

STATE OF INDIANA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT PUBLIC
NOTICE NO: 20240204– IN0064602– D
DATE OF NOTICE: February 4, 2025
DATE RESPONSE DUE: March 6, 2025

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

MINOR – RENEWAL:

University of Notre Dame du Lac, Permit No. IN0064602, ST. JOSEPH COUNTY, 100 Facilities Building, Notre Dame, IN. This facility is a fossil fuel steam generating facility. The facility recirculates water from St. Joseph’s Lake for use as non-contact cooling water. The average daily discharge from Outfall 007 or the bypass Outfalls 002, 004, or 008 to the St. Joseph Lake is 7.6 MGD. The outfall locations are as follows:

Outfall 007	Latitude: 41° 42’ 23” Longitude: -86° 14’ 14”
Outfall 002	Latitude: 41° 42’ 21.99” Longitude: -86° 14’ 13.99”
Outfall 004	Latitude: 41° 42’ 20” Longitude: -86° 14’ 17.99”
Outfall 008	Latitude: 41° 42’ 17.99” Longitude: -86° 14’ 22.99”

This is the second public notice for this facility. Pursuant to IC 13-15-5-1, IDEM published a draft permit document from December 19, 2023, through January 18, 2024, as part of Public Notice No. 20231219-IN0064602-D. That Public Notice was subsequently extended from January 22, 2024, through February 2, 2024, as part of Public Notice No. 20240122-IN0064602-D-EXT to solicit additional input from interested parties. Due to substantial changes to that draft permit document, IDEM is posting a notice of a new 30-day comment period based on the revised draft permit document. Permit Manager: Heidi Etter at 317-233- 49063 or hetter@idem.in.gov. Posted online at <https://www.in.gov/idem/public-notices/>.

PROCEDURES TO FILE A RESPONSE

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

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

To Request a Public Hearing: Any person may request a public hearing. A written request must be submitted to the above address on or before the Response Due Date. The written request shall include: the name and address of the person making the request, the interest of the person making the request, persons represented by the person making the request, the reason for the request and the issues proposed for consideration at the hearing. The Department will determine whether to hold a public hearing based upon the comments and the rationale for the request. Public Notice of such a hearing would be published in accordance with 327 IAC 5-3-9 and to those persons submitting comments and/or on the mailing list at least 30 days prior to the hearing.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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

Mike Braun, Governor

VIA ELECTRONIC MAIL

February 4, 2025

Doug Marsh, Vice President
University of Notre Dame du Lac
100 Facilities Building
Notre Dame, IN 46556

Dear Mr. Marsh:

Re: NPDES Permit No. IN0064602
Draft Permit
University of Notre Dame du Lac
Notre Dame, IN – St. Joseph 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.

Sincerely,

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

Enclosures

cc: St. Joseph County Health Department
Paul Kempf, Assistant VP of Utilities & Maintenance
Michael Cira, Senior Environmental and Safety Specialist
Chief, Permits Section, U.S. EPA, Region 5
Porfirio Ascencio, IDEM
IDEM, Northern Regional Office

Visit on.IN.gov/survey or scan the QR code to provide feedback.

We appreciate your input!

Letthead INDY R-01.2024



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,

UNIVERSITY OF NOTRE DAME DU LAC

is authorized to discharge from a steam generating facility that is located at 100 Facilities Building in Notre Dame, Indiana to receiving waters identified as St. Joseph Lake in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I and II, and III 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 007, 002, 004 and 008. The discharge is limited to non-contact cooling water. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into St. Joseph Lake. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2]
Outfalls 007, 002, 004, 008 [3]

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	----	----	----	Daily	24 Hr. Total
Intake Flow	Report	Report	MGD	----	----	----	Daily	24 Hr. Total [8]
Oil & Grease [7]	-	-	lbs/day	Report	Report	mg/l	2 X Monthly	Grab
Temperature [5][6]	-	-	lbs/day	Report	Report	°F	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.	2 X Monthly	Grab

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

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

- [3] Outfall 007: Latitude: 41° 42' 23" Longitude: -86° 14' 14"
 Outfall 002: Latitude: 41° 42' 21.99" Longitude: -86° 14' 13.99"
 Outfall 004: Latitude: 41° 42' 20" Longitude: -86° 14' 17.99"
 Outfall 008: Latitude: 41° 42' 17.99" Longitude: -86° 14' 22.99"
- [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 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.
- [6] The discharge from Outfalls 007, 002, 004, 008 shall not exceed the maximum limits in the following table by more than three degrees Fahrenheit (3°F) (one and seven-tenths degrees Celsius (1.7°C)).

Table 1

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
°F	50	50	60	70	80	90	90	90	90	78	70	57
°C	10	10	15.6	21.1	26.7	32.2	32.2	32.2	32.2	25.5	21.1	14

- [7] The facility is required to investigate and eliminate any significant or measured concentration of oil and grease (quantities in excess of 5 mg/l). The intent of this requirement is to assure that oil and grease is not added to once-through cooling water in measurable quantities (5 mg/l).
- [8] If a flow measurement device is not present, then the permittee may estimate the flow at this intake and must report the daily maximum flow for each day on the MMR with the monthly results summarized on the DMRs that are submitted every month.

B. MINIMUM NARRATIVE LIMITATIONS

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

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

C. MONITORING AND REPORTING

1. Representative Sampling

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

2. Monthly Reporting

The permittee shall submit monitoring reports to the Indiana Department of Environmental Management (IDEM) containing results obtained during the previous month and shall be submitted no later than the 28th day of the month following each completed monitoring period. The first report shall be submitted by the 28th day of the month following the month in which the permit becomes effective. 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 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:
 - (1) recording the discharge flow rate at the time each individual sample is taken,
 - (2) adding together the discharge flow rates recorded from each individuals 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, Illinois 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, Indiana 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;

- b. The person(s) who performed the sampling or measurements;
- 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. 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 comply with any applicable standards, regulations and requirements issued or approved under section 316(b) of the Clean Water Act.

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

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 5-22. In order to operate a wastewater treatment plant the operator shall have qualifications as established in 327 IAC 5-22-7.

327 IAC 5-22-10.5(a) provides that a certified operator may be designated as being in responsible charge of more than one (1) wastewater treatment plant, if it can be shown that he will give adequate supervision to all units involved. Adequate supervision means that sufficient time is spent at the plant on a regular basis to assure that the certified operator is knowledgeable of the actual operations and that test reports and results are representative of the actual operations conditions. In accordance with 327 IAC 5-22-3(11), "responsible charge operator" means the person responsible for the overall daily operation, supervision, or management of a wastewater facility.

Pursuant to 327 IAC 5-22-10(4), the permittee shall notify IDEM when there is a change of 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.

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.
- 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; or
- c. Any upset (as defined in Part II.B.3 above) that causes an exceedance of any effluent limitation in the permit.

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. 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 Cooling Water Intake Structures

A. Best Technology Available (BTA) Determination

Section 316(b) of the Clean Water Act requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available (BTA) 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 (CWIS). 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 BTA standards to reduce impingement and entrainment of aquatic organisms at existing power generation and manufacturing facilities.

IDEM has made BTA impingement and entrainment determinations for this facility.

- Based on an evaluation of the information contained in the permittee's 316(b) application and supplemental information submitted by the permittee, IDEM has granted the de minimis exception at 40 CFR 125.94(c)(11).
- After considering all the factors that must and may be considered by the federal rules, IDEM finds that the existing facility meets the BTA for entrainment mortality.

