

STATE OF INDIANA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
PUBLIC NOTICE NO 20240305 – IN0061441– D
DATE OF NOTICE: March 5, 2024
DATE RESPONSE DUE: April 5, 2024

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

MINOR – RENEWAL:

Tipton County Landfill, Permit IN0061441, TIPTON COUNTY, 299 West County Road 300 South, Tipton, IN. This facility functions as a closed landfill. The average flow for this facility is 0.02 MGD of landfill leachate wastewater which is treated prior to discharging through Outfall 001 to Cicero Creek. Outfall 001 is located at 40° 15' 28" N, -86° 00' 39" W. Permit Manager Heidi Etter at 317-233-4903 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 will be circulated in at least one newspaper in the geographical area of the discharge and to those persons submitting comments and/or on the mailing list at least 30 days prior to the hearing.



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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

Eric J. Holcomb

Governor

Brian C. Rockensuess

Commissioner

March 5, 2024

VIA ELECTRONIC MAIL

Philip Beer, Tipton County Engineer
Tipton County Landfill
405 Market Road
Tipton, Indiana 46072

Dear Philip Beer:

Re: NPDES Permit No. IN0061441
Draft Permit
Tipton County Landfill
Tipton, IN – Tipton 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

cc: Tipton County Health Department
Sendhil Kumar, Atlas Technical Consultants, LLC
Brent Miller, Atlas Technical Consultants, LLC
Jeremy Waite, IDEM
Andy Schmidt, IDEM



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

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

TIPTON COUNTY LANDFILL

is authorized to discharge from the closed landfill that is located at 299 West County Road 300 South, Tipton, Indiana, to receiving waters identified as Cicero Creek in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I and II 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 Outfall 001, located at Latitude 40° 15' 28", Longitude -86° 00' 39". The discharge is limited to landfill leachate. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Cicero Creek. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2]
Outfall 001

Table 1

Parameter	Quantity or Loading			Quality or Concentration			Monitoring Requirements	
	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units	Measurement Frequency	Sample Type
Flow	Report	Report	MGD	----	----	----	1 X Daily	24 Hr. Total
CBOD ₅ [3]								
Summer	Report	Report	lbs/day	15	30	mg/l	1 X Monthly	Grab
Winter	Report	Report	lbs/day	25	50	mg/l	1 X Monthly	Grab
TSS	Report	Report	lbs/day	27	60	mg/l	1 X Monthly	Grab
Ammonia (as N) [3]								
Summer	Report	Report	lbs/day	3.0	5.2	mg/l	1 X Monthly	Grab
Winter	Report	Report	lbs/day	4.1	7.1	mg/l	1 X Monthly	Grab
Iron [4]	Report	Report	lbs/day	2.4	5.5	mg/l	1 X Quarterly [5]	Grab
Chloride	Report	Report	lbs/day	Report	Report	mg/l	1 X Monthly	Grab
Zinc [4]	Report	Report	lbs/day	0.11	0.20	mg/l	[6]	Grab
Phenol	Report	Report	lbs/day	0.015	0.026	mg/l	[6]	Grab
<i>p</i> -Cresol	Report	Report	lbs/day	0.014	0.025	mg/l	[6]	Grab
Benzoic Acid	Report	Report	lbs/day	0.071	0.12	mg/l	[6]	Grab
<i>α</i> -Terpineol	Report	Report	lbs/day	0.016	0.033	mg/l	[6]	Grab

Table 2

Parameter	Quality or Concentration				Monitoring Requirements	
	Daily Minimum	Monthly Average	Daily Maximum	Units	Measurement Frequency	Sample Type
pH [7]	6.0	----	9.0	s.u.	1 X Monthly	Grab

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

- [2] In the event that a new water treatment additive is to be used that will contribute to this Outfall, or changes are to be made in the use of water treatment additives, including dosage, the permittee must apply for and receive approval from IDEM prior to such discharge. Discharges of any such additives must meet Indiana water quality standards. The permittee must apply for permission to use water treatment additives by completing and submitting State Form 50000 (Application for Approval to Use Water Treatment Additives) currently available at: <https://www.in.gov/idem/forms/idem-agency-forms/>.
- [3] Summer limitations apply from May 1 through November 30. Winter limitations apply from December 1 through April 30.
- [4] The permittee shall measure and report the identified metal as total recoverable metal.
- [5] Samples shall be taken once at any time during each of the four annual quarters:
- (A) January-February-March;
 - (B) April-May-June;
 - (C) July-August-September; and
 - (D) October-November-December.

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

- [6] A monitoring waiver per 40 CFR 122.44(a)(2) has been granted for these parameters for the term of this permit. The waiver is a permit condition which expires along with the permit. The permittee must request renewal of this waiver when applying for permit renewal. The request must demonstrate through sampling or other technical information, including information generated during an earlier permit term that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger. IDEM shall be notified if any changes occur at this facility that would require the conditions upon which this waiver was granted to be reviewed.
- [7] 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.

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.

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;
- c. Any upset (as defined in Part II.B.3 above) that causes an exceedance of any effluent limitation in the permit; or
- d. Violation of a maximum daily discharge limitation for any of the following toxic pollutants or hazardous substances: Phenol, Zinc, p-Cresol, Benzoic Acid, and Ammonia.

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).



National Pollutant Discharge Elimination System
Briefing Memo for
Tipton County Landfill
Draft: February 2024
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:	Tipton County Commissioners 101 East Jefferson Street Tipton, Indiana 46072
Existing Permit Information:	Permit Number: IN0061441 Expiration Date: March 31, 2024
Facility Contact:	Philip D. Beer, Tipton County Engineer (317) 544-4996, pbeer@usiconsultants.com
Facility Location:	299 West County Road 300 South Tipton, Indiana Tipton County
Receiving Stream(s):	Cicero Creek
GLI/Non-GLI:	Non-GLI
Proposed Permit Action:	Renew
Date Application Received:	September 29, 2023
Source Category:	NPDES Minor – Industrial
Permit Writer:	Heidi Etter (317) 233-4903, hetter@idem.in.gov

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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 Tipton County Landfill on September 29, 2023.

In accordance with 327 IAC 5-2-6(a), the current five-year permit was issued with an effective date of April 1, 2019. 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

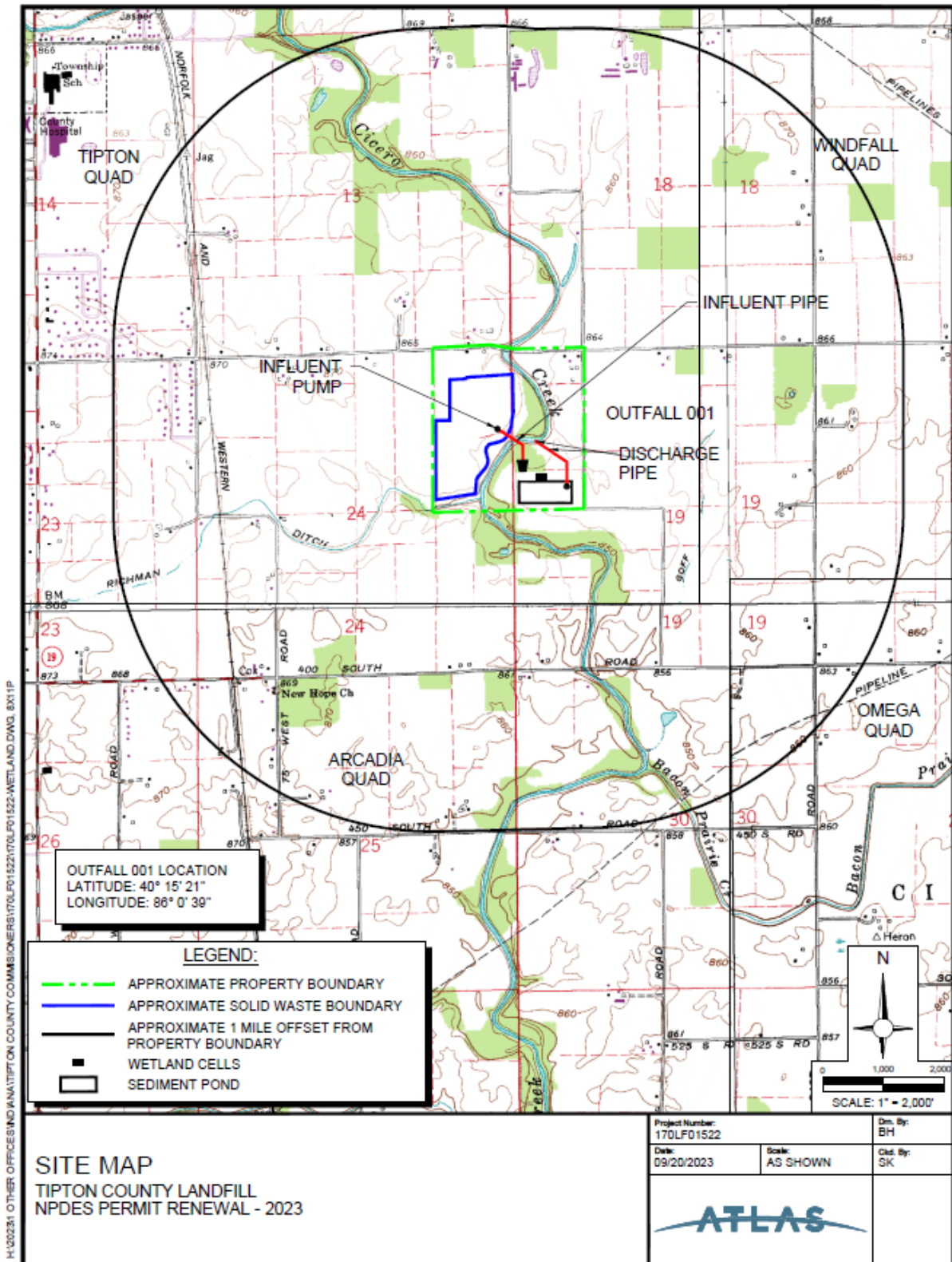
2.1 General

Tipton County Landfill is classified under Standard Industrial Classification (SIC) Code 4953 – Refuse Systems.

The facility is a closed landfill located in Tipton County. The landfill received 25 to 75 tons of municipal and sanitary waste per day from 1969 until December 1997. Landfill daily cover and capping material was obtained from a borrow pit east of Cicero Creek. The closed landfill is located on the western portion of the property, and the treatment system is located on the eastern portion of the property.

