



State of Ohio Environmental Protection Agency

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Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Chris Korleski, Director

February 8, 2008

RE: PUBLIC WASTEWATER  
CAMPBELL WWTP  
NPDES PERMIT NO. 3PD00008  
2008 CEI

Board of Mahoning County Commissioners  
21 West Boardman Street  
Youngstown, OH 44503

Dear Gentlemen:

On January 23, 2008, this writer conducted an unannounced Compliance Evaluation Inspection of the Campbell WWTP. The intent of the inspection was to assess operations and maintenance at the POTW and to assess compliance with NPDES Permit No. 3PD00008\*KD. Representing the county during the inspection was Guy Maiorana.

**Observations**

The condition of the treatment system was considered satisfactory at the time of the inspection. Following are observations made during the inspection.

1. During the inspection, the oxidation ditches had good color and good mixing.
2. The clarifiers did have a scum on their surface, and a moderate amount of floc was being discharged over the weir to the outfall. The weirs were free of sludge deposits and algae at the time of the inspection. Effluent was being sampled on the day of the inspection.

According to Mr. Maiorana, the Mixed Liquor Suspended Solids (MLSS) was approximately 3000 mg/l. It was indicated that the higher-than-usual MLSS was helping to reduce scum on the surface of the clarifier. It is recommended that the county also monitor f/m ratios and Mean Cell Residence Time (MCRT) in addition to MLSS. Maintaining the food/mass (f/m) ratio and the MCRT within the ranges established for the treatment system may help considerably to reduce the scum on the surface of the clarifiers and to improve the settling characteristics of the floc.

3. All three pumps at the Wilson Avenue pump station were operational at the time of the inspection. According to Mr. Maiorana the county does periodic flow tests to check the capacity of the pumps. Mr. Maiorana stated that each pump is checked multiple times throughout the year to ensure that the maximum amount of wastewater enters the plant before discharging directly to the Mahoning River through the Wilson Avenue bypass pipe.

According to Mr. Maiorana, plant personnel are made aware of an overflow event at the Wilson Avenue bypass by an audible alarm. Once the overflow event has ended, the plant personnel record the total volume of wastewater bypassed from a totalizing flow monitor.

4. Sludge solids are dewatered in a belt filter press. The county has several options available for handling sludge. At the time of the inspection, the lid of the sludge holding tank was frozen in position. As a result, the holding tank has limited use. However, the county has other options for processing sludge which minimizes the impact of the holding tank on the county's ability to dispose of sludge.

Mr. Maiorana stated during the inspection that attempts will be made to repair the holding tank lid during the summer of 2008. The extent of repairs is unknown until the tank can be cleaned and inspected.

5. Mr. Maiorana stated that the county continues to blend fully treated wastewater with wastewater that is treated through the "tea cups". Though use of the "tea cups" is necessary at this time to minimize the discharge of pollutants, they are considered temporary until excessive inflow and infiltration in the Campbell sanitary sewer system is eliminated.

The first step of eliminating excessive inflow and infiltration is currently underway. The city of Campbell is cleaning the storm sewers which should reduce inflow to the sanitary sewer system. At the same time, several cross connections have been identified for elimination. The known cross connections must be eliminated as soon as possible in order to reduce overflow events at the Wilson Avenue bypass.

6. The wastewater treatment personnel appear to be keeping maintenance records. Repair records are retained in individual files for each piece of equipment. Repair dates are maintained on log sheets. It is recommended that the Mahoning County plants initiate the use of log books to track maintenance records. Included in the maintenance record should be dates that equipment is taken out of service and the dates equipment is returned to service. It is understood that the county will be putting into place a computer tracking system for operation and maintenance at the wastewater treatment plants.

### **Effluent Limits Compliance Review**

A review of the compliance record for the Campbell POTW was conducted for the time period covering August 2006 through November 2007. Following are violations identified during the review period.

Limit Violations

No limit violations were reported during the review period

Frequency Violations

Station	Parameter	Sample Frequency	Expected	Reported	Violation Date
601	Total Suspended Solids	3/Week	3	2	10/15/2006
901	Hardness, Total (CaCO3)	1/Month	1	0	11/01/2006
601	pH, Maximum	1/Day	1	0	12/02/2006
601	pH, Maximum	1/Day	1	0	12/13/2006
001	Nitrogen Kjeldahl, Tot	1/2Weeks	1	0	02/15/2007
601	CBOD 5 day	3/Week	3	2	02/22/2007
001	Dissolved Oxygen	1/Day	1	0	04/01/2007
001	Dissolved Oxygen	1/Day	1	0	07/01/2007
601	CBOD 5 day	3/Week	3	2	10/01/2007

Bypass Events

Following are dates that bypass events were reported at the Wilson Avenue bypass station.

December 12, 2007	November 26, 2007	March 15, 2007
March 1, 2007	January 15, 2007	October 20, 2006
October 17, 2006	September 30, 2006	

The frequency violations noted above constitute violations of R.C. 6111.07. The bypass events constitute violations of R.C. 6111.04. Be advised that the above violations will be added to the list of violations included in the current enforcement action.

Conclusion

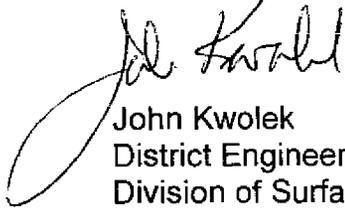
The primary concern associated with the Campbell Wastewater Treatment Plant (WWTP) is the Wilson Avenue bypass. The county and the city of Campbell have recently been working together to clean the storm sewer system and identify cross connections with the sanitary sewers. As the storm sewer system continues to be cleaned, the city of Campbell and the county should continue to work together to identify additional cross connections between the sanitary and storm sewers. As previously identified, every bypass event at the Wilson Avenue bypass pipe is a violation of R.C. 6111.04. Therefore, as cross connections are eliminated and the amount of inflow and infiltration is reduced, the number of bypass events will also be reduced.

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Once the known cross connections are eliminated, the county must model the sanitary sewer system to determine how it reacts to storm events. When the model is complete, the county must conduct an engineering study of the Campbell treatment plant to determine if the current capacities are adequate. The treatment plant must provide sufficient capacity to properly treat all predicted volumes of wastewater based on the sanitary sewer model.

You may contact this writer at (330) 963-1251 to discuss any questions you may have regarding this inspection report.

Respectfully,



John Kwolek  
District Engineer  
Division of Surface Water

JK/mt

cc: Mayor and Council, City of Campbell  
Joe Warino, Mahoning County Sanitary Engineer  
Thomas Behlen, AGO/EES

File: Public/Mahoning Campbell WWTP/Permit and Compliance