This determination will be reassessed at the next permit reissuance to ensure that the CWISs continue to meet the applicable 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 the following cooling water intake structure requirements:

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 monitor the intake flow at the intake, at a minimum frequency of daily. These data must be reported on the DMRs and MMRs. Further, the permittee shall submit an annual summary of the actual intake flows measured at a minimum frequency of daily.
6. 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).
7. 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.
8. 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.

9. The permittee shall submit and maintain all the information required by the applicable provisions of 40 CFR 125.97.
10. The permittee must keep records of all submissions that are part of its permit application until the subsequent permit is 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.
11. 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 and the Compliance Branch at wwReports@idem.in.gov.



National Pollutant Discharge Elimination System
Briefing Memo for
University of Notre Dame du Lac
Draft: January 2025
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

Permittee:	University of Notre Dame du Lac 100 Facilities Building Notre Dame, IN, 46556
Existing Permit Information:	Permit Number: IN0064602 Expiration Date: April 30, 2023
Facility Contact:	Charles Farrell, Sr. Environmental and Safety Specialist (574) 631-9826 charles.f.farrell.70@nd.edu
Facility Location:	100 Facilities Building Notre Dame, Indiana 46556 St. Joseph County
Receiving Stream(s):	St. Joseph Lake
GLI/Non-GLI:	GLI
Proposed Permit Action:	Renew
Date Application Received:	November 2, 2022
Source Category:	NPDES Minor – Industrial
Permit Writer:	Heidi Etter hetter@idem.in.gov (317) 233-4903

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1.0 INTRODUCTION

The Indiana Department of Environmental Management (IDEM) received a National Pollutant Discharge Elimination System (NPDES) Permit application from the University of Notre Dame du Lac on November 2, 2022.

In accordance with 327 IAC 5-2-6(a), the current five-year permit was issued with an effective date of May 1, 2018. 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) Section 124.7, as well as Title 327 of the Indiana Administrative Code (IAC) 327 Article 5-3-7, a Statement of Basis, or Briefing Memo, is required for certain NPDES permits. This document fulfills the requirements established in these regulations. This Briefing Memo was prepared in order to document the factors considered in the development of NPDES Permit effluent limitations. The technical basis for the Briefing Memo 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 Briefing Memo where necessary.

2.0 FACILITY DESCRIPTION

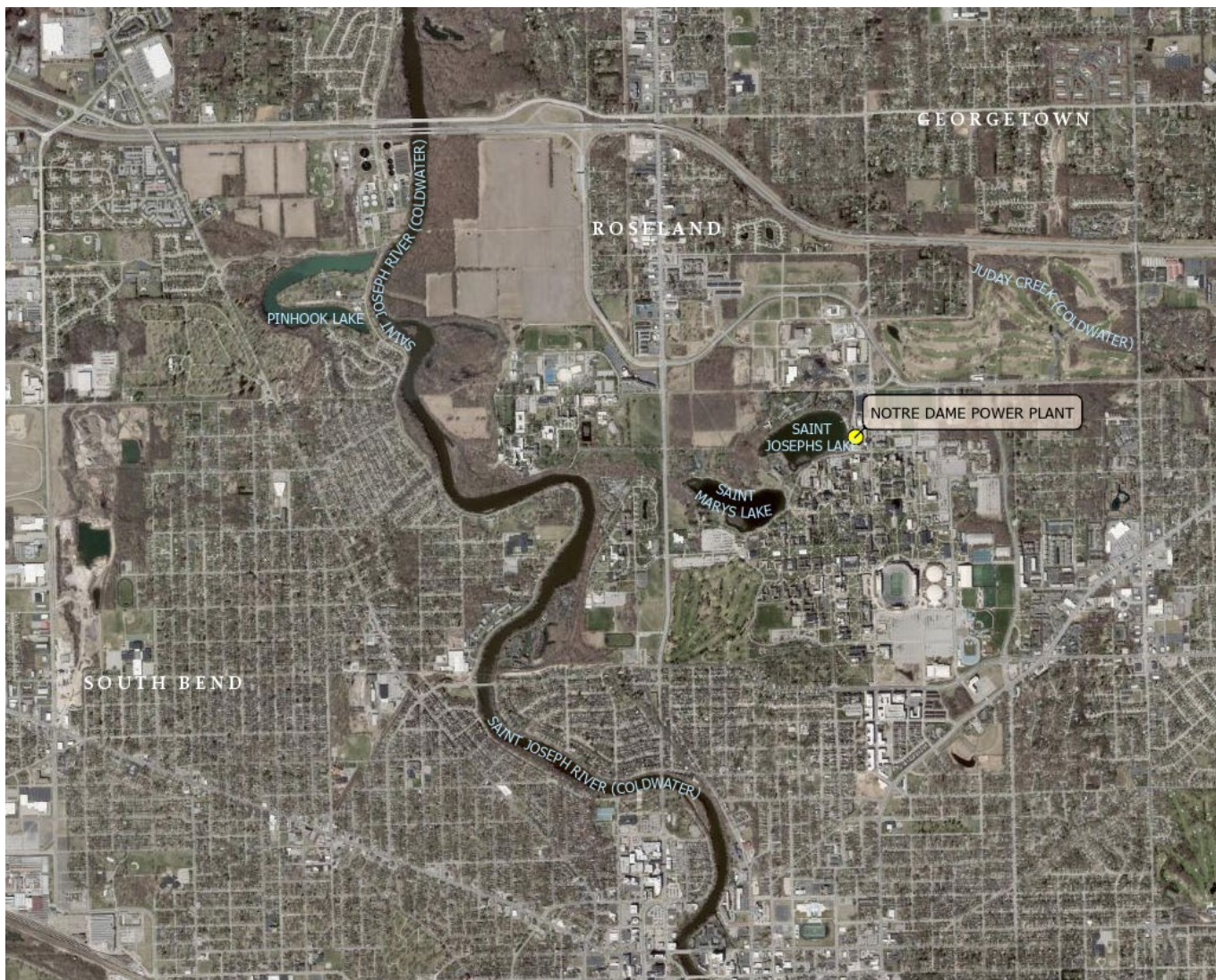
2.1 General

The University of Notre Dame du Lac is classified under Standard Industrial Classification (SIC) Code 8221-Colleges and Universities.

The University of Notre Dame du Lac owns and operates a fossil-fueled steam generating facility. The facility recirculates water from St. Joseph's Lake for use as non-contact cooling water. The primary outfall associated with the discharge of non-contact cooling water is Outfall 007. The discharge from Outfall 007 consists of single-pass water that goes through the onsite cooling towers (#1-5). During regular operation, water is discharged into the cooling tower basin, which eventually discharges through Outfall 007 into the St. Joseph Lake. Alternatively, water may be discharged through the bypass outfalls (002, 004, and 008) into the same lake.

A map showing the location of the facility has been included as Figure 1.

