STATE OF INDIANA
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
PUBLIC NOTICE NO 20240412 – IN0059021– D
DATE OF NOTICE: April 12, 2024
DATE RESPONSE DUE: May 13, 2024

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

Minor – Renewal:

Steel Dynamics, Inc – Flat Roll Group, Butler Division, Permit No. IN0059021, DEKALB COUNTY, 4500 County Road 59, Butler, IN. This facility operates as a flat-rolled mini-steel mill facility. The average flow for this facility is 0.8 MGD of stormwater and non-process wastewater which is discharged through Outfalls 002, 003, and 005 to Solomon Shank Ditch to the St. Joseph River. Outfall 002 is located at 41º 21' 58" N, 84º 55' 25" W; Outfall 003 is located at 41º 21' 52" N, 84º 54' 51" W, and Outfall 005 is located at 41º 21' 49" N, 84º 55' 05" W. Permit Manager: Heidi Etter, 317/233-4903, 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 therationale 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

April 12, 2024

VIA ELECTRONIC MAIL

Chad Bickford, General Manager
Steel Dynamics, Inc. – Flat Roll Group, Butler Division
4500 County Road 59
Butler, Indiana 46721

Dear Chad Bickford:

Re: NPDES Permit No. IN0059021
Draft Permit
Steel Dynamics, Inc. – Flat Roll Group, Butler Division
Butler, IN – DeKalb 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: DeKalb County Health Department
Bill Bougher, Environmental Engineer
Lynn Stackhouse, IDEM
Jaime Saylor, Hatchett & Hauck, LLP
Tom Baker, Hatchett & Hauck, LLP

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 IC13-15,

STEEL DYNAMICS, INC.
FLAT ROLL GROUP, BUTLER DIVISION

is authorized to discharge from the flat-rolled mini-steel mill facility and the co-located liquid pig Iron and direct reduced Iron plant that is located at 4500 County Road 59, Butler, Indiana, Dekalb County to receiving waters identified as Solomon Shank Ditch 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

1. 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 002,** located at Latitude 41˚ 21' 58", Longitude -84˚ 55' 25". The discharge is limited to non-contact groundwater from geothermal heating and cooling; air conditioning condensate; compressor condensate; non-contact cooling water from compressors; intermittent non-contact cooling water from the Hot Mill/Melt Shop and Iron Dynamics Division (IDD); stormwater run-off from outdoor storage of scrap metal, iron bearing materials, slag, coal, and lime; and other stormwater run-off. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Solomon Shank Ditch. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2][4]
Outfall 002

Table 1

	Quantity or Loading			**Quality or Concentration**			**Monitoring Requirements**	
Parameter	**Monthly Average**	**Daily Maximum**	**Units**	**Monthly Average**	**Daily Maximum**	**Units**	**Measurement Frequency**	**Sample Type**
Flow [6]	Report	Report	MGD	----	----	----	1 X Daily	24 Hr. Total
Oil & Grease	Report	Report	lbs/day	10.0	15.0	mg/l	1 X Monthly	Grab
TSS [7]	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	Grab
Sulfate (SO_4) [7]	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	Grab
Lead [3][7]	Report	Report	lbs/day	Report	Report	mg/l	2 X Monthly	Grab
Zinc [3][7]	2.0	3.6	lbs/day	0.22	0.39	mg/l	2 X Monthly	Grab
Whole Effluent Toxicity [5]								
Acute	----	----	----	----	1.0	TUa	See Part I.F of Permit	
Chronic	----	----	----	1.1	----	TUc	See Part I.F of Permit	

Table 2

	Quality or Concentration				**Monitoring Requirements**	
Parameter	**Daily Minimum**	**Monthly Average**	**Daily Maximum**	**Units**	**Measurement Frequency**	**Sample Type**
pH [8]	6.0	----	9.0	s.u.	1 X Daily	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 that would result in an increased discharge concentration, the permittee must apply for and receive approval from IDEM prior to such discharge. Discharges of any such additives must meet Indiana water quality standards. The permittee must apply for permission to use water treatment additives by completing and submitting State Form 50000 (Application for Approval to Use Water Treatment Additives) currently available at: https://www.in.gov/idem/forms/idem-agency-forms/.

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

[4] The Storm Water Pollution Prevention Plan (SWP3) requirements can be found in Part I.E of this permit.

[5] See Part I.F for whole effluent toxicity requirements.

[6] Flow may be estimated for discharges consisting solely of non-contact groundwater from geothermal heating and cooling and/or air conditioning cooling condensate.

[7] These parameters [total suspended solids (TSS), lead, zinc, and sulfate (as SO_4)] are to be monitored at least two times per month if a storm event occurs during the month, as described below:

> The samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. For each sample taken, the permittee shall record the duration and total rainfall of the storm event, the number of hours between beginning of the storm measured and the end of the previous measurable rain event, and the outside temperature at the time of sampling. A grab sample shall be taken during the first thirty (30) minutes of the discharge (or as soon thereafter as practicable).

If there are no storm events during a month, total suspended solids, sulfate (as SO_4), lead, and zinc shall continue to be monitored but at a frequency of at least one time per month.

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

2. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from **Outfall 003,** located at Latitude 41° 21' 52", Longitude -84° 54' 51". The discharge is limited to non-contact groundwater from geothermal heating and cooling, cooling condensate, compressor condensate, boiler blowdown, boiler condensate, non-contact cooling water from the Cold Mill and compressors, RO backwash, stormwater run-off from storage of Zinc ingots and steel coils, and other stormwater run-off. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Solomon Shank Ditch. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2][4]
Outfall 003

Table 1

	Quantity or Loading			Quality or Concentration			Monitoring Requirements	
Parameter	**Monthly Average**	**Daily Maximum**	**Units**	**Monthly Average**	**Daily Maximum**	**Units**	**Measurement Frequency**	**Sample Type**
Flow [5]	Report	Report	MGD	----	----	----	1 X Daily	24 Hr. Total
Oil & Grease	Report	Report	lbs/day	10.0	15.0	mg/l	1 X Weekly	Grab
TSS	Report	Report	lbs/day	Report	Report	mg/l	1 X Weekly	Grab
Zinc [3]	Report	Report	lbs/day	Report	Report	mg/l	1 X Monthly	Grab
Whole Effluent Toxicity [6]								
Acute	----	----	----	----	Report	TUa	See Part I.F of Permit	
Chronic	----	----	----	Report	----	TUc	See Part I.F of Permit	

Table 2

	Quality or Concentration				Monitoring Requirements	
Parameter	**Daily Minimum**	**Monthly Average**	**Daily Maximum**	**Units**	**Measurement Frequency**	**Sample Type**
pH [7]	6.0	----	9.0	s.u.	1 X Daily	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 that would result in an increased discharge concentration, the permittee must apply for and receive approval from IDEM prior to such discharge. Discharges of any such additives must meet Indiana water quality standards. The permittee must apply for permission to use water treatment additives by completing and submitting State Form 50000 (Application for Approval to Use Water Treatment Additives) currently available at: https://www.in.gov/idem/forms/idem-agency-forms/.

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

[4] The Storm Water Pollution Prevention Plan (SWP3) requirements can be found in Part I.E of this permit.

[5] Flow may be estimated for discharges consisting solely of non-contact groundwater from geothermal heating and cooling and/or air conditioning cooling condensate.

[6] See Part I.F for whole effluent toxicity requirements.

[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.

3. The permittee is authorized to discharge from the outfall listed below in accordance with the terms and conditions of this permit. The permittee is authorized to discharge from **Outfall 005,** located at Latitude 41° 21' 49", Longitude -84° 55' 05". The discharge is limited to stormwater run-off from equipment and slag storage areas and other stormwater run-off. Samples taken in compliance with the monitoring requirements below shall be taken at a point representative of the discharge but prior to entry into Solomon Shank Ditch. Such discharge shall be limited and monitored by the permittee as specified below:

DISCHARGE LIMITATIONS [1][2][4]
Outfall 005

Table 1

	Quantity or Loading			Quality or Concentration			Monitoring Requirements	
Parameter	**Monthly Average**	**Daily Maximum**	**Units**	**Monthly Average**	**Daily Maximum**	**Units**	**Measurement Frequency**	**Sample Type**
Flow	Report	Report	MGD	----	----	----	1 X Monthly	24 Hr. Total
Oil & Grease	Report	Report	lbs/day	10.0	15.0	mg/l	1 X Monthly	Grab
Zinc [3]	Report	Report	lbs/day	Report	Report	mg/l	1 X Monthly	Grab
TSS [5]	----	----	----	----	Report	mg/l	1 X Yearly	Grab
COD [5]	----	----	----	----	Report	mg/l	1 X Yearly	Grab
$CBOD_5$ [5]	----	----	----	----	Report	mg/l	1 X Yearly	Grab
TKN [5]	----	----	----	----	Report	mg/l	1 X Yearly	Grab
NO_3/NO_2 [5]	----	----	----	----	Report	mg/l	1 X Yearly	Grab
Total Phosphorus [5]	----	----	----	----	Report	mg/l	1 X Yearly	Grab

Table 2

	Quality or Concentration				Monitoring Requirements	
Parameter	**Daily Minimum**	**Monthly Average**	**Daily Maximum**	**Units**	**Measurement Frequency**	**Sample Type**
pH [6]	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 that would result in an increased discharge concentration, the permittee must apply for and receive approval from IDEM prior to such discharge. Discharges of any such additives must meet Indiana water quality standards. The permittee must apply for permission to use water treatment additives by completing and submitting State Form 50000 (Application for Approval to Use Water Treatment Additives) currently available at: https://www.in.gov/idem/forms/idem-agency-forms/.

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

[4] The Storm Water Pollution Prevention Plan (SWP3) requirements can be found in Part I.E of this permit.

[5] All samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches and at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. With the exception of Flow, Oil & Grease, and Zinc there shall be a minimum of three (3) months between reported sampling events.

For each sample taken, the permittee shall record the duration and total rainfall of the storm event, the number of hours between beginning of the storm measured and the end of the previous measurable rain event, and the outside temperature at the time of sampling.

A gab sample shall be taken during the first thirty (30) minutes of the discharge (or as soon thereafter as practicable).

[6] 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 determined in accordance with 327 IAC 2-1.5-7, 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 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 parameter.

2. Monthly Reporting

   The permittee shall submit federal and state discharge 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. For parameters with monthly average water quality based effluent limitations (WQBELs) below the LOQ, daily effluent values that are less than the limit of quantitation (LOQ) may be assigned a value of zero (0), unless, after considering the number of monitoring results that are greater than the limit of detection (LOD), and applying appropriate statistical techniques, a value other than zero (0) is warranted.

b. For all other parameters for which the monthly average WQBEL is equal to or greater than the LOQ, calculations that require averaging of measurements of daily values (both concentration and mass) shall use an arithmetic mean, except the monthly average for *E. coli* shall be calculated as a geometric mean. Daily effluent values 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. “Average Monthly Discharge” means the total mass or flow-weighted concentration of all daily discharges sampled or measured during a calendar month on which daily discharges are sampled and measured, divided by the number of daily discharges sampled and/or measured during such month.

The average monthly 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 on a one-time basis without consideration of the flow rate of the discharge 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. [PART I.D. DELETED AND RESERVED]

E. STORMWATER POLLUTION PREVENTION PLAN

1. Development of Storm Water Pollution Prevention Plan

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

a. Identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility. Storm water associated with industrial activity is defined at 40 CFR 122.26(b)(14) and includes, but is not limited to, the discharge from any conveyance that is used for collecting and conveying storm water and that is directly related to manufacturing, processing or raw materials storage areas at an industrial plant;

b. Describe practices and measures to be used in reducing the potential for pollutants to be exposed to storm water; and

c. Assure compliance with the terms and conditions of this permit.

2. Contents of Storm Water Pollution Prevention Plan

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

a. Storm Water Pollution Prevention Team -The plan shall list, by position title, the member or members of the permittee's storm water pollution prevention team who are responsible for developing the storm water pollution prevention plan (SWPPP) and assisting the facility or plant manager in its implementation, maintenance, and revision. The plan shall clearly identify the responsibilities of each storm water pollution prevention team member.

b. Description of Potential Pollutant Sources – The plan shall provide a map and description of all areas at the facility that generate storm water discharges associated with industrial activity and have a reasonable potential for storm water to be exposed to pollutants. The plan shall identify all activities and significant materials (defined in 40 CFR 122.26(b)(12)), which may potentially be significant pollutant sources. As a minimum, the plan shall contain the following:

(1) A soils map indicating the types of soils found on the facility property and showing the boundaries of the facility property outlined in a contrasting color. If a facility's property only has impervious surfaces, the soils map requirement can be omitted.

(2) A graphical representation, such as an aerial photograph or site layout maps, drawn to an appropriate scale, which contains a legend and compass coordinates, indicating, at a minimum, the following:

(A) All on-site storm water drainage and discharge conveyances, which may include pipes, ditches, swales, and erosion channels, related to a storm water discharge.

(B) Known adjacent property drainage and discharge conveyances, if directly associated with run-off from the facility.

(C) All on-site and known adjacent property water bodies, including wetlands and springs.

(D) An outline of the drainage area for each outfall discharging storm water.

(E) An outline of the facility property, indicating directional flows, via arrows, of surface drainage patterns.

(F) An outline of impervious surfaces, which includes pavement and buildings, and an estimate of the impervious and pervious surface square footage for each drainage area placed in a map legend.

(G) On-site injection wells, as applicable.

(H) On-site wells used as potable water sources, as applicable.

(I) All existing major structural control measures to reduce pollutants in storm water run-off.

(J) All existing and historical underground or aboveground storage tank locations, as applicable.

(K) All permanently designated plowed or dumped snow storage locations.

(L) All loading and unloading areas for solid and liquid bulk materials.

(M) All existing and historical outdoor storage areas for raw materials, intermediary products, final products, and waste materials.

(N) All existing or historical outdoor storage areas for fuels, processing equipment, and other containerized materials, for example, in drums and totes.

(O) Outdoor processing areas.

(P) Dust or particulate generating process areas.

(Q) Outdoor assigned waste storage or disposal areas.

(R) Pesticide or herbicide application areas.

(S) Vehicular access roads.

The on-site mapping of items listed in clauses (J) through (S) is required only in those areas that generate storm water discharges exposed to industrial activity and have a reasonable potential for storm water exposure to pollutants. The mapping of historical locations is only required if the historical locations have a reasonable potential for storm water exposure to historical pollutants.

(3) An area site map that indicates:

(A) The topographic relief or similar elevations to determine surface drainage patterns;

(B) The facility boundaries outlined in contrasting color;

(C) All receiving waters; and

(D) All known drinking water wells; and

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

(4) A narrative description of areas that generate storm water discharges associated with industrial activity and have a reasonable potential for storm water exposure to pollutants, including descriptions for any existing or historical areas listed in Part I.E.2.b.(2)(J) through (S) of this permit, and any other areas thought to generate storm water discharges associated with industrial activity and be a reasonable potential source of storm water exposure to pollutants. The narrative descriptions for each identified area must include the following:

(A) Type and typical quantity of materials present in the area.

(B) Methods of storage, including presence of any secondary containment measures.

(C) Any remedial actions undertaken in the area to eliminate pollutant sources or exposure of storm water to those sources. If a corrective action plan was developed, the type of remedial action and plan date shall be referenced.

(D) Any significant release or spill history dating back a period of three (3) years from the effective date of this permit, in the identified area, for materials spilled outside of secondary containment structures and impervious surfaces in excess of their reportable quantity, including the following:

i. The date and type of material released or spilled.

ii. The estimated volume released or spilled.

iii. A description of the remedial actions undertaken, including disposal or treatment.

