



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Eric J. Holcomb
Governor

Brian C. Rockensuess
Commissioner

June 27, 2024

VIA ELECTRONIC MAIL

Mr. Brady Dryer
Commonwealth Engineers, Inc.
7256 Company Drive
Indianapolis, Indiana 46237

Dear Mr. Dryer:

Re: Preliminary Effluent Limitations
City of Plymouth Wastewater Treatment Plant
NPDES Permit No. IN0020991
Marshall County

This letter is in response to your request for preliminary effluent limitations for developing local limits for the City of Plymouth Wastewater Treatment Plant. The existing WWTP is a Class IV 3.5 MGD activated sludge treatment facility with ultraviolet light disinfection. The facility discharges to the Yellow River. The Q7,10 of the receiving stream at the outfall location is 33 cfs.

A Wasteload Allocation Analysis (WLA002764) was performed by this Office's staff on April 29, 2024. The following effluent limits are appropriate for the aforementioned wastewater treatment plant with an average design flow of 3.5 MGD with continuous discharge to the Yellow River:

Table 1

Pollutant	Monthly Average	Daily Maximum	Units
Cadmium	0.0055	0.011	mg/l
T. Chromium	0.076	1.5	mg/l
Copper	0.054	0.11	mg/l
Molybdenum	13	25	mg/l
Nickel	0.46	0.93	mg/l
Selenium	0.012	0.030	mg/l
Silver	0.014	0.029	mg/l
Zinc	0.32	0.65	mg/l
Cyanide, Free	0.017	0.035	mg/l

The water quality-based limits set forth in this letter are based on the Indiana water quality standards in effect at this time and may not be the final limits once an NPDES permit is issued. If the water quality standards are modified by the Water Pollution Control Board and new water quality standards become effective prior to the date the NPDES permit for

Mr. Brady Dryer
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the facility is actually issued, then IDEM is required by law to issue the modified NPDES permit with limits based on the new standards.

If there are any questions regarding the NPDES permit requirements, please feel free to contact contact Jay Hanko at Jhanko@idem.IN.gov or 317/233-0704.

Sincerely,

A handwritten signature in black ink that reads "Leigh Voss". The signature is written in a cursive style with a large, stylized "L" and "V".

Leigh Voss, Chief
Municipal NPDES Permits Section
Office of Water Quality

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

INDIANAPOLIS

OFFICE MEMORANDUM

Date: April 29, 2024

To: File

Thru: Leigh Voss, Chief *LAV*
Municipal NPDES Permits Section
John Donnellan, Reviewer *JTD*
Municipal NPDES Permits Section

From: Jay Hanko *JAH*
Municipal NPDES Permits Section

Subject: Wasteload Allocation Report for Plymouth WWTP in Marshall County
(IN0020991, WLA 002764)

Water Quality Based Effluent Limits (WQBELs) were developed for the City of Plymouth Wastewater Treatment Plant (WWTP) in Marshall County for an average design flow of 3.5 MGD. WQBELs for cadmium, total chromium, copper, cyanide, molybdenum, nickel, selenium, silver, and zinc were requested by the city as part of a local limits evaluation.

At present, the City of Plymouth WWTP operates a Class IV, 3.5 MGD activated sludge treatment facility with ultraviolet disinfection. Final biosolids can be disposed of at a landfill, can be land applied by a contractor, or can be land applied by the permittee under Land Application Permit No. INLA000297.

The facility discharges via Outfall 001 to the Yellow River to the Kankakee River, specifically in Assessment Unit INK0152_01 and within the 12-digit HUC (Hydrologic Unit Code) 071200010502. The receiving stream reach of the Yellow River has a $Q_{7,10}$ of 33 cfs (21.3 MGD). There are no public water supply intakes in the vicinity of the outfall location.

The receiving stream falls under the rules for the non-Great Lakes region. The receiving stream is designated for full body contact recreation and shall be capable of supporting a well-balanced, warm water aquatic community. The receiving stream is listed on Indiana's 2022 303(d) list of impaired water bodies for *E. coli*. However, the facility is listed as an NPDES discharger within the Kankakee/Iroquois River Total Maximum Daily Load (TMDL) report, which was approved by EPA on September 29, 2009. The permittee received an *E. coli* allocation that is in accordance with the permittee's current *E. coli* limit.

