



**Environmental
Protection Agency**

John R. Kasich, Governor

Mary Taylor, Lt. Governor

Scott J. Nally, Director

January 9, 2011

RE: LORAIN COUNTY
CITY OF OBERLIN WWTP
CEI
NPDES NO. 3PD00025

City of Oberlin
Department of Public Works
85 South Main Street
Oberlin, OH 44074
Attn: Jeff Baumann, Public Works Director

Dear Mr. Baumann:

On December 13, 2011, a Compliance Evaluation Inspection (CEI) was conducted at the City of Oberlin Wastewater Treatment Plant WWTP. Present during the inspection were Mr. Steve Hoffert, representing the City of Oberlin; Mr. John Sabo, of the Lorain County Health Department; and this writer. The purpose of the December 13th inspection was to evaluate the facility's compliance with National Pollutant Discharge Elimination System (NPDES) Permit effluent limits, as well as the terms and conditions of the permit. The last CEI was conducted on January 29, 2009.

Observations made during the December 13th inspection included the following:

- 1) The headworks barscreen was in use. Replacement of the barscreen is anticipated during 2012. The existing comminutor is not operational, and is planned for removal in the future.
- 2) Aerated grit chamber contents were turbid and gray in color.
- 3) The flow equalization basins were in use, and contained a couple of feet of storm water which had been diverted there during a recent precipitation event. The flow equalization basin contents were in the process of being bled back into the Wastewater Treatment Plant (WWTP) headworks.
- 4) The circular primary clarifier was in use, its contents were turbid gray, and the effluent trough was clean and free of solids. Approximately 90% of the influent flow is directed to the circular clarifier during normal influent flow rates.
- 5) The old rectangular primary settling tank was not in use, but is used when influent flows are greater than 2.0 MGD.
- 6) A second old rectangular settling tank is used as a gravity sludge thickener.
- 7) Grease skimmed off the primary clarifiers is collected in a dumpster, and disposed of at the Republic (former BFI) Landfill.

- 8) The WWTP was being operated in the contact/stabilization mode, with solids concentrations in the contact and stabilization tanks being maintained at approximately 3000 ppm, and 10,000 ppm, respectively. Stabilization tank contents were medium brown with crisp white foam.
- 9) The southern-most stabilization tank is also used as an air stripper for sludge during sludge pressing operations.
- 10) Both final settling tanks were in use at the time of the inspection, and contents of the final settling tanks were the typical turbid gray color. Effluent weirs of the final settling tanks were free of solids or algal growth.
- 11) The nitrification tower was in operation.
- 12) All three rapid sand filters were online. Backwash of the rapid sand filters is based upon flow rate to the filters, or time based, if not backwashed after a four hour period of time has passed without backwashing. The sand/media in the rapid sand filters was supplemented in 2011.
- 13) UV disinfection facilities were not in use, as effluent disinfection is not required November 1st through April 30th. The UV facilities consist of two banks of bulbs, with eight bulbs in each bank. The UV facilities were rewired since the last inspection.

During the time period since the last inspection (January 1, 2009 through December 1, 2011), the Oberlin WWTP has reported the following NPDES Permit final effluent numeric violations in their electronic Discharge Monitoring Reports (eDMR):