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

Figure 1: Facility Location



229 West County Road 300 South
 Tipton, IN – Tipton County

2.2 Outfall Locations

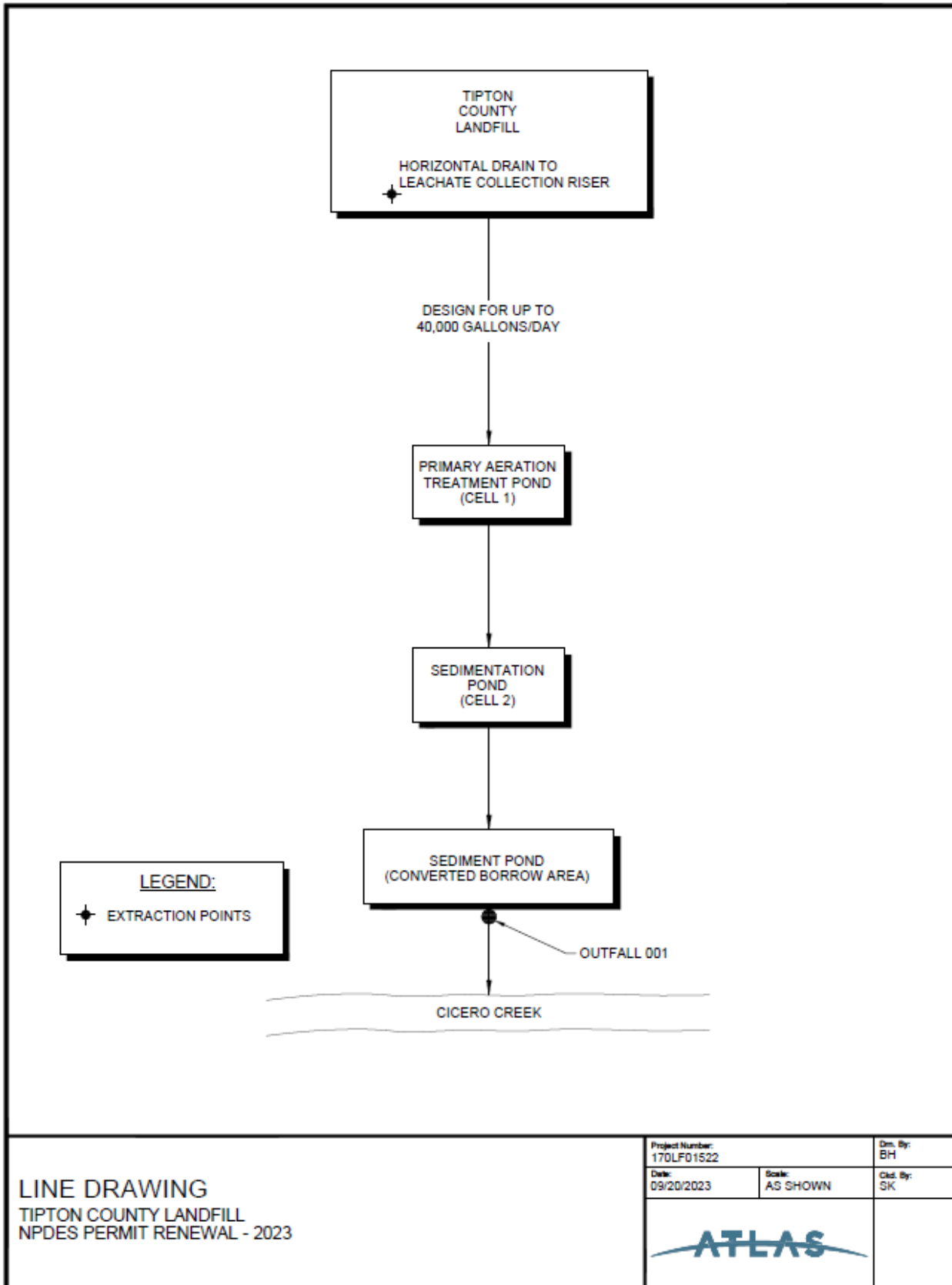
Outfall 001	Latitude: 40° 15' 28"
	Longitude: -86° 00' 39"

2.3 Wastewater Treatment

Landfill leachate is the source of wastewater at the facility. The leachate is pumped through a series of two (2) treatment cells. The first cell is an approximately 720,000-gallon basin that utilizes four aerators to provide primary aeration treatment, and the second cell is an approximately 132,000-gallon basin that provides treatment through sedimentation/polishing. The second cell includes a sand filter for the effluent line. Water is pumped from the second cell into a settling pond (converted from a previous borrow area), which is a thriving wetland environment. The final effluent is discharged into Cicero Creek.

The wastewater treatment system has an average influent flow of approximately 0.02 MGD. A Water Balance Diagram has been included as Figure 2.

Figure 2: Water Balance Diagram



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Outfall 001: For the purpose of determining the Water Quality-based Effluent Limitations (WQBELs), the average influent flow of 0.02 MGD that was provided in the permit renewal application was used since actual effluent flow data are not available.

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

IDEM has given the permittee a Class A-SO industrial wastewater treatment plant classification as settling is the only treatment provided.

2.4 Changes in Operation

A new leachate treatment system was constructed at the end of 2020 and first utilized in spring of 2021. Under the previous treatment system, leachate was pumped through a series of three lined, constructed wetland treatment cells before it was pumped to a settling pond (converted borrow area) and then discharged into Cicero Creek. The new treatment system pumps leachate through an aeration basin and a settling/polishing basin before pumping it to the existing settling pond (converted borrow area) and then discharging to Cicero Creek. The new treatment system has improved pumping capacity, allowing up to 40,000 gallons of leachate to be pumped per day if needed.

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 Outfall 001 between April 2019 and November 2023. 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 Outfall 001 is Cicero Creek. The $Q_{7,10}$ low flow value of Cicero Creek is 0.6 cfs, as determined by using the ratio of drainage area formula and data obtained from USGS Gaging Station 00349210 in Tipton County. Cicero Creek shall be capable of supporting a well-balanced, warm water aquatic community and full body contact recreation in accordance with 327 IAC 2-1-3.

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

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.

Cicero Creek, Assessment-Unit INW0165_03, HUC 051202010605, is not on the 2022 303(d) list for impairments. A comprehensive survey of the Cicero Creek Watershed was conducted by Indiana Department of Environmental Management (IDEM) in 2001 and 2006. The primary cause of impairment is *Escherichia coli* (*E. coli*) bacteria. Pollution sources in the watershed include nonpoint sources from agriculture and pastures, land application of manure and urban and rural run-off, as well as point sources from straight pipe discharges, home sewage treatment system disposal and combined sewer overflow outlets.

A TMDL for Cicero Creek has been developed for *E. coli*. U.S. EPA Region 5 approved the Cicero Creek Watershed TMDL report on September 30, 2011 for 27 impairments. TMDL reports identify and evaluate water quality problems in impaired water bodies and propose solutions to bring those waters into attainment with water quality standards.

5.0 PERMIT LIMITATIONS

5.1 Technology-Based Effluent Limits (TBELs)

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

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

Outfall 001

The applicable technology-based standards for the Tipton County Landfill are contained in 40 CFR 445 – Landfill Point Source Category. The leachate generated at Tipton County Landfill is subject to ELGs set forth in 40 CFR 445.21, Subpart B – RCRA Subtitle D Non-Hazardous Waste Landfill Subcategory. The table below provides a summary of the applicable regulations:

Regulated Parameter	Maximum Daily (mg/l)	Maximum Monthly Average (mg/l)
BOD	140	37
TSS	88	27
Ammonia (as N)	10	4.9
α -Terpineol	0.033	0.016
Benzoic Acid	0.12	0.071
ρ -Cresol	0.025	0.014
Phenol	0.026	0.015
Zinc	0.20	0.11
pH	Within the range of 6-9	Within the range of 6-9

Conversion of BOD₅ to CBOD₅:

The EPA usually changes to BOD₅ standard from 30 BOD₅ to 25 CBOD₅. Therefore, BOD₅(0.83) = CBOD₅.

$$\text{Daily Maximum} = 140 \frac{\text{mg}}{\text{l}} \text{BOD}_5 \times 0.83 = 116 \frac{\text{mg}}{\text{l}} \text{CBOD}_5$$

$$\text{Monthly Average} = 37 \frac{\text{mg}}{\text{l}} \text{BOD}_5 \times 0.83 = 31 \frac{\text{mg}}{\text{l}} \text{CBOD}_5$$

5.2 Water Quality-Based Effluent Limits (WQBELs)

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

5.3 Effluent Limitations and Monitoring Requirements by Outfall

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

5.3.1 External Outfall (001)

Narrative Water Quality Based Limits

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

Flow

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

pH

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

CBOD₅

The discharge of leachate from the facility will have a nutrient load component. Limits for CBOD₅ are based on a WLA completed by this office on November 7, 2001. Based on available dilution at the outfall, the current monthly average limits of 15 mg/l for summer and 25 mg/l for winter and daily maximum limits of 30 mg/l for summer and 50 mg/l for winter are protective of water quality criteria. These limits are also more stringent than the TBELs, thus they have been retained from the previous permit.

Iron

As part of this permit renewal, a Wasteload Allocation (WLA) report, WLA002751, was completed on February 26, 2024 and Iron was evaluated for reasonable potential to exceed (RPE) a water quality criterion for Iron. The results of the reasonable potential analysis show that the discharge has no reasonable potential to exceed a water quality criterion for Iron. However, Iron is present in the discharge and treated through the wastewater treatment system, so the Monthly Average of 2.4 mg/l and Daily Maximum of 5.5 mg/l have been retained from the previous permit.

Chloride

As part of this permit renewal, a Wasteload Allocation (WLA) report, WLA002751, was completed on February 26, 2024 and Chloride was evaluated for reasonable potential to exceed (RPE) a water quality criterion for Chloride. The results of the reasonable potential analysis show that the discharge has no reasonable potential to exceed a water quality criterion for Chloride. However, Chloride was present in the discharge the past year at higher concentrations than previous years, thus monitoring requirements have been retained from the previous permit so that this pollutant may be evaluated for reasonable potential to exceed a water quality criterion in the future.

