem.in.gov](mailto:wwReports@idem.in.gov).



**National Pollutant Discharge Elimination System**  
**Fact Sheet for**  
**Northern Indiana Public Service Company LLC (NIPSCO)**  
**R.M. Schahfer Generating Station**  
**Draft: September 2026**  
**Final: 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>                   | Northern Indiana Public Service Company LLC (NIPSCO)<br>R.M. Schahfer Generating Station<br>2723 East 1500 North<br>Wheatfield, IN 46392                                      |
| <b>Existing Permit Information:</b> | Permit Number: IN0053201<br>Expiration Date: September 30, 2025                                                                                                               |
| <b>Facility Contact:</b>            | Ariel Rozwara, Facility Environmental Coordinator<br>(219) 265-5372, arozwara@nisource.com                                                                                    |
| <b>Facility Location:</b>           | 2723 East 1500 North<br>Wheatfield, IN 46392<br>Jasper County                                                                                                                 |
| <b>Receiving Stream(s):</b>         | Kankakee River (Outfalls 001 and 002), Davis Ditch (Outfalls 004S, 005S, 006S, 007S, SMS 010S, and SMS 011S), and Stalbaum Ditch (Outfalls 014, 003S, SMS 012S, and SMS 013S) |
| <b>GLI/Non-GLI:</b>                 | Non-GLI                                                                                                                                                                       |
| <b>Proposed Permit Action:</b>      | Renew                                                                                                                                                                         |
| <b>Date Application Received:</b>   | April 2, 2025                                                                                                                                                                 |
| <b>Source Category:</b>             | NPDES Major– Industrial                                                                                                                                                       |
| <b>Permit Writer:</b>               | Heidi Etter<br>(317) 233-4903, hetter@idem.in.gov                                                                                                                             |

## Table of Contents

|                                                                                  |           |
|----------------------------------------------------------------------------------|-----------|
| <b>1.0 Introduction.....</b>                                                     | <b>3</b>  |
| <b>2.0 Facility description .....</b>                                            | <b>3</b>  |
| 2.1 General.....                                                                 | 3         |
| 2.2 Outfall Locations.....                                                       | 6         |
| 2.3 Descriptions of Outfalls and Wastewater Treatment.....                       | 7         |
| 2.4 Changes in Operation.....                                                    | 17        |
| 2.5 Facility Stormwater .....                                                    | 17        |
| <b>3.0 Permit History .....</b>                                                  | <b>18</b> |
| 3.1 Compliance History .....                                                     | 18        |
| <b>4.0 Location of Discharge/Receiving Water Use Designation .....</b>           | <b>19</b> |
| 4.1 Total Maximum Daily Loads (TMDLs) .....                                      | 19        |
| <b>5.0 Permit limitations.....</b>                                               | <b>20</b> |
| 5.1 Technology-Based Effluent Limits (TBELs) .....                               | 20        |
| 5.2 Water Quality-Based Effluent Limits (WQBELs).....                            | 22        |
| 5.3 Effluent Limitations and Monitoring Requirements by Outfall .....            | 22        |
| 5.4 Whole Effluent Toxicity (WET) Testing .....                                  | 32        |
| 5.5 Antibacksliding.....                                                         | 32        |
| 5.6 Antidegradation .....                                                        | 33        |
| 5.7 Stormwater .....                                                             | 33        |
| 5.8 Water Treatment Additives .....                                              | 36        |
| <b>6.0 Permit Draft Discussion .....</b>                                         | <b>39</b> |
| 6.1 Discharge Limitations, Monitoring Conditions and Rationale.....              | 39        |
| 6.2 Schedule of Compliance.....                                                  | 42        |
| 6.3 Other Requirements .....                                                     | 42        |
| 6.3.1 Polychlorinated Biphenyl (PCB).....                                        | 42        |
| 6.4 Clean Water Act Section 316(b) Cooling Water Intake Structure(s) (CWIS)..... | 43        |
| 6.5 Spill Response and Reporting Requirement.....                                | 65        |
| 6.6 Permit Processing/Public Comment .....                                       | 65        |



## 1.0 INTRODUCTION

---

The Indiana Department of Environmental Management (IDEM) received a National Pollutant Discharge Elimination System (NPDES) Permit application from Northern Indiana Public Service Company LLC (NIPSCO) on April 2, 2025, and an addendum to the renewal application on April 10, 2026. In accordance with 327 IAC 5-2-6(a), the current five-year permit was issued with an effective date of October 1, 2020. The permit was subsequently modified on July 18, 2023. A five-year permit is proposed in accordance with 327 IAC 5-2-6(a).

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.

## 2.0 FACILITY DESCRIPTION

---

### 2.1 General

NIPSCO – R.M. Schahfer Generating Station (RMSGs) is classified under Standard Industrial Classification (SIC) Code 4911 – Electric Power Services.

RMSGs is a natural gas and coal-fired power steam electric generation facility. The coal-fired boilers convert water into high pressure steam which drives turbines that are connected to electrical generators. The facility retired coal-fired Units 14 and 15 by October 1, 2021, and planned to retire their last coal-fired steam generating units (Units 17 and 18) by December 31, 2025. However, RMSGs received a U.S. Department of Energy 202(c) order on December 23, 2025 to keep Units 17 and 18 operational. Units 17 and 18 each have a nameplate capacity of 423.5 MW (combined capacity of 847 MW). The facility also has two (2) natural gas-fired combustion turbine peaking units (16A & B) that can produce approximately 155 MW total.

The source water for the facility is withdrawn from the Kankakee River and held in the Intake Settling Basin (ISB).

Additionally, there are three upcoming projects at/next to the facility that will be addressed as part of this permit renewal.

First, NIPSCO is proposing to install a new Peaker Plant at the facility consisting of four (4) natural gas-fired simple cycle combustion turbines with an overall capacity of approximately 400 MW. The source water for the new Peaker Plant will be well water. Wastewater from the Peaker Plant will be discharged into an on-site detention pond and ultimately discharged to Stahlbaum Ditch via a new outfall.

Second, a third party intends to own and operate a new data center facility (internally called “Project Orion”) on its property adjacent to the east side of the RMSGS facility property. Makeup water for Project Orion’s direct evaporative coolers will be sourced from RMSGS’s ISB. Blowdown from the evaporative cooling system, as well as strainer backwash, will be discharged into RMSGS’s Final Settling Basin (FSB) where it will commingle with RMSGS wastewaters and ultimately discharge via Outfall 001/002. The potable water supply for Project Orion will be sourced from the NIPSCO well water system, and associated sanitary discharges will be treated by the RMSGS sanitary treatment and discharged through Outfall 101 to the FSB.

Third, NIPSCO Generation, LLC (an affiliate of NIPSCO, commonly referred to as “GenCo”) will be constructing and operating four (4) combined-cycle gas turbines (CCGTs) – Unit 21A, Unit 21B, Unit 22A, and Unit 22B – for electric power generation via natural gas. The CCGTs will be arranged in two blocks. Each block will include two combustion gas turbines equipped with a dedicated heat recovery steam generator (HRSG) and a duct burner which will supply steam to one steam turbine electric generator. Ancillary systems include two mechanical draft cooling towers, two auxiliary boilers, one natural-gas dew-point heater, SF6-insulated high-voltage breakers, natural-gas piping, emergency diesel generators and fire pumps, six lube oil tanks, and other support equipment. The nominal net capacity for each block is 1,150 MW (ISO) for a combined net capacity of 2,300 MW.

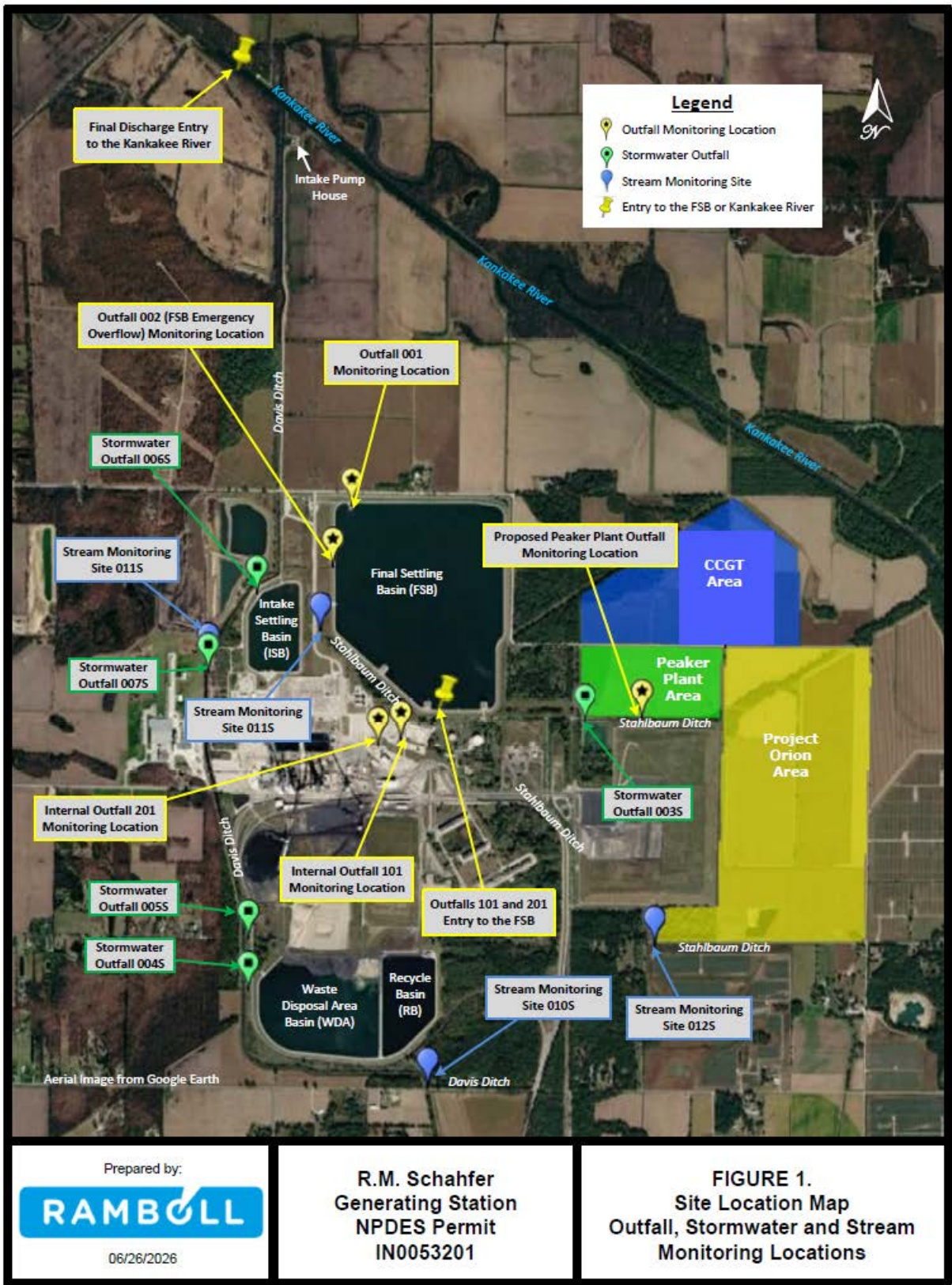
The ISB will supply source water for the CCGT operations. Cooling tower blowdown (CTBD) and various low volume waste sources will discharge to the FSB where it will commingle with RMSGS wastewaters and ultimately discharge via Outfall 001/002. Potable water supply for the CCGT will be sourced from well water, and associated sanitary discharges sent to an on-site septic tank/field.

Information about the continued operation of coal-fired Units 17 and 18, data center project, and CCGT project was supplied in an addendum to the renewal application submitted April 10, 2026.

More details about the timelines for these projects are provided in Section 2.4 below.

A map showing the location of the facility, including the proposed project locations and associated outfalls, has been included as Figure 1 below.

Figure 1: Facility Location



2723 East 1500 North  
Wheatfield, IN – Jasper County

## 2.2 External Outfall Locations

| Outfall                                         | Coordinates                                            | Receiving Water                   |
|-------------------------------------------------|--------------------------------------------------------|-----------------------------------|
| Outfall 001<br>(Entry to the Kankakee)          | Latitude: 41° 15' 2.34"<br>Longitude: -87° 01' 40.55"  | Kankakee River                    |
| Outfall 001<br>(Monitoring Location)            | Latitude: 41° 13' 46.3"<br>Longitude: -87° 01' 40.04"  |                                   |
| Outfall 002<br>(Outfall 001 Emergency Overflow) | Latitude: 41° 13' 35.87"<br>Longitude: -87° 01' 18.43" | Kankakee River via<br>Davis Ditch |
| Newly Proposed<br>Outfall 014                   | Latitude: 41° 13' 9.36"<br>Longitude: -87° 00' 6.80"   | Stahlbaum Ditch                   |
| Outfall 003S                                    | Latitude: 41° 13' 8.55"<br>Longitude: -87° 00' 20"     | Stahlbaum Ditch                   |
| Outfall 004S                                    | Latitude: 41° 12' 22"<br>Longitude: -87° 01' 38"       | Davis Ditch                       |
| Outfall 005S                                    | Latitude: 41° 12' 31"<br>Longitude: -87° 01' 38"       | Davis Ditch                       |
| Outfall 006S                                    | Latitude: 41° 13' 31"<br>Longitude: -87° 01' 36"       | Davis Ditch                       |
| Outfall 007S                                    | Latitude: 41° 12' 17.46"<br>Longitude: -87° 01' 47.3"  | Davis Ditch                       |

## 2.3 Descriptions of Outfalls and Wastewater Treatment

### **Outfall 001 (primary) and 002 (emergency overflow)**

The sources of wastewater contributing to these outfalls are treated sanitary wastewater from Internal Outfall 101, treated landfill leachate and stormwater from Internal Outfall 201, cooling tower blowdown (including cooling tower blowdown from Internal Outfall 401), low volume waste sources (including low volume waste sources from Internal Outfall 501), strainer backwash and direct evaporative cooler blowdown, flue gas desulfurization (FGD) blowdown wastewaters, bottom ash transport water, coal pile runoff, coal combustion residuals (CCR) impoundment dewatering water, construction dewatering water, “startup” waters (e.g., hydrostatic test water and pipe flushing water) from Project Orion and the CCGT facility, and stormwater.

It should be noted that air heater wash is considered low volume waste for the purposes of this permit due to site-specific considerations. This classification is consistent with the approach in previous permits for the facility.

In addition, RMSGS has a new proposed discharge associated with a new data center facility (Project Orion) that will be permitted through Outfall 001. During the startup period, discharge from Project Orion will consist of temporary and intermittent discharges of hydrostatic test water and pipe flushing water. After startup, the discharge will consist of non-continuous and seasonably variable strainer backwash and direct evaporative cooler blowdown. Makeup water sourced from RMSGS’s ISB will be pumped to Project Orion to replace the blowdown of ‘spent’ cooling water and supply filter backwash water as needed. Under typical operations where makeup water is needed, it will be pumped through self-cleaning strainers followed by bag filters. Prior to use in the direct evaporative coolers, both sulfuric acid (to lower alkalinity) and sodium hypochlorite (as a biocide) will be used to pretreat the makeup cooling water. If needed, dechlorination of the blowdown will also occur before discharge into the FSB.

The need for the direct evaporative cooling system to be in operation is determined by the ambient temperature and humidity. When ambient temperatures are less than the threshold, the data center buildings can be maintained using free air cooling. While warm weather may occur throughout the year, it is anticipated that the direct evaporative cooling system will only operate during the warmest months of the year (May through September). Because of their higher setpoint, evaporative cooling systems can operate without discharge at higher temperatures and humidity than traditional mechanical cooling towers. Therefore, the Project Orion wastewater discharges are not expected to be continuous and will be seasonally variable. The estimated average discharge from Project Orion to the FSB after startup is 0.034 MGD (average day, average year) with peak flow estimated at 0.24 MGD (daily average for a peak month in a peak year).

Treatment of wastewater prior to discharge via Outfall 001 includes sedimentation and dechlorination.

The facility has an average discharge of approximately 19.7 MGD and a maximum monthly average discharge of 22.0 MGD, based on the most recent 2 years of data. Future discharge flows expected once Project Orion and the CCGT facility are online are an average discharge of

approximately 18.44 MGD without dewatering of the Waste Disposal Area and 20.31 MGD with dewatering of the Waste Disposal Area.

### **Internal Outfall 101**

The discharge from Internal Outfall 101 consists of treated sanitary wastewater only. Treatment includes pre-aeration, activated sludge, sedimentation, and UV disinfection. No chemical treatment is currently provided for sanitary wastewaters. Internal Outfall 101 has an average discharge of 0.0086 MGD and a maximum monthly average discharge of 0.0510 MGD, based on the most recent 2 years of data.

Sanitary discharges associated with the upcoming Project Orion will also be treated by the RMSGS sanitary treatment system and discharged through Internal Outfall 101 to the FSB. Sanitary discharge volumes from Project Orion are initially expected to be 10,000 gpd (0.01 MGD) with final volumes of 20,000 gpd (0.02 MGD).

### **Internal Outfall 201**

Internal Outfall 201 discharges effluent from a refurbished and upgraded former wastewater treatment plant (WWTP) initially designated to treat blowdown from the FGD scrubbers for Units 14 and 15 prior to discharge to the Final Basin via Internal Outfall 201. The wastewater treatment process at this treatment plant consists of neutralization, chemical precipitation, coagulation, flocculation, sedimentation, filtration and ion exchange. The treatment plant includes an equalization tank, reaction tank, clarifier, effluent sand filter, and an additional mercury polishing step. Sludge thickening and dewatering technologies are also utilized.

However, with the retirement of Units 14 and 15 as of October 1, 2021, and subsequent decommissioning activities, FGD wastewater is no longer discharged at Internal Outfall 201. Currently, the discharge from Internal Outfall 201 consists of treated landfill leachate and stormwater only. These wastestreams are treated at the WWTP prior to discharge. Internal Outfall 201 has an average daily discharge of 0.063 MGD and a maximum monthly average discharge of 0.15 MGD, based on the most recent 2 years of data.

### **Removal of Internal Outfall 301**

In the last permit renewal, Internal Outfall 301 was proposed for FGD wastewaters from Units 17 and 18 prior to commingling with non-FGD wastewaters. The applicable federal effluent guidelines applied in the last permit renewal included the generally applicable Best Available Technology economically feasible (BAT) limits at 40 CFR 423.13(g)(1), which list limits for arsenic, mercury, selenium, and nitrate/nitrite. Since the last renewal, the facility filed a timely Notice of Planned Participation (NOPP) under 40 CFR 423.19(g) for units that will achieve permanent cessation of coal combustion (PCCC) by December 31, 2028. This puts the facility in the 2020 BAT subcategory for FGD wastewater at 40 CFR 423.13(g)(2)(i), which only includes limits for TSS per 40 CFR 423.12(b)(11) in addition to the Best Practicable Control Technology (BPT) limits for Oil and Grease at 40 CFR 423.12(b)(11). TSS and Oil and Grease limits for several commingled regulated wastestreams are applied at Outfall 001. Therefore, FGD wastewater from Units 17 and 18 will not be permitted at Internal Outfall 301.

### **Newly Proposed Internal Outfall 401**

Cooling tower blowdown (CTBD) from the new CCGT facility will discharge to the FSB at newly proposed Internal Outfall 401, though during the startup period, discharge will consist of temporary and intermittent discharges of hydrostatic test water and pipe flushing water. CTBD wastewater is subject to the federal effluent guidelines in 40 CFR 423, and sampling for applicable federal effluent guideline parameters will be done prior to commingling with any other wastewaters. The peak flow discharged from Internal Outfall 401 is estimated to be 15.46 MGD.

### **Newly Proposed Internal Outfall 501**

Low volume waste sources from the new CCGT facility will discharge to the FSB at newly proposed Internal Outfall 501, though during the startup period, discharge will consist of temporary and intermittent discharges of hydrostatic test water and pipe flushing water. Low volume waste source wastewater is subject to the federal effluent guidelines in 40 CFR 423, and sampling for applicable federal effluent guideline parameters will be done prior to commingling with any other wastewaters.

For the source water preparatory steps, water will be pumped from the ISB to an ultrafiltration (UF) unit. Most of the UF produced water will be sent to reverse osmosis (RO) and either ion exchange (IX) resin treatment systems or electrodeionization prior to being used in the power generation process for periodic turbine washes. A portion of the UF produced water will be used for miscellaneous facility uses, and some may also be used as quench water for HRSG/boiler blowdown. The miscellaneous uses wastewater will be sent through an oil-water separator prior to commingling with other wastestreams at wastewater collection. The combined blowdown/quench water may serve as a secondary source of makeup water for the cooling towers.

