Application No.: OH0122271
Ohio EPA Permit No.: 2ID00014*GD

National Pollutant Discharge Elimination System (NPDES) Permit Program

PUBLIC NOTICE

NPDES Permit to Discharge to State Waters

Ohio Environmental Protection Agency
Permits Section
50 West Town St., Suite 700
P. O. Box 1049
Columbus, Ohio 43216-1049
(614) 644-2001

Public Notice No.:	193012
Date of Issue of Public Notice:	Dec-12-2023
Name and Address of Applicant:	Worthington Industries, Inc., 6303 County Road 10, Delta, OH, 43515
Name and Address of Facility Where Discharge Occurs:	Worthington Industries, 6303 County Road 10, Delta, OH, 43515, Fulton County
Outfall Flow and Location List:	001 0 GPD 41N 33' 48'' 84W 03' 25''
Receiving Stream:	Maumee River
Nature of Business:	Steel processing including hydrochloric acid pickling, hot-dip zinc galvanizing and slitting of steel coils
Key parameters to be limited in the permit are as follows:	Dissolved Oxygen, Total Oil and Grease, Total Phosphorus, Total Recoverable Zinc, Total Recoverable Lead, Total Residual Chlorine, Total (Low Level) Mercury, Maximum pH, Minimum pH, Acute Toxicity, Pimephales promelas, Acute Toxicity, Ceriodaphnia dubia

On the basis of preliminary staff review and application of standards and regulations, the director of the Ohio Environmental Protection Agency will issue a permit for the discharge subject to certain effluent conditions and special conditions. The draft permit will be issued as a final action unless the director revises the draft after consideration of the record of a public meeting or written comments, or upon disapproval by the administrator of the U.S. Environmental Protection Agency. Any person may submit written comments on the draft permit and administrative record and may request a public hearing. A request for public hearing shall be in writing and shall state the nature of the issues to be raised. In appropriate cases, including cases where there is significant public interest, the director may hold a public hearing on a draft permit or permits prior to final issuance of the permit or permits. Following final action by the director, any aggrieved party has the right to appeal to the Environmental Review Appeals Commission.

Interested persons are invited to submit written comments upon the discharge permit. Comments should be submitted in person or by mail no later than 30 days after the date of this public notice. Comments should be delivered or mailed to both of the following locations: 1) Ohio Environmental Protection Agency, Lazarus Government Center, Division of Surface Water, Permits Processing Unit, 50 West Town St., Suite 700, P.O. Box 1049, Columbus, Ohio 43216-1049 and 2) Ohio Environmental Protection Agency, Northwest District Office 347 North Dunbridge Road, Bowling Green, Ohio 43402.

The Ohio EPA permit number and public notice numbers should appear next to the above address on the envelope and on each page of any submitted comments. All comments received no later than 30 days after the date of this public notice will be considered.

Proposed Water Quality Based Effluent Limitations: This draft permit contains water quality based effluent limitation(s) (WQBELs). In accordance with Ohio Revised Code Section 6111.03(J)(3), the Director establishes WQBELs after considering, to the extent consistent with the Federal Water Pollution Control Act, evidence relating to the technical feasibility and economic reasonableness of removing the polluting properties from those wastes and to evidence relating to conditions calculated to result from that action and their relation to benefits to the people of the state and to accomplishment of the purposes of this chapter. This determination was made based on data and information available at the time the permit was drafted, which included the contents of the of the timely submitted National Pollutant Discharge Elimination System (NDPES) permit renewal application, along with any and all pertinent information available to the Director.

This public notice hereby allows the permittee to provide to the Director for consideration during this public comment period, additional site-specific pertinent and factual information with respect to the technical feasibility and economic reasonableness for achieving compliance with WQBEL(s). This information shall be submitted to the addresses listed above.

Should the applicant need additional time to review, obtain or develop site-specific pertinent and factual information with respect to the technical feasibility and economic reasonableness of achieving compliance with WQBEL(s), written notification for any additional time shall be sent no later than 30 days after the date of this public notice to the Director at the addresses listed above.

Should the applicant determine that compliance with a WQBEL is technically and/or economically unattainable, the permittee may submit an application for a variance to the applicable WQBEL in accordance with the terms and conditions set forth in Ohio Administrative Code (OAC) Rule 3745-33-07(D) no later than 30 days after the date of this public notice to the addresses listed above.

Alternately, the applicant may propose the development of site-specific water quality standard(s) pursuant to OAC Rule 3745-1-35. The permittee shall submit written notification to the Director regarding their intent to develop site-specific water quality standards for the pollutant at issue to the addresses listed above no later than 30 days after the date of this public notice.

The application, fact sheets, permit including effluent limitations, special conditions, comments received, and other documents are available for inspection and may be copied at a cost of 5 cents per page at the Ohio Environmental Protection Agency at the address shown on page one of this public notice any time between the hours of 8 a.m. and 4:30 p.m., Monday through Friday. Copies of the public notice are available at no charge at the same address. Individual NPDES draft permits that are in public notice are now available on DSW's web site: http://www.epa.ohio.gov/dsw/permits/individuals/draftperm.aspx

Mailing lists are maintained for persons or groups who desire to receive public notice for all applications in the state or for certain geographical areas. Persons or groups may also request copies of fact sheets, applications, or other documents pertaining to specific applications. Persons or groups may have their names put on such a list by making a written request to the agency at the address shown above.

Ohio EPA No. 2ID00014*GD
Application No. OH0122271

DRAFT COPY
SUBJECT TO REVISION
OHIO EPA

Action Date:
Effective Date:
Expiration Date: 5 Years

Ohio Environmental Protection Agency
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., hereinafter referred to as the "Act"), and the Ohio Water Pollution Control Act (Ohio Revised Code Section 6111),

Worthington Industries Inc.

is authorized by the Ohio Environmental Protection Agency, hereinafter referred to as "Ohio EPA," to discharge from the Worthington Industries wastewater treatment works located at 6303 County Road 10, Delta, Ohio, Fulton County and discharging to Maumee River in accordance with the conditions specified in Parts I, II, and III of this permit.

This permit is conditioned upon payment of applicable fees as required by Section 3745.11 of the Ohio Revised Code.

This permit and the authorization to discharge shall expire at midnight on the expiration date shown above. In order to receive authorization to discharge beyond the above date of expiration, the permittee shall submit such information and forms as are required by the Ohio EPA no later than 180 days prior to the above date of expiration.

_____
Anne M. Vogel
Director

Total Pages: 23

PART I, A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from outfall 2ID00014001. See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

Table - Final Outfall - 001 - Final

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
Parameter	Concentration Specified Units				Loading* kg/day			Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
00011 - Water Temperature - F	-	-	-	-	-	-	-	1/Day	Maximum Indicating Thermometer	All
00300 - Dissolved Oxygen - mg/l	-	4.0	-	-	-	-	-	1/Week	Grab	All
00530 - Total Suspended Solids - mg/l	-	-	-	-	-	-	-	1/Week	24hr Composite	All
00550 - Oil and Grease, Total - mg/l	10.0	-	-	-	-	-	-	1/Week	Grab	All
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	-	-	-	-	-	1/Week	24hr Composite	All
00665 - Phosphorus, Total (P) - mg/l	1.0	-	-	-	0.40	-	-	1/Week	24hr Composite	All
00980 - Iron, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Month	24hr Composite	All
01074 - Nickel, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/6 Months	24hr Composite	Semi-annual
01094 - Zinc, Total Recoverable - ug/l	450	-	-	-	0.22	-	-	1/Week	24hr Composite	All
01114 - Lead, Total Recoverable - ug/l	640	-	-	488	0.31	-	0.24	1/Week	24hr Composite	All
01118 - Chromium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/6 Months	24hr Composite	Semi-annual
01119 - Copper, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Week	24hr Composite	All
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	Continuous	All
50060 - Chlorine, Total Residual - mg/l	0.038	-	-	-	-	-	-	1/Week	Grab	All
50092 - Mercury, Total (Low Level) - ng/l	-	-	-	-	-	-	-	2/Year	Grab	Semi-annual

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
Parameter	Concentration Specified Units				Loading* kg/day			Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
61425 - Acute Toxicity, Ceriodaphnia dubia - TUa	1.0	-	-	-	-	-	-	1/Quarter	24hr Composite	Quarterly
61427 - Acute Toxicity, Pimephales promelas - TUa	1.0	-	-	-	-	-	-	1/Quarter	24hr Composite	Quarterly
61941 - pH, Maximum - S.U.	9.0	-	-	-	-	-	-	1/Week	Grab	All
61942 - pH, Minimum - S.U.	-	6.5	-	-	-	-	-	1/Week	Grab	All
70300 - Residue, Total Filterable - mg/l	-	-	-	-	-	-	-	1/Week	24hr Composite	All

Notes for Station Number 2ID00014001:

* Effluent loadings for phosphorus based on average design flow of 104,840 GPD.

a. Effluent loadings for lead and zinc based on design flow of 130,000 GPD.

b. Sampling shall be performed when discharging. If NO DISCHARGE OCCURS DURING THE ENTIRE MONTH, report "AL" in the first column of the first day of the month on the 4500 Form (Monthly Operating Report). A signature is still required.

c. Limits Below Quantification - See Item G.

d. Mercury, Tracking - See Item H

e. Biomonitoring - See Item L.

PART I, A. INTERNAL MONITORING REQUIREMENTS

2. During the period beginning on the effective date of this permit and lasting until the expiration date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from outfall 2ID00014601. See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

Table - Internal Monitoring Station - 601 - Final

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
Parameter	Concentration Specified Units				Loading* kg/day			Measuring Frequency	Sampling Type	Monitoring Months
	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly			
00530 - Total Suspended Solids - mg/l	-	-	-	-	134	-	27.4	1/Week	24hr Composite	All
00550 - Oil and Grease, Total - mg/l	-	-	-	-	41.0	-	13.6	1/Week	Grab	All
01094 - Zinc, Total Recoverable - ug/l	-	-	-	-	1.15	-	0.38	1/Week	24hr Composite	All
01114 - Lead, Total Recoverable - ug/l	-	-	-	-	0.86	-	0.29	1/Week	24hr Composite	All
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Week	Continuous	All
61941 - pH, Maximum - S.U.	9.0	-	-	-	-	-	-	1/Week	Grab	All
61942 - pH, Minimum - S.U.	-	6.0	-	-	-	-	-	1/Week	Grab	All

Notes for station 2ID00014601:

* Effluent loadings based on average production rates.

a. Hydrochloric Acid Pickling: 3,600 tons/day

b. Hot Dip Galvanizing: 2,400 tons/day

PART I, C. - SCHEDULE OF COMPLIANCE

Milestone Summary Report

Section	Report	Event Code	Due Date
Industrial WET Limits	Submit Study Plan	34099	6 months after the permit effective date
Industrial WET Limits	Toxics Reduction Evaluation Plan	2199	9 months after the permit effective date
Temperature Evaluation Plan	Submit Study Plan	34099	12 months after the permit effective date
Industrial WET Limits	Submit Corrective Action Plan	91299	18 months after the permit effective date
Industrial WET Limits	Begin Construction	3099	24 months after the permit effective date
Industrial WET Limits	Final Compliance w/ Eff Limits	5699	36 months after the permit effective date

A. Industrial WET Limits and Toxicity Reduction Plans (TRE)

1. As soon as possible, the permittee shall initiate a Toxicity Reduction Evaluation (TRE) in order to meet the Whole Effluent Toxicity (WET) limits of 1.0 TUa at outfall 2ID00014001. The permittee shall attain compliance as expeditiously as practicable, but not later than the dates developed in accordance with the following schedule:

a. Within 6 months after the permit effective date, the permittee shall submit a general plan for attaining compliance with the final WET limitations of 1.0 TUa at outfall 2ID00014001. The strategy shall address the permittee's general approach for the TRE to meet the WET limits. (Event Code 34099)

b. Within 9 months after the permit effective date, the permittee shall implement the general plan in order to attain compliance with the 1.0 TUa WET limits at outfall 2ID00014001. (Event Code 02199)

c. Starting with a report annually to be submitted by March 1st after the effective date of this permit and lasting until compliance with the 1.0 TUa WET limits is achieved, the permittee shall submit annual reports detailing the progress of the TRE. These annual progress reports shall include any biomonitoring results or other relevant information obtained during the TRE.

d. Within 18 months after the permit effective date, the permittee shall submit a specific plan detailing any necessary construction, process changes, pretreatment program changes or other related items that are sufficient to attain compliance with the final WET limits of 1.0 TUa at outfall 2ID00014001. (Event Code 91299) The plan shall include, at a minimum:

i. Identification of the source(s) of toxicity with supporting data.
ii. Technical justification of any necessary changes in treatment and/or operation required to eliminate toxicity, if any.
iii. A schedule for initiation and completion of construction, if necessary. A complete Permit-to-Install (PTI) application and approvable detail plans must be submitted to the Ohio EPA, Northwest District Office at the address provided below if construction is needed.

e. Within 24 months after the permit effective date, the permittee shall implement the specific plan and initiate construction, if necessary. (Event Code 03099)

f. Within 36 months after the permit effective date, the permittee shall attain compliance with the final WET limits of 1.0 TUa at outfall 2ID00014001. (Event Code 05699)

g. Reports and plans required by this schedule of compliance for toxicity reduction shall be submitted through the Ohio EPA eBusiness Center/STREAMS, Division of Surface Water NPDES Permit Applications service. The Ohio EPA eBusiness Center can be found in the link: https://ebiz.epa.ohio.gov/login.html

h. The permittee shall submit written notification to the Ohio EPA, Northwest District Office, Division of Surface Water, after completion of paragraphs b, e and f above. Notification must be submitted within fourteen (14) days after compliance with each requirement.

B. Temperature Reduction Evaluation Plan

1. Within 12 months after the permit effective date, the permittee shall complete and submit a study plan to evaluate the observed increase in temperature and measures that can be taken to reduce the temperature of the discharge. Submit the plan to Ohio EPA, Northwest District Office, Division of Surface Water. (Event Code 34099)

PART II, OTHER REQUIREMENTS

A. Description of the location of the required sampling stations are as follows:

Sampling Station	Description of Location
2ID00014001	Final effluent at manhole southeast of facility before discharging to County pump station (Lat: 41N 33' 48" ; Long: 84W 03' 25")
2ID00014601	Internal station monitored at wastewater treatment plant prior to mixing with any other wastewater

B. This permit shall be modified, or alternatively, revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act, if the effluent standard or limitation so issued or approved.