Ammonia (As N)

The construction and utilization of a new treatment system at the closed Tipton County Landfill resulted in an increase in influent flow. A Wasteload Allocation (WLA002751) report was completed on February 26, 2024 in order to determine WQBELs for Ammonia based on the average influent flow of 0.02 MGD provided in the permit renewal application. An antidegradation analysis for Ammonia was also completed. The WQBELs calculated for Ammonia would cause a significant lowering of water quality, therefore de minimis limits were used instead for comparison to TBELs. The February 26, 2024 WLA report has been included in Appendix A.

The de minimis WQBELs are more stringent than the TBELs for Ammonia, thus the de minimis limits of 3.0 mg/l Monthly Average and 5.2 mg/l Daily Maximum for summer and 4.1 mg/l Monthly Average and 7.1 mg/l Daily Maximum for winter have been applied.

α -Terpineol, Benzoic Acid, p-Cresol, Phenol, & Zinc

IDEM will grant a monitoring waiver for these parameters per 40 CFR 122.44(a)(2) for the term of this permit based on a review of the effluent data. The data indicates that α -Terpineol, Benzoic Acid, p-Cresol, Phenol, and Zinc have been “non-detect” for the last permit cycle. The waiver is a permit condition which expires along with the permit. The permittee must request renewal of this waiver when applying for permit renewal. The request must demonstrate through sampling or other technical information, including information generated during an earlier permit term that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger. IDEM shall be notified if any changes occur at this facility that would require the conditions upon which this waiver was granted to be reviewed.

Total Suspended Solids (TSS)

The Monthly Average limit for TSS of 27 mg/l set forth in 40 CFR 445.21 will be retained from the previous permit. The Daily Maximum TSS limit of 60 mg/l is based on a Wasteload Allocation Report (WLA) completed by this office on November 7, 2001 and has been retained as it is more stringent than the Daily Maximum TSS limit set forth in 40 CFR 445.21.

5.4 Whole Effluent Toxicity (WET) Testing

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

5.5 Antibacksliding

Indiana’s prohibitions on backsliding under 327 IAC 5-2-10(a)(11) are applicable to BPJ case-by-case technology-based effluent limitations, when proposed to be increased based on

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

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

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

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.

This permit includes increased Ammonia loadings at Outfall 001. WQBELs calculated as part of a wasteload allocation (WLA) analysis were found to result in a significant lowering of water quality as defined in 327 IAC 2-1.3-2(50). However, de minimis concentration limits were calculated for Ammonia and can be accepted as they do not cause to not cause a significant lowering of water quality. The permittee has agreed to accept these limits. Therefore, antidegradation is satisfied.

5.7 Stormwater

There is no stormwater associated with this permit.

5.8 Water Treatment Additives

In the event that changes are to be made in the use of water treatment additives that could significantly change the nature of, or increase the discharge concentration of any of the additives contributing to an outfall governed under the permit, the permittee must apply for and obtain approval from IDEM prior to such discharge. Discharges of any such additives must meet Indiana water quality standards. The permittee must apply for permission to use water treatment additives by completing and submitting State Form 50000 (Application for Approval to Use Water Treatment Additives) available at: <https://www.in.gov/idem/forms/idem-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.

The monitoring frequency for Iron was reduced from 1 X Monthly to 1 X Quarterly since the discharge has no reasonable potential to exceed a water quality criterion for Iron and Iron concentrations were generally consistent throughout the last permit cycle. Nothing has changed to warrant modifying the monitoring conditions for the other parameters.

Outfall 001:

Parameter	Monthly Average	Daily Maximum	Units	Minimum Frequency	Sample Type
Flow	Report	Report	MGD	1 X Daily	24 Hr. Total
CBOD ₅					
Summer	15 Report	30 Report	mg/l lbs/day	1 X Monthly	Grab
Winter	25 Report	50 Report	mg/l lbs/day	1 X Monthly	Grab
TSS	27 Report	60 Report	mg/l lbs/day	1 X Monthly	Grab
Ammonia (as N)					
Summer	3.0 Report	5.2 Report	mg/l lbs/day	1 X Monthly	Grab
Winter	4.1 Report	7.1 Report	mg/l lbs/day	1 X Monthly	Grab
Iron	2.4 Report	5.5 Report	mg/l lbs/day	1 X Quarterly	Grab
Chloride	Report Report	Report Report	mg/l lbs/day	1 X Monthly	Grab
Zinc	0.11 Report	0.20 Report	mg/l lbs/day	[*]	Grab
Phenol	0.015 Report	0.026 Report	mg/l lbs/day	[*]	Grab
p-Cresol	0.014 Report	0.025 Report	mg/l lbs/day	[*]	Grab
Benzoic Acid	0.071 Report	0.12 Report	mg/l lbs/day	[*]	Grab
α-Terpineol	0.016 Report	0.033 Report	mg/l lbs/day	[*]	Grab

Parameter	Daily Minimum	Daily Maximum	Units	Minimum Frequency	Sample Type
pH	6.0	9.0	Std Units	1 X Monthly	Grab

[*] A monitoring waiver per 40 CFR 122.44(a)(2) has been granted for these parameters for the term of this permit. The waiver is a permit condition which expires along with the permit. The permittee must request renewal of this waiver when applying for permit renewal. The request must demonstrate through sampling or other technical information, including information generated during an earlier permit term that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger. IDEM shall be notified if any changes occur at this facility that would require the conditions upon which this waiver was granted to be reviewed.

6.2 Schedule of Compliance

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

6.3 Special Conditions and Other Permit Requirements

There are no special conditions on this permit.

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 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.

Appendix A
Waste Load Allocation (WLA#002751)

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANAPOLIS

OFFICE MEMORANDUM

Date: February 26, 2024

To: Permit File

Thru: John Elliott *JE*
Permits Branch

From: Heidi Etter *HE*
Industrial NPDES Permits Section

Subject: Wasteload Allocation Report for Tipton County Landfill in Tipton County
(IN0061441, WLA002751)

A reasonable potential to exceed analysis for chloride and iron, water quality-based effluent limitations (WQBELs) for zinc and ammonia (as N), as well as an antidegradation significant lowering analysis for zinc and ammonia (as N) were completed for the closed Tipton County Landfill in Tipton County for an increase in the effluent flow from 0.0049 to 0.02 million gallons per day (mgd) with a discharge to Outfall 001. The zinc and ammonia limits in the existing permit are technology-based effluent limitations (TBELs). At present the permittee operates a treatment process which includes an aeration basin, a sedimentation/polishing basin, and a settling pond that is a thriving wetland environment. Discharge is to Cicero Creek. The receiving stream is covered under the rules for the non-Great Lakes system.

Cicero Creek is designated for full body contact recreation and shall be capable of supporting a well-balanced, warm water aquatic community in accordance with 327 IAC 2-1. The assessment unit for Cicero Creek is INW0165_03 in HUC 051 202 010 605. Cicero Creek is not on the 2022 303(d) list for any parameters, but it is in Category 4A for *E. coli*. A TMDL study for Cicero Creek has been developed for *E. coli*. The $Q_{7,10}$ low-flow of Cicero Creek at the outfall is 0.6 cfs.

The reasonable potential analysis for iron and chloride was conducted using effluent datasets provided by the facility. The results of the reasonable potential analysis using the reasonable potential statistical procedure are included in Table 1. The results show that there is not reasonable potential to exceed a water quality criterion for iron or chloride. Therefore, WQBELs for iron and chloride are not required at Outfall 001.

The WQBELs for zinc and ammonia (as N) at an effluent flow of 0.02 mgd with a discharge from Outfall 001 to Cicero Creek are included in Table 2. These WQBELs may be compared to the applicable TBELs. An antidegradation analysis was performed for zinc and ammonia (as N) since these parameters are considered regulated pollutants for antidegradation purposes and the WQBELs at the increased effluent flow would result in increased loadings to Cicero Creek. Water quality criteria are available for zinc and ammonia (as N) and the receiving stream is considered a high quality water for these parameters. Therefore, the WQBELs for zinc and ammonia (as N) are subject to the antidegradation requirements for high quality waters under 327 IAC 2-1.3.

The results of the antidegradation analysis are included in Table 3. The results show that the increase in zinc loadings would not cause a significant lowering of water quality of zinc. However, the increase in ammonia (as N) loadings for summer and winter based on the increased effluent flow would cause a

significant lowering of water quality of ammonia (as N). If the WQBELs for ammonia (as N) in Table 2 are pursued, an antidegradation demonstration would be required for ammonia (as N).

Effluent limits for ammonia (as N) that do not cause a significant lowering of water quality are included in Table 3. An antidegradation demonstration would not be required if these limits are accepted. The benchmark available loading capacities for zinc and ammonia (as N) for future antidegradation de minimis determinations under 327 IAC 2-1.3-4 are also included in Table 3. The documentation of this wasteload allocation analysis is included as an attachment to this document.

TABLE 1
Results of Reasonable Potential Statistical Procedure
For Tipton County Landfill in Tipton County
Outfall 001 to Cicero Creek
(IN0061441, WLA002751)

Parameter	Maximum Daily Sample (mg/l)	Number of Daily Samples	CV	Multiplying Factor	PEQ (mg/l)	PEL*		PEQ > PEL		Reasonable Potential to Exceed?
						Monthly Average (mg/l)	Daily Maximum (mg/l)	Monthly Average	Daily Maximum	
Iron	1.14	33	0.3	1.1	1.3	3.2	5.5	No	No	No
Chloride	84.2	33	0.4	1.1	93	840	1400	No	No	No

* Based on an effluent flow of 0.02 mgd.

February 26, 2024

TABLE 2
Water Quality-based Effluent Limitations
For Tipton County Landfill in Tipton County
Outfall 001 to Cicero Creek
(IN0061441, WLA002751)

Parameter	Quality or Concentration*			Quantity or Loading*			Monthly Sampling Frequency
	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units	
Zinc	0.35	0.61	mg/l	0.058	0.10	lbs/day	2
Total Ammonia (as N)							
Summer	10.1	24.3	mg/l	1.7	4.1	lbs/day	2
Winter	14.0	24.3	mg/l	2.3	4.1	lbs/day	2

* Based on an effluent flow of 0.02 mgd.