Figure 1: Facility Location



100 Facilities Building
Notre Dame, IN 46556
St. Joseph County

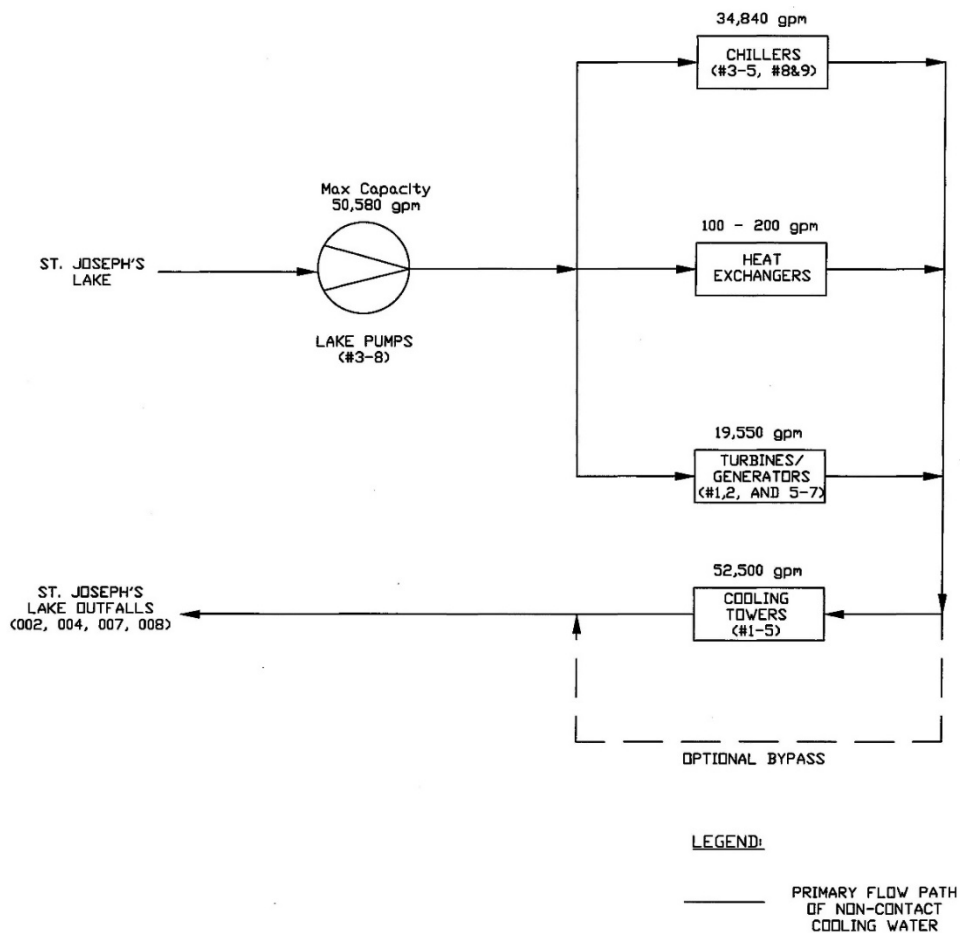
2.2 Outfall Locations

Outfall 007	Latitude: 41° 42' 23" Longitude: -86° 14' 14"
Outfall 002	Latitude: 41° 42' 21.99" Longitude: -86° 14' 13.99"
Outfall 004	Latitude: 41° 42' 20" Longitude: -86° 14' 17.99"
Outfall 008	Latitude: 41° 42' 17.99" Longitude: -86° 14' 22.99"

2.3 Discharges and Wastewater Treatment

Other than the once-through cooling provided to the noncontact cooling water, no wastewater treatment takes place for the wastestreams discharged under this permit. The cooling water is discharged into the cooling tower basin, which discharges through Outfall 007 into St. Joseph Lake. Water may also be discharged through the bypass outfalls (002, 004, and 008) into the same lake. A Flow Diagram has been included as Figure 2.

Figure 2: Flow Diagram



Outfall 007, 002, 004 and 008: The average daily discharge from Outfall 007 or the bypass Outfalls 002, 004 or 008 to the St. Joseph Lake is 7.6 MGD. The design flow (highest monthly average) based on the most recent 2 years of data is 58.7 MGD.

The permittee shall have any 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 5-22-5. In order to operate a wastewater treatment plant, the operator shall have qualifications as established in 327 IAC 5-22-7.

IDEM has determined that the permittee doesn't qualify for an industrial wastewater treatment plant classification because the wastewater is not treated prior to discharge.

2.4 Changes in Operation

In the permit application no changes in operation were identified as occurring since the previous permit renewal.

2.5 Facility Stormwater

There is no stormwater associated with this permit.

3.0 PERMIT HISTORY

3.1 Compliance History

A review of this facility's discharge monitoring data was conducted for compliance verification and shows no permit limitation violations at Outfalls 002, 004, 007, and 008 between January 2020 and November 2022. There are no pending or current enforcement actions regarding this NPDES permit.

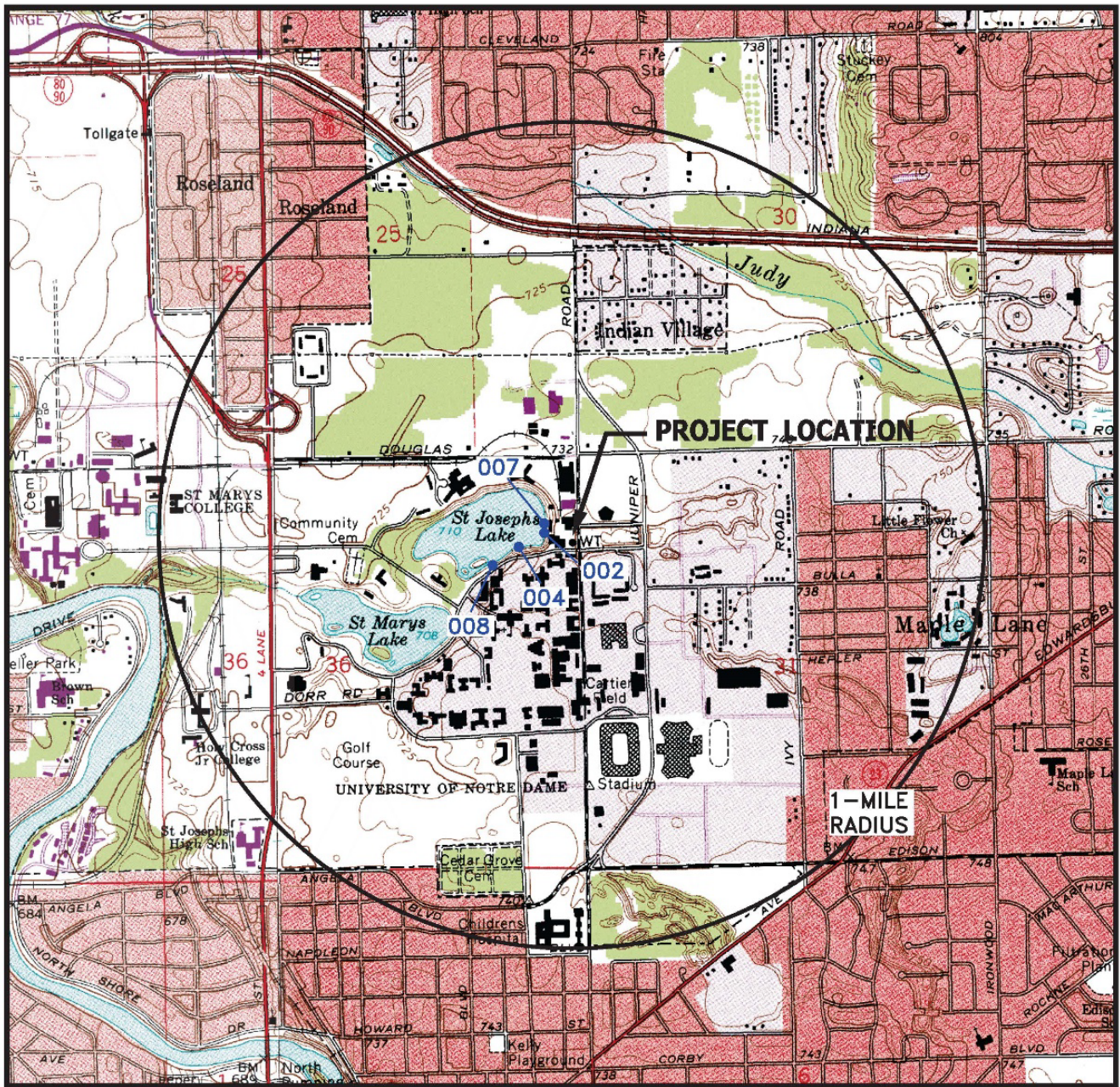
4.0 LOCATION OF DISCHARGE/RECEIVING WATER USE DESIGNATION

The receiving stream for Outfalls 007, 002, 004 and 008 is St. Joseph Lake. The $Q_{7,10}$ low flow value of St. Joseph Lake is 0.0 cfs and shall be capable of supporting a well-balanced, warm water aquatic community and full body contact recreation in accordance with 327 IAC 2-1.5-5.

