PHOSPHORUS TMDLs IN OHIO

- Ohio EPA has recently adopted final TMDLs for Phosphorus on Little Beaver Creek (approved by U.S. EPA on September 28, 2005), the Upper Sandusky River (approved September 29, 2004), the Lower Cuyahoga River (approved September 26, 2003) and the Little Miami River (approved July 2, 2002).
- In the absence of an applicable aquatic life criterion for Phosphorus, these TMDLs were based upon "target values" identified by Ohio EPA using an internal "technical guidance" document on the *Association Between Nutrients, Habitat and the Aquatic Biota in Ohio Rivers and Streams* (Ohio EPA, 1999)[www.epa.state.oh.us/dsw/guidance/guidance.html]
- The "target values" for Phosphorus vary depending on the ecoregion, use designation and drainage area of the river. For warmwater habitat streams in the Little Beaver Creek watershed, the values used range from 0.08 to 0.3 mg/l.
- In general terms, the *Association* document uses a "reference site" approach (which looks at the Phosphorus levels observed in pristine, un-impacted reference streams) rather than an "effects based" approach (which would attempt to determine what levels of Phosphorus actually cause impairment to the aquatic biological community).
- The *Association* document recognizes, but then ignores, the fact that Ohio streams can and do achieve full attainment of the applicable biological criteria with Phosphorus levels higher than the reference-site "target" values.
- To implement the Phosphorus TMDLs on the Little Miami and upper Sandusky Rivers, Ohio EPA has been imposing concentration limits of 1.0 mg/l (a common technology-based limit for POTWs), coupled with a "special condition" that also requires the POTW to comply with the annual load established in the TMDL (expressed as kg/year). Compliance with the annual load limit is determined by a formula that multiplies the median daily effluent concentration measured in the POTW's discharge by the median daily effluent flow rate of the POTW for the last 5 calendar years. Credits are allowed for alternative source reductions procured by the POTW. Compliance schedules have been allowed in some permits, but not in others. [*Compare* the attached excerpts from the NPDES permits for Xenia and Crestline.]
- Perhaps because of the "special condition" approach to implementation, and the availability of extended compliance schedules, no challenges to these TMDLs have yet been filed. However, one city in Ohio is now faced with a mandatory 95% reduction in Phosphorus load that is likely to cause its single largest employer to relocate.

LEGAL ISSUES

- Section 303 of the Clean Water Act requires the State to establish TMDLs "at a level necessary to implement the applicable water quality standards."
- Federal regulations at 40 CFR § 130.7(c)(1) similarly require TMDLs to be established at levels necessary to attain and maintain applicable "narrative and numerical" water quality standards.

- Ohio EPA guidance on the "Legal and Technical Basis for Nutrient Target Values Used in TMDL Projects (Ohio EPA, 2000) suggests that the state can base a TMDL for Phosphorus on the "target values" from the *Association* document, even though it recognizes that these values are only "suggested guidelines" that are "not codified in regulations." [Available at: www.epa.state.oh.us/dsw/guidance/guidance.html]
- State courts in South Carolina, Tennessee and West Virginia have held that their state agencies acted improperly in establishing TMDLs or setting permit limits using similar approaches, because the target values being used had not been formally promulgated as rules in accordance with state administrative law requirements.
- U.S. EPA's action in approving the state's TMDL submission can be challenged in Federal District Court under the Administrative Procedure Act. *See Longview Fibre Co. v. Rasmussen*, 980 F.2d 1307 (9th Cir. 1997); *Friends of the Earth v. U.S. EPA*, 333 F.3d 184 (D.C. Cir. 2003); *Sierra Club v. Leavitt*, 2005 U.S. Dist. LEXIS 35628 (N.D. Fla. 2005).

Application No. OH0028193

Issue Date: April 4, 2003

Effective Date: May 1, 2003

Expiration Date: January 31, 2008

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),

City of Xenia

is authorized by the Ohio Environmental Protection Agency, hereinafter referred to as "Ohio EPA," to discharge from the Ford Road wastewater treatment works located at 779 Ford Road, Xenia, Ohio, Greene County and discharging to the Little Miami 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.