Backwash and/or concentrate (from the UF, RO and IX resin systems or electrodeionization) as well as infrequent clean-in-place wastewaters from the RO will be combined with the oil/water separator effluent and evaporative cooler blowdown at wastewater collection before being sent to the FSB. These wastewaters are also considered low volume waste. It is proposed that the combined discharge from wastewater collection be designated as Outfall 501 with ELG compliance sampling occurring before discharge to the FSB. The peak flow discharged from Internal Outfall 501 is estimated to be 0.88 MGD.

### **Newly Proposed Outfall 014**

The facility is planning on constructing a new Peaker Plant consisting of four natural gas-fired simple cycle combustion turbines (approximately 400 MW) at the facility with full operations anticipated by December 2027. The anticipated location is on land within the facility boundary near the existing landfill.

Available details including a description of wastewater sources, water balances, and projected effluent quality were included in a November 2024 submission of an Antidegradation Applicability Form to IDEM. RMSGS formally requested authorization to discharge wastewater



from the Peaker Unit and area stormwater to Stahlbaum Ditch under a new outfall. This outfall will be referred to as Outfall 014.

Untreated Greensand filter backwash, oil separator treated miscellaneous uses wastewaters, untreated RO associated wastewaters, and untreated evaporative cooler blowdown will be collected in the Wastewater Collection Sump, which will then be discharged to a detention pond. Seasonal variability in generation of wastewater flows is expected. Discharge of evaporative cooler blowdown is only expected in the summer at a flow volume of approximately 0.021 MGD. Approximately 0.142 MGD total of wastewater is anticipated to be discharged into the detention pond in the summer, compared to 0.0086 MGD in the winter. The wastewater will combine with stormwater in the detention pond and discharge to Stahlbaum Ditch via Outfall 014.

### **Outfall 003S**

The discharge from Outfall 003S consists of stormwater associated with industrial activity, including surface water runoff from a perimeter storm water network from the onsite restricted waste landfill. Stormwater flows through vegetation down the capped sides of the closed landfill segments into perimeter ditches which feed the valved runoff pond. No stormwater treatment occurs.

### **Outfall 004S**

The discharge at Outfall 004S consists of stormwater associated with industrial activity. Stormwater flows through wooded area northwest of Waste Disposal Area pond under railroad tracks and perimeter road to Davis Ditch. Outfalls 004S and 005S provide drainage from coal car railroad tracks exiting the plant and the perimeter security road. The drainage area also includes the emergency overflow spillway of the Waste Disposal Area pond. No stormwater treatment occurs. Outfall 004S is considered representative of Outfalls 005S and 006S.

### **Outfall 005S**

Stormwater associated with industrial activity is discharged at Outfall 005S. Specifically, the stormwater includes drainage from coal car tracks exiting the plant and the perimeter security road. The drainage area also includes the emergency overflow spillway of the Waste Disposal Area pond. No stormwater treatment occurs.

### **Outfall 006S**

Discharge at Outfall 006S consists of stormwater associated with industrial activity. Stormwater flows through the grassy area northwest of the ISB along and under perimeter road to Davis Ditch. The drainage area includes drainage of the perimeter security road and emergency overflow from the ISB. Outfall 006S provides drainage for a different section of the perimeter security road than Outfalls 004S and 005S. No stormwater treatment occurs.



## **Outfall 007S**

Stormwater associated with industrial activity is discharged at Outfall 007S, including roof drain runoff and stormwater collected from the area surrounding the main buildings of the generating facility. Stormwater flows through gravel areas to an underground 36" pipe, and no stormwater treatment occurs.

Water Balance Diagram of current (Figure 2a) and future (Figure 2b) flows to Outfall 001 has been included below. A flow diagram for the Internal Outfall 201 Wastewater Treatment System is provided in Figure 3. A Peaker Plant Water Balance Diagram is included in Figure 4. The Combined Cycle Gas Turbine Overview Process Flow Diagram is included in Figure 5.

The permittee shall have the wastewater treatment facilities under the responsible charge of an operator certified by the Commissioner in a classification corresponding to the classification of the wastewater treatment plant as required by IC 13-18-11-11 and 327 IAC 5-23-6.

IDEM has given the permittee a Class D industrial wastewater treatment plant classification.

Figure 2a: Current Water Balance Diagram to Outfall 001

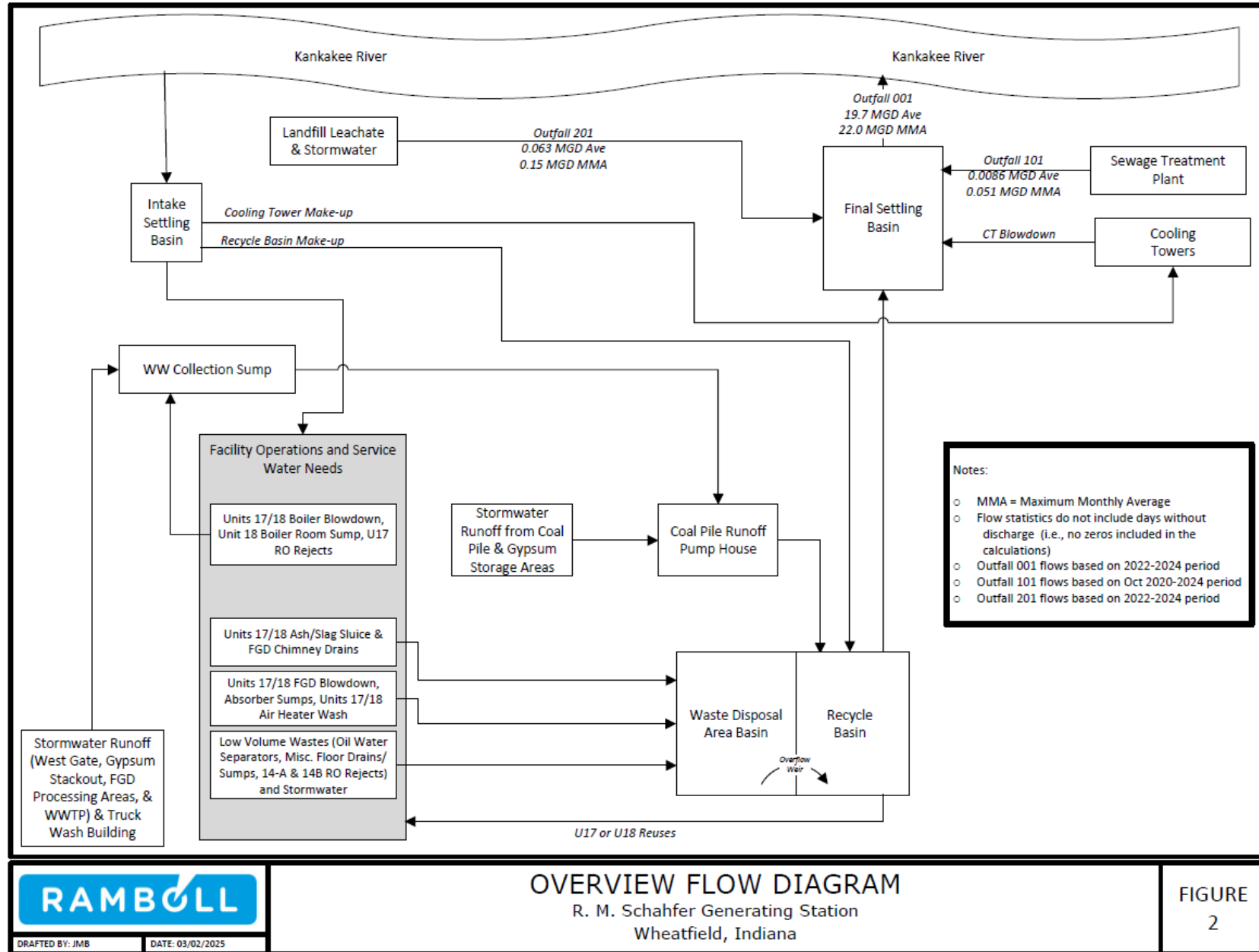
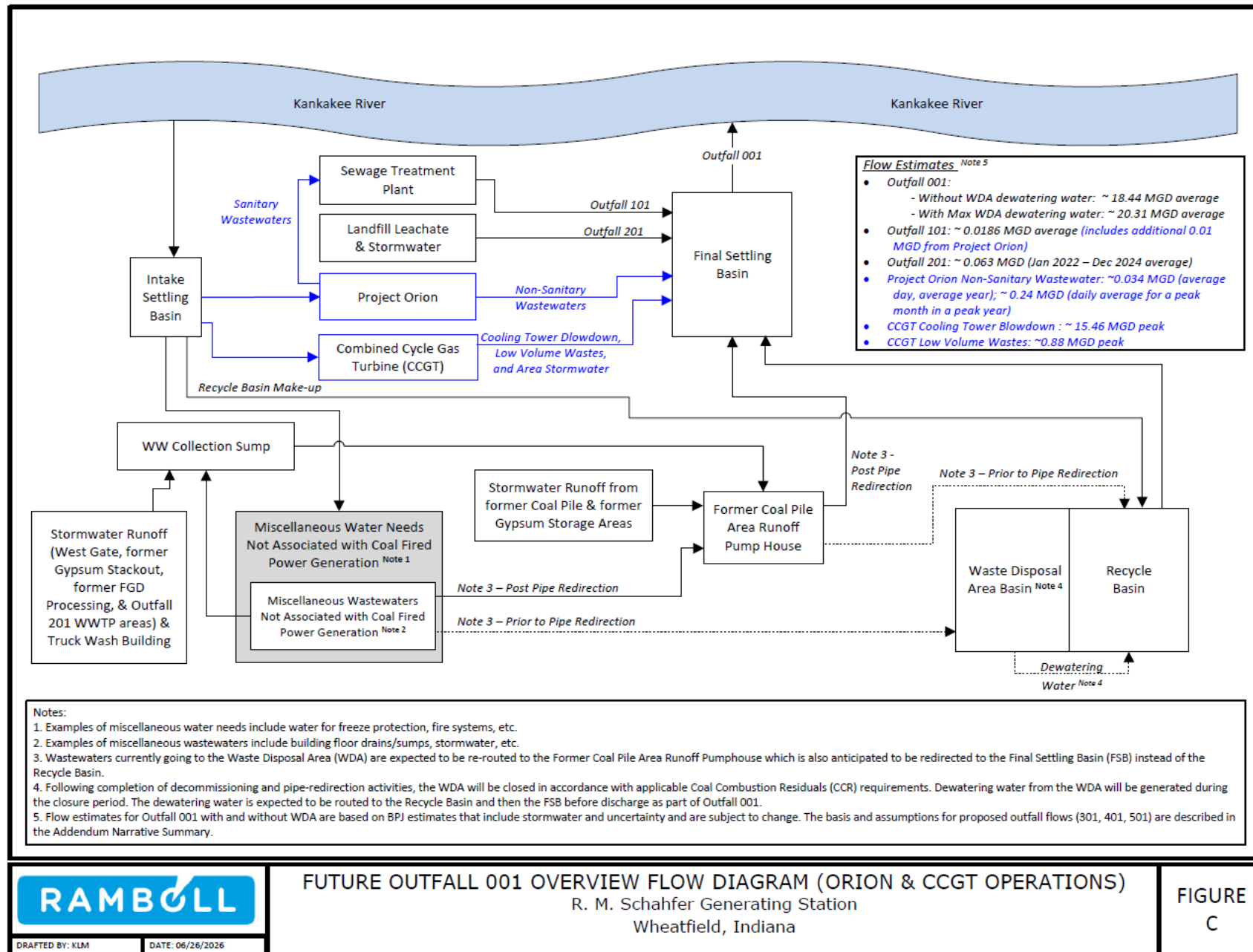


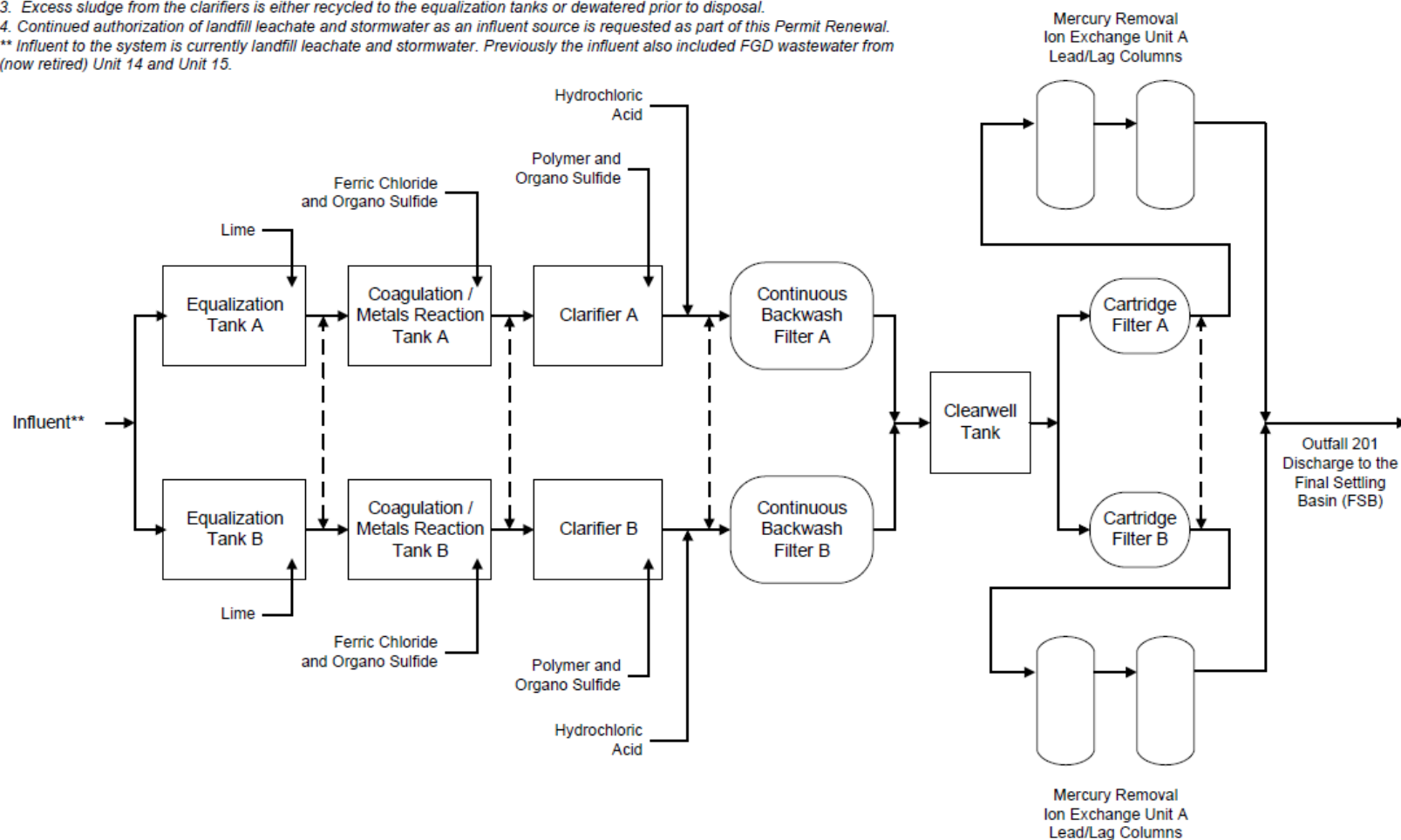
Figure 2b: Future Water Balance Diagram to Outfall 001



**Figure 3: Internal Outfall 201 Wastewater Treatment System**

**Notes:**

1. The figure is not intended to show all details, but provides an overview of the treatment system. For example, associated backwash flows and filter press water are also recycled to or sent to the equalization tanks.
  2. The treatment system design includes redundancy and interconnectivity (dashed lines).
  3. Excess sludge from the clarifiers is either recycled to the equalization tanks or dewatered prior to disposal.
  4. Continued authorization of landfill leachate and stormwater as an influent source is requested as part of this Permit Renewal.
- \*\* Influent to the system is currently landfill leachate and stormwater. Previously the influent also included FGD wastewater from (now retired) Unit 14 and Unit 15.



Prepared for:

**R.M. Schahfer Generating Station**  
**NPDES Permit IN0053201**

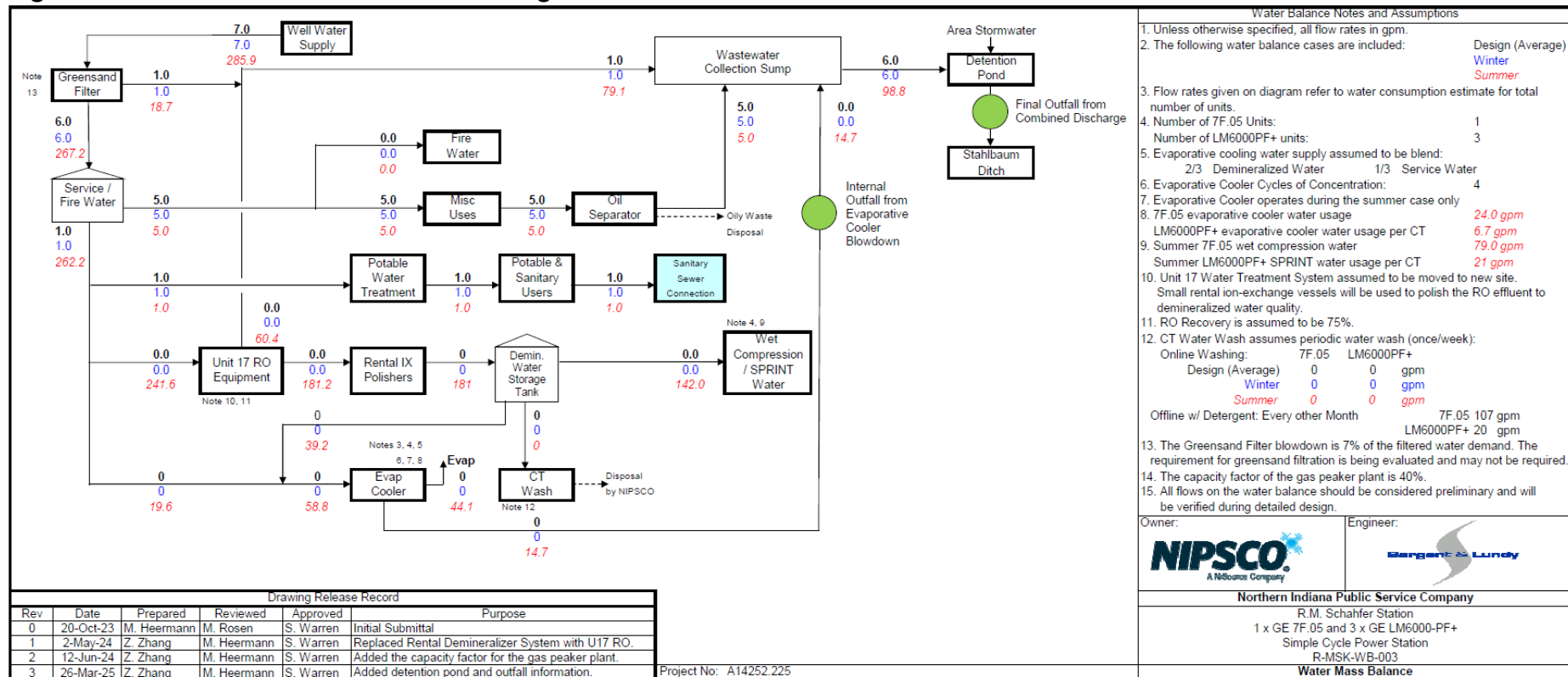
Prepared by:



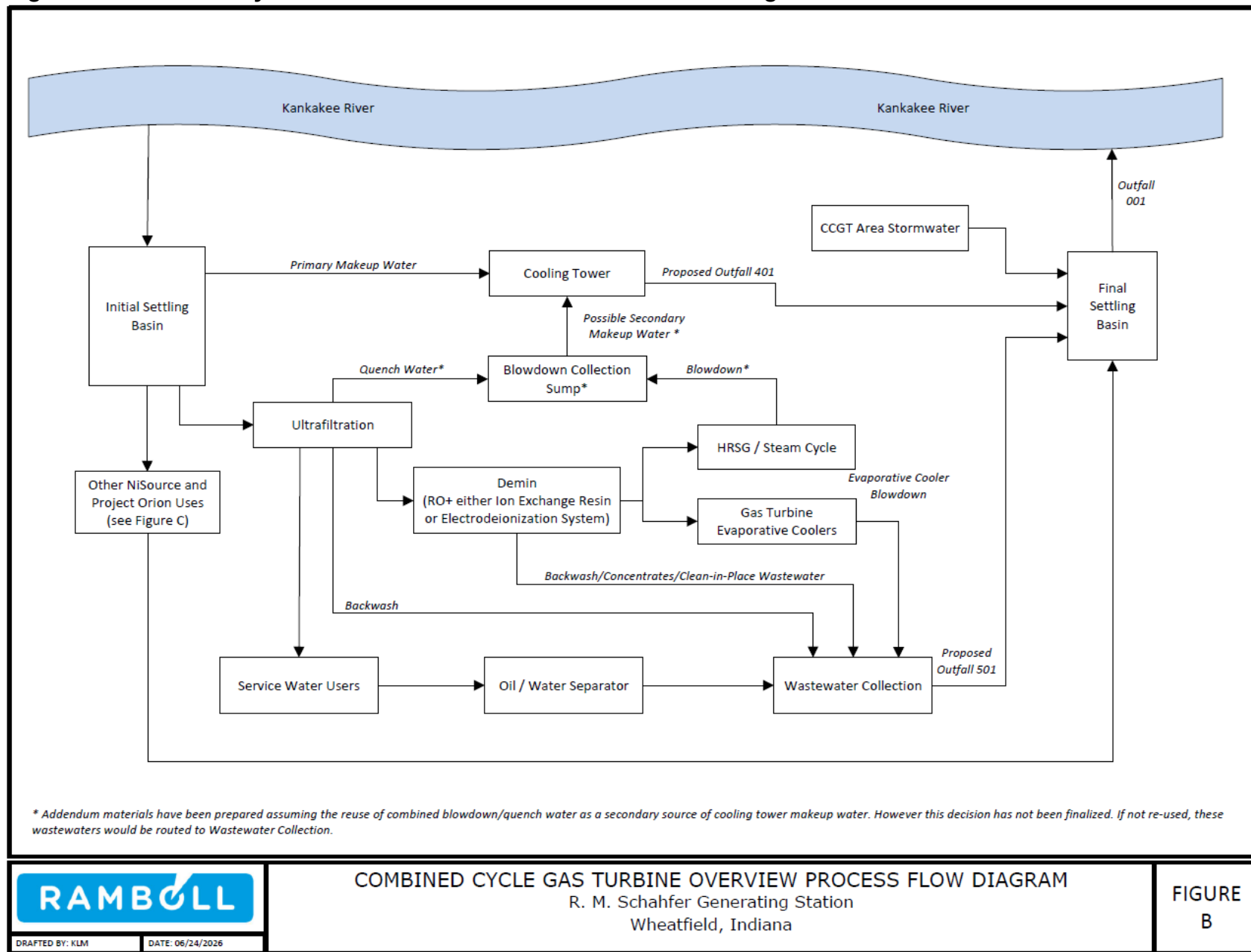
**FIGURE 3.**  
**Treatment Schematic for the Outfall 201**  
**Wastewater Treatment System**

Rev 02/28/2025

**Figure 4: Peaker Plant Water Balance Diagram**



**Figure 5: Combined Cycle Gas Turbine Overview Process Flow Diagram**



## **2.4 Changes in Operation**

Coal-fired Units 14 and 15 were retired by October 1, 2021, and fully decommissioned following shutdown. The facility planned to retire Units 17 and 18 by December 31, 2025, but received a Department of Energy 202(c) order to keep the units operational. Retirement of Units 16A and 16B is not planned until the end of 2027.