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Act then applicable.

C. All parameters, except flow, need not be monitored on days when the plant is not normally staffed (Saturdays, Sundays, and Holidays). On those days, report "AN" on the monthly report form.

D. Composite samples shall be comprised of at least three grab samples proportionate in volume to the sewage flow rate at the time of sampling and collected at intervals of at least 30 minutes, but not more than 2 hours, during the period that the plant is staffed on each day for sampling. Such samples shall be collected at such times and locations, and in such fashion, as to be representative of the facility's overall performance.

E. Grab samples shall be collected at such times and locations, and in such fashion, as to be representative of the facility's performance.

F. Treatment Additives

Written permission must be obtained from the director of the Ohio EPA prior to the use of any treatment additives discharged to waters of the state, except for those exempt in rule. If additives are being used that have not previously been approved, an approval must be obtained for continued use. Discharges of these additives must meet Ohio Water Quality Standards and shall not be harmful or inimical to aquatic life. Request for approvals shall be filed in accordance with OAC 3745-33-03(G) and should be filed at least forty-five days prior to use or immediately if the additive is currently being used. Application forms are available for download on the DSW website:

https://epa.ohio.gov/static/Portals/35/permits/Additive-Form.docx

G. Limits Below Quantification

The parameters below have had effluent limitations established that are below the Ohio EPA Quantification Level (OEPA QL) for the approved analytical procedure promulgated at 40 CFR 136. OEPA QLs may be expressed as Practical Quantification Levels (PQL) or Minimum Levels (ML). Compliance with an effluent limit that is below the OEPA QL is determined in accordance with

ORC Section 6111.13 and OAC Rule 3745-33-07(C). For maximum effluent limits, any value reported below the OEPA QL shall be considered in compliance with the effluent limit. For average effluent limits, compliance shall be determined by taking the arithmetic mean of values reported for a specified averaging period, using zero (0) for any value reported at a concentration less than the OEPA QL, and comparing that mean to the appropriate average effluent limit. An arithmetic mean that is less than or equal to the average effluent limit shall be considered in compliance with that limit.

The permittee must utilize the lowest available detection method currently approved under 40 CFR Part 136 for monitoring these parameters.

REPORTING:

All analytical results, even those below the OEPA QL (listed below), shall be reported. Analytical results are to be reported as follows:

1. Results above the QL: Report the analytical result for the parameter of concern.

2. Results above the MDL, but below the QL: Report the analytical result, even though it is below the QL.

3. Results below the MDL: Analytical results below the method detection limit shall be reported as "below detection" using the reporting code "AA".

The following table of quantification levels will be used to determine compliance with NPDES permit limits:

Parameter	PQL	ML
Chlorine, tot. res.	0.050 mg/l	--

This permit may be modified, or, alternatively, revoked and reissued, to include more stringent effluent limits or conditions if information generated as a result of the conditions of this permit indicate the presence of these pollutants in the discharge at levels above the water quality based effluent limit (WQBEL).

H. Tracking of Group 4 Parameters

A preliminary effluent limit (PEL) has been provided below for parameters with a projected effluent quality (PEQ) equivalent to or exceeding seventy-five percent of the PEL. In accordance with rule 3745-33-07(A)(2) of the Ohio Administrative Code, the permittee must report in writing, any effluent concentration sample result greater than the PEL values listed below to Ohio EPA, Northwest District Office. Written notification must be submitted within 30 days of an effluent concentration sample result that exceeds the PEL and must detail the reasons why the PEL has been exceeded and the expectation of continued levels above the PEL.

Parameter	PEL	PEL (maximum)
Mercury	1.3 ng/L	1700 ng/L

The permittee shall reduce discharge levels to below the PEL if either of the following conditions are met:

1. The maximum detected concentration per month is greater than the maximum PEL for four or more months during any consecutive six month period; or

2. The thirty-day average for any pollutant is greater than the average PEL for two or more months during any consecutive six month period; and

If the permittee cannot reduce discharge levels below the PEL within six months after either of conditions 1 or 2 above are met, the permittee may request to modify the permit to contain a compliance schedule. This request shall contain justification for the additional time necessary to reduce discharge levels.

I. Water quality based permit limitations in this permit may be revised based on updated wasteload allocations or use designation rules. This permit may be modified, or revoked and reissued, to include new water quality based effluent limits or other conditions that are necessary to comply with a revised wasteload allocation, or an approved total maximum daily loads (TMDL) report as required under Section 303 (d) of the Clean Water Act.

J. The permittee has been assigned a wasteload allocation for total phosphorus in the Maumee Watershed Nutrient TMDL, which was based on the permittee's load during the development of the TMDL report and from which no load reductions were sought. Consistent with these and other assumptions of the TMDL, no TMDL based effluent limit is applied in this permit issuance. This permit may be revised to include TMDL based effluent limits for total phosphorus if the TMDL is modified to include a revised implementation approach.

K. Outfall Signage

The permittee shall maintain a permanent marker on the stream bank at each outfall that is regulated under this NPDES permit. This includes final outfalls, bypasses, and combined sewer overflows. The sign shall include, at a minimum, the name of the establishment to which the permit was issued, the Ohio EPA permit number, and the outfall number and a contact telephone number. The information shall be printed in letters not less than two inches in height. The sign shall be a minimum of 2 feet by 2 feet and shall be a minimum of 3 feet above ground level. The sign shall not be obstructed such that persons in boats or persons swimming on the river or someone fishing or walking along the shore cannot read the sign. Vegetation shall be periodically removed to keep the sign visible. If the outfall is normally submerged the sign shall indicate that. If the outfall is a combined sewer outfall, the sign shall indicate that untreated human sewage may be discharged from the outfall during wet weather and that harmful bacteria may be present in the water. When an existing sign is replaced or reset, the new sign shall comply with the requirements of this section.

L. Biomonitoring Program Requirements

1. General Requirements

All toxicity testing conducted as required by this permit shall be done in accordance with Reporting and Testing Guidance for Biomonitoring Required by the Ohio Environmental Protection Agency (hereinafter, the "biomonitoring guidance"), Ohio EPA, 1991 (or current revision). The Standard Operating Procedures (SOP) or verification of SOP submittal, as described in Section 1.B. of the biomonitoring guidance, shall be submitted no later than three months after the effective date of this permit. If the laboratory performing the testing has modified its protocols, a new SOP is required.

2. Testing Requirements

Acute Bioassays

For the life of the permit, the permittee shall conduct quarterly definitive acute toxicity tests using Ceriodaphnia dubia and fathead minnows (Pimephales promelas) on effluent samples from outfall 2ID00014001. These tests shall be conducted as specified in Section 2 of the biomonitoring guidance.

3. Data Review

a. Reporting

Following completion of each quarterly bioassay requirement, the permittee shall report results of the tests in accordance with Sections 3.H.1. and 3.H.2.b. of the biomonitoring guidance. Ohio EPA will evaluate the results in order to judge compliance with the whole effluent toxicity limitations of 1.0 TUa at outfall 2ID00014001. In addition, this permit may be modified to require additional biomonitoring or to require further investigation of toxicity.

b. Definitions

TUa = Acute Toxic Units = 100/lC500 or 100/EC50

M. Storm Water

To comply with industrial storm water regulations, the permittee submitted a form for "No Exposure Certification" which was signed on August 11, 2022. Compliance with the industrial storm water regulations must be re-affirmed every five years. No later than May 31, 2027, the permittee must submit a new form for "No Exposure Certification" or make other provisions to comply with the industrial storm water regulations.

N. The permittee shall use EPA Method 1631 promulgated under 40 CFR 136 to comply with the effluent mercury monitoring requirements of this permit.

PART III - GENERAL CONDITIONS

1. DEFINITIONS

"Daily discharge" means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

"Average weekly" discharge limitation means the highest allowable average of "daily discharges" over a calendar week, calculated as the sum of all "daily discharges" measured during a calendar week divided by the number of "daily discharges" measured during that week. Each of the following 7-day periods is defined as a calendar week: Week 1 is Days 1 - 7 of the month; Week 2 is Days 8 - 14; Week 3 is Days 15 - 21; and Week 4 is Days 22 - 28. If the "daily discharge" on days 29, 30 or 31 exceeds the "average weekly" discharge limitation, Ohio EPA may elect to evaluate the last 7 days of the month as Week 4 instead of Days 22 - 28. Compliance with fecal coliform bacteria or E coli bacteria limitations shall be determined using the geometric mean.

"Average monthly" discharge limitation means the highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during a calendar month divided by the number of "daily discharges" measured during that month. Compliance with fecal coliform bacteria or E coli bacteria limitations shall be determined using the geometric mean.

"85 percent removal" means the arithmetic mean of the values for effluent samples collected in a period of 30 consecutive days shall not exceed 15 percent of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

"Absolute Limitations" Compliance with limitations having descriptions of "shall not be less than," "nor greater than," "shall not exceed," "minimum," or "maximum" shall be determined from any single value for effluent samples and/or measurements collected.

"Net concentration" shall mean the difference between the concentration of a given substance in a sample taken of the discharge and the concentration of the same substances in a sample taken at the intake which supplies water to the given process. For the purpose of this definition, samples that are taken to determine the net concentration shall always be 24-hour composite samples made up of at least six increments taken at regular intervals throughout the plant day.

"Net Load" shall mean the difference between the load of a given substance as calculated from a sample taken of the discharge and the load of the same substance in a sample taken at the intake which supplies water to given process. For purposes of this definition, samples that are taken to determine the net loading shall always be 24-hour composite samples made up of at least six increments taken at regular intervals throughout the plant day.

"MGD" means million gallons per day.

"mg/l" means milligrams per liter.

"ug/l" means micrograms per liter.

"ng/l" means nanograms per liter.

"S.U." means standard pH unit.

"kg/day" means kilograms per day.

"Reporting Code" is a five digit number used by the Ohio EPA in processing reported data. The reporting code does not imply the type of analysis used nor the sampling techniques employed.

"Quarterly (1/Quarter) sampling frequency" means the sampling shall be done in the months of March, June, August, and December, unless specifically identified otherwise in the Effluent Limitations and Monitoring Requirements table.

"Yearly (1/Year) sampling frequency" means the sampling shall be done in the month of September, unless specifically identified otherwise in the effluent limitations and monitoring requirements table.

"Semi-annual (2/Year) sampling frequency" means the sampling shall be done during the months of June and December, unless specifically identified otherwise.

"Winter" shall be considered to be the period from November 1 through April 30.

"Bypass" means the intentional diversion of waste streams from any portion of the treatment facility.

"Summer" shall be considered to be the period from May 1 through October 31.

"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.

"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.

"Sewage sludge" means a solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works as defined in section 6111.01 of the Revised Code. "Sewage sludge" includes, but is not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment processes. "Sewage sludge" does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator, grit and screenings generated during preliminary treatment of domestic sewage in a treatment works, animal manure, residue generated during treatment of animal manure, or domestic septage.

"Sewage sludge weight" means the weight of sewage sludge, in dry U.S. tons, including admixtures such as liming materials or bulking agents. Monitoring frequencies for sewage sludge parameters are based on the reported sludge weight generated in a calendar year (use the most recent calendar year data when the NPDES permit is up for renewal).

"Sewage sludge fee weight" means the weight of sewage sludge, in dry U.S. tons, excluding admixtures such as liming materials or bulking agents. Annual sewage sludge fees, as per section 3745.11(Y) of the Ohio Revised Code, are based on the reported sludge fee weight for the most recent calendar year.

2. GENERAL EFFLUENT LIMITATION

The effluent shall, at all times, be free of substances:

A. In amounts that will settle to form putrescent, or otherwise objectionable, sludge deposits; or that will adversely affect aquatic life or water fowl;

B. Of an oily, greasy, or surface-active nature, and of other floating debris, in amounts that will form noticeable accumulations of scum, foam, or sheen;

C. In amounts that will alter the natural color or odor of the receiving water to such degree as to create a nuisance;

D. In amounts that either singly or in combination with other substances are toxic to human, animal, or aquatic life;

E. In amounts that are conducive to the growth of aquatic weeks or algae to the extent that such growth become inimical to more desirable forms of aquatic life, or create conditions that are unsightly, or constitute a nuisance in any other fashion;

F. In amounts that will impair designated instream or downstream water uses

3. FACILITY OPERATION AND QUALITY CONTROL

All wastewater treatment works shall be operated in a manner consistent with the following:

A. At all times, the permittee shall maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee necessary to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with conditions of the permit.

B. The permittee shall effectively monitor the operation and efficiency of treatment and control facilities and the quantity and quality of the treated discharge.

C. Maintenance of wastewater treatment works that results in degradation of effluent quality shall be scheduled during non-critical water quality periods and shall be carried out in a manner approved by Ohio EPA as specified in the Paragraph in the PART III entitled, "UNAUTHORIZED DISCHARGES".

4. REPORTING

A. Monitoring data required by this permit shall be submitted monthly on Ohio EPA 4500 Discharge Monitoring Report (DMR) forms using the electronic DMR (e-DMR) internet application. e-DMR allows permitted facilities to enter, sign, and submit DMRs on the internet. e-DMR information is found on the following web page:

https://epa.ohio.gov/divisions-and-offices/surface-water/permitting/electronic-business-services

B. DMRs shall be signed by a facility's Responsible Official or a Delegated Responsible Official (i.e. a person delegated by the Responsible Official). The Responsible Official of a facility is defined as:

1. For a corporation: by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (a) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or (b) The manager of one 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 explicit or implicit duty of making 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. In the case of a municipal, state or other public facility, by either the principal executive officer, the ranking elected official or other duly authorized employee.
For e-DMR, the person signing and submitting the DMR will need to obtain an eBusiness Center account and Personal Identification Number (PIN). Additionally, Delegated Responsible Officials must be delegated by the Responsible Official, either on-line using the eBusiness Center's delegation function, or on a paper delegation form provided by Ohio EPA. For more information on the PIN and delegation processes, please view the following web page:

https://epa.ohio.gov/divisions-and-offices/surface-water/guides-manuals/edmr-pin-information-and-application

C. DMRs submitted using e-DMR shall be submitted to Ohio EPA by the 20th day of the month following the month-of-interest.

D. 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 in Section 5. SAMPLING AND ANALYTICAL METHODS, the results of such monitoring shall be included in the calculation and reporting of the values required in the reports specified above.