February 26, 2024

TABLE 3
Results of Antidegradation Procedure for Non-BCCs
For Tipton County Landfill in Tipton County
Outfall 001 to Cicero Creek
(IN0061441, WLA002751)

Parameter	High Quality Water?	Proposed Effluent Limits Cause a Significant Lowering?	Benchmark Available Loading Capacity (lbs/day)	Effluent Limits that Do Not Require an Antidegradation Demonstration					
				Quality or Concentration*			Quantity or Loading*		
				Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units
Zinc	Yes	No	0.625						
Total Ammonia (as N)									
Summer	Yes	Yes	2.74	3.0	5.2	mg/l	0.50	0.87	lbs/day
Winter	Yes	Yes	4.41	4.1	7.1	mg/l	0.69	1.2	lbs/day

* Based on an effluent flow of 0.02 mgd.

February 26, 2024

Documentation of Wasteload Allocation Analysis For Discharges in the Non-Great Lakes System

Analysis By: Heidi Etter

Date: February 26, 2024

Reviewed By: John Elliott

WLA Number: 002751

Facility Information

- **Name:** Tipton County Landfill
- **NPDES Permit Number:** IN0061441
- **Permit Expiration Date:** March 31, 2024
- **County:** Tipton
- **Purpose of Analysis:** Reasonable potential to exceed (RPE) analysis for iron and chloride, WQBELs for zinc and ammonia (as N) for comparison to applicable technology-based effluent limitations and an antidegradation significant lowering analysis for zinc and ammonia (as N) based on an increase in effluent flow.
- **Outfall Number:** 001 (see Attachment 1)
- **Facility Operations:** Closed municipal and sanitary waste landfill
- **Applicable Effluent Guidelines:** Landfill leachate is subject to 40 CFR 445 – Landfill Point Source Category, Subpart B – RCRA Subtitle D Non-Hazardous; the pollutants covered include BOD, TSS, ammonia (as N), α -terpineol, benzoic acid, p -cresol, phenol, zinc, and pH.
- **Type of Treatment:** During the term of the permit, the permittee replaced their constructed wetland treatment system with a treatment process which includes an aeration basin and a sedimentation/polishing basin. The treatment system was upgraded to treat more landfill leachate. The treatment system will continue to discharge to a final settling pond that is a thriving wetland environment prior to discharge to the receiving stream.
- **Current Permitted Flow:** 0.0049 mgd (highest monthly average flow from the most recent 2 year period as mentioned in the Briefing Memo of the 2019 permit)
- **Effluent Flow Used in WLA Analysis:** 0.02 mgd (the influent design flow is 0.04 mgd, with actual influent flow to the treatment system reaching the design flow in October 2021; actual effluent flow data from the final settling pond are not available as the facility has been reporting influent flow instead of effluent flow on their discharge monitoring report; based on the size of the final settling pond, the average flow reported on Form 2C of the permit renewal application was used to estimate the final effluent flow for this analysis.)
- **Current Effluent Limits (Outfall 001):**

DISCHARGE LIMITATIONS [1][2]

Outfall 001
Table 1

Parameter	Quantity or Loading			Quality or Concentration			Monitoring Requirements	
	Monthly Average Report	Daily Maximum Report	Units	Monthly Average	Daily Maximum	Units	Measurement Frequency	Sample Type
Flow	Report	Report	MGD	-----	-----	-----	Daily	24 Hr. Total
CBOD ₅ [3]								
Summer	Report	Report	lbs/day	15	30	mg/l	1 X Monthly	Grab
Winter	Report	Report	lbs/day	25	50	mg/l	1 X Monthly	Grab
TSS	Report	Report	lbs/day	27	60	mg/l	1 X Monthly	Grab
Ammonia (As N)	Report	Report	lbs/day	4.9	10	mg/l	1 X Monthly	Grab
Iron [4]	Report	Report	lbs/day	2.4	5.5	mg/l	1 X Monthly	Grab
Chloride	Report	Report	lbs/day	Report	Report	mg/l	1 X Monthly	Grab
Zinc [4]	Report	Report	lbs/day	0.11	0.20	mg/l	Quarterly [5]	Grab
Phenol	Report	Report	lbs/day	0.015	0.026	mg/l	Quarterly [5]	Grab
p-Cresol	Report	Report	lbs/day	0.014	0.025	mg/l	Quarterly [5]	Grab
Benzoic Acid	Report	Report	lbs/day	0.071	0.12	mg/l	Quarterly [5]	Grab
α-Terpineol	Report	Report	lbs/day	0.016	0.033	mg/l	Quarterly [5]	Grab

Table 2

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

Pollutants of Concern and Type of WLA Analysis

Pollutants of Concern and Type of WLA Analysis		
Parameter	Type of Analysis	Reason for Inclusion on Pollutants of Concern List
Chloride	RPE	Monitored in the permit
Iron	RPE	Limited in the permit
Zinc and Ammonia (as N)	WQBELs	Effluent limitation guidelines (ELGs) apply to Outfall 001
Zinc and Ammonia (as N)	Significant Lowering	A higher effluent flow was used in the WLA analysis so antidegradation was considered

Receiving Stream Information

- **Receiving Stream:** Cicero Creek within 40 miles upstream of Morse Reservoir
- **Public Water System Intakes Downstream:** The nearest public water system intake downstream of the outfall is in White River, downstream of Morse Reservoir. This public water system intake did not impact the analysis.
- **Designated Stream Use:** The receiving stream is designated for full body contact recreational use and shall be capable of supporting a well-balanced, warm water aquatic community in accordance with 327 IAC 2-1.
- **12-Digit HUC:** 051 202 010 605
- **Assessment Unit (2022):** INW0165_03 (Cicero Creek)
- **Consolidated List Category 4 (2022):** Cicero Creek is in Category 4A for *E. coli*.
- **Consolidated List Category 5 (303(d) List) (2022):** Cicero Creek is not on the 2022 303(d) list for any parameters.
- **TMDL Status:** The Cicero Creek Watershed TMDL was approved by U.S. EPA on September 30, 2011. The pollutant included in the TMDL is *E. coli*. This TMDL will not impact the WLA analysis.

- **Q1,10 (Outfall):** 0.4 cfs (0.26 mgd)
- **Q7,10 (Outfall):** 0.6 cfs (0.39 mgd)
- **Q30,10 (Outfall):** 0.9 cfs (0.58 mgd)

The Q_{1,10}, Q_{7,10} and Q_{30,10} stream flows were determined using the ratio of drainage area formula and data from USGS continuous record station 00349210, Cicero Creek at Tipton which has a drainage area of 81.3 mi², a Q_{1,10} of 0.4 cfs, a Q_{7,10} of 0.5 cfs, and a Q_{30,10} of 0.8 cfs. This gage is located upstream of Outfall 001. The information for the gaging station was obtained from the book “Low-Flow Characteristics for Selected Streams in Indiana” by Kathleen K. Fowler and John T. Wilson, published in 2015 by the USGS.

- **Nearby Dischargers:** The City of Tipton (IN0021474) operates an activated sludge WWTP with an average design flow of 2.0 mgd. The collection system is comprised of combined sanitary and storm sewers and a wet weather treatment facility. A review of monthly average effluent flow data for the period December 2018 through November 2023 showed a low of 0.74 mgd in November 2023. The WWTP discharges to Cicero Creek about 2.2 miles upstream of the closed Tipton County Landfill outfall. The Town of Atlanta (IN0022306) operates a controlled discharge waste stabilization lagoon with an average design flow of 0.08 mgd and discharge to Cicero Creek about 3.1 miles downstream of the closed Tipton County Landfill outfall. Neither of these dischargers was considered in the current analysis.

Calculation of Preliminary Effluent Limitations

The background concentrations of iron, zinc, chloride and ammonia (as N) were determined by calculating the geometric mean of available instream data. Data for the pollutants of concern are not available for Cicero Creek upstream of the outfall. Limited data for Cicero Creek are available from IDEM probabilistic watershed sampling conducted about 0.9 miles downstream of the outfall in June, July and September 2020 (station WWU-06-0014). Data for Cicero Creek are also available from IDEM fixed station CIC-17, Cicero Creek at Mt. Pleasant Rd, East of Arcadia located about 7.6 miles downstream of the outfall. The monthly fixed station data were considered more representative of Cicero Creek water quality and were used to calculate background concentrations. The survey data include values reported as less than the limit of quantitation (LOQ). These values were set equal to one-half the LOQ. The determination of background concentrations using the last five years of available data is included in Attachments 2 and 3.

The 75th percentile downstream summer/winter pH and temperature values are used to determine ammonia (as N) criteria and the 50th percentile downstream hardness is used to determine the criteria for those metals whose criteria are dependent on hardness. The acute and chronic chloride criteria at 327 IAC 2-1-6(a)(6) are dependent on the stream hardness and sulfate concentrations. The 50th percentile downstream values of hardness and sulfate are used to calculate the criteria. The use of the downstream water quality data is intended to determine values of the water quality characteristics that are representative of design conditions. The design condition is based on the facility effluent flow and, for ammonia (as N), the Q_{30,10} low-flow, and for zinc and chloride, the Q_{7,10} low-flow of the receiving stream. Based on the available dilution, downstream IDEM fixed water quality monitoring station CIC-17 was used. The last five years of available data for pH and temperature are included Attachments 4 and 5, respectively. The last five years of available data for hardness, chloride and sulfate are included in Attachment 6.

For acute ammonia (as N), the 75th percentile pH was set equal to the default values of 7.8/7.8 s.u. for summer/winter since the wasteload allocation is set equal to the final acute value (FAV) at the end of pipe. For chronic ammonia (as N), the 75th percentile pH and temperature were calculated from the fixed station data. pH was calculated as 8.4/8.5 s.u. for summer/winter and temperature as 24/8.5°C for summer/winter. 50th percentile values for chloride, sulfate, and hardness were calculated as 43 mg/l, 29 mg/l, and 300 mg/l, respectively.

The number of samples per month used to calculate the monthly average preliminary effluent limitations (PELs) for iron, zinc, ammonia (as N), and chloride was set equal to 2, based on the expected monitoring frequency. The coefficient of variation used to calculate monthly average and daily maximum PELs was set equal to the default value of 0.6. The spreadsheet used to calculate PELs for an effluent flow of 0.02 MGD is included in Attachment 7.

Reasonable Potential Analysis

Calculation of Projected Effluent Quality

Effluent data for iron and chloride obtained from the facility for the three-year period December 2020 through November 2023 are included in Attachment 8. The effluent data include values reported as less than (<) the LOD. These values were assigned the reported less than value.

A reasonable potential to exceed (RPE) analysis was conducted using the procedures under 327 IAC 5-2-11.5 for discharges to the Great Lakes system. The facility collects monthly samples of these parameters, so there is only one measurement for each month. A monthly projected effluent quality (PEQ) is calculated when there are at least two data points available. Therefore, only a daily PEQ could be calculated and was used as the monthly PEQ.