In addition, the facility filed a timely Notice of Planned Participation (NOPP) under 40 CFR 423.19(g) for units that will achieve permanent cessation of coal combustion (PCCC) by December 31, 2028. This filing redefined the applicable BAT ELGs for FGD wastewater and bottom ash transport water. In 2024, there were revisions to the ELGs that added a new subcategory: units that will achieve PCCC by 2034. RMSGS filed a new NOPP in accordance with 40 CFR 423.19(h) for the new subcategory on October 29, 2025. This filing redefined the applicable BAT ELGs for combustion residual leachate.

Furthermore, three new projects are expected to be implemented within this permit cycle. These projects include a new natural gas Peaker Plant, a data center that will be owned and operated by a third party on the third party property adjacent to the RMSGS property, and a combined cycle gas turbine (CCGT) facility that will be constructed and operated by GenCo and located on the RMSGS property. The CCGT facility will include four new CCGTs (Unit 21A, Unit 21B, Unit 22A, and Unit 22B).

Implementation of plans for construction of the Peaker Plant on-site is underway with full operations expected by December 2027. The anticipated start date for the data center discharge is the 2<sup>nd</sup> quarter of 2027. For the CCGT facility, the anticipated start date for simple cycle operation is in 2029, one combined cycle block is anticipated to be online in 2030, and both combined cycle blocks are expected to be fully operational sometime in late 2030 or 2031.

Separate but related to the NPDES Permit, RMSGS has started closure activities for on-site (CCR) impoundments. Closure of the Multi-Cell Unit is currently underway; dewatering is complete and revegetation activities are underway. Associated CCR material is handled by the on-site restricted waste landfill. Closure activities for the Waste Disposal Area were anticipated to start in late 2026 but have been delayed due to the Department of Energy 202(c) order extending the operation of Units 17 and 18. However, temporary dewatering of CCR impoundments is still expected to occur within the permit term.

## **2.5 Facility Stormwater**

The facility is located within a mile of the Kankakee River with shallow groundwater and a potential for periodic flooding. It has been identified that the groundwater in the area of the Restricted Waste Site Type I Landfill (RWS I), that historically accepted FGD Sludge and Coal Ash, has been impacted by a showing of elevated levels of sodium, sulfate, and specific conductance.

The shallow groundwater has the potential to discharge to surface water by way of the two (2) primary drainage ditches (Stalbaum Ditch and Davis Ditch) that flow through the property. Therefore, Outfalls 004S and 007S, and Stream Monitoring Sites (SMS) 010S and 011S shall monitor stormwater in Davis Ditch. Outfall 004S discharge shall be representative of discharge from Outfalls 005S and 006S. Additionally, Outfall 003S, SMS 012S, and SMS 013S shall monitor for stormwater in Stalbaum Ditch.

Outfalls 004S and 005S provide drainage from coal car tracks exiting the plant and the perimeter security road. Outfall 006S provides drainage for a different section of the perimeter security road and emergency overflow from the Intake Settling Basin. Outfall 007S consists of roof drain runoff and storm water collected from the area surrounding the main buildings of the generating facility. Outfall 003S is surface water runoff from a perimeter stormwater network from the onsite restricted waste landfill. To date, no discharge from Outfall 003S has been reported.

| Location | Coordinates                                           | Description                   |
|----------|-------------------------------------------------------|-------------------------------|
| SMS 010S | Latitude: 41° 12' 5.22"<br>Longitude: -87° 00' 56.4"  | Stormwater in Davis Ditch     |
| SMS 011S | Latitude: 41° 13' 19.21"<br>Longitude: -87° 01' 47.3" | Stormwater in Davis Ditch     |
| SMS 012S | Latitude: 41° 12' 29.88"<br>Longitude: -87° 00' 3.9"  | Stormwater in Stahlbaum Ditch |
| SMS 013S | Latitude: 41° 13' 24.52"<br>Longitude: -87° 01' 21.3" | Stormwater in Stahlbaum Ditch |

In addition, CCGT area stormwater will be directed to the FSB for discharge via Outfall 001/002. Project Orion area stormwater will not be directed to the FSB as is not considered stormwater associated with industrial activity and will instead be managed directly by Project Orion in accordance with the Jasper County Drainage Board requirements.

### 3.0 PERMIT HISTORY

#### 3.1 Compliance History

A review of this facility's discharge monitoring data was conducted for compliance verification. This review indicates the permit limitation violations in the table below between October 2020 and June 2026. There are no pending or current enforcement actions regarding this permit.

| Outfall | Parameter      | Dates of Violation       |
|---------|----------------|--------------------------|
| 001     | pH             | September 2024           |
| 101     | TSS            | October 2025, April 2026 |
|         | <i>E. coli</i> | April 2026               |
| 201     | TSS            | April 2026               |



## 4.0 LOCATION OF DISCHARGE/RECEIVING WATER USE DESIGNATION

---

The receiving stream for Outfalls 001 and 002 is the Kankakee River, and the receiving stream for Outfall 014 is Stalbaum Ditch. The  $Q_{7,10}$  low flow value of the Kankakee River is 294 cfs and Stalbaum Ditch is 0.0 cfs. These receiving streams shall be capable of supporting a well-balanced, warm water aquatic community and full body contact recreation in accordance with 327 IAC 2-1-3.

Shallow groundwater has the potential to discharge to surface water by way of two (2) primary drainage ditches (Stalbaum Ditch and Davis Ditch) that flow through the property and into the Kankakee River. The  $Q_{7,10}$  low flow value of Davis Ditch is 0.0 cfs.

The permittee discharges to a waterbody that has been identified as a water of the state that is not within the Great Lakes system. Therefore it is subject to NPDES requirements specific to dischargers not discharging to waters within the Great Lakes system under 327 IAC 2-1 and 327 IAC 5-2-11.1. These rules contain applicable water quality standards and the procedures to calculate and incorporate water quality-based effluent limitations.

### 4.1 Total Maximum Daily Loads (TMDLs)

Section 303(d) of the Clean Water Act requires states to identify waters, through their Section 305(b) water quality assessments, that do not or are not expected to meet applicable water quality standards with federal technology based standards alone. States are also required to develop a priority ranking for these waters taking into account the severity of the pollution and the designated uses of the waters. Once this listing and ranking of impaired waters is completed, the states are required to develop TMDLs for these waters in order to achieve compliance with the water quality standards. Indiana's 2024 303(d) List of Impaired Waters was developed in accordance with Indiana's Water Quality Assessment and 303(d) Listing Methodology for Waterbody Impairments and Total Maximum Daily Load Development for the 2024 Cycle.

The Kankakee River, Assessment-Unit INK0189\_02, HUC 071200010809, is on the 2024 303(d) list for impairments (biological integrity and PCBs in fish tissue). A TMDL for the Kankakee/Iroquois River Watershed has been developed for *Escherichia coli* bacteria (*E. coli*). U.S. EPA under Section 303(d) of the Clean Water Act approved the Kankakee/Iroquois River Watershed TMDL report on September 29, 2009 for 80 impairments. TMDL reports identify and evaluate water quality problems in impaired water bodies and propose solutions to bring those waters into attainment with water quality standards.

Stalbaum Ditch and Davis Ditch (Assessment-Units INK0189\_T1004 and INK0189\_T1009, respectively; HUC 071200010809) are not on the 2024 303(d) list for impairments and TMDLs are not currently planned for these streams.

## 5.0 PERMIT LIMITATIONS

---

### 5.1 Technology-Based Effluent Limits (TBELs)

EPA develops effluent limitations guidelines (ELGs) for industrial and commercial activities as required by the Clean Water Act (CWA). ELGs are technology-based effluent limits (TBELs). TBELs established pursuant to sections 301(b), 304, and 306 of the CWA represent the minimum level of treatment for industrial point sources that must be included in an NPDES permit (327 IAC 5-5-2(a)). The federal effluent guidelines and standards are located at 40 CFR 403 through 471, inclusive, and are incorporated into Indiana law at 327 IAC 5-2-1.5. In Indiana, NPDES permits are required to ensure compliance with these federal ELGs under 327 IAC 5-2-10(a)(1), 327 IAC 5-2-10(a)(2), and 327 IAC 5-5-2.

In the absence of ELGs for a particular process or parameter, TBELs can also be established on a case-by-case basis for a particular process or parameter using best professional judgment (BPJ) in accordance with 327 IAC 5-5-2 and 5-2-10 (see also 40 CFR 122.44 and 125.3, and Section 402(a)(1) of the CWA).

The applicable technology-based standards for the facility are contained in 40 CFR 423 – Steam Electric Point Source Category. Since Outfall 001/002 and Internal Outfall 201 at this facility are classified as “existing point sources”, discharges from these outfalls are subject to effluent guidelines identified in 40 CFR 423.12, Best Practicable Control Technology (BPT) and 40 CFR 423.13, Best Available Control Technology (BAT). Discharges from the new Peaker Plant and CCGT facility will be subject to effluent guidelines identified in 40 CFR 423.15, New Source Performance Standards (NSPS).

The applicable effluent guidelines subparts and limitations are included in the tables below.

#### Applicable ELG Subparts

| Outfall                    | Subpart                                                                                                                                                                                      | Description                                                                                                   |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| 001/002, 201, 401, and 501 | 40 CFR 423.12(b)(1) and (2), 40 CFR 423.15(b)(1) and (2)                                                                                                                                     | pH control and Polychlorinated biphenyl (PCB)                                                                 |
| 001/002                    | 40 CFR 423.12(b)(3), 40 CFR 423.12(b)(9) and (10), 40 CFR 423.12(b)(4), 40 CFR 423.13(k)(2)(ii), 40 CFR 423.12(b)(7) and (8), 40 CFR 423.13(d), 40 CFR 423.12(b)(11), 40 CFR 423.13(g)(2)(i) | Low volume waste source, Coal pile runoff, Bottom ash transport water, Cooling tower blowdown, FGD wastewater |
| 201                        | 40 CFR 423.12(b)(11), 40 CFR 423.13(l)(2)(i)(A)                                                                                                                                              | Combustion residual leachate                                                                                  |
| 401                        | 40 CFR 423.15(b)(10)                                                                                                                                                                         | Cooling tower blowdown                                                                                        |
| 501                        | 40 CFR 423.15(b)(3)                                                                                                                                                                          | Low volume waste source                                                                                       |
| 014                        | 40 CFR 423.15(b)(1), (2), and (3)                                                                                                                                                            | pH control and Polychlorinated biphenyl (PCB), Low volume waste source                                        |

## Applicable Effluent Guidelines Limitations from 40 CFR 423

| Pollutants from ELGs              |             | Wastewater Stream*                            |                               |                                            |                                                |                                |                                          |
|-----------------------------------|-------------|-----------------------------------------------|-------------------------------|--------------------------------------------|------------------------------------------------|--------------------------------|------------------------------------------|
|                                   |             | Low volume waste source<br>(001/002, 501,014) | Coal pile runoff<br>(001/002) | Bottom ash<br>transport water<br>(001/002) | Cooling tower<br>blowdown***<br>(001/002, 401) | FGD<br>wastewater<br>(001/002) | Combustion<br>residual leachate<br>(201) |
| TSS (mg/l)                        | Daily Max   | 100                                           | 50**                          | 100                                        | n/a                                            | 100                            | 100                                      |
|                                   | Monthly Avg | 30                                            | n/a                           | 30                                         | n/a                                            | 30                             | 30                                       |
| O&G (mg/l)                        | Daily Max   | 20                                            | n/a                           | 20                                         | n/a                                            | 20                             | 20                                       |
|                                   | Monthly Avg | 15                                            | n/a                           | 15                                         | n/a                                            | 15                             | 15                                       |
| Arsenic (µg/l)                    | Daily Max   | n/a                                           | n/a                           | n/a                                        | n/a                                            | n/a                            | 11                                       |
|                                   | Monthly Avg | n/a                                           | n/a                           | n/a                                        | n/a                                            | n/a                            | 8                                        |
| Mercury (ng/l)                    | Daily Max   | n/a                                           | n/a                           | n/a                                        | n/a                                            | n/a                            | 788                                      |
|                                   | Monthly Avg | n/a                                           | n/a                           | n/a                                        | n/a                                            | n/a                            | 356                                      |
| Free Available<br>Chlorine (mg/l) | Daily Max   | n/a                                           | n/a                           | n/a                                        | 0.5                                            | n/a                            | n/a                                      |
|                                   | Monthly Avg | n/a                                           | n/a                           | n/a                                        | 0.2                                            | n/a                            | n/a                                      |
| Total Zinc<br>(mg/l)              | Daily Max   | n/a                                           | n/a                           | n/a                                        | 1.0                                            | n/a                            | n/a                                      |
|                                   | Monthly Avg | n/a                                           | n/a                           | n/a                                        | 1.0                                            | n/a                            | n/a                                      |
| Total<br>Chromium<br>(mg/l)       | Daily Max   | n/a                                           | n/a                           | n/a                                        | 0.2                                            | n/a                            | n/a                                      |
|                                   | Monthly Avg | n/a                                           | n/a                           | n/a                                        | 0.2                                            | n/a                            | n/a                                      |
| pH                                |             | ≥ 6.0 s.u. and ≤ 9.0 s.u.                     |                               |                                            |                                                |                                |                                          |

\*When wastewater streams are combined for discharge and/or treatment 40 CFR 423 requires that the quantity of each pollutant or pollutant property controlled by these subparts attributable to each controlled waste source shall not exceed the specified limitations for that waste source.

\*\*This value is an instantaneous limitation (at any time), not a daily maximum

\*\*\*No detectable amount of the 126 pollutants contained in chemicals added for cooling tower maintenance, except total chromium and total zinc. Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or State, if the State has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

## **5.2 Water Quality-Based Effluent Limits (WQBELs)**

WQBELs are designed to be protective of the beneficial uses of the receiving water and are independent of the available treatment technology. The WQBELs for this facility are based on water quality criteria in 327 IAC 2-1-6 or developed under the procedures described in 327 IAC 2-1-8.2 through 8.7 and 327 IAC 2-1-8.9, and implementation procedures in 327 IAC 5. Limitations are required for any parameter which has the reasonable potential to exceed a water quality criterion as determined using the procedures under 327 IAC 5-2-11.1(h).

## **5.3 Effluent Limitations and Monitoring Requirements by Outfall**

Under 327 IAC 5-2-10(a) (see also 40 CFR 122.44), NPDES permit requirements are technology-based effluent limitations and standards (including TBELs based on federal effluent limitations guidelines or developed on a case-by-case basis using BPJ, where applicable), water quality standards-based, or based on other more stringent requirements. The decision to limit or monitor the parameters contained in this permit is based on information contained in the permittee's NPDES application and other available information relating to the facility and the receiving waterbody as well as the applicable federal effluent limitations guidelines. In addition, when renewing a permit, the existing permit limits, the antibacksliding requirements under 327 IAC 5-2-10(a)(11), and the antidegradation requirements under 327 IAC 2-1.3 must be considered.

### **5.3.1 All Outfalls (001/002, 101, 201, 401, 501, 014, 003S, 004S, 007S, 010S, 011S, 012S, and 013S)**

#### ***Flow***

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

### **5.3.2 All External Outfalls (001/002, 014)**

#### ***Narrative Water Quality Based Limits***

The narrative water quality criteria contained under 327 IAC 2-1-6(a)(1) and (2) have been included in this permit to ensure that these minimum water quality conditions are met.

#### ***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).

### **5.3.3 Outfalls 001 and 002**

#### ***Intake Flow***

The actual intake flows must be measured at a minimum frequency of daily in accordance with 40 CFR 125.94.

#### ***Intake Velocity***

The actual intake velocity must be measured or calculated at a minimum frequency of daily. The permittee must maintain an actual through-screen velocity of 0.5 feet per second (fps) or less in accordance with 40 CFR 125.94(c)(3).

#### ***Cycles of Concentration***

The cycles of concentration of the Unit 17 and 18 cooling towers must be measured at a minimum frequency of daily. COC serve as an indicator of minimized makeup flows, and thus may be used by IDEM when assessing performance of a particular closed-cycle recirculating cooling system (CCRS).

#### ***Temperature***

Effluent Limitations for temperature are based on the criteria established in 327 IAC 2-1-6(b)(4).

#### ***Total Suspended Solids (TSS)***

The ELGs for low volume waste sources, bottom ash transport water, FGD wastewater, and combustion residual leachate include TSS limitations of 100 mg/l daily maximum and 30 mg/l monthly average, while the coal pile run off ELGs have a 50 mg/l instantaneous maximum limitation for TSS. The building block approach was used to account for the different wastestreams regulated for TSS or containing TSS as well as any dilution wastestreams (recycle basin makeup water) that discharge through Outfall 001.

Although coal pile runoff is a regulated wastestream for TSS, it only has an instantaneous maximum limitation for TSS per the ELGs. Therefore, the instantaneous maximum of 50 mg/l was applied for the daily maximum TSS concentration allocation for coal pile runoff. Since coal pile runoff does not have a monthly average TSS limit in the ELGs, it was given the same monthly average concentration allocation as the regulated wastestreams with a 30 mg/l monthly average limit for TSS.

Wastestreams that carry TSS but are not regulated wastestreams for TSS per the ELGs (cooling tower blowdown and stormwater) were given the same daily maximum and monthly average allocations for TSS that the regulated wastestreams were given (100 mg/l and 30 mg/l, respectively). TSS allocations for the sanitary wastewater from Internal Outfall 101 were based on the secondary treatment limits at 40 CFR 133.102(b) and are 45 mg/l daily maximum and 30 mg/l monthly average.