The permittee discharges to a waterbody that has been identified as a water of the state within the Great Lakes system. Therefore, it is subject to NPDES requirements specific to Great Lakes system dischargers under 327 IAC 2-1.5 and 327 IAC 5-2-11.4 through 11.6. These rules contain water quality standards applicable to dischargers within the Great Lakes system and the procedures to calculate and incorporate water quality-based effluent limitations.

A Site Map has been included as Figure 3.

Figure 3: Site Map



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 2022 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 2022 Cycle.

The St. Joseph Lake, Assessment-Unit INJ01P1177_00, HUC 040500012207, is not on the 2022 303(d) list for impairments. A TMDL for the receiving water has not been completed and no TMDL is in progress.

5.0 PERMIT LIMITATIONS

5.1 Technology-Based Effluent Limits (TBELs)

TBELs require every individual member of a discharge class or category to operate their water pollution control technologies according to industry-wide standards and accepted engineering practices. TBELs are developed by applying the National Effluent Limitation Guidelines (ELGs) established by EPA for specific industrial categories. Technology-based treatment requirements established pursuant to sections 301(b) and 306 of the CWA represent the minimum level of control that must be imposed in an NPDES permit (327 IAC 5-5-2(a)).

In the absence of ELGs for a particular process or parameter, TBELs can also be established on a case-by-case basis 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).

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 2-1.5-8 or developed under the procedures described in 327 IAC 2-1.5-11 through 16 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 5-2-11.5.

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 External Outfalls (007, 002, 004, 008)

Narrative Water Quality Based Limits

The narrative water quality criteria contained under 327 IAC 2-1.5-8(b)(1) and (2) have been included in this permit to ensure that these minimum water quality conditions are met.

Flow

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

5.3.2 Outfalls (007, 002, 004, 008)

pH

Limitations for pH in the proposed permit are based on the criteria established in 327 IAC 2-1.5-8(c)(2).

Oil and Grease (O & G)

If oil and grease is measured in the effluent in significant quantities, the source of such discharge is to be investigated and eliminated. The facility is required to investigate and eliminate any significant or measured concentration of oil and grease (quantities in excess of 5 mg/l). The intent of this requirement is to assure that oil and grease is not added to once-through cooling water in measurable quantities (5 mg/l). This requirement is considered sufficient to ensure compliance with narrative water quality criteria in 327 IAC 2-1.5-8(b)(1)(C) which prohibits oil or other substances in amounts sufficient to produce color, visible sheen, odor or other conditions in such a degree to create a nuisance. This requirement is also consistent with the General Permit for Once-Through Noncontact Cooling Water.

Temperature

Effluent limitations for temperature are based on the criteria established in 327 IAC 2-1.5-8(c)(4).

5.4 Whole Effluent Toxicity (WET) Testing

The permit does not contain a requirement to conduct whole effluent toxicity (WET) tests.

5.5 Antibacksliding

Pursuant to 327 IAC 5-2-10(a)(11), unless an exception 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. None of the limits included in this permit are less stringent than the comparable effluent limitations in the previous permit, therefore, backsliding is not an issue in accordance with 327 IAC 5-2-10(a)(11).

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 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 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-agency-forms/> 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.

There are no water treatment additives currently approved for use at the facility.

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.

Outfall 007, 002, 004, 008:

Parameter	Monthly Average	Daily Maximum	Units	Minimum Frequency	Sample Type
Flow	Report	Report	MGD	Daily	24 Hr. Total
Intake Flow*	Report	Report	MGD	Daily	24 Hr. Total
Oil and Grease	Report	Report	mg/l	2 X Monthly	Grab
Temperature	Report	Report	°F	2 X Monthly	Grab

*If a flow measurement device is not present, intake flow can be estimated

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

6.2 Schedule of Compliance

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

6.3. Clean Water Act Section 316(b) Cooling Water Intake Structure(s) (CWIS)

6.3.1 Introduction

Section 316(b) of the Clean Water Act requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available (BTA) 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)).

The permittee withdraws water from St. Joseph's Lake via an intake pipe protected by an intake crib, submerged approximately 235 feet offshore. The intake pipe extends to the concrete sump, which houses a trash rack and two sets of stationary screens. See Figure 4, below. The water is transported from the screens to the cooling plant, where it is distributed to six cooling water intake pumps. Two (2) of the pumps have a capacity of 6,000 gpm (8.6 mgd), two (2) pumps have a capacity of 9,570 gpm (13.8 mgd), and two (2) pumps have a capacity of 9,720 gpm (14 mgd).

Based on the pump capacities, the design intake flow for this intake is 72.8 MGD. The actual intake flow, 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 permittee did not provide five years of intake flow data (the permittee's data system only retains the most recent 18 months of data); however, the permittee stated in their application that the average intake flow for the period from April 2021 through September 2022 was 43.1 mgd and provided an average monthly flow rate for 2021 and 2022 as provided in the following table. In addition, under the Indiana Department of Natural Resources (IDNR) Significant Water Withdrawal

Facility program, the permittee submits monthly and annual water withdrawal data to IDNR every year. The permittee has informed IDEM that they consider the flow they provided to IDEM as part of this 316(b) application to be more accurate than the data the permittee submits to IDNR.

Year	Average Flow (mgd)
2021	44.6
2022	41.5
Average:	43.1

All the water withdrawn is used for cooling.

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 316(b) application with their renewal permit application in November 2022. The permittee provided additional information for the intake after November 2022 and submitted a revised 316(b) application on September 29, 2023.

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 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 December 13, 2022. On April 20, 2023, the U.S. Fish and Wildlife Service provided their comment on the application and stated that there were no threatened and endangered species that would be impacted by the permittee's intake.