E. Analyses of pollutants not required by this permit, except as noted in the preceding paragraph, shall not be reported to the Ohio EPA, but records shall be retained as specified in Section 7. RECORDS RETENTION.

5. SAMPLING AND ANALYTICAL METHOD

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored flow. Test procedures for the analysis of pollutants shall conform to regulation 40 CFR 136, "Test Procedures For The Analysis of Pollutants" unless other test procedures have been specified in this permit. The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to ensure accuracy of measurements.

6. RECORDING OF RESULTS

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

A. The exact place and date of sampling; (time of sampling not required on EPA 4500)

B. The person(s) who performed the sampling or measurements;

C. The date the analyses were performed on those samples;

D. The person(s) who performed the analyses;

E. The analytical techniques or methods used; and

F. The results of all analyses and measurements.

7. RECORDS RETENTION

The permittee shall retain all of the following records for the wastewater treatment works for a minimum of three years except those records that pertain to sewage sludge disposal, use, storage, or treatment, which shall be kept for a minimum of five years, including:

A. All sampling and analytical records (including internal sampling data not reported);

B. All original recordings for any continuous monitoring instrumentation;

C. All instrumentation, calibration and maintenance records;

D. All plant operation and maintenance records;

E. All reports required by this permit; and

F. Records of all data used to complete the application for this permit for a period of at least three years, or five years for sewage sludge, from the date of the sample, measurement, report, or application.

These periods will be extended during the course of any unresolved litigation, or when requested by the Regional Administrator or the Ohio EPA. The three year period, or five year period for sewage sludge, for retention of records shall start from the date of sample, measurement, report, or application.

8. AVAILABILITY OF REPORTS

Except for data determined by the Ohio EPA to be entitled to confidential status, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the appropriate district offices of the Ohio EPA. Both the Clean Water Act and Section 6111.05 Ohio Revised Code state that effluent data and receiving water quality data shall not be considered confidential.

9. DUTY TO PROVIDE INFORMATION

The permittee shall furnish to the Director, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking, and reissuing, or terminating the permit, or to determine compliance with this permit. The permittee shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

10. RIGHT OF ENTRY

The permittee shall allow the Director or an authorized representative upon presentation of credentials and other documents as may be required by law to:

A. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit.

B. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit.

C. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit.

D. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location.

11. UNAUTHORIZED DISCHARGES

A. Bypass Not Exceeding Limitations - The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 11.B and 11.C.

B. Notice

1. Anticipated Bypass - If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.

2. Unanticipated Bypass - The permittee shall submit notice of an unanticipated bypass as required in paragraph 12.B (24 hour notice).

C. Prohibition of Bypass

1. Bypass is prohibited, and the Director may take enforcement action against a permittee for bypass, unless:

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 downtime. 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 which occurred during normal periods of equipment downtime or preventive maintenance; and

c. The permittee submitted notices as required under paragraph 11.B.

2. The Director may approve an anticipated bypass, after considering its adverse effects, if the Director determines that it will meet the three conditions listed above in paragraph 11.C.1.

12. NONCOMPLIANCE NOTIFICATION

A. Exceedance of a Daily Maximum Discharge Limit

1. The permittee shall report noncompliance that is the result of any violation of a daily maximum discharge limit for any of the pollutants listed by the Director in the permit by e-mail or telephone within twenty-four (24) hours of discovery.

The permittee may report to the appropriate Ohio EPA district office e-mail account as follows (this method is preferred):

Southeast District Office: sedo24hournpdes@epa.ohio.gov
Southwest District Office: swdo24hournpdes@epa.ohio.gov
Northwest District Office: nwdo24hournpdes@epa.ohio.gov
Northeast District Office: nedo24hournpdes@epa.ohio.gov
Central District Office: cdo24hournpdes@epa.ohio.gov
Central Office: co24hournpdes@epa.ohio.gov

The permittee shall attach a noncompliance report to the e-mail. A noncompliance report form is available on the following web site under the Monitoring and Reporting - Non-Compliance Notification section:

https://epa.ohio.gov/divisions-and-offices/surface-water/permitting/individual-wastewater-discharge-permits

Or, the permittee may report to the appropriate Ohio EPA district office by telephone toll-free between 8:00 AM and 5:00 PM as follows:

Southeast District Office: (800) 686-7330
Southwest District Office: (800) 686-8930
Northwest District Office: (800) 686-6930
Northeast District Office: (800) 686-6330
Central District Office: (800) 686-2330
Central Office: (614) 644-2001

The permittee shall include the following information in the telephone noncompliance report:

a. The name of the permittee, and a contact name and telephone number;

b. The limit(s) that has been exceeded;

c. The extent of the exceedance(s);

d. The cause of the exceedance(s);

e. The period of the exceedance(s) including exact dates and times;

f. If uncorrected, the anticipated time the exceedance(s) is expected to continue; and,

g. Steps taken to reduce, eliminate or prevent occurrence of the exceedance(s).

B. Other Permit Violations

1. The permittee shall report noncompliance that is the result of any unanticipated bypass resulting in an exceedance of any effluent limit in the permit or any upset resulting in an exceedance of any effluent limit in the permit by e-mail or telephone within twenty-four (24) hours of discovery.

The permittee may report to the appropriate Ohio EPA district office e-mail account as follows (this method is preferred):

Southeast District Office: sedo24hournpdes@epa.ohio.gov
Southwest District Office: swdo24hournpdes@epa.ohio.gov
Northwest District Office: nwdo24hournpdes@epa.ohio.gov
Northeast District Office: nedo24hournpdes@epa.ohio.gov
Central District Office: cdo24hournpdes@epa.ohio.gov
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Central District Office: (800) 686-2330
Central Office: (614) 644-2001

The permittee shall include the following information in the telephone noncompliance report:

a. The name of the permittee, and a contact name and telephone number;

b. The time(s) at which the discharge occurred, and was discovered;

c. The approximate amount and the characteristics of the discharge;

d. The stream(s) affected by the discharge;

e. The circumstances which created the discharge;

f. The name and telephone number of the person(s) who have knowledge of these circumstances;

g. What remedial steps are being taken; and,

h. The name and telephone number of the person(s) responsible for such remedial steps.

2. The permittee shall report noncompliance that is the result of any spill or discharge which may endanger human health or the environment within thirty (30) minutes of discovery by calling the 24-Hour Emergency Hotline toll-free at (800) 282-9378. The permittee shall also report the spill or discharge by e-mail or telephone within twenty-four (24) hours of discovery in accordance with B.1 above.

C. When the telephone option is used for the noncompliance reports required by A and B, the permittee shall submit to the appropriate Ohio EPA district office a confirmation letter and a completed noncompliance report within five (5) days of the discovery of the noncompliance. This follow up report is not necessary for the e-mail option which already includes a completed noncompliance report.

D. If the permittee is unable to meet any date for achieving an event, as specified in a schedule of compliance in their permit, the permittee shall submit a written report to the appropriate Ohio EPA district office within fourteen (14) days of becoming aware of such a situation. The report shall include the following:

1. The compliance event which has been or will be violated;

2. The cause of the violation;

3. The remedial action being taken;

4. The probable date by which compliance will occur; and,

5. The probability of complying with subsequent and final events as scheduled.

E. The permittee shall report all other instances of permit noncompliance not reported under paragraphs A or B of this section on their monthly DMR submission. The DMR shall contain comments that include the information listed in paragraphs A or B as appropriate.

F. If the permittee becomes aware that it failed to submit an application, or submitted incorrect information in an application or in any report to the director, it shall promptly submit such facts or information.

13. RESERVED

14. DUTY TO MITIGATE

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

15. AUTHORIZED DISCHARGES

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than, or at a level in excess of, that authorized by this permit shall constitute a violation of the terms and conditions of this permit. Such violations may result in the imposition of civil and/or criminal penalties as provided for in Section 309 of the Act and Ohio Revised Code Sections 6111.09 and 6111.99.

16. DISCHARGE CHANGES

The following changes must be reported to the appropriate Ohio EPA district office as soon as practicable:

A. For all treatment works, any significant change in character of the discharge which the permittee knows or has reason to believe has occurred or will occur which would constitute cause for modification or revocation and reissuance. The permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Notification of permit changes or anticipated noncompliance does not stay any permit condition.

B. For publicly owned treatment works:

1. Any proposed plant modification, addition, and/or expansion that will change the capacity or efficiency of the plant;

2. The addition of any new significant industrial discharge; and

3. Changes in the quantity or quality of the wastes from existing tributary industrial discharges which will result in significant new or increased discharges of pollutants.

C. For non-publicly owned treatment works, any proposed facility expansions, production increases, or process modifications, which will result in new, different, or increased discharges of pollutants.

Following this notice, modifications to the permit may be made to reflect any necessary changes in permit conditions, including any necessary effluent limitations for any pollutants not identified and limited herein. A determination will also be made as to whether a National Environmental Policy Act (NEPA) review will be required. Sections 6111.44 and 6111.45, Ohio Revised Code, require that plans for treatment works or improvements to such works be approved by the Director of the Ohio EPA prior to initiation of construction.

D. In addition to the reporting requirements under 40 CFR 122.41(l) and per 40 CFR 122.42(a), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

1. That any activity has occurred or will occur which would result in the discharge on a routine or frequent basis of any toxic pollutant which is not limited in the permit. If that discharge will exceed the highest of the "notification levels" specified in 40 CFR Sections 122.42(a)(1)(i) through 122.42(a)(1)(iv).

2. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the "notification levels" specified in 122.42(a)(2)(i) through 122.42(a)(2)(iv).

17. TOXIC POLLUTANTS

The permittee shall comply with effluent standards or prohibitions established under Section 307 (a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement. Following establishment of such standards or prohibitions, the Director shall modify this permit and so notify the permittee.

18. PERMIT MODIFICATION OR REVOCATION

A. After notice and opportunity for a hearing, this permit may be modified or revoked, by the Ohio EPA, in whole or in part during its term for cause including, but not limited to, the following:

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

2. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

3. Change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge.

B. Pursuant to rule 3745-33-04, Ohio Administrative Code, the permittee may at any time apply to the

Ohio EPA for modification of any part of this permit. The filing of a request by the permittee for a permit modification or revocation does not stay any permit condition. The application for modification should be received by the appropriate Ohio EPA district office at least ninety days before the date on which it is desired that the modification become effective. The application shall be made only on forms approved by the Ohio EPA.

19. TRANSFER OF OWNERSHIP OR CONTROL

This permit may be transferred or assigned and a new owner or successor can be authorized to discharge from this facility, provided the following requirements are met:

A. The permittee shall notify the succeeding owner or successor of the existence of this permit by a letter, a copy of which shall be forwarded to the appropriate Ohio EPA district office. The copy of that letter will serve as the permittee's notice to the Director of the proposed transfer. The copy of that letter shall be received by the appropriate Ohio EPA district office sixty (60) days prior to the proposed date of transfer;

B. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) shall be submitted to the appropriate Ohio EPA district office within sixty days after receipt by the district office of the copy of the letter from the permittee to the succeeding owner;

At any time during the sixty (60) day period between notification of the proposed transfer and the effective date of the transfer, the Director may prevent the transfer if he concludes that such transfer will jeopardize compliance with the terms and conditions of the permit. If the Director does not prevent transfer, he will modify the permit to reflect the new owner.

20. OIL AND HAZARDOUS SUBSTANCE LIABILITY

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 to which the permittee is or may be subject under Section 311 of the Clean Water Act.

21. SOLIDS DISPOSAL

Collected grit and screenings, and other solids other than sewage sludge, shall be disposed of in such a manner as to prevent entry of those wastes into waters of the state, and in accordance with all applicable laws and rules.

22. CONSTRUCTION AFFECTING NAVIGABLE WATERS

This permit does not authorize or approve the construction of any onshore or offshore physical structures or facilities or the undertaking of any work in any navigable waters.

23. CIVIL AND CRIMINAL LIABILITY

Except as exempted in the permit conditions on UNAUTHORIZED DISCHARGES or UPSETS, nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

24. STATE LAWS AND REGULATIONS

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.

25. PROPERTY RIGHTS

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations.

26. UPSET

The provisions of 40 CFR Section 122.41(n), relating to "Upset," are specifically incorporated herein by reference in their entirety. For definition of "upset," see Part III, Paragraph 1, DEFINITIONS.

27. SEVERABILITY

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 circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

28. SIGNATORY REQUIREMENTS

All applications submitted to the Director shall be signed and certified in accordance with the requirements of 40 CFR 122.22.

All reports submitted to the Director shall be signed and certified in accordance with the requirements of 40 CFR Section 122.22.

29. OTHER INFORMATION

A. Where the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or in any report to the Director, it shall promptly submit such facts or information.

B. ORC 6111.99 provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $25,000 per violation.

C. ORC 6111.99 states 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 or noncompliance shall, upon conviction, be punished by a fine of not more than $25,000 per violation.

D. ORC 6111.99 provides that any person who violates Sections 6111.04, 6111.042, 6111.05, or division (A) of Section 6111.07 of the Revised Code shall be fined not more than $25,000 or imprisoned not more than one year, or both.

30. NEED TO HALT OR REDUCE ACTIVITY

40 CFR 122.41(c) states that 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 conditions of this permit.

31. APPLICABLE FEDERAL RULES

All references to 40 CFR in this permit mean the version of 40 CFR which is effective as of the effective date of this permit.

32. AVAILABILITY OF PUBLIC SEWERS

Notwithstanding the issuance or non-issuance of an NPDES permit to a semi-public disposal system, whenever the sewage system of a publicly owned treatment works becomes available and accessible, the permittee operating any semi-public disposal system shall abandon the semi-public disposal system and connect it into the publicly owned treatment works.

National Pollutant Discharge Elimination System (NPDES) Permit Program

FACT SHEET

Regarding an NPDES Permit to Discharge to Waters of the State of Ohio
for **Worthington Industries Inc.**

Public Notice No.: 193012
Public Notice Date: December 12, 2023
Comment Period Ends: January 11, 2024

Ohio EPA Permit No.: **2ID00014*GD**
Application No.: **OH0122271**

Name and Address of Applicant:

Worthington Industries Inc.
6303 County Road 10
Delta, Ohio 43515

Name and Address of Facility Where Discharge Occurs:

Worthington Industries Inc.
6303 County Road 10
Delta, Ohio 43515
Fulton County

Receiving Water: Maumee River

Subsequent Stream Network: Lake Erie

INTRODUCTION

Development of a Fact Sheet for NPDES permits is mandated by Title 40 of the Code of Federal Regulations (CFR), Section 124.8 and 124.56. This document fulfills the requirements established in those regulations by providing the information necessary to inform the public of actions proposed by the Ohio Environmental Protection Agency (Ohio EPA), as well as the methods by which the public can participate in the process of finalizing those actions.