The limits calculated for TSS using the building block approach are a daily maximum of 95 mg/l and monthly average of 29 mg/l. These calculations are shown below:

### Building Block Approach for TSS at Outfall 001

| Source                                                    | Flow (MGD) | Designation | Concentration (mg/l) |             | CiFi      |             |
|-----------------------------------------------------------|------------|-------------|----------------------|-------------|-----------|-------------|
|                                                           |            |             | Daily Max            | Monthly Avg | Daily Max | Monthly Avg |
| Low Volume Waste                                          | 1.69       | Regulated   | 100                  | 30          | 169       | 50.7        |
| Bottom Ash Transport Water                                | 0.68       | Regulated   | 100                  | 30          | 68        | 20.4        |
| Coal Pile Runoff                                          | 0.124      | Regulated   | 50                   | 30          | 6.2       | 3.72        |
| 17/18 FGD Wastewater                                      | 1.10       | Regulated   | 100                  | 30          | 110       | 33          |
| Outfall 101 (Treated Sanitary)                            | 0.009      | Unregulated | 45                   | 30          | 0.405     | 0.27        |
| Outfall 201 (Treated Landfill Leachate)                   | 0.043      | Regulated   | 100                  | 30          | 4.3       | 1.29        |
| Cooling Tower Blowdown                                    | 3.20       | Unregulated | 100                  | 30          | 320       | 96          |
| Other Stormwater                                          | 1.45       | Unregulated | 100                  | 30          | 145       | 43.5        |
| Recycle Basin Makeup water from the Intake Settling Basin | 0.33       | Dilute      | 0                    | 0           | 0         | 0           |
| Total Flow:                                               |            | 8.63        | $\Sigma$ CiFi:       |             | 822.905   | 248.88      |

|                           |    |
|---------------------------|----|
| Daily Max Limit (mg/l):   | 95 |
| Monthly Avg Limit (mg/l): | 29 |

### Oil and Grease (O & G)

The ELGs for O&G for each of the regulated contributing wastestreams (low volume waste sources, bottom ash transport water, FGD wastewater, and combustion residual leachate) are the same with a 20 mg/l daily maximum and a 15 mg/l monthly average. The dilution wastestreams for O&G that discharge through Outfall 001 include sanitary wastewater, cooling tower blowdown, stormwater, coal pile runoff, and recycle basin makeup water. The building block approach was used to account for the different wastestreams regulated for O&G as well as any dilution wastestreams that discharge through Outfall 001.

The limits calculated for O&G using the building block approach are a daily maximum of 8.1 mg/l and monthly average of 6.1 mg/l. These calculations are shown below:

### Building Block Approach for Oil and Grease at Outfall 001

| Source                                                    | Flow (MGD) | Designation | Concentration (mg/l) |             | CiFi      |             |
|-----------------------------------------------------------|------------|-------------|----------------------|-------------|-----------|-------------|
|                                                           |            |             | Daily Max            | Monthly Avg | Daily Max | Monthly Avg |
| Low Volume Waste                                          | 1.69       | Regulated   | 20                   | 15          | 33.8      | 25.35       |
| Bottom Ash Transport Water                                | 0.68       | Regulated   | 20                   | 15          | 13.6      | 10.2        |
| Coal Pile Runoff                                          | 0.124      | Dilute      | 0                    | 0           | 0         | 0           |
| 17/18 FGD Wastewater                                      | 1.10       | Regulated   | 20                   | 15          | 22        | 16.5        |
| Outfall 101 (Treated Sanitary)                            | 0.009      | Dilute      | 0                    | 0           | 0         | 0           |
| Outfall 201 (Treated Landfill Leachate)                   | 0.043      | Regulated   | 20                   | 15          | 0.86      | 0.645       |
| Cooling Tower Blowdown                                    | 3.20       | Dilute      | 0                    | 0           | 0         | 0           |
| Other Stormwater                                          | 1.45       | Dilute      | 0                    | 0           | 0         | 0           |
| Recycle Basin Makeup water from the Intake Settling Basin | 0.33       | Dilute      | 0                    | 0           | 0         | 0           |
| Total Flow:                                               |            | 8.63        | $\Sigma$ CiFi:       |             | 70.26     | 52.695      |

|                           |     |
|---------------------------|-----|
| Daily Max Limit (mg/l):   | 8.1 |
| Monthly Avg Limit (mg/l): | 6.1 |

### Total Chromium

Monitoring requirements and effluent limitations have been retained from the previous permit for Total Chromium. These limits are technology-based from 40 CFR 423.13(d)(1) for discharges from cooling tower blowdown. The effluent limitations have been retained from the previous permit in accordance with antibacksliding regulations. The permittee is required to meet a daily maximum limit of 0.2 mg/l for Total Chromium.

### Total Zinc

The previous permit applied WQBELs calculated from a 2004 RPE analysis that showed zinc was discharged at levels to have a reasonable potential to exceed a water quality criterion for zinc. The WQBELs are more stringent than the TBELs from 40 CFR 423.13(d)(1) for discharges from cooling tower blowdown. Therefore, the effluent limitations have been retained from the previous permit and are 0.604 mg/l daily maximum and 0.301 mg/l monthly average.

### Mercury

In 2010, an RPE analysis showed that mercury was discharged at levels to have a reasonable potential to exceed a water quality criterion for mercury. The effluent limitations have been retained from the previous permit due to the source and nature of the wastewater. The limits are 20.0 ng/l daily maximum and 12.0 ng/l monthly average.

## ***Sulfate***

In 2004, a reasonable potential to exceed (RPE) analysis showed that sulfate was discharged at levels to have a reasonable potential to exceed a water quality criterion for sulfate. These effluent limitations are included in the permit because sulfate is a significant component of the landfill waste material. The effluent limitations have been retained from the previous permit due to the source and nature of the wastewater and are 1,501 mg/l daily maximum and 748 mg/l monthly average.

### ***Total Residual Chlorine (TRC) – Continuous***

The limits for continuous total residual chlorine are retained from the previous permit and are based on the water quality standards in 327 IAC 2-1-6. The limits are 0.02 mg/l monthly average and 0.04 mg/l daily maximum. The WQBELs for chlorine are less than the limit of quantitation (LOQ) of 0.06 mg/l. The permittee will be considered in compliance with the permit limits if the effluent concentrations measured are less than the LOQ of 0.06 mg/l.

### ***Total Residual Chlorine (TRC) – Intermittent***

The intermittent TRC limit of 0.2 mg/l daily maximum has been retained from the previous permit and is based on 327 IAC 2-1-6. To be considered an intermittent discharge, total residual chlorine shall not be detected in the discharge from any single generating unit for a period of more than forty (40) minutes in duration, and such periods shall be separated by at least five (5) hours. The permittee is limited to no more than four (4) chlorination cycles per day. The intermittent TRC limitations were developed for the control of zebra mussels.

### ***Chlorination – Frequency***

The monitoring of chlorination frequency applies only when the facility is chlorinating intermittently. The permit requires the permittee to provide a monthly report on the “times per day” the permittee is intermittently chlorinating. The permittee is limited to no more than four (4) chlorination cycles per day.

### ***Chlorination – Duration***

The monitoring for duration of chlorination dose applies only when the facility is chlorinating intermittently. The permit requires the permittee to provide a monthly report on the number of minutes per chlorination cycle the permittee is chlorinating intermittently. The permittee is limited to no more than forty (40) minutes per chlorination cycle.



## ***Iron***

The permittee provided future estimated Outfall 001 parameter concentrations with Project Orion and the CCGT facility in operation as part of their April 10, 2026, addendum to the NPDES permit renewal application. Based on these data, iron was identified as a pollutant of concern and thus monitoring requirements for iron have been included in the permit at Outfall 001 to determine if there is a reasonable potential to exceed a water quality criterion for iron.

## ***Ammonia (as N), Arsenic, Boron, Chloride, Manganese, Selenium, Nitrate/Nitrite***

IDEM identified the following as pollutants of concern for the facility's FGD wastewater: Ammonia, Arsenic, Boron, Chloride, Manganese, Selenium, and Nitrate/Nitrite. The monitoring requirements for these parameters have been retained in this permit in accordance with 40 CFR Part 423.

## ***Cadmium, Lead, Calcium, Total Dissolved Solids (TDS), Fluoride, Antimony, Barium, Beryllium, Cobalt, Lithium, Molybdenum, Thallium, Radium 226 and 228 combined***

In conjunction with other facilities discharging coal combustion residuals, monitoring is proposed for the above parameters 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 available.

Calcium, fluoride, and total dissolved solids (TDS) were selected for monitoring based on the list of constituents for detection monitoring of CCR contaminants found in 40 CFR 257 Appendix III. Boron, sulfate, and chloride are also found on this list in 40 CFR 257 Appendix III, thus monitoring of these pollutants has been retained.

Antimony, barium, beryllium, cadmium, cobalt, lead, lithium, molybdenum, thallium, and radium 226 and 228 combined were selected for monitoring based on the list of constituents for assessment monitoring of CCR contaminants found in 40 CFR 257 Appendix IV. Arsenic, chromium, mercury, and selenium are also CCR contaminants found in 40 CFR 257 Appendix IV, thus monitoring of these pollutants has been retained.

## ***126 Priority Pollutants***

40 CFR 423.13(d)(1) prohibits the discharge of the 126 priority pollutants (listed in Appendix A of the regulations, except chromium and zinc (which have specific numeric limits) in detectable amounts due to chemicals added for cooling tower maintenance. in detectable amounts. 40 CFR 423.13(d)(3) states that, at the permitting authority's discretion, compliance with the limitations for the 126 priority pollutants in paragraph (d)(1) of this section may be determined by engineering calculations which demonstrate that the regulated pollutants (except chromium and zinc) are not detectable (due to the use of cooling tower chemicals) in the final discharge by the analytical methods in 40 CFR part 136.

As part of this permit renewal, the permittee has submitted information that demonstrates the 126 priority pollutants (except chromium and zinc which have specific numeric limits) are not detectable in the final discharge due to the use of cooling tower chemicals.

#### **5.3.4 Internal Outfall 101**

##### ***CBOD<sub>5</sub> and TSS***

Effluent limitations for CBOD<sub>5</sub> and TSS were established using BPJ and are based on 40 CFR 133 and 327 IAC 5-10-5: Small Sanitary Discharge.

##### ***E. coli***

The *E. coli* limitations are set in accordance with regulations specified in 327 IAC 5-10-6.

#### **5.3.5 Internal Outfall 201**

##### ***Total Suspended Solids (TSS)***

TSS limitations are based upon 40 CFR 423.12(b)(11) and are 100.0 mg/l daily maximum and 30.0 mg/l monthly average.

##### ***Oil and Grease (O&G)***

The proposed O & G limitations are based upon 40 CFR 423.12(b)(11) and are 20.0 mg/l daily maximum and 15.0 mg/l monthly average.

##### ***Arsenic***

Arsenic limitations are based upon 40 CFR 423.13(l)(2)(i)(A) and are 11 ug/l daily maximum and 8 ug/l monthly average. As allowed by the ELG, the permittee must comply with the limits as soon as possible beginning 120 days after the facility permanently ceases coal combustion, but no later than April 30, 2035. The permittee must notify IDEM, Office of Water Quality, Compliance Data Section within 30 days of the facility permanently ceasing coal combustion. Monitoring of arsenic will be required in the meantime.

##### ***Mercury***

Mercury limitations are based upon 40 CFR 423.13(l)(2)(i)(A) and are 788 ng/l daily maximum and 356 ng/l monthly average. As allowed by the ELG, the permittee must comply with the limits as soon as possible beginning 120 days after the facility permanently ceases coal combustion, but no later than April 30, 2035. The permittee must notify IDEM, Office of Water Quality, Compliance Data Section within 30 days of the facility permanently ceasing coal combustion. Monitoring of mercury will be required in the meantime.

## ***pH***

The effluent pH is limited to between 6.0 and 9.0 s.u. pursuant to the BPT requirements established under 40 CFR 423.12(b)(1).

## ***Removal of Selenium, Nitrate/Nitrite (as N), Ammonia (as N), Boron, Chloride, Manganese, and Zinc***

These parameters were previously included in the NPDES permit due to discharge of FGD wastewater at Internal Outfall 201. However, since Units 14 and 15 have been retired, there is no longer discharge of FGD wastewater at this outfall. Therefore, monitoring and limits for these parameters at Internal Outfall 201 have been removed.

### **5.3.6 Internal Outfall 401**

#### ***Cycles of Concentration***

The cycles of concentration of the cooling towers associated with Units 21A/21B and Units 22A/22B must be measured at a minimum frequency of daily. COC serve as an indicator of minimized makeup flows, and thus may be used by IDEM when assessing performance of a particular closed-cycle recirculating cooling system (CCRS).

#### ***Free Available Chlorine***

Monitoring requirements and technology-based effluent limitations from 40 CFR 423.15(b)(10)(i) for Free Available Chlorine have been applied at Internal Outfall 401 due to the discharge of cooling tower blowdown from the CCGT facility. The permittee is required to meet a daily maximum limit of 0.5 mg/l and monthly average limit of 0.2 mg/l for Free Available Chlorine.

#### ***Chlorination Duration per Day***

Pursuant to 40 CFR 423.15(b)(10)(ii), neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Regional Administrator or state, if the state has NPDES permit issuing authority, that the units in a particular location cannot operate at or below this level of chlorination.

#### ***Total Chromium***

Monitoring requirements and technology-based effluent limitations from 40 CFR 423.15(b)(10)(i) for Total Chromium have been applied at Internal Outfall 401 due to the discharge of cooling tower blowdown from the CCGT facility. The permittee is required to meet a daily maximum limit of 0.2 mg/l and monthly average limit of 0.2 mg/l for Total Chromium.

### ***Total Zinc***

Monitoring requirements and technology-based effluent limitations from 40 CFR 423.15(b)(10)(i) for Total Zinc have been applied at Internal Outfall 401 due to the discharge of cooling tower blowdown from the CCGT facility. The permittee is required to meet a daily maximum limit of 1.0 mg/l and monthly average limit of 1.0 mg/l for Total Zinc.

### ***pH***

The effluent pH is limited to between 6.0 and 9.0 s.u. pursuant to the New Source Performance Standards established under 40 CFR 423.15(b)(1).

### ***126 Priority Pollutants***

40 CFR 423.15(b)(10)(iii) prohibits the discharge of the 126 priority pollutants (listed in Appendix A of the regulations, except chromium and zinc (which have specific numeric limits) in detectable amounts due to chemicals added for cooling tower maintenance. in detectable amounts. 40 CFR 423.15(b)(10)(iii) states that, at the permitting authority's discretion, compliance with the limitations for the 126 priority pollutants in paragraph (b)(10)(i) of this section may be determined by engineering calculations which demonstrate that the regulated pollutants (except chromium and zinc) are not detectable (due to the use of cooling tower chemicals) in the final discharge by the analytical methods in 40 CFR part 136.

As part of this permit renewal, the permittee has submitted information that demonstrates the 126 priority pollutants (except chromium and zinc which have specific numeric limits) are not detectable in the final discharge due to the use of cooling tower chemicals.

## **5.3.7 Internal Outfall 501**

### ***Total Suspended Solids (TSS)***

TSS limitations are based upon 40 CFR 423.15(b)(3) and are 100 mg/l daily maximum and 30 mg/l monthly average.

### ***Oil and Grease (O&G)***

The proposed O & G limitations are based upon 40 CFR 423.15(b)(3) and are 20 mg/l daily maximum and 15 mg/l monthly average.

### ***pH***

The effluent pH is limited to between 6.0 and 9.0 s.u. pursuant to the New Source Performance Standards established under 40 CFR 423.15(b)(1).

### **5.3.8 Outfall 014**

#### ***Total Suspended Solids (TSS)***

TSS limitations are based upon 40 CFR 423.15(b)(3) for low volume waste sources and are 100 mg/l daily maximum and 30 mg/l monthly average.

#### ***Oil and Grease (O&G)***

The proposed O & G limitations are based upon 40 CFR 423.15(b)(3) for low volume waste sources and are 20 mg/l daily maximum and 15 mg/l monthly average.

#### ***pH***

The effluent pH is limited to between 6.0 and 9.0 s.u. pursuant to the New Source Performance Standards requirements established under 40 CFR 423.15(b)(1).

#### ***Manganese***

Based on the data provided with the Antidegradation Applicability Form for the new Peaker Plant, manganese is present in the source water (groundwater) for the Peaker Plant, but not at concentrations expected to cause a significant lowering of water quality. Therefore, monitoring has been included for manganese to verify that a significant lowering of water quality does not occur.

#### ***Boron, Chloride, Sulfate, Lithium, and Molybdenum***

For the Peaker Plant operations, groundwater will be sourced from a well about 2,000 feet north of the landfill. There are several OLQ monitoring wells around the landfill and the final pond for the Peaker Plant. NIPSCO provided data from these monitoring wells as an update to their Antidegradation Applicability Form. Based on the deep well data near the landfill, the pollutants listed above are present in the groundwater, but not at concentrations expected to cause a significant lowering of water quality. Therefore, monitoring has been included for these pollutants to verify that a significant lowering of water quality does not occur.

The water quality criteria for chloride and sulfate are hardness dependent under 327 IAC 2-1-6(a)(6). Therefore, hardness should be monitored in conjunction with chloride and sulfate. It is recommended that the permittee monitor hardness during the last year of the permit cycle so that the data may be used in reasonable potential to exceed (RPE) analysis for chloride and sulfate in the next permit renewal. If hardness data is not provided for the next permit renewal, a default hardness value will be used instead for RPE analysis.

### **5.3.9 Stormwater Outfalls 003S, 004S, and 007S; Stream Monitoring Sties 010S, 011S, 012S, and 013S**

***TSS, pH, Oil & Grease (O & G), Arsenic, Cadmium, Chromium, Copper, Lead, Nickel, Selenium, Zinc, and Sulfate***

The above identified parameters are associated with stormwater discharges at this facility. The monitoring requirements for the above-mentioned parameters have been retained from the previous permit.

## **5.4 Whole Effluent Toxicity (WET) Testing**

Whole effluent toxicity (WET) test requirements are included in the NPDES permit to monitor compliance with the narrative water quality criteria under 327 IAC 2-1-6(a)(1)(E) and (a)(2). 327 IAC 2-1-6(a)(1)(E) requires all surface waters at all times and all places, including the mixing zone, to be free from substances, materials, etc. which are in amounts sufficient to be acutely toxic to or to otherwise severely injure or kill aquatic life, other animals, plants, or humans. 327 IAC 2-1-6(2) requires that all waters outside the mixing zone be free of 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. In addition, under 327 IAC 5-2-11.1(h), IDEM is required to determine whether the discharge causes, or has the reasonable potential to cause or contribute to a violation of these narrative water quality criteria.

Therefore, the permittee is required to conduct WET tests to determine the toxicity of the final effluent at Outfall 001. This does not negate the requirement to submit a water treatment additive (WTA) application and/or worksheet for replacement or new additives/chemicals proposed for use at the site.

## **5.5 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.

Outfall 014 is for a proposed new discharge; therefore, antibacksliding regulations do not apply.

The calculated daily maximum and monthly average limits for TSS and monthly average limit for Oil and Grease at Outfall 001 are less stringent than the comparable effluent limitations in the previous permit. However, information was available during this permit renewal that was not available at the time of permit issuance last renewal that would have justified the application of a less stringent effluent limitation at the time of permit issuance. Therefore, under 327 IAC 5-2-10(a)(11)(B), these less stringent limitations do not violate the antibacksliding requirements.

None of the other limits calculated as part of this permit renewal 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).

## **5.6 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 proposes to establish new or increased loading of TSS at Outfall 014 and Oil and Grease at Outfalls 001 and 014. The limitations for TSS and Oil and Grease in this permit were established in accordance with the Tier 1 antidegradation standard to ensure the narrative and numeric water quality criteria applicable to the designated uses are achieved in the water and any designated uses of the downstream water are maintained and protected.

For Outfalls 001 and 002, 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.

## **5.7 Stormwater**

Under 327 IAC 5-4-6(d), if an individual permit is required under 327 IAC 5-4-6(a) for discharges consisting entirely of stormwater, or if an individual permit is required under 327 IAC 5-2-2 that includes discharge of commingled stormwater associated with industrial activity, IDEM may consider the following in determining the requirements to be contained in the permit:

- (1) The nature of the discharges and activities occurring at the site or facility.
- (2) Information relevant to the potential impact on water quality.
- (3) The requirements found in the following: (A) 327 IAC 5-2, (B) 327 IAC 5-5, (C) 327 IAC 5-9, and (D) 327 IAC 15-6.
- (4) "Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits", EPA 833-D-96-001, September 1, 1996, available from U.S. EPA, National Service Center for Environmental Publications at <https://www.epa.gov/nscep> or from IDEM.