_____
Christopher Jones
Director

Total Pages: 39

Part I, A. - INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

2. During the period beginning on the effective date of this pemit and lasting until 36 months after the effective date, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from the following outfall: 1PD00015001 . See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

Table - Final Outfall - 001 - Interim

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units				Loading* kg/day					
Parameter	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly	Measuring Frequency	Sampling Type	Monitoring Months
00010 - Water Temperature - C	-	-	-	-	-	-	-	1/Day	Continuous	All
00300 - Dissolved Oxygen - mg/l	-	6.0	-	-	-	-	-	1/Day	Multiple Grab	Summer
00300 - Dissolved Oxygen - mg/l	-	6.0	-	-	-	-	-	1/Day	Multiple Grab	Winter
00515 - Residue, Total Dissolved - mg/l	-	-	-	-	-	-	-	1 / 2 Weeks	Composite	All
00530 - Total Suspended Solids - mg/l	-	-	30	20	-	409	273	3/Week	Composite	Summer
00530 - Total Suspended Solids - mg/l	-	-	45	30	-	613	409	3/Week	Composite	Winter
00552 - Oil and Grease, Hexane Extr Method - mg/l	10	-	-	-	-	-	-	1/Month	Grab	All
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	4.5	3.0	-	61	41	3/Week	Composite	Summer
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	18	12	-	245	164	3/Week	Composite	Winter
00625 - Nitrogen Kjeldahl, Total - mg/l	-	-	-	-	-	-	-	1/Month	Composite	All
00630 - Nitrite Plus Nitrate, Total - mg/l	-	-	-	-	-	-	-	1/Month	Composite	All
00665 - Phosphorus, Total (P) - mg/l	-	-	-	-	-	-	-	1/Week	Composite	All
00719 - Cyanide, Free - mg/l	-	-	-	-	-	-	-	1/Quarter	Grab	Quarterly
01009 - Barium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01074 - Nickel, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01082 - Strontium, Total (Sr) - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01094 - Zinc, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01113 - Cadmium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01114 - Lead, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units				Loading* kg/day					
Parameter	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly	Measuring Frequency	Sampling Type	Monitoring Months
01118 - Chromium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01119 - Copper, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01220 - Chromium, Dissolved Hexavalent - ug/l	31	-	-	-	0.43	-	-	1/Month	Grab	All
31616 - Fecal Coliform - #/100 ml	-	-	2000	1000	-	-	-	3/Week	Grab	Summer
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	Continuous	All
50060 - Chlorine, Total Residual - mg/l	0.038	-	-	-	-	-	-	1/Day	Multiple Grab	Summer
50092 - Mercury, Total (Low Level) - ng/l	300	-	-	43	0.004	-	0.0006	1/Month	Grab	All
61941 - pH, Maximum - S.U.	9.0	-	-	-	-	-	-	1/Day	Multiple Grab	All
61942 - pH, Minimum - S.U.	-	6.5	-	-	-	-	-	1/Day	Multiple Grab	All
80082 - CBOD 5 day - mg/l	-	-	23	15	-	313	204	3/Week	Composite	Summer
80082 - CBOD 5 day - mg/l	-	-	40	25	-	545	341	3/Week	Composite	Winter

NOTES for Station Number 1PD00015001:

* Effluent loadings based on average design flow of 3.6 MGD.
- Total residual chlorine - See Part II, Item J.
- Phosphorus - See Schedule of Compliance, Item B.
- Nickel, zinc, cadmium, lead, total chromium, and copper - See Part II, Item N.
- Dissolved hexavalent chromium - See Part II, Items O and P.
- Mercury - See Schedule of Compliance, Item C.1 and Part II, Items O and P.
- Free cyanide - See Part II, Item R.