The WQBELs for these pollutants of concern are included in Table 1. The documentation of the wasteload allocation analysis is included as an attachment to this document.

Attachments

TABLE 1
Water Quality-based Effluent Limitations
For Plymouth WWTP in Marshall County
Outfall 001 to Yellow River
(IN0020991, WLA002764)

Parameter	Quality or Concentration*			Quantity or Loading*			Monthly Sampling Frequency
	Monthly Average	Daily Maximum	Units	Monthly Average	Daily Maximum	Units	
Cadmium	0.0055	0.011	mg/l	0.16	0.32	lbs/day	4
Total Chromium	0.76	1.5	mg/l	0.47	0.91	lbs/day	4
Copper	0.054	0.11	mg/l	1.6	3.2	lbs/day	4
Molybdenum	13	25	mg/l	380	730	lbs/day	4
Nickel	0.46	0.93	mg/l	13	27	lbs/day	4
Selenium (lotic)	0.012	0.030	mg/l	0.35	0.88	lbs/day	4
Silver	0.014	0.029	mg/l	0.41	0.85	lbs/day	4
Zinc	0.32	0.65	mg/l	9.3	19	lbs/day	4
Cyanide, Free	0.017	0.035	mg/l	0.50	1.0	lbs/day	4

* Based on an effluent flow of 3.5 mgd.

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

Analysis By: Jay Hanko

Date: April 26, 2024

Reviewed By: John Donnellan

WLA Number: 002764

Facility Information

- **Name:** City of Plymouth Wastewater Treatment Plant
- **NPDES Permit Number:** IN0020991
- **Permit Expiration Date:** July 31, 2025
- **County:** Marshall
- **Purpose of Analysis:** Metals WQBELS for Local Limits Evaluation
- **Outfall Number:** 001
- **Type of Treatment:** Activated Sludge with UV disinfection
- **Current Average Design Flow:** 3.5 mgd
- **Average Design Flow for WLA Analysis:** 3.5 mgd [For sanitary discharges only.]
- **Current Effluent Limits:** Currently, there are no limitations or monitoring requirements for metals in the permit.

Pollutants of Concern and Type of WLA Analysis

Pollutants of Concern and Type of WLA Analysis		
Parameter	Type of Analysis	Reason for Inclusion on Pollutants of Concern List
Cadmium	WQBEL	Local Limits Evaluation
Chromium	WQBEL	Local Limits Evaluation
Copper	WQBEL	Local Limits Evaluation
Molybdenum	WQBEL	Local Limits Evaluation
Nickel	WQBEL	Local Limits Evaluation
Selenium	WQBEL	Local Limits Evaluation
Silver	WQBEL	Local Limits Evaluation
Zinc	WQBEL	Local Limits Evaluation
Cyanide	WQBEL	Local Limits Evaluation

Receiving Stream Information

- **Receiving Stream:** Yellow River
- **Public Water System Intakes Downstream:** No
- **Designated Stream Use:** The receiving stream is designated for full body contact recreational use and shall be capable of supporting a well-balanced warm water aquatic community in accordance with 327 IAC 2-1.
- **12 Digit HUC:** 071200010502
- **Assessment Unit (2022):** INK0152_01
- **303(d) List (2022):** The receiving stream is listed on Indiana's 2022 303(d) list of impaired water bodies for *E. coli*.
- **TMDL Status:** The facility is listed as an NPDES discharger within the Kankakee/Iroquois River Total Maximum Daily Load (TMDL) report, which was approved by EPA on September 29, 2009. The permittee received an *E. coli* allocation that is in accordance with the permittee's current *E. coli* limit.
- **Q7,10 (Outfall):** 33 cfs
- **Q7,10 (Public Water System Intake):** NA
- **Q7,10 (Industrial Water Supply Intake):** NA
- **Q30,10 (Outfall):** 38 cfs
- **Q50 (Outfall):** 166 cfs
- **Dilution Factor:** 6.1:1

The Q_{7,10}, Q_{1,10}, and Q_{30,10} stream flows were determined from the USGS continuous record gaging station 05516500 on the Yellow River, near Plymouth, Indiana. This gaging station is located upstream of the outfall location and has a drainage area of 294 mi². Daily stream data from April 1, 1987 to March 31, 2021 were uploaded into the USGS SWToolbox program in order to determine appropriate low-flow values. Low-flow data from years previous to 1987 have been excluded due to flow regulation that took place at the Lake of the Woods dam. Please reference the March 5, 2010 WLA001760 for the City of Plymouth WWTP for more information concerning the specific period of record and the history behind the Lake of the Woods dam operation.