In accordance with 327 IAC 15-2-2(a), the commissioner may regulate stormwater discharges associated with industrial activity, as defined in 40 CFR 122.26(b)(14), consistent with the EPA 2008 NPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity, as modified, effective May 27, 2009, under an NPDES general permit. Therefore, using Best Professional Judgment to develop case-by-case technology-based limits as authorized by 327 IAC 5-2-10, 327 IAC 5-5, and 327 IAC 5-9 (see also 40 CFR 122.44, 125.3, and Section 402(a)(1) of the Clean Water Act (CWA)), IDEM has developed stormwater requirements for individual permits that are consistent with the EPA 2008 NPDES Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activity. The 2008 Multi-Sector General Permit and Fact Sheet is available from: <https://www.epa.gov/npdes/previous-versions-epas-msgp-documents>.

According to 40 CFR 122.26(b)(14) and 327 IAC 15-6-2 facilities classified under Standard Industrial Classification (SIC) Code 4911, are considered to be engaging in "industrial activity" for purposes of 40 CFR 122.26(b). Therefore, the permittee is required to have all stormwater discharges associated with industrial activity permitted. Treatment for stormwater discharges associated with industrial activities is required to meet, at a minimum, best available technology economically achievable/best conventional pollutant control technology (BAT/BCT) requirements. EPA has determined that non-numeric technology-based effluent limits have been determined to be equal to the best practicable technology (BPT) or BAT/BCT for stormwater associated with industrial activity.

Stormwater associated with industrial activity must also be assessed to ensure compliance with all water quality standards. Effective implementation of the non-numeric technology-based requirements should, in most cases, control discharges as necessary to meet applicable water quality standards. Violation of any of these effluent limitations constitutes a violation of the permit.

Additionally, IDEM has determined that with the appropriate implementation of the required control measures and Best Management Practices (BMPs) found in Part I.D. of the permit, the discharge of stormwater associated with industrial activity from this facility will meet applicable water quality standards and will not cause a significant lowering of water quality. Therefore, the stormwater discharge is in compliance with the antidegradation standards found in 327 IAC 2-1.3-3, and pursuant to 327 IAC 2-1.3-4(a)(5), an antidegradation demonstration is not required.

The technology-based effluent limits (TBELs) require the permittee to minimize exposure of raw, final, or waste materials to rain, snow, snowmelt, and runoff. In doing so, the permittee is required, to the extent technologically available and economically achievable, to either locate



industrial materials and activities inside or to protect them with storm resistant coverings. In addition, the permittee is required to: (1) use good housekeeping practices to keep exposed areas clean, (2) regularly inspect, test, maintain and repair all industrial equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater discharges, (3) minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur, (4) stabilize exposed area and contain runoff using structural and/or non-structural control measures to minimize onsite erosion and sedimentation, and the resulting discharge of pollutants, (5) divert, infiltrate, reuse, contain or otherwise reduce stormwater runoff, to minimize pollutants in the permitted facility discharges, (6) enclose or cover storage piles of salt or piles containing salt used for deicing or other commercial or industrial purposes, including maintenance of paved surfaces, (7) train all employees who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel), including all members of your Pollution Prevention Team, (8) ensure that waste, garbage and floatable debris are not discharged to receiving waters by keeping exposed areas free of such materials or by intercepting them before they are discharged, and (9) minimize generation of dust and off-site tracking of raw, final or waste materials.

To meet the non-numeric effluent limitations in Part I.D.4, the permit requires the facility to select control measures (including BMPs) to address the selection and design considerations in Part I.D.3.

The permittee must control its discharge as necessary to meet applicable water quality standards. It is expected that compliance with the non-numeric technology-based requirements should ensure compliance with applicable water quality standards. However, if at any time the permittee, or IDEM, determines that the discharge causes or contributes to an exceedance of applicable water quality standards, the permittee must take corrective actions, and conduct follow-up monitoring and IDEM may impose additional water quality-based limitations.

### **“Terms and Conditions” to Provide Information in a Stormwater Pollution Prevention Plan (SWPPP)**

Distinct from the effluent limitation provisions in the permit, the permit requires the discharger to prepare a SWPPP for the permitted facility. The SWPPP is intended to document the selection, design, installation, and implementation (including inspection, maintenance, monitoring, and corrective action) of control measures being used to comply with the effluent limits set forth in Part I.D. of the permit. In general, the SWPPP must be kept up-to-date, and modified when necessary, to reflect any changes in control measures that were found to be necessary to meet the effluent limitations in the permit.

The requirement to prepare a SWPPP is not an effluent limitation. Rather, it documents what practices the discharger is implementing to meet the effluent limitations in Part I.D. of the permit. The SWPPP is not an effluent limitation because it does not restrict quantities, rates, and concentrations of constituents which are discharged. Instead, the requirement to develop a SWPPP is a permit “term or condition” authorized under sections 402(a)(2) and 308 of the Act. Section 402(a)(2) states, “[t]he Administrator shall prescribe conditions for [NPDES] permits to assure compliance with the requirements of paragraph (1) of this subsection, including

conditions on data and information collection, reporting, and such other requirements as he deems appropriate.” The SWPPP requirements set forth in this permit are terms or conditions under the CWA because the discharger is documenting information on how it intends to comply with the effluent limitations (and inspection and evaluation requirements) contained elsewhere in the permit. Thus, the requirement to develop a SWPPP and keep it up-to-date is no different than other information collection conditions, as authorized by 327 IAC 5-1-3 (see also CWA section 402(a)(2)).

It should be noted that EPA has developed a guidance document, “Developing your Stormwater Pollution Prevention Plan: A guide for Industrial Operators (EPA 833-B09-002), March 2021, to assist facilities in developing a SWPPP, as well as an Industrial Stormwater Monitoring and Sampling Guide (EPA 832-B-09-003), April 2021.

### **Public availability of documents**

Part I.E.2.d(2) of the permit requires that the permittee retain a copy of the current SWPPP at the facility and make it immediately available, at the time of an onsite inspection or upon request, to IDEM. When submitting the SWPPP to IDEM, if any information in the SWPPP is considered to be confidential, that information shall be submitted in accordance with 327 IAC 12.1. Interested persons can request a copy of the SWPPP through IDEM. Any information that is confidential pursuant to Indiana law will not be released to the public.

## **5.8 Water Treatment Additives**

In the event that changes are to be made in the use of water treatment additives that could significantly change the nature of, or increase the discharge concentration of any of the additives contributing to an outfall governed under the permit, the permittee must apply for and obtain 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) available at: <https://www.in.gov/idem/forms/idem-forms-list/> and submitting any needed supplemental information. In the review and approval process, IDEM determines, based on the information submitted with the application, whether the use of any new or changed water treatment additives/chemicals or dosage rates could potentially cause the discharge from any permitted outfall to cause chronic or acute toxicity in the receiving water.

The authority for this requirement can be found under one or more of the following: 327 IAC 5-2-8(11)(B), which generally requires advance notice of any planned changes in the permitted facility, any activity, or other circumstances that the permittee has reason to believe may result in noncompliance with permit requirements; 327 IAC 5-2-8(11)(F)(ii), which generally requires notice as soon as possible of any planned physical alterations or additions to the permitted facility if the alteration or addition could significantly change the nature of, or increase the quantity of, pollutants discharged; and 327 IAC 5-2-9(2) which generally requires notice as soon as the discharger knows or has reason to know that the discharger has begun or expects to begin to use or manufacture, as an intermediate or final product or byproduct, any toxic pollutant that was not reported in the permit application. The following is a list of water treatment additives currently approved for use at the facility:

| Additive Name           | Supplier                  | Injection Points                                        | Purpose                                                       |
|-------------------------|---------------------------|---------------------------------------------------------|---------------------------------------------------------------|
| <b>BL1302</b>           | ChemTreat                 | Cooling Water Condenser Loop and U17, U18 Boiler System | pH control                                                    |
| <b>BL1304</b>           | ChemTreat                 | Auxiliary Boiler near RO Inlet                          | pH control                                                    |
| <b>BL1304</b>           | ChemTreat                 | U14/17 RO Systems                                       | pH control                                                    |
| <b>CL1370</b>           | ChemTreat                 | Circ Water System                                       | Cooling Water Treatment                                       |
| <b>CL206</b>            | ChemTreat                 | Circ Water System                                       | Cooling Water and Reserve Osmosis                             |
| <b>CL2840</b>           | ChemTreat                 | Circ Water System                                       | Closed System Treatment                                       |
| <b>CL4125</b>           | ChemTreat                 | Circ Water System                                       | Cooling Water Treatment                                       |
| <b>CL4132</b>           | ChemTreat                 | U17, U18 Circulating Cooling Water                      | Cooling Water Treatment                                       |
| <b>CL4704</b>           | ChemTreat                 | Circ Water System                                       | Cooling Water Treatment                                       |
| <b>CL5450</b>           | ChemTreat                 | Circ Water System                                       | Cooling Water Treatment                                       |
| <b>CL5828</b>           | ChemTreat                 | Circ Water System                                       | Cooling Water Treatment Dispersant                            |
| <b>FCT42</b>            | ChemTreat                 | U14/15/17/18 Coal Feeders                               | Fuel Additive                                                 |
| <b>FGD 1105</b>         | ChemTreat                 | U17, U18 FGD Slurry                                     | Deposit Inhibitor                                             |
| <b>P8007L</b>           | ChemTreat                 | WWTP                                                    | Metal Precipitant                                             |
| <b>P8022L</b>           | ChemTreat                 | FGD blowdown and absorber sumps                         | FGD Additive for Hg removal                                   |
| <b>P812A</b>            | ChemTreat                 | WWTP                                                    | Water Clarification and Solids Conditioning                   |
| <b>P8200L</b>           | ChemTreat                 | Circ Water System                                       | Metal Precipitant                                             |
| <b>RL124</b>            | ChemTreat                 | Auxiliary Boiler near RO Inlet                          | Oxygen Scavenger                                              |
| <b>RL124</b>            | ChemTreat                 | Reverse Osmosis system                                  | Dechlorination                                                |
| <b>RL9005</b>           | ChemTreat                 | Reverse Osmosis system                                  | Reverse Osmosis Treatment                                     |
| <b>RL9007</b>           | ChemTreat                 | U14/15/17/18 CTs                                        | Corrosion/scale inhibitor                                     |
| <b>MercX-811</b>        | Mercury Process Solutions | FGD blowdown and absorber sumps                         | FGD Additive for Hg removal                                   |
| <b>Mixed Oxidant</b>    | MIOX                      | U14, U15 Cooling Tower                                  | Algaecide and biocide                                         |
| <b>Hydrated Lime</b>    | Mississippi Lime          | WWTP                                                    | Wastewater treatment chemical                                 |
| <b>2877</b>             | Nalco                     | Recycle Basin                                           | Algaecide                                                     |
| <b>3D Trasar 3DT198</b> | Nalco                     | U14, U17, U18 Condenser                                 | Cooling Tower treatment                                       |
| <b>3DT138</b>           | Nalco                     | Circ Water System                                       | Water Chemistry control                                       |
| <b>3DT337</b>           | Nalco                     | U14/17/18 Condensers                                    | Corrosion control                                             |
| <b>Nalclear 7763</b>    | Nalco                     | WWTP                                                    | Wastewater treatment chemical                                 |
| <b>Nalco 7385</b>       | Nalco                     | U14, U15, U17, U18 Cooling Tower                        | Scale inhibitor                                               |
| <b>Nalco 7408</b>       | Nalco                     | RO units, Feedwater Ion Exchange Unit, Wastewater       | Boiler chlorine scavenger                                     |
| <b>Nalco 7468</b>       | Nalco                     | Cooling towers                                          | Cooling tower Antifoam (used in conjunction with Nalco 73550) |
| <b>Nalco 8735</b>       | Nalco                     | Reverse Osmosis system                                  | RO system pH stabilizer                                       |
| <b>Nalco 90005</b>      | Nalco                     | U14, U15, U17, U18 Cooling Tower                        | Algaecide and biocide                                         |

| Additive Name                  | Supplier     | Injection Points                    | Purpose                           |
|--------------------------------|--------------|-------------------------------------|-----------------------------------|
| <b>Nalco PermaClean PC-11</b>  | Nalco        | Reverse Osmosis system              | RO system biocide                 |
| <b>Nalmet 1689</b>             | Nalco        | WWTP                                | Wastewater treatment chemical     |
| <b>Perma Treat PC-191T</b>     | Nalco        | Reverse Osmosis system              | Boiler antiscalant                |
| <b>Trasar Trac 109</b>         | Nalco        | FGD, Boiler, RO, and cooling towers | Cooling Tower corrosion inhibitor |
| <b>Ferric Chloride</b>         | PVS Chemical | WWTP                                | Wastewater treatment chemical     |
| <b>Hydrochloric Acid</b>       | PVS Chemical | WWTP                                | Wastewater treatment pH control   |
| <b>Sodium Hydroxide</b>        | Rowe         | Unit 14 basement                    | pH control                        |
| <b>Sodium Hypochlorite</b>     | Rowe         | U17, U18 Cooling Tower Basin        | Algaecide and biocide             |
| <b>AGS Plus DBA</b>            | Solutia      | FGD specific                        | FGD process additive              |
| <b>AZ8100</b>                  | Suez         | U14/17/18 Condensers                | Corrosion control                 |
| <b>CT1300</b>                  | Suez         | U14/15/17/18 CTs                    | Algaecide                         |
| <b>ECP8135</b>                 | Suez         | U17, U18 Circulating Cooling Water  | Corrosion inhibitor               |
| <b>Fuelsolv HG2610</b>         | Suez         | FGD blowdown and absorber sumps     | Biocide                           |
| <b>Klaraid PC1195</b>          | Suez         | Absorber recycle water              | FGD Additive for Hg removal       |
| <b>PE2505</b>                  | Suez         | Circ Water System                   | Corrosion/scale inhibitor         |
| <b>Ammonium Hydroxide</b>      | Wilson       | North of Unit 14, 17                | Boiler pH control                 |
| <b>Citric Acid (anhydrous)</b> | Wilson       | Unit 14, 15 basement                | RO system maintenance             |
| <b>Sulfuric Acid</b>           | Wilson       | U14, U15, U17, U18 Cooling Tower    | pH control                        |

| Additive Name    | Supplier          | Injection Points        | Purpose |
|------------------|-------------------|-------------------------|---------|
| Spectrus CT 1306 | Suez (now Veolia) | Existing Cooling Towers | Biocide |

## 6.0 PERMIT DRAFT DISCUSSION

### 6.1 Discharge Limitations, Monitoring Conditions and Rationale

The proposed final effluent limitations are based on the more stringent of the Indiana water quality-based effluent limitations (WQBELs), technology-based effluent limitations (TBELs), or approved total maximum daily loads (TMDLs) and NPDES regulations as appropriate for each regulated outfall. Section 5.3 of this document explains the rationale for the effluent limitations at each Outfall.

Analytical and sampling methods used shall conform to the version of 40 CFR 136 as referenced in 327 IAC 5-2-13(d)(1) and 327 IAC 5-2-1.5.

Nothing has changed to warrant modifying the monitoring conditions at Internal Outfalls 101 and 201, Stormwater Outfalls 003S, 004S, 007S, and Stream Monitoring Sites 010S, 011S, 012S, 013S.

The monitoring frequencies and sample types proposed for pollutants at Outfalls 001, 002, 014, and Internal Outfalls 401 and 501 are based on the source and nature of the discharges and comparable to the monitoring frequencies and sample types included in permits regulating similar types of discharges.

#### Outfalls 001 and 002:

| Parameter       | Monthly Average | Daily Maximum | Units        | Minimum Frequency | Sample Type  |
|-----------------|-----------------|---------------|--------------|-------------------|--------------|
| Flow            | Report          | Report        | MGD          | 1 X Daily         | Continuous   |
| Intake Flow     | Report          | Report        | MGD          | 1 X Daily         | Continuous   |
| Intake Velocity | ----            | 0.5           | fps          | 1 X Daily         | Report       |
| Cycles of Conc. | Report          | Report        | number       | 1 X Daily         | Report       |
| Temperature     | Report          | Report        | °F           | 1 X Weekly        | Grab         |
| TSS             | 29              | 95            | mg/l         | 1 X Weekly        | 24-Hr. Comp. |
| O&G             | 6.1             | 8.1           | mg/l         | 1 X Weekly        | Grab         |
| Chromium        | 0.2             | 0.2           | mg/l         | 1 X Monthly       | Grab         |
| Zinc            | 0.301           | 0.604         | mg/l         | 1 X Monthly       | Grab         |
| Mercury         | 12              | 20            | ng/l         | 6 X Yearly        | Grab         |
| Sulfate         | 748             | 1,501         | mg/l         | 1 X Weekly        | Grab         |
| TRC             |                 |               |              |                   |              |
| Continuous      | 0.02            | 0.04          | mg/l         | 1 X Daily         | Grab         |
| Intermittent    | ----            | 0.2           | mg/l         | 1 X Daily         | Grab         |
| Chlorination    |                 |               |              |                   |              |
| Frequency       | ----            | 4             | times/day    | 1 X Daily         | Report       |
| Duration        | ----            | 40            | minutes/dose | 1 X Daily         | Report       |
| Iron            | Report          | Report        | mg/l         | 2 X Monthly       | 24-Hr. Comp. |
| Ammonia (as N)  | Report          | Report        | mg/l         | 2 X Monthly       | Grab         |

| Parameter                                            | Monthly Average | Daily Maximum | Units | Minimum Frequency | Sample Type  |
|------------------------------------------------------|-----------------|---------------|-------|-------------------|--------------|
| Arsenic                                              | Report          | Report        | µg/l  | 1 X Weekly        | Grab         |
| Boron                                                | Report          | Report        | µg/l  | 1 X Weekly        | Grab         |
| Chloride                                             | Report          | Report        | mg/l  | 2 X Monthly       | Grab         |
| Manganese                                            | Report          | Report        | mg/l  | 1 X Weekly        | Grab         |
| Selenium                                             | Report          | Report        | µg/l  | 1 X Weekly        | Grab         |
| Nitrate/Nitrite                                      | Report          | Report        | mg/l  | 1 X Weekly        | Grab         |
| Cadmium                                              | Report          | Report        | mg/l  | 2 X Monthly       | 24-Hr. Comp. |
| Lead                                                 | Report          | Report        | mg/l  | 2 X Monthly       | 24-Hr. Comp. |
| Calcium                                              | Report          | Report        | mg/l  | 2 X Monthly       | 24-Hr. Comp. |
| Total Dissolved Solids (TDS)                         | Report          | Report        | mg/l  | 2 X Monthly       | 24-Hr. Comp. |
| Fluoride                                             | Report          | Report        | mg/l  | 2 X Monthly       | 24-Hr. Comp. |
| Antimony                                             | Report          | Report        | mg/l  | 2 X Monthly       | 24-Hr. Comp. |
| Barium                                               | Report          | Report        | mg/l  | 2 X Monthly       | 24-Hr. Comp. |
| Beryllium                                            | Report          | Report        | mg/l  | 2 X Monthly       | 24-Hr. Comp. |
| Cobalt                                               | Report          | Report        | mg/l  | 2 X Monthly       | 24-Hr. Comp. |
| Lithium                                              | Report          | Report        | mg/l  | 2 X Monthly       | 24-Hr. Comp. |
| Molybdenum                                           | Report          | Report        | mg/l  | 2 X Monthly       | 24-Hr. Comp. |
| Thallium                                             | Report          | Report        | mg/l  | 2 X Monthly       | 24-Hr. Comp. |
| Radium 226 and 228 combined                          | Report          | Report        | pCi/L | 2 X Monthly       | 24-Hr. Comp. |
| Whole Effluent Toxicity (See Part 1.F of the permit) |                 |               |       |                   |              |

| Parameter | Daily Minimum | Daily Maximum | Units     | Minimum Frequency | Sample Type |
|-----------|---------------|---------------|-----------|-------------------|-------------|
| pH        | 6.0           | 9.0           | Std Units | 1 X Weekly        | Grab        |

#### Internal Outfall 101:

| Parameter         | Monthly Average | Daily Maximum | Units      | Minimum Frequency | Sample Type  |
|-------------------|-----------------|---------------|------------|-------------------|--------------|
| Flow              | Report          | Report        | MGD        | 2 X Monthly       | 24-Hr. Total |
| CBOD <sub>5</sub> | 25              | 40            | mg/l       | 2 X Monthly       | 24-Hr. Comp. |
| TSS               | 30              | 45            | mg/l       | 2 X Monthly       | Grab         |
| <i>E. coli</i>    | 125             | 235           | cfu/100 ml | 2 X Monthly       | Grab         |