Comparison of PEQs to PELs

The reasonable potential analysis for chloride is included in Attachment 9. The results of this analysis show that a PEQ does not exceed a PEL for chloride. Therefore, there is not a reasonable potential to exceed a water quality criterion for chloride at Outfall 001. The reasonable potential analysis for iron is included in Attachment 9. The results of this analysis show that a PEQ does not exceed a PEL for iron. Therefore, there is not a reasonable potential to exceed a water quality criterion for iron at Outfall 001.

Calculation of Water Quality-based Effluent Limitations

The PELs for zinc and ammonia (as N) in Attachment 7 are based on water quality criteria and may be compared to applicable technology-based effluent limitations (TBELs) to determine if the WQBELs are required in the permit for Outfall 001.

Antidegradation Analysis for Non-BCCs

Due to the increase in flow from Outfall 001 (from 0.0049 mgd to 0.02 mgd), the calculated mass-based WQBELs for zinc and ammonia (as N) in Attachment 7 would result in increased loadings to Cicero Creek.

High Quality Water Determination

High Quality Water Determination		
Parameter	High Quality Water? Yes/No	Rationale for Determination
Zinc	Yes	Water quality data for Cicero Creek from IDEM watershed and fixed station sampling show that Cicero Creek is a high quality water for zinc.
Ammonia (as N)	Yes	Water quality data for Cicero Creek from IDEM watershed and fixed station sampling show that Cicero Creek is a high quality water for ammonia (as N).

Significant Lowering Determination

A determination was made whether the proposed increased loading would cause a significant lowering of water quality based on the definition in 327 IAC 2-1.3-2(50). To cause a significant lowering, the proposed increased loading would have to result in an increase in the ambient concentration of the regulated pollutant in the receiving stream and be greater than a de minimis lowering of water quality, unless an exemption other than de minimis under 2-1.3-4 applies.

Equations for Calculation of Ambient Concentration

An increase in the ambient concentration of the regulated pollutant in the receiving stream will occur if the increased loading results in a proposed ambient concentration of the regulated pollutant (C_{sp}) that is greater than the existing ambient concentration of the regulated pollutant (C_{se}). The following calculation was used to make this determination:

If $C_{sp} > C_{se}$, then there is an increase in the ambient concentration of the regulated pollutant.

$$C_{sp} = \frac{(C_p * Q_p) + (C_{b1} * Q_{s1})}{Q_p + Q_{s1}} \quad \text{(Proposed ambient concentration of the regulated pollutant (in mg/l).)}$$

$$C_{se} = \frac{(C_e * Q_e) + (C_{b1} * Q_{s1})}{Q_e + Q_{s1}} \quad \text{(Existing ambient concentration of the regulated pollutant (in mg/l).)}$$

C_p = Proposed monthly average concentration limit (in mg/l).

C_e = Existing monthly average concentration limit (in mg/l).

Q_p = Proposed effluent flow (in mgd).

Q_e = Existing effluent flow (in mgd).

Q_{s1} = The Q7,10 low-flow of the receiving stream (in mgd).

C_{b1} = Background concentration of the receiving stream (in mg/l).

If $C_p = C_{se} + [(Q_{s1}/Q_p) * (C_{se} - C_{b1})]$, then there is not an increase in the ambient concentration of the regulated pollutant.

De minimis Equations:

Total Loading Capacity (TLC) = (Stream Design Flow (mgd) + Existing Effluent Flow (mgd) + Proposed increase in Effluent Flow (mgd)) * Water Quality Criterion (mg/l) * 8.345

Used Loading Capacity (ULC) = Stream Design Flow (mgd) * Background Conc. (mg/l) * 8.345 + Existing Monthly Average Mass Limit (lbs/day)

Available Loading Capacity (ALC) = Total Loading Capacity – Used Loading Capacity

Benchmark Available Loading Capacity = 0.9 * (ALC established at the time of the request for the initial increase in the loading of the regulated pollutant); this is the first increase under the new antidegradation rule so the Benchmark ALC was not used in the de minimis determination, but will be documented for any future increase of the regulated pollutant.

Results for Ammonia (as N):

I. Significant Lowering Determination

A. Ambient Concentration Increase

- **Ambient Concentration Increase for Summer:**

$C_p = 10.1 \text{ mg/l}$; $C_e = 4.9 \text{ mg/l}$; $Q_p = 0.02 \text{ mgd}$; $Q_e = 0.0049 \text{ mgd}$; $Q_{s1} = 0.39 \text{ mgd}$; $C_{b1} = 0.055 \text{ mg/l}$

$C_{sp} = 0.55 \text{ mg/l}$

$C_{se} = 0.12 \text{ mg/l}$

$C_{sp} > C_{se}$ so there is an increase in the ambient concentration of the regulated pollutant in the receiving water body for the summer period.

- **Ambient Concentration Increase for Winter:**

$C_p = 14.0 \text{ mg/l}$; $C_e = 4.9 \text{ mg/l}$; $Q_p = 0.02 \text{ mgd}$; $Q_e = 0.0049 \text{ mgd}$; $Q_{s1} = 0.39 \text{ mgd}$; $C_{b1} = 0.074 \text{ mg/l}$

$C_{sp} = 0.75 \text{ mg/l}$

$C_{se} = 0.13 \text{ mg/l}$

$C_{sp} > C_{se}$ so there is an increase in the ambient concentration of the regulated pollutant in the receiving water body for the winter period.

B. De minimis Lowering of Water Quality:

- **Total Loading Capacity**

A stream design flow for acute criteria is not specified in 327 IAC 5-2-11.1 so the Q1,10 flow was used. The Q30,10 is the stream design flow for the chronic ammonia (as N) criterion. The

acute ammonia (as N) criteria are based on the summer/winter downstream pH values of 8.4/8.5 s.u. and not the default pH used in the wasteload allocation calculation.

Summer

$$\begin{aligned} \text{Chronic Aquatic TLC} &= (0.58 \text{ mgd} + 0.02 \text{ mgd}) * 0.700 \text{ mg/l} * 8.345 \\ &= 3.505 \text{ lbs/day} \end{aligned}$$

$$\begin{aligned} \text{Acute Aquatic TLC} &= (0.26 \text{ mgd} + 0.02 \text{ mgd}) * 3.883 \text{ mg/l} * 8.345 \\ &= 9.073 \text{ lbs/day} \end{aligned}$$

Winter

$$\begin{aligned} \text{Chronic Aquatic TLC} &= (0.58 \text{ mgd} + 0.02 \text{ mgd}) * 1.089 \text{ mg/l} * 8.345 \\ &= 5.453 \text{ lbs/day} \end{aligned}$$

$$\begin{aligned} \text{Acute Aquatic TLC} &= (0.26 \text{ mgd} + 0.02 \text{ mgd}) * 3.203 \text{ mg/l} * 8.345 \\ &= 7.484 \text{ lbs/day} \end{aligned}$$

The chronic aquatic criterion TLC results in the lowest loading value so this TLC was used for the de minimis calculations.

- **Used Loading Capacity (i.e. Existing loading)**

The minimum ALC will be based on the chronic criterion so only the Q30,10 was used. There are no current mass limits, so the existing effluent flow of 0.0049 mgd was used to calculate the existing monthly average mass.

$$\text{Summer ULC} = 0.58 \text{ mgd} * 0.055 \text{ mg/l} * 8.345 + 0.20 \text{ lbs/day} = 0.466 \text{ lbs/day}$$

$$\text{Winter ULC} = 0.58 \text{ mgd} * 0.074 \text{ mg/l} * 8.345 + 0.20 \text{ lbs/day} = 0.558 \text{ lbs/day}$$

- **Available Loading Capacity**

$$\text{Summer ALC} = 3.505 \text{ lbs/day} - 0.466 \text{ lbs/day} = 3.04 \text{ lbs/day}$$

$$\text{Winter ALC} = 5.453 \text{ lbs/day} - 0.558 \text{ lbs/day} = 4.90 \text{ lbs/day}$$

10% of Available Loading Capacity

$$\text{Summer: } 0.1 * 3.04 \text{ lbs/day} = 0.30 \text{ lbs/day}$$

$$\text{Winter: } 0.1 * 4.90 \text{ lbs/day} = 0.49 \text{ lbs/day}$$

- **Proposed Increase in Mass**

$$\text{Summer: } 1.7 \text{ lbs/day} - 0.20 \text{ lbs/day} = 1.5 \text{ lbs/day}$$

$$\text{Winter: } 2.3 \text{ lbs/day} - 0.20 \text{ lbs/day} = 2.1 \text{ lbs/day}$$

The proposed increase is greater than 10% of the Available Loading Capacity for both summer and winter.

C. Conclusion: The proposed increased loading will result in an increase in the ambient concentration of ammonia (as N) in the receiving stream and be greater than a de minimis lowering of water quality for both summer and winter. Therefore, it will cause a significant lowering of water quality for both summer and winter.

II. Calculation of Limits that Do Not Cause a Significant Lowering of Water Quality

A. Concentration in the Receiving Water Body Does Not Increase

If $C_p = C_{se} + [(Q_{s1}/Q_p) * (C_{se} - C_{b1})]$, then there is not an increase in the ambient concentration of the regulated pollutant.

Summer

$$C_p = 0.12 \text{ mg/l} + [(0.39/0.02) * (0.12 - 0.055)] = 1.4 \text{ mg/l}$$

$$M_p = 1.4 \text{ mg/l} * 0.02 \text{ mgd} * 8.345 = 0.23 \text{ lbs/day}$$

Winter

$$C_p = 0.13 \text{ mg/l} + [(0.39/0.02) * (0.13 - 0.074)] = 1.2 \text{ mg/l}$$

$$M_p = 1.2 \text{ mg/l} * 0.02 \text{ mgd} * 8.345 = 0.20 \text{ lbs/day}$$

B. De minimis Lowering of Water Quality

If $M_p = M_e + 0.1 * (ALC)$, then the net increase in loading is equal to 10% of the available loading capacity.