Therefore, the low-flow values at the continuous gaging station 05516500 for the aforementioned period of record (April 1, 1987 thru March 31, 2021) were the following: Q_{7,10} of 32 cfs, Q_{1,10} of 30 cfs, Q_{30,10} of 38 cfs, and a Q50 of 163. These low-flow statistics were obtained from SWToolbox program designed by the USGS. The drainage area at the outfall location was determined to be approximately 300 mi² and was determined from the USGS StreamStats website. A ratio of the two drainage areas was used to calculate the final value for the Q_{7,10}, Q_{1,10}, and the Q_{30,10} stream flows. The Q50 flow was also determined with the USGS SWtoolbox, by utilizing the "Duration/Compare" tool. The same period of record was used to determine the Q50 flow (April 1, 1987 thru March 31, 2021). A ratio of drainage areas approach was also used to calculate the final value for the Q50 low flow value.

- **Nearby Dischargers:** None that will affect this analysis.

Calculation of Preliminary Effluent Limitations

The background concentration of cadmium, chromium, copper, nickel, selenium, and zinc were calculated from the survey station YR-12, (L-Site UMK060-000) Yellow River at Starke CR 500E, east of Knox, which is located downstream of the outfall. Background concentrations for cyanide, molybdenum, and silver were not available. The period of observation was from January 2020 through March 2024. This data is included in **Attachment 2**. The background concentration was determined by calculating the geometric mean of this dataset.

The 50th percentile downstream hardness and sulfate concentrations were also calculated from this survey station YR-12 on the Yellow River (see **Attachments 3**). The period of observations was from January 2020 through March 2024. The 50th percentile of downstream hardness was determined to be 325 mg/L.

The background concentration of a given pollutant was determined by calculating the geometric mean of the instream data for the pollutant. The survey data include values reported as less than the limit of quantitation (LOQ). These data were set equal to ½ the detection limit. The coefficient of variation used to calculate monthly average and daily maximum PELs was set equal to the default value of 0.6. The number of samples per month used to calculate monthly average PELs for all toxics was set equal to 4, based on the anticipated monitoring frequency. The calculation of preliminary effluent limitations is shown in **Attachment 4**.

List of Attachments

Attachment 1: Map of Outfall Location

Attachment 2: Calculation of Background Concentrations

Attachment 3: Calculation of Downstream Water Quality Characteristics (Hardness)

Attachment 4: Calculation of Preliminary Effluent Limitations

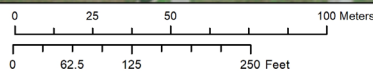
City of Plymouth WWTP Outfall 001 Location



This map is intended to serve as an aid in graphic representation only. This information is not warranted for accuracy or other purposes.

Mapped By: Gabrielle Ghrechi, Office of Water Quality
Date: March 20, 2020

Sources:
Non Orthophotography
Data - Obtained from the State of Indiana Geographical Information Office Library
Orthophotography - Obtained from Indiana Map Framework Data (www.indianamap.org)
Map Projection: UTM Zone 16 N Map Datum: NAD83



Legend

-  NPDES_Facilities_2018
-  River



ATTACHMENT 2
Calculation of Background Concentrations
Data From Fixed Station YR-12 on Yellow River