#### Internal Outfall 201:

| Parameter      | Monthly Average | Daily Maximum | Units | Minimum Frequency | Sample Type  |
|----------------|-----------------|---------------|-------|-------------------|--------------|
| Flow           | Report          | Report        | MGD   | 2 X Monthly       | 24-Hr. Total |
| TSS            | 30              | 100           | mg/l  | 2 X Monthly       | 24-Hr. Comp. |
| Oil and Grease | 15              | 20            | mg/l  | 2 X Monthly       | Grab         |

| Parameter      | Monthly Average | Daily Maximum | Units | Minimum Frequency | Sample Type |
|----------------|-----------------|---------------|-------|-------------------|-------------|
| <u>Arsenic</u> |                 |               |       |                   |             |
| Interim        | Report          | Report        | µg/l  | 1 X Monthly       | Grab        |
| Final          | 8               | 11            | µg/l  | 1 X Monthly       | Grab        |
| <u>Mercury</u> |                 |               |       |                   |             |
| Interim        | Report          | Report        | ng/l  | 6 X Yearly        | Grab        |
| Final          | 356             | 788           | ng/l  | 6 X Yearly        | Grab        |

| Parameter | Daily Minimum | Daily Maximum | Units     | Minimum Frequency | Sample Type |
|-----------|---------------|---------------|-----------|-------------------|-------------|
| pH        | 6.0           | 9.0           | Std Units | 1 X Weekly        | Grab        |

#### Internal Outfall 401:

| Parameter                     | Monthly Average | Daily Maximum | Units   | Minimum Frequency | Sample Type  |
|-------------------------------|-----------------|---------------|---------|-------------------|--------------|
| Flow                          | Report          | Report        | MGD     | 1 X Daily         | 24-Hr. Total |
| Cycles of Conc.               | Report          | Report        | number  | 1 X Daily         | Report       |
| Free Available Chlorine       | 0.2             | 0.5           | mg/l    | 1 X Daily         | Grab         |
| Chlorination Duration per Day | ----            | 120           | Min/day | 1 X Daily         | Report       |
| Total Chromium                | 0.2             | 0.2           | mg/l    | 2 X Monthly       | Grab         |
| Total Zinc                    | 1.0             | 1.0           | mg/l    | 2 X Monthly       | Grab         |

| Parameter | Daily Minimum | Daily Maximum | Units     | Minimum Frequency | Sample Type |
|-----------|---------------|---------------|-----------|-------------------|-------------|
| pH        | 6.0           | 9.0           | Std Units | 1 X Weekly        | Grab        |

#### Internal Outfall 501:

| Parameter      | Monthly Average | Daily Maximum | Units | Minimum Frequency | Sample Type  |
|----------------|-----------------|---------------|-------|-------------------|--------------|
| Flow           | Report          | Report        | MGD   | 1 X Daily         | 24-Hr. Total |
| TSS            | 30              | 100           | mg/l  | 2 X Monthly       | 24-Hr. Comp. |
| Oil and Grease | 15              | 20            | mg/l  | 2 X Monthly       | Grab         |

| Parameter | Daily Minimum | Daily Maximum | Units     | Minimum Frequency | Sample Type |
|-----------|---------------|---------------|-----------|-------------------|-------------|
| pH        | 6.0           | 9.0           | Std Units | 1 X Weekly        | Grab        |

#### Outfall 014:

| Parameter | Monthly Average | Daily Maximum | Units | Minimum Frequency | Sample Type  |
|-----------|-----------------|---------------|-------|-------------------|--------------|
| Flow      | Report          | Report        | MGD   | 1 X Daily         | 24-Hr. Total |
| TSS       | 30              | 100           | mg/l  | 2 X Monthly       | Grab         |

| Parameter      | Monthly Average | Daily Maximum | Units | Minimum Frequency | Sample Type |
|----------------|-----------------|---------------|-------|-------------------|-------------|
| Oil and Grease | 15              | 20            | mg/l  | 2 X Monthly       | Grab        |
| Manganese      | Report          | Report        | mg/l  | 2 X Monthly       | Grab        |
| Boron          | Report          | Report        | mg/l  | 2 X Monthly       | Grab        |
| Chloride       | Report          | Report        | mg/l  | 2 X Monthly       | Grab        |
| Sulfate        | Report          | Report        | mg/l  | 2 X Monthly       | Grab        |
| Lithium        | Report          | Report        | mg/l  | 2 X Monthly       | Grab        |
| Molybdenum     | Report          | Report        | mg/l  | 2 X Monthly       | Grab        |

| Parameter | Daily Minimum | Daily Maximum | Units     | Minimum Frequency | Sample Type |
|-----------|---------------|---------------|-----------|-------------------|-------------|
| pH        | 6.0           | 9.0           | Std Units | 2 X Monthly       | Grab        |

**Stormwater Outfalls: 003S, 004S, 007S**

**Stream Monitoring Sites: 010S, 011S, 012S, 013S**

| Parameter      | Daily Maximum | Units | Minimum Frequency | Sample Type    |
|----------------|---------------|-------|-------------------|----------------|
| Flow           | Report        | MGD   | Annually          | Estimate Total |
| TSS            | Report        | mg/l  | Annually          | Grab           |
| pH             | Report        | s.u.  | Annually          | Grab           |
| Oil and Grease | Report        | mg/l  | Annually          | Grab           |
| Arsenic        | Report        | mg/l  | Annually          | Grab           |
| Cadmium        | Report        | mg/l  | Annually          | Grab           |
| Chromium       | Report        | mg/l  | Annually          | Grab           |
| Copper         | Report        | mg/l  | Annually          | Grab           |
| Lead           | Report        | mg/l  | Annually          | Grab           |
| Nickel         | Report        | mg/l  | Annually          | Grab           |
| Selenium       | Report        | mg/l  | Annually          | Grab           |
| Zinc           | Report        | mg/l  | Annually          | Grab           |
| Sulfate        | Report        | mg/l  | Annually          | Grab           |

## 6.2 Schedule of Compliance

The circumstances in this NPDES permit do not qualify for a schedule of compliance.

## 6.3 Other Requirements

### **6.3.1 Polychlorinated Biphenyl (PCB)**

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 for Outfall 001 and Outfall 014 with the next NPDES permit renewal application for at least one sample taken from each final outfall. The corresponding facility water sources (the intake water for Outfall 001 and well water for Outfall 014) shall be monitored at the same time as the final outfalls.

| <u>Pollutant</u> | <u>Test Method</u> | <u>LOD</u> | <u>LOQ</u> |
|------------------|--------------------|------------|------------|
| PCBs*            | EPA 608            | 0.1 ug/L   | 0.3 ug/L   |

\*PCB 1242, 1254, 1221, 1232, 1248, 1260, 1016

## **6.4 Clean Water Act Section 316(b) Cooling Water Intake Structure(s) (CWIS)**

### **6.4.1 Introduction**

In accordance with 40 CFR 401.14, the location, design, construction and capacity of cooling water intake structures of any point source for which a standard is established pursuant to section 301 or 306 of the Act shall reflect the best technology available for minimizing adverse environmental impact.

The EPA promulgated a CWA section 316(b) regulation on August 15, 2014, which became effective on October 14, 2014. 79 Fed. Reg. 48300-439 (August 15, 2014). This regulation established application requirements and standards for cooling water intake structures. The regulation is applicable to point sources with a cumulative design intake flow (DIF) greater than 2 MGD where 25% or more of the water withdrawn (using the actual intake flow (AIF)) is used exclusively for cooling purposes. All existing facilities subject to these regulations must submit the information required by 40 CFR 122.21(r)(2)–(r)(8) and facilities with an actual intake flow of greater than 125 MGD must also submit the information required by 40 CFR 122.21(r)(9)-(r)(13). The regulation establishes best technology available standards to reduce impingement and entrainment of aquatic organisms at existing power generation and manufacturing facilities.

Impingement is the process by which fish and other aquatic organisms are trapped and often killed or injured when they are pulled against the CWIS's outer structure or screens as water is withdrawn from a waterbody. Entrainment is the process by which fish larvae and eggs and other aquatic organisms in the intake flow enter and pass through a CWIS and into a cooling water system, including a condenser or heat exchanger, which often results in the injury or the death of the organisms (see definitions at 40 CFR 125.92(h) and (n)).

RMSGs has one cooling water intake structure located on Davis Ditch near the Kankakee River, withdrawing water from the Kankakee River.

The design intake flow (DIF) for the permittee is 57.6 MGD. The actual intake flow (AIF), as defined under 40 CFR 125.92(a), is the average volume of water withdrawn on an annual basis by the cooling water intake structures over the past five years. The actual intake flow for the facility over this period is 14.2 MGD, and a permitted daily maximum intake flow of 39 MGD was included in the 2020 permit. Almost all of the makeup water drawn through the CWIS could be used for cooling purposes under normal operating conditions.

Therefore, since the facility has a DIF greater than 2 MGD, and because the percentage of flow used at the facility exclusively for cooling is greater than 25%, the facility is required to meet the BTA standards for impingement and entrainment mortality, including any measures to protect Federally-listed threatened and endangered species and designated critical habitat established under 40 CFR 125.94(g).

As an existing facility with a DIF greater than 2 MGD and because the AIF is less than or equal to 125 MGD, the permittee was required to submit the application information required by 40 CFR 122.21(r)(2) through (r)(8). The permittee submitted a complete 316(b) application with their NPDES renewal application.

The regulation also established requirements that build on existing CWA requirements to coordinate with the U.S. Fish and Wildlife Service prior to issuing NPDES permits. Pursuant to 40 CFR 125.98(h), upon receipt of an NPDES permit 316(b) application for an existing facility subject to the rule, the Director (IDEM) must forward a copy of the permit application to the appropriate Field Office of the U.S. Fish and Wildlife Service (USFWS) for a 60-day review. A copy of this permit application was sent to the Bloomington Field Office of the U.S. Fish and Wildlife Service April 2, 2025. The USFWS's response is discussed in Section 6.4.5 below.

Much of the factual and narrative information presented below was taken, sometimes directly, from the permittee's 316(b) application.

#### **6.4.2 Facility and Cooling Water Intake Structure (CWIS) Description**

##### **A. Detailed Description**

The R.M. Schahfer Generating Station (RMSGs) has historically had four coal-fired boilers (Units 14, 15, 17, and 18) which began operating in 1976 when Unit 14 came online, followed by Unit 15 (1979), Unit 17 (1983), and Unit 18 (1986). Operation of Units 14 and 15 ceased as of October 1, 2021. Units 17 and 18 continue to operate under a Department of Energy 202(c) order. However, the facility filed an NOPP to permanently cease coal combustion by December 31, 2028. Units 17 and 18 feature close-cycle cooling via a single multi-cell mechanical draft cooling tower per unit.

The facility also has two natural gas-fired, simple-cycle turbines (Units 16A and 16B) that are only operated for maintenance, thus they are typically in stand-by mode. Units 16A and 16B are air-cooled and, accordingly, are not liable under the 316(b) Rule. Retirement of Units 16A and 16B is not planned until the end of 2027.

Two of the future projects near and at the facility (Project Orion and the CCGT facility, respectively) will utilize intake water from the cooling water intake structure (CWIS) as well.

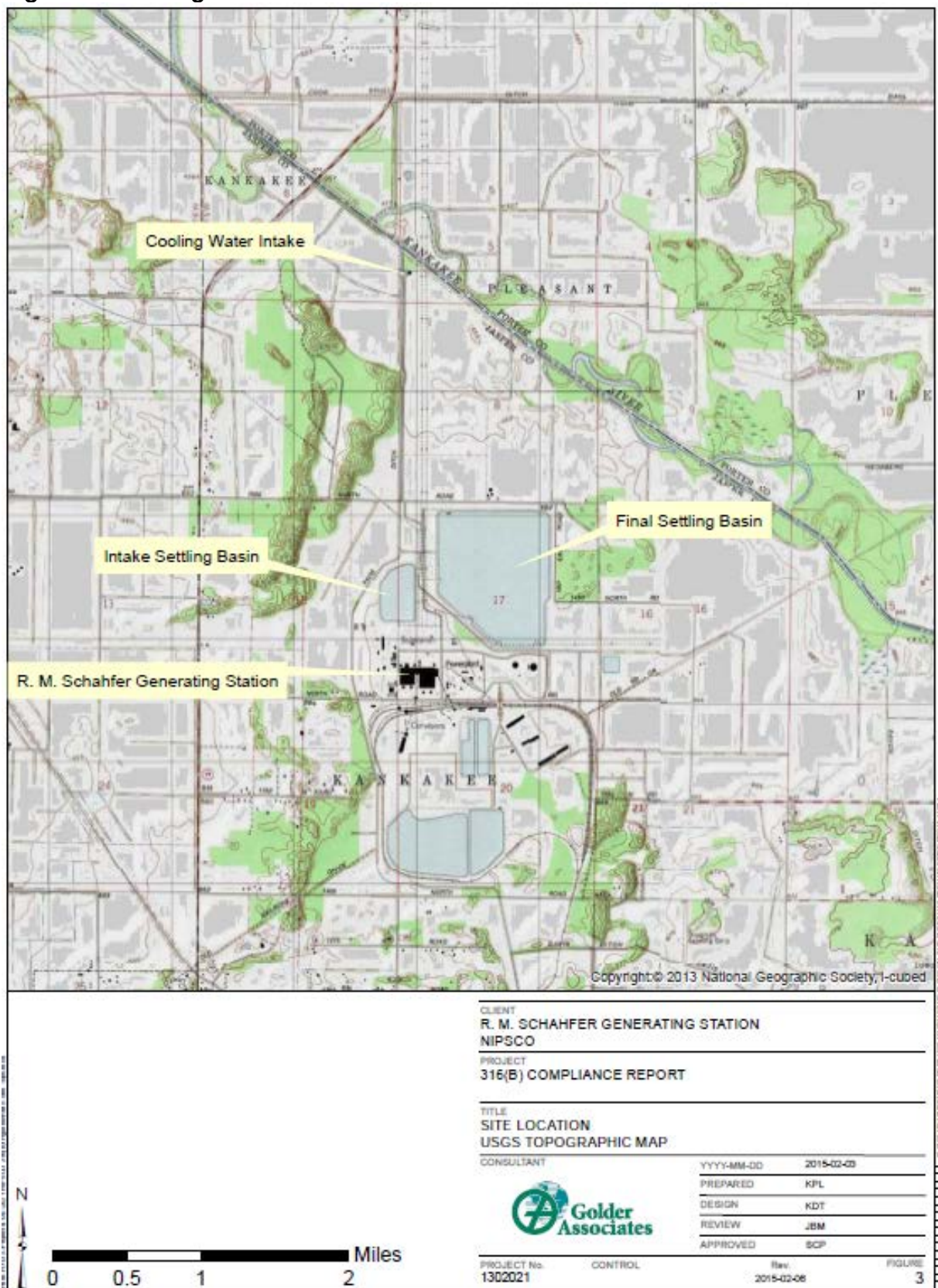
For the CCGT facility, GenCo will be constructing and operating four CCGTs (Unit 21A, Unit 21B, Unit 22A, and Unit 22B) for electric power generation via natural gas. The CCGTs will be arranged in two blocks (two units per block), and each block will include a mechanical draft cooling tower with a targeted 2 cycles of concentration. The targeted 2 cycles of concentration is based on existing cooling tower operations. However, due to different materials of construction for the proposed new cooling towers, it may be possible to achieve

higher cycles of concentration. As part of the design process the feasibility of increasing the cycles of concentration is being investigated. Should significant increases be deemed possible, NiSource will provide updated information to IDEM. Simple cycle operation is expected to commence in 2029, one combined cycle block is expected to be online in 2030, and both combined cycle blocks should be fully operational sometime in late 2030 or 2031.

Relative to the current (Units 17 and 18) and future CCGT water needs, Project Orion requires a comparatively small volume of cooling water as makeup to its direct evaporative cooling (DEC) system. DEC, also known as adiabatic cooling, involves direct contact between the heated air stream and water in a soaked evaporative medium. Outside air is drawn through the media causing the water to evaporate. The evaporation process absorbs heat, thereby cooling the air stream, which is recycled back through the building. Water that is not evaporated is recycled through the system. The DEC is only used seasonally (approximately April – October timeframe) and is not expected to operate continuously. The anticipated start date for Project Orion is the second quarter of 2027.

Makeup water for the recirculating water system comes from the Kankakee River via Davis Ditch through a single cooling water intake structure (CWIS). The CWIS is located on Davis Ditch approximately two miles north of the plant (see Figure 6 below). The intake structure sits on the east bank of Davis Ditch, approximately 550 feet south of the confluence with the Kankakee River. Due to the close proximity of this intake structure to the Kankakee River, water from the Kankakee River is drawn upstream to the intake via Davis Ditch. Water depths in Davis Ditch immediately in front of the intake pump house are approximately eight feet.

**Figure 6: Cooling Water Intake Location**



Makeup water is drawn through the CWIS by a set of three circulating water pumps; however, only two of the pumps can be operated together at any one time. Makeup water is pulled into the service water pump house through a pair of steel bar trash racks then into two separate bays, each containing one traveling screen with stainless steel mesh panels.

Coarse environmental debris is removed from the intake flow at the CWIS prior to entry into the permittee's water system. Debris is removed from the trash rack, as needed, by a mechanical rake system and emptied into a dumpster for disposal. Typically, the traveling screens do not operate continuously but rotate when sufficient head differential occurs across the screens from flow blockage by debris buildup. While rotating, debris is cleared from the traveling screens by spray wash nozzles, and cleared debris is washed into a collection trough and flows out of the intake building to a receptacle for disposal.

From the CWIS, makeup water travels via underground pipe to the Intake Settling Basin (ISB). The ISB has supply and bypass lines to various unit service water systems. Water from the ISB is pumped into the plants to be used as cooling tower makeup water, as well as makeup water to the recycle line, and to provide water to the boilers and the Flue-Gas Desulfurization (FGD) equipment. The largest portion of water used at the plant is condenser cooling water, which is recirculated through cooling towers.

For Project Orion, makeup water will be pumped from the ISB to the facility. Approximately 95% of the water will be used to replace the blowdown of 'spent' cooling water from the direct evaporative coolers and the remaining 5% will be used to supply filter backwash water as needed.

For the new CCGT facility, 93% of the water pumped from the ISB to the CCGT facility will be used directly as cooling tower makeup water and the rest of the ISB source water will be pumped to an ultrafiltration unit to prepare the water before use as boiler feed water, quench water for the HRSG/boiler blowdown, and other miscellaneous facility needs (e.g., freeze protection, fire systems).

Post-retirement of Units 17 and 18, a portion of the intake water will be used for decommissioning and cleanup activities, freeze protection, and fire systems.

After passing through the plant processes, all water is routed to the Final Settling Basin (FSB) located on the north side of the plant. Numerous wastestreams discharge internally to the FSB and can be reused/recycled to the cooling towers or other systems. Final discharge from the FSB through the permitted outfalls returns to the Kankakee River.

The CWIS operates as needed to provide makeup water for the RMSGS water system. The CWIS service pumps are run to maintain a normal operational water depth of 2.0 to 5.5 ft. in the ISB; makeup water also may bypass the ISB and be drawn directly into the cooling recirculation systems, if needed. CWIS operations may be altered to address abnormal conditions in the Kankakee River or in the permittee's operations.

## B. Intake Flows, Velocity of Intake Flows Through Traveling Screens, and Area of Influence

### Intake Flows

Since only two of the circulating water pumps can be operated together at any one time, each with a capacity of 20,000 gallons per minute (gpm), the maximum DIF for RMSGS is approximately 40,000 gpm (57.6 MGD).

As of the 2020 permit renewal effective date (October 1, 2020), the maximum permitted daily intake flow for the facility was 39 MGD. However, for the period 2020 through 2024, the AIF is calculated to be 14.2 MGD. Post-retirement of coal-fired Units 14 and 15, the AIF calculated for the period of 2022 through 2024 is 12.5 MGD.

**5-Year AIF Calculation**

| Year               | Annual Average Intake Flow (MGD) |
|--------------------|----------------------------------|
| 2020               | 15.9                             |
| 2021               | 17.5                             |
| 2022               | 14.0                             |
| 2023               | 13.1                             |
| 2024               | 10.5                             |
| <b>5-year AIF:</b> | <b>14.2</b>                      |

**3-Year AIF Calculation**

| Year               | Annual Average Intake Flow (MGD) |
|--------------------|----------------------------------|
| 2022               | 14.0                             |
| 2023               | 13.1                             |
| 2024               | 10.5                             |
| <b>3-year AIF:</b> | <b>12.5</b>                      |

Additionally, the daily maximum intake flow for the facility has not exceeded 39 MGD since the limit was included in the 2020 permit renewal. The maximum observed daily intake flow since the retirement of Units 14 and 15 is 31.1 MGD.

The Project Orion and CCGT facility will be using intake water from the ISB and therefore the AIF is expected to increase. There will be three stages of water demand over the next five years:

1. Current needs by Units 17 and 18
2. Units 17 and 18 plus Project Orion needs
3. Project Orion plus CCGT facility needs

For Project Orion, the estimated seasonal and non-continuous intake volumes are: 0.093 MGD average and 1.88 MGD peak. With non-continuous DEC operation, Project Orion's average annual cooling water use is estimated to be less than 8 million gallons per year.