This Fact Sheet is prepared in order to document the technical basis and risk management decisions that are considered in the determination of water quality based NPDES Permit effluent limitations. The technical basis for the Fact Sheet may consist of evaluations of promulgated effluent guidelines, existing effluent quality, instream biological, chemical, and physical conditions, and the relative risk of alternative effluent limitations. This Fact Sheet details the discretionary decision-making process empowered to the Director by the Clean Water Act (CWA) and Ohio Water Pollution Control Law (Ohio Revised Code [ORC] 6111). Decisions to award variances to Water Quality Standards (WQS) or promulgated effluent guidelines for economic or technological reasons will also be justified in the Fact Sheet where necessary.

Antidegradation provisions in Ohio Administrative Code (OAC) Chapter 3745-1 describe the conditions under which water quality may be lowered in surface waters. No antidegradation review was necessary.

Effluent limits based on available treatment technologies are required by Section 301(b) of the CWA. Many of these have already been established by the United States Environmental Protection Agency (U.S. EPA) in the effluent guideline regulations (a.k.a. categorical regulations) for industry categories in 40 CFR Parts 405-499. Technology-based regulations for publicly-owned treatment works are listed in the Secondary Treatment Regulations (40 CFR Part 133). If regulations have not been established for a category of dischargers, the director may establish technology-based limits based on best professional judgment (BPJ).

Ohio EPA reviews the need for water-quality-based limits on a pollutant-by-pollutant basis. Wasteload allocations (WLAs) are used to develop these limits based on the pollutants that have been detected in the discharge, and the receiving water's assimilative capacity. The assimilative capacity depends on the flow in the water receiving the discharge, and the concentration of the pollutant upstream. The greater the upstream flow, and the lower the upstream concentration, the greater the assimilative capacity is. Assimilative capacity may represent dilution (as in allocations for metals), or it may also incorporate the break-down of pollutants in the receiving water (as in allocations for oxygen-demanding materials).

The need for water-quality-based limits is determined by comparing the WLA for a pollutant to a measure of the effluent quality. The measure of effluent quality is called Projected Effluent Quality (PEQ). This is a statistical measure of the average and maximum effluent values for a pollutant. As with any statistical method, the more data that exists for a given pollutant, the more likely that PEQ will match the actual observed data. If there is a small data set for a given pollutant, the highest measured value is multiplied by a statistical factor to obtain a PEQ; for example, if only one sample exists, the factor is 6.2, for two samples - 3.8, for three samples - 3.0. The factors continue to decline as samples sizes increase. These factors are intended to account for effluent variability, but if the pollutant concentrations are fairly constant, these factors may make PEQ appear larger than it would be shown to be if more sample results existed.

SUMMARY OF PERMIT CONDITIONS

The effluent limits and/or monitoring requirements proposed for all parameters are the same as in the current permit, except those listed below.

Lower maximum concentration limits are proposed for lead and zinc based on the updated waste load allocation. A new monthly limit for lead is also proposed. These limits are proposed because the federal effluent limit guidelines proposed at outfall 601 are less stringent than Ohio's Water Quality Standards.

Monitoring requirements are proposed to be removed for bis(2-ethylhexyl) Phthalate, bromomethane, pentachlorophenol, and silver because these parameters are below detection for the sampling and no reasonable potential was observed for these parameters.

Dioxin toxicity equivalent is being removed from the permit because there were no detections for pentachlorophenol and there was no reasonable potential observed.

Limits for mercury are proposed to be removed but a group 4 tracking requirement will be included in Part II of the permit.

In accordance with Ohio Administrative Code (OAC) 3745-33-07, it has been determined that the effluent from Worthington Industries shows acute toxicity to Ceriodaphnia dubia and Pimephales promelas. Limits are proposed to continue.

A compliance schedule to perform a toxicity reduction evaluation (TRE) is proposed to evaluate the observed whole effluent toxicity.

A compliance schedule to evaluate temperature discharge is proposed. In review of the discharge monitoring data an increase of temperature discharge over the last several years has been observed.

In Part II of the permit, special conditions are included that address stormwater compliance; whole effluent toxicity (WET) testing; the Maumee River Phosphorus TMDL, and outfall signage.

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PROCEDURES FOR PARTICIPATION IN THE FORMULATION OF FINAL DETERMINATIONS

The draft action shall be issued as a final action unless the Director revises the draft after consideration of the record of a public meeting or written comments, or upon disapproval by the Administrator of the U.S. Environmental Protection Agency.

Within thirty days of the date of the Public Notice, any person may request or petition for a public meeting for presentation of evidence, statements, or opinions. The purpose of the public meeting is to obtain additional evidence. Statements concerning the issues raised by the party requesting the meeting are invited. Evidence may be presented by the applicant, the state, and other parties, and following presentation of such evidence other interested persons may present testimony of facts or statements of opinion.

Requests for public meetings shall be in writing and shall state the action of the Director objected to, the questions to be considered, and the reasons the action is contested. Such requests should be emailed to HClerk@epa.ohio.gov or mailed to:

Legal Records Section
Ohio Environmental Protection Agency
P.O. Box 1049
Columbus, Ohio 43216-1049

Interested persons are invited to submit written comments upon the discharge permit. Comments should be submitted by email to epa.dswcomments@epa.ohio.gov (preferred method) or delivered in person or by mail no later than 30 days after the date of this Public Notice. Deliver or mail all comments to:

Ohio Environmental Protection Agency
Attention: Division of Surface Water
Permits Processing Unit
P.O. Box 1049
Columbus, Ohio 43216-1049

The Ohio EPA permit number and Public Notice numbers should appear on each page of any submitted comments. All comments received no later than 30 days after the date of the Public Notice will be considered.

Citizens may conduct file reviews regarding specific companies or sites. Appointments are necessary to conduct file reviews because requests to review files have increased dramatically in recent years. The first 250 pages copied are free. For requests to copy more than 250 pages, there is a five-cent charge for each page copied. Payment is required by check or money order, made payable to Treasurer State of Ohio.

For additional information about this fact sheet or the draft permit, contact Alex Young, 419-373-3017, Alexander.Young@epa.ohio.gov.

INFORMATION REGARDING CERTAIN WATER QUALITY BASED EFFLUENT LIMITS

This draft permit may contain proposed water-quality-based effluent limits (WQBELs) for parameters that **are not** priority pollutants. (See the following link for a list of the priority pollutants: https://epa.ohio.gov/static/Portals/35/pretreatment/Pretreatment_Program_Priority_Pollutant_Detection_Limits.pdf) In accordance with ORC 6111.03(J)(3), the Director established these WQBELs after considering, to the extent consistent with the Federal Water Pollution Control Act, evidence relating to the technical feasibility and economic reasonableness of removing the polluting properties from those wastes and to evidence relating to conditions calculated to result from that action and their relation to benefits to the people of the state and to

accomplishment of the purposes of this chapter. This determination was made based on data and information available at the time the permit was drafted, which included the contents of the timely submitted NPDES permit renewal application, along with any and all pertinent information available to the Director.

This public notice allows the permittee to provide to the Director for consideration during this public comment period additional site-specific pertinent and factual information with respect to the technical feasibility and economic reasonableness for achieving compliance with the proposed final effluent limitations for these parameters. The permittee shall email to epa.dswcomments@epa.ohio.gov (preferred method) or deliver or mail this information to:

Ohio Environmental Protection Agency
Attention: Division of Surface Water
Permits Processing Unit
P.O. Box 1049
Columbus, Ohio 43216-1049

Should the applicant need additional time to review, obtain or develop site-specific pertinent and factual information with respect to the technical feasibility and economic reasonableness of achieving compliance with these limitations, a written request for any additional time shall be sent to the above address no later than 30 days after the Public Notice Date on Page 1.

Should the applicant determine that compliance with the proposed WQBELs for parameters other than the priority pollutants is technically and/or economically unattainable, the permittee may submit an application for a variance to the applicable WQS used to develop the proposed effluent limitation in accordance with the terms and conditions set forth in OAC 3745-33-07(D). The permittee shall submit this application to the above address no later than 30 days after the Public Notice Date.

Alternately, the applicant may propose the development of site-specific WQS pursuant to OAC 3745-1-39. The permittee shall submit written notification regarding their intent to develop site specific WQS for parameters that are not priority pollutants to the above address no later than 30 days after the Public Notice Date.

LOCATION OF DISCHARGE/RECEIVING WATER USE CLASSIFICATION

Worthington Industries discharges to the Maumee River at River Mile 42.51. Figure 1 shows the approximate location of the facility.

This segment of the Maumee River is described by Ohio EPA River Code: 04-001, Hydrologic Unit Code: 04100009-02-07, County: Fulton, Ecoregion: Huron/Erie Lake Plains. The Maumee River is designated for the following uses under Ohio's WQS (OAC 3745-1-11) Modified Warmwater Habitat, Agricultural Water Supply, Industrial Water Supply, and Primary Contact Recreation.

Use designations define the goals and expectations of a waterbody. These goals are set for aquatic life protection, recreation use and water supply use, and are defined in the Ohio WQS (OAC 3745-1-07). The use designations for individual waterbodies are listed in rules -08 through -32 of the Ohio WQS. Once the goals are set, numeric WQS are developed to protect these uses. Different uses have different water quality criteria.

Use designations for aquatic life protection include habitats for coldwater fish and macroinvertebrates, warmwater aquatic life and waters with exceptional communities of warmwater organisms. These uses all meet the goals of the federal CWA. Ohio WQS also include aquatic life use designations for waterbodies which cannot meet the CWA goals because of human-caused conditions that cannot be remedied without causing fundamental changes to land use and widespread economic impact. The dredging and clearing of some small streams to support agricultural or urban drainage is the most common of these conditions. These streams are given Modified Warmwater or Limited Resource Water designations.

Recreation uses are defined by the depth of the waterbody and the potential for wading or swimming. Uses are defined for bathing waters, swimming/canoeing (Primary Contact Recreation) and wading only (Secondary Contact which are generally waters too shallow for swimming or canoeing).

Water supply uses are defined by the actual or potential use of the waterbody. Public Water Supply designations apply near existing water intakes so that waters are safe to drink with standard treatment. Most other waters are designated for agricultural water supply and industrial water supply.

FACILITY DESCRIPTION

Worthington Industries is a finished steel processing facility that manufactures galvanized steel strips. The facility has the capacity to process 3,600 tons of steel per day through acid pickling and 2,400 tons per day through hot-dip galvanizing. The effluent is discharged to the Maumee River via an eleven-mile county maintained sewer that contains combined effluents from Worthington Industries and North Star Bluescope Steel. Worthington Industries obtains water from the Village of Delta and uses the water in the cooling of the formed steel and in the pickling line and galvanizing operations. The industrial processes at the facility include (see Figure 2):

- Hydrochloric Acid Pickling
- Alkaline Cleaning
- Hot-Dip Zinc Galvanizing
- Slitting of Steel Coils

The process operations at Worthington Industries are classified under Standard Industrial Classification (SIC) category 3399, "Primary Metal Products" and 3479, "Metal Coating and Allied Service". The process wastewaters generated from these operations are regulated under 40 CFR Part 420, "Iron and Steel Manufacturing Point Source Category". The manufacturing processes are applicable to the following subparts:

- 420.94, "Acid Picking", Subpart I, (b) hydrochloric acid pickling, (2) Strip, sheet and plate;

- 420.114, “Alkaline Cleaning”, Subpart K, (a) batch and continuous; and,
- 420.124, “Hot Coating”, Subpart L, (a) galvanizing, terne coating and other coatings, (1) Strip, sheet and miscellaneous products.

Worthington Industries obtains water from the Village of Delta.

Worthington Industries is covered under the following additional NPDES permit(s): industrial storm water general permit 2GR00522*GG.

DESCRIPTION OF EXISTING DISCHARGE

Worthington Industries has one outfall and one internal monitoring station. The process wastewater from the equalization tank (transferred from the waste holding tank) goes through neutralization (by lime or caustic) and clarification before it is stored in clean water holding tanks. There is an internal monitoring station 601 for checking compliance with federal effluent guideline limits. After sampling point 601 the effluent combines with non-contact cooling water and is sampled at outfall 001 before finally entering the sewer line. Outfall 001 contains the 601 effluent, R.O. reject water, and non-contact cooling water blowdown. All of these waters are aerated prior to discharge. Outfall 001 effluent mixes with effluent from the adjacent North Star Bluescope Steel plant in the sewer that discharges to the Maumee River at River Mile 42.51. Sanitary waste is discharged to the Village of Delta's WWTP. Figure 2 provides a flow schematic of the wastewater sources and supplies associated with Worthington Industries. Process wastewater is treated by the following processes:

- Flocculation
- Mixing
- Sedimentation
- Chemical Oxidation
- Chemical Precipitation
- Neutralization

The average flow rates for the permit cycle for outfalls 001 and 601 are shown on Table 3.

Table 2 is a summary of the effluent violations.

Table 4 presents data compiled from the NPDES permit renewal application Form 2C.

Table 5 presents a summary of unaltered Discharge Monitoring Report (DMR). Data are presented for the period January 2017 through March 2022, and current permit limits are provided for comparison.

Table 6 summarizes the chemical specific data for outfall 001 by presenting the average and maximum PEQ values.

Table 7 summarizes the results of acute and chronic WET tests of the final effluent.

ASSESSMENT OF IMPACT ON RECEIVING WATERS

The Creager Cemetery-Maumee River watershed assessment unit, which includes the Maumee River in the vicinity of Worthington Industries discharge, is listed as impaired for recreation on Ohio’s 303(d) list.

A biological and water quality survey of the Maumee River in 2014 showed full attainment of the use designation both upstream and downstream of Worthington Industries discharge. The Maumee River in the study area covered by this report was evaluated by Ohio EPA staff for aquatic life and recreational use potential

during the 2012 and 2013 field seasons. This assessment included the collection of water chemistry and biological sampling at numerous sites in the Maumee and Auglaize Rivers. A summary of the results from this assessment for the interactive segment covered in this report can be found in Table 8. More information can be found in the following technical support document:
https://epa.ohio.gov/static/Portals/35/documents/MaumeeTSD_2014.pdf.

