

# Regulating Centralized Waste Treaters

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Industrial Pretreatment Coordinator

City Of Oshkosh

# My Background

- Bachelor's of Science Degree From Stevens Point
  - Majoring in Waste Management
- 2 summer Internships for City of Brookfield WWTP
- 2 Years as an Operator for City of Manitowoc WWTP
- 7 Years as an Operator for City of Oshkosh WWTP
- 2 Years as a Mechanic for City of Oshkosh WWTP
- Going on 2 Years as Pretreatment Coordinator Oshkosh WWTP

# Oshkosh WWTP



# City of Oshkosh Industrial Pretreatment Program Overview

- 4 year 364 day permit length
- Semi-Annual tests for industry and for City are Broken down in permit as 1 sampling event per quarter.
- All samples, flow monitoring, and lab work done by Contracted Lab.
- City pays for all sampling and then bill semi-annually to industries.
- Quarterly billing for Phos, Amm, TSS, and BOD based off pounds.

# Applicable Standards



40 CFR 403

40 CFR 437 (New Source Standards)



NR 211



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Municipal Code Chapter 24

# Centralized Waste Treater

- Located around 2.5 miles from plant
- Discharge does not go through any lift stations
- They provide monthly discharge reports (6000-18000gpd) (300,000-450,000 gallons per month)
- There are 5 sample points
- Not all are used by industry but all are included in permit

# Metals Subcategory (sample point 001)

CYANIDE, TOTAL	<0.015	mg/L
<u>METALS</u>		
ANTIMONY, TOTAL	<0.0080	mg/L
ARSENIC, TOTAL	0.0009	mg/L
CADMIUM, TOTAL	<0.0003	mg/L
CHROMIUM, TOTAL	0.0031	mg/L
COBALT, TOTAL	0.0035	mg/L
COPPER, TOTAL	0.015	mg/L
LEAD, TOTAL	0.0043	mg/L
MERCURY, TOTAL	<0.0002	mg/L
METALS DIGESTION	DONE	
NICKEL, TOTAL	0.059	mg/L
SILVER, TOTAL	<0.0006	mg/L
TIN, TOTAL	<0.010	mg/L
TITANIUM, TOTAL	<0.0004	mg/L
VANADIUM, TOTAL	0.0016	mg/L
ZINC, TOTAL	0.046	mg/L

<u>POLLUTANT</u>	<u>MAXIMUM DAILY LIMIT (mg/L)</u>	<u>MONTHLY AVERAGE LIMIT (mg/L)</u>
<u>Antimony</u>	<u>0.249</u>	<u>0.206</u>
<u>Arsenic</u>	<u>0.162</u>	<u>0.104</u>
<u>Cadmium</u>	<u>0.474</u>	<u>0.0962</u>
<u>Chromium</u>	<u>15.5</u>	<u>3.07</u>
<u>Cobalt</u>	<u>0.192</u>	<u>0.124</u>
<u>Copper</u>	<u>4.14</u>	<u>1.06</u>
<u>Cyanide (In-Plant)*</u>	<u>500</u>	<u>178</u>
<u>Lead</u>	<u>1.32</u>	<u>0.283</u>
<u>Mercury</u>	<u>0.00234</u>	<u>0.000739</u>
<u>Nickel</u>	<u>3.95</u>	<u>1.45</u>
<u>Silver</u>	<u>0.120</u>	<u>0.0351</u>
<u>Tin</u>	<u>0.409</u>	<u>0.120</u>
<u>Titanium</u>	<u>0.0947</u>	<u>0.0618</u>
<u>Vanadium</u>	<u>0.218</u>	<u>0.0662</u>
<u>Zinc</u>	<u>2.87</u>	<u>0.641</u>

# Oils Subcategory Sample Point (002)

Parameter	Results	Units
<u>METALS</u>		
CHROMIUM, TOTAL	0.0065	mg/L
COBALT, TOTAL	<0.0008	mg/L
COPPER, TOTAL	0.013	mg/L
LEAD, TOTAL	<0.0035	mg/L
METALS DIGESTION	DONE	
TIN, TOTAL	<0.010	mg/L
ZINC, TOTAL	0.016	mg/L
<u>ORGANICS</u>		
<u>SEMIVOLATILES</u>		
2-Fluorobiphenyl-surrogate	75	REC %
Bis(2-ethylhexyl)phthalate	<26.2	ug/L
Carbazole	<20	ug/L
Fluoranthene	<14.2	ug/L
Nitrobenzene-d5-surrogate	74	REC %
Octadecane	<20	ug/L
n-Decane	<20	ug/L
p-Terphenyl-d14-surrogate	79	REC %

POLLUTANT	MAXIMUM DAILY LIMIT (mg/L)	MONTHLY AVERAGE LIMIT (mg/L)
<u>Chromium</u>	<u>0.746</u>	<u>0.323</u>
<u>Cobalt</u>	<u>56.4</u>	<u>18.8</u>
<u>Copper</u>	<u>0.500</u>	<u>0.242</u>
<u>Lead</u>	<u>0.350</u>	<u>0.160</u>
<u>Tin</u>	<u>0.335</u>	<u>0.165</u>
<u>Zinc</u>	<u>8.26</u>	<u>4.50</u>
<u>Bis(2-ethylhexyl)phthalate</u>	<u>0.215</u>	<u>0.101</u>
<u>Carbazole</u>	<u>0.598</u>	<u>0.276</u>
<u>n-Decane</u>	<u>0.948</u>	<u>0.437</u>
<u>Fluoranthene</u>	<u>0.0537</u>	<u>0.0268</u>
<u>n-Octadecane</u>	<u>0.589</u>	<u>0.302</u>