Part I, A. - FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning 36 months after 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 the following outfall: 1PD00015001 . See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

Table - Final Outfall - 001 - Final

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units				Loading* kg/day					
Parameter	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly	Measuring Frequency	Sampling Type	Monitoring Months
00010 - Water Temperature - C	-	-	-	-	-	-	-	1/Day	Continuous	All
00300 - Dissolved Oxygen - mg/l	-	6.0	-	-	-	-	-	1/Day	Multiple Grab	Winter
00300 - Dissolved Oxygen - mg/l	-	7.0	-	-	-	-	-	1/Day	Multiple Grab	Summer
00515 - Residue, Total Dissolved - mg/l	-	-	-	-	-	-	-	1 / 2 Weeks	Composite	All
00530 - Total Suspended Solids - mg/l	-	-	45	30	-	613	409	3/Week	Composite	Winter
00530 - Total Suspended Solids - mg/l	-	-	30	20	-	409	273	3/Week	Composite	Summer
00552 - Oil and Grease, Hexane Extr Method - mg/l	10	-	-	-	-	-	-	1/Month	Grab	All
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	2.3	1.5	-	31.3	20.4	3/Week	Composite	Summer
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	18	12	-	245	164	3/Week	Composite	Winter
00625 - Nitrogen Kjeldahl, Total - mg/l	-	-	-	-	-	-	-	1/Month	Composite	All
00630 - Nitrite Plus Nitrate, Total - mg/l	-	-	-	-	-	-	-	1/Month	Composite	All
00665 - Phosphorus, Total (P) - mg/l	-	-	-	-	-	-	-	1/Week	Composite	Winter
00665 - Phosphorus, Total (P) - mg/l	-	-	1.5	1.0	-	20.4	13.6	1/Week	Composite	Summer
00719 - Cyanide, Free - mg/l	-	-	-	-	-	-	-	1/Quarter	Grab	Quarterly
01009 - Barium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01074 - Nickel, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01082 - Strontium, Total (Sr) - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01094 - Zinc, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01113 - Cadmium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units				Loading* kg/day					
Parameter	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly	Measuring Frequency	Sampling Type	Monitoring Months
01114 - Lead, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01118 - Chromium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01119 - Copper, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
01220 - Chromium, Dissolved Hexavalent - ug/l	24	-	-	17	0.33	-	0.23	1/Month	Grab	All
31616 - Fecal Coliform - #/100 ml	-	-	2000	1000	-	-	-	3/Week	Grab	Summer
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	Continuous	All
50060 - Chlorine, Total Residual - mg/l	0.038	-	-	-	-	-	-	1/Day	Multiple Grab	Summer
50092 - Mercury, Total (Low Level) - ng/l	300	-	-	43	0.004	-	0.0006	1/Month	Grab	All
61941 - pH, Maximum - S.U.	9.0	-	-	-	-	-	-	1/Day	Multiple Grab	All
61942 - pH, Minimum - S.U.	-	6.5	-	-	-	-	-	1/Day	Multiple Grab	All
80082 - CBOD 5 day - mg/l	-	-	15	10	-	204	136	3/Week	Composite	Summer
80082 - CBOD 5 day - mg/l	-	-	40	25	-	545	341	3/Week	Composite	Winter

NOTES for Station Number 1PD00015001:

* Effluent loadings based on average design flow of 3.6 MGD.
- Total residual chlorine - See Part II, Item J.
- Phosphorus - See Schedule of Compliance, Item B.
- Nickel, zinc, cadmium, lead, total chromium, and copper - See Part II, Item N.
- Dissolved hexavalent chromium - See Part II, Items O and P.
- Mercury - See Schedule of Compliance, Item C.1 and Part II, Items O and P.
- Free cyanide - See Part II, Item R.

Part I, C - Schedule of Compliance

A. Upper LMR TMDL Phosphorus Reduction Implementation Schedule

As soon as possible, but not later than the dates developed in accordance with the following schedule, the permittee shall achieve the final effluent limits in Part I. A. of this permit, and an allowable total phosphorus load of 6.8 kg/day during the months of May through October. The permittee may achieve the allowable phosphorus load by reducing phosphorus loads discharged through wastewater treatment plant station number 1PD00015001 and/or by implementing alternative load reduction projects that are reviewed by and are acceptable to Ohio EPA.

The allowable total phosphorus load may be expressed as:

6.8 kg/day total phosphorus = (med Qeff x med Peff x F) - (estimated total phosphorus load reduction from alternative load reduction initiatives)

where:

med Qeff = 5-year median daily effluent flow rate during May - October (MGD). This flow value shall be the median of the daily flows at station number 1PD00015001 during May - October for the previous 5 consecutive calendar years.

med Peff = median daily effluent total phosphorus concentration during May - October (mg/l)

F = conversion factor

Alternative load reductions = estimated average daily total phosphorus load reductions during May - October achieved since 1998

1. The permittee shall immediately begin an evaluation of the capability of the existing treatment facilities to reduce the effluent loadings of total phosphorus. Both operational procedures, unit process configuration, and other appropriate measures shall be evaluated.