Where,

M_p = Proposed monthly average mass limit (in lbs/day)

M_e = Existing monthly average mass limit (in lbs/day)

To be a de minimis lowering of water quality, the following mass and concentration limits would be required:

$$\text{Summer Mass: } M_e + 0.1 * ALC = 0.20 + 0.1 * 3.04 \text{ lbs/day} = 0.504 \text{ lbs/day}$$

Summer Mass (rounded down): 0.50 lbs/day

Summer Concentration: 3.0 mg/l

$$\text{Winter Mass: } M_e + 0.1 * ALC = 0.20 + 0.1 * 4.90 \text{ lbs/day} = 0.690 \text{ lbs/day}$$

Winter Mass (rounded down): 0.69 lbs/day

Winter Concentration: 4.1 mg/l

C. Limits that Do Not Cause a Significant Lowering: The less stringent of the limits that do not cause an increase in the ambient concentration and the de minimis limits can be accepted to not cause a significant lowering of water quality. In this case the de minimis limits are less stringent.

The daily maximum concentration and mass limits were calculated by multiplying the monthly average concentration and mass limits by 1.73, which is the ratio of the daily maximum long-term average multiplier to the monthly average multiplier used in the calculation of WQBELs for ammonia (as N).

Parameter	Monthly Average		Daily Maximum	
	(mg/l)	(lbs/day)	(mg/l)	(lbs/day)
Ammonia (as N)				
Summer	3.0	0.50	5.2	0.87
Winter	4.1	0.69	7.1	1.2

III. Benchmark Available Loading Capacity

Summer: $0.9 * 3.04 \text{ lbs/day} = 2.74 \text{ lbs/day}$

Winter: $0.9 * 4.90 \text{ lbs/day} = 4.41 \text{ lbs/day}$

Results for Zinc:

I. Significant Lowering Determination

A. Ambient Concentration Increase

- Ambient Concentration Increase:**

$C_p = 0.35 \text{ mg/l}$; $C_e = 0.11 \text{ mg/l}$; $Q_p = 0.02 \text{ mgd}$; $Q_e = 0.0049 \text{ mgd}$; $Q_{s1} = 0.39 \text{ mgd}$; $C_{b1} = 0.0054 \text{ mg/l}$

$C_{sp} = 0.022 \text{ mg/l}$

$C_{se} = 0.0067 \text{ mg/l}$

$C_{sp} > C_{se}$ so there is an increase in the ambient concentration of the regulated pollutant in the receiving water body.

B. De minimis Lowering of Water Quality:

- Total Loading Capacity**

A stream design flow for acute aquatic life criteria is not specified in 327 IAC 5-2-11.1 so the Q1,10 flow was used. The Q7,10 is the stream design flow for chronic aquatic life and human health noncancer criteria for zinc. The total loading capacity is based on total recoverable zinc.

Aquatic Life Criteria

Chronic Aquatic TLC = $(0.39 \text{ mgd} + 0.02 \text{ mgd}) * 0.304 \text{ mg/l} * 8.345$
 $= 1.040 \text{ lbs/day}$

Acute Aquatic TLC = $(0.26 \text{ mgd} + 0.02 \text{ mgd}) * 0.304 \text{ mg/l} * 8.345$
 $= 0.7103 \text{ lbs/day}$

Human Health Noncancer Criteria

Nondrinking TLC = $(0.39 \text{ mgd} + 0.02 \text{ mgd}) * 26.00 \text{ mg/l} * 8.345$
 $= 88.96 \text{ lbs/day}$

The acute aquatic criterion TLC results in the lowest loading value so this TLC was used for the de minimis calculations.

- **Used Loading Capacity (i.e. Existing loading)**

The minimum ALC will be based on the acute criterion so only the Q1,10 was used. There are no current mass limits, so the existing effluent flow of 0.0049 mgd was used to calculate the existing monthly average mass.

$$\text{ULC} = 0.26 \text{ mgd} * 0.0054 \text{ mg/l} * 8.345 + 0.0045 \text{ lbs/day} = 0.0162 \text{ lbs/day}$$

- **Available Loading Capacity**

$$\text{ALC} = 0.7103 \text{ lbs/day} - 0.0162 \text{ lbs/day} = 0.694 \text{ lbs/day}$$

10% of Available Loading Capacity

$$0.1 * 0.694 \text{ lbs/day} = 0.069 \text{ lbs/day}$$

- **Proposed Increase in Mass**

$$0.058 \text{ lbs/day} - 0.0045 \text{ lbs/day} = 0.054 \text{ lbs/day}$$

The proposed increase is not greater than 10% of the Available Loading Capacity.

C. Conclusion: The proposed increased loading will result in an increase in the ambient concentration of zinc in the receiving stream, but it will not be greater than a de minimis lowering of water quality. Therefore, it will not cause a significant lowering of water quality.

II. Benchmark Available Loading Capacity

$$\text{Zinc: } 0.9 * 0.694 \text{ lbs/day} = 0.625 \text{ lbs/day}$$

List of Attachments

Attachment 1: Map of Outfall Location

Attachments 2 and 3: Calculation of Background Concentrations

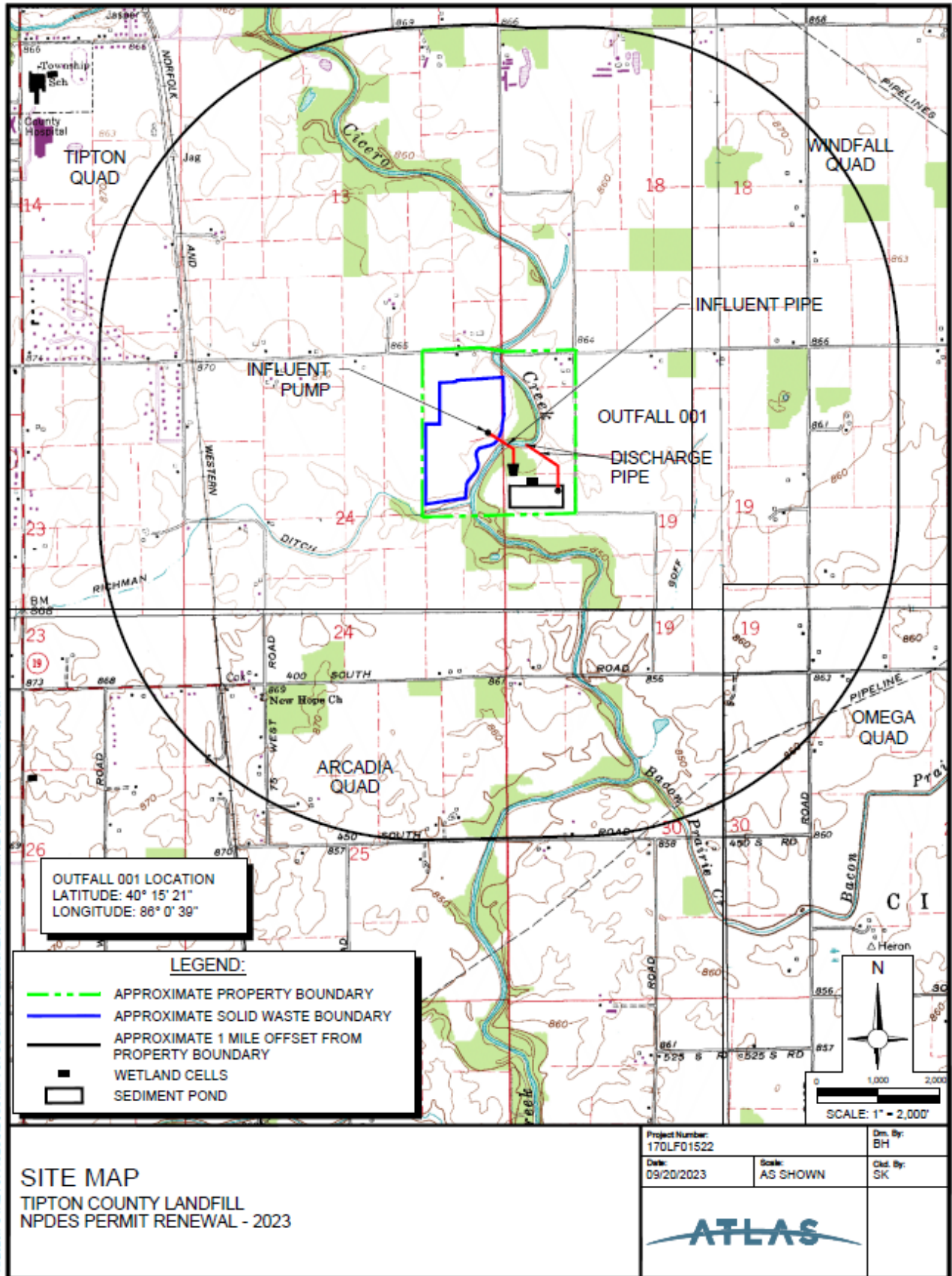
Attachments 4 through 6: Calculation of Water Quality Characteristics

Attachment 7: Calculation of Preliminary Effluent Limitations

Attachment 8: Effluent Data for Outfall 001

Attachment 9: Reasonable Potential to Exceed Analysis

ATTACHMENT 1



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ATTACHMENT 2
Calculation of Background Concentrations
Data From Fixed Station CIC-17
Cicero Creek at Mt. Pleasant Rd, East of Arcadia

Date	Summer Ammonia-N (mg/l)	Adjusted Summer Ammonia-N (mg/l)	Date	Winter Ammonia-N (mg/l)	Adjusted Winter Ammonia-N (mg/l)
5/22/2019	<.1	0.05	12/18/2018	<.1	0.05
6/24/2019	<.1	0.05	2/26/2019	0.3	0.3
7/22/2019	<.1	0.05	3/26/2019	0.2	0.2
8/20/2019	<.1	0.05	4/16/2019	<.1	0.05
9/18/2019	<.1	0.05	12/18/2019	0.2	0.2
10/29/2019	<.1	0.05	1/22/2020	0.2	0.2
11/26/2019	0.2	0.2	2/25/2020	0.2	0.2
6/23/2020	<.1	0.05	12/14/2020	<.1	0.05
7/21/2020	<.1	0.05	1/26/2021	<.1	0.05
8/24/2020	<.1	0.05	3/30/2021	<.1	0.05
9/8/2020	0.345	0.345	4/26/2021	<.1	0.05
10/27/2020	<.1	0.05	12/28/2021	<.1	0.05
11/30/2020	<.1	0.05	3/21/2022	<.1	0.05
5/24/2021	<.1	0.05	4/18/2022	<.1	0.05
6/22/2021	<.1	0.05	12/19/2022	<.1	0.05
7/27/2021	<.1	0.05	1/9/2023	<.1	0.05
8/10/2021	<.1	0.05	2/13/2023	<.1	0.05
9/21/2021	<.1	0.05	3/14/2023	<.1	0.05
10/26/2021	<.1	0.05	4/11/2023	<.1	0.05
11/18/2021	<.1	0.05			
5/17/2022	<.1	0.05	Geomean		0.074
6/21/2022	<.1	0.05			
7/13/2022	<.1	0.05			
8/30/2022	<.1	0.05			
9/12/2022	<.1	0.05			
10/11/2022	<.1	0.05			
11/7/2022	<.1	0.05			
5/4/2023	<.1	0.05			
6/14/2023	<.1	0.05			
7/4/2023	<.1	0.05			
8/2/2023	<.1	0.05			
9/7/2023	<.1	0.05			
10/3/2023	<.1	0.05			
11/2/2023	<.1	0.05			
Geomean		0.055			