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

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

i. Toxicity data of chemicals or materials used within the area, referencing appropriate material safety data sheet information locations.

ii. The frequency and typical quantity of listed chemicals or materials to be stored within the area.

iii. Potential ways in which storm water discharges may be exposed to listed chemicals and materials.

iv. The likelihood of the listed chemicals and materials to come into contact with storm water.

(5) A narrative description of existing and planned management practices and measures to improve the quality of storm water run-off entering a water of the state. Descriptions must be created for existing or historical areas listed in Part I.E.2.b.(2)(J) through (S) of this permit and any other areas thought to generate storm water discharges associated with industrial activity and be a potential source of storm water exposure to pollutants. The description must include the following:

(A) Any existing or planned structural and nonstructural control practices and measures.

(B) Any treatment the storm water receives prior to leaving the facility property or entering a water of the state.

(C) The ultimate disposal of any solid or fluid wastes collected in structural control measures other than by discharge.

(6) If applicable, the specific control practices and measures for potential pollutant source areas must include the following:

(A) Identification of areas that due to topography, activities, or other factors have a high potential for significant soil erosion and identify and implement measures to limit erosion.

(B) A plan to cover, or otherwise reduce the potential for pollutants in storm water discharge from deicing salt and sand or other commercial or industrial material storage piles, except for exposure resulting from the addition or removal of materials from the pile. For piles that do not have the potential for polluting stormwater runoff, the plan needs to provide the basis for determining no exposure potential. The plan must be included in the SWPPP.

(C) Storage piles of sand and salt or other commercial or industrial materials must be stored in a manner to reduce the potential for polluted storm water runoff and in accordance with the plan required under Part I.E.2.b.(6)(B) of this permit

(7) Information or other documentation required under Part I.E.5. of this permit.

(8) The results of storm water monitoring. The monitoring data must include completed field data sheets, chain-of-custody forms, and laboratory results. If the monitoring data are not placed into the facility's SWPPP, the on-site location for storage of the information must be reference in the SWPPP. As two (2) or more sample monitoring events are completed, the laboratory results must be compared to indicate water quality improvements in the run-off from the facility. If the parameters and sample type are identical, historical storm water monitoring data at each discharge outfall, or representative discharge outfall, if applicable, can be used in the comparison to provide data that is more reflective of initial water quality conditions.

(9) A mapped or narrative description of any such management practice or measure pursuant to subsection Part I.E.3.d. of the permit must be added to the SWPPP.

3. Planning and Implementation of Measures and Practices in the Storm Water Pollution Prevention Plan

For areas of the facility that generate storm water discharges and have a reasonable potential for storm water exposure to pollutants, storm water exposure to pollutants must be minimized. To ensure this reduction, the following practices and measures must be planned and implemented:

a. A written preventative maintenance program, including the following:

(1) Implementation of good housekeeping practices to ensure the facility will be operated in a clean and orderly manner and that pollutants will not have the potential to be exposed to storm water via vehicular tracking or other means.

(2) Maintenance of storm water management measures, for example, catch basins or the cleaning of oil or water separators. All maintenance must be documented and either contained in, or have the on-site record keeping location referenced in, the SWPPP.

(3) Inspection and testing of facility equipment and systems that are in areas of the facility that generate storm water discharges and have a reasonable potential for storm water exposure to pollutants to ensure appropriate maintenance of such equipment and systems and to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

(4) At a minimum, quarterly inspections of the storm water management measures and storm water run-off conveyances. Inspections must be documented and either contained in, or have the on-site record keeping location referenced in, the SWPPP.

(5) An employee training program to inform personnel at all levels of responsibility that have the potential to engage in industrial activities that impact storm water quality of the components and goals of the SWPPP. Training must occur at a minimum annually and should address topics such as spill response, good housekeeping, and material management practices. All employee training sessions, including relevant storm water topics discussed and a roster of attendees, must be documented and either contained in, or have the on-site record keeping location referenced in, the SWPPP.

b. A written spill response program, including the following:

(1) Location, description, and quantity of all response materials and equipment.

(2) Response procedures for facility personnel to respond to a release.

(3) Contact information for reporting spills, both for facility staff and external emergency response entities.

c. Non-Storm Water Discharges – The permittee must document that it has evaluated for the presence of non-storm water discharges not authorized by an NPDES permit. Any non-storm water discharges must either be eliminated or incorporated into this permit. Documentation of non-storm water discharges shall include a written non-storm water assessment, including the following:

(1) A statement that storm water discharges entering a water of the state have been evaluated for the presence of illicit discharges and non-storm water contributions.

(2) Detergent or solvent-based washing of equipment or vehicles that would allow washwater additives to enter any storm water drainage system or receiving water shall not be allowed at this facility unless authorized under a NPDES permit.

(3) All interior maintenance area floor drains with the potential for maintenance fluids or other materials to enter storm sewers must be either sealed, connected to a sanitary sewer with prior authorization, or authorized under a NPDES permit. The sealing, sanitary sewer connecting, or permitting of drains under this item must be documented in the written non-storm water assessment program.

(4) The statement shall include a description of the method used, the date of any testing, and the on-site drainage points that were directly observed during the test.

d. If parameter reductions are not indicated in a comparison conducted under Part I.E.2.b.(8) of this permit and they cannot be attributed to laboratory error or significant variability in the rainfall events, the source of the pollutant parameter must be investigated and either eliminated or reduced via a management practice or measure to the extent technologically practicable and cost beneficial. A lack of reduction does not, in and of itself, constitute a violation of this permit.

If parameter concentrations are at, or below, laboratory detection limitations, further reductions are not necessary.

4. Annual Review and Reports

At least once every twelve (12) months, the permittee shall conduct an annual review of the storm water control measures and practices to determine if modifications are necessary to meet the effluent limitations in this permit. The results of the annual review must be documented in a report that shall be retained within the SWPPP.

The permittee shall submit an annual report that contains the following information at a minimum:

(a) Any changes from the original Form 2F application,

(b) Any changes to the facility, the facility's operations or industrial activities that may reasonably be expected to affect the quality of storm water discharges associated with industrial activity from the facility,

(c) A copy of the comparison of all storm water sampling data results included in the facility's SWPPP and required under this permit,

(d) Any additional best management practices (BMPs) implemented, or corrective measures taken, as a result of sampling data results, and

(e) Any additional BMPs implemented, or corrective measures taken, as a result of the annual review.

The report must be submitted to the Industrial NPDES Permit Section, as well as the Compliance Branch, on an annual basis. The report may be submitted by email to the Industrial NPDES Permit Section at OWQWWPER@idem.in.gov and to the Compliance Branch at wwReports@idem.in.gov. The email subject line should include the NPDES Permit # and the type of report being submitted (Annual Storm Water Report). The permittee's first annual review report will be due twelve (12) months from the effective date of the permit. All subsequent annual review reports will be due no later than the anniversary of the effective date of the permit.

5. General Requirements – The SWPPP must meet the following general requirements:

(a) The plan shall be certified by a qualified professional. The term qualified professional means an individual who is trained and

experienced in storm water treatment techniques and related fields as may be demonstrated by state registration, professional certification, experience, or completion of course work that enable the individual to make sound, professional judgments regarding storm water control or treatment and monitoring, pollutant fate and transport, and drainage planning.

(b) The plan shall be retained at the facility and be available for review by a representative of the Commissioner upon request.

(c) The plan must be revised and updated as required.

(d) The permittee shall amend the plan when either of the following occur:

(1) Whenever there is a change in design, construction, operation, or maintenance at the facility, which may have a significant effect on the potential for the discharge of pollutants to surface waters of the state. Within sixty (60) days of amending the plan as a result of the conditions above, the permittee shall make the required changes to the SWPPP.

(2) Upon written notice by the Commissioner that the SWPPP proves to be ineffective in controlling pollutants in storm water discharges associated with industrial activity. Within sixty (60) days of such notification from the commissioner, the permittee shall make the required changes to the SWPPP and shall submit the amended plan to the Commissioner for review.

(e) If the permittee has other written plans, required under applicable federal or state law, such as operation and maintenance, spill prevention control and countermeasures (SPCC), or risk contingency plans, which fulfill certain requirements of an SWPPP, these plans may be referenced, at the permittee’s discretion, in the appropriate sections of the SWPPP to meet those section requirements.

(f) The permittee may combine the requirements of the SWPPP with another written plan if:

(1) The plan is retained at the facility and available for review;

(2) All the requirements of the SWPP are contained within the plan; and

(3) A separate, labeled section is utilized in the plan for the SWPPP requirements.

F. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

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

1. Whole Effluent Toxicity (WET) Tests

The permittee must conduct the series of aquatic toxicity tests specified in Part I.F.1.d. to monitor the acute and chronic toxicity of the effluent discharged from Outfall 002 and Outfall 003.

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

a. Toxicity Test Procedures and Data Analysis

(1) All test organisms, test procedures and quality assurance criteria used must be in accordance with the Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water to Freshwater Organisms, Fourth Edition, Section 11, Fathead Minnow (*Pimephales promelas*) Larval Survival and Growth Test Method 1000.0, and Section 13, Daphnid (*Ceriodaphnia dubia*) Survival and Reproduction Test Method 1002.0, EPA 821-R-02-013, October 2002 (hereinafter "Chronic Toxicity Test Method"), or most recent update that conforms to the version of 40 CFR 136 incorporated by reference in 327 IAC 5. [References to specific portions of the Chronic Toxicity Test Method contained in this Part I.F. are provided for informational purposes. If the Chronic Toxicity Test Method is updated, the corresponding provisions of that updated method would be applicable.]

(2) Any circumstances not covered by the above methods, or that require deviation from the specified methods must first be approved by the IDEM Permits Branch.

(3) The determination of acute and chronic endpoints of toxicity (LC_{50}, NOEC and IC_{25} values) must be made in accordance with the procedures in Section 9, "Chronic Toxicity Test Endpoints and Data Analysis" and the Data Analysis procedures as outlined in Section 11 for fathead minnow (Test

Method 1000.0; see flowcharts in Figures 5, 6 and 9) and Section 13 for *Ceriodaphnia dubia* (Test Method 1002.0; see flowcharts in Figures 4 and 6) of the Chronic Toxicity Test Method. The IC_{25} value together with 95% confidence intervals calculated by the Linear Interpolation and Bootstrap Methods in Appendix M of the Chronic Toxicity Test Method must be determined in addition to the NOEC value.

b. Types of Whole Effluent Toxicity Tests

(1) Tests may include a 3-brood (7-day) definitive static-renewal daphnid (*Ceriodaphnia dubia*) survival and reproduction toxicity test and a 7-day definitive static-renewal fathead minnow (*Pimephales promelas*) larval survival and growth toxicity test.

(2) All tests must be conducted using 24-hour composite samples of final effluent. Three effluent samples are to be collected on alternate days (e.g., collected on days one, three and five). The first effluent sample will be used for test initiation and for test solution renewal on day 2. The second effluent sample will be used for test solution renewal on days 3 and 4. The third effluent sample will be used for test solution renewal on days 5, 6 and 7. If shipping problems are encountered with renewal samples after a test has been initiated, the most recently used sample may continue to be used for test renewal, if first approved by the IDEM Permits Branch, but for no longer than 72 hours after first use.

Site-Specific Information: IDEM understands that the permittee's discharge may not be continuous. In instances where chronic WET testing is required and the discharge is not continuous, notwithstanding the requirements in the immediately preceding paragraph, the permittee is authorized to use the same effluent collected on day one for the chronic WET test solution renewal at 24, 48, 72, 96, 120, and 144 hours. In other words, the effluent sample collected on day one would be used for the entire testing period or for up to 144 hours. Additional site-specific information regarding sample collection for a discharge that is not continuous is included below under Part I.F.1.c.(1).

(3) The whole effluent dilution series for the definitive test must include a control and at least five effluent concentrations with a minimum dilution factor of 0.5. The effluent concentrations selected must include and, if practicable, bracket the effluent concentrations associated with the determinations of acute and

chronic toxicity provided in Part I.F.1.f. Guidance on selecting effluent test concentrations is included in Section 8.10 of the Chronic Toxicity Test Method. The use of an alternate procedure for selecting test concentrations must first be approved by the IDEM Permits Branch.

(4) If, in any control, more than 10% of the test organisms die in the first 48 hours with a daphnid species or the first 96 hours with fathead minnow, or more than 20% of the test organisms die in 7 days, that test is considered invalid and the toxicity test must be repeated. In addition, if in the *Ceriodaphnia dubia* survival and reproduction test, the average number of young produced per surviving female in the control group is less than 15, or if 60% of surviving control females have less than three broods; and in the fathead minnow (*Pimephales promelas*) survival and growth test, if the mean dry weight of surviving fish in the control group is less than 0.25 mg, that test is considered invalid and must also be repeated. All other test conditions and test acceptability criteria for the fathead minnow (*Pimephales promelas*) and *Ceriodaphnia dubia* chronic toxicity tests must be in accordance with the test requirements in Section 11 (Test Method 1000.0), Table 1 and Section 13 (Test Method 1002.0), Table 3, respectively, of the Chronic Toxicity Test Method.

c. Effluent Sample Collection and Chemical Analysis

(1) Whole effluent samples taken for the purposes of toxicity testing must be 24-hour composite samples collected at a point that is representative of the final effluent, but prior to discharge. Effluent sampling for the toxicity testing may be coordinated with other permit sampling requirements as appropriate to avoid duplication. First use of the whole effluent toxicity testing samples must not exceed 36 hours after termination of the 24-hour composite sample collection and must not be used for longer than 72 hours after first use. For discharges of less than 24 hours in duration, composite samples must be collected for the duration of the discharge within a 24-hour period (see “24-hour composite sample” definition in Part I.C.3. of this permit).

Site-Specific Information: If the permittee conducts a chronic WET test according to the Site-Specific Information in Part I.F.1.b.(2), a sufficient amount of effluent must be collected for all test solution renewals and held in a special container (for example: Cubitainer®) or a sample container with an appropriate discharge valve. To minimize the loss of toxicity due to microbial degradation, chemical transformation, or

volatilization, the sample container should be completely filled with almost no air space or headspace between the effluent sample and the lid and must be stored at 0 - 4ºC at all times. The purpose of using a special sample container is to keep the headspace above the sample at a minimum. When the effluent sample is removed from the container, this is accomplished as follows: Each time a sample is taken from the container, air enters. The air should be expelled by compressing the container before closing or by using an appropriate discharge valve attached to the sample container.

(2) Chemical analysis must be conducted on each effluent sample taken for toxicity testing, including each sample taken for the repeat testing as outlined in Part I.F.1.f.(3). The chemical analysis detailed in Part I.A.1 (for WET testing of Outfall 002) and Part I.A.2 (for WET testing of Outfall 003) must be conducted for the effluent sample in accordance with Part I.C.4. of this permit. The results from these chemical analyses must be included with the full whole effluent toxicity (WET) test laboratory report submitted pursuant to Part I.F.1.e.(3).

d. Toxicity Testing Species, Frequency and Duration

(1) Outfall 002

Chronic toxicity testing for *Ceriodaphnia dubia* and fathead minnow (*Pimephales promales*) must be conducted once every six (6) months as calculated from the effective date of the permit, for the duration of the permit.

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

(2) Outfall 003

Chronic toxicity testing for *Ceriodaphnia dubia* must be conducted <u>once annually</u>, as calculated from the effective date of the permit, for the duration of the permit. Under the previous permit, this facility conducted whole effluent toxicity testing

using the most sensitive species. Based on the permittee's record of compliance with whole effluent toxicity testing, the number of species tested may continue to include only the one most sensitive to the toxicity in the effluent.