Date	Total	Adjusted	Total	Adjusted	Total	Adjusted	Total	Adjusted	Total	Adjusted	Total	Adjusted
	Cadmium (ug/l)	Cadmium (ug/l)	Chromium (ug/l)	Chromium (ug/l)	Copper (ug/l)	Copper (ug/l)	Nickel (ug/l)	Nickel (ug/l)	Selenium (ug/l)	Selenium (ug/l)	Zinc (ug/l)	Zinc (ug/l)
1/1/2020	< 1	0.5	1.92	1.92	4.69	4.69	3.86	3.86	< 1	0.5	16.4	16.4
2/4/2020	< 1	0.5	< 1	0.5	2.2	2.2	2.6	2.6	< 1	0.5	7.01	7.01
3/4/2020	< 1	0.5	1.58	1.58	4.5	4.5	3.8	3.8	< 1	0.5	15.6	15.6
5/20/2020	< 1	0.5	1.57	1.57	4.78	4.78	3.98	3.98	< 1	0.5	18.6	18.6
6/10/2020	< 1	0.5	< 1	0.5	1.7	1.7	2.42	2.42	< 1	0.5	< 1	0.5
7/7/2020	< 1	0.5	< 1	0.5	1.92	1.92	2.03	2.03	< 1	0.5	6.08	6.08
8/19/2020	< 1	0.5	< 1	0.5	1.13	1.13	2.21	2.21	< 1	0.5	< 1	0.5
9/15/2020	< 1	0.5	< 1	0.5	1.42	1.42	1.6	1.6	< 1	0.5	< 1	0.5
10/6/2020	< 1	0.5	< 1	0.5	1.1	1.1	1.2	1.2	< 1	0.5	< 1	0.5
11/3/2020	< 1	0.5	< 1	0.5	2	2	1.2	1.2	< 1	0.5	13.6	13.6
12/22/2020	< 1	0.5	< 1	0.5	1	1	1	1	< 1	0.5	< 1	0.5
1/7/2021	< 1	0.5	< 1	0.5	2.3	2.3	1.9	1.9	< 1	0.5	41.7	41.7
2/3/2021	< 1	0.5	< 1	0.5	1	1	1.2	1.2	< 1	0.5	10.1	10.1
3/1/2021	< 1	0.5	3.4	3.4	7	7	5.7	5.7	1.6	1.6	65.3	65.3
4/27/2021	< 1	0.5	< 1	0.5	1.4	1.4	1.8	1.8	< 1	0.5	< 1	0.5
5/4/2021	< 1	0.5	< 1	0.5	2.3	2.3	2.2	2.2	< 1	0.5	19.1	19.1
6/2/2021	< 1	0.5	< 1	0.5	1.6	1.6	1.8	1.8	< 1	0.5	< 1	0.5
7/14/2021	< 1	0.5	< 1	0.5	2.6	2.6	2.4	2.4	< 1	0.5	28.6	28.6
8/25/2021	< 1	0.5	< 1	0.5	1.2	1.2	1.3	1.3	< 1	0.5	< 1	0.5
9/2/2021	< 1	0.5	< 1	0.5	1.2	1.2	1.1	1.1	< 1	0.5	6.4	6.4
10/14/2021	< 1	0.5	0.63	0.63	3.2	3.2	2.7	2.7	< 1	0.5	9.1	9.1
11/29/2021	< 1	0.5	< 1	0.5	1.4	1.4	2.3	2.3	< 1	0.5	< 1	0.5
12/21/2021	< 1	0.5	0.81	0.81	2.3	2.3	2.5	2.5	< 1	0.5	10.4	10.4
1/19/2022	< 1	0.5	< 1	0.5	1.1	1.1	1.5	1.5	< 1	0.5	< 1	0.5
2/10/2022	< 1	0.5	< 1	0.5	1.3	1.3	1.6	1.6	< 1	0.5	< 1	0.5
3/28/2022	< 1	0.5	< 1	0.5	2.3	2.3	2.2	2.2	< 1	0.5	< 1	0.5
4/18/2022	< 1	0.5	< 1	0.5	1.5	1.5	1.9	1.9	< 1	0.5	< 1	0.5
5/10/2022	< 1	0.5	0.61	0.61			2.3	2.3	< 1	0.5	< 1	0.5
6/20/2022	< 1	0.5	< 1	0.5	1.2	1.2	1.8	1.8	< 1	0.5	< 1	0.5
7/26/2022	< 1	0.5	0.64	0.64	2.1	2.1	2.4	2.4	< 1	0.5	< 1	0.5
8/24/2022	< 1	0.5	< 1	0.5	0.97	0.97	1.8	1.8	< 1	0.5	< 1	0.5
9/14/2022	< 1	0.5	< 1	0.5	1	1	1.4	1.4	< 1	0.5	< 1	0.5
10/27/2022	< 1	0.5	< 1	0.5	1.1	1.1	1.3	1.3	< 1	0.5	< 1	0.5
11/9/2022	0.6	0.6	0.64	0.64	1.4	1.4	2.2	2.2	< 1	0.5	8.4	8.4
12/7/2022	< 1	0.5	< 1	0.5	1.8	1.8	1.7	1.7	< 1	0.5	< 1	0.5
1/18/2023	< 1	0.5	< 1	0.5	1.1	1.1	1.9	1.9	< 1	0.5	< 1	0.5
2/23/2023	< 1	0.5	2.8	2.8	5.2	5.2	4.5	4.5	< 1	0.5	26.6	26.6
3/21/2023	< 1	0.5	< 1	0.5	1.8	1.8	2.2	2.2	< 1	0.5	< 1	0.5
4/18/2023	< 1	0.5	< 1	0.5	1.3	1.3	1.8	1.8	< 1	0.5	< 1	0.5
5/22/2023	< 1	0.5	< 1	0.5	1.2	1.2	1.5	1.5	< 1	0.5	< 1	0.5
6/20/2023	< 1	0.5	< 1	0.5	1.3	1.3	2.5	2.5	< 1	0.5	< 1	0.5
7/27/2023	< 1	0.5	< 1	0.5	0.97	0.97	1.3	1.3	< 1	0.5	< 1	0.5
8/15/2023	< 1	0.5	< 1	0.5	0.91	0.91	1.3	1.3	< 1	0.5	< 1	0.5
9/26/2023	< 1	0.5	< 1	0.5	0.96	0.96	1.5	1.5	< 1	0.5	< 1	0.5
10/18/2023	< 1	0.5	< 1	0.5	0.74	0.74	1	1	< 1	0.5	< 1	0.5
11/8/2023	< 1	0.5	< 1	0.5	0.87	0.87	1.3	1.3	< 1	0.5	< 1	0.5
12/27/2023	< 1	0.5	< 1	0.5	1.4	1.4	2.1	2.1	< 1	0.5	< 1	0.5
1/8/2024	< 1	0.5	< 1	0.5	0.96	0.96	2.1	2.1	< 1	0.5	< 1	0.5
2/5/2024	< 1	0.5	< 1	0.5	1.9	1.9	2.3	2.3	< 1	0.5	< 1	0.5
3/4/2024	< 1	0.5	< 1	0.5	1.1	1.1	1.8	1.8	< 1	0.5	< 1	0.5
Geomean		0.50		0.59		1.60		1.93		0.51		1.48

