

BASIS FOR DECISION MEMO

Permit Processor: Tom Braum
 Date: November 27, 2019
 Permit No. MI0023680
 Designated Site Name: New Baltimore WWTP

Monitoring Point 001A: Authorization to discharge 1.75 MGD of treated municipal wastewater from Monitoring Point 001A through Outfall 001. Outfall 001 discharges to Crapaud Creek.

| <u>Parameter</u> | <u>Maximum Limits for Quantity or Loading</u> | | | | <u>Maximum Limits for Quality or Concentration</u> | | | | <u>Monitoring Frequency</u> | <u>Sample Type</u> | <u>Basis for Limits</u> |
|---|---|----------------|-----------------|----------------|--|--------------|-----------------|--------------|-----------------------------|-------------------------|-------------------------|
| | <u>Monthly</u> | <u>7-Day</u> | <u>Daily</u> | <u>Units</u> | <u>Monthly</u> | <u>7-Day</u> | <u>Daily</u> | <u>Units</u> | | | |
| Flow | (report) | --- | (report) | MGD | --- | --- | --- | --- | Daily | Report Total Daily Flow | PWJ |
| Carbonaceous Biochemical Oxygen Demand (CBOD ₅) | | | | | | | | | | | |
| May – November | 58/60 | 150 | (report) | lbs/day | 4 | --- | 10 | mg/l | 5x Weekly | 24-Hr Composite | AWT |
| December – April | 160 | 230 | (report) | lbs/day | 11 | --- | 16 | mg/l | 5x Weekly | 24-Hr Composite | WQBEL |
| Total Suspended Solids (TSS) | | | | | | | | | | | |
| May – November | 290 | 440 | (report) | lbs/day | 20 | 30 | (report) | mg/l | 5x Weekly | 24-Hr Composite | PWJ |
| December – April | 350 | 520/530 | (report) | lbs/day | 24 | 36 | (report) | mg/l | 5x Weekly | 24-Hr Composite | BPJ/AD |
| Ammonia Nitrogen (as N) | | | | | | | | | | | |
| May – November | 7.3 | 29/30 | (report) | lbs/day | 0.5 | --- | 2.0 | mg/l | 5x Weekly | 24-Hr Composite | AWT |
| December – March | --- | 67 | (report) | lbs/day | --- | --- | 4.6 | mg/l | 5x Weekly | 24-Hr Composite | WQBEL |
| April | --- | 50 | (report) | lbs/day | --- | --- | 3.4 | mg/l | 5x Weekly | 24-Hr Composite | WQBEL/AD |
| Total Selenium | 0.07 | --- | (report) | lbs/day | 5.0 | --- | (report) | ug/l | Monthly | 24-Hr Composite | WQBEL |
| <i>Total Copper</i> | <i>(report)</i> | --- | --- | <i>lbs/day</i> | <i>(report)</i> | --- | --- | <i>ug/l</i> | <i>2x Annually</i> | <i>24-Hr Composite</i> | |
| Fecal Coliform Bacteria | --- | --- | --- | --- | 200 | 400 | (report) | cts/100 ml | 5x Weekly | Grab | WQS |
| Available Cyanide | 0.08 | --- | (report) | lbs/day | 5.2 | --- | (report) | ug/l | Quarterly | Grab | WQBEL |
| Total Phosphorus (as P) | 15 | --- | (report) | lbs/day | 1.0 | --- | (report) | mg/l | 5x Weekly | 24-Hr Composite | WQBEL |
| | Seasonal Average | | | | Seasonal Average | | | | | | |
| May – September | 12/8.7 | --- | --- | lbs/day | 0.8 | --- | --- | mg/l | Annually | Calculation | PWJ |

| Parameter | Maximum Limits for Quantity or Loading | | | | Maximum Limits for Quality or Concentration | | | | Monitoring Frequency | Sample Type | Basis for Limits |
|-------------------------|--|-------|----------|---------|---|-------|----------|-------|----------------------|-------------|------------------|
| | Monthly | 7-Day | Daily | Units | Monthly | 7-Day | Daily | Units | | | |
| Total Mercury | | | | | | | | | | | |
| Corrected | (report) | --- | (report) | lbs/day | (report) | --- | (report) | ng/l | Quarterly | Calculation | WQC |
| Uncorrected | (report) | --- | --- | lbs/day | (report) | --- | (report) | ng/l | Quarterly | Grab | WQC |
| Field Duplicate | --- | --- | --- | --- | (report) | --- | (report) | ng/l | Quarterly | Grab | WQC |
| Field Blank | --- | --- | --- | --- | (report) | --- | (report) | ng/l | Quarterly | Preparation | WQC |
| Laboratory Method Blank | --- | --- | --- | --- | (report) | --- | (report) | ng/l | Quarterly | Preparation | WQC |
| | 12-Month Rolling Avg | | | | 12-Month Rolling Avg | | | | | | |
| Total Mercury | 0.000029/ 0.000075 | --- | --- | lbs/day | 2.0/3.0 | --- | --- | ng/l | Quarterly | Calculation | WQV |
| | | | | | Minimum Daily | | | | | | |
| pH | --- | --- | --- | --- | 6.5 | --- | 9.0 | S.U. | 5x Weekly | Grab | WQS |
| Dissolved Oxygen | | | | | | | | | | | |
| April – November | --- | --- | --- | --- | 6.0 | --- | --- | mg/l | 5x Weekly | Grab | WQBEL |
| December – March | --- | --- | --- | --- | 5.0 | --- | --- | mg/l | 5x Weekly | Grab | WQBEL |