# Organics Subcategory Sample Point (003)

## ORGANICS

### SEMIVOLATILES

DONE

2,4,6-Tribromophenol-surrogate	98	REC %
2,4,6-Trichlorophenol	<16.4	ug/L
2-Fluorophenol-surrogate	46.4	REC %
Phenol-d6-surrogate	77	REC %
m & p-Cresol	<14	ug/L
o-Cresol	<11.8	ug/L

<u>POLLUTANT</u>	<u>MAXIMUM DAILY LIMIT</u> (mg/L)	<u>MONTHLY AVERAGE LIMIT</u> (mg/L)
<u>o-cresol</u>	<u>1.92</u>	<u>0.561</u>
<u>p-cresol</u>	<u>0.698</u>	<u>0.205</u>
<u>2,4,6 trichlorophenol</u>	<u>0.155</u>	<u>0.106</u>

# Combined Waste Oil Subpart and Metal Subpart Sample Point (004)

- Grab sample before mixing with any other subpart.
- Industry has not used this discharge.
- Still included in the permit if / when they want to use it.

# Combined Waste Oils - Metals

<u>POLLUTANT</u>	<u>MAXIMUM DAILY LIMIT (mg/L)</u>	<u>MONTHLY AVERAGE LIMIT (mg/L)</u>
<u>Antimony</u>	<u>0.249</u>	<u>0.206</u>
<u>Arsenic</u>	<u>0.162</u>	<u>0.104</u>
<u>Cadmium</u>	<u>0.474</u>	<u>0.0962</u>
<u>Chromium</u>	<u>0.746</u>	<u>0.323</u>
<u>Cobalt</u>	<u>0.192</u>	<u>0.124</u>
<u>Copper</u>	<u>0.500</u>	<u>0.242</u>
<u>Cyanide</u>	<u>500</u>	<u>178</u>
<u>Lead</u>	<u>0.350</u>	<u>0.160</u>
<u>Mercury</u>	<u>0.00234</u>	<u>0.000739</u>
<u>Nickel</u>	<u>3.95</u>	<u>1.45</u>
<u>Silver</u>	<u>0.120</u>	<u>0.0351</u>
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<u>n-Decane</u>	<u>0.948</u>	<u>0.437</u>
<u>Fluoranthene</u>	<u>0.0537</u>	<u>0.0268</u>
<u>n-Octadecane</u>	<u>0.589</u>	<u>0.302</u>

# Factory Sewer (005) Local Limits

<u>Pollutant</u>	<u>Daily Maximum mg/l</u>
<u>Cadmium</u>	<u>1.2</u>
<u>Chromium</u>	<u>7.0</u>
<u>Copper</u>	<u>2.4</u>
<u>Lead</u>	<u>2.0</u>
<u>Mercury</u>	<u>3.4 ug/l</u>
<u>Nickel</u>	<u>2.9</u>
<u>Silver</u>	<u>3.5</u>
<u>Zinc</u>	<u>4.2</u>
<u>Cyanide</u>	<u>1.9</u>
<u>Oil and Grease (mineral based)</u>	<u>100</u>
<u>pH</u>	<u>not &lt; 5.0 nor &gt; 12 standard pH units</u>
<u>BOD</u>	
<u>Total Suspended Solids (TSS)</u>	
<u>Ammonia-nitrogen</u>	
<u>Phosphorus</u>	
<u>TTOs</u>	<u>Sum of all concentrations over 0.01 or submit TTO Cert. Form</u>

# Factory Sewer Sample Point (005)

pH-FIELD	8.3	S.U.
<u>GENERAL ANALYSIS</u>		
CYANIDE, TOTAL	<0.015	mg/L
OIL AND GREASE (HEXANE)	3.1	mg/L
PETROLEUM OIL & GREASE	<1.8	mg/L

FLOW	20225	gpd
<u>GENERAL ANALYSIS</u>		
BOD5	<200 Est: 157	mg/L
pH-LAB	8.5	S.U.
SUSPENDED SOLIDS	22	mg/L
<u>METALS</u>		
CADMIUM, TOTAL	0.0011	mg/L
CHROMIUM, TOTAL	<0.003	mg/L
COPPER, TOTAL	0.014	mg/L
LEAD, TOTAL	<0.007	mg/L
MERCURY, TOTAL	<0.0002	mg/L
METALS DIGESTION	DONE	
NICKEL, TOTAL	0.021	mg/L
SILVER, TOTAL	<0.001	mg/L
ZINC, TOTAL	0.064	mg/L
<u>NUTRIENTS</u>		
AMMONIA NITROGEN	4.1	mg/L
PHOSPHORUS, TOTAL	0.17	mg/L

# Communication Both Ways