If a TRE is initiated during the term of the permit, after receiving notification under Part I.F.1.e, the Compliance Data Section will suspend the toxicity testing requirements above for the term of the TRE compliance schedule described in Part I.F.2. After successful completion of the TRE, the toxicity tests established under Part I.F.2.c.(4) must be conducted once every six (6) months, as calculated from the first day of the first month following successful completion of the post-TRE toxicity tests (see Part I.F.2.c.(4)), for the remainder of the permit term.

e. Reporting

(1) Notifications of intent to reduce the number of species tested to the one most sensitive to the toxicity in the effluent under Part I.F.1.d., or notifications of the failure of two (2) consecutive toxicity tests and the intent to begin the implementation of a toxicity reduction evaluation (TRE) under Part I.F.1.f.(4) must be submitted in writing to the Compliance Data Section of IDEM's Office of Water Quality.

(2) Results of all toxicity tests, including invalid tests, must be reported to IDEM according to the general format and content recommended in the Chronic Toxicity Test Method, Section 10, "Report Preparation and Test Review". However, only the results of valid toxicity tests are to be reported on the discharge monitoring report (DMR). The results of the toxicity tests and laboratory report are due by the earlier of 60 days after completion of the test or the 28th day of the month following the end of the period established in Part I.F.1.d.

(3) The full whole effluent toxicity (WET) test laboratory report must be submitted to IDEM electronically as an attachment to an e-mail to the Compliance Data Section at wwreports@idem.IN.gov. The results must also be submitted via NetDMR.

(4) For quality control and ongoing laboratory performance, the laboratory report must include results from appropriate standard reference toxicant tests. This will consist of acute (LC_{50} values), if available, and chronic (NOEC, LOEC and IC_{25} values) endpoints of toxicity obtained from reference toxicant

tests conducted within 30 days of the most current effluent toxicity tests and from similarly obtained historical reference toxicant data with mean values and appropriate ranges for each species tested for at least three months to one year. Toxicity test laboratory reports must also include copies of chain-of-custody records and laboratory raw data sheets.

(5) Statistical procedures used to analyze and interpret toxicity data (e.g., Fisher's Exact Test and Steel's Many-one Rank Test for 7-day survival of test organisms; tests of normality (e.g., Shapiro-Wilk's Test) and homogeneity of variance (e.g., Bartlett's Test); appropriate parametric (e.g., Dunnett's Test) and non-parametric (e.g., Steel's Many-one Rank Test) significance tests and point estimates (IC_{25}) of effluent toxicity, etc.; together with graphical presentation of survival, growth and reproduction of test organisms), including critical values, levels of significance and 95% confidence intervals, must be described and included as part of the toxicity test laboratory report.

(6) For valid toxicity tests, the whole effluent toxicity (WET) test laboratory report must include a summary table of the results for each species tested as shown in the table presented below. This table will provide toxicity test results, reported in acute toxic units (TU_a) and chronic toxic units (TU_c), for evaluation under Part I.F.1.f. and reporting on the discharge monitoring report (DMR).

Outfall 002

Test Organism [1]	Test Type	Endpoint [2]	Units	Result	Compliance Limit	Pass/ Fail [6]	Reporting
Ceriodaphnia dubia	3-brood (7-day) Definitive Static-Renewal Survival and Reproduction	48-hr. LC_{50}	%	Report			Laboratory Report
			TU_a	Report			
		NOEC Survival	%	Report			
			TU_c	Report			
		NOEC Reproduction	%	Report			
			TU_c	Report			
		IC_{25} Reproduction	%	Report			
			TU_c	Report			
		Toxicity (acute) [3]	TU_a	Report [5]	1.0	Report	Laboratory Report **and NetDMR** (Parameter Code 61425)
		Toxicity (chronic) [4]	TU_c	Report [5]	1.1	Report	Laboratory Report **and NetDMR** (Parameter Code 61426)
Pimephales promelas	7-day Definitive Static-Renewal Larval Survival and Growth	96-hr. LC_{50}	%	Report			Laboratory Report
			TU_a	Report			
		NOEC Survival	%	Report			
			TU_c	Report			
		NOEC Growth	%	Report			
			TU_c	Report			
		IC_{25} Growth	%	Report			
			TU_c	Report			
		Toxicity (acute) [3]	TU_a	Report [5]	1.0	Report	Laboratory Report **and NetDMR** (Parameter Code 61427)
		Toxicity (chronic) [4]	TU_c	Report [5]	1.1	Report	Laboratory Report **and NetDMR** (Parameter Code 61428)

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

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

[3] The toxicity (acute) endpoint for *Ceriodaphnia dubia* is the 48-hr. LC_{50} result reported in acute toxic units (TU_a). The toxicity (acute) endpoint for *Pimephales promelas* is the 96-hr. LC_{50} result reported in acute toxic units (TU_a).

[4] The toxicity (chronic) endpoint for *Ceriodaphnia dubia* is the higher of the NOEC Survival, NOEC Reproduction and IC_{25} Reproduction values reported in chronic toxic units (TU_c). The toxicity (chronic) endpoint for *Pimephales promelas* is the higher of the NOEC Survival, NOEC Growth and IC_{25} Growth values reported in chronic toxic units (TU_c).

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

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

Outfall 003

Test Organism [1]	Test Type	Endpoint [2]	Units	Result	Compliance Limit [6]	Pass/ Fail [7]	Reporting
Ceriodaphnia dubia	3-brood (7-day) Definitive Static-Renewal Survival and Reproduction	48-hr. LC_{50}	%	Report			Laboratory Report
			TU_a	Report			
		NOEC Survival	%	Report			
			TU_c	Report			
		NOEC Reproduction	%	Report			
			TU_c	Report			
		IC_{25} Reproduction	%	Report			
			TU_c	Report			
		Toxicity (acute) [3]	TU_a	Report [5]	1.0	Report	Laboratory Report **and NetDMR** (Parameter Code 61425)
		Toxicity (chronic) [4]	TU_c	Report [5]	1.2	Report	Laboratory Report **and NetDMR** (Parameter Code 61426)
Pimephales promelas	7-day Definitive Static-Renewal Larval Survival and Growth	96-hr. LC_{50}	%	Report			Laboratory Report
			TU_a	Report			
		NOEC Survival	%	Report			
			TU_c	Report			
		NOEC Growth	%	Report			
			TU_c	Report			
		IC_{25} Growth	%	Report			
			TU_c	Report			
		Toxicity (acute) [3]	TU_a	Report [5]	1.0	Report	Laboratory Report **and NetDMR** (Parameter Code 61427)
		Toxicity (chronic) [4]	TU_c	Report [5]	1.2	Report	Laboratory Report **and NetDMR** (Parameter Code 61428)

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

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

[3] The toxicity (acute) endpoint for *Ceriodaphnia dubia* is the 48-hr. LC_{50} result reported in acute toxic units (TU_a). The toxicity (acute) endpoint for *Pimephales promelas* is the 96-hr. LC_{50} result reported in acute toxic units (TU_a).

[4] The toxicity (chronic) endpoint for *Ceriodaphnia dubia* is the higher of the NOEC Survival, NOEC Reproduction and IC_{25} Reproduction values reported in chronic toxic units (TU_c). The toxicity (chronic) endpoint for *Pimephales promelas* is the higher of the NOEC Survival, NOEC Growth and IC_{25} Growth values reported in chronic toxic units (TU_c).

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

[6] These values do not represent effluent limitations, but rather exceedance of these values results in a demonstration of toxicity that triggers additional action and reporting by the permittee.

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

f. Demonstration of Toxicity

(1) At Outfall 002, toxicity (acute) will be demonstrated if the effluent is observed to have exceeded 1.0 TU_a (acute toxic units) for *Ceriodaphnia dubia* in 48 hours or in 96 hours for *Pimephales promelas*. For this purpose, a separate acute toxicity test is not required. The results for the acute toxicity demonstration must be extrapolated from the chronic toxicity test. For the purpose of selecting test concentrations under Part I.F.1.b.(3), the effluent concentration associated with acute toxicity is 100%.

At Outfall 003, toxicity (acute) will be demonstrated if the effluent is observed to have exceeded 1.0 TU_a (acute toxic units) for *Ceriodaphnia dubia* in 48 hours or in 96 hours for *Pimephales promelas*. For this purpose, a separate acute toxicity test is not required. The results for the acute toxicity demonstration must be extrapolated from the chronic toxicity test. For the purpose of selecting test concentrations under Part I.F.1.b.(3), the effluent concentration associated with acute toxicity is 100%.

(2) At Outfall 002, toxicity (chronic) will be demonstrated if the effluent is observed to have exceeded 1.1 TU_c (chronic toxic units) for *Ceriodaphnia dubia* or *Pimephales promelas* from the chronic toxicity test. For the purpose of selecting test concentrations under Part I.F.1.b.(3), the effluent concentration associated with chronic toxicity is 90.9%.

At Outfall 003, toxicity (chronic) will be demonstrated if the effluent is observed to have exceeded 1.2 TU_c (chronic toxic units) for *Ceriodaphnia dubia* or *Pimephales promelas* from the chronic toxicity test. For the purpose of selecting test concentrations under Part I.F.1.b.(3), the effluent concentration associated with chronic toxicity is 83.3%.

(3) If toxicity (acute) or toxicity (chronic) is demonstrated in any of the chronic toxicity tests specified above, a repeat chronic toxicity test using the procedures in Part I.F.1. of this permit and the same test species must be initiated within two (2) weeks of test failure. During the sampling for any repeat tests, the permittee must also collect and preserve sufficient effluent samples for use in any toxicity identification evaluation (TIE) and/or toxicity reduction evaluation (TRE), if necessary.

(4) If any two (2) consecutive chronic toxicity tests, including any and all repeat tests, demonstrate acute or chronic toxicity, the permittee must notify the Compliance Data Section under Part I.F.1.e. within 30 days of the date of termination of the second test, and begin the implementation of a toxicity reduction evaluation (TRE) as described in Part I.F.2. After receiving notification from the permittee, the Compliance Data Section will suspend the whole effluent toxicity testing requirements in Part I.F.1. for the term of the TRE compliance schedule.

g. Definitions

(1) "Acute toxic unit" or "TU_a" is defined as $100/LC_{50}$ where the LC_{50} is expressed as a percent effluent in the test medium of an acute whole effluent toxicity (WET) test that is statistically or graphically estimated to be lethal to fifty percent (50%) of the test organisms.

(2) "Chronic toxic unit" or "TU_c" is defined as 100/NOEC or $100/IC_{25}$, where the NOEC or IC_{25} are expressed as a percent effluent in the test medium.

(3) "Inhibition concentration 25" or "IC_{25}" means the toxicant (effluent) concentration that would cause a twenty-five percent (25%) reduction in a nonquantal biological measurement for the test population. For example, the IC_{25} is the concentration of toxicant (effluent) that would cause a twenty-five percent (25%) reduction in mean young per female or in growth for the test population.

(4) "No observed effect concentration" or "NOEC" is the highest concentration of toxicant (effluent) to which organisms are exposed in a full life cycle or partial life cycle (short term) test, that causes no observable adverse effects on the test organisms, that is, the highest concentration of toxicant (effluent) in which the values for the observed responses are not statistically significantly different from the controls.

2. Toxicity Reduction Evaluation (TRE) Schedule of Compliance

The development and implementation of a TRE is only required if toxicity is demonstrated in two (2) consecutive tests as described in Part I.F.1.f.(4). The post-TRE toxicity testing requirements in Part I.F.2.c. must also be completed as part of the TRE compliance schedule.

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

Requirement	**Deadline**
Development and Submittal of a TRE Plan	Within 90 days of the date of two (2) consecutive failed toxicity tests.
Initiate a TRE Study	Within 30 days of TRE Plan submittal.
Submit TRE Progress Reports	Every 90 days beginning six (6) months from the date of two (2) consecutive failed toxicity tests.
Post-TRE Toxicity Testing Requirements	Immediately upon completion of the TRE, conduct three (3) consecutive months of toxicity tests with both test species; if no acute or chronic toxicity is shown with any test species, reduce toxicity tests to the following for the remainder of the permit term. Outfall 002 → Once Quarterly Outfall 003 → Once every six (6) months If post-TRE toxicity testing demonstrates toxicity, continue the TRE study.
Submit Final TRE Report	Within 90 days of successfully completing the TRE (including the post-TRE toxicity testing requirements), not to exceed three (3) years from the date that toxicity is initially demonstrated in two (2) consecutive toxicity tests.

a. Development of TRE Plan

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

(1) Methods for Aquatic Toxicity Identification Evaluations:

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

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

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

(2) Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I (EPA/600/6-91/005F), May 1992.

(3) Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs) (EPA/600/2-88/070), April 1989.

(4) Clarifications Regarding Toxicity Reduction and Identification Evaluations in the National Pollutant Discharge Elimination System Program, U.S. EPA, March 27, 2001.

b. Conduct the TRE

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

c. Post-TRE Toxicity Testing Requirements

(1) After completing the TRE, the permittee must conduct monthly post-TRE toxicity tests with the two (2) test species *Ceriodaphnia dubia* and fathead minnow (*Pimephales promelas*) for a period of three (3) consecutive months.

(2) If the three (3) monthly tests demonstrate no toxicity with any test species as described in Part I.F.1.f., the TRE will be considered successful. Otherwise, the TRE study must be continued.

(3) The post-TRE toxicity tests must be conducted in accordance with the procedures in Part I.F.1. The results of these tests must be submitted as part of the final TRE Report required under Part I.F.2.d.

(4) After successful completion of the TRE, the permittee must resume the chronic toxicity tests required in Part I.F.1. The permittee may reduce the number of species tested to only include the species demonstrated to be most sensitive to the toxicity in the effluent. The established starting date for the frequency in Part I.F.1.d. is the first day of the first month following successful completion of the post-TRE toxicity tests.

d. Reporting

(1) Progress reports must be submitted every 90 days to the Compliance Data Section beginning six (6) months from the date of two (2) consecutive failed toxicity tests. Each TRE progress report must include a listing of proposed activities for the next quarter and a schedule to reduce toxicity in the effluent discharge to acceptable levels through control of the toxicant source or treatment of whole effluent.

(2) Within 90 days of successfully completing the TRE, including the three (3) consecutive monthly tests required as part of the post-TRE toxicity testing requirements in Part I.F.2.c., the permittee must submit to the Compliance Data Section a final TRE Report that includes the following:

(A) A discussion of the TRE results;

(B) The starting date established under Part I.F.2.c.(4) for the continuation of the toxicity testing required in Part I.F.1.; and

(C) If applicable, the intent to reduce the number of species tested to the one most sensitive to the toxicity in the effluent under Part I.F.2.c.(4).

e. Compliance Date

The permittee must complete items a., b., c. and d. from Part I.F.2. and reduce toxicity in the effluent discharge to acceptable levels as soon as possible, but no later than three (3) years from the date that toxicity is initially demonstrated in two (2) consecutive toxicity tests (i.e. the date of termination of the second test) as described in Part I.F.1.f.(4).

G. REOPENING CLAUSES

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

1. to comply with any applicable effluent limitation or standard issued or approved under 301(b)(2)(C),(D) and (E), 304 (b)(2), and 307(a)(2) of the Clean Water Act, if the effluent limitation or standard so issued or approved:

   a. contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

   b. controls any pollutant not limited in the permit.

2. for any of the causes listed under 327 IAC 5-2-16.

3. to include Whole Effluent Toxicity (WET) limitations or to include limitations for specific toxicants if the results of the WET testing and/or the Toxicity Reduction Evaluation (TRE) study indicate that such limitations are necessary.

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

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:

a. Violation of any terms or conditions of this permit;

b. 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

c. 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.

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.

