



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

January 25, 2013

RE: MEDINA COUNTY
CHIPPEWA TOWNSHIP
MEDINA SD 700 WWTP
(NPDES NO. 3PH00017)

Mr. Dave Bazilevich, Supt. of Treatment
Medina County Sanitary Engineers
791 West Smith Road
PO Box 542
Medina, OH 44258

Dear Mr. Bazilevich:

A Compliance Evaluation Inspection (CEI) was conducted at the Medina SD 700 (Chippewa Lake) wastewater treatment plant (WWTP) on December 13, 2012. Present during the inspection were Mr. Rob Emmons, Superintendent of the WWTP, and this writer. The SD 700 WWTP is located at 5750 Kennard Road, in Chippewa Lake, Ohio.

The purpose of the inspection was to evaluate the operation and maintenance of the facility, and its compliance with National Pollutant Discharge Elimination System (NPDES) permit to discharge terms and conditions. The most recent inspection of the SD 700 WWTP was October 14, 2010.

At the time of the December 13th inspection, the following observations were made:

- 1) The grit removal chamber at the head of the WWTP was in service, with contents being typical gray and turbid. Removed grit is collected in a one cubic yard dumpster, which is hauled to the Lorain County Allied Wastes landfill on a weekly basis.
- 2) Contents of all four aeration tanks were well aerated, and were medium brown in color, with a very slight, crisp white foam. Return activated sludge (RAS) lines were returning dark brown sludge from the settling tanks to the aeration tanks.

The aeration tanks are operated in series, with wastewater flowing from tanks one through four.

- 3) Following the aeration tanks, and prior to wastewater entering the settling tanks, liquid polymer is added. Bagged dry polymer (approximately three scoops) is mixed with water in a plastic 55-gallon tank, and fed into the splitter box utilizing a chemical feed pump.

Approximately two 55-gallon tanks of polymer are added during a 24-hour period, with the dosing rate of the polymer addition being manually adjusted.

- 4) Both final settling tanks were in service, and the mechanical skimmers were operating. Settling tank effluent troughs were clean and free of solids or algae, and contents of the settling tanks exhibited a slight suspended pinfloc.

Chlorine is added to the final settling tanks on an as-needed basis, in an effort to control filamentous algal growth in the tanks.

- 5) Disinfection of the effluent is accomplished with chlorine gas, and liquid sodium bisulfite is used for dechlorination.

Approximately 15-20 pounds of chlorine is used per average flow day, and one 55-gallon drum of bisulfite (38-40%) is used every 7 to 10 days. High flow days require approximately 20-25 pounds per day of chlorine for disinfection. Chlorine gas is supplied in 150-pound cylinders.

- 6) Effluent being discharged was post aerated, and was visually clear and free of solids or foam.

- 7) Up to 18,000 gallons per week of 2 ½ % solids sludge is generated at the SD 700 WWTP, and is hauled to the Medina SD 500 WWTP for treatment and disposal. The liquid sludge is hauled by Agri-Sludge.

- 8) One of two aerated sludge holding tanks at the WWTP was in use, and was approximately ¾ full.

A review of the electronic Discharge Monitoring Report (eDMR) data submitted for the Medina SD 700 WWTP since the last inspection (October 1, 2010, through December 1, 2012), found the following numeric effluent violations:

**Medina SD 700
 NPDES Permit No. 3PH00017
 (October 1, 2010 – December 1, 2012)
 Numeric Effluent Violations**

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
March 2011	Total Suspended Solids	7D Conc	23	30.2	3/1/2011
March 2011	Total Suspended Solids	30D Qty	49.7	61.0677	3/1/2011
March 2011	Total Suspended Solids	7D Qty	76.2	177.664	3/1/2011
March 2011	CBOD 5 day	7D Qty	49.7	54.7333	3/1/2011
March 2011	Total Suspended Solids	7D Qty	76.2	95.1475	3/8/2011

During the same time period, the following reporting code excursions were noted:

**Medina SD 700
 NPDES Permit No. 3PH00017
 (October 1, 2010 – December 1, 2012)
 Reporting Code Violations**

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
May 2011	Fecal Coliform			AK	5/6/2011
August 2012	Fecal Coliform			AK	8/17/2012

**AK = Too numerous to count

Other items discussed with Mr. Emmons during the December 13th inspection include:

- 1) A data base search for the Certified Operator of Record notification for the Medina SD 700 WWTP found no such document (ORC Notification Form EPA 5121) has been submitted. The ORC Form needs to be completed for Mr. Emmons, and submitted to the Ohio EPA as soon as possible.
- 2) Since the last inspection, a phosphorus removal treatment process was installed at the WWTP. The phosphorus removal treatment process utilizes the addition of ferric sulfate as the removal chemical.

The ferric sulfate liquid (50 – 66%) is fed by an LMI pump metering system, from a 300 gallon day tank, to the head of the aeration process. Approximately 25 gallons per day are fed, with the rate being manually adjusted, based upon phosphorus readings in the final effluent.

Installation of the phosphorus removal treatment system was necessary to meet the final effluent limits of 1.0 mg/l for phosphorus, which went effective April 1, 2011.

- 3) Average daily flows at the WWTP range from 0.300 to 0.500 MGD, and peak wet weather flows may reach 1.0 MGD. At the time of the inspection, the flow to the WWTP was approximately 0.420 MGD.
- 4) The 1 million gallon capacity above-ground excess storm water storage tank at the WWTP was used approximately twice during 2011, and three times in 2012. A VSD was installed for the storm water storage tank since the last inspection.
- 5) NPDES Permit required samples are collected by an automatic composite sampler and SD 700 plant personnel, and taken to the Medina SD 500 WWTP lab for analysis. Dissolved Oxygen, temperature, and pH measurements are conducted on-site by SD 700 plant personnel. A chain of custody form is employed for samples collected and taken to the SD 500 lab for analysis.
- 6) The NPDES Permit-required Operator's log book was inspected, and its contents discussed. Mr. Emmons was informed that the log book needs to contain more detailed information, as outlined in Ohio Administrative Code 3745-7-09. In particular, the arrival and departure time of the Operator of Record needs to be included in the daily log.
- 7) There are two Self Contained Breathing Apparatus (SCBA) at the WWTP, which can be used in the event of a chlorine gas leak. However, Mr. Emmons indicated the employees are not regularly trained on their use. It is recommended that all employees be regularly and properly trained in their use.
- 8) There are four full time employees at the Medina SD 700 WWTP (two Class III, one Class II, and one Class I). Employees work 8AM till 4PM Monday through Friday, and 7AM through 3PM on the weekends.

Medina County should continue current operation and maintenance practices, which allow the SD 700 WWTP to consistently meet its NPDES Permit limits.

If you have any comments or questions regarding this correspondence, you may contact me at (330) 963-1110.

Respectfully,



Charles E. Allen
Environmental Engineer
Division of Surface Water

CEA/cs

File: Public/MedinaCounty SD 700/P&C