



State of Ohio Environmental Protection Agency

Northeast District Office

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

March 26, 2009

RE: CITY OF MASSILLON WWTP
NPDES 3PE00007
2009 CEI

Mayor & Council
City of Massillon
One James Duncan Plaza
Massillon, OH 44646

Dear Mayor & Council:

On March 19, 2009, this writer conducted a compliance evaluation inspection (CEI) of the City of Massillon Wastewater Treatment Plant (WWTP). Present during the inspection were Joe Ulrich, Manager, and Tony Ulrich, Operations Superintendent, Massillon Wastewater Treatment Department.

At the time of the inspection, the treatment system was producing what appeared to be a satisfactory quality effluent. The mixed liquor in the aeration tanks had a very good color. Pin floc was noted in the final clarifiers. Tony Ulrich indicated that the pin floc is a result of keeping a high mixed liquor in the aeration tanks. The mixed liquor is kept at approximately 4,000 mg/l due to the high organic load received by the wastewater treatment plant.

The rapid sand filters were producing a clear effluent, but remain problematic. Each of the three filter cells must be taken off line every four weeks so that they can be cleaned. At peak flows, the filters are bypassed for up to eight hours with a few million gallons of secondary effluent being bypassed around the sand filters. It is understood that the City is involved in a lawsuit regarding the poor performance of the filters. These filters must be upgraded or replaced.

The mechanically cleaned bar screens, which were installed in 1976, are scheduled for replacement in 2009.

Odors continue to be an issue at this facility. The three major sources of odors, according to Joe Ulrich, include the headworks, roughing towers and sludge blending tanks.

The roughing towers are removing approximately 55% of the organic load they receive. If these towers were to be removed from service, this wastewater treatment plant would be unable to meet the numeric effluent limitations contained in the NPDES permit. Odors at the top of the towers were not excessive at the time of inspection. Three of the four screw pumps which carry primary effluent to the tops of the towers have been covered. The remaining uncovered screw pump will be equipped with a cover by the end of May 2009. A misting system utilizing hydrogen peroxide and caustic has been added to these screw pumps and the sludge blending tanks to reduce odors.

Due to the effectiveness of the misting systems at the roughing tower screw pumps and sludge blending tanks, an identical misting system will be added to the influent screw pumps, which are already covered. This system will be operational by April 30, 2009. Future projects to aid in odor reduction include equipping the roughing towers with covers and a misting system.

The influent hydrogen sulfide (H₂S) concentrations are significantly higher than what is normally expected at a municipal wastewater treatment plant. The hydrogen sulfide concentration entering this plant can be as high as 100 mg/l. These high concentrations are the source of the odor problems. They also adversely affect the treatment efficiency of the system. The flow equalization tank, which was to be used to equalize the high influent organic load, is not used during dry weather due to the additional odors created by its' use. The tank is only able to be used during rainfall events. Reducing influent H₂S concentrations at the WWTP must be a priority for the City.

Maintenance of the collection system has been a priority for the department. The collection system is being inspected and cleaned every two years. The department has two crews to accomplish this task. The City will contract with a private company to monitor the flow throughout the collection system. The flow monitoring information will be accessible through a web based application.

A review of your monthly operating reports covering the period September 2007 through January 2009 revealed the following effluent violations:

| Reporting Period | Station | Parameter | Limit Type | Limit | Reported Value | Violation Date |
|------------------|---------|------------------------|------------|-------|----------------|----------------|
| October 2007 | 001 | Total Suspended Solids | 30D Conc | 12 | 13.232 | 10/1/2007 |
| October 2007 | 001 | Total Suspended Solids | 7D Conc | 18 | 20.1 | 10/15/2007 |
| February 2008 | 001 | Total Suspended Solids | 30D Qty | 718 | 774.364 | 2/1/2008 |
| February 2008 | 001 | Total Suspended Solids | 7D Conc | 18 | 18.4333 | 2/15/2008 |
| February 2008 | 001 | Total Suspended Solids | 7D Qty | 1076 | 1370.06 | 2/15/2008 |
| April 2008 | 001 | pH, Maximum | 1D Conc | 9.0 | 9.6 | 4/23/2008 |
| July 2008 | 001 | pH, Maximum | 1D Conc | 9.0 | 9.6 | 7/4/2008 |
| August 2008 | 001 | Oil and Grease, Hexane | 1D Conc | 10 | 11. | 8/20/2008 |

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Should you have any questions or comments regarding this letter, please feel free to contact this office at 330/963-1197.

Sincerely,



Dean W. Stoll, P.E.
Environmental Engineer
Division of Surface Water

DWS:bo

cc: Joe Ulrich, Manager, Wastewater Treatment Department

File: Public/Permit Compliance