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, or 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; and (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), except as provided in IC 13-30-10-1.5(f), a person who willfully or negligently violates any NPDES permit condition or filing requirement under IC 13-18-19, 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(h), a person who willfully or recklessly violates any applicable standard or limitation of IC 13-18-9commits a Class C 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 provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under a permit shall, upon

conviction, be punished by a fine of not more than ten thousand dollars ($10,000) per violation, or by imprisonment for not more than one hundred eighty (180) days per violation, or by both. IC 13-30-10-1 provides that any person who knowingly or intentionally: (a) makes a false material statement, representation, or certification in any form, notice or report; (b) destroys, alters, conceals, withholds, or falsely certifies a record, report, plan or other document; or (c) tampers with, falsifies, or renders inaccurate or inoperative a recording or monitoring device or method, including the data gathered from the device or method, that is required to be filed or maintained under the terms of this permit 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 a modification is 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 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 monitoring equipment or method; any collection, treatment, pollution management, or discharge facilities; or practices required or otherwise regulated under this permit; and

d. Sample or monitor, at reasonable times, any discharge of pollutants or internal wastestreams (where necessary to ascertain the nature of a discharge of pollutants) for the purpose of evaluating compliance with the permit or as otherwise authorized.

16. New or Increased Loading of Pollutants

New or increased loading of regulated pollutants must comply with 327 IAC 2-1.3. The permittee is prohibited from undertaking any deliberate activity that would result in a new or increased loading of a regulated pollutant to surface waters of the state unless the new or increased loading qualifies for an exemption under 327 IAC 2-1.3-4(c)(2) or one of the following is completed prior to the commencement of the activity:

a. Information is submitted to the Commissioner demonstrating that the proposed new or increased loading 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 unessential 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 exceed any 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 covered 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 operated in compliance with proper operation and maintenance procedures;

(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 "Discharge Monitoring Reports", Part I.C.2.

3. Twenty-Four Hour Reporting Requirements

Pursuant to 327 IAC 5-2-8(11)(C), the permittee shall orally report to the Commissioner information on the following types of noncompliance within 24 hours from the time permittee becomes aware of such noncompliance. If the noncompliance meets the requirements of item b (Part II.C.3.b) or 327 IAC 2-6.1, then the report shall be made within those prescribed time frames. However, under 327 IAC 2-6.1-3(1), when the constituents of the discharge that is in noncompliance are regulated by this permit, and death or acute injury or illness to animals or humans does not occur, the reporting requirements of 327 IAC 2-6.1 do not apply.

a. Any unanticipated bypass which exceeds any effluent limitation in the permit;

b. Any noncompliance which may pose a significant danger to human health or the environment. Reports under this item shall be made as soon as the permittee becomes aware of the noncomplying circumstances; or

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

d. Violation of a maximum daily discharge limitation for any of the following toxic pollutants: Zinc.

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.

(4) Under the proposed Federal E-Reporting Rule, a method will be developed for submittal of all affected reports and documents using electronic signatures that is compliant with the Cross-Media Electronic Reporting Regulation (CROMERR). Enrollment and use of NetDMR currently provides for CROMERR-compliant report submittal.

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 a 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
Steel Dynamics, Inc.
Flat Roll Group, Butler Division
Draft: April 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:	Steel Dynamics, Inc. 4500 County Road 59 Butler, Indiana 46721
Existing Permit Information:	Permit Number: IN0059021 Expiration Date: March 31, 2024
Facility Contact:	Bill Bougher, Environmental Engineer (260) 868-8191, bill.bougher@steeldynamics.com
Facility Location:	4500 County Road 59 Butler, Indiana 46721 DeKalb County
Receiving Stream(s):	Solomon Shank Ditch
GLI/Non-GLI:	GLI
Proposed Permit Action:	Renew
Date Application Received:	October 3, 2023
Source Category:	NPDES Minor – Industrial
Permit Writer:	Heidi Etter (317) 233-4903, hetter@idem.in.gov

Table of Contents

1.0 INTRODUCTION

The Indiana Department of Environmental Management (IDEM) received a National Pollutant Discharge Elimination System (NPDES) Permit application from Steel Dynamics, Inc. – Flat Roll Group, Butler Division on October 3, 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

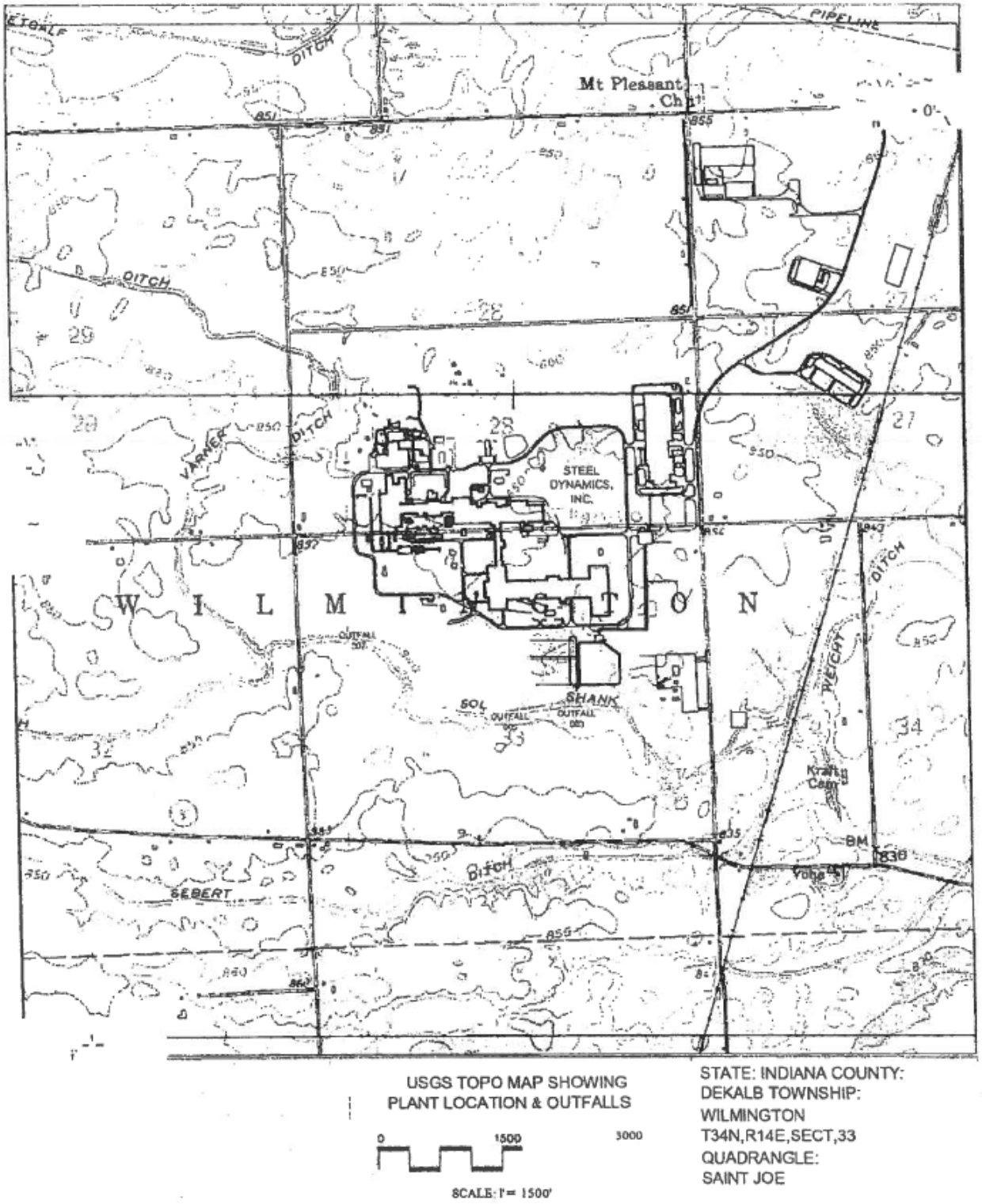
2.1 General

Steel Dynamics, Inc. – Flat Roll Group, Butler Division is classified under Standard Industrial Classification (SIC) Code 3312 – Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills.

The facility operates a flat-rolled mini-steel mill facility. The facility manufactures low carbon, hot-rolled steel products. Manufacturing operations include scrap melting, fluxing, casting, rolling, coil cleaning, acid pickling, cold rolling, hot dip zinc coating, coil coating (paint line), gauge reduction, annealing, and tempering. A separate operation involves the manufacture of Liquid Pig Iron and Direct Reduced Iron (DRI), a briquetted blend of iron materials, coal, fluxing agent, and binder material. Groundwater from on-site wells provide the source of all potable and process water used at the facility.

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

Figure 1: Facility Location



Steel Dynamics, Inc. – Flat Roll Group, Butler Division
4500 County Road 59
Butler, IN – Dekalb County

2.2 Outfall Locations

Outfall 002	Latitude: 41º 21' 58" Longitude: -84º 55' 25"
Outfall 003	Latitude: 41º 21' 52" Longitude: -84º 54' 51"
Outfall 005	Latitude: 41º 21' 49" Longitude: -84º 55' 05"

2.3 Wastewater Treatment

The wastewater listed below is sent to the Southwest Detention Pond and eventually discharges via Outfall 002 to Solomon Shank Ditch. The pH may be adjusted as needed through use of CO_2 and/or any previously approved water treatment chemical.

- Non-contact groundwater from geothermal heating and cooling;
- Air conditioning condensate;
- Compressor condensate;
- Non-contact cooling water from compressors;
- Intermittent non-contact cooling water from the Hot Mill/Melt Shop and Iron Dynamics Division (IDD);
- Stormwater run-off from the scrap metal, iron bearing materials, slag, coal storage areas, and lime storage areas; and
- Other Stormwater run-off.

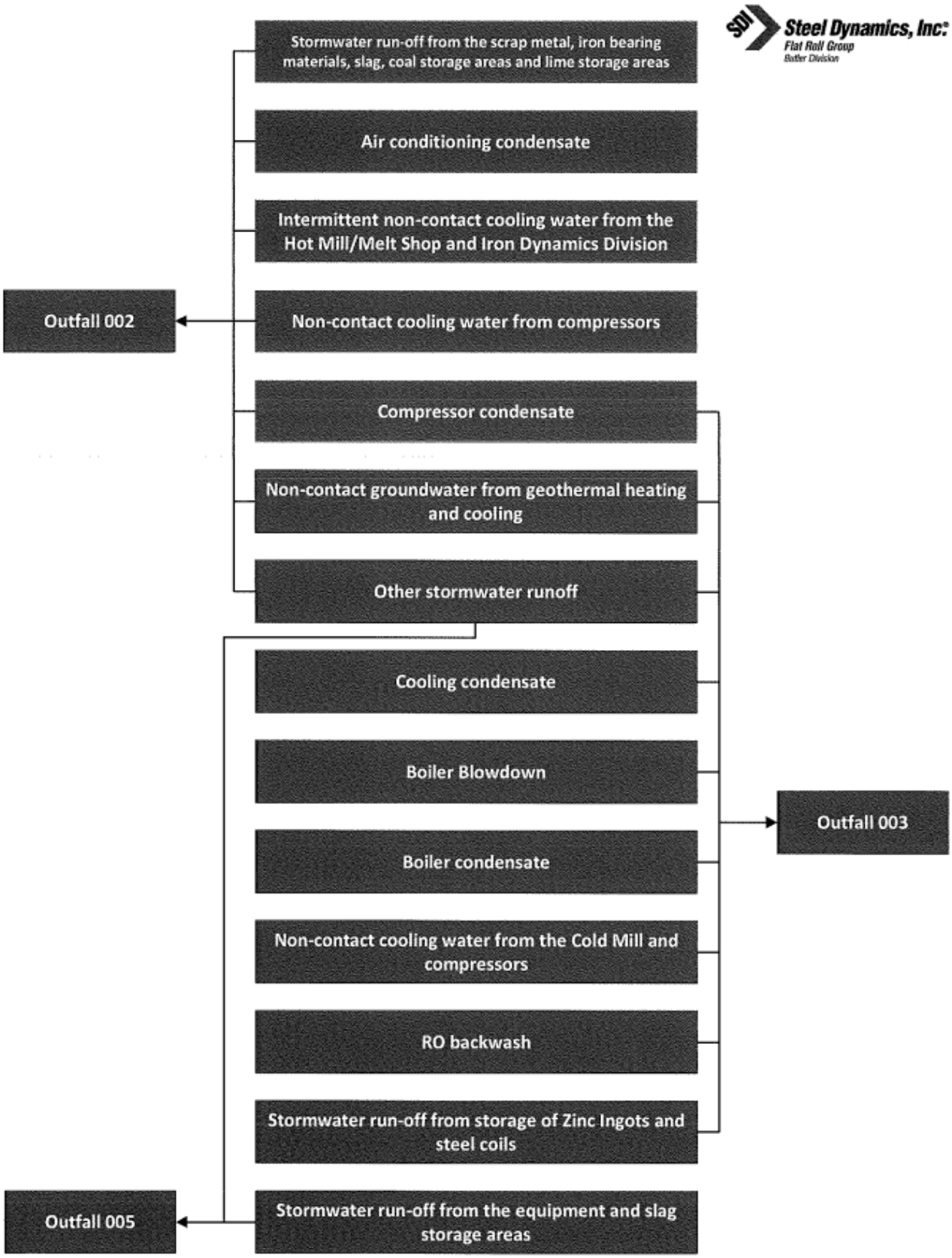
The wastewater listed below is sent to the Southeast Detention Pond and eventually discharges via Outfall 003 to Solomon Shank Ditch. The pH may be adjusted as needed through use of CO_2 and/or any previously approved water treatment chemical.

- Non-contact groundwater from geothermal heating and cooling;
- Cooling condensate;
- Compressor condensate;
- Boiler blowdown;
- Boiler condensate;
- Non-contact cooling water from the Cold Mill and compressors;
- RO backwash;
- Stormwater run-off from storage of zinc ingots and steel coils; and
- Other Stormwater run-off.

The South Detention Pond receives stormwater run-off from the equipment and slag storage areas. The stormwater is discharged via Outfall 005 to Solomon Shank Ditch. The pH may be adjusted as needed through use of CO_2 and/or any previously approved water treatment chemical.

A Flow Diagram has been included as Figure 2.

Figure 2: Flow Diagram



Outfall 002:	The average daily discharge from Outfall 002 to Solomon Shank Ditch is 0.3 MGD. The design flow (highest monthly average) based on the most recent 2 years of data is 1.1 MGD.
Outfall 003:	The average daily discharge from Outfall 003 to Solomon Shank Ditch is 0.5 MGD. The design flow (highest monthly average) based on the most recent 2 years of data is 1.1 MGD.
Outfall 005:	The average daily discharge from Outfall 005 to Solomon Shank Ditch is variable as it is dependent on the size of the storm event. The design flow (highest monthly average) based on the most recent 2 years of data is 0.19 MGD.

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 based on the information provided in the permit renewal application.

2.4 Changes in Operation

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

2.5 Facility Stormwater

Stormwater commingled with non-process wastewater is discharged via Outfalls 002 and Outfall 003 to Solomon Shank Ditch. Outfall 005 discharges solely stormwater to Solomon Shank Ditch.

Outfall 002

Outfall 002 receives stormwater run-off from approximately 136 acres (approximately 19 acres of which are impervious surfaces). Outdoor storage that could be exposed to the stormwater includes scrap metal, slag, iron bearing materials, coal, and dolomitic limestone. Run-off flows into the Southwest Detention Pond prior to discharge via Outfall 002 to Solomon Shank Ditch. Prior to discharge, the pH may be adjusted as needed through use of CO_2 and/or any previously approved water treatment chemical.

Outfall 003

Outfall 003 receives stormwater run-off from approximately 288 acres (approximately 50 acres of which are impervious surfaces). Outdoor storage that could be exposed to the stormwater includes steel coils and zinc ingots. Run-off flows into the Southeast Detention Pond prior to discharge via Outfall 003 to Solomon Shank Ditch. Prior to discharge, the pH may be adjusted as needed through use of CO_2 and/or any previously approved water treatment chemical.