ATTACHMENT 3
Calculation of Background Concentrations
Data From Fixed Station CIC-17
Cicero Creek at Mt. Pleasant Rd, East of Arcadia

Date	Total	Total	Adjusted	Chloride
	Iron (ug/l)	Zinc (ug/l)	Total Zinc (ug/l)	
12/18/2018	265	<6	3	29
2/26/2019	956	49.5	49.5	67
3/26/2019	369	22.1	22.1	45
4/16/2019	1420	11.8	11.8	22
5/22/2019	661	24.1	24.1	26
6/24/2019	1190	10.8	10.8	22
7/22/2019	178	<6	3	32
8/20/2019	154	<6	3	150
9/18/2019	138	8.09	8.09	159
10/29/2019	116	7.68	7.68	85
11/26/2019	152	15.7	15.7	166
12/18/2019	148	7.29	7.29	78
1/22/2020	504	25.2	25.2	41
2/25/2020	477	25.4	25.4	46
6/23/2020	160	<6	3	47
7/21/2020	130	<6	3	78
8/24/2020	121	<6	3	74
9/8/2020	872	20.6	20.6	26
10/27/2020	128	6.7	6.7	48
11/30/2020	88	<6	3	36
12/14/2020	181	6.7	6.7	40
1/26/2021	240	18.5	18.5	49
3/30/2021	604	<6	3	31
4/26/2021	158	<6	3	39
5/24/2021	147	<6	3	39
6/22/2021	94.6	<6	3	47
7/27/2021	129	<6	3	40
8/10/2021	123	6.6	6.6	85
9/21/2021	280	12.8	12.8	165
10/26/2021	1960	15.3	15.3	17
11/18/2021	162	6.2	6.2	42
12/28/2021	2860	18	18	24
3/21/2022	171	<6	3	34
4/18/2022	125	<6	3	32
5/17/2022	241	<6	3	29
6/21/2022	169	<6	3	36
7/13/2022	251	<6	3	71
8/30/2022	281	<6	3	155
9/12/2022	808	<6	3	33
10/11/2022	109	<6	3	185
11/7/2022	162	8.7	8.7	154
12/19/2022	118	<6	3	111
1/9/2023	135	<6	3	56
2/13/2023	200	<6	3	39
3/14/2023	222	<6	3	39
4/11/2023	168	<6	3	34
5/4/2023	104	<6	3	33
6/14/2023	57.2	<6	3	43
7/4/2023	100	<6	3	32
8/2/2023	136	<6	3	138
9/7/2023	121	<6	3	163
10/3/2023	264	<6	3	232
11/2/2023	60.2	<6	3	69
Geomean	222		5.4	54

ATTACHMENT 4
Calculation of Water Quality Characteristics
Data From Fixed Station CIC-17
Cicero Creek at Mt. Pleasant Rd, East of Arcadia

Summer pH		Winter pH	
Date	(s.u.)	Date	(s.u.)
5/22/2019	8.31	12/18/2018	8.36
6/24/2019	8.13	2/26/2019	7.96
7/22/2019	8.69	3/26/2019	8.24
8/20/2019	8.79	4/16/2019	7.97
9/18/2019	8.13	12/18/2019	8.52
10/29/2019	7.5	1/22/2020	8.23
11/26/2019	7.64	2/25/2020	8.19
6/23/2020	8.59	12/14/2020	8.57
7/21/2020	8.25	1/26/2021	8.86
8/24/2020	8.44	3/30/2021	8.15
9/8/2020	7.98	4/26/2021	8.69
10/27/2020	8.32	12/28/2021	8.05
11/30/2020	8.47	3/21/2022	8.13
5/24/2021	8.05	4/18/2022	8.02
6/22/2021	8.47	12/19/2022	8.37
7/27/2021	8.2	1/9/2023	8.2
8/10/2021	8.4	2/13/2023	7.25
9/21/2021	--	3/14/2023	8.42
10/26/2021	8.06	4/11/2023	8.6
11/18/2021	8.36		
5/17/2022	8.28	75th %	8.5
6/21/2022	7.97		
7/13/2022	8.1		
8/30/2022	8.07		
9/12/2022	7.9		
10/11/2022	8.06		
11/7/2022	7.61		
5/4/2023	8.49		
6/14/2023	8.42		
7/4/2023	8.25		
8/2/2023	8.41		
9/7/2023	7.92		
10/3/2023	7.93		
11/2/2023	8.1		
75th %	8.4		

ATTACHMENT 5
Calculation of Water Quality Characteristics
Data From Fixed Station CIC-17
Cicero Creek at Mt. Pleasant Rd, East of Arcadia

Summer		Winter	
Temperature		Temperature	
Date	(°C)	Date	(°C)
5/22/2019	29	12/18/2018	5.2
6/24/2019	21.3	2/26/2019	4.7
7/22/2019	24.3	3/26/2019	7.4
8/20/2019	24.6	4/16/2019	13.6
9/18/2019	23.19	12/18/2019	0.6
10/29/2019	13.3	1/22/2020	2
11/26/2019	6.22	2/25/2020	5.2
6/23/2020	24.3	12/14/2020	5.5
7/21/2020	26.1	1/26/2021	2
8/24/2020	27	3/30/2021	12
9/8/2020	22.9	4/26/2021	17.7
10/27/2020	9.8	12/28/2021	7.7
11/30/2020	7.1	3/21/2022	8.6
5/24/2021	20.9	4/18/2022	8.4
6/22/2021	21.6	12/19/2022	-0.1
7/27/2021	23.7	1/9/2023	1.8
8/10/2021	26.5	2/13/2023	4.7
9/21/2021	21.4	3/14/2023	5.1
10/26/2021	13.5	4/11/2023	16.5
11/18/2021	8.8		
5/17/2022	19.8	75th %	8.5
6/21/2022	21.3		
7/13/2022	23.2		
8/30/2022	22.7		
9/12/2022	19.1		
10/11/2022	11.8		
11/7/2022	10.1		
5/4/2023	14.8		
6/14/2023	19.3		
7/4/2023	25.4		
8/2/2023	24.8		
9/7/2023	21.4		
10/3/2023	18.5		
11/2/2023	5		
75th %	24		

ATTACHMENT 6
Calculation of Water Quality Characteristics
Data From Fixed Station CIC-17
Cicero Creek at Mt. Pleasant Rd, East of Arcadia

Date	Hardness (mg/l)	Chloride (mg/l)	Sulfate (mg/l)
12/18/2018	356	29	21
2/26/2019	327	67	22
3/26/2019	317	45	28
4/16/2019	291	22	21
5/22/2019	323	26	19
6/24/2019	303	22	27
7/22/2019	336	32	25
8/20/2019	298	150	46
9/18/2019	275	159	46
10/29/2019	225	85	40
11/26/2019	329	166	45
12/18/2019	334	78	41
1/22/2020	313	41	30
2/25/2020	304	46	30
6/23/2020	265	47	29
7/21/2020	299	78	36
8/24/2020	278	74	32
9/8/2020	132	26	25
10/27/2020	313	48	34
11/30/2020	334	36	23
12/14/2020	329	40	28
1/26/2021	358	49	35
3/30/2021	285	31	19
4/26/2021	277	39	26
5/24/2021	313	39	25
6/22/2021	291	47	24
7/27/2021	315	40	30
8/10/2021	280	85	55
9/21/2021	281	165	42
10/26/2021	197	17	9.7
11/18/2021	371	42	29
12/28/2021	283	24	--
3/21/2022	290	34	24
4/18/2022	308	32	25
5/17/2022	316	29	26
6/21/2022	330	36	20
7/13/2022	293	71	31
8/30/2022	222	155	43
9/12/2022	151	33	20
10/11/2022	281	185	55
11/7/2022	300	154	53
12/19/2022	305	111	58
1/9/2023	329	56	44
2/13/2023	335	39	25
3/14/2023	325	39	30
4/11/2023	288	34	25
5/4/2023	312	33	19
6/14/2023	296	43	26
7/4/2023	293	32	20
8/2/2023	249	138	35
9/7/2023	288	163	49
10/3/2023	301	232	65
11/2/2023	250	69	40
50th %	300	43	29

ATTACHMENT 7

Calculation of Preliminary Effluent Limitations for Discharges in the Non-Great Lakes System (Excluding Discharges to the Ohio River)

General Information	
Facility Name:	Tipton County Landfill
County:	Tipton
NPDES Number:	IN0061441
WLA Number:	002751
WLA Report Date:	February 26, 2024
Outfall:	001
Receiving Water:	Cicero Creek

Ambient Downstream Water Quality Characteristics	
Hardness (50th percentile)	= 300 mg/l
Chloride (50th percentile)	= 43 mg/l
Sulfate (50th percentile)	= 29 mg/l
pH (50th percentile)	= s.u.
Acute Ammonia-N	
Summer pH (75th percentile)	= 7.8 s.u.
Winter pH (75th percentile)	= 7.8 s.u.
Chronic Ammonia-N	
Summer Temperature (75th percentile)	= 24 C
Summer pH (75th percentile)	= 8.4 s.u.
Winter Temperature (75th percentile)	= 8.5 C
Winter pH (75th percentile)	= 8.5 s.u.