ATTACHMENT 3
Calculation of Water Quality Characteristics
Data From Fixed Station YR-12

Date	Hardness (mg/l)
1/1/2020	267
2/4/2020	307
3/4/2020	251
5/20/2020	219
6/10/2020	325
7/7/2020	318
8/19/2020	319
9/15/2020	330
10/6/2020	312
11/3/2020	343
12/22/2020	344
1/7/2021	359
2/3/2021	326
3/1/2021	309
4/27/2021	347
5/4/2021	341
6/2/2021	367
7/14/2021	334
8/25/2021	296
9/2/2021	313
10/14/2021	285
11/29/2021	354
12/21/2021	322
1/19/2022	354
2/10/2022	342
3/28/2022	294
4/18/2022	305
5/10/2022	307
6/20/2022	333
7/26/2022	280
8/24/2022	321
9/14/2022	314
10/27/2022	340
11/9/2022	349
12/7/2022	347
1/18/2023	347
2/23/2023	291
3/21/2023	323
4/18/2023	322
5/22/2023	325
6/20/2023	335
7/27/2023	322
8/15/2023	338
9/26/2023	337
10/18/2023	302
11/8/2023	349
12/27/2023	353
1/8/2024	361
2/5/2024	318
3/4/2024	347
50th %	325

ATTACHMENT 4

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

General Information	
Facility Name:	Plymouth WWTP
County:	Marshall
NPDES Number:	IN0020991
WLA Number:	002764
WLA Report Date:	April 26, 2024
Outfall:	001
Receiving Water:	Yellow River

Ambient Downstream Water Quality Characteristics	
Hardness (50th percentile)	= 325 mg/l
Chloride (50th percentile)	= 25 mg/l
Sulfate (50th percentile)	= 50 mg/l
pH (50th percentile)	= 7.8 s.u.
Acute Ammonia-N	
Summer pH (75th percentile)	= 7.8 s.u.
Winter pH (75th percentile)	= 7.8 s.u.
Chronic Ammonia-N	
Summer Temperature (75th percentile)	= 25 C
Summer pH (75th percentile)	= 7.8 s.u.
Winter Temperature (75th percentile)	= 10 C
Winter pH (75th percentile)	= 7.8 s.u.