Outfall 005

Outfall 005 receives stormwater run-off from approximately 10 acres none of which are impervious surfaces. Outdoor storage that could be exposed to the stormwater includes equipment and slag. Run-off flows into the South Detention Pond prior to discharge via Outfall 005 to Solomon Shank Ditch. Prior to discharge, the pH may be adjusted as needed through use of CO_2 and/or any previously approved water treatment chemical.

3.0 PERMIT HISTORY

3.1 Compliance History

A review of this facility's discharge monitoring data was conducted for compliance verification. This review indicates the following permit limitation violations between April 2019 and November 2023; pH violations at both Outfall 002 (April 2019, June 2019, December 2019, January 2020, May 2021, July 2021, August 2021, September 2021, September 2022, December 2022, January 2023, February 2023, March 2023, and May 2023) and Outfall 003 (June 2019, August 2019, July 2020, June 2021, and September 2021). 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 002, Outfall 003, and Outfall 005 is Solomon Shank Ditch, which is a tributary to the St. Joseph River. Solomon Shank Ditch and the St. Joseph River are part of the St. Joseph River (Lake Erie) Watershed. The $Q_{7,10}$ low flow value of Solomon Shank Ditch is 0.6 cfs and shall be capable of supporting a well-balanced, warm water aquatic community and full body contact recreation in accordance with 327 IAC 2-1.5-5.

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

A Site Map has been included as Figure 3.

Figure 3: Site Map

4.1 Total Maximum Daily Loads (TMDLs)

Section 303(d) of the Clean Water Act requires states to identify waters, through their Section 305(b) water quality assessments, that do not or are not expected to meet applicable water quality standards with federal technology-based standards alone. States are also required to develop a priority ranking for these waters taking into account the severity of the pollution and the designated uses of the waters. Once this listing and ranking of impaired waters is completed, the states are required to develop TMDLs for these waters in order to achieve compliance with the water quality standards. Indiana's 2022 303(d) List of Impaired Waters was developed in accordance with Indiana's Water Quality Assessment and 303(d) Listing Methodology for Waterbody Impairments and Total Maximum Daily Load Development for the 2022 Cycle.

The Solomon Shank Ditch, Assessment-Unit INA0356_T1018, HUC 041000030506, is not on the 2022 303(d) list for impairments. A TMDL for the Solomon Shank Ditch isn't currently planned.

The St. Joseph River, Assessment-Unit INA0382_01, HUC 041000030802, is on the 2022 303(d) list for *Escherichia coli* (*E. coli*) and Polychlorinated biphenyls (PCBs) in fish tissue.

A TMDL for the St. Joseph River (Lake Erie) Watershed has been developed for total suspended solids (TSS) in the sediment, nutrients, and *Escherichia coli* (*E. coli*). U.S. EPA Region 5 approved the St. Joseph River (Lake Erie) Watershed TMDL Report on October 26, 2017 for 58 bacteria (*E. coli*), 15 nutrient (total phosphorus), and 12 sediment (total suspended solid) 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. As described in the "Decision Document for the St. Joseph River Watershed TMDL, Indiana", revised March 1, 2019, corrections were made to the revised Decision Document of October 26, 2017 and final bacteria TMDL numbers were updated.

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).

EPA established TBELs for iron and steel manufacturing facilities under 40 CFR 420, which are applicable only to categorically regulated process wastewaters. All process wastewaters produced at this facility are discharged to the Butler POTW and regulated by the City of Butler's EPA-approved Pretreatment Program. The non-process wastewaters discharged through Outfalls 002, 003, and 005 under this permit are not subject to these federal ELGs.

This NPDES permit regulates only non-process wastewater discharged from Steel Dynamics, Inc. – Flat Roll Group, Butler Division; ELGs have not yet been developed specifically for this type of discharge. Therefore, as provided by law, IDEM has established TBELs for TSS in the proposed permit utilizing BPJ to meet the requirements of Best Conventional Technology and Best Available Technology Economically Achievable (BCT/BAT).

5.2 Water Quality-Based Effluent Limits (WQBELs)

WQBELs are designed to be protective of the beneficial uses of the receiving water and are independent of the available treatment technology. The WQBELs for this facility are based on water quality criteria in 327 IAC 2-1.5-8 or developed under the procedures described in 327 IAC 2-1.5-11 through 16 and implementation procedures in 327 IAC 5. Limitations are required for any parameter which has the reasonable potential to exceed a water quality criterion as determined using the procedures under 327 IAC 5-2-11.5.

5.3 Effluent Limitations and Monitoring Requirements by Outfall

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

5.3.1 All External Outfalls (002, 003, 005)

Narrative Water Quality Based Limits

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

Flow

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

pH

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

5.3.2 Outfall (002)

Oil and Grease (O & G)

O & G limitations are 15.0 mg/l Daily Maximum and 10.0 mg/l Monthly Average. These limits are considered sufficient to ensure compliance with narrative water quality criteria in 327 IAC 2-1.5-8(b)(1)(C) which prohibits oil or other substances in amounts sufficient to produce color, visible sheen, odor, or other conditions in such a degree to create a nuisance.

Sulfate (SO_4)

Based on effluent data provided with the NPDES renewal application and historical data, sulfate has been identified as a pollutant of concern in the discharge. Therefore, sulfate monitoring has been retained from the previous permit to determine if there is reasonable potential to exceed a water quality criterion for sulfate in the future.

Lead

Based on effluent data provided with the NPDES renewal application and historical data, lead has been identified as a pollutant of concern in the discharge. Therefore, lead monitoring has been retained from the previous permit to determine if there is reasonable potential to exceed a water quality criterion for lead in the future.

Zinc

Based on effluent data provided with the NPDES renewal application and historical data, zinc has been identified as a pollutant of concern in the discharge. As part of this permit renewal, a Wasteload Allocation (WLA) report, WLA002744, was completed on February 9, 2024 and zinc was evaluated for reasonable potential to exceed (RPE) a water quality criterion for zinc. The results of the reasonable potential analysis show that the discharge has a reasonable potential to exceed a water quality criterion for zinc; therefore, WQBELs are required for zinc. The monthly average limitation for zinc is 0.22 mg/l (2.0 lbs/day) and the daily maximum limitation is 0.39 mg/l (3.6 lbs/day).

Total Suspended Solids (TSS)

TSS is a regulated conventional pollutant and is monitored in the NPDES permit to ensure adequate wastewater treatment is provided and the narrative water quality criteria

will be protected. TSS is a parameter used to protect the existing and designated uses by preventing the discharge from having putrescent, or otherwise objectionable deposits, unsightly or deleterious deposits, color or other conditions in such a degree as to create a nuisance. The proposed monitoring requirements are based upon best professional judgment (BPJ) of the technology and allows IDEM to determine if the corresponding effluent limitations equivalent to the Best Conventional Pollutant Control Technology (BCT) are being met.

5.3.3 Outfall (003)

Oil and Grease (O & G)

O & G limitations are 15.0 mg/l Daily Maximum and 10.0 mg/l Monthly Average. These limits are considered sufficient to ensure compliance with narrative water quality criteria in 327 IAC 2-1.5-8(b)(1)(C) which prohibits oil or other substances in amounts sufficient to produce color, visible sheen, odor, or other conditions in such a degree to create a nuisance.

Zinc

Based on effluent data provided with the NPDES renewal application and historical data, zinc has been identified as a pollutant of concern in the discharge. Therefore, zinc monitoring has been retained from the previous permit to determine if there is reasonable potential to exceed a water quality criterion for zinc in the future.

Total Suspended Solids (TSS)

TSS is a regulated conventional pollutant and is monitored in the NPDES permit to ensure adequate wastewater treatment is provided and the narrative water quality criteria will be protected. TSS is a parameter used to protect the existing and designated uses by preventing the discharge from having putrescent, or otherwise objectionable deposits, unsightly or deleterious deposits, color or other conditions in such a degree as to create a nuisance. The proposed monitoring requirements are based upon best professional judgment (BPJ) of the technology and allows IDEM to determine if the corresponding effluent limitations equivalent to the Best Conventional Pollutant Control Technology (BCT) are being met.

5.3.4 Outfall (005)

Oil and Grease (O & G)

O & G limitations are 15.0 mg/l Daily Maximum and 10.0 mg/l Monthly Average. These limits are considered sufficient to ensure compliance with narrative water quality criteria in 327 IAC 2-1.5-8(b)(1)(C) which prohibits oil or other substances in amounts sufficient to produce color, visible sheen, odor, or other conditions in such a degree to create a nuisance.

Zinc

Based on effluent data provided with the NPDES renewal application and historical data, zinc has been identified as a pollutant of concern in the discharge. Therefore, zinc monitoring has been retained from the previous permit to determine if there is reasonable potential to exceed a water quality criterion for zinc in the future.

$CBOD_5$, COD, Total Phosphorus, Total Suspended Solids (TSS), Total Kjeldahl Nitrogen (TKN), and Nitrate + Nitrite Nitrogen (NO_3/NO_2)

The above identified parameters are typically associated with stormwater discharges. The monitoring for $CBOD_5$, COD, Total Phosphorus, TSS, TKN, and NO_3/NO_2 have been retained from the previous permit.

5.4 Whole Effluent Toxicity (WET) Testing

Under 327 IAC 2-1.5-8(b)(1)(E)(ii), a discharge shall not cause acute toxicity, as measured by whole effluent toxicity (WET) tests, at any point in the waterbody. Under 327 IAC 2-1.5-8(b)(2)(A)(iv) a discharge shall not cause chronic toxicity to aquatic life, outside of the applicable mixing zone, as measured by WET tests. Under 327 IAC 5-2-11.5(c)(2), IDEM may include WET test requirements in an NPDES Permit if determined to be necessary to generate the data needed to determine whether WET limits are required in the permit.

Therefore, the permittee is required to conduct WET tests at Outfall 002 and 003 to determine the toxicity of the final effluent. This does not negate the requirement to submit a water treatment additive (WTA) application and/or worksheet for replacement or new additives/chemicals proposed for use at the site.

Outfall 002

Indiana's regulations for the Great Lakes system include narrative criteria with numeric interpretations for acute (2-1.5-8(b)(1)(E)(ii)) and chronic (2-1.5-8(b)(2)(A)(iv)) whole effluent toxicity (WET) and a procedure for conducting reasonable potential for WET (5-2-11.5(c)(1)). The U.S. EPA did not approve the reasonable potential procedure for WET so Indiana is now required under 40 CFR Part 132.6(c) to use the reasonable potential procedure in Paragraphs C.1 and D of Procedure 6 in Appendix F of 40 CFR Part 132. IDEM used this procedure in conducting the reasonable potential analysis for WET.

WETT has been required of the permittee at Outfall 002 for many years. In the past five (5) years, Steel Dynamics, Inc. – Flat Roll Group, Butler Division exceeded the acute WET trigger value of 1.0 TUa in August 2019 for Fathead Minnow (*Pimephales promelas*) and chronic WET limit of 1.2 TUc in August 2019 for *Ceriodaphnia dubia* and Fathead Minnow. Therefore, as part of this permit renewal, a Wasteload Allocation (WLA) report, WLA002744, was completed on February 9, 2024 and the Acute and Chronic WET was evaluated for reasonable potential to exceed (RPE) whole effluent toxicity. This reasonable potential analysis was done in accordance with the Federal Great Lakes Guidance in 40 CFR Part 132. U.S. EPA over promulgated Indiana's reasonable potential procedure for WET in 327 IAC 5-2-11.5(c)(1) and

Indiana is now required to apply specific portions of the Federal Great Lakes Guidance when conducting reasonable potential analyses for WET. Indiana's requirements are specified under 40 CFR Part 132.6. The results of the reasonable potential analysis for WET show that the discharge has a reasonable potential to exceed the numeric interpretation of the narrative criterion for acute and chronic WET. Therefore, WQBELs are required for acute and chronic WET. The WLA report, WLA002744, has been included as Appendix A. This does not preclude the requirement to submit WTA application(s) and/or worksheet(s) for the replacement or new additives/chemicals proposed for use at the site.

The whole effluent toxicity language in Part I.F. of the permit has been revised and updated. The primary purpose of the changes was to ensure consistent implementation of the whole effluent toxicity testing requirements and reporting of the results on both the DMR and in the required whole effluent toxicity test report for all permittees. The reporting tables also now clearly require the more stringent of the IC25 and NOEC values (higher of the calculated TUs) to be used as the reported final Toxicity (acute and chronic) value to be compared to the compliance limit.

Outfall 003

The permittee is also required to continue WETT to determine the toxicity of the final effluent at Outfall 003. This does not preclude the requirement to submit WTA application(s) and/or worksheet(s) for the replacement or new additives/chemicals proposed for use at the site.

5.5 Antibacksliding

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

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

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 new or increased permit limitations for zinc at Outfall 002. In accordance with 327 IAC 2-1.3-1(b), the new or increased permit limitations are not subject to the Antidegradation Implementation Procedures in 327 IAC 2-1.3-5 and 2-1.3-6 as the new or increased permit limitations are not the result of a deliberate activity taken by the permittee. Limitations were included in the permit for zinc due to this pollutant showing a reasonable potential to exceed a water quality criterion for zinc in the Wasteload Allocation Report (WLA002744) completed on February 9, 2024.

5.7 Stormwater

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

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

According to 40 CFR 122.26(b)(14) and 327 IAC 15-6-2 facilities classified under Standard Industrial Classification (SIC) Code 3312 – Steel Works, Blast Furnaces (Including Coke Ovens), and Rolling Mills, are considered to be engaging in "industrial activity" for purposes of 40 CFR 122.26(b). Therefore, the permittee is required to have all stormwater discharges associated with industrial activity permitted. Treatment for stormwater discharges associated with industrial activities is required to meet, at a minimum, best available technology

economically achievable/best conventional pollutant control technology (BAT/BCT) requirements. EPA has determined that non-numeric technology-based effluent limits have been determined to be equal to the best practicable technology (BPT) or BAT/BCT for stormwater associated with industrial activity.

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

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

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

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

"Terms and Conditions" to Provide Information in a Stormwater Pollution Prevention Plan (SWPPP)

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

The requirement to prepare a SWPPP is not an effluent limitation. Rather, it documents what practices the discharger is implementing to meet the effluent limitations in the permit. The SWPPP is not an effluent limitation because it does not restrict quantities, rates, and concentrations of constituents which are discharged. Instead, the requirement to develop a SWPPP is a permit "term or condition" authorized under sections 402(a)(2) and 308 of the Act. Section 402(a)(2) states, "[t]he Administrator shall prescribe conditions for [NPDES] permits to assure compliance with the requirements of paragraph (1) of this subsection, including conditions on data and information collection, reporting, and such other requirements as he deems appropriate." The SWPPP requirements set forth in this permit are terms or conditions under the CWA because the discharger is documenting information on how it intends to comply with the effluent limitations (and inspection and evaluation requirements) contained elsewhere in the permit. Thus, the requirement to develop a SWPPP and keep it up-to-date is no different than other information collection conditions, as authorized by 327 IAC 5-1-3 (see also CWA section 402(a)(2)).

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

Public availability of documents

Part I.E.5(b) of the permit requires that the permittee retain a copy of the current SWPPP at the facility and make it immediately available, at the time of an onsite inspection or upon request, to IDEM. When submitting the SWPPP to IDEM, if any information in the SWPPP is considered to be confidential, that information shall be submitted in accordance with 327 IAC 12.1. Interested persons can request a copy of the SWPPP through IDEM. Any information that is confidential pursuant to Indiana law will not be released to the public.