Figure 4: Site Map



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

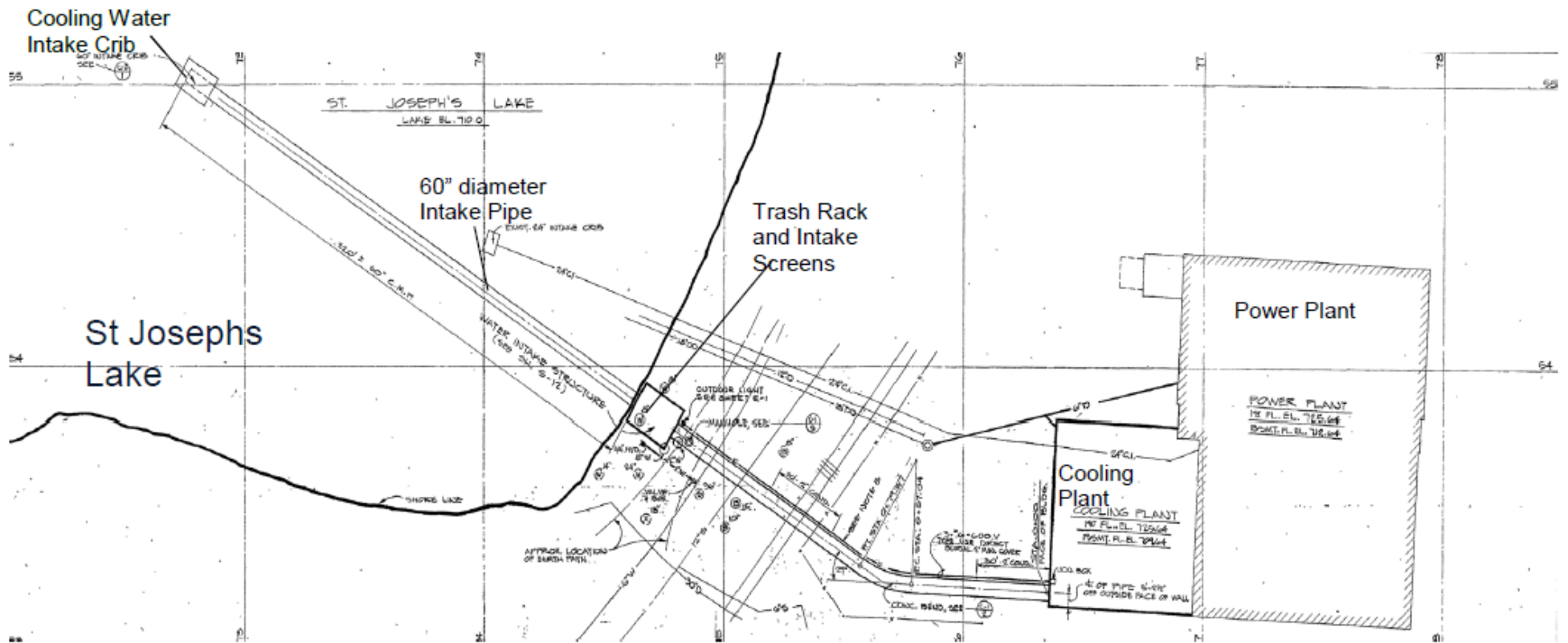
6.3.2 Facility and Cooling Water Intake Structure (CWIS) Description

A. Detailed Description

The permittee's CWIS is a submerged intake crib/hood, located in St. Joseph's Lake, that protects the opening to a 60-inch diameter intake pipe. The intake pipe extends approximately 235 feet offshore. Water is withdrawn and discharged into St. Joseph's Lake 365 days per year. The invert pipe elevation is 685 ft. mean sea level (M.S.L.) and normal water elevation is 710 ft. M.S.L. The low water elevation is unknown. (UND, 2022b). See Figure 5, below.

The intake crib/hood is an 8-foot by 5-foot rectangle that is constructed of 10-gauge sheet metal. The intake is open to flow on all sides, has risers that create a 3-foot-high opening, and is always submerged. The intake pipe is constructed of 10-gauge corrugated metal pipe and extends to the shoreline where it enters a concrete sump. The concrete sump has a bottom elevation of approximately 701.5 ft. M.S.L and is approximately 10 feet in height (UND, 2022b). The sump houses a trash rack followed by two sets of stationary screens. The trash rack has vertical bars with 1.5-inch openings between bars. Behind the trash rack are two sets of seven stationary screens; the trash rack and each set of screens are 18 inches apart. Each set of screens is comprised of six screens that are 23 inches wide, and one screen in the center that is 20 inches wide. All of the screens are 120 inches in height and constructed of 5/8-inch square openings with 0.072-inch stainless steel mesh panels.

Figure 5: Drawing of Water Intake Structure and Screen Locations



After the screens, water is conveyed through a 60-inch diameter cooling water intake pipe into the cooling plant as the suction line to six cooling water intake pumps. Two of the pumps have a capacity of 6,000 gpm (8.6 mgd), two pumps have a capacity of 9,570 gpm (13.8 mgd), and two pumps have a capacity of 9,720 gpm (14 mgd). Based on the cumulative capacity of the cooling water intake pumps, the design intake flow (DIF) of the cooling water intake system is 50,580 gpm (72.8 mgd). The pumps that supply water from the intake structure to the plant and their design flow rates are shown in the table below.

Pump Number	Design Flow (gpm)	Design Flow (mgd)
Pump #3	6,000	8.6
Pump #4	9,720	14.0
Pump #5	9,720	14.0
Pump #6	6,000	8.6
Pump #7	9,570	13.8
Pump #8	9,570	13.8
Maximum Total Daily Operation	50,580	72.8

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

Intake Flow

The cooling water intake structure operates to provide a continuous supply of water from St. Joseph’s Lake to the Power Plant where it is used for once-through, noncontact cooling, 365 days per year (Cardno, 2021). The water withdrawn through the CWIS supports the University’s steam and electricity generation by providing noncontact cooling water to heat exchangers and chillers. A 60-inch pipe conveys water from the CWIS to the cooling water pumps which are located in the plant.

The design intake flow, assuming all pumps are operating, is 72.8 MGD (50,580 GPM). The University’s Delta V data historian is only set up to store 18 months of data; therefore, insufficient intake flow data was provided to determine the actual intake flow (which is a 5-year annual average); however, based on the intake flow data that was provided the average intake flow for 2021 and 2022 was 43.1 mgd as shown in the below table.

Year	Average Monthly Intake Flow (mgd)
2021	44.6
2022	41.5
Average (2021-2022)	43.1

The permittee does periodically operate all of its pumps during normal operation; therefore, the maximum daily intake flow is 72.8 mgd.

The proportion of the source waterbody withdrawn has been calculated on a monthly basis as a percentage of the St. Joseph’s Lake volume. Actual intake flow data for April 2021 through September 2022 was provided by the University (UND, 2022a). The table below shows the proportion of the average daily withdrawals from St. Joseph’s Lake on an average monthly basis. The maximum percentage of the waterbody withdrawn (30.8%) occurs in July.

Month	Average Water Withdrawal (MGD)	Proportion of Lake Withdrawn* (%)
January	26.1	13.8
February	28.8	15.2
March	27.8	14.7
April	27.4	14.5
May	46.9	24.8
June	58.0	30.6
July	58.3	30.8
August	56.0	29.5
September	49.4	26.1
October	52.0	27.4
November	25.6	13.5
December	23.0	12.1
*Total volume of lake = 189.4 MG		

Intake Velocity

Approach Velocity

The approach velocity was calculated by the permittee at the following locations, using the design intake flow (DIF) and maximum monthly average intake flow: at the intake pipe, between the hood and riser of the intake hood, at the intake hood riser. The intake velocities were determined by dividing the DIF (112.70 cfs) and maximum monthly average intake flow (94.64 cfs) by the cross-sectional area of the intake location.

$$V_{\text{approach}} = Q/A$$

Where V_{approach} = velocity at the mouth of the intake pipe, between the hood and riser of intake crib or at the riser of the intake crib; Q = DIF or maximum monthly average intake flow; and A = cross-sectional area of the intake pipe, between the hood and riser of intake crib or at the riser of the intake crib.

Since the maximum daily intake flow is the same as the design intake flow, the velocities at the maximum daily intake flow would be the same as the velocities at the design intake flow.

The calculated intake velocities are provided below.

Location	Velocity (fps)	Flow
Intake Pipe	5.74	Design Intake Flow
Between Hood and Riser	1.44	
At Riser	2.82	
Intake Pipe	4.82	Maximum Monthly Average Intake Flow
Between Hood and Riser	1.21	
At Riser	2.37	

Velocity-Intake Screens and Intake Crib

The velocity was calculated at the intake screens (the through screen velocity) located onshore and the face of the intake crib (intake velocity). These values were calculated using a design intake flow (DIF) and the maximum monthly average intake flow at normal water level as listed in the table below. The calculations assume that the DIF is 72.8 mgd (50,580 gpm) and that the maximum monthly average intake flow is 61.2 mgd, and all of the flow passes through the 60” intake pipe, into the concrete sump where the trash rack and screens are located. The through screen velocity and velocity at the face of the intake crib are listed below.