2. Not later than 12 months from the effective date of this permit, the permittee shall implement measures identified in the evaluation that can reasonably be expected to maximize the ability of the existing treatment facilities to achieve a final effluent limit of 1.0 mg/l total phosphorus (30-day average) during the months of May - October. Permits To Install shall be obtained if necessary.

3. If the reduction target of 1.0 mg/l total phosphorus (30-day average) during the months of May - October is not achieved by implementing measures identified in the evaluation, not later than 18 months from the effective date of this permit, the permittee shall submit a general plan to the Ohio EPA Southwest District Office to achieve the final effluent limit. [Event Code 1299]

The general plan for achieving the final effluent limit shall address, as a minimum, the following:

a. The treatment technology required to achieve the Phase 1 reduction target.
b. Cost estimates of required improvements and operation, maintenance, and replacement costs for the improved facility.
c. A fixed date compliance schedule for meeting the final effluent limit for phosphorus. As a minimum, this schedule should include dates for: submission of approvable detail plans; completion of construction; attainment of operational level; notification of the Ohio EPA Southwest District Office within 14 days of attaining operational level; and achieving the final effluent limit for phosphorus not later than 36 months from the effective date of this permit.
d. The financial mechanism to be used to fund the required improvements, operation, maintenance, and replacement costs.

4. The permittee shall attain compliance with the final effluent limit of 1.0 mg/l total phosphorus (30-day average) during the months of May - October not later than 36 months from the effective date of this permit. (Event Code 5699)

5 By complying with the final effluent limit of 1.0 mg/l total phosphorus (30-day average) during the months of May - October, the permittee will be authorized by this NPDES permit to discharge a total phosphorus load that is greater than its final allowable load of 6.8 kg/day.

Not later than 54 months from effective date of this permit, the permittee shall submit a general plan for additional loading reductions necessary to achieve the final allowable phosphorus load of 6.8 kg/day. In developing the plan, the permittee shall evaluate various alternatives for achieving the additional loading reduction. The alternatives may include, but are not limited to: implementation of nonpoint source loading reduction projects; implementation of projects that increase the capacity of the receiving waters to assimilate total phosphorus loads; entering into cooperative agreements with other parties to implement projects that will achieve the cumulative, basin-wide point source loading reductions identified in the report "Total Maximum Daily Loads for the Upper Little Miami River"; and/or upgrading the existing wastewater treatment facilities. (Event Code 1299)

Any alternative load reduction projects or other initiatives identified and undertaken by the permittee to achieve the additional phosphorus loading reductions must comply with the wasteload allocations (WLA) and load allocations (LA) assigned in the Upper Little Miami River TMDL report. Loading reductions achieved by the permittee must be applied to meeting the point source WLA for phosphorus. After review and acceptance by Ohio EPA, any portion of loading reductions achieved by one stakeholder may be credited to it or to any other stakeholder(s) so long as such credit is not duplicated.

The general plan for achieving the additional loading reductions shall address, as a minimum, the following:

a. The alternative(s) chosen to achieve the loading reductions.
b. Cost estimates of implementing the chosen alternatives, including any applicable operation, maintenance, and replacement costs.
c. A fixed date compliance schedule for meeting the reduction targets for total phosphorus during the months of May - October. As a minimum, this schedule should include dates for: submission of approvable detail plans (if applicable); completion of implementation/construction; attainment of operational level; notification of the Ohio EPA Southwest District Office within 14 days of attaining operational level (if applicable); and achieving the additional loading reductions required by Schedule of Compliance Item A.6. not later than 118 months from the effective date of this permit.
d. The financial mechanism to be used to fund the required improvements, operation, maintenance, and replacement costs (if applicable).
e. For alternatives other than upgrading the existing wastewater treatment facilities, demonstrate reasonable assurance by providing information that: the proposed projects are technically feasible based on accepted modeling, data from similar projects, and commonly accepted professional expectations; there is a reasonable expectation that the proposed controls will be implemented; and other appropriate measures identified by the permittee.