5.8 Water Treatment Additives

In the event that changes are to be made in the use of water treatment additives that could significantly change the nature of, or increase the discharge concentration of any of the additives contributing to an outfall governed under the permit, the permittee must apply for and obtain approval from IDEM prior to such discharge. Discharges of any such additives must meet Indiana water quality standards. The permittee must apply for permission to use water

treatment additives by completing and submitting State Form 50000 (Application for Approval to Use Water Treatment Additives) available at: https://www.in.gov/idem/forms/idem-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.

The following is a list of water treatment additives currently approved for use at the facility:

Supplier	WTA	Outfall	System Feed Point
Webb Chemical Service Corp.	Sulfuric acid	002, 003	Non-contact cooling system of Iron Dynamics
Nalco Company	Towerbrom 960	002	Main water treatment non-contact system
Nalco Company	3D Trasar 3DT-487	002	Main water treatment non-contact system
Suez WTA Canada	Scaletrol PDC 9313	002	Non-contact cooling system of Iron Dynamics
Veolia WTS Canada	Gengard GN 8020	002	Non-contact cooling system of Iron Dynamics
Nalco Company	PermaTreat PC-191T	003	Reverse osmosis

6.0 PERMIT DRAFT DISCUSSION

6.1 Discharge Limitations, Monitoring Conditions and Rationale

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

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

Nothing has changed to warrant modifying the monitoring conditions.

Outfall 002:

Parameter	Monthly Average	Daily Maximum	Units	Minimum Frequency	Sample Type
Flow	Report	Report	MGD	1 X Daily	24-Hr. Total
Oil and Grease	Report 10.0	Report 15.0	lbs/day mg/l	1 X Monthly	Grab
TSS	Report Report	Report Report	lbs/day mg/l	2 X Monthly	Grab
Sulfate (SO_4)	Report Report	Report Report	lbs/day mg/l	2 X Monthly	Grab
Lead	Report Report	Report Report	lbs/day mg/l	2 X Monthly	Grab
Zinc	2.0 0.22	3.6 0.39	lbs/day mg/l	2 X Monthly	Grab
Whole Effluent Toxicity					
Acute	----	1.0	TUa	See Part I.F of Permit	
Chronic	1.1	-----	TUc	See Part I.F of Permit	

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

Outfall 003:

Parameter	Monthly Average	Daily Maximum	Units	Minimum Frequency	Sample Type
Flow	Report	Report	MGD	1 X Daily	24-Hr. Total
Oil and Grease	Report 10.0	Report 15.0	lbs/day mg/l	1 X Weekly	Grab
TSS	Report Report	Report Report	lbs/day mg/l	1 X Weekly	Grab
Zinc	Report Report	Report Report	lbs/day mg/l	1 X Monthly	Grab
Whole Effluent Toxicity					
Acute	----	Report	TUa	See Part I.F of Permit	
Chronic	Report	-----	TUc	See Part I.F of Permit	

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

Outfall 005:

Parameter	Monthly Average	Daily Maximum	Units	Minimum Frequency	Sample Type
Flow	Report	Report	MGD	1 X Monthly	24-Hr. Total
Oil and Grease	Report 10.0	Report 15.0	lbs/day mg/l	1 X Monthly	Grab
Zinc	Report Report	Report Report	lbs/day mg/l	1 X Monthly	Grab
TSS	----	Report	mg/l	1 X Annually	Grab
COD	----	Report	mg/l	1 X Annually	Grab
$CBOD_5$	----	Report	mg/l	1 X Annually	Grab
TKN	----	Report	mg/l	1 X Annually	Grab
NO_3/NO_2	----	Report	mg/l	1 X Annually	Grab
Total Phosphorus	----	Report	mg/l	1 X Annually	Grab

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

6.2 Schedule of Compliance

The draft permit contains new effluent limits for zinc. In accordance with 327 IAC 5-2-12.1 (see also 40 CFR 122.47(a)), a schedule of compliance is allowed in an NPDES permit when requested and justified by the permittee, but only when appropriate and when the schedule of compliance requires achievement of compliance "as soon as possible" and meets other specified conditions. Before a schedule of compliance can be included in a permit, the permittee must submit a request for the schedule to IDEM and demonstrate that they meet the requirements for such a schedule pursuant to 327 IAC 5-2-12.1.

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

Wasteload Allocation (WLA002744)

State Form 4336

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANAPOLIS

OFFICE MEMORANDUM

Date: February 9, 2024
Thru: John Elliott JE
Permits Branch

To: Permit File

From: Heidi Etter HE
Industrial NPDES Permits Section

Subject: Wasteload Allocation Report for Steel Dynamics - Butler in DeKalb County (IN0059021, WLA002744)

A reasonable potential analysis for lead, zinc, sulfate and whole effluent toxicity (WET) was done for the renewal of the NPDES permit for the Steel Dynamics facility in Butler. The analysis was done for Outfall 002 which discharges at an effluent flow of 1.1 mgd to Sol Shank Ditch, a tributary to St. Joseph River upstream of Cedarville Reservoir. The discharge is covered under the rules for the Great Lakes system.

Sol Shank Ditch is designated for full-body contact recreation and shall be capable of supporting a well-balanced, warm water aquatic community. Sol Shank Ditch in the vicinity of the outfall (Assessment Unit INA0356_T1018) is not on the 2022 303(d) list. A TMDL for *E. coli* for St. Joseph River downstream of its confluence with Sol Shank Ditch (Assessment Unit INA0382_01) was approved by EPA October 26, 2017 and is included in the St. Joseph River (Lake Erie) Watershed TMDL. The TMDL includes an allocation for *E. coli* for the wastewater and stormwater from Steel Dynamics. The report also includes TMDLs for total phosphorus and TSS at the mouth of the St. Joseph River. These TMDLs also include allocations for wastewater and stormwater from Steel Dynamics. The Q7,10 of Sol Shank Ditch upstream of the Steel Dynamics facility is 0.6 cfs.

The reasonable potential analysis for lead, zinc, and sulfate was done in accordance with the reasonable potential statistical procedure in 327 IAC 5-2-11.5(b). The calculation of the monthly average and daily maximum projected effluent quality (PEQ) for each pollutant is included in Table 1. The results of the reasonable potential procedure are included in Table 2 and they show that there is a reasonable potential to exceed a water quality criterion for zinc. Therefore, water quality-based effluent limitations (WQBELs) are required for zinc. The WQBELs for zinc at an effluent flow of 1.1 mgd are included in Table 3.

A reasonable potential analysis for WET was done in accordance with the Federal Great Lakes Guidance in 40 CFR Part 132. U.S. EPA overpromulgated Indiana's reasonable potential procedure for WET in 327 IAC 5-2-11.5(c)(1) and Indiana is now required to apply specific portions of the Federal Great Lakes Guidance when conducting reasonable potential analyses for WET. Indiana's requirements are included under 40 CFR Part 132.6. The results of the reasonable potential analysis for WET show that the

discharge from Outfall 002 does have a reasonable potential to exceed the numeric interpretation of the narrative criterion for both acute and chronic WET.

Once a determination is made that WQBELs are required for WET, the WQBELs are established in accordance with 327 IAC 5-2-11.6(d). This provision allows a case-by-case determination of whether to establish a WQBEL for only acute or chronic WET, or WQBELs for both acute and chronic WET, the number of species required for testing and the particular species required for testing. The purpose of this WLA report is not to make these determinations, but to provide the numerical limits. In addition, the toxicity reduction evaluation (TRE) trigger for chronic WET is equal to the monthly average WQBEL for WET and the TRE trigger for acute WET is equal to the daily maximum WQBEL for WET. The WQBELs for WET are included in Table 3.

The documentation of the wasteload allocation analysis is included as an attachment.

TABLE 1
Calculation of Projected Effluent Quality
For Steel Dynamics, Inc. - Butler in DeKalb County
Outfall 002 to Sol Shank Ditch
(IN0059021, WLA002744)

Parameter	Monthly Average PEQ					Daily Maximum PEQ				
	Maximum Monthly Average (mg/l)	Number of Monthly Averages	CV	Multiplying Factor	Monthly Average PEQ (mg/l)	Maximum Daily Sample (mg/l)	Number of Daily Samples	CV	Multiplying Factor	Daily Maximum PEQ (mg/l)
Lead	0.0037	35	0.7	1.2	0.0044	0.0059	83	0.9	0.9	0.0053
Zinc	0.508	35	0.9	1.2	0.61	0.602	83	1.0	0.9	0.54
Sulfate	545	34	0.6	1.2	654	670	82	0.7	0.9	603

2/09/2024

TABLE 2
Results of Reasonable Potential Statistical Procedure
Steel Dynamics, Inc. - Butler in DeKalb County
Outfall 002 to Sol Shank Ditch
(IN0059021, WLA002744)

Parameter	Monthly Average Comparison			Daily Maximum Comparison			WQBELs Required?
	Monthly Average PEQ (mg/l)	Monthly Average PEL (mg/l)	PEQ > PEL?	Daily Maximum PEQ (mg/l)	Daily Maximum PEL (mg/l)	PEQ > PEL?	
Lead	0.0044	0.012	No	0.0053	0.021	No	No
Zinc	0.61	0.22	Yes	0.54	0.39	Yes	Yes
Sulfate	654	1100	No	603	2000	No	No

2/09/2024

TABLE 3
Water Quality-based Effluent Limitations
Steel Dynamics, Inc. - Butler in DeKalb County
Outfall 002 to Sol Shank Ditch
(IN0059021, WLA002744)

Parameter	Quality or Concentration			Quantity or Loading*			Monthly Sampling Frequency
	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units	
Zinc	0.22	0.39	mg/l	2.0	3.6	lbs/day	2
Whole Effluent Toxicity							
Acute		1.0	TUa				
Chronic	1.1		TUc				

*Based on an effluent flow of 1.1 mgd.

2/09/2024

Documentation of Wasteload Allocation Analysis
For Discharges to the Great Lakes System

Analysis By: Heidi Etter
Date: February 9, 2024
Reviewed By: John Elliott
WLA Number: 002744

Facility Information

- **Name:** Steel Dynamics - Butler
- **NPDES Permit Number:** IN0059021
- **Permit Expiration Date:** March 31, 2024
- **County:** DeKalb
- **Purpose of Analysis:** Reasonable potential analysis for permit renewal.
- **Outfall Number:** 002 (see Attachment 1)
- **Facility Operations:** Noncontact groundwater from geothermal heating and cooling, air conditioning and compressor condensate, non-contact cooling water, stormwater runoff including runoff from the scrap metal, iron bearing materials, slag, coal and lime storage areas
- **Applicable Effluent Guidelines:** None that apply to this outfall
- **Type of Treatment:** Detention pond with pH adjustment using CO_2 and/or IDEM approved water treatment chemicals.
- **Current Permitted Flow:** 0.6 mgd (The highest monthly average flow for the period November 2016 thru October 2018 was 3.1 mgd and occurred in March 2017. An average flow of 0.6 mgd is included in the 2018 permit renewal application and was used in the analysis based on a review of discharge flows during WET testing.)
- **Effluent Flow for WLA Analysis:** 1.1 mgd (This is the highest monthly average flow for the period October 2021 thru September 2023 and occurred in October 2021)
- **Current Effluent Limits:** The following table only includes the pollutants included in the reasonable potential analysis.

Parameter	Monthly Average		Daily Maximum		Measurement Frequency
	(mg/l)	(lbs/day)	(mg/l)	(lbs/day)	
Zinc	Report	Report	Report	Report	2 X Monthly
Lead	Report	Report	Report	Report	2 X Monthly
Sulfate	Report	Report	Report	Report	2 X Monthly
Acute WET (TUa)#	--	--	Report	--	Twice annually
Chronic WET (TUc)+	1.2	--	--	--	Twice annually

[#] An acute toxicity reduction evaluation trigger of 1.0 TUa applies to the discharge.
[+] A chronic toxicity reduction evaluation limit of 1.2 TUc also applies to the discharge.

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**
Lead, Zinc, and Sulfate	RPE	Monitored in current permit.
Acute and Chronic WET	RPE	Limited in current permit.

Receiving Stream Information

- **Receiving Stream:** Sol Shank Ditch to St. Joseph River to Cedarville Reservoir to St. Joseph River to Maumee River to Lake Erie; Cedarville Reservoir is within 40 miles downstream of the outfall
- **Drainage Basin:** Lake Erie
- **Public Water System Intakes Downstream:** The City of Fort Wayne has a public water system intake in St. Joseph River downstream of Cedarville Reservoir. It was not considered in this analysis due to its location downstream of the reservoir.
- **Designated Stream Use:** Sol Shank Ditch is designated for full body contact recreation and shall be capable of supporting a well-balanced, warm water aquatic community.
- **12-Digit HUC:** 041000030506
- **Assessment Unit:** INA0356_T1018 (Sol Shank Ditch); INA0382_01 (St. Joseph River)
- **Consolidated List Category 4 (2022):** Assessment Unit INA0382_01 (St. Joseph River) is in Category 4A for the full body contact recreation (*E. coli* cause) designated use.
- **Consolidated List Category 5 (303(d) List) (2022):** Sol Shank Ditch is not on the 2022 303(d) list. St. Joseph River is on the 2022 303(d) list for PCBs in fish tissue.
- **TMDL Information:** A TMDL for *E. coli* for St. Joseph River downstream of its confluence with Sol Shank Ditch (Assessment Unit INA0382_01) was approved by EPA October 26, 2017 and is included in the St. Joseph River (Lake Erie) Watershed TMDL. The TMDL includes an allocation for *E. coli* for the wastewater and stormwater from Steel Dynamics. The report also includes TMDLs for total phosphorus and TSS at the mouth of the St. Joseph River. These TMDLs also include allocations for wastewater and stormwater from Steel Dynamics. The report lists a sanitary and industrial waste component with an average design flow of 0.125 mgd. Sanitary and process wastewater are currently treated at the Butler WWTP and not discharged to Sol Shank Ditch.
- **Q7,10 (Outfall):** 0.6 cfs (0.39 mgd)
- **Q1,10 (Outfall):** 0.6 cfs (0.39 mgd)
- **Harmonic Mean Flow (Outfall):** 2.0 cfs (1.3 mgd)
  (USGS partial record gaging station 04177900 Big Run at Butler was used to estimate the stream design flows for Sol Shank Ditch. The drainage area at this gage is 16.7 mi^2, the Q1,10 is 0.8 cfs, the Q7,10 is 0.8 cfs, and the harmonic mean flow is 3.0 cfs. The drainage area and stream design flows were 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. The drainage area upstream of the outfall is 11.1 mi^2 and was determined using the USGS StreamStats website. The stream design flows were determined using the ratio of drainage areas.)

- **Nearby Dischargers:** Steel Dynamics Outfall 003 is about 0.7 miles downstream and also includes monitoring requirements for zinc and whole effluent toxicity. A review of the Outfall 003 effluent data for zinc showed that the discharge is below the most stringent applicable water quality criterion for zinc, therefore, the discharge was not considered as part of this wasteload allocation. There is no information available that indicates that the WET of the two outfalls are additive, therefore, in accordance with 327 IAC 5-2-11.4(a)(8), the downstream outfall will not affect this wasteload allocation.

Calculation of Preliminary Effluent Limitations

Water quality data are not available for Sol Shank ditch. Therefore, data were obtained from fixed water quality monitoring station STJ-36, St. Joseph River at the SR 8 bridge, Newville. This station is located upstream of the confluence of Sol Shank Ditch with St. Joseph River. Data were limited to the last five years of available data.