The attainment status of the Maumee River watershed is reported in the final Ohio 2022 Integrated Water Quality Monitoring and Assessment Report. The full Integrated Report is available through the Ohio EPA, Division of Surface Water website at:
https://epa.ohio.gov/static/Portals/35/tmdl/2022intreport/Full-2022-IR.pdf

A Total Maximum Daily Load (TMDL) report for the Maumee River is currently under development.

DEVELOPMENT OF WATER-QUALITY-BASED EFFLUENT LIMITS

Determining appropriate effluent concentrations is a multiple-step process in which parameters are identified as likely to be discharged by a facility, evaluated with respect to Ohio water quality criteria, and examined to determine the likelihood that the existing effluent could violate the calculated limits.

Parameter Selection

Effluent data for Worthington Industries were used to determine what parameters should undergo a WLA. The parameters discharged are identified by the data available to Ohio EPA, DMR data submitted by the permittee, compliance sampling data collected by Ohio EPA, and any other data submitted by the permittee, such as priority pollutant scans required by the NPDES application or by pretreatment, or other special conditions in the NPDES permit. The sources of effluent data used in this evaluation are as follows:

Self-monitoring data (DMR)	January 2017 through March 2022
Form 2C data	2022

Statistical Outliers and Other Non-representative Data

The data were examined and one value for iron of 7,070 µg/L on 4/6/17 was removed from the evaluation as non-representative data.

This data is evaluated statistically, and PEQ values are calculated for each pollutant. Average PEQ (PEQ_{avg}) values represent the 95th percentile of monthly average data, and maximum PEQ (PEQ_{max}) values represent the 95th percentile of all data points (see Table 6).

The PEQ values are used according to Ohio rules to compare to applicable WQS and allowable WLA values for each pollutant evaluated. Initially, PEQ values are compared to the applicable average and maximum WQS. If both PEQ values are less than 25 percent of the applicable WQS, the pollutant does not have the reasonable potential to cause or contribute to exceedances of WQS, and no WLA is done for that parameter. If either PEQ_{avg} or PEQ_{max} is greater than 25 percent of the applicable WQS, a WLA is conducted to determine whether the parameter exhibits reasonable potential and needs to have a limit or if monitoring is required (see Table 9).

Wasteload Allocation

For those parameters that require a wasteload allocation (WLA), the results are based on the uses assigned to the receiving waterbody in OAC 3745-1. The following dischargers in the Maumee River were considered interactive (see Figure 3):

- Worthington Industries
- North Star BlueScope Steel

The WLA for this segment of the Maumee River divided loads between the North Star and Worthington Steel discharges. Allocations were distributed on a flow-proportional basis, resulting in equal concentration WLAs for each discharge.

The available assimilative capacity was distributed among them using the conservative substance wasteload allocation (CONSWLA) water quality model for conservative parameters. CONSWLA is the model Ohio EPA typically uses in multiple discharger situations. CONSWLA model inputs for flow are fixed at their critical low levels and inputs for effluent flow are fixed at their design or 50th percentile levels. Background concentrations are fixed at a representative value (generally a 50th percentile) using available ambient stream data from upstream sampling stations. A mass balancing method is then used to allocate effluent concentrations that maintain WQS under these conditions. This technique is appropriate when data bases are unavailable to generate statistical distributions for inputs and if the parameters modeled are conservative.

The applicable waterbody uses for this facility's discharge and the associated stream design flows are as follows:

Aquatic life (Warmwater Habitat)		
Toxics (metals, organics, etc.)	Average	Annual 7Q10
	Maximum	Annual 1Q10
Ammonia-N	Average	Summer 30Q10
		Winter 30Q10
Agricultural Water Supply		Harmonic mean flow
Human Health (nondrinking)		Harmonic mean flow
Wildlife		Annual 90Q10

Allocations are developed using a percentage of stream design flow (as specified in Table 10), and allocations cannot exceed the Inside Mixing Zone Maximum criteria.

Whole Effluent Toxicity Wasteload Allocation

Whole effluent toxicity (WET) is the total toxic effect of an effluent on aquatic life measured directly with a toxicity test. Acute WET measures short term effects of the effluent while chronic WET measures longer term and potentially more subtle effects of the effluent.

WQS for WET are expressed in Ohio's narrative "free from" WQS rule [OAC 3745-1-04(D)]. These "free froms" are translated into toxicity units (TUs) by the associated WQS Implementation Rule (OAC 3745-2-09). WLAs can then be calculated using TUs as if they were water quality criteria.

The WLA calculations for WET are similar to those for aquatic life criteria - using the chronic toxicity unit (TU_c) and 7Q10 flow for the average and the acute toxicity unit (TU_a) and 1Q10 flow for the maximum. These values are the levels of effluent toxicity that should not cause instream toxicity during critical low-flow conditions. For Worthington Industries, the WLA values for outfall 001 are 1.0 TU_a and 30.29 TU_c.

The chronic toxicity unit (TU_c) is defined as 100 divided by the estimate of the effluent concentration which causes a 25% reduction in growth or reproduction of test organisms (IC_{25}):

$$TU_c = 100/IC_{25}$$

This equation applies outside the mixing zone for warmwater, modified warmwater, exceptional warmwater, coldwater, and seasonal salmonid use designations except when the following equation is more restrictive (*Ceriodaphnia dubia* only):

TU_c = 100/geometric mean of No Observed Effect Concentration and Lowest Observed Effect Concentration

The acute toxicity unit (TU_a) is defined as 100 divided by the concentration in water having 50% chance of causing death to aquatic life (LC_{50}) for the most sensitive test species:

$$TU_a = 100/LC_{50}$$

This equation applies outside the mixing zone for all designated waters.

REASONABLE POTENTIAL/EFFLUENT LIMITS/MANAGEMENT DECISIONS

After appropriate effluent limits are calculated, the reasonable potential of the discharger to violate the WQS must be determined. Each parameter is examined and placed in a defined "group". Parameters that do not have a WQS or do not require a WLA based on the initial screening are assigned to either group 1 or 2. For the allocated parameters, the preliminary effluent limits (PEL) based on the most restrictive average and maximum WLAs are selected from Table 11. The average PEL (PEL_{avg}) is compared to the average PEQ (PEQ_{avg}) from Table 6, and the PEL_{max} is compared to the PEQ_{max}. Based on the calculated percentage of the allocated value [($PEQ_{avg} \div PEL_{avg}$) X 100, or ($PEQ_{max} \div PEL_{max}$) X 100)], the parameters are assigned to group 3, 4, or 5. The groupings are listed in Table 12.

The final effluent limits are determined by evaluating the groupings in conjunction with other applicable rules and regulations. Table 13 presents the final effluent limits and monitoring requirements proposed for Worthington Industries outfall 001 and internal monitoring station 601 and the basis for their recommendation. Unless otherwise indicated, the monitoring frequencies proposed in the permit are continued from the existing permit.

Final Outfall 001

Dissolved Oxygen, Oil and Grease and pH
Limits proposed for dissolved oxygen, oil and grease and pH. are based on Ohio's water quality standards. The water quality-based pH limits are protective of the federal effluent guideline limitations.

Chlorine
The Ohio EPA risk assessment (Table 12) places chlorine in group 5. This placement, as well as the data in Table 5 and Table 6, indicates that the reasonable potential to exceed WQS and limits are necessary to protect water quality. For these parameters, the PEQ is greater than 100 percent of the WLA and certain conditions exist that increase the risk to the environment. Pollutants that meet this requirement must have permit limits under OAC 3745-33-07(A)(1). The proposed limit for total residual chlorine is based on the WLA. The IMZM is a value calculated to avoid rapidly lethal conditions in the effluent mixing zone.

The effluent limit for total residual chlorine is lower than the quantification level of 0.050 mg/L.
However, a pollutant minimization program is not required because the dosing rate of dechlorination chemicals ensures that the water quality-based effluent limit is being met.

Phosphorus
The phosphorus limits are proposed to continue based on best technical judgment.

Lead and Zinc
To be protective of the Ohio WQS inside mixing zone maximum limits are being proposed for, zinc and lead. The limits are proposed because the calculated ELG loading limits for these parameters at outfall 601 exceeds the WQBEL and IMZM limits at outfall 001. Since the ELGs would allow a discharge greater than Ohio's Water quality standard from the internal outfall, limits are proposed at the final outfall to ensure that the water quality standard is not exceeded. Only a maximum limit is being proposed for Zinc because the calculated outside mixing zone average limits are greater than the inside mixing zone maximum for Zinc. Lower maximum concentration limits are proposed based on the updated wasteload allocation.

Although the current WLA would allow slightly higher loading limits for lead and zinc because the flow used to calculate the WLA has increase from the previous permit from 0.13 MGD to 0.22 MGD. Anti-backsliding provisions in the OAC prevent the imposition of less stringent limits than those in the existing permit unless specific conditions have been satisfied. In the case of the Worthington, none of those conditions have been satisfied, so the existing limits are proposed to continue. The anti-backsliding provisions of OAC 3745-33-05 require that an anti-degradation review must be completed before an existing permit limit can be made less stringent. The rule requires other conditions to be satisfied as well.

Copper and Mercury
The Ohio EPA risk assessment (Table 12) places copper and mercury in group 4. This placement, as well as the data in Table 5 and Table 6, support that these parameters do not have the reasonable potential to contribute to WQS exceedances, and limits are not necessary to protect water quality. Monitoring for Group 4 pollutants (where PEQ exceeds 50 percent of the WLA) is required by OAC 3745-33-07(A)(2).

In addition, the mercury effluent quality falls within 75 percent of the WLA. Under OAC 3745-33-07(A)(2), parameters in this range must have a tracking requirement in the permit that specifies reductions in pollutant concentrations if effluent concentrations exceed the WLA. The tracking/reduction requirements are included in Part II of the permit. Limits for mercury will be removed but monitoring will continue.

Ammonia, Chromium, Iron, Nickel, and Total Filterable Residue
The Ohio EPA risk assessment (Table 12) places ammonia, chromium, iron, nickel, and total filterable residue in groups 2 and 3. This placement, as well as the data in Table 5 and Table 6, support that these parameters do not have the reasonable potential to contribute to WQS exceedances, and limits are not necessary to protect water quality. Monitoring at a is proposed to document that these pollutants continue to remain at low levels.

Barium, Bis(2-ethyhexyl) phthalate, Boron, Bromomethane, Free Cyanide, Chloroform, Dichlorobromomethane, Manganese, Molybdenum, Nitrate & Nitrite, Pentachlorophenol and Silver
The Ohio EPA risk assessment (Table 12) places barium, bis(2-ethyhexyl) phthalate, boron, bromomethane, free cyanide, chloroform, dichlorobromomethane, manganese, molybdenum, nitrate & nitrite, pentachlorophenol and silver in groups 2 and 3. This placement, as well as the data in Table 5 and Table 6, support that these parameters do not have the reasonable potential to contribute to WQS exceedances, and limits are not necessary to protect water quality. No new monitoring is proposed. Monitoring for bromomethane, bis(2-ethyhexyl) phthalate, pentachlorophenol, and silver is proposed to be removed.

Temperature, Flow Rate and Total Suspended Solids
Monitoring for these parameters is proposed to continue in order to evaluate the performance of the treatment plant.

Internal Monitoring Station 601

The internal station monitors the effluent from the process wastewater treatment facility. Technology-based limits from the federal effluent guideline limitations (ELGs) found in 40 CFR 420 are applied at this internal station. Consistent with 40 CFR 122.45(h), the current permit includes monitoring and limits at internal station 601. ELGs are applied at this outfall to ensure that these treatment standards are met prior to combining with other waste streams. If monitoring was not done at this location, it would not be possible to verify compliance with these standards due to dilution. Federal rules at 40 CFR 125.3(f) prohibit attaining these standards by dilution.

Total Suspended Solids, Oil and Grease, Zinc, and Lead
These limits are determined used the guideline numbers expressed in kilograms of pollutant per 1,000 kilograms of production. The currently daily production estimates are as follows:

- Hydrochloric Acid Pickling – 3,600 tons
- Hot Dip Galvanizing – 2,400 tons

An example of the 30-day limit calculation for total suspended solids for hydrochloric acid pickling is shown below:

L = [(P * C) / 1000] * ELG*K

Where:
L = the allowable load limit
P = production (in tons)
C = conversion factor from tons to lbs
ELG = federal effluent guideline limitation
K=conversion factor from lbs to kg

Therefore:

L = [(3,600 tons/day * 2,000 lb/ton) / 1,000 lb/lb] * 0.00501*0.45359 = 16.36 kg/day

Attachment 1 has a listing of all applicable ELGs and the resulting calculations. The calculated limits are the same as the limits in the previous permit.

Whole Effluent Toxicity Reasonable Potential

Evaluating the acute toxicity results in Table 7 under the provisions of 40 CFR Part 132, Appendix F, Procedure 6, gives an acute PEQ values of 2.16 TU_a for Ceriodaphnia dubia and 4.34 TU_a for Pimephales promelas. Reasonable potential for toxicity is demonstrated since these values exceed the WLA values of 1.0 TU_a. Consistent with Procedure 6 and OAC 3745-33-07(B), a daily maximum limit of 1.0 TU_a is proposed to continue. Attachment 2 provides additional information on the reasonable potential evaluation.

OTHER REQUIREMENTS

Compliance Schedule

***Toxicity Reduction Evaluation (TRE)* –** Within 6 months, the permittee shall initiate a TRE in order to reduce WET toxicity. Details are in Part I.C of the permit.

***Temperature Reduction Evaluation* –** Within 12 months, the permittee shall complete a study plan to evaluate the observed increase in temperature and measures that can be taken to reduce the temperature of the discharge.

Phosphorus
In September 2023, the Maumee Watershed Nutrient Total Maximum Daily Load (TMDL) Report was approved by US EPA. The TMDL was developed to restore full attainment of the designated uses in the Western Basin of Lake Erie. The TMDL assigned an individual wasteload allocation to Worthington of 8.2 kg of total phosphorus for the critical season (March through July). For many major sources of phosphorus in the watershed, compliance with this individual wasteload allocation will be regulated through the Maumee Watershed Total Phosphorus NPDES General Permit. However, due to the relatively small contribution of phosphorus load, Worthington has not been included in the general permit.