The conservative combined highest estimated water demand for the third stage of operations (Project Orion plus CCGT facility) are the following:

Peak CCGT and Peak Project Orion operating scenario = 34.35 MGD  
Peak CCGT and Average Project Orion operating scenario = 32.56 MGD

### Velocity of Intake Flows Through Traveling Screens

The cooling water intake structure configuration has not been modified since the April 2015 CWIS Report (available in IDEM's Virtual File Cabinet [VFC]). However, in preparing their 316(b) application for this permit renewal, the facility re-evaluated the historical understanding of the CWIS. This included re-measuring the mesh opening and wire dimensions. The following summarizes the updates in the CWIS information:

- Wetted Depth: revised to 12 feet from 13 feet
- Vertical Panel Dimension: revised to 18.6 inches from 19.0 inches
- Mesh Wire Thickness: revised to 4/47 inches from 3/32 inches
- Mesh Opening: revised to 7/20 inches from 3/8 inches

The overall impact of these updates is that the calculated submerged open area (113.6 square inches) is less than previously calculated (155.1 square inches), which results in a higher calculated through-screen velocity.

The table below shows the through-screen velocity (TSV) calculated at the permitted daily maximum intake flow, the 5-year AIF, and the 3-year AIF.

| Intake Flow         | TSV     |
|---------------------|---------|
| Permitted daily max |         |
| 39 MGD              | 0.5 fps |
| 5-year AIF          |         |
| 14.2 MGD            | 0.2 fps |
| 3-year AIF          |         |
| 12.5 MGD            | 0.2 fps |

With the updated measurements and recalculation of the submerged open area to 113.6 square inches, the daily maximum intake flow limit of 39 MGD included in the 2020 permit renewal now results in a through-screen velocity of 0.5 fps, an increase from the 0.4 fps calculated with the former 155.1 square inches submerged open area measurement.

For the second stage of operations (Units 17 and 18 plus Project Orion), adding the 0.093 MGD average intake flow for Project Orion to the 5-year and 3-year AIFs for the current Unit 17 and 18 operations yields the same through screen velocities shown in the table above (0.2 fps for both the 5-year and 3-year AIFs).

For the third stage of operations (Project Orion plus CCGT facility), the through-screen velocity calculated using the peak estimated flow demand for Project Orion and the CCGT facility is 0.5 fps (0.47 fps without rounding).

## Area of Influence

The hydraulic zone of influence (HZI), or area of influence, is that portion of the source waterbody hydraulically affected by the CWIS withdrawal of water. In the context of Section 316(b), the HZI defines the source area or the near field capture zone for small, weakly motile or planktonic organisms that are easily entrained. A detailed discussion of the calculations and methodology to determine the HZI is included in the facility's April 2015 CWIS Report.

The input values and the calculated dimensions of the HZI for the shoreline CWIS located on the Davis Ditch are shown in Table 1 of the April 2015 CWIS Report. This table provides results for two river flow conditions based on data from U.S. Geological Survey (USGS) Gaging Station No. 05517500, Kankakee River at Dunns Bridge, Indiana, for the period of record 2007 through 2015, and the maximum design intake flow condition. The flow conditions evaluated are:

1. Mean annual flow in the Kankakee River = 1,605 cubic feet per second (cfs)
2. Lowest mean annual flow in the Kankakee River = 943 cfs
3. The maximum design intake flow condition is the DIF (57.6 MGD or 89 cfs)

Under all river and intake flow conditions, it is assumed that the entire area of the Davis Ditch is within the HZI. The location of the HZI-line with the Kankakee River will change with stream flow and intake flow, and therefore with time. The location of the HZI-line at any time will depend on the ratio of the intake flow to the river flow. Under extreme low-flow hydrologic conditions (e.g., lowest mean annual flow conditions at the Dunns Bridge gaging station), the HZI-line will move away from the shoreline and downstream. The maximum values for this scenario are approximately 12.6 ft and 3.6 ft, respectively. Consequently, outside a line defined by these dimensions, the probability of hydraulically influencing nonmotile organisms remains low most of the time. Under normal hydrologic conditions (e.g., mean annual flow conditions), the HZI-line will move toward the shoreline and toward the intake. The values for this scenario are approximately 7.9 ft and 2.1 ft, respectively. Consequently, inside a line defined by these dimensions, the probability is high most of the time. Between these extremes, the probability of hydraulically influencing non-motile organisms is moderate and variable.

The DIF of 57.6 MGD (89 cfs) is less than 10% of the lowest mean annual flow of the Kankakee River for the period studied of 2007 through 2015 and less than 6% of the mean annual flow of 1,605 cfs for the period of study. Although flow values were not provided for Davis Ditch, since it is such a small stream, it is expected that the DIF of 57.6 MGD would be 100% of the lowest mean annual flow and mean annual flow of Davis Ditch.



### **6.4.3 Source Water Biological Characterization**

The Kankakee River is 140 miles long and is located in northwestern Indiana and northeastern Illinois (INDR 1990, <https://www.in.gov/dnr/water/4108.htm>). The Kankakee River Basin (part of the Illinois River Basin) is 2,989 square miles (mi<sup>2</sup>) and drains portions of Michigan, Indiana, and Illinois. The Kankakee River originates just southwest of South Bend, Indiana in St. Joseph County. It then travels 104 miles to the west and southwest to Illinois. The main stem of the Kankakee River forms the southern boundaries of Lake, Porter, and LaPorte Counties and the northern borders of Newton, Jasper, and Starke Counties (INDR 1990). The Kankakee River was channelized during the late 1800's and early 1900's during the draining of the Grand Kankakee Marsh, resulting in a river system prone to flooding.

At the confluence with Davis Ditch, the Kankakee River flows from southeast to northwest. The river generally proceeds west where it joins with the Des Plaines River southwest of Joliet, Illinois, becoming the Illinois River, which flows southwest before emptying into the Mississippi River near Grafton, Illinois. The Illinois River is also connected to the Chicago River and, ultimately, Lake Michigan via the Illinois Waterway, which was constructed in 1933 to replace the Illinois and Michigan Canal (Lamb 1983).

The Kankakee River is a productive system, with a predominance of its drainage area in agricultural use. It is home to a warmwater fish community with species including Small and Largemouth Bass, Walleye, Northern Pike, and various panfish.

According to the IDEM Integrated Report on the status of impairment of Indiana waters, the upper Illinois River Basin, including the upper Kankakee, Iroquois, and Yellow River basins, 41% of the stream miles are attaining their designated uses, while 59% are not (IDEM 2024). A complete listing of Kankakee River Section 303(d) impaired waters of the Kankakee River can be found at <https://www.in.gov/idem/nps/2647.htm>. Indiana's Integrated Monitoring and Assessment Report can be found at <https://www.in.gov/idem/nps/2639.htm>.

No previous impingement or entrainment studies have been performed at RMSGS; therefore, historic plant impingement and entrainment data is not available. To assess the fish community, Ramboll conducted a review of publicly-available information from published and online resources. Based on their 2025 review, the extensive electrofishing surveys completed by Price and Robertson in 2001 are still the most recent, representative reference of species and relative abundance in the vicinity of the cooling water intake structure.

In 2001, Price and Robertson (2005) performed extensive electrofishing surveys within Indiana portions of the main branch of the Kankakee, including a station at Dunns Bridge, approximately 3.5 miles upstream of the plant intake. During this study, a total of 46 fish species were identified; these species are the most likely species found in the vicinity of the CWIS due to their presence in the main stem of the Kankakee River. Relative abundance of each species in the Price and Robertson (2005) study is presented in the facility's April 2015 CWIS Report to provide estimated relative abundances within the main channel of the Kankakee River in the vicinity of the RMSGS intake. Creel surveys were also conducted during the study to identify recreational catch. Species identified during the creel survey are noted in the April 2015 CWIS Report as well.

Fish community studies in the Kankakee River mainstem have been conducted by the IDEM Office of Water Quality in 1999 (5 sites), 2004 (6 sites), 2009 (4 sites), and 2017 (8 sites). The top 10 most abundant species in order of numbers of individuals from these studies included Spotfin Shiner, Bluegill, Common Carp, Redhorse spp. Bluntnose Minnow, Green Sunfish, Rock Bass, Largemouth Bass, Buffalo spp. and Smallmouth Bass. Of note was the presence of all three buffalo species (Bigmouth, Black, and Smallmouth) and five redhorse species. Sport fish species were documented and included Largemouth Bass, Northern Pike, Smallmouth Bass, Walleye, and Yellow Perch.

The average total Index of Biotic Integrity (IBI) score for the Kankakee River from these 24 samples was 38 with a median of 41. IBI scores ranged from 17 to 56. Nine of the 24 sites (37.5%) had IBI scores below the 36 threshold and would be considered not meeting their aquatic life use. The average species richness for these sites was 18 species with a median of 19. The species richness ranged from 3 to 27 species. The Dunn's Bridge site, upstream of RMSGS, had a total IBI score of 22 (*i.e.*, not supporting the aquatic life use designation) and species richness of 13. Much further downstream in the Kankakee River, the next three sites had IBI scores ranging from 40 to 46 (*i.e.*, supporting the aquatic life use designation).

The 2017 IDEM study was completed to assess the impacts of the thermal plume at Outfall 001 of RMSGS and included sampling downstream of the outfall. IDEM used a Traveling T-Zone (Emery and Thomas 2002) sampling method for comparison of near and far-field changes to the biological community. Thirty-three fish species were documented in the 600 meters immediately downstream of the RMSGS Outfall 001. Included in this list were four species of Redhorse, Bigmouth Buffalo, and Northern Hog Sucker. Sport fish included Largemouth Bass, Northern Pike, Rock Bass, and Smallmouth Bass. Twelve metric attributes about the community structure were assessed for determining if a gradient of community response was apparent with increasing distance from the RMSGS including species richness, number of darter species, number of sunfish species, number of round bodied suckers, number of sensitive species, percent round bodied suckers, percent tolerant species, percent omnivores, percent insectivores, percent carnivores, catch per unit of effort, and percent simple lithophilic spawners. The study concluded that there were no significant changes in the fish community structure proceeding downstream from Outfall 001. The fish community structure in the Kankakee River scored as 'fair' to 'good' and was meeting its aquatic life use designation as of 2017. Data from these studies are managed in the Office of Water Quality Watershed Assessment and Planning Branch's Assessment Information Management System (AIMS) and can be provided upon request.

#### **6.4.4 Impingement and Entrainment– Aquatic Life Studies**

No previous impingement or entrainment studies have been performed at the facility; therefore, historic plant impingement and entrainment data were not used by the permittee to assess species and life stages or numbers of organisms susceptible to impingement and entrainment. The permittee, in-lieu of impingement and entrainment studies at the facility, has presented data based on surveys of aquatic life surveys near the CWIS and the design/operation of the CWIS to assess species, life stages and relative numbers of organisms susceptible to impingement and entrainment at the CWIS.

The facility's April 2015 CWIS Report evaluated the primary gamefish species identified in the Price and Robertson (2005) study, as well as the most prevalent forage and rough fish species, to determine their susceptibility to impingement and entrainment at RMSGS various life stages. The egg and larval stages of all species are considered the most susceptible to impingement and entrainment, as they may be unable to escape the induced current of the RMSGS intake. The following species were considered in the 2015 316(b) report: Northern Pike (*Esox lucius*), Largemouth Bass (*Micropterus salmoides*), Smallmouth Bass (*Micropterus dolomieu*), Channel Catfish (*Ictalurus punctatus*), Walleye (*Sander vitreus*), Bluegill (*Lepomis macrochirus*), Gizzard Shad (*Dorosoma cepedianum*), Spotfin Shiner (*Cyprinella spiloptera*), Carp (*Cyprinus carpio*) and Silver Redhorse (*Moxostoma anisurum*).

Evaluating susceptibility of these early life stages requires knowledge of species life history characteristics including egg diameter, larval head capsule width, spawning habitats and substrates, and egg adhesiveness. RMSGS traveling screens currently have 5/16-inch openings, which would not restrict egg or larval individuals of the above-listed species from becoming entrained based upon size. However, several of these species may have limited susceptibility based upon other life history factors. A discussion of each species is found in the facility's April 2015 CWIS Report.

Egg and larval abundance within the Kankakee River are expected to peak during the period of late April through July. Some species, such as northern pike, begin spawning in early March whereas others, such as bluegill, spawn from May through late August. However, most species' spawning periods overlap during the late spring and early summer months of May, June, and early July. Though some fish species, such as trout and salmon, spawn in the fall and hatch in the spring, species identified in the Kankakee River primarily hatch shortly after egg fertilization; spawning periods and periods of larval emergence completely or partially overlap. Hatching typically occurs between 3 days and 3-4 weeks following fertilization, depending upon the species, at the water temperatures expected within the Kankakee River in the late spring and early summer months (Becker 1983). By late August or early September, most young-of-the-year (YOY) fishes have grown and progressed through their larval stages and are sufficiently strong swimmers to be able to avoid being drawn into the CWIS.

## **A. Impingement**

Regarding susceptibility to impingement, for juvenile and adult fish, the USEPA has indicated that a water velocity of 1.0 fps is sufficient to protect 96 percent of fish species (FR 2001). In the Rule, USEPA has provided a level of additional safety, indicating that a design intake flow or maximum actual through-screen velocity of 0.50 fps may be considered BTA for impingement.

At the maximum DIF of 57.6 MGD, the through-screen velocity can reach 0.78 fps. Following the retirement of Units 14 and 15, the maximum actual intake flow is 31.1 MGD, which reduces the maximum observed through screen velocity to 0.42 fps. Therefore, the RMSGS facility meets BTA for impingement based on the actual intake velocity less than 0.5 fps.

## **B. Entrainment**

The April 2015 CWIS Report indicated susceptibility to egg entrainment is expected to be highest among walleye, while larval entrainment is expected to be highest amongst silver redhorse, walleye, spotfin shiner, and gizzard shad.

These results are consistent with results found in Boehler & Baker (2013), where larval drift samples in Honey Creek, Seneca County, Ohio were dominated by sucker species (80 percent), perch species (10 percent), and minnow species (8 percent). Silver redhorse is a sucker species, walleye is a perch species, and spotfin shiner is a minnow species.

The use of closed cycle cooling means that the DIF of the RMSGS of 57.6 MGD (89 cfs) is significantly less than a similar sized facility that does not employ closed cycle cooling. The DIF of 57.6 MGD is less than 10% of the lowest mean annual flow of the Kankakee River for the period studied of 2007 through 2015 and less than 6% of the mean annual flow of 1,605 cfs for that same period. As a result, the HZI is relatively limited in the Kankakee River reducing potential numbers of organisms impacted for entrainment and impingement. As noted above, the entire area of the Davis Ditch is expected to be within the HZI and the DIF is expected to be 100% of the flow of Davis Ditch.

Furthermore, intake flows are expected to reduce over time following the retirement of Units 17 and 18. Reduction in entrainment is expected as a result of reduced intake flows at the facility.

Regarding federally listed species, USFWS concurs that the one federally listed species - Sheepnose mussel - has been extirpated from the Kankakee River in the area of the CWIS and did not raise any issues related to federally listed species. See discussion below.

### **6.4.5 Protected Species Susceptible to Impingement and Entrainment**

Since the April 2015 CWIS Report and the 2020 CWIS Requirements Update, the Indiana Department of Natural Resources (IDNR) has updated the available Endangered, Threatened, and Rare Species List. This list has been expanded to include Jasper and neighboring counties, La Porte and Porter.

Federal- and state-listed species identified for Jasper, La Porte, and Porter Counties of Indiana that may be located in the Kankakee River or the Davis Ditch in the vicinity of the RMSGS intake are presented in Table 1 below.

This list includes species that are endangered, threatened, or of special concern to the applicable managing agencies. Additionally, the species listed in Table 5 of the April 2015 CWIS Report, have a current or historical range that includes the area of influence of RMSGS, utilize the source waterbody (up to ordinary high-water marks) for any portion of their life cycle or rely on species for their survival that meet these criteria.

**Table 1. Threatened and Endangered (T&E) Species with Potential to Impact**

| County            | Aquatic Life | Species Name                        | Common Name              | T&E Status |
|-------------------|--------------|-------------------------------------|--------------------------|------------|
| Porter            | Mussel       | <i>Alasmidonta viridis</i>          | Slippershell Mussel      | SSC        |
| Porter            | Mussel       | <i>Eurynia dilatata</i>             | Spike                    | SSC        |
| La Porte          | Mussel       | <i>Lymnaea stagnalis</i>            | Swamp Lymnaea            | SSC        |
| Jasper / Porter   | Mussel       | <i>Plethobasus cyphus</i>           | Sheepnose                | E, SE      |
| Porter            | Mussel       | <i>Venustaconcha ellipsiformis</i>  | Ellipse                  | SSC        |
| Porter            | Mussel       | <i>Villosa iris</i>                 | Rainbow                  | SSC        |
| La Porte / Porter | Fish         | <i>Acipenser fulvescens</i>         | Lake Sturgeon            | SE         |
| La Porte          | Fish         | <i>Ichthyomyzon fossor</i>          | Northern Brook Lamprey   | SSC        |
| Jasper / La Porte | Fish         | <i>Moxostoma valenciennesi</i>      | Greater Redhorse         | SE         |
| La Porte / Porter | Fish         | <i>Rhinichthys cataractae</i>       | Longnose Dace            | SSC        |
| La Porte          | Amphibian    | <i>Acris blanchardi</i>             | Blanchard's Cricket Frog | SSC        |
| Jasper / Porter   | Amphibian    | <i>Ambystoma laterale</i>           | Blue-spotted Salamander  | SSC        |
| Jasper            | Amphibian    | <i>Cryptobranchus alleganiensis</i> | Eastern Hellbender       | SE         |
| La Porte / Porter | Amphibian    | <i>Hemidactylium scutatum</i>       | Four-toed Salamander     | SSC        |
| Jasper            | Amphibian    | <i>Lithobates blairi</i>            | Plains Leopard Frog      | SE         |
| La Porte / Porter | Amphibian    | <i>Necturus maculosus</i>           | Common mudpuppy          | SSC        |

**NOTES:**

(A): Indiana Department of Natural Resources (February 27, 2025): County Endangered, Threatened and Rare Species List (Jasper, La Porte, and Porter County); <https://www.in.gov/dnr/nature-preserves/heritage-data-center/endangered-plant-and-animal-species/county/>

(B): E: Federally Endangered; SE: State Endangered; SSC: State Special Concern

One federally-listed species (Sheepnose, *Plethobasus cyphus* – a freshwater mussel) is included on the updated IDNR Indiana County Endangered, Threatened, and Rare Species lists for Jasper and Porter counties above; however, Sheepnose is not included on USFWS County Distribution of Federally-Listed Threatened, Endangered, and Candidate Species for Jasper or Porter counties (USFWS 2015). Correspondence with Elizabeth McCloskey (USFWS Northern Indiana Suboffice) revealed that Sheepnose were extirpated from the Kankakee River in Jasper and Porter counties when the river was dredged and ditched in the late 1800s to early 1900s. Ms. McCloskey clarified that the IDNR maintains historical occurrences in their database, but that USFWS does not have any extant records of Sheepnose in the Kankakee River in Indiana.

The 2002 USFWS Sheepnose status assessment report confirms that Sheepnose was extirpated from the channelized portions of the Kankakee River in Indiana (USFWS 2002).

In addition to the one federally-listed species, the list in Table 1 above includes five state endangered (one being the Sheepnose) and 11 state special concern species that could be impacted. None of the 46 species identified by Price and Robertson (2005) in the Kankakee River mainstem were listed as threatened or endangered.

In addition to the federal and state-listed Sheepnose, the Ellipse (*Venustaconcha ellipsiformis*) is the only other listed freshwater mussel species identified from USFWS and IDNR county lists. The Ellipse is a State Species of Concern listed by IDNR in Porter County but not in Jasper County. The exclusion of the Ellipse from the Jasper County IDNR Indiana County Endangered, Threatened, and Rare Species List may indicate that the Ellipse is not found in the portion of the Kankakee River that forms the border of Jasper and Porter counties in the vicinity of RMSGS. No other federal or state-listed mussel species are identified in Jasper or Porter counties on USFWS or IDNR species lists.

Like all unionid mussels, the Ellipse develops from a parasitic glochidial larval stage that requires a fish host to complete its life cycle. Although possibly not listed as threatened, endangered, or species of special concern; some common fish species within the Kankakee River are important to these threatened and endangered mussels as host species.