The background concentration for each pollutant was determined by calculating the geometric mean of the data for the pollutant (327 IAC 5-2-11.4(a)(8)). In 327 IAC 5-2-11.4(a)(8) a procedure is included for calculating background concentrations when the data set includes values below the limit of detection. In this procedure, values in the data set below the limit of detection (LOD) are assigned the value (V) and then the geometric mean of the data set is calculated. The value (V) is determined as follows:

$$V = (LOD) \times [1 - (\text{Number of nondetects})/(\text{Total number of values})]$$

The fixed station data are actually reported as less than the limit of quantitation (LOQ). Therefore, a procedure based on best professional judgment was used for the fixed station data. If less than one-half the values in the data set were below the LOQ, the values below the LOQ were assigned the value (V) and then the geometric mean of the data set was calculated. The value (V) was determined as follows:

$$V = (LOQ) \times [1 - (\text{Number below LOQ})/(\text{Total number of values})]$$

If one-half or more of the values in the data set were below the LOQ, the values below the LOQ were set equal to one-half the LOQ. The determination of background concentrations using fixed station data is included in Attachment 2.

According to 327 IAC 5-2-11.4(a)(13), the 50^{th} percentile hardness downstream of the point of discharge is to be used to determine the criteria for those metals whose criteria are dependent on hardness. The 50^{th} percentile hardness value at fixed station STJ-36 calculated using the last five years of data is 138 mg/l. The data are included in Attachment 3.

Aquatic life criteria applicable to waters in the Great Lakes system are not available for sulfate. Therefore, the sulfate criterion applicable to waters outside the Great Lakes system in 327 IAC 2-1-6(a)(8) was used as an ambient screening value for both acute and chronic aquatic life. The criterion is dependent on the hardness and chloride concentrations outside the applicable mixing zone. Effluent data for chloride are not available. Since the receiving stream is effluent dominant at the Q7,10 stream design flow condition, a conservative sulfate screening value was

used. This value was determined using an end-of-pipe chloride concentration based on the chronic chloride criterion calculated using the 50th percentile effluent sulfate concentration (see Attachment 5) and the downstream hardness. The chronic chloride criterion of 388 mg/l is included in Attachment 4.

The coefficient of variation used to calculate monthly average and daily maximum preliminary effluent limitations (PELs) was set equal to the default value of 0.6. The number of samples per month used to calculate monthly average PELs was set equal to 2 based on the expected monitoring frequency. The spreadsheet used to calculate PELs is included in Attachment 4.

Reasonable Potential Analysis for Lead, Zinc, and Sulfate

Calculation of Projected Effluent Quality

Effluent data for Outfall 002 obtained from the facility and MMRs for the period August 2020 through August 2023 were used to calculate the monthly projected effluent quality (PEQ) and daily PEQ for lead, zinc, and sulfate. The effluent data include values reported as less than (<) the LOD. These values were assigned the reported less than value. Monthly averages were calculated for those months for which at least two data points are available. The data are included in Attachment 5.

Comparison of PEQs to PELs

The reasonable potential analysis is included in Attachment 6. The results of the analysis show that a PEQ does not exceed a PEL for lead or sulfate, but a PEQ does exceed a PEL for zinc. Therefore, there is a reasonable potential to exceed a water quality criterion for zinc and WQBELs for zinc are required at Outfall 002.

Reasonable Potential Analysis for Whole Effluent Toxicity (WET)

U.S. EPA disapproved the reasonable potential procedure for whole effluent toxicity at 327 IAC 5-2-11.5(c)(1). In place of 327 IAC 5-2-11.5(c)(1), IDEM is required to apply Paragraphs C.1 and D of Procedure 6 in Appendix F of 40 CFR Part 132. The following analysis is based on Paragraphs C.1 and D of Procedure 6 in Appendix F of 40 CFR Part 132.

Effluent Data

The permit renewal effective April 1, 2019 required chronic toxicity testing using *Ceriodaphnia dubia* and Fathead Minnow for three consecutive months at Outfall 002. Thereafter, chronic toxicity testing was required once every six (6) months for the most sensitive species. Effluent data for WET for the period April 2019 thru September 2023 are included in Attachment 7. After the three initial tests, semi-annual testing was only continued for Fathead Minnow. Chronic toxicity was reported using the No Observed Effect Concentration (NOEC) and IC25 values.

Reasonable Potential Analysis for Acute WET

The WET of an effluent is or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above the numeric interpretation of the narrative criterion for acute WET at 2-1.5-8(b)(1)(E)(ii) when effluent specific WET data demonstrates that:

(TUa effluent) x (B) x (effluent flow)/(Qad + effluent flow) > AC, where:

TUa effluent = maximum acute WET result
B = multiplying factor from 5-2-11.5(h)
effluent flow = effluent flow used to calculate WQBELs for individual pollutants
Qad = amount of receiving water available for dilution
AC = numeric interpretation of the narrative criterion for acute WET

For Steel Dynamics – Butler Outfall 002, the calculation is done as follows:

TUa effluent = 2.0 TUa (Fathead Minnow)
B = 1.3 (based on 11 samples and a CV of 0.3)
effluent flow = 1.1 mgd
Qad = 0.0 mgd (an alternate mixing zone has not been approved for acute WET)
AC = 1.0 TUa (the applicable numeric interpretation of the narrative criterion for acute WET for the case where an alternate mixing zone for acute WET has not been approved)

(2.0 TUa effluent) x (1.3) x (1.1 mgd)/(0.0 mgd + 1.1 mgd) = 2.6 TUa

The calculated value is greater than 1.0 TUa, so there is reasonable potential for acute WET.

Reasonable Potential Analysis for Chronic WET
The WET of an effluent is or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above the numeric interpretation of the narrative criterion for chronic WET at 2-1.5-8(b)(2)(A)(iv) when effluent specific WET data demonstrates that:

(TUc effluent) x (B) x (effluent flow)/(Qad + effluent flow) > CC, where:

TUc effluent = maximum chronic WET result
B = multiplying factor from 5-2-11.5(h)
effluent flow = effluent flow used to calculate WQBELs for individual pollutants
Qad = amount of receiving water available for dilution
CC = numeric interpretation of the narrative criterion for chronic WET

For Steel Dynamics – Butler Outfall 002, the calculation is done as follows:

TUc effluent = 22.7 TUc (Fathead Minnow; based on the IC25)
B = 3.3 (based on 11 samples and a CV of 2.0)
effluent flow = 1.1 mgd
Qad = 0.0975 mgd (25% of the Q7,10 (0.39 mgd))
CC = 1.0 TUc

(22.7 TUc) x (3.3) x (1.1 mgd)/(0.0975mgd + 1.1 mgd) = 69 TUc

The calculated value is greater than 1.0 TUc, so there is reasonable potential for chronic WET.

Water Quality-Based Effluent Limitations (WQBELs)

The PELs for zinc in Attachment 4 for Outfall 002 are based on water quality criteria and may be included in an NPDES permit as WQBELs.

Once a determination is made that WQBELs are required for whole effluent toxicity (WET), the WQBELs are established in accordance with 327 IAC 5-2-11.6(d). Under this provision, the monthly average WQBEL is set equal to the chronic WET wasteload allocation established under 5-2-11.4 and the daily maximum WQBEL is set equal to the acute WET wasteload established under 5-2-11.4.

Under 5-2-11.4(c), the wasteload allocation for chronic WET is calculated using the effluent flow, 25% of the Q7,10 for dilution and the numeric interpretation of the narrative criterion for chronic WET (1.0 TUc; 327 IAC 2-1.5-8(b)(2)(A)(iv)). The background concentration of chronic WET is set equal to zero in accordance with 327 IAC 5-2-11.4(a)(8). Under 5-2-11.4(c), for the case where there is not an approved alternate mixing zone for acute WET, the wasteload allocation for acute WET is equal to the numeric interpretation of the narrative criterion for acute WET (1.0 TUa if there is no approved acute mixing zone; 327 IAC 2-1.5-8(b)(1)(E)(ii)). The calculation of the wasteload allocations for acute and chronic WET along with the resulting WQBELs are included in Attachment 4.

List of Attachments

Attachment 1: Map of Outfall Location
Attachment 2: Calculation of Background Concentrations
Attachment 3: Calculation of Downstream Water Quality Characteristics
Attachment 4: Calculation of Preliminary Effluent Limitations
Attachment 5: Effluent Data for Lead, Zinc and Sulfate at Outfall 002
Attachment 6: Reasonable Potential Statistical Procedure for Outfall 002
Attachment 7: Effluent Data for WET at Outfall 002

ATTACHMENT 1

ATTACHMENT 2
Calculation of Background Concentrations
Data From Fixed Station STJ-36

Date	Total Lead (ug/l)	Adjusted Total Lead (ug/l)	Total Zinc (ug/l)	Adjusted Total Zinc (ug/l)	Sulfate (mg/l)
11/12/2018	<1	0.49	13.9	13.9	42
12/3/2018	2.35	2.35	16.2	16.2	27
2/19/2019	<1	0.49	<6	3.8	35
3/4/2019	<1	0.49	18.8	18.8	38
4/2/2019	1.6	1.6	14.1	14.1	27
5/20/2019	1.82	1.82	14.3	14.3	25
6/3/2019	4.51	4.51	30	30	24
7/8/2019	1.73	1.73	12.9	12.9	30
8/5/2019	<1	0.49	10.8	10.8	43
9/2/2019	1.07	1.07	14.2	14.2	45
10/15/2019	<1	0.49	<6	3.8	41
11/4/2019	1.03	1.03	8.92	8.92	26
12/2/2019	2.4	2.4	19.8	19.8	26
1/6/2020	<1	0.49	9.9	9.9	31
2/10/2020	<1	0.49	9.3	9.3	37
3/2/2020	8.35	8.35	68.8	68.8	26
5/18/2020	4.49	4.49	28.9	28.9	27
6/8/2020	<1	0.49	6.48	6.48	29
7/13/2020	<1	0.49	6.14	6.14	42
8/17/2020	<1	0.49	10.7	10.7	55
9/14/2020	<.5	0.35	<6	3.8	53
10/12/2020	<.5	0.35	<6	3.8	50
11/17/2020	<.5	0.35	<6	3.8	64
12/1/2020	<.5	0.35	7.5	7.5	56
1/11/2021	<.5	0.35	11.6	11.6	76
3/2/2021	2.2	2.2	38.1	38.1	58
4/19/2021	0.66	0.66	9.2	9.2	67
5/3/2021	0.66	0.66	7.6	7.6	64
6/14/2021	0.96	0.96	14.7	14.7	62
7/5/2021	1.3	1.3	17.2	17.2	44
8/18/2021	0.67	0.67	9.4	9.4	41
9/13/2021	<.5	0.35	6.6	6.6	64
10/4/2021	2.6	2.6	23.6	23.6	33
11/2/2021	0.82	0.82	11.4	11.4	28
12/14/2021	3.2	3.2	24.8	24.8	27
3/28/2022	0.96	0.96	7	7	37
4/19/2022	<.5	0.35	<6	3.8	30
5/17/2022	1.3	1.3	11.3	11.3	38
6/28/2022	<.5	0.35	<6	3.8	36
7/19/2022	0.82	0.82	<6	3.8	34
8/17/2022	1.1	1.1	7.9	7.9	60
9/26/2022	<.5	0.35	<6	3.8	54
10/12/2022	<.5	0.35	<6	3.8	45
11/30/2022	<.5	0.35	<6	3.8	54
12/20/2022	<1	0.49	<6	3.8	47
1/30/2023	<.5	0.35	<6	3.8	19
2/28/2023	3.4	3.4	27	27	34
3/28/2023	1.3	1.3	10.7	10.7	39
4/25/2023	<.5	0.35	<6	3.8	42
5/24/2023	0.5	0.5	<6	3.8	49
6/20/2023	0.67	0.67	<6	3.8	60
7/20/2023	<.5	0.35	<6	3.8	59
8/30/2023	<.5	0.35	<6	3.8	87
9/27/2023	<.5	0.35	<6	3.8	52
10/24/2023	<.5	0.35	<6	3.8	
Geomean		**0.76**		**8.5**	**41**

ATTACHMENT 3
Calculation of Water Quality Characteristics
Data From Fixed Station STJ-36

Date	Hardness (mg/l)	Chloride (mg/l)	Sulfate (mg/l)
11/12/2018	304	24	42
12/3/2018	212	22	27
2/19/2019	259	24	35
3/4/2019	295	26	38
4/2/2019	184	25	27
5/20/2019	205	14	25
6/3/2019	190	13	24
7/8/2019	261	18	30
8/5/2019	309	24	43
9/2/2019	294	27	45
10/15/2019	343	21	41
11/4/2019	170	14	26
12/2/2019	224	22	26
1/6/2020	207	18	31
2/10/2020	275	24	37
3/2/2020	210	29	26
5/18/2020	237	27	27
6/8/2020	271	18	29
7/13/2020	313	24	42
8/17/2020	279	28	55
9/14/2020	289	27	53
10/12/2020	312	34	50
11/17/2020	335	34	64
12/1/2020	317	43	56
1/11/2021	341	47	76
3/2/2021	226	67	58
4/19/2021	312	31	67
5/3/2021	298	35	64
6/14/2021	297	33	62
7/5/2021	268	22	44
8/18/2021	278	26	41
9/13/2021	321	37	64
10/4/2021	182	18	33
11/2/2021	207	16	28
12/14/2021	199	19	27
3/28/2022	201	18	37
4/19/2022	274	22	30
5/17/2022	254	22	38
6/28/2022	314	24	36
7/19/2022	280	23	34
8/17/2022	268	29	60
9/26/2022	291	30	54
10/12/2022	310	30	45
11/30/2022	276	36	54
12/20/2022	302	40	47
1/30/2023	286	39	19
2/28/2023	129	12	34
3/28/2023	236	25	39
4/25/2023	294	24	42
5/24/2023	299	24	49
6/20/2023	310	25	60
7/20/2023	327	30	59
8/30/2023	294	26	87
9/27/2023	290	29	52
10/24/2023	301	29	
50th %	**280**	**25**	**42**

ATTACHMENT 4
Calculation of Preliminary Effluent Limitations

Discharger Name:	Steel Dynamics, Inc. - Butler (Outfall 002)
Receiving Stream:	Sol Shank Ditch

2/9/2024
4:53 PM

			Mixing Zone
Discharge Flow	=	1.1 mgd	
Q1,10 receiving stream (Outfall)	=	0.39 mgd	
Q7,10 receiving stream (Outfall)	=	0.39 mgd	25%
Q7,10 receiving stream (Industrial Water Supply)	=	mgd	25%
Q30,10 receiving stream (Outfall)	=	mgd	25%
Harmonic Mean Flow (Outfall)	=	mgd	25%
Harmonic Mean Flow (Drinking Water Intake)	=	mgd	25%
Q90,10 receiving stream	=	mgd	25%
Dilution Factor (for acute mixing zone)	=		
Hardness (50th percentile)	=	280 mg/l	
Chloride (50th percentile)	=	388 mg/l	
Sulfate (50th percentile)	=	161 mg/l	
Stream pH (50th percentile)	=	s.u.	
Summer Stream Temperature (75th percentile)	=	C	
Summer Stream pH (75th percentile)	=	s.u.	
Winter Stream Temperature (75th percentile)	=	C	
Winter Stream pH (75th percentile)	=	s.u.	

