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July 22, 2024

Jason House, Branch Chief
Compliance and Enforcement Branch
Office of Water Quality
Indiana Department of Environmental Management
100 N. Senate Ave.
Indianapolis, IN 46204

Jonathan Schweizer, Staff Environmental Engineer
NPDES Program Branch - Water Division
USEPA Region 5
77 W. Jackson Blvd.
Chicago, IL 60604

Via email: jahouse@idem.IN.gov, schweizer.jonathan@epa.gov

RE: Veedersburg WWTP Response to Follow Up EPA Comments on the Town of Veedersburg, IN Local Limits Addendum Dated July 2, 2024

Mr. Schweizer:

We appreciate your review of the Town of Veedersburg MAHL/Local Limits ReportAddendum.

Following is the Town's response to each follow up comment/question provided in the order in which they were presented:

1. A comparison of the 2021 and 2024 spreadsheets shows a substantial reduction in domestic and commercial loads since 2021 for both copper and nickel. (copper .1512 lb./day in 2021 down to .0726 lb./day in 2024, and nickel .0237 lb./day in 2021 down to .0114 lb./day in 2024). Is this the result of pollutant minimization, i.e., source reduction conducted in accordance with Ms. Venema's response to Comment No. 2?

   It should be noted that the revised 2024 domestic and commercial loading is estimated based on the more recent (2023) WWTP flow rate and the domestic/commercial concentration data from the 2018 and 2019 MAHL sampling events. While updated WWTP influent and effluent data was available, additional domestic/commercial sampling was not completed.

   MasterGuard requested that the Town re-evaluate the Local Limit using a higher hardness more representative of the receiving water, Coal Creek. Utilizing a 250 mg/L hardness for the chronic and acute toxicity criteria with the 2021 spreadsheet flows (which used WWTP and MasterGuard flows from 2019) resulted in much higher calculated nickel local limits (0.48 mg/L monthly, and 0.97 mg/L daily max) than seemed prudent based on the substantial amount of WET testing and corresponding effluent metals testing.

   The increase in MasterGuard flow / total industrial flow to divide the calculated MAIL by appears to be more significant than the domestic loading in determining the proposed local limit. MasterGuard's flow rate represents approximately 30-50% of the total WWTP flow.

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The Town tracked daily flows at the WWTP compared to MasterGuard's discharge during February 2024. The tracking spreadsheet is attached for reference.

2. Why does Table A3 show chronic water quality standards (WQS) of 0.025 mg/l and 0.113 mg/l for copper and nickel respectively, while Table A4 shows chronic WQS of 0.40 mg/l and 1.02 mg/l for the same pollutants? Are the Table A4 numbers actually acute WQS, and should the "chronic" column be deleted?

   *Table A3 is the Chronic Water Quality. Table A4 is the **Acute** Water Quality criteria calculations. The WQS used in Table A4 are the acute water quality standards. The correctly labeled table is attached for reference.*

Please let us know if you have any additional comments or questions.

Sincerely,

FLEIS & VANDENBRINK

Elaine J. Venema

Elaine J. Venema, P.E.
Sr. Project Manager

Enclosures: February 2024 daily flow comparison spreadsheet
Table A4 with correctly labeled WQS column

cc w/ encl: Connie Sichts, Veedersburg
Mary Armacost, IDEM
Kimberly Rohr, IDEM
Holly Zucher, IDEM
Jodie Opie, EPA

Date	Plant Flow	MG Flow	%	Rainfall
1-Feb	0.399	0.125717	32%	
2-Feb	0.299	0.118222	40%	
3-Feb	0.316	0.110936	35%	
4-Feb	0.279	0.076489	27%	
5-Feb	0.292	0.125683	45%	
6-Feb	0.281	0.105624	37%	
7-Feb	0.288	0.124876	43%	
8-Feb	0.292	0.096833	31%	
9-Feb	0.31	0.141252	57%	
10-Feb	0.248	0.072849	31%	
11-Feb	0.237	0.059354	22%	
12-Feb	0.275	0.112466	39%	
13-Feb	0.288	0.127197	46%	
14-Feb	0.277	0.11764	42%	
15-Feb	0.283	0.120027	52%	
16-Feb	0.229	0.057292	26%	0.5
17-Feb	0.219	0.060922	25%	
18-Feb	0.246	0.088604	30%	
19-Feb	0.298	0.142743	52%	
20-Feb	0.275	0.120029	47%	
21-Feb	0.254	0.116562	41%	
22-Feb	0.282	0.110562	39%	0.4
23-Feb	0.287	0.131023	51%	
24-Feb	0.258	0.099036	41%	
25-Feb	0.24	0.080626	29%	
26-Feb	0.279	0.114659	45%	0.1
27-Feb	0.254	0.141568	56%	
28-Feb	0.291	0.160356	55%	
29-Feb	0.283	0.137368	49%	
Average	0.277896552	0.110224655	40%	
Minimum	0.219	0.057292	22%	
Maximum	0.399	0.160356	57%	