Metals Translators (dissolved to total recoverable)		
	Acute	Chronic
Arsenic	1.000	1.000
Cadmium	0.898	0.863
Chromium III	0.316	0.860
Copper	0.960	0.960
Lead	0.631	0.631
Nickel	0.998	0.997
Selenium	--	1.000
Silver	0.85	--
Zinc	0.978	0.986

Receiving Water Questions (Yes or No)	
Acute Mixing Zone Allowed?	No
Public Water System (PWS) Intake Downstream?	No
Industrial Water Supply (IWS) Intake Downstream?	No
Interstate Wabash River Discharge?	No
Put-and-Take Trout Fishing?	No
Fish Early Life Stages Present?	Yes

Effluent Flow	=	0.02 mgd
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Receiving Stream Design Flows	
Q1,10 (Outfall)	= 0.4 cfs
Q7,10 (Outfall)	= 0.6 cfs
Q7,10 (Public Water System Intake)	= cfs
Q7,10 (Industrial Water Supply Intake)	= cfs
Q30,10 (Outfall)	= 0.9 cfs
Q50 (Outfall)	= cfs
Q50 (Public Water System Intake)	= cfs

Mixing Zone Dilution			
Dilution Factor (for acute mixing zone)	=		
		Dilution Fraction	Flow
			Location
Chronic Aquatic Life (Except Ammonia and Selenium)	=	50%	Q7,10 Outfall
Chronic Aquatic Life (Ammonia and Selenium)	=	50%	Q30,10 Outfall
Chronic WET	=	25%	Q7,10 Outfall
Human Noncancer Drinking Water	=	100%	Q7,10 PWS Intake
Human Noncancer Nondrinking Water	=	50%	Q7,10 Outfall
Human Cancer Drinking Water	=	100%	Q50 PWS Intake
Human Cancer Nondrinking Water	=	25%	Q50 Outfall
Public Water Supply	=	100%	Q7,10 PWS Intake
Industrial Water Supply	=	100%	Q7,10 IWS Intake

										Indiana Water Quality Criteria for the Non-Great Lakes System (ug/l) [2]							Preliminary Effluent Limitations [3]											
										A	B	C	D	E	F	G												
										Aquatic Life Criteria		Human Health Noncancer Criteria		Human Health Cancer Criteria		Add. PWS Criteria												
										Acute (AAC)	Chronic (CAC)	Drinking (HNC-D)	Nondrinking (HNC-N)	Drinking (HCC-D)	Nondrinking (HCC-N)	(PWS)	Concentration (ug/l)		Mass (lbs/day)		Criteria	Basis						
Source of Criteria [1]	A	B	C	D	E	F	G	Bckgrnd (Outfall) (ug/l)	Bckgrnd (Intake) (ug/l)	Remove Mixing Zone? (Yes or Blank)	Samples/ Month	CV	Facility Specific CV? (Yes or No)	CAS Number	Parameters	Average	Maximum	Average	Maximum	Type [4]	Basis							
7	7							222			2	0.6	No	7439896	Iron	2744	2495					3200	5500	0.53	0.92	SSC	AAC	
1	1	1	1					5.4			2	0.6	No	7440666	Zinc[5][7]	297.25	299.68	7400	26000			350	610	0.058	0.1	Tier I	AAC	
														7664417	Total Ammonia (as N)[7]													
4	4							55			2	0.6	No		Summer	12138.81	699.92					10100	24300	1.7	4.1	Tier I	CAC[10]	
4	4							74			2	0.6	No		Winter	12138.81	1089.26					14000	24300	2.3	4.1	Tier I	AAC	
1	1					1		54000			2	0.6	No	1688706	Chloride[7][11]	724264	447619					250000	840000	1400000	140	230	Tier I	AAC

[1] Source of Criteria

- Indiana numeric water quality criterion in 327 IAC 2-1-6(a)(3), Table 6-1, 2-1-6(a)(4), Table 6-1a, 2-1-6(a)(6), 2-1-6(a)(7), Table 6-4 or in 2-1-6(e).
- "Must not exceed" (MNE) criterion in 327 IAC 2-1-6(a)(8), or 2-1-6(a)(9). This criterion is treated as a 4-day average criterion and is implemented in the same manner as the chronic aquatic life criterion.
- Industrial water supply (IWS) criterion in 327 IAC 2-1-6(f). This criterion is treated as a 4-day average criterion and is implemented in the same manner as the chronic aquatic life criterion.
- Acute (1-hour average) and chronic (30-day average) criteria for total ammonia nitrogen in "1999 Update of Ambient Water Quality Criteria for Ammonia," EPA-822-R-99-014, December 1999.
- Tier I criterion derived using the methodology in 327 IAC 2-1-8.2 or 327 IAC 2-1-8.3 when the required data set is available, or using the methodology in 327 IAC 2-1-8.4, 327 IAC 2-1-8.5 or 327 IAC 2-1-8.6.
- Tier II criterion derived using the methodology in 327 IAC 2-1-8.2 or 327 IAC 2-1-8.3 when the required data set is not available.
- Site-specific water quality criterion (SSC) in 327 IAC 2-1-8.9, Table 8.9-1 or developed under 327 IAC 2-1-8.9.
- Screening value (SV).
- Numeric interpretation of narrative criterion for toxicity using U.S. EPA recommended water quality criteria for whole effluent toxicity (WET).
- U.S. EPA national recommended water quality criterion under Section 304(a) of the Clean Water Act (CWA).

[2] Except as noted, aquatic life criteria and screening values for all metals are in the form of total recoverable metal.

Human health criteria and screening values and public water supply screening values for all metals are in the form of total recoverable metal.

[3] The preliminary effluent limitations (PELs) for metals are in the form of total recoverable metal (with the exception of Chromium (VI) which is in the form of dissolved metal).

[4] See the table "Indiana Water Quality Criteria for the Non-Great Lakes System" for information on the type and source of criteria.

[5] Aquatic life criteria and screening values for the above-noted metals are in the form of dissolved metal.

[6] The above-noted substances are probable or known human carcinogens.

[7] The above-noted substances have a criterion that is a function of an ambient downstream water quality characteristic. See the table "Indiana Water Quality Criteria for the Non-Great Lakes System" for information on the criterion equation.

[8] The above-noted substances are bioaccumulative chemicals of concern (BCCs). Beginning January 1, 2004, the water quality criteria for a BCC shall be applied directly to the undiluted discharge for all discharges of a BCC.

To apply the water quality criteria for a BCC directly to the undiluted discharge, enter "Yes" in the "Remove Mixing Zone?" column.

[9] Limits based on screening values (as indicated by SV) ARE NOT to be used as water quality-based effluent limitations. These are solely to be used as preliminary effluent limitations.

[10] The monthly average PEL was set equal to the most stringent WLA because the calculated monthly average PEL exceeded the most stringent WLA and a facility-specific CV was not determined.

[11] The ambient downstream water quality characteristic must be entered for both chloride and sulfate and it cannot exceed the applicable chronic aquatic life or "must not exceed" criterion for the substance.

Preliminary effluent limitations (PELs) for chloride and sulfate shall not be used to establish water quality-based effluent limitations that do not ensure the water quality criteria for both substances are achieved in the receiving water.

ATTACHMENT 8
Effluent Data for Tipton County Landfill (IN0061441)

Date	Iron (mg/l)		Chloride (mg/l)	
	Daily	Adjusted Daily	Daily	
Dec-20	--		--	
Jan-21	--		--	
Feb-21	--		--	
Mar-21	<0.5	0.5	26.1	
Apr-21	<0.5	0.5	26.6	
May-21	<1	1	30.7	
Jun-21	<0.5	0.5	35.6	
Jul-21	0.61	0.61	37.5	
Aug-21	0.501	0.501	38.5	
Sep-21	0.676	0.676	43.6	
Oct-21	<0.5	0.5	41.7	
Nov-21	<0.5	0.5	39.3	
Dec-21	<0.5	0.5	38.4	
Jan-22	<0.5	0.5	25.1	
Feb-22	<0.5	0.5	40.5	
Mar-22	<0.5	0.5	32.4	
Apr-22	<0.5	0.5	35	
May-22	<0.5	0.5	32.9	
Jun-22	<0.5	0.5	38.3	
Jul-22	<0.5	0.5	43	
Aug-22	<0.5	0.5	33	
Sep-22	<0.5	0.5	34.7	
Oct-22	<0.5	0.5	45.4	
Nov-22	1.14	1.14	2	
Dec-22	<0.5	0.5	47.4	
Jan-23	0.5	0.5	42.9	
Feb-23	<0.5	0.5	43.7	
Mar-23	<0.5	0.5	84.2	
Apr-23	<0.5	0.5	42.7	
May-23	<0.5	0.5	46	
Jun-23	0.5	0.5	51	
Jul-23	<0.5	0.5	57.4	
Aug-23	<0.5	0.5	56.8	
Sep-23	<0.5	0.5	64.4	
Oct-23	<0.5	0.5	67.5	
Nov-23	<0.5	0.5	63	
Outlier Analysis	mean	0.54	mean	42.0
	std	0.14	std	14.7
	mean + 3std	0.97	mean + 3std	86.2
Reasonable Potential Analysis	n	33	n	33
	CV	0.3	CV	0.4
	max	1.14	max	84.2

ATTACHMENT 9

Reasonable Potential Statistical Procedure for Discharges in the Non-Great Lakes System (Excluding Discharges to the Ohio River)

Facility Name: Tipton County Landfill NPDES Number: IN0061441 WLA Number: 002751 WLA Report Date: February 26, 2024 Outfall Number: 001 Receiving Water: Cicero Creek		Monthly Average Determination							Daily Maximum Determination						
Parameters	Reasonable Potential to Exceed? (Yes or No)*	Maximum Monthly Average (ug/l)	Number of Monthly Averages	CV	MF	PEQ (ug/l)	PEL (ug/l)	PEQ > PEL?	Maximum Daily Sample (ug/l)	Number of Daily Samples	CV	MF	PEQ (ug/l)	PEL (ug/l)	PEQ > PEL?
Iron	No					1300	3200	No	1140	33	0.3	1.1	1300	5500	No
Chloride	No					93000	840000	No	84200	33	0.4	1.1	93000	1400000	No

* Reasonable Potential to Exceed:

- 1) "Yes I" means that a projected effluent quality (PEQ) exceeded a preliminary effluent limitation (PEL) based on a Tier I criterion.
- 2) "Yes II" means that a PEQ exceeded a PEL based on a Tier II criterion.
- 3) "Yes SSC" means that a PEQ exceeded a PEL based on a site-specific criterion.
- 4) "No" means that a PEQ did not exceed a PEL.
- 5) "Evaluate Criteria" means that a PEQ exceeded a PEL based on a screening value.