



State of Ohio Environmental Protection Agency

Northeast District Office

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

August 28, 2009

RE: MEDINA COUNTY
HINCKLEY TOWNSHIP
MEDINA SD 300
(NPDES NO. 3PK00003)

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

Dear Mr. Phelps:

On August 6, 2009, a Compliance Evaluation Inspection (CEI) was conducted at the Medina SD 300 (Hinckley) wastewater treatment plant (WWTP), located at 85 Ridge Road, in Hinckley, Ohio. The purpose of the inspection was to evaluate the operation and maintenance of the facility prior to renewal of the NPDES permit to discharge.

At the time of the August 6th inspection, the following observations were made, and information obtained:

- 1) Raw flow enters the WWTP through mechanical bar screens, then passes through comminutors. There are 2 comminutors, with one being utilized during average flow conditions. At the time of the inspection, the east comminutor was in operation.
- 2) Flow enters a wet well in the headworks building, where 3 influent pumps pump the flow to the aeration tanks. There are 3 aeration tanks, of which 2 were being utilized. The third aeration tank is utilized when wastewater flows are high.

Contents of the aeration tanks were medium brown in color, with no foam or odor present. Typical MLSS concentrations in the warmer months are maintained in the 1200 to 1500 ppm range.

- 3) From the aeration tanks, flow enters clarifiers for settling. There are 4 clarifiers, of which 1 was being used at the time of the inspection. Only one tank is used during average flow rates

Water in the clarifier was clear, and the effluent troughs were clean and free of solids or algae. Settled effluent was also clear, and some floating grease was present at the manual skimmer, which is utilized approximately once per shift.

Ferrous chloride is introduced to aid in the removal of phosphorus.

- 4) From the clarifiers, flow enters the rotating biological contactors (RBCs). There are 12 total RBC units (2 trains of 6 units each). All 12 RBC units were being utilized, and contained the typical greenish/gray biological growth. The RBCs are being utilized for nitrogen removal, not BOD.
- 5) Following the RBCs the flow enters the sand filters. There are 3 traveling bridge sand filters, of which only one was being operated at the time of the inspection. During high flow periods additional sand filters will be put on-line.
- 6) Disinfection is accomplished with chlorine gas, and dechlorination of the chlorinated water is performed with liquid sodium bisulfate. Approximately 20 pounds per day of chlorine is utilized, and chlorine gas is supplied in 1 Ton cylinders.
- 7) The effluent was visually clear, and free of solids and foam. Final effluent is sampled with an ISCO 4700 autosampler, with the sample kept at 3 to 4 degrees C. Final flow is measured by parshall flume and sonic meter.
- 8) Sludge generated at the WWTP is digested in aerobic digesters. There are 4 digesters, of which 2 were in use at the time of the inspection. Digested sludge is dewatered, after the addition of polymer, by a 2 meter Ashbrook sludge press. The sludge press is operated 1 to 2 X/week, 16 to 24 hr/day.

Filter cake from the sludge press is run through an auger and blended with lime, then sent via conveyor to a storage building until it is hauled away for disposal. Sludge cake is kept in the building for approximately one week.
- 9) Sludge generated at the Medina SD 300 WWTP is classified as Class B sludge, and is hauled and land applied by Bio-Gro.
- 10) Dissolved Oxygen, temperature, and pH measurements are conducted by plant personnel. All other samples are analyzed by the Medina SD 500 WWTP lab.
- 11) There are 18 full time employees at the Medina SD 300 WWTP, and coverage is provided 24/7.
- 12) Grit is removed manually out of the aeration tanks, and disposed of, along with screenings, at the BFI landfill.

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- 13) There are 4 pump stations throughout the Medina SD 300 service area. The service area includes a small portion of Broadview Heights, North Royalton, Strongsville, Brunswick, and 2 Ohio Turnpike plazas.
- 14) ADDF of the WWTP is 3.25 MGD. Average dry weather flow seen at the WWTP is approximately 1.8 MGD. There is a slight I/I problem in the collection system, but not enough to cause operational problems at the WWTP and subsequently NPDES permit violations.

A review of the electronic Discharge Monitoring Reports (eDMR's) submitted for the Medina SD 300 WWTP for the period of December 1, 2005 through August 1, 2009, found the following final effluent limit numeric violations:

**Medina SD 300
NPDES Permit No. 3PK00003
(December 1, 2005 – August 1, 2009)
Numeric Effluent Violations**

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
March 2007	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	1.59	3/8/2007
March 2008	Nitrogen, Ammonia (NH3-N)	7D Qty	18	19.9209	3/1/2008

Medina County should continue current operation and maintenance practices, which allow the SD 300 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/mt

File: Public/MedinaCounty SD 300/P&C