**OBERLIN WWTP
 NPDES PERMIT NO. 3PD00025
 NUMERIC EFFLUENT VIOLATIONS
 (JAN. 1, 2009 – DEC. 1, 2011)**

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
February 2009	Total Suspended Solids	7D Qty	102	104.533	2/8/2009
April 2009	Total Suspended Solids	7D Qty	102	107.080	4/15/2009
April 2009	Nitrogen, Ammonia (NH3-N)	7D Qty	34	43.5023	4/15/2009
August 2009	Phosphorus, Total (P)	30D Conc	1.0	1.0045	8/1/2009
March 2010	Nitrogen, Ammonia (NH3-N)	30D Qty	23	25.3812	3/1/2010
March 2010	Total Suspended Solids	7D Qty	102	160.792	3/8/2010
March 2010	Nitrogen, Ammonia (NH3-N)	7D Qty	34	47.5364	3/8/2010
August 2010	pH, Minimum	1D Conc	6.5	6.4	8/30/2010
March 2011	Nitrogen, Ammonia (NH3-N)	30D Qty	23	35.7742	3/1/2011
March 2011	Nitrogen, Ammonia (NH3-N)	7D Qty	34	52.8928	3/1/2011
March 2011	Total Suspended Solids	7D Qty	102	245.631	3/8/2011
March 2011	Nitrogen, Ammonia (NH3-N)	7D Qty	34	69.1352	3/8/2011
March 2011	Phosphorus, Total (P)	7D Qty	8.5	10.4096	3/8/2011
April 2011	Nitrogen, Ammonia (NH3-N)	30D Qty	23	23.4170	4/1/2011

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
May 2011	Nitrogen, Ammonia (NH3-N)	30D Qty	11	12.1982	5/1/2011
May 2011	Nitrogen, Ammonia (NH3-N)	7D Qty	17	22.0443	5/1/2011

Items discussed during the December 13th inspection included the following:

- 1) The annual report on the Free Cyanide Pollutant Minimization Program (PMP) is due by February 15, 2012.
- 2) The General Mercury Variance granted to the City requires the submittal of a mercury Pollutant Minimization Program (PMP) annual report by February 15th of each year. This annual report is also due in February 2012. There have been no mercury exceedances since the last inspection.
- 3) There has been one bypass of the storm water storage basins in the past year (Spring 2011).
- 4) Control of the entire WWTP is available via cell phone or laptop, from any remote location, since the PLC programming / SCADA system software was updated.
- 5) A PTI was issued to Oberlin for replacement of the influent screening equipment. The City will have to rebid the project in 2012, but plans still remain for construction of the project in 2012.
- 6) A 30 KW generator was installed to provide backup power for the digester. Capital has been budgeted for the purchase of a backup 200 KW generator to serve the remainder of the WWTP.
- 7) Hydrogen peroxide is utilized in cleaning the rapid sand filters.
- 8) There are 6 full time employees at the WWTP, providing coverage at the WWTP 10 to 12 hours per day, seven days per week, 365 days per year. The SCADA allows continuous monitoring of the WWTP 24 hours per day.
- 9) The Oberlin WWTP lab runs analysis for all NPDES permitted parameters, with the exception of heavy metals, total kjeldahl nitrogen, cyanide, and oil & grease, which are sent to Water and Wastewater Labs in Cleveland, OH. Low Level Mercury is analyzed by Jones & Henry Labs.

DMRQA Study Number 31 was run in July 2011, and analytical results were all within the acceptable range.

- 10) Sludge generated at the Oberlin WWTP is treated and stored in two lagoons at the WWTP. Approximately 1.2 million gallons of the 6.5% solids sludge was recently pressed, and is being stored in the sludge drying beds onsite. As soon as the sludge can be land applied in the spring, the 18% solids Class B pressed sludge will be hauled by Agri-Sludge, and spread on farm sites in Lorain County.
- 11) Installation of a permanent sludge press is being considered for next year. Installation of a concrete pad and filter press will require issuance of a PTI from the Ohio EPA.
- 12) Screenings and grit removed at the WWTP are disposed of at the Republic (formerly BFI) landfill in Lorain County.

The City of Oberlin should continue implementation of operation and maintenance practices that will enable the WWTP to consistently meet its NPDES Permit effluent limits. The City should also continue with the implementation of the PMP for both mercury and free cyanide.

Should you have any questions or comments on the contents of this letter, please contact me at (330) 963-1110.

Respectfully,



Charles E. Allen
Environmental Engineer
Division of Surface Water

CA/cs