Metals Translators (dissolved to total recoverable)		
	Acute	Chronic
Arsenic	1.000	1.000
Cadmium	0.895	0.860
Chromium III	0.316	0.860
Copper	0.960	0.960
Lead	0.619	0.619
Nickel	0.998	0.997
Selenium	--	1.000
Silver	0.85	--
Zinc	0.978	0.986

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

Effluent Flow	=	3.5 mgd
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Receiving Stream Design Flows	
Q1.10 (Outfall)	= 30 cfs
Q7.10 (Outfall)	= 33 cfs
Q7.10 (Public Water System Intake)	= cfs
Q7.10 (Industrial Water Supply Intake)	= cfs
Q30.10 (Outfall)	= 38 cfs
Q50 (Outfall)	= 166 cfs
Q50 (Public Water System Intake)	= cfs

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

Source of Criteria [1]	A	B	C	D	E	F	G	Bckgrnd (Outfall) (ug/l)	Bckgrnd (Intake) (ug/l)	Remove Mixing Zone? (Yes or Blank)	Samples/ Month	CV	Facility Specific CV? (Yes or No)	CAS Number	Indiana Water Quality Criteria for the Non-Great Lakes System (ug/l) [2]							Preliminary Effluent Limitations [3]							
															Aquatic Life Criteria		Human Health Noncancer Criteria		Human Health Cancer Criteria		Add. PWS Criteria	Concentration (ug/l)		Mass (lbs/day)		Criteria Type [4]	Basis		
															Acute (AAC)	Chronic (CAC)	Drinking (HNC-D)	Nondrinking (HNC-N)	Drinking (HCC-D)	Nondrinking (HCC-N)		(PWS)	Average	Maximum	Average			Maximum	
1 1 8 8								0.5			4	0.6	No	7440439	Cadmium[5][6][7]	5.39	1.74	14	1400				5	5.5	11	0.16	0.32	Tier I	CAC
1 1 8 8								0.59			4	0.6	No	16065831	Chromium (III)[5][7]	1496	195	140	14000				100	748	1501	21.86	43.85	Tier I	CAC
1 1 8 8								0			4	0.6	No	18540299	Chromium (VI)[5]	15.71	10.58	230	25000					16	31	0.47	0.91	Tier I	AAC
													No	7440473	Total Chromium									760	1500	22	45	Tier I	CAC
1 1 1 8								1.6			4	0.6	No	7440508	Copper[5][7]	51.66	31.08	1300	56000					54	110	1.6	3.2	Tier I	AAC
5 6 8 8								0			4	0.6	No	7439987	Molybdenum	84000	3800	120	10000					13000	25000	380	730	Tier II	CAC
1 1 1 1								1.93			4	0.6	No	7440020	Nickel[5][7]	1269.16	140.96	610	4600					460	930	13	27	Tier I	CAC
1 1 1 1								0.51			4	0.6	No	7782492	Selenium (Iotic)[5]		3.1	170	4200				50	12	30	0.35	0.88	Tier I	CAC[10]
1 1 8 8								0			4	0.6	No	7440224	Silver[5][7]	12.21		130	26000					14	29	0.41	0.85	Tier I	AAC
1 1 1 1								1.48			4	0.6	No	7440666	Zinc[5][7]	318.11	320.71	7400	26000					320	650	9.3	19	Tier I	AAC
1 1 1 1								0			4	0.6	No	57125	Cyanide, Free	22	5.2						200	17	35	0.50	1.0	Tier I	CAC