PERMIT CONDITIONS:

Final Effluent Limitations, Monitoring Point 001A

Quantification Levels and Analytical Methods for Selected Parameters

Additional Monitoring Requirements

Pollutant Minimization Program for Total Mercury

Short Term Waste Characterization Study

Untreated or Partially Treated Sewage Discharge Reporting and Testing Requirements

Facility Contact

Monthly Operating Reports

Asset Management

Continuous Monitoring

Discharge Monitoring Report – Quality Assurance Study Program

Storm Water Pollution Prevention (not required)

Industrial Waste Pretreatment Program

Residuals Management Program for Land Application of Biosolids

NOTES:

Daily concentration and/or loading requirements for various parameters have been added to support the MiWaters Discharge Monitoring Report system requirements.

Storm Water requirements are not needed for the facility because all the site's stormwater is collected, conveyed to the headworks of the treatment plant, and treated. No untreated stormwater from this facility is discharged to a surface water of the state.

Quarterly monitoring was recommended for 1,2-diphenylhydrazine, 2,4,6-trichlorophenol, 3,3-dichlorobenzidine, benzidine, hexachlorobenzene, hexachlorobutadiene, and hexachlorocyclopentadiene because the correct methods and/or quantification levels were not used when testing for these parameters during the previous permit cycle. These parameters have not been included as final effluent limitations because they are not expected in the facility's discharge; however, the compounds and appropriate quantification levels (QL's) are now listed in Part I.A.2. Quantification Levels and Analytical Methods for Selected Parameters, and these parameters are included in the additional monitoring requirements under Part I.A.3.

The previous permit included a Short Term Waste Characterization Study in order to identify whether the listed set of compounds required limiting to protect the receiving water in accordance with applicable water quality standards. All the parameters that were listed in this section are included in Part I.A.3. Additional Monitoring Requirements of this permit so Permits Section determined the Short Term Waste Characterization Study could be removed from the permit.

Less stringent limits are recommended for the daily maximum concentration and loading for Ammonia Nitrogen (as N) for the month of April. Based on a review of the facility's existing effluent quality, Permits Section determined that it is appropriate to retain the current limitations based on antidegradation.

The reporting requirements for total mercury results and associated data for corrected, uncorrected, field duplicate, field blank, and laboratory method blank results have been revised.

Loading limitations for CBOD₅, TSS, Ammonia Nitrogen, and Total Phosphorus have been corrected based on the Water Resources Division's rounding procedure.

The facility was upgraded from a Rotating Biological Contactor (RBC) treatment system to an Oxidation Ditch treatment system in 2010. Prior to this upgrade, the facility's final effluent limitations for CBOD₅ and Ammonia Nitrogen were performance based. Because of the treatment system upgrade, new limitations, including redefined seasons, were developed for these parameters based on AWT and included in the permit version issued in 2010. During the issuance of the previous permit (issued 2015), the monitoring seasons for TSS were changed to be consistent with the previously redefined seasons for CBOD₅; however, the more stringent effluent limits for TSS of 36 mg/l and 24 mg/l that had been in place during the comparable discharge season were maintained under the basis of antibacksliding. Based on a review of the facility's existing effluent quality, Permits Section has determined it continues to be appropriate to retain these limits for TSS under antidegradation.

The final effluent limitation for Total Copper has been removed. Data from twice annual samples indicated there was not reasonable potential for copper to be discharged at concentrations greater than Michigan WQS.

A final effluent limitation for Total Selenium has been added. Data collected in accordance with Part I.A.2. Additional Monitoring Requirements indicated there is reasonable potential for total selenium to be discharged at concentrations greater than Michigan WQS.

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Limit Change Key

Normal Type = existing requirement - carried over from previous version of permit

Bold Type = new requirement - not in previous version of permit

Italic = deleted requirement - not carried over from previous version of permit

Basis for Limits Key

BPJ - Best Professional Judgment of appropriate treatment technology-based effluent limits in the absence of applicable federal guidelines

WQBEL - Water Quality-Based Effluent Limit

AWT - Advanced Wastewater Treatment

WQC - Water Quality Concern

WQS - Water Quality Standard

WQV - Water Quality Variance

PWJ - Permit Writer's Judgment

AD – Antidegradation