Discharge-Induced Mixing (DIM)	No
Drinking Water Intake Downstream	No
Industrial Water Supply Downstream	No

Metals Translators
(dissolved to total recoverable)

	Acute	Chronic
Arsenic	1.000	1.000
Cadmium	0.901	0.866
Chromium III	0.316	0.860
Copper	0.960	0.960
Lead	0.641	0.641
Mercury	0.85	0.85
Nickel	0.998	0.997
Selenium		1.000
Silver	0.85	1.000
Zinc	0.978	0.986

									Indiana Water Quality Criteria for the Great Lakes System (ug/l) [2]							Preliminary Effluent Limitations [3] (calculated in accordance with 327 IAC 5-2-11.4 and 11.6)					
									A	B	C	D	E	F	G						
Source of Criteria [1]							Background	Remove Mixing Zone?												Criteria	
A	B	C	D	E	F	G	(ug/l)	(Yes or Blank)	Add.	Samples/ Month	CV	CAS Number	Parameters	Aquatic Life Criteria Acute (CMC)	Aquatic Life Criteria Chronic (CCC)	Human Health Noncancer Criteria Drinking (HNC-D)	Human Health Noncancer Criteria Nondrinking (HNC-N)	Human Health Cancer Criteria Drinking (HCC-D)	Human Health Cancer Criteria Nondrinking (HCC-N)	Wildlife Criteria (WC)	Concentration (ug/l) Average	Concentration (ug/l) Maximum	Mass (lbs/day) Average	Mass (lbs/day) Maximum	Type	Basis
1	1						0.76			2	0.6	7439921	Lead[4][5][9]	194.09	7.56						12	21	0.11	0.19	Tier I	CCC
1	1	3	3				8.5			2	0.6	7440666	Zinc[5][9]	280.37	282.66	9000	250000				220	390	2	3.6	Tier I	CMC
1	1	1					25000			2	0.6	1688706	Chloride[9][10]	628429	388390	250000					400000	690000	3700	6300	Tier I	CCC
5	5	1					41000			2	0.6	14808798	Sulfate[9][10]	1464856	1464856	250000					1100000	2000000	10000	18000	EASV[8]	CMC
													Whole Effluent Toxicity (WET)													
1							0						Acute (TUa) without Mixing Zone	1.0								1.0				
	1						0						Chronic (TUc)		1.0						1.1					

0 Number of Carcinogenic pollutants present in the effluent

[1] Source of Criteria
1) Indiana numeric water quality criterion; 327 IAC 2-1.5-8(b)(3), Table 8-1 and Table 8-1a; 327 IAC 2-1.5-8(b)(5); 327 IAC 2-1.5-8(b)(6), Table 8-3; 327 IAC 2-1.5-8(b)(7), Table 8-4; 327 IAC 2-1.5-8(c)(5); and 327 IAC 2-1.5-8(f).
2) Additional Criteria for Lake Michigan, 327 IAC 2-1.5-8(j), Table 8-9. These criteria are not aquatic life criteria, however, since they are treated as 4-day average criteria, they are included in the chronic aquatic criteria column.
3) Tier I criterion calculated using the methodology in 327 IAC 2-1.5-11, 327 IAC 2-1.5-14, and 327 IAC 2-1.5-15.
4) Tier II value calculated using the methodology in 327 IAC 2-1.5-12, 327 IAC 2-1.5-14, and 327 IAC 2-1.5-15.
5) Estimated ambient screening value (EASV) calculated in accordance with 327 IAC 5-2-11.5(b)(3)(A)(i).

[2] Except as noted, aquatic life criteria, values and screening values for all metals are in the form of total recoverable metal. Aquatic life criteria for cyanide are in the form of free cyanide.
Human health criteria, values and screening values and public water supply screening values for all metals are in the form of total recoverable metal. Human health criteria for cyanide are in the form of total cyanide.

[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] The above-noted substances are probable or known human carcinogens. If an effluent contains more than one of these substances, the additivity provisions contained in 327 IAC 5-2-11.4(a)(4)(A) shall be applied. This spreadsheet automatically applies these additivity provisions by reducing each human health wasteload allocation for a carcinogen by an equal amount. This allocation between carcinogens can be altered on a case-specific basis.

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

[6] The above-noted substances are bioaccumulative chemicals of concern (BCCs). Dilution is not allowed for new discharges of BCCs to streams and for any discharges of BCCs to the open waters of Lake Michigan. Dilution is not allowed for existing discharges of BCCs to streams after January 1, 2004 unless the discharge meets an exception. To not allow for dilution for BCCs, place a "Y" in the "BCC" column.

[7] The above-noted substance is a chlorinated dibenzo-p-dioxin. If an effluent contains more than one chlorinated dibenzo-p-dioxin or chlorinated dibenzofuran, the additivity provisions contained in 327 IAC 5-2-11.4(a)(4)(C) shall be applied.

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

[9] The above noted substances have a criterion that is a function of an ambient downstream water quality characteristic.

[10] The ambient downstream water quality characteristic must be entered for both chloride and sulfate and it cannot exceed the applicable chronic aquatic life 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 waterbody.

Last revised: 25 April 2023

ATTACHMENT 5
Effluent Data for Steel Dynamics, Inc. - Butler (IN0059021) Outfall 002

	Zinc (mg/l)		Lead (mg/l)			Sulfate (mg/l)	
Date	Daily	Monthly Average	Daily	Adjusted Daily	Monthly Average	Daily	Monthly Average
8/5/2020	0.127		0.00127	0.00127		100	
9/1/2020	0.052		0.00051	0.00051		440	
9/8/2020	0.057		<0.002	0.002		430	
9/21/2020	0.042		0.00044	0.00044		340	
9/23/2020	0.059		0.00053	0.00053		360	
9/25/2020	0.069	0.0558	0.00102	0.00102	0.00090	490	412
10/5/2020	0.175		0.00237	0.00237		550	
10/13/2020	0.101	0.138	0.00149	0.00149	0.0019	540	545
11/10/2020	0.099		0.00097	0.00097		190	
11/24/2020	0.080	0.0893	<0.002	0.002	0.0015	120	155
12/1/2020	0.055		0.00081	0.00081		95	
12/16/2020	0.468	0.262	0.00091	0.00091	0.00086	350	223
1/14/2021	0.057		<0.0002	0.0002		190	
1/26/2021	0.313	0.185	0.00113	0.00113	0.00067	550	370
2/3/2021	0.166		0.0007	0.0007		670	
2/25/2021	0.171	0.169	0.00127	0.00127	0.00099	170	420
3/3/2021	0.316		0.00149	0.00149		82	
3/11/2021	0.481		0.00275	0.00275		160	
3/22/2021	0.177		0.00104	0.00104		190	
3/24/2021	0.242		0.00083	0.00083		230	
3/26/2021	0.395	0.322	0.00443	0.00443	0.0021	150	162
4/1/2021	0.090		0.00065	0.00065		79	
4/6/2021	0.082	0.086	0.00038	0.00038	0.00052	97	88.0
5/6/2021	0.062		0.00033	0.00033		130	
5/11/2021	0.365	0.213	0.0018	0.0018	0.0011	46	88.0
6/1/2021	0.580		0.00055	0.00055		220	
6/22/2021	0.275	0.428	0.00098	0.00098	0.00077	-	
7/6/2021	0.2		0.00097	0.00097		75	
7/13/2021	0.244	0.222	0.00173	0.00173	0.0014	89	82.0
8/10/2021	0.52		0.00128	0.00128		180	
8/16/2021	0.496	0.508	0.00084	0.00084	0.0011	53	117
9/7/2021	0.556		0.00096	0.00096		110	
9/21/2021	0.351	0.454	0.00078	0.00078	0.00087	440	275
10/5/2021	0.17		0.00153	0.00153		60	
10/25/2021	0.602	0.386	0.00592	0.00592	0.0037	260	160
11/1/2021	0.191		0.00143	0.00143		140	
11/8/2021	0.0147		<0.0002	0.0002		38	
11/10/2021	0.0232		0.00028	0.00028		49	
11/12/2021	0.0551	0.0710	0.00054	0.00054	0.00061	53	70
12/6/2021	0.326		0.00253	0.00253		130	
12/15/2021	0.0962	0.211	0.00159	0.00159	0.0021	58	94
1/4/2022	0.0377		0.00058	0.00058		120	
1/24/2022	0.0577	0.0477	0.00093	0.00093	0.00076	390	255
2/7/2022	0.0118		<0.0002	0.0002		240	
2/14/2022	0.138	0.0749	0.0011	0.0011	0.00065	90	165
3/2/2022	0.0991		0.0016	0.0016		392	
3/21/2022	0.4967		0.005	0.005		330	
3/23/2022	0.224		0.0029	0.0029		220	
3/25/2022	0.11	0.232	0.0018	0.0018	0.0028	80	256
4/5/2022	0.127		0.0016	0.0016		250	
4/11/2022	0.0693	0.0982	0.0005	0.0005	0.0011	150	200
5/23/2022	0.0999		0.0012	0.0012		140	
5/25/2022	0.068	0.0840	0.0007	0.0007	0.00095	140	140
6/7/2022	0.105		0.0022	0.0022		70	
6/27/2022	0.0842	0.0946	0.0017	0.0017	0.0020	260	165
7/5/2022	0.1668		0.0041	0.0041		150	
7/25/2022	0.0237	0.0953	0.0011	0.0011	0.0026	40	95.0
8/15/2022	0.0246		0.0005	0.0005		50	

	Zinc (mg/l)			Lead (mg/l)			Sulfate (mg/l)		
Date		Daily	Monthly Average	Daily	Adjusted Daily	Monthly Average		Daily	Monthly Average
8/22/2022		0.0213	0.0230	0.0004	0.0004	0.00045		100	75.0
9/12/2022		0.019		0.0002	0.0002			170	
9/14/2022		0.0258		0.0003	0.0003			140	
9/16/2022		0.0456	0.0301	0.0006	0.0006	0.00037		300	203
10/18/2022		0.0977		0.0008	0.0008			80	
10/26/2022		0.0798	0.0888	0.001	0.001	0.00090		60	70.0
11/17/2022		0.0745		0.0011	0.0011			550	
11/28/2022		0.0349	0.0547	0.0004	0.0004	0.00075		170	360
12/9/2022		0.0342		0.0005	0.0005			450	
12/22/2022		0.0173	0.0258	0.0002	0.0002	0.00035		340	395
1/10/2023		0.0161		0.0002	0.0002			130	
1/25/2023		0.0525	0.0343	0.0008	0.0008	0.00050		170	150
2/9/2023		0.114		0.0015	0.0015			130	
2/22/2023		0.179	0.147	0.0029	0.0029	0.0022		220	175
3/3/2023		0.0329		0.0007	0.0007			44	
3/23/2023		0.0222	0.0276	0.00048	0.00048	0.00059		161	103
4/21/2023		0.0272		0.00039	0.00039			155	
4/28/2023		0.044	0.0356	0.00164	0.00164	0.0010		179	167
5/22/2023		0.0692		0.00191	0.00191			181	
6/14/2023		0.0376		0.00064	0.00064			222	
6/26/2023		0.0897	0.0637	0.00184	0.00184	0.0012		154	188
7/12/2023		0.0296		0.00058	0.00058			164	
7/20/2023		0.0339	0.0318	0.00069	0.00069	0.00064		239	202
8/17/2023		0.0537		0.00125	0.00125			299	
8/30/2023		0.0143	0.0340	<0.00020	0.0002	0.00073		141	220
Outlier Analysis	**mean**	**0.147**		**mean**	**0.0012**		**mean**	**204**	
	std	**0.154**		**std**	**0.0011**		**std**	**145**	
	mean + 3std	**0.608**		**mean + 3std**	**0.0044**		**mean + 3std**	**641**	
Reasonable Potential Analysis	**n**	**83**	**35**	**n**	**83**	**35**	**n**	**82**	**34**
	CV	**1.0**	**0.9**	**CV**	**0.9**	**0.7**	**CV**	**0.7**	**0.6**
	max	**0.602**	**0.508**	**max**	**0.0059**	**0.0037**	**max**	**670**	**545**
							50th %	**161**	

ATTACHMENT 6

Reasonable Potential Statistical Procedure

2/9/2024
4:57 PM

(calculated in accordance with 327 IAC 5-2-11.5)		Monthly Average Determination							Daily Maximum Determination						
Parameters	WQBELs Required*	Monthly Average (ug/l)	Number of Monthly Averages	CV	MF	PEQ (ug/l)	PEL (ug/l)	PEQ > PEL?	Daily Sample (ug/l)	Number of Daily Samples	CV	MF	PEQ (ug/l)	PEL (ug/l)	PEQ > PEL?
Lead	No	3.7	35	0.7	1.2	4.4	12	No	5.9	83	0.9	0.9	5.3	21	No
Zinc	Yes I	508	35	0.9	1.2	610	220	Yes	602	83	1.0	0.9	540	390	Yes
Sulfate	No	545000	34	0.6	1.2	654000	1100000	No	670000	82	0.7	0.9	603000	2000000	No

*WQBELs Required:

[1] "Yes I" means that a projected effluent quality (PEQ) exceeded a preliminary effluent limitation (PEL) based on a Tier I criterion and WQBELs must be included in the NPDES permit.

[2] "Yes II" means that a PEQ exceeded a PEL based on a Tier II value and WQBELs must be included in the NPDES permit.

[3] "No" means that a PEQ did not exceed a PEL and WQBELs do not have to be included in the NPDES permit based on the reasonable potential statistical procedure.

[4] "Data" means that a PEQ exceeded a PEL based on an "estimated ambient screening value" and the permittee must generate sufficient data to develop a Tier I criterion or Tier II value for the parameter.

ATTACHMENT 7

Steel Dynamics, Inc. - Butler (IN0059021) Outfall 002

Whole Effluent Toxicity Data [1]

Species: ***Ceriodaphnia dubia***

	Acute WET Data			Chronic WET Data				
Date	**LC50 (%)**	**LC50 (TU_a)**	**Adjusted LC50 (TU_a)**	**NOEC (%)**	**NOEC (TUc)**	**IC25 (%)**	**IC25 (TU_c)**	**Adjusted IC25 (TU_c)**
Jun-19	>100	<1.0	1.0	100	1.0	>100	<1.0	1.0
Jul-19	>100	<1.0	1.0	100	1.0	92.4	1.1	1.1
Aug-19	>100	<1.0	1.0	50	2.0	45.7	2.2	2.2
Sep-19	>100	<1.0	1.0	100	1.0	>100	<1.0	1.0
n			**4**		**4**			**4**
CV			**--**		**--**			**--**
Maximum			**1.0**		**2.0**			**2.2**

Species: Fathead Minnow [2][3]

	Acute WET Data			Chronic WET Data				
Date	**LC50 (%)**	**LC50 (TU_a)**	**Adjusted LC50 (TU_a)**	**NOEC (%)**	**NOEC (TUc)**	**IC25 (%)**	**IC25 (TU_c)**	**Adjusted IC25 (TU_c)**
Jul-19	>100	<1.0	1.0	100	1.0	>100	<1.0	1.0
Aug-19 [4]	51.1	2.0	2.0	<13	7.7	4.4	22.7	22.7
Sep-19	>100	1.0	1.0	100	1.0	>100	1.0	1.0
Apr-20	>100	1.0	1.0	100	1.0	>100	1.0	1.0
Sep-20	>100	1.0	1.0	100	1.0	>100	1.0	1.0
Mar-21	>100	1.0	1.0	100	1.0	>100	1.0	1.0
Nov-21	>100	1.0	1.0	100	1.0	>100	1.0	1.0
Apr-22	>100	1.0	1.0	100	1.0	>100	1.0	1.0
Sep-22	>100	1.0	1.0	100	1.0	>100	1.0	1.0
Mar-23	>100	1.0	1.0	100	1.0	>100	1.0	1.0
Sep-23	>100	1.0	1.0	100	1.0	>100	1.0	1.0
n			**11**		**11**			**11**
CV			**0.3**		**1.3**			**2.2**
Maximum			**2.0**		**7.7**			**22.7**

[1] The renewal permit effective April 1, 2019 required chronic toxicity testing for three consecutive months for *Ceriodaphnia dubia* and Fathead Minnow. Thereafter, chronic toxicity testing was required once every six (6) months for the most sensitive species.

[2] The June 2019 Fathead Minnow toxicity test was deemed invalid as a result of a poor control response. The control had 75 percent survival on day 6; test acceptable criteria requires a minimum of 80 percent survival in the control.

[3] The data for this species were used in the reasonable potential analysis.

[4] The NOEC was below the lowest test dilution, so the TUc was calculated using the lowest test dilution.

2/09/2024