Location	Water Depth (ft.)	Velocity (fps) at DIF	Velocity (fps) at Max Monthly Average Flow
Intake Crib	Submerged	1.44	1.21
Intake Screens	8.5	1.42	1.19

Since the maximum daily intake flow is the same as the design intake flow, the velocities at the maximum daily intake flow would be the same as the velocities at the design intake flow.

The velocity at the intake screens (through screen velocity) used the normal water depth instead of the minimum water depth as required under the 316(b) regulations; however, the minimum water depth is not known.

Area of Influence (AOI)

No physical studies were performed to determine the intake AOI within the waterbody. A desktop analysis was performed to calculate the approximate AOI within the 0.5 feet per second (fps) velocity contour. The United States Environmental Protection Agency (USEPA) considers an intake velocity of 0.5 fps to be a *de minimis* value relative to significant impingement concerns because fish have the swimming ability to overcome this velocity and avoid impingement. Based on the physical dimensions of the CWIS, the pump capacities, and assuming the water is at normal water elevation, the AOI at the intake crib was computed for the DIF and maximum monthly average flow. The results are shown in the table below.

Flow Condition	AOI (ft)
DIF	6.14
Max Monthly Average Flow	4.64

Since the maximum daily intake flow is the same as the design intake flow, the velocities at the maximum daily intake flow would be the same as the velocities at the design intake flow.

6.3.3 Source Water Biological Characterization

The facility is situated within the 694,400-acre St. Joseph's River watershed, which is located in northeast Indiana, northwest Ohio, and south-central and southwest Michigan. The St. Joseph basin is characterized by complex topography that includes moraines and level till plains among braided outwash channels and ridges. This terrain includes small, enclosed basins occupied by lakes, marshes, and outwash fans. The surface water system of the St. Joseph River basin is characterized by more than 200 natural lakes, approximately 27,000 wetlands, and low-gradient streams developed on outwash and till deposits.

The source waterbody for withdrawing cooling water is St. Joseph's Lake, which is fed stormwater and groundwater discharge. St. Joseph's Lake is hydraulically connected to the adjacent St. Mary's Lake via a subsurface culvert; surface water from St. Mary's Lake discharges to the St. Joseph River via a subsurface culvert.

List of Species and Relative Abundance

Fishes identified in facility impingement samples collected from October 2021 to October 2022 were, with the single exception of yellow bullhead, warmwater recreational species: green sunfish, bluegill, yellow perch, largemouth bass and redear sunfish. Green sunfish often hybridize with other sunfishes such as bluegill; hence, there were instances where bluegill/sunfish were identified. These species are representative of the warmwater fish community present in St. Joseph's Lake.

Fishes historically observed in the vicinity of the CWIS within tributaries to the St. Joseph River are also characteristic of a warmwater fish community. Hence, there was some overlap with the species observed in St. Joseph's Lake impingement samples despite habitat differences:

- Marenchin and Sever (1981): Fishes were historically sampled from small creeks within the St. Joseph River watershed near the facility. Of the 7 sample sites, Juday Creek, which is approximately 1 mile from the facility, is the nearest sample station. Fishes were sampled by day electro-shocking with a Smith-Root Type VII backpack Electrofisher. Collections were made over a 90–130-meter stretch of each stream for a duration of 90 minutes.

The table below provides a breakdown of the 3,741 specimens collected in 21 samples across the 7 sample sites were observed. The dominant species were forage fishes characteristic of creeks, pools, and fluvial habitats.

Family	Genus and Species	Common Name	Abundance	Ranked Relative Abundance (%)
Cyprinidae	<i>Notropis cornutus</i>	common shiner	756	20.21%
Percidae	<i>Etheostoma nigrum</i>	johnny darter	504	13.47%
Cyprinidae	<i>Notropis chrsocephalus</i>	striped shiner	445	11.90%
	<i>Semotilus atromaculatus</i>	creek chub	440	11.76%
	<i>Pimephales notatus</i>	bluntnose minnow	294	7.86%
Catostomidae	<i>Catostomous commersoni</i>	white sucker	288	7.70%
Cyprinidae	<i>Rhinichthys atratulus</i>	blacknose dace	182	4.87%
	<i>N. cornutus X chrysocephalus</i>	hybrid shiner	119	3.18%
	<i>Nocomis biguttatus</i>	hornyhead chub	95	2.54%
Percidae	<i>Percina maculate</i>	blackside darter	65	1.74%
Cyprinidae	<i>Notemigonus crysoleucus</i>	golden shiner	63	1.68%
	<i>Campostoma anomalum</i>	central stoneroller	54	1.44%
Centrarchidae	<i>Ambloplites rupestris</i>	rock bass	50	1.34%
Esocidae	<i>Esox americanus</i>	redfin pickerel	49	1.31%
Ictaluridae	<i>Noturus gyrinus</i>	tadpole madtom	47	1.26%
Percidae	<i>Etheostoma caeruleum</i>	rainbow darter	42	1.12%
Catostomidae	<i>Moxostoma erythrurum</i>	golden redhorse	41	1.10%
Centrarchidae	<i>Micropterus dolomieu</i>	smallmouth bass	40	1.07%
Cyprinidae	<i>Ericymba buccata</i>	silverjaw minnow	38	1.02%
Cottidae	<i>Cottus baridi</i>	mottled sculpin	38	1.02%
Catostomidae	<i>Hypentelium nigricans</i>	northern hogsucker	10	0.27%
Ictaluridae	<i>Ictalurus natalis</i>	yellow bullhead ^[1]	10	0.27%
Centrarchidae	<i>Micropterus salmoides</i>	largemouth bass ^[1]	10	0.27%
Cyprinidae	<i>Notropis rubellus</i>	rosyface shiner	7	0.19%
Centrarchidae	<i>Lepomis cyanellus</i>	green sunfish ^[1]	7	0.19%
Salmonidae	<i>Salmo trutta</i>	brown trout	5	0.13%
Ictaluridae	<i>Noturus flavus</i>	stonecat	5	0.13%
Centrarchidae	<i>Lepomis gibbosus</i>	pumpkinseed	5	0.13%
	<i>Lepomis macrochirus</i>	bluegill ^[1]	5	0.13%
Umbridae	<i>Umbra limi</i>	central mudminnow	4	0.11%
Aphredoderidae	<i>Aphredoderus sayanus</i>	pirate perch	4	0.11%
Esocidae	<i>Esox lucius</i>	northern pike	3	0.08%
Atherinidae	<i>Labidesthes sicculus</i>	brook silverside	3	0.08%
Centrarchidae	<i>Pomoxis nigromaculatus</i>	black crappie	3	0.08%
Petromyzontidae	<i>Ichthyomyzon sp.</i>	lamprey	2	0.05%
	<i>Lampetra lamottei</i>	brook lamprey	2	0.03%
Cyprinidae	<i>Cyprinus carpio</i>	common carp	1	0.03%
	<i>Notropis stramineus</i>	sand shiner	1	0.03%

Family	Genus and Species	Common Name	Abundance	Ranked Relative Abundance (%)
	<i>Pimephales promelas</i>	fathead minnow	1	0.03%
Centrarchidae	<i>Lepomis megalotis</i>	longear sunfish	1	0.03%
Percidae	<i>Perca flavescens</i>	yellow perch ^[1]	1	0.03%
	<i>Percina caprodes</i>	logperch	1	0.03%

Notes: [1] Boldfaced species were also observed in facility impingement samples (October 2021 to July 2022)

6.3.4 Impingement and Entrainment– Aquatic Life Studies

The most recent impingement study for the University of Notre Dame du Lac was completed by Cardno, Inc. (now Stantec Consulting) in 2022.