Facilities not proposed to join the group general permit together contribute less than 15 percent of the load from permitted facilities. These facilities may not have phosphorus-specific controls and the wasteload allocation in the TMDL is consistent with the existing loads. Therefore, phosphorus reductions are not proposed for these facilities. Existing efforts to promote optimization, regionalization, and onsite discharge will continue, but have not been accounted for as reductions needed to meet the wasteload allocation. Consistent with the assumptions of the TMDL, no TMDL based effluent limits based on the WLA are proposed for the permittee in this NPDES renewal. Ohio EPA will continue to evaluate phosphorus contributions from these permittees to ensure they remain at low levels. If Ohio EPA determines that the assumptions of the TMDL are no longer representative of the watershed, the TMDL may be modified to include a revised implementation approach. If this were to occur, the application of TMDL based total phosphorus effluent limits for this permittee may be re-evaluated.

Outfall Signage
Part II of the permit includes requirements for the permittee to place and maintain a sign at each outfall to the Maumee River providing information about the discharge. Signage at outfalls is required pursuant to OAC 3745-33-08(A).

Part III
Part III of the permit details standard conditions that include monitoring, reporting requirements, compliance responsibilities, and general requirements.

Storm Water Compliance
To comply with industrial storm water regulations, the permittee requested coverage under the industrial storm water general permit. Permit 2GR00522*GG became effective on 8/11/2022. No later than 5/31/2027, the permittee must request renewed coverage under the industrial storm water general permit or make other provisions to comply with the industrial storm water regulations.

Figure 1. Location of Worthington Industries

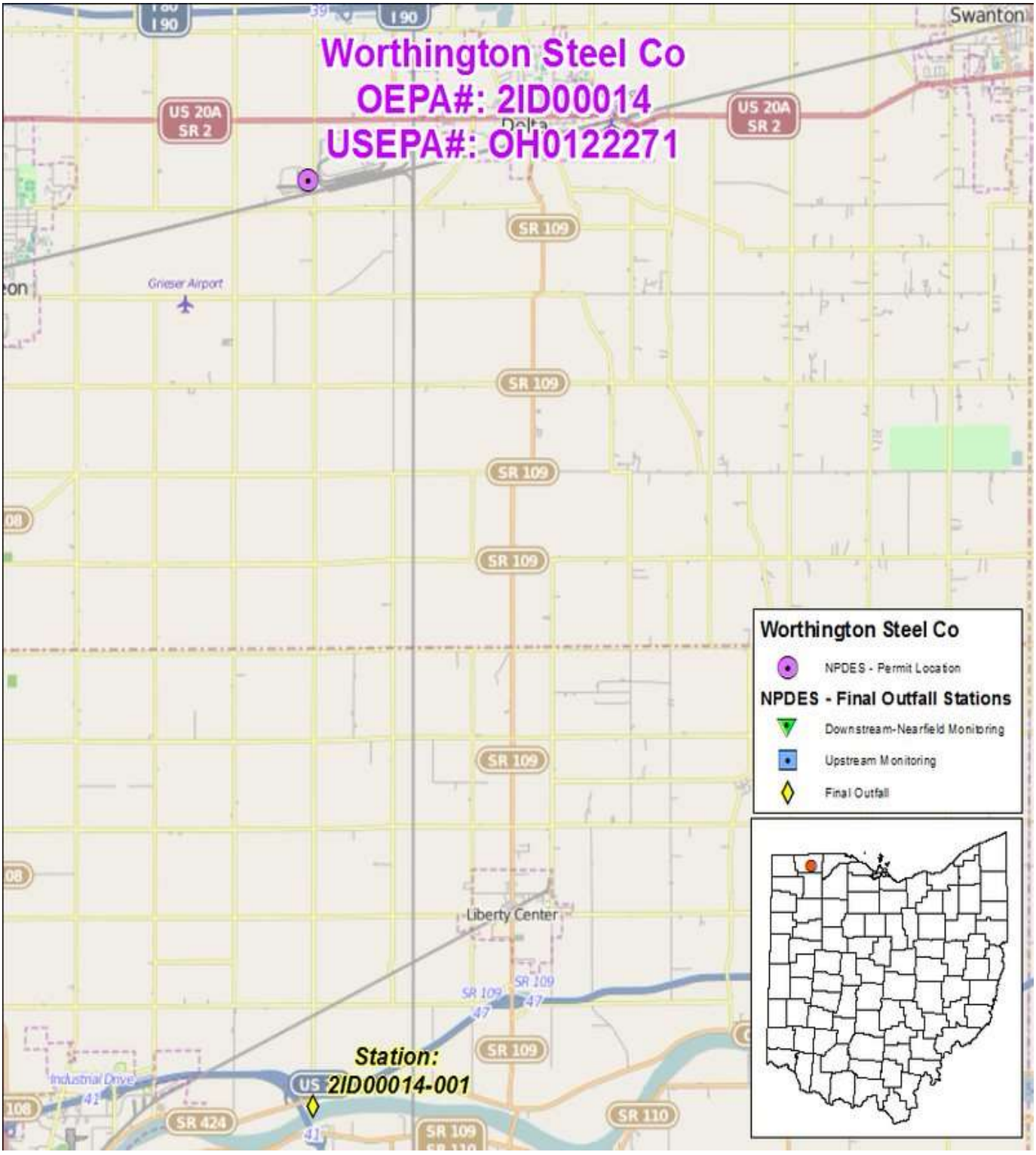


Figure 2. Water Balance Diagram

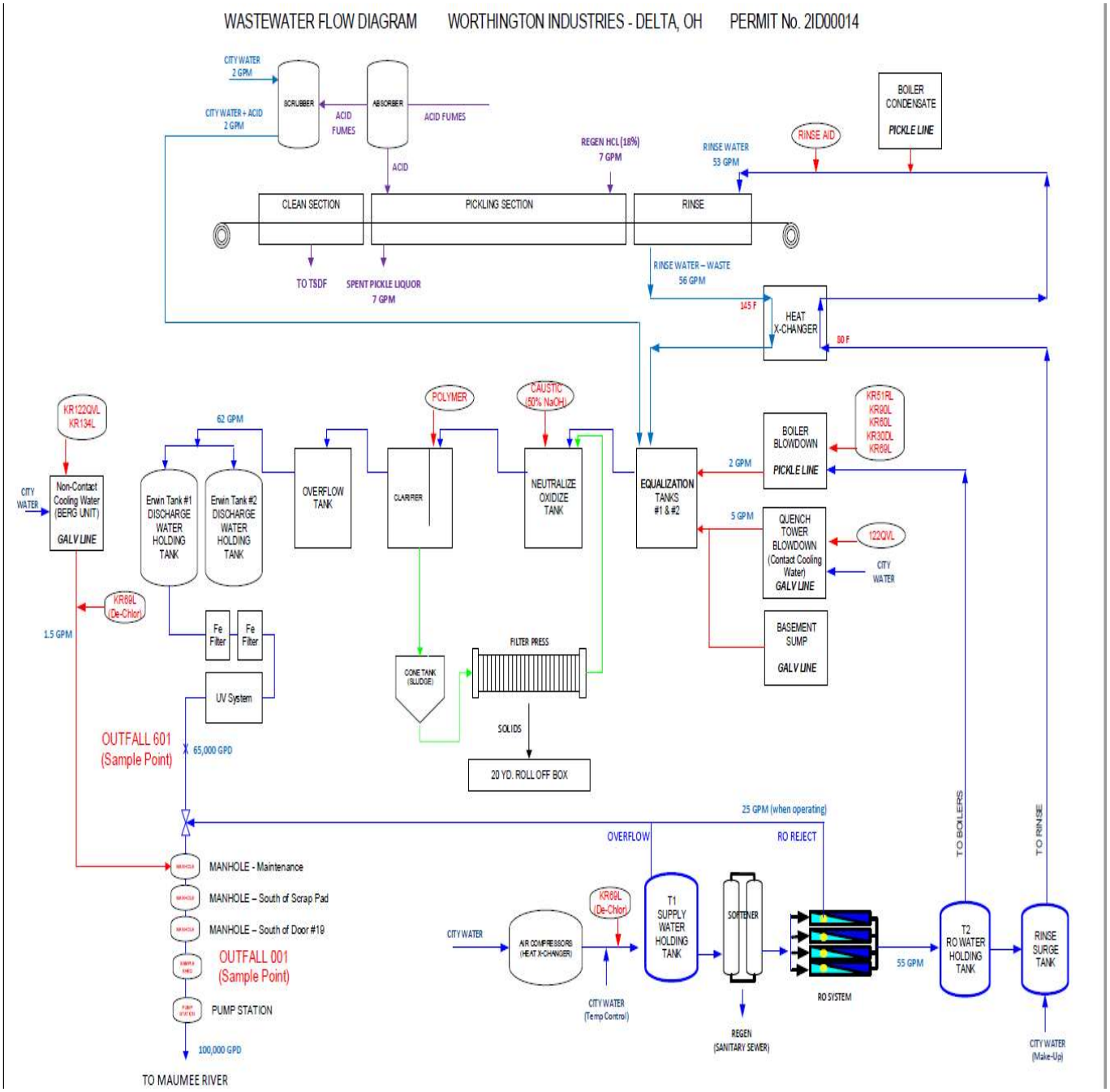
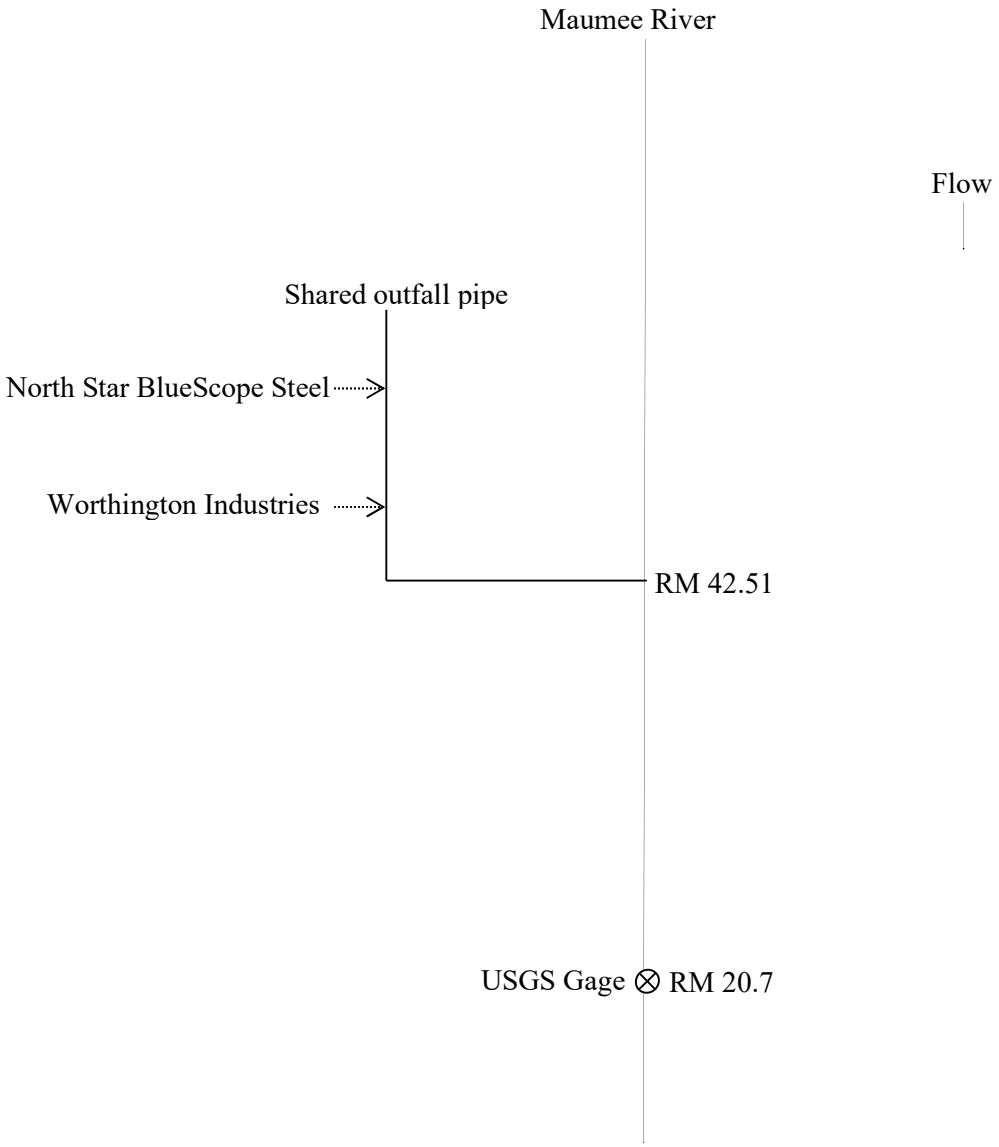


Figure 3. Maumee River Study Area



RM = River Mile
USGS = United States Geological Survey

Table 1. Monitoring Stations, Wastewater Sources, Treatment Processes, Discharge Points, and Flow Rates

Station #	Wastewater Source	Treatment Utilized	Discharge/ Receiving Stream	Average Flow Rate (MGD)
001	Pickling line rinse section, boiler blowdown, HCl fume scrubber, noncontact cooling water, quench tower blowdown, reverse osmosis reject	pH adjustment, chemical precipitation, flocculation, Sedimentation, for process wastewater	Maumee River	0.1
601	Pickle Line Rinse Section, Boiler Blowdown, HCl Fume Scrubber, Quench Tower Blowdown	Oil skimming, pH adjustment, chemical precipitation, flocculation, Sedimentation, for process wastewater	Internal Monitoring Station	0.07

Table 2. Effluent Violations for Outfall 001

PARAMETER	2017	2018	2019	2020	2021	2022
001 - Acute Toxicity, Ceriodaphnia	0	1	1	0	0	0
001 - Acute Toxicity, Pimephelas	2	1	3	1	0	0
001 - Chlorine, Total Residual	0	1	0	0	1	0
001 - Copper, Total Recoverable	1	0	0	0	0	0
001 - Dissolved Oxygen	9	5	0	0	6	0
001 - pH, Maximum	0	0	1	1	0	0
601 - pH, Maximum	0	0	1	0	0	0
Total	**12**	**8**	**6**	**2**	**7**	**0**