[1] Source of Criteria

- Indiana numeric water quality criterion in 327 IAC 2-1-6(a)(3), Table 6-1, 2-1-6(a)(4), Table 6-1a, 2-1-6(a)(6), 2-1-6(a)(7), Table 6-4 or in 2-1-6(e).
 - "Must not exceed" (MNE) criterion in 327 IAC 2-1-6(a)(8), or 2-1-6(a)(9). This criterion is treated as a 4-day average criterion and is implemented in the same manner as the chronic aquatic life criterion.
 - Industrial water supply (IWS) criterion in 327 IAC 2-1-6(f). This criterion is treated as a 4-day average criterion and is implemented in the same manner as the chronic aquatic life criterion.
 - Acute (1-hour average) and chronic (30-day average) criteria for total ammonia nitrogen in "1999 Update of Ambient Water Quality Criteria for Ammonia," EPA-822-R-99-014, December 1999.
 - Tier I criterion derived using the methodology in 327 IAC 2-1-8.2 or 327 IAC 2-1-8.3 when the required data set is available, or using the methodology in 327 IAC 2-1-8.4, 327 IAC 2-1-8.5 or 327 IAC 2-1-8.6.
 - Tier II criterion derived using the methodology in 327 IAC 2-1-8.2 or 327 IAC 2-1-8.3 when the required data set is not available.
 - Site-specific water quality criterion (SSC) in 327 IAC 2-1-8.9, Table 8.9-1 or developed under 327 IAC 2-1-8.9.
 - Screening value (SV).
 - Numeric interpretation of narrative criterion for toxicity using U.S. EPA recommended water quality criteria for whole effluent toxicity (WET).
 - U.S. EPA national recommended water quality criterion under Section 304(a) of the Clean Water Act (CWA).
- [2] Except as noted, aquatic life criteria and screening values for all metals are in the form of total recoverable metal. Human health criteria and screening values and public water supply screening values for all metals are in the form of total recoverable metal.
- [3] The preliminary effluent limitations (PELs) for metals are in the form of total recoverable metal (with the exception of Chromium (VI) which is in the form of dissolved metal).
- [4] See the table "Indiana Water Quality Criteria for the Non-Great Lakes System" for information on the type and source of criteria.
- [5] Aquatic life criteria and screening values for the above-noted metals are in the form of dissolved metal.
- [6] The above-noted substances are probable or known human carcinogens.
- [7] The above-noted substances have a criterion that is a function of an ambient downstream water quality characteristic. See the table "Indiana Water Quality Criteria for the Non-Great Lakes System" for information on the criterion equation.
- [8] The above-noted substances are bioaccumulative chemicals of concern (BCCs). Beginning January 1, 2004, the water quality criteria for a BCC shall be applied directly to the undiluted discharge for all discharges of a BCC. To apply the water quality criteria for a BCC directly to the undiluted discharge, enter "Yes" in the "Remove Mixing Zone" column.
- [9] Limits based on screening values (as indicated by SV) ARE NOT to be used as water quality-based effluent limitations. These are solely to be used as preliminary effluent limitations.
- [10] The monthly average PEL was set equal to the most stringent WLA because the calculated monthly average PEL exceeded the most stringent WLA and a facility-specific CV was not determined.
- [11] The ambient downstream water quality characteristic must be entered for both chloride and sulfate and it cannot exceed the applicable chronic aquatic life or "must not exceed" criterion for the substance. Preliminary effluent limitations (PELs) for chloride and sulfate shall not be used to establish water quality-based effluent limitations that do not ensure the water quality criteria for both substances are achieved in the receiving water.

From: [VOSS, LEIGH](#)
To: [Hanko, Jay](#)
Subject: FW: City of Plymouth IN0020991 WLA Request
Date: Tuesday, April 16, 2024 1:41:47 PM
Attachments: [image002.png](#)
[image003.png](#)
[image004.png](#)
[image005.png](#)
[image008.png](#)

Can you do the WLA for Plymouth? WLA002764

Leigh Voss, Chief
Municipal NPDES Permits Section
Indiana Department of Environmental Management
Office of Water Quality
317/232-8698



Help us improve!
IDEM values your feedback



From: Andrew Utz <autz@contactcei.com>
Sent: Wednesday, April 10, 2024 8:29 AM
To: VOSS, LEIGH <LVOSS@idem.IN.gov>
Cc: Brady Dryer <bdryer@contactcei.com>
Subject: City of Plymouth IN0020991 WLA Request

**** This is an EXTERNAL email. Exercise caution. DO NOT open attachments or click links from unknown senders or unexpected email. ****

Good Morning Leigh,

We are working with the City of Plymouth to evaluate their local limits. We are requesting a WLA/RPE report for the following for use in this evaluation:

- Cadmium
- Chromium
- Copper
- Cyanide
- Molybdenum
- Nickel
- Selenium
- Silver

- Zinc

Thank you,

Andrew Utz

Compliance Specialist

T: 800-289-1177 | D: 317-215-0857

Corporate Office: 7256 Company Dr., Indianapolis, IN, 46237, USA

Regional Offices: Crown Point, Evansville, Fort Wayne, Indianapolis North, and South Bend, IN | Bowling Green, KY



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