No facility entrainment data or fish surveys of St. Joseph’s Lake were available for review. Hence, the data needed to prepare 40 CFR §122.21(r)(4)(ii) through (vi) were obtained from the following sources:

- Facility impingement data collected from October 2021 to October 2022 (Cardno, 2022, unpublished data).
- Historical published fish survey data for tributaries to the St. Joseph River within the vicinity of the facility (Marenchin and Sever, 1981).
- U.S. Fish & Wildlife Service (USFWS) Information for Planning, and Conservation Tool (IPaC) Trust Resources List Report (USFWS, 2022).
- Indiana Department of Natural Resources: Indiana Endangered, Threatened and Rare Species List for St. Joseph County (IDNR, 2022).

A. Impingement

The impingement study was conducted over a 12-month period from October 6, 2021 to October 13, 2022. The study consisted of fifty-two 24-hour sampling events, with a total of 136 fishes and seven species being impinged by the facility CWIS. Of the total fishes impinged, 61 were alive, 16 were damaged, 55 were dead, and 4 individuals were identified as “long dead”, i.e., partially decayed, cloudy eyes. Collectively, yellow perch and bluegill accounted for over 81% of the collections of live, damaged, dead, and long dead fishes. Nearly all impinged largemouth bass were dead, except for a single specimen that was long dead. Impingement at the University of Notre Dame du Lac is estimated at an average of 2.8 to 2.5 fish per day and 1016 to 945 fish per year, as calculated from 2021 and 2022 data, respectively.

Impingement of live fishes by the CWIS was episodic, with most impingement occurring during the month of May, followed by impingement events in January and April. Most of the impinged fishes in May were yellow perch; live fishes impinged in lower numbers were bluegill, green sunfish, redear sunfish, and yellow bullhead.

B. Entrainment

Based on 12 months of facility impingement data and the available literature, the ichthyoplankton (eggs and larvae) of six fishes are deemed susceptible to entrainment by the facility CWIS: yellow perch, bluegill, green sunfish, redear sunfish, yellow bullhead, and largemouth bass. A rationale regarding the likelihood of entrainment is summarized below:

- Eggs: Eggs of most species are demersal and adhesive; hence, they have a low susceptibility to entrainment.
- Larvae: Larvae susceptible to entrainment are pelagic, passively drift, and are <20 mm total length; yellow perch, bluegill, green sunfish, redear sunfish, and largemouth bass all meet this criterion. Entrainment may also occur for green sunfish, redear sunfish, and largemouth bass due to elevated approach velocities.

6.3.5 Protected Species Susceptible to Impingement and Entrainment

The permittee conducted a query with the UFSWS Information for Planning and Conservation (IPaC) online tool to search for any federally protected species or critical habitat near St. Joseph's Lake and no federally listed fish or shellfish were identified.

The IDNR Endangered, Threatened, and Rare Species List for St. Joseph County was also reviewed for any potentially present state listed aquatic species. Two shellfish and two fish were identified as state listed aquatic species but are unlikely to be present in St. Joseph's Lake.

Based on a review of the permittee's 316(b) application, Dan Sparks with the U.S. Fish and Wildlife Service provided comments to IDEM on April 20, 2023, concluding that there are no endangered or threatened species that would be impacted by the cooling water intake structures at the University of Notre Dame du Lac.

6.3.6 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.

Instead of selecting one of the impingement mortality BTA alternatives listed in the regulations, the permittee proposed that IDEM apply the de minimis rate of impingement exception at 40 CFR 125.94(c)(11). Under this exception, in limited and rare circumstances, IDEM can conclude that rates of impingement may be so low at a facility that additional impingement controls may not be justified. This determination must be based on a review of data submitted under 40 CFR 122.21(r). Notice of a determination that no additional impingement controls are warranted must be included in the draft or proposed permit and IDEM's response to all comments on this determination must be included in the record for the final permit.

In support of the permittee's request that IDEM apply the de minimis exception, the permittee conducted a one-year impingement study from October 6, 2021 through October 12, 2022 and submitted the results of the study on March 30, 2023. In summary, the permittee impinged 132 aquatic organisms during the course of this study, primarily bluegill, yellow perch and largemouth bass. Based on this study, the permittee estimated that the average impingement rate may range from 2.8 to 2.5 fish per day and estimated the annual impingement to range from 1016 (using 2021 flows) to 945 fish (using 2022 flows). This number of fish impinged is relatively small.

In consideration of a de minimis exception, the facility's percent withdrawal from St. Joseph's Lake was reviewed. In Part I.H. of the August 2014 federal register preamble for EPA's 316(b) regulations, it states in pertinent part:

EPA acknowledges that there may be circumstances where flexibility in the application of the rule may be called for and the rule so provides. For example, some low flow facilities that withdraw a small proportion of the mean annual flow of a river may warrant special consideration by the Director. As an illustration, if a facility withdraws less than 50 mgd AIF, withdraws less than 5 percent of mean annual flow of the river on which it is located (if on a river or stream), ... [IDEM] may determine that the facility is a candidate for consideration under the de minimis provisions contained at § 125.94(c)(11).

Although IDEM was not able to determine the AIF for this facility, it likely is slightly under 50 mgd (the two-year annual average was about 43 mgd); however, the permittee withdraws a significant percentage of the volume of St. Joseph's Lake every day. Based on a monthly average, the daily percent withdrawal ranged from 12.1% of the Lake is being withdrawn every day in January to 30.8% of the Lake is being withdrawn every day in July. Over the month's most critical for protection of aquatic life, May through October, the permittee estimated that they withdrew over 24% of the volume of the Lake every day. In addition, IDEM considered the intake velocities of the CWIS (discussed in Section 6.3.2.B of this Briefing Memo). The calculated velocities at the intake screens (the through screen velocity) located onshore and the face of the intake crib (intake velocity) using a design intake flow (DIF) and the maximum monthly average intake flow at normal water level were relatively high.

However, since the permittee's fish impingement study showed a relatively small number of fish impinged, IDEM has granted the de minimis exception.

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 best technology available 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))

In its 316(b) application, the permittee evaluated six initial candidate technologies, three of which were determined to be infeasible, aquatic filter barriers, variable speed pumps, and alternative cooling water sources. The remaining three entrainment technologies were selected for further technical feasibility and cost evaluation. There were: modified fine mesh traveling screens (Ristroph); narrow slot wedgewire screens; and a closed cycle recirculating system. However, the permittee concluded that modified fine mesh traveling screens would not be feasible at the facility.

The permittee's more detailed evaluation of the closed cycle cooling system and fine mesh screens (modified traveling screens and cylindrical wedgewire screens) is contained in section 9.2 of the permittee's revised 316(b) application.

No entrainment studies have been conducted, so the numbers and types of organisms entrained are unknown. It is likely that larvae of some of the impinged fish species could be observed in entrainment samples due to the high approach velocities. However, because of the intake's relatively large percentage withdrawal from St. Joseph's Lake, the presence of the intake on such a small body of water may have reduced the number of organisms available to be entrained.