Time period: January 2017 to April 1, 2022

Table 3. Average Annual Effluent Flow Rates

	Flow Rate (Million Gallons per Day)					
Outfall	Year	# obs	Average	Median	95th Percentile	Maximum
001	2017	365	0.18	0.18	0.26	0.32
001	2018	365	0.16	0.16	0.24	0.26
001	2019	348	0.14	0.15	0.20	0.25
001	2020	366	0.12	0.13	0.17	0.20
001	2021	365	0.10	0.10	0.14	0.20
001	2022	90	0.10	0.10	0.14	0.16
601	2017	335	0.08	0.08	0.10	0.18
601	2018	318	0.08	0.08	0.10	0.68
601	2019	321	0.08	0.09	0.11	0.44
601	2020	336	0.08	0.09	0.11	0.12
601	2021	342	0.06	0.06	0.10	0.45
601	2022	84	0.07	0.07	0.10	0.11

Time period: January 2017 to April 1, 2022

Table 4. Effluent Characterization Based on Form 2C Data

PARAMETER (µg/L)	Form 2C Data		
	# of Samples	Average	Maximum
Chromium	3	AA (4)	AA (4)
Copper	48	27.5	38
Lead	48	AA (5)	AA (5)
Nickel	48	2.3	7
Silver	3	AA (4)	AA (4)
Barium	1	5	5
Iron	12	802	3480
Manganese	1	7	7
Molybdenum	1	21	21
Zinc	48	15.1	246
Mercury (ng/L)	3	AA (0.5)	AA (0.5)
Bromomethane (methyl bromide)	1	AA (1)	AA (1)
Pentachlorphenal	1	AA (5)	AA (5)
Nitrate + Nitrite (mg/L)	1	2.3	2.3
Chloroform	1	15	15
Dichlorobromomethane	1	3.7	3.7
Sulfate	1	51	51
Bis(2-ethylhexyl) Phthalate	1	AA (5)	AA (5)
Boron	1	48	48
Fluoride	1	1.66	1.66
Selenium	1	AA (8)	AA (8)

AA = below detection

Table 5. Effluent Characterization Using Self-Monitoring Data

Effluent Monitoring Data for 2ID00014*FD between 1/1/2017 and 4/1/2022								
			Current Limits			Percentiles		
Outfall	Parameter	Unit	30 Day	Daily	# Obs	50th	95th	Data Range
001	Water Temperature	°F	Monitoring Only		1899	87.4	102	60.4 - 111
	Dissolved Oxygen - 2017-2022	mg/L	--	4.0[m]	228	5.4	3.81*	1.1 - 10.2
	Dissolved Oxygen - 2017-2017	mg/L	--	5.0[m]	24	5.65	3.03*	2.1 - 8.6
	Total Suspended Solids	mg/L	Monitoring Only		252	7	24.5	0 - 1360
	Oil and Grease, Total	mg/L	--	10.0	252	--	--	< 5
	Nitrogen, Ammonia	mg/L	Monitoring Only		252	.15	.365	0 - .75
	Phosphorus, Total - 2017-2022	kg/day	--	0.40	225	.0424	.119	0 - .278
	Phosphorus, Total - 2017-2017	kg/day	--	0.48	24	.0301	.0889	0 - .131
	Phosphorus, Total	mg/L	--	1.0	252	.09	.235	0 - .48
	Cyanide, Free	mg/L	Monitoring Only		1	--	--	< .005
	Iron	µg/L	Monitoring Only		66	548	3350	53 - 7070
	Nickel	µg/L	Monitoring Only		10	< 4	3.85	0 - 7
	Silver	µg/L	Monitoring Only		10	--	--	< 4
	Zinc	kg/day	0.113	0.231	225	< .00591	.0137	0 - .104
	Zinc	µg/L	230	470	228	< 10	30.7	0 - 246
	Lead	kg/day	--	0.330	225	< .00254	< .00254	0 - .00462
	Lead 2017-2022	µg/L	--	670	228	< 5	< 5	0 - 12
	Lead 2017-2017	µg/L	Monitoring Only		24	< 5	< 5	0 - 10
	Chromium	µg/L	Monitoring Only		10	--	--	< 4

	Copper	kg/day	--	0.0259	24	.005	.0209	0 - .0305
	Copper 2017-2017	µg/L	--	53	24	8.5	26	0 - 36
	Copper 2017-2022	µg/L	Monitoring Only		228	13	27	0 - 44
	Bromomethane	µg/L	Monitoring Only		19	--	--	< 1
	Pentachlorophenol	µg/L	Monitoring Only		19	--	--	< 5
	Bis(2-ethylhexyl) Phthalate	µg/L	Monitoring Only		19	--	--	< 5
	Flow Rate	MGD	Monitoring Only		1899	.136	.231	.015 - .323
	Chlorine, Total Residual	mg/L	--	0.038	252	< .03	< .03	0 - .56
	Mercury, Total - 2017-2021	kg/day	0.0000005	0.0007	9	< .000000089	.000000275	0 - .000000458
	Mercury, Total - 2017-2017	kg/day	0.00000064	0.00083	1	.000000297	.000000297	.000000297 - .000000297
	Mercury, Total	ng/L	1.3	1700	10	< .5	.717	0 - .852
	Acute Toxicity, Ceriodaphnia dubia	TUa	--	1.0	21	< .2	1.22	0 - 1.35
	Acute Toxicity, Pimephales promelas	TUa	--	1.0	21	< .2	2.25	0 - 2.55
	pH, Maximum	S.U.	--	9.0	252	7.82	8.38	7.1 - 12.3
	pH, Minimum	S.U.	--	6.5[m]	252	7.82	7.42*	7.1 - 12.3
	Residue, Total Filterable	mg/L	Monitoring Only		252	1300	1920	158 - 2520
	Toxicity Equivalent	pg/L	Monitoring Only		19	--	--	0 - 0
601	Total Suspended Solids - 2017-2022	kg/day	57.4	134	214	1.82	5.39	0 - 7.9
	Total Suspended Solids - 2017-2017	kg/day	63.64	148.39	24	1.94	3.91	0 - 5.05
	Oil and Grease, Total - 2017-2022	kg/day	13.6	41	218	--	--	< 1.53

	Oil and Grease, Total - 2017-2017	kg/day	16.7	50.12	24	--	--	< 1.5
	Zinc 2017-2017	kg/day	0.34	1.022	24	< .00167	.00192	0 - .00333
	Zinc 2017-2022	kg/day	0.38	1.15	214	< .00178	.00396	0 - .0246
	Lead 2017-2017	kg/day	0.254	0.766	24	--	--	< .000833
	Lead 2017-2022	kg/day	0.29	0.86	214	--	--	< .00089
	Flow Rate	MGD	Monitoring Only		1736	.082	.105	.001 - .681
	pH, Maximum	S.U.	--	9.0	225	7.72	8.44	7.12 - 12.3
	pH, Minimum	S.U.	--	6.0[m]	225	7.72	7.3*	7.12 - 12.3

m = minimum
* = For pH minimum and dissolved oxygen, 5th percentile shown in place of 95th percentile

Table 6. Projected Effluent Quality

Parameter	Units	Number of Samples	Number >MDL	PEQ Average	PEQ Maximum
Self-Monitoring (DMR) Data					
Ammonia (summer)	mg/L	80	60	0.276	0.4
Ammonia (winter)	mg/L	68	58	0.313	0.451
Bis(2-ethylhexyl) phthalate	µg/L	19	0	--	--
Bromomethane	µg/L	19	0	--	--
Chlorine	mg/L	252	2	0.286	0.392
Chromium	µg/L	10	0	--	--
Copper	µg/L	252	244	21.7	30.15
Cyanide - free	µg/L	1	0	--	--
Iron	µg/L	65	65	2334	3685
Lead	µg/L	252	4	6.132	8.4
Mercury (BCC) [B]	ng/L	10	2	1.057	1.448
Nickel	µg/L	10	1	8.687	11.9
Pentachlorophenol	µg/L	19	0	--	--
Phosphorus	mg/L	252	222	0.175	0.254
Silver	µg/L	10	0	--	--
Total Filterable Residue	mg/L	252	252	1987	2771
Zinc	µg/L	228	61	33.58	43.47
Form 2C data					
Barium	µg/L	1	1	22.63	31
Boron	µg/L	1	1	217.3	297.6
Chloroform	µg/L	1	1	67.89	93
Dichlorobromomethane	µg/L	1	1	16.75	22.94
Manganese	µg/L	1	1	31.68	43.4
Molybdenum	µg/L	1	1	95.05	130.2
Nitrate-N + Nitrite-N	mg/L	1	1	10.41	14.26
Sulfates	mg/L	1	1	230.8	316.2

BCC = Bioaccumulative Chemical of Concern
MDL = analytical method detection limit
PEQ = projected effluent quality
[B] Bioaccumulative Chemical of Concern (BCC); no mixing zone allowed after 11/15/2010, WQS must be met at end-of-pipe, unless requirements for an exception are met as listed in OAC 3745-2-05(A)(2)(e)(ii)

Table 7. Summary of Acute Toxicity Results

Date	*Ceriodaphnia Dubia* Acute (Tu_a)	*Pimephales Promelas* Acute (Tu_a)
1/19/2017	AA (0.2)	AA (0.2)
3/16/2017	AA (0.2)	AA (0.2)
6/15/2017	AA (0.2)	1.22
7/13/2017	AA (0.2)	0.3
8/17/2017	AA (0.2)	0.5
12/14/2017	AA (0.2)	1.27
1/18/2018	AA (0.2)	AA (0.2)
3/15/2018	AA (0.2)	AA (0.2)
6/26/2018	1.22	0.4
7/26/2018	AA (0.2)	1.48
8/16/2018	.7	1.65
12/18/2018	AA (0.2)	AA (0.2)
3/7/2019	AA (0.2)	0.2
6/14/2019	1.35	2.55
8/27/2019	AA (0.2)	2.25
12/19/2019	AA (0.2)	1.7
3/5/2020	AA (0.2)	AA (0.2)
6/11/2020	AA (0.2)	1.18
8/13/2020	AA (0.2)	AA (0.2)
12/17/2020	AA (0.2)	AA (0.2)
3/10/2021	AA (0.2)	AA (0.2)
6/10/2021	AA (0.2)	AA (0.2)
8/12/2021	AA (0.2)	AA (0.2)
12/2/2021	AA (0.2)	AA (0.2)
3/17/2022	AA (0.2)	AA (0.2)

AA = non-detection; analytical method detection limit of 0.2 TU_a,
TU_a = acute toxicity unit

Table 8. Use Attainment Table

Location	River Mile	Use Designation	Attainment Status	Causes of Impairment	Sources of Impairment
Maumee River at water works intake	47.10	MWH	Full		
Maumee River upstream State Route 109	41.24	MWH	Full		
Maumee River upstream Grand Rapids Dam	32.60	MWH	Full		

Table from: Biological and Water Quality Study of the Maumee River and Auglaize River 2012-2013.
MWH = Modified Warmwater Habitat

Table 9. Water Quality Criteria in the Study Area

Parameter	Units	Outside Mixing Zone Criteria					Inside Mixing Zone Maximum [A]
		Average				Maximum Aquatic Life [A]	
		Wildlife	Human Health [A]	Agri-culture [A]	Aquatic Life [A]		
Ammonia (summer)	mg/L	--	--	--	0.5	--	--
Ammonia (winter)	mg/L	--	--	--	2.3	--	--
Barium	µg/L	--	160000	--	1200 [B]	5300 [B]	11000 [B]
Bis(2-ethylhexyl)phthalate[C]	µg/L	--	32	--	8.4	1100	2100
Boron	µg/L	--	200000	--	3900	33000	65000
Bromomethane	µg/L	--	2600	--	16 [B]	38 [B]	75 [B]
Chlorine - TRes	mg/L	--	--	--	0.011	0.019	0.038
Chloroform [C]	µg/L	--	1700	--	140 [B]	1300 [B]	2600 [B]
Chromium - TR	µg/L	--	14000	100	160	3300	6700
Copper - TR	µg/L	--	64000	500	18	29	57
Cyanide - free	µg/L	--	48000	--	5.2	22	44
Dichlorobromomethane [C]	µg/L	--	180	--	340 [B]	3100 [B]	6200 [B]
Iron - TR	µg/L	--	--	5000	--	--	--
Lead - TR	µg/L	--	--	100	17	320	640
Manganese - TR	µg/L	--	61000	--	--	--	--
Mercury – TR [E]	ng/L	1.3	3.1	10000	910	1700	3400
Molybdenum	µg/L	--	10000	--	20000	190000	370000
Nickel - TR	µg/L	--	43000	200	99	890	1800
Nitrate-N + Nitrite-N	mg/L	--	--	100	--	--	--
Pentachlorophenol [C]	µg/L	--	1.6	--	--	--	--
Phosphorus	mg/L	--	--	--	--	--	--
Silver	µg/L	--	11000	--	1.3	5.9	12
Sulfates	mg/L	--	--	--	--	--	--
Total Filterable Residue	mg/L	--	--	--	1500	--	--
Zinc - TR	µg/L	--	35000	25000	230	230	450

[A] Human Health and Aquatic Life Criteria are Tier I unless otherwise indicated.
[B] Tier II criteria
[C] Carcinogen
[E] Bioaccumulative Chemical of Concern (BCC)

Table 10. Instream Conditions and Discharger Flow

Parameter	Units		Value	Basis
Upstream flows:				
Maumee R. above North Star and Worthington Industries				
1Q10	cfs	annual	53.2	USGS gage #04193500, 1940-2021 data
7Q10	cfs	annual	91.9	USGS gage #04193500, 1940-2021 data
30Q10	cfs	summer	139.3	USGS gage #04193500, 1940-2020 data
	cfs	winter	351.1	USGS gage #04193500, 1939-2021 data
Harmonic Mean Flow	cfs	annual	750.2	USGS gage #04193500, 1939-2021 data
Mixing Assumption	%	average	25	Stream-to-discharge ratio
(Maumee R.)	%	maximum	66.8	Stream-to-discharge ratio
Worthington Industries				
Outfall 001 flow rate	cfs (MGD)	average	0.34 (0.22)	95 percentile of monthly average flows 2017-2022
North Star Steel				
Outfall 001 flow rate	cfs (MGD)	average	0.44 (0.29)	95 percentile of monthly average flows 2017-2022
Instream Hardness	mg/l	annual	213	STORET; 49 values, 2012-21
Background Water Quality for the Maumee River				
Aluminum	µg/L	annual	435.5	STORET; 12 values, 0<MDL, 2012-13
Ammonia	mg/L	summer	0.08	DMR; Napoleon 901, 20 values, 0<MDL,2017-22
Ammonia	mg/L	winter	0.181	DMR; Napoleon 901, 16 values, 0<MDL,2017-22
Antimony	µg/L	annual	0	No representative data available.
Arsenic - TR	µg/L	annual	2.35	STORET; 12 values, 4<MDL, 2012-13
Barium	µg/L	annual	51	STORET; 12 values, 0<MDL, 2012-13
Bis(2-ethylhexyl)phthalate	µg/L	annual	0	No representative data available.
Boron	µg/L	annual	0	No representative data available.
Bromide	mg/L	annual	0	No representative data available.
Bromoform	µg/L	annual	0	No representative data available.
Bromomethane	µg/L	annual	0	No representative data available.
Chlorine - TRes	mg/L	annual	0	No representative data available.
Chlorodibromomethane	µg/L	annual	0	No representative data available.
Chloroform	µg/L	annual	0	No representative data available.
Chromium - TR	µg/L	annual	1	STORET; 12 values, 10<MDL, 2012-13
Copper - TR	µg/L	annual	2.45	STORET; 12 values, 0<MDL, 2012-13
Dichlorobromomethane	µg/L	annual	0	No representative data available.
Fluoride	mg/L	annual	0	No representative data available.
Iron - TR	µg/L	annual	582.5	STORET; 12 values, 0<MDL, 2012-13
Lead - TR	µg/L	annual	1	STORET; 12 values, 11<MDL, 2012-13
Manganese - TR	µg/L	annual	0	No representative data available.
Mercury - TR	ng/L	annual	0	No representative data available.
Methyl bromide	µg/L	annual	0	No representative data available.
Methyl chloride	µg/L	annual	0	No representative data available.