Sauger (*Stizostedion canadense*) and sunfish (*Lepomis* species) are the only known naturally occurring host fish species for the Ellipse (Allen et al. 2007). Sauger is not one of the 46 species listed by Price and Robertson (2005) for the Kankakee River; however, four species of *Lepomis* are present in the Kankakee River: green sunfish (*Lepomis cyanellus*), Pumpkinseed (*Lepomis gibbosus*), Warmouth (*Lepomis gulosus*), and Orangespotted sunfish (*Lepomis humilis*).

#### Consultation with Federal and State Agencies [40 CFR § 122.21(r)(4)(vii)]

Publicly available data sources were used by the permittee to identify federal and state listed species with the potential to be impacted by activities at RMSGS. Publicly available information from USFWS and IDNR was inconsistent regarding the potential presence of federal and state listed Sheepnose mussel in the Kankakee River in Indiana. The permittee indicated that correspondence with Elizabeth McCloskey (USFWS Northern Indiana Suboffice) clarified that USFWS does not have any extant records of Sheepnose in the Kankakee River in Indiana and IDNR records in the county database are historical, as discussed above.

In an email to IDEM dated April 3, 2025, with respect to the permittee's updated 316(b) application, Mr. Dan Sparks of USFWS stated that there are no federally threatened or endangered aquatic species in the action area of the facility. Therefore, USFWS did not have any formal comments on the application.

#### **6.4.6 References**

Allen, D.C., B.E. Sietman, D.E. Kelner, M.C. Hove, J.E. Kurth, J.M. Davis, J.L. Weiss, and D.J. Hornbach. 2007. Early life-history and conservation status of *Venustaconcha ellipsiformis* (*Bivalvia*, Unionidae) in Minnesota. *American Midland Naturalist* 157: 74-91.

Becker, G.C. 1983. *Fishes of Wisconsin*. University of Wisconsin Press, 1983. 1052 pp.  
Accessed February 6, 2015 at: <http://digital.library.wisc.edu/1711.dl/EcoNatRes.FishesWI>

Boehler, C.T., and K. Baker. 2013. Diel Larval Fish Drift in a Small Ohio Stream (Honey Creek, Seneca Co., OH). *The Ohio Journal of Science*, v111, n2-5 (January, 2013), 33-36

Emery, E.B., and J.A. Thomas. 2002. A method for assessing outfall effects on Great River fish populations: the traveling zone approach. In T.P. Simon (Ed.). *Biological Response Signatures: Patterns in Biological Indicators for assessing Freshwater Aquatic Assemblages*. CRC Press, Boca Raton, FL.

Federal Register. 2001. Notice of Data Availability; National Pollutant Discharge Elimination System - Regulations Addressing Cooling Water Intake Structures for New Facilities. Volume 66, No. 102, Friday, May 25, 2001. P. 28864

Lamb, J. 1983. Illinois Waterway: Its 310 Year History. *The Waterways Journal Weekly*. (August 27, 1983):8

Price and Robertson. 2005. Fishery, Habitat, and Recreational Use Surveys for the Kankakee River, Indiana. Indiana Department of Natural Resources – Division of Fish and Wildlife Final Report – Workplans #200766, #202766. 31 pp.

United States Department of the Interior. 2015. US Fish & Wildlife Service: IPaC - Information, Planning, and Conservation System. Accessed 5 January 2015 at <http://ecos.fws.gov/ipac/>

USFWS (United States Fish and Wildlife Service). 2002. Status Assessment Report for the sheepsnose, *Plethobasus cyphus*, occurring in the Mississippi River system (U.S. Fish and Wildlife Service Regions 3, 4, and 5). Ohio River Valley Ecosystem Team, Mollusk Subgroup. 79pp.

#### **6.4.7 Best Technology Available (BTA) Determinations**

##### **A. Impingement BTA**

Under 40 CFR 125.94(c) existing facilities subject to the rule must comply with one of the following seven BTA Standards for Impingement Mortality:

1. Operate a closed-cycle recirculating system as defined at 40 CFR §125.92;
2. Operate a CWIS that has a maximum design through-screen design intake velocity of 0.5 fps;
3. Operate a CWIS that has a maximum actual through-screen intake velocity of 0.5 fps;
4. Operate an offshore velocity cap that is a minimum of 800 feet offshore;

5. Operate a modified traveling screen that the Director (IDEM) determines meets the definition of the rule (at §125.92(s)) and that the Director (IDEM) determines is BTA for impingement reduction;
6. Operate any other combination of technologies, management practices, and operational measures that the Director (IDEM) determines is BTA for impingement reduction; or
7. Achieve the specified impingement mortality performance standard of less than 24 percent.

The permittee has proposed to comply with alternative 3, above. Under this alternative, the permittee must operate a cooling water intake structure that has a maximum through-screen intake velocity of 0.5 feet per second. The owner or operator of the facility must submit information to IDEM that demonstrates that the maximum intake velocity as water passes through the structural components of a screen measured perpendicular to the screen mesh does not exceed 0.5 feet per second. Through-screen velocity data provided by the permittee with their permit renewal application indicates that the maximum through-screen velocity has remained below 0.5 feet per second since the daily maximum intake flow limit of 39 MGD was included in the September 24, 2020 permit renewal. In addition, the information provided in the April 10, 2026 addendum to the permit renewal application indicates that the through-screen velocity will continue to meet the 0.5 feet per second or less standard when water demands include Project Orion and the CCGT facility, with the peak estimated flow demand of 34.35 MGD resulting in a 0.47 fps through-screen velocity.

The maximum velocity must be achieved under all conditions, including during minimum ambient source water surface elevations (based on BPJ using hydrological data) and during periods of maximum head loss across the screens or other devices during normal operation of the intake structure. IDEM may authorize the owner or operator of the facility to exceed the 0.5 fps velocity at an intake for brief periods for the purpose of maintaining the cooling water intake system, such as backwashing the screen face. If the intake does not have a screen, the maximum intake velocity perpendicular to the opening of the intake must not exceed 0.5 feet per second during minimum ambient source water surface elevations. In addition, the permittee must monitor the velocity at the screen at a minimum frequency of daily. In lieu of velocity monitoring at the screen face, the permittee may calculate the through-screen velocity using water flow, water depth, and the screen open areas.

Instead of continuing the daily maximum intake flow limit of 39 MGD at Outfall 001/002, a daily maximum intake velocity limit of 0.5 fps has been included in the permit. The change from a daily maximum intake flow limit associated with a 0.5 fps intake velocity to a daily maximum intake velocity limit of 0.5 fps allows for more direct reporting of intake velocities and comparison of the reported daily maximum intake velocity to the 0.5 fps or less requirement for the BTA standard at 40 CFR 125.94(c)(3).

Monitoring requirements for the intake flow have been included in the permit to verify intake velocity calculations as needed. Cycles of concentration (COC) monitoring has been retained to monitor the flow reduction efforts at the facility.

IDEM concurs with the permittee that compliance with impingement mortality standard alternative 3 above (40 CFR 125.94(c)(3)) for the CWIS at this facility meets BTA.



## **B. Entrainment BTA**

For existing facilities, EPA did not identify any single technology or group of technology controls as available and feasible for establishing national performance standards for entrainment. Instead, EPA's regulations require the permitting agency to make a site-specific determination of the BTA standard for entrainment for each individual facility. See 40 CFR 125.94(d).

EPA's regulations put in place a framework for establishing entrainment requirements on a site-specific basis, including the factors that must be considered in the determination of the appropriate entrainment controls. These factors include the number of organisms entrained, emissions changes, land availability, and remaining useful plant life as well as social benefits and costs of available technologies when such information is of sufficient rigor to make a decision. These required factors are listed under 40 CFR 125.98(f)(2).

EPA's regulations also establish factors that may be considered when establishing site-specific entrainment BTA requirements, including: entrainment impacts on the waterbody, thermal discharge impacts, credit for flow reductions associated with unit retirements, impacts on reliability of energy delivery, impacts on water consumption, and availability of alternative sources of water. (40 CFR 125.98(f)(3))

The permittee has closed-cycle cooling via a single multi-cell mechanical draft cooling tower on each unit which has allowed the permittee to achieve substantial reductions in water usage. The facility has also retired two coal-fired generating units, Units 14 and 15, since the last permit renewal, which has decreased intake flows in recent years. These flow reductions are expected to lead to reductions in the number of organisms entrained.

Future conditions will continue to minimize water withdrawals by utilizing recirculating cooling systems for Project Orion and the CCGT facility. Additionally, the CCGT facility is exploring use of combined HRSG/boiler blowdown/quench water as a secondary source of makeup water for the cooling towers, further reducing water withdrawals as compared to once-through cooling.

The percent reduction of water withdrawal was previously calculated for all four cooling towers (when Units 14 and 15 and Units 17 and 18 were all in operation) and was estimated at more than 95% reduction compared to a once-through cooling system. The combined cooling withdrawal to supply the new cooling towers at the CCGT facility and DEC at Project Orion is expected to be reduced by at least 95% compared to the use of once-through cooling systems.

After considering all the factors that must and may be considered by the federal rules (see discussion below), IDEM finds that the existing facility meets the BTA for entrainment mortality.

Must and May Factor Discussion (40 CFR 125.98(f)(2) and (3))

1. MUST FACTORS (40 CFR 125.98(f)(2))

i. Numbers and types of organisms entrained, including, specifically, the numbers and species (or lowest taxonomic classification possible) of Federally-listed, threatened and endangered species, and designated critical habitat (e.g., prey base);

Regarding federally-listed species, there are no known federal listed species expected to be impacted by the CWIS. See above Section E. Threatened, Endangered, and Other Protected Species Susceptible to Impingement and Entrainment.

The salamander mussel (*Simpsonaias ambigua*) is proposed as federally endangered. As a Unionid species, it uses mudpuppy as a host for its glochidia. There is no proposed critical habitat for salamander mussel in the Kankakee River. Therefore, it is unlikely that this species exists in Davis Ditch or would be affected by the ongoing operations of the intake.

Like the salamander mussel, the state-listed sheepsnose, slippershell, spike, and rainbow mussels are Unionid species that use a host for its glochidia and could potentially be susceptible to entrainment during the brief period prior to attaching to a host. However, the sheepsnose mussel range, as identified by USFWS, does not extend to the Kankakee River or Davis Ditch near the intake. It is unlikely that the state-listed lake sturgeon or longnose dace would be affected by entrainment because the only remaining native population of lake sturgeon in Indiana is in the East Fork White River and longnose dace in Indiana are only found in the Lake Michigan drainage. If greater redhorse (state-listed) populations exist in the Indiana reaches of the Kankakee River and use Davis Ditch for spawning, it could potentially be susceptible to entrainment.

The permittee currently operates a closed cycle cooling system in association with the coal-fired generating units and will continue use of a closed-cycle recirculating system for the CCGT facility. The Project Orion DEC is a hybrid system that is estimated to have similar water reductions (vs. once through systems) as the closed cycle systems. While IDEM has not determined that the facility meets the federal definition of a CCRS, the current closed cycle cooling system has reduced the need for intake water and therefore the number of organisms entrained by the facility compared to a facility of similar size without closed cycle cooling. In addition to the use of closed cycle cooling via mechanical draft cooling towers, the permittee retired two coal-fired units (Units 14 and 15), which has further reduced intake flows at the facility and thus the number of organisms entrained as well. Future operations with continued use of close-cycle recirculating systems are expected to minimize intake flows and thus minimize the number of organisms entrained as well.

ii. Impact of changes in particulate emissions or other pollutants associated with entrainment technologies;

Particle emissions will continue from the new mechanical draft cooling towers associated with the CCGT facility. The DEC for Project Orion includes marginal evaporation of treated river water.

iii. Land availability insofar as it relates to the feasibility of entrainment technology;

Land is available for the two cooling towers that will be used at the CCGT and Project Orion's footprint includes the DEC system.

iv. Remaining useful plant life; and

RMSGs intends to cease coal combustion by December 31, 2028. Project Orion's anticipated start date is in the second quarter of 2027 and the CCGT facility is expected to start operations in 2029. There are no foreseeable plans to cease Project Orion operations or the CCGT facility once they are online.

v. Quantified and qualitative social benefits and costs of available entrainment technologies when such information on both benefits and costs is of sufficient rigor to make a decision.

The permittee is not required to provide Cost Evaluation Study (40 CFR 122.21(r)(10)) or Benefits Evaluation (40 CFR 122.21(r)(11)) because the AIF is less than 125 MGD. Also, RMSGs intends to cease coal combustion by December 31, 2028.

Cooling water for both the CCGT facility and Project Orion will be minimized by recirculating cooling water, thereby minimizing water withdrawals to the extent practicable, which is the most effective entrainment reduction technology. By using mechanical draft cooling towers and DEC, there is a substantial reduction in water withdrawal (at least 95% based on historical estimates for the Unit 14 & 15 and Unit 17 & 18 cooling towers), and proportionately entrainment, as compared to once-through cooling. Additionally, the anticipated peak withdrawal flow of 34.35 MGD represents less than 5% of the nearby Kankakee River median flow (Q50 = 1,100 cfs = 711 MGD).

2. MAY FACTORS (40 CFR 125.98(f)(3))

i. Entrainment impacts on the waterbody;

Entrainment of Davis Ditch and Kankakee River fish eggs and larvae are not expected to impact the existing warmwater fish community. Mechanical draft cooling towers and DEC will be used to reduce the volume of water withdrawn from the Kankakee River and minimize entrainment to the extent practicable. Additionally, RMSGs intends to cease coal combustion by December 31, 2028.

ii. Thermal discharge impacts;

RMSGs intends to cease coal combustion by December 31, 2028. Therefore, thermal discharge impacts related to Units 17 and 18 are not an issue.

Operation of the CCGT facility and its associated cooling towers will not cause a change to the thermal discharge; all wastewaters including the cooling tower blowdown are routed through a 221-acre Final Settling Basin (FSB) prior to discharge as Outfall 001. The size and resulting residence time of the FSB assists in mitigating the thermal load of discharges to the Kankakee River. The addition of non-contact cooling water from the DEC system used by Project Orion will not increase the effluent temperature because DEC cools the air through water evaporation rather than heat transfer to the cooling water. The future RMSGs Outfall 001 discharge is expected to continue to comply with the applicable temperature criteria.

iv. Impacts on the reliability of energy delivery within the immediate area;

Operation of the CCGT facility will improve reliability of energy delivery within the immediate area.

v. Impacts on water consumption; and

RMSGs intends to cease coal combustion by December 31, 2028. However, water consumption will be increased, compared to recent operations of Units 17 & 18, with use of the new cooling towers at the CCGT facility and DEC system at Project Orion.

vi. Availability of process water, gray water, waste water, reclaimed water, or other waters of appropriate quantity; and, quality for reuse as cooling water

Numerous wastestreams discharge internally to the FSB and can be reused/recycled to the cooling towers or other systems.

The CCGT facility aims to use the boiler blowdown and associated quench water as a secondary source of makeup water for the cooling towers. A thorough investigation of potential water reuse from external sources has not been carried out. However, it is unusual for the quantity of water required, of sufficient water quality, to be available from nearby wastewater treatment plants or water reuse sources, particularly in an area as remote as the RMSGs site. For example, the nearby Town of Wheatfield Wastewater Treatment Plant has an average design flow of 0.077 MGD and a proposed upgrade may increase the capacity (split between the existing plant and a new package plant) to an average design flow of 0.099 MGD. In short, there is no known source of wastewater or reclaimed water that could supply the volumes needed.

#### **6.4.8 BTA Impingement and Entrainment Determination Summary**

Based on the information provided by the permittee, IDEM concurs with the permittee that operating a CWIS that has a maximum actual through-screen intake velocity of 0.5 fps (40 CFR 125.94(c)(3)) is the BTA for impingement mortality at the facility.

Further, after considering all the factors that must and may be considered by the federal rules (see discussion in Section 6.3.6.B above), IDEM has determined that the existing facility meets BTA for entrainment. Primary in this entrainment BTA determination is that RMSGS intends to cease coal combustion by December 31, 2028, and that a closed-cycle recirculating system will be utilized by the CCGT facility and DEC will be utilized by Project Orion.

#### **6.4.9 Permit Conditions**

The permittee shall comply with requirements below:

1. In accordance with 40 CFR 125.98(b)(1), nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.
2. The permittee must at all times properly operate and maintain the cooling water intake structure and associated intake equipment.
3. The permittee must inform IDEM of any proposed changes to the CWIS or proposed changes to operations at the facility that affect the information taken into account in the current BTA evaluation.
4. Any discharge of intake screen backwash must meet the Minimum Narrative Limitations contained in Part I.B of the permit. There must be no discharge of debris from intake screen washing which will settle to form objectionable deposits which are in amounts sufficient to be unsightly or deleterious, or which will produce colors or odors constituting a nuisance.
5. The permittee must either conduct visual inspections or employ remote monitoring devices during the period the cooling water intake structure is in operation as required by 40 CFR 125.96(e). The permittee must conduct such inspections at least weekly to ensure that any technologies operated to comply with 40 CFR 125.94 are maintained and operated to function as designed including those installed to protect Federally-listed threatened or endangered species or designated critical habitat. Alternative procedures can be approved if this requirement is not feasible (e.g., an offshore intake, velocity cap, or during periods of inclement weather).
6. In accordance with 40 CFR 125.97(c), by January 31 of each year, the permittee must submit to the Industrial NPDES Permit Section IDEM-OWQ an annual certification statement for the preceding calendar year signed by the responsible corporate officer as defined in 40 CFR 122.22 (see 327 IAC 5-2-22) subject to the following:

- a. If the information contained in the previous year's annual certification is still pertinent, you may simply state as such in a letter to IDEM and the letter, along with any applicable data submission requirements specified in this section shall constitute the annual certification.
  - b. If you have substantially modified operation of any unit at your facility that impacts cooling water withdrawals or operation of your cooling water intake structures, you must provide a summary of those changes in the report. In addition, you must submit revisions to the information required at 40 CFR 122.21(r) in your next permit application.
7. BTA determinations for entrainment mortality and impingement mortality at cooling water intake structures will be made in each permit reissuance in accordance with 40 CFR 125.90-98. The permittee must submit all the information required by the applicable provisions of 40 CFR 122.21(r)(2) through (r)(8) with the next renewal application. Since the permittee has submitted the studies required by 40 CFR 122.21(r), the permittee may, in subsequent renewal applications pursuant to 40 CFR 125.95(c), request to reduce the information required if conditions at the facility and in the waterbody remain substantially unchanged since the previous application so long as the relevant previously submitted information remains representative of the current source water, intake structure, cooling water system, and operating conditions. Any habitat designated as critical or species listed as threatened or endangered after issuance of the current permit whose range of habitat or designated critical habitat includes waters where a facility intake is located constitutes potential for a substantial change that must be addressed by the owner/operator in subsequent permit applications, unless the facility received an exemption pursuant to 16 U.S.C. 1536(o) or a permit pursuant to 16 U.S.C. 1539(a) or there is no reasonable expectation of take. The permittee must submit the request for reduced cooling water intake structure and waterbody application information at least **two years and six months** prior to the expiration of the NPDES permit. The request must identify each element in this subsection that it determines has not substantially changed since the previous permit application and the basis for the determination. IDEM has the discretion to accept or reject any part of the request.
8. The permittee must submit an annual summary of the actual intake flows measured at the intake at a minimum frequency of daily. Further, the permittee shall submit an annual summary spreadsheet of the actual intake flows with the annual summary required in Part IV.B.6 of the permit above.
9. The permittee must monitor the velocity at the traveling screens at a minimum frequency of daily. In lieu of velocity monitoring at the screen face of the traveling screens, the permittee may calculate the through-screen velocity using water flow, water depth, and the screen open areas. These daily measurements must be reported on the MMR with the monthly results summarized on the DMRs that are submitted every month

10. The permittee must monitor and report the cycles of concentration for the Unit 17, Unit 18, Units 21A/21B, and Units 22A/22B cooling towers at a minimum frequency of daily. Further, the permittee shall submit an annual summary spreadsheet of the cycles of concentration for each unit with the annual summary required in Part IV.B.6 of the permit above.
11. The permittee shall submit and maintain all the information required by the applicable provisions of 40 CFR 125.97.
12. The permittee must keep records of all submissions that are part of its permit application until the subsequent permit issued to document compliance with 40 CFR 125.95. If IDEM approves a request for reduced permit application studies under 40 CFR 125.95(a) or (c) or 40 CFR 125.98(g), the permittee must keep records of all submissions that are part of the previous permit application until the subsequent permit is issued.
13. All required reports must be submitted to the IDEM, Office of Water Quality, NPDES Permits Branch, Industrial NPDES Permit Section at [OWQWWPER@idem.in.gov](mailto:OWQWWPER@idem.in.gov) and the Compliance Branch at [wwReports@idem.in.gov](mailto:wwReports@idem.in.gov).

## **6.5 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.

## **6.6 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 minimum 30-day comment period is available to solicit input from interested parties, including the public.