Based on the information provided by the permittee, and IDEM's evaluation of the factors that IDEM must and may consider (see below), IDEM has determined that the existing facility meets 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):

No entrainment studies have been conducted, so the numbers and types of organisms entrained are unknown. A fish impingement study, however, was conducted over a 12-month period from October 6, 2021 to October 13, 2022. A total of 136 fishes were impinged by the cooling water intake structure representing the following warmwater fishes: Bluegill, Yellow Perch, Largemouth Bass, Yellow Bullhead, Green Sunfish, Lepomis spp., Bluegill/Sunfish, And Redear Sunfish. It is likely that the larvae of Yellow Perch, Bluegill, Green Sunfish, Redear Sunfish, and Largemouth Bass would be observed in entrainment samples because approach velocities exceed 0.3 fps.

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

Closed-Cycle Recirculating System (CCRS)

Operation of cooling towers in this configuration will create increased drift and air pollutant emissions. The drift produced by the cooling towers could create environmental, maintenance, and safety issues for the plant and surrounding areas, including fogging and icing in the parking lot and adjacent road along the St. Joseph River. The potential impact of drift and air pollutant emissions at the site is elevated because the most feasible location for the cooling towers is within close proximity of other campus buildings. In addition, the towers would be needed for year-round operation, resulting in additional grid-wide emissions due, to increased electrical demand.

The permittee currently operates cooling towers during the warmer summer months, but the retrofit to a CCRS will increase overall particulate emissions at the permittee since the cooling towers would be required to run year-round for the CCRS.

Fine-Mesh Screens (modified fine mesh traveling screens and narrow slot wedgewire screens)

The installation of Modified Ristroph traveling screens with fine-mesh overlays or narrow slot wedgewire screens would not result in direct emissions. Construction activities associated with both fine-mesh screen alternatives may result in additional emissions from truck exhaust, mobile construction equipment, etc. The additional electrical power needed to operate the screens would result in added grid-wide emissions; however, this increase is expected to be minor.

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

Closed-Cycle Recirculating System (CCRS)

The CCRS retrofit at the Facility assumes that the existing once-through cooling towers and infrastructure would be used where possible with a retrofit to a closed-loop system. Although additional infrastructure would be required to “close” the cooling system, a substantial portion of the infrastructure would be installed in or near St. Joseph’s Lake. Additional investigation would also be required to confirm that the existing cooling towers are capable of effectively reducing the heat load from the Facility during year-round operation. There is currently limited land available at the Facility to accommodate additional mechanical-draft cooling towers, if required for year-round CCRS operation. Assuming that the existing once-through cooling towers would be used in the CCRS, adequate land appears to be available for the retrofit, although routing of closed loop piping remains a potential issue due to the tightness of the site and close proximity to St. Joseph’s Lake.

Fine-Mesh Screens (modified fine mesh traveling screens and narrow slot wedgewire screens)

The existing intake structure could potentially be modified or replaced to accommodate Modified Ristroph traveling screens with seasonal use of fine-mesh panels and a fish return. However, the increase in TSV would make implementation of this alternative infeasible unless the CWIS was expanded to add additional screens and screening area. Additionally, the larger size and additional mechanical and electrical equipment associated with the traveling screens would require a substantially larger area than the existing stationary screens.

The wedgewire screens would be installed in the lake at the end of the intake pipe and would not take up additional dry land area. However, the screens would disturb the lakebed and require additional environmental permitting. The compressors and tank for the air burst cleaning system and associated electrical equipment would need to be installed on land and would occupy additional area.

iv. Remaining useful plant life; and

There are no plans to retire or curtail operations of the physical plant that provides the University campus buildings with electricity, steam, and chilled water in the foreseeable future.

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 costs of the reviewed alternatives range from \$2.5 million (low estimate for installation of wedgewire screens) to \$20.2 million (average installation for CCRS). Cost estimates for a CCRS with mechanical draft cooling towers range from \$13.2 million to \$20.2 million for an average difficulty installation (costs for the CCRS retrofit at the

Facility would be considered to be average or slightly lower due to the expected use of the existing once-through cooling towers and some existing infrastructure). The narrow-slot 2 mm wedgewire screens have a total estimated capital cost of \$2.5 million to \$5.4 million. Installation of Modified Ristroph traveling water screens with seasonal use of fine-mesh overlays and a fish return was not considered feasible for the Facility without an expanded intake; therefore, associated costs were not estimated.

As discussed in subsequent sections, ongoing operational costs for the reviewed alternatives are not included in the capital costs. Such operational costs relate to electricity, chemical treatment, equipment maintenance and repair, and safety considerations.

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

i. Entrainment impacts on the waterbody;

No entrainment data is available. Wedgewire screens, fine mesh traveling screens and a closed-cycle cooling system all would be expected to significantly reduce the entrainment impacts of the intake. However, since the intake has been withdrawing a significant percentage of the Lake for many years, the presence of the intake on such a small body of water may have reduced the number of organisms available to be entrained.

ii. Thermal discharge impacts;

Wedgewire and fine mesh traveling screens would not be expected to have an increased thermal discharge impact. A closed-cycle cooling system would be expected to reduce the thermal discharge impacts on the waterbody, in part since the volume of heated water that would be discharged into the Lake would be reduced by about 97% or more.

iii. Credit for reductions in flow associated with the retirement of units occurring within the ten years preceding October 14, 2014;

No units have been retired in the 10 years preceding October 14, 2014 or the 10 years preceding this renewal permit.

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

A retrofit to include year-round operation of cooling towers could reduce production due to the additional electrical and maintenance requirements needed to operate the major cooling tower components. The impact is likely minor from a reliability standpoint but would create additional points of failure that add risk or warrant added redundancy.

Operation of Modified Ristroph fine-mesh traveling water screens or narrow-slot wedgewire screens may impact system reliability if debris-related fouling results in the need for frequent screen by-pass. Summer algae blooms and potential frazil ice formation in the winter would require installation of a bypass with the fine-mesh technologies. Additionally, installation of these technologies would require scheduled outage of the water intake system and Power Plant production operations.

v. Impacts on water consumption; and

Year-round CCRS operation would significantly reduce the University's water withdrawal requirements.

The modified Ristroph traveling water screens will not result in significant water consumption increases. The spray cleaning system will require greater water withdrawal, but the spray is typically returned directly to the lake via the debris or fish return troughs. Installation of wedgewire screens would not cause any significant changes in water consumption.

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

The permittee evaluated alternate sources for use as cooling water and did not identify any feasible alternatives.

6.3.7 Best Technology Available (BTA) Impingement and Entrainment Determination Summary

Based on the results of the permittee's fish impingement study, IDEM has granted the de minimis exception to the BTA standards for impingement mortality.

After considering all the factors that must and may be considered by the federal rules (see discussion above) and information provided by the permittee, IDEM has determined that the existing facility meets the BTA standard for entrainment mortality.

6.3.8 Cooling Water Intake Structure Permit Conditions

A. The permittee shall comply with the following cooling water intake structure requirements:

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 monitor the intake flow at the intake, at a minimum frequency of daily. These data must be reported on the DMRs and MMRs. Further, the permittee shall submit an annual summary of the actual intake flows measured at a minimum frequency of daily.
6. 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).
7. 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.
8. 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.

9. The permittee shall submit and maintain all the information required by the applicable provisions of 40 CFR 125.97.
10. 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.
11. 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 and the Compliance Branch at wwReports@idem.in.gov.

6.4 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.

6.5 Permit Processing/Public Comment

Pursuant to IC 13-15-5-1, IDEM published a draft permit document from December 19, 2023, through January 18, 2024, as part of Public Notice No. 20231219-IN0064602-D. That Public Notice was subsequently extended from January 22, 2024, through February 2, 2024, as part of Public Notice No. 20240122-IN0064602-D-EXT to solicit additional input from interested parties. Due to substantial changes to that draft permit document, IDEM will republish 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.