6. The permittee shall achieve the final allowable total phosphorus load of 6.8 kg/day during the months of May - October not later than 118 months from the effective date of this permit. (Event Code 5699)

This NPDES permit, Ohio EPA permit number 1PD00015*JD, expires on January 31, 2008. This Schedule of Compliance includes an item that extends beyond the term of the permit. The requirements of Schedule of Compliance Item A.6., including the compliance date, will be included in permit 1PD00015 when it is renewed.

In the event that evidence becomes available demonstrating to the Director's satisfaction that biological indices applicable to the Upper Little Miami River Basin are in full attainment, or that monitoring data collected at the lower end of the TMDL study area show that the May - October median total phosphorus concentration measured at this site is less than or equal to the 0.17 mg/l instream target for two consecutive years, the Director will evaluate any proposed modification of the TMDL Implementation Schedule included in this NPDES permit.

This permit may be modified or revoked and reissued for the following reasons:

- To include new or revised conditions based on new information resulting from implementation of the TMDL recommendations.

- To include new or revised conditions based on plans submitted by the permittee to upgrade the existing wastewater treatment facilities to achieve the allowable total phosphorus load of 6.8 kg/day during the months of May through October.

B. Compliance Schedule for Mercury Variance

1. The permittee shall use EPA Method 1631 to comply with the mercury monitoring requirements of this permit. The method detection level for Method 1631 is 0.2 ng/l. The quantification level is 1.0 ng/l. Because the quantification level for Method 1631 is lower than the mercury effluent limits, it is possible to directly evaluate compliance with the limits.

2. During the period beginning on the effective of this permit and lasting until this permit is modified or renewed, an interim quantification level (QL) of 1.0 ug/l (1000 ng/l) shall apply to analytical results reported for mercury. Any analytical result reported less than the interim QL shall be considered to be in compliance with that limit.

REPORTING:

All analytical results, even those below the interim QL shall be reported. Analytical results are to be reported as follows:

a. Results above the interim QL: Report the analytical result for mercury.

b. Results above the MDL for method 1631, but below the interim QL: Report the analytical result, even though it is below the interim QL.

c. Results below the MDL for method 1631: Analytical results below the method detection limit shall be reported as "below detection" using the reporting code "AA".

Application No. OH0020664

Issue Date: June 21, 2004

Effective Date: August 1, 2004

Expiration Date: July 31, 2009

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),

City of Crestline

is authorized by the Ohio Environmental Protection Agency, hereinafter referred to as "Ohio EPA," to discharge from the City of Crestline wastewater treatment works located at Westgate Drive, Crestline, Ohio, Crawford County and discharging to Westerly Creek 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.

_____
Christopher Jones
Director

Total Pages: 29

Part I, A. - INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date of this permit and lasting until 36 months after the effective date of the permit, the permittee is authorized to discharge in accordance with the following limitations and monitoring requirements from the following outfall: 2PC00006001. See Part II, OTHER REQUIREMENTS, for locations of effluent sampling.

Table - Final Outfall - 001 - Interim - 001 - Final

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units				Loading* kg/day					
Parameter	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly	Measuring Frequency	Sampling Type	Monitoring Months
00010 - Water Temperature - C	-	-	-	-	-	-	-	1/Day	Maximum Indicating Thermometer	All
00300 - Dissolved Oxygen - mg/l	-	5.0	-	-	-	-	-	1/Day	Multiple Grab	All
00400 - pH - S.U.	9.0	6.5	-	-	-	-	-	1/Day	Multiple Grab	All
00530 - Total Suspended Solids - mg/l	-	-	18	12	-	65	43	3/Week	Composite	All
00552 - Oil and Grease, Hexane Extr Method - mg/l	10	-	-	-	-	-	-	1 / 2 Weeks	Grab	All
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	1.2	0.8	-	4.3	2.9	3/Week	Composite	Summer
00610 - Nitrogen, Ammonia (NH3) - mg/l	-	-	3.5	2.3	-	12.6	8.3	3/Week	Composite	Winter
00625 - Nitrogen Kjeldahl, Total - mg/l	-	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
00630 - Nitrite Plus Nitrate, Total - mg/l	-	-	-	-	-	-	-	1/Month	Composite	All
00665 - Phosphorus, Total (P) - mg/l	-	-	1.5	1.0	-	5.4	3.6	1/Week	Composite	All
01074 - Nickel, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Month	Composite	All
01094 - Zinc, Total Recoverable - ug/l	360	-	-	322	1.3	-	1.2	1/Month	Composite	All
01113 - Cadmium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Month	Composite	All
01114 - Lead, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Month	Composite	All
01118 - Chromium, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Month	Composite	All
01119 - Copper, Total Recoverable - ug/l	-	-	-	-	-	-	-	1/Month	Composite	All
01220 - Chromium, Dissolved Hexavalent - ug/l	-	-	-	-	-	-	-	1/Month	Grab	All
31616 - Fecal Coliform - #/100 ml	-	-	2000	1000	-	-	-	3/Week	Grab	Summer