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TABLE A4

Local Limits Determination Based on Acute Water Quality Standards

Pollutant	ENVIRONMENTAL CRITERIA AND PROCESS DATA BASE										MAXIMIM LOADING		INDUSTRIAL		
	IU Pollut. Flow (MGD) (Qind)	Avg POTW Flow (MGD) (Qpotw)	Max POTW Flow (MGD) (Qmax)	Stream 7Q10 Exceedence Flow (MGD)	Nonvolatile Removal Fraction (%)	Average Removal Efficiency (%) (Ravg)	Acute WQS (mg/l) (C_{WQS})	Acute WQS (mg/l) (WQBELa)	Domestic an Commercial Conc. (mg/l) (Cdom)	Domestic an Commercial Flow (MGD) (Qdom)	Allowable Headworks (lbs/day) (Lhw)	Domestic/ Commercial (lbs/day) (Ldom)	Allowable Loading (lbs/day) (Lind)	Local Limit (mg/l) (Cind)	Safety Factor (%) (SF)
Arsenic	0.1135	0.253	2.52	2.6	100	48	0.36	0.360	0.0017	0.1395	1.468	0.0020	1.319	1	10
Cadmium	0.1135	0.253	2.52	2.6	100	67	0.011	0.011	0.0001	0.1395	0.070	0.0002	0.063	0.07	10
Chromium	0.1135	0.253	2.52	2.6	100	55	1.162	1.162	0.0019	0.1395	5.434	0.0022	4.888	5	10
Copper	**0.1135**	**0.253**	**2.52**	**2.6**	**100**	**44**	**0.040**	**0.040**	**0.0624**	**0.1395**	**0.153**	**0.0726**	**0.065**	**0.07**	**10**
Cyanide	0.1135	0.253	2.52	2.6	100	69	0.022	0.022	0.0020	0.1395	0.150	0.0024	0.132	0.14	10
Lead	0.1135	0.253	2.52	2.6	100	49	0.172	0.172	0.0020	0.1395	0.714	0.0023	0.640	1	10
Mercury	0.1135	0.253	2.52	2.6	100	60	0.0024	0.002	0.0001	0.1395	0.013	0.0001	0.011	0.01	10
Molybdenum	0.1135	0.253	2.52	2.6	100	20	84	84.000	0.0000	0.1395	222	0.0000	166	176	25
Nickel	**0.1135**	**0.253**	**2.52**	**2.6**	**100**	**28**	**1.02**	**1.017**	**0.0098**	**0.1395**	**2.98**	**0.0114**	**2.670**	**2.822**	**10**
Selenium	0.1135	0.253	2.52	2.6	100	33	0.12	0.120	0.0021	0.1395	0.378	0.0024	0.338	0.36	10
Silver	0.1135	0.253	2.52	2.6	100	75	0.0083	0.008	0.0001	0.1395	0.070	0.0001	0.063	0.07	10
Zinc	0.1135	0.253	2.52	2.6	100	46	0.249	0.249	0.0857	0.1395	0.980	0.0996	0.782	1	10

(Q_{ind}) Industrial User total plant discharge flow in Million Gallons per Day (MGD) that contains a particular pollutan

(Q_{potw}) POTW's average influent flow in MGD

(Q_{7Q10}) IDEM designated the average minimum 7 consecutive day flow that occurs once in 10 years for receiving stream (MGI

(R_{avg}) Average removal efficiency across POTW as percent

(C_{WQS}) State acute water quality standard for a particular pollutant in mg/l. Reference: IDEM Water Quality Standards - 327 IAC 2-1-

(Q_{dom}) Domestic/commercial background flow in MGD

(C_{dom}) Domestic/commercial background concentration for a particular pollutant in mg/l

(L_{hw}) Maximum allowable headworks pollutant loading to the POTW in pounds per day (lbs/day)

(L_{dom}) Domestic/commercial background loading to the POTW for a particular pollutant in pounds per day (lbs/day)

(L_{ind}) Maximum allowable industrial loading to the POTW in pounds per day

(C_{ind}) Industrial allowable local limit for a given pollutant in mg/l

$F_{(nonvol)}$ Fraction of overall POTW removal not due to volatilization as a percen

(SF) Safety factor as a percent.

(Q_{max}) Maximim permitted POTW flow

8.337 Unit conversion factor

$$C_{crit} = C_{ind}$$

$$L_{hw} = \frac{8.337 * Q_{potw} * WQBEL_a}{(1 - R_{avg} * F_{nonvol})}$$

$$L_{ind} = L_{hw} * (1\text{-}SF/100) - L_{dom}$$

$$C_{ind} = \frac{L_{ind}}{Q_{ind} * 8.337}$$

WQBELa = C_{WQS}, no mixing zone credit is allowed by 327 IAC 2-1-