Molybdenum	µg/L	annual	0	No representative data available.
Nickel - TR	µg/L	annual	4.85	STORET; 12 values, 0<MDL, 2012-13
Nitrate-N + Nitrite-N	mg/L	annual	1.4	STORET; 12 values, 4<MDL, 2012-13
Pentachlorophenol	µg/L	annual	0	No representative data available.
Phenol	µg/L	annual	0	No representative data available.
Silver	µg/L	annual	0	No representative data available.
Total Filterable Residue	mg/L	annual	392	STORET; 13 values, 0<MDL, 2012-13
trans-1,2-Dichloroethylene	µg/L	annual	0	No representative data available.
Zinc - TR	µg/L	annual	5	STORET; 12 values, 10<MDL, 2012-13

DMR = Discharge Monitoring Report
MDL = Method Detection Limit
NPDES = National Pollutant Discharge Elimination System
STORET = United States Environmental Protection Agency Storage and Retrieval Data Warehouse
USGS = United States Geological Survey

Table 11. Summary of Effluent Limits to Maintain Applicable Water Quality Criteria

Parameter	Units	Outside Mixing Zone Criteria					Inside Mixing Zone Maximum
			Average			Maximum Aquatic Life	
		Wildlife	Human Health	Agri Supply	Aquatic Life		
Ammonia (summer)	mg/L	--	--	--	50.31	--	--
Ammonia (winter)	mg/L	--	--	--	636	--	--
Barium [B]	µg/L	--	38610000 [A]	--	35051 [A]	243658 [A]	11000
Bis(2-ethylhexyl)phthalate	µg/L	--	17720 [A]	--	587	117118 [A]	2100
Boron [B]	µg/L	--	48280000 [A]	--	118800 [A]	1532000 [A]	65000
Bromomethane [B]	µg/L	--	1440000 [A]	--	1118 [A]	4046 [A]	75
Chlorine - TRes	mg/L	--	--	--	0.3351 [A]	0.882 [A]	0.038
Chloroform	µg/L	--	941400 [A]	--	9784 [A]	138412 [A]	2600
Chromium - TR [B]	µg/L	--	7752000 [A]	54825 [A]	11114 [A]	351249 [A]	6700
Copper - TR	µg/L	--	15450000 [A]	120103 [A]	476 [A]	1235 [A]	57
Dichlorobromomethane [B]	µg/L	--	43449 [A]	--	10357 [A]	143872 [A]	6200
Iron - TR	µg/L	--	--	1067000	--	--	--
Lead - TR	µg/L	--	--	23898 [A]	488	14806 [A]	640
Manganese - TR [B]	µg/L	--	33780000	--	--	--	--
Mercury - TR [C]	ng/L	1.3	3.1	10000 [A]	910	1700	3400
Molybdenum [B]	µg/L	--	2414000 [A]	--	609231 [A]	8818000 [A]	370000
Nickel - TR [B]	µg/L	--	10380000 [A]	47111 [A]	2873 [A]	41085 [A]	1800
Nitrate-N + Nitrite-N [B]	mg/L	--	--	54604	--	--	--
Pentachlorophenol [B]	µg/L	--	386	--	--	--	--
Silver [B]	µg/L	--	2655000 [A]	--	40 [A]	274 [A]	12
Total Filterable Residue	mg/L	--	--	--	34143	--	--
Zinc - TR	µg/L	--	8447000 [A]	6033000 [A]	6859 [A]	10447 [A]	450

[A] Allocation must not exceed the Inside Mixing Zone Maximum.
[B] Parameter would not require a WLA based on reasonable potential procedures, but allocation requested by permit staff.
[C] Bioaccumulative Chemical of concern (BCC).

Table 12. Parameter Assessment

Group 1: Due to a lack of numeric criteria, the following parameters could not be evaluated at this time.

Sulfates

Group 2: PEQ < 25% of WQS or all data below minimum detection limit; WLA not required. No limit recommended, monitoring optional.

Ammonia (winter)	Barium	Bis(2-ethylhexyl) phthalate
Boron	Bromomethane	Chromium - TR
Cyanide - free	Dichlorobromomethane	Manganese - TR
Molybdenum	Nickel - TR	Nitrate-N + Nitrite-N
Pentachlorophenol	Silver	Zinc - TR

Group 3: PEQmax < 50% of maximum PEL and PEQavg < 50% of average PEL. No limit recommended, monitoring optional.

Ammonia (summer)	Chloroform [B]	Total Filterable Residue
Iron - TR	Lead - TR	

Group 4: PEQmax > 50% but <100% of the maximum PEL or PEQavg > 50% but < 100% of the average PEL. Monitoring is appropriate.

Copper - TR Mercury – TR [A]

Group 5: Maximum PEQ > 100% of the maximum PEL or average PEQ > 100% of the average PEL,or either the average or maximum PEQ is between 75 and 100% of the PEL and certain conditions that increase the risk to the environment are present. Limit recommended.

Limits to Protect Numeric Water Quality Criteria

			Recommended Effluent Limits	
Parameter	Units	Period	Average	Maximum
Chlorine - TRes	mg/L	annual	--	0.038

PEL = preliminary effluent limit

PEQ = projected effluent quality

WLA = wasteload allocation

WQS = water quality standard

[A] = Requires a permit tracking requirement in accordance with OAC 3745-33-07(A)(2) since the PEQ is > or = 75 percent of the PEL.

Table 13. Final Effluent Limits

Parameter	Units	Concentration		Loading (kg/day)[a]		Basis[b]
		Daily Maximum	30 Day Average	Daily Maximum	30 Day Average	
Final Outfall 001						
Water Temperature	°F	- - - - - - - - - - - Monitor - - - - - - - - - - -				M[c]
Dissolved Oxygen	mg/L	4.0[m]	--	--	--	WQS
Total Suspended Solids	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				M[c]
Oil & Grease	mg/L	10	--	--	--	WQS
Ammonia	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				M[c]
Phosphorus	mg/L	1.0	--	0.4	--	BTJ
Iron	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				M
Nickel	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				M
Zinc	µg/L	450	--	0.22	--	IMZM/ABS
Lead	µg/L	640	488	0.31	0.24	IMZM/ABS
Chromium	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				M
Copper	µg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				M
Flow Rate	MGD	- - - - - - - - - - - Monitor - - - - - - - - - - -				M[c]
Chlorine	mg/L	0.038	--	--	--	WLA
Mercury	ng/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				M
Acute Toxicity, *Ceriodaphnia dubia*	TUa	1.0				WET
Acute Toxicity, *Pimephales promelas*	TUa	1.0				WET
Total Filterable Residue	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				M
pH, maximum	SU	9.0	--	--	--	WQS
pH, minimum	SU	6.5[m]	--	--	--	WQS
Total Filterable Residue	mg/L	- - - - - - - - - - - Monitor - - - - - - - - - - -				M
Internal Monitoring Station 601						
Total Suspended Solids	mg/L	--	--	134	27.4	ELG NSPS
Oil and Grease	mg/L	--	--	41	13.6	ELG NSPS
Zinc	µg/L	--	--	1.15	0.38	ELG NSPS
Lead	µg/L	--	--	0.86	0.29	ELG NSPS
Flow Rate	MGD	- - - - - - - - - - - Monitor - - - - - - - - - - -				M
pH, maximum	S.U.	9.0				ELG NSPS
pH, minimum	S.U.	6.0[m]				ELG NSPS

[a] Effluent loadings at outfall 001 kept at previous loadings due to ABS. 0.13 MGD for Zinc and Lead and 0.104840 MGD for phosphorus as calculated from the previous permit cycle.

[b] Definitions:
ABS = Antibacksliding Rule (OAC 3745-33-05(F) and 40 CFR Part 122.44(l))
BPJ = Best Professional Judgment
ELG = Federal Effluent Limitation Guidelines, see Attachment 1 40 CFR 420
M = Determination of Sampling Frequency Formula for Industrial Waste Discharges
NSPS = New Source Performance Standards
WET = Whole Effluent Toxicity (OAC 3745-33-07(B))
WLA = Wasteload Allocation procedures (OAC 3745-2)
IMZM = Inside Mixing Zone Maximum
WQS = Ohio Water Quality Standards (OAC 3745-1)

[c] Monitoring of flow and other indicator parameters is specified to assist in the evaluation of effluent quality and treatment plant performance.

Attachment 1. Applicable Federal Effluent Limitation Guidelines

Operation	Production (tons/day)	Regulation	Effluent Limit Guidelines					Loading Allowances				
			TSS Monthly Avg	TSS Daily Max	O&G monthly Avg	O&G Daily Max		TSS Monthly Avg	TSS Daily Max	O&G Monthly Avg	O&G Daily Max	Units
Acid Pickling	3,600	420.94(b)(2) NSPS	0.00501	0.0117	0*	0.000*		36.07	84.24	0.00*	0.00*	lb/day
Hot Coating	2,400	420.124(a)(1) NSPS	0.0188	0.0438	0.00626	0.0188		90.24	210.24	30.05	90.24	lb/day
Total Load								126.31	294.48	30.05	90.24	lb/day
								57.29	133.57	13.63	40.93	kg/day
Current Limits								57.4	134	13.6	41	kg/day

* Oil and Grease effluent guidelines only apply for Acid Pickling 420.94(b)(2) when treated with cold rolling wastewaters, set to 0 since the facility does not use cold rolling wastewaters

Operation	Production (tons/day)	Regulation	Effluent Limit Guidelines					Loading Allowances				
			Zinc Monthly Avg	Zinc Daily Max	Lead monthly Avg	Lead Daily Max		Zinc Monthly Avg	Zinc Daily Max	Lead Monthly Avg	Lead Daily Max	Units
Acid Pickling	3,600	420.94(b)(2) NSPS	0.0000334	0.000100	0.000025	0.0000751		0.24	0.72	0.18	0.54	lb/day
Hot Coating	2,400	420.124(a)(1) NSPS	0.000125	0.000376	0.0000939	0.000282		0.60	1.80	0.45	1.35	lb/day
Total Load								0.84	2.52	0.63	1.89	lb/day
								0.38	1.15	0.29	0.86	kg/day
Current Limits								0.382	1.15	0.286	0.86	kg/day

Attachment 2. Whole Effluent Toxicity Reasonable Potential Analysis

	Water Flea (*Ceriodaphnia dubia*)	**Fathead Minnow (*Pimephales promelas*)**
	Acute	**Acute**
WLA (TU)	1.0	1.0
Total # of Tests	25	25
Maximum Value (TU)	1.35	2.55
Coefficient of Variation[1]	1.57	1.66
Multiplying Factors[2]	1.6	1.7
PEQ (Maximum Value x Multiplying Factor)	2.16	4.34
Reasonable Potential Demonstrated? (Yes/No) (Yes if PEQ > WLA)	Yes	Yes

1 40 CFR Part 132, Appendix F, Paragraph D(3)
2 40 CFR Part 132, Appendix F, Table F6-1

Addendum 1. Acronyms

ABS	Anti-backsliding
BAT	Best Available Technology Economically Achievable
BCT	Best Conventional Pollutant Control Technology
BPJ	Best professional judgment
BPT	Best Practicable Control Technology Currently Available
BTJ	Best technical judgment
CFR	Code of Federal Regulations
CONSWLA	Conservative substance wasteload allocation
CWA	Clean Water Act
CWIS	Cooling water intake structure
DMR	Discharge Monitoring Report
DMT	Dissolved metal translator
ELG	Federal effluent limitation guideline
gpm	Gallons per minute
IMZM	Inside mixing zone maximum
MDL	Analytical method detection limit
MGD	Million gallons per day
NPDES	National Pollutant Discharge Elimination System
NSPS	New source performance standards
OAC	Ohio Administrative Code
Ohio EPA	Ohio Environmental Protection Agency
ORC	Ohio Revised Code
ORSANCO	Ohio River Valley Water Sanitation Commission
PEL	Preliminary effluent limit
PEQ	Projected effluent quality
PMP	Pollution Minimization Program
PPE	Plant performance evaluation
SIC	Standard Industrial Classification
TBEL	Technology-based effluent limit
TMDL	Total Daily Maximum Load
TRE	Toxicity reduction evaluation
TU	Toxicity unit
U.S. EPA	United States Environmental Protection Agency
WET	Whole effluent toxicity
WLA	Wasteload allocation
WQBEL	Water-quality-based effluent limit
WQS	Water Quality Standards