Effluent Characteristic	Discharge Limitations							Monitoring Requirements		
	Concentration Specified Units				Loading* kg/day					
Parameter	Maximum	Minimum	Weekly	Monthly	Daily	Weekly	Monthly	Measuring Frequency	Sampling Type	Monitoring Months
50050 - Flow Rate - MGD	-	-	-	-	-	-	-	1/Day	Continuous	All
50092 - Mercury, Total (Low Level) - ng/l	-	-	-	-	-	-	-	1/Month	Grab	All
61426 - Chronic Toxicity, Ceriodaphnia dubia - TUc	1.7	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
61428 - Chronic Toxicity, Pimephales promelas - TUc	1.7	-	-	-	-	-	-	1/Quarter	Composite	Quarterly
80082 - CBOD 5 day - mg/l	-	-	15	10	-	54	36	3/Week	Composite	All

Notes for Station Number 2PC00006001:

* Effluent loadings based on average design flow of 0.95 MGD.

Mercury - See Part II, Item Q and Part I.C, Schedule of Compliance, Item A.

Whole effluent toxicity - The annual average limit for chronic toxicity for both Ceriodaphnia dubia (reporting code 61426) and Pimephales promelas (reporting code 61428) is 1.0 TUc. See Part II, Item O.

Phosphorus - See Part II, Item R, special condition for compliance with Upper Sandusky River Watershed TMDL phosphorus load.

b. Definitions

TUc = Chronic Toxicity Units = 100/IC25

The above equation for chronic toxicity units 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):

TUc = Chronic Toxic Units = 100/square root of (NOEC x LOEC)

P. A composite sample of sewage sludge collected at Station 581 (for non-EQ sewage sludge) shall be monitored for dioxin in sewage sludge, as the term dioxin is defined in rule 3745-40-01 of the Ohio Administrative Code, and the results, once during the term of the permit, reported to the Ohio EPA as per rule 3745-40-06 of the Ohio Administrative Code.

Q. The permittee shall use EPA Method 1631 to comply with the mercury monitoring requirements of this permit. The method detection level (MDL) for Method 1631 is 0.2 ng/l. The quantification level for Method 1631 is 0.5 ng/l.

R. Upper Sandusky River Watershed TMDL Phosphorus Load Compliance

The permittee shall achieve the final effluent limits for total phosphorus in Part I. A. of this permit and an allowable total phosphorus load of 2.4 kg/day.

The allowable total phosphorus load may be expressed as:

2.4 kg/day total phosphorus = med Qeff x med Peff x F

where:

med Qeff = 5-year median daily effluent flow rate (MGD). This flow value shall be the median of the daily flows at station number 2PC00006001 for the previous 5 consecutive calendar years.

med Peff = median daily effluent total phosphorus concentration during January - December (mg/l).

F = conversion factor, 3.7854.

S. Within 12 months of the effective date of this permit, the permittee shall submit the storm water data required by 40 CFR 122.26(c)[Application Form 2F testing]. This includes data for oil&grease, pH, BOD5, COD, Total Suspended Solids, Total Phosphorus, Total Kjehldahl Nitrogen and Nitrate-Nitrite Nitrogen collected under the storm runoff conditions specified in the above rule. The data shall be submitted to the appropriate district office.