



State of Ohio Environmental Protection Agency

Northeast District Office

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

March 6, 2009

RE: Lorain County  
City of Avon Lake WWTP  
Compliance Evaluation Inspection (CEI)  
NPDES No. 3PD00003

Mr. Rick Eberle, Chief of Utilities Operations  
City of Avon Lake  
Municipal Utilities Dept.  
201 Miller Road  
Avon Lake, OH 44012

Dear Mr. Eberle:

On February 5, 2009, a Compliance Evaluation Inspection (CEI) was conducted at the City of Avon Lake Wastewater Treatment Plant. Present during the inspection were Messrs. Joe Tomsic and Randy Balmert, representing the City of Avon Lake, and Mr. Ron Bell and this writer, representing Ohio EPA.

At the time of the inspection, all of the sewage treatment components at the WWTP were in operation, and the general operation and maintenance of the plant could be rated as satisfactory.

During the February 5<sup>th</sup> inspection, the following observations were made:

- 1) The grit removal system was in operation. Grit is hauled to Allied Waste for disposal, approximately 2 cubic yards every 2 weeks.
- 2) Two of three primary settling tanks were being used for treatment. Contents were the typical turbid gray. The third primary settling tank is used for treatment of sludge from the Avon Lake water treatment plant.
- 3) Both aeration tanks were in use. Contents were medium brown with crisp white foam on the surface. Ferrous chloride is added to the aeration tanks for improved solids removal.
- 4) All three secondary settling tanks were in use. Contents of the secondary settling tanks exhibited a slight rising pinfloc, and effluent troughs contained some algae growth on the weirs.
- 5) The UV disinfection system was off-line, as its use is only required from May 1<sup>st</sup> through October 31<sup>st</sup>.

- 6) The sludge filter press was in the process of being cleaned. The filter press is used 5 days per week, approximately 10 hours per day. Sludge is landfilled in the on-site sludge monofill.

The last Compliance Evaluation Inspection (CEI) conducted at the Avon Lake WWTP was on September 14, 2007. Since the last CEI, the Avon Lake WWTP electronic Discharge Monitoring Reports (eDMR) have indicated the following NPDES permit effluent numerical violations:

**AVON LAKE WWTP  
 NPDES PERMIT NO. 3PD00003  
 NUMERIC EFFLUENT VIOLATIONS  
 (Sep.1, 2007 – Jan.1, 2009)**

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
February 2008	001	Total Suspended Solids	30D Qty	492	548.191	2/1/2008
February 2008	001	Total Suspended Solids	7D Qty	737	1010.22	2/1/2008
February 2008	001	pH, Minimum	1D Conc	6.5	6.26	2/22/2008
March 2008	001	Total Suspended Solids	30D Conc	20	31.9354	3/1/2008
March 2008	001	Total Suspended Solids	7D Conc	30	38.4285	3/1/2008
March 2008	001	Total Suspended Solids	30D Qty	492	1083.39	3/1/2008
March 2008	001	Total Suspended Solids	7D Qty	737	1281.80	3/1/2008
March 2008	001	Total Suspended Solids	7D Conc	30	31.7142	3/8/2008
March 2008	001	Total Suspended Solids	7D Qty	737	985.320	3/8/2008
March 2008	001	Total Suspended Solids	7D Conc	30	36.8571	3/15/2008
March 2008	001	Total Suspended Solids	7D Qty	737	1381.31	3/15/2008
March 2008	001	Total Suspended Solids	7D Qty	737	919.903	3/22/2008
April 2008	001	Total Suspended Solids	30D Conc	20	22.8666	4/1/2008
April 2008	001	Total Suspended Solids	30D Qty	492	557.184	4/1/2008
April 2008	001	Total Suspended Solids	7D Qty	737	767.749	4/1/2008
April 2008	001	pH, Minimum	1D Conc	6.5	6.44	4/7/2008
April 2008	001	pH, Minimum	1D Conc	6.5	6.28	4/13/2008
April 2008	001	pH, Minimum	1D Conc	6.5	6.28	4/14/2008
April 2008	001	pH, Minimum	1D Conc	6.5	6.4	4/15/2008
April 2008	001	pH, Minimum	1D Conc	6.5	6.47	4/18/2008
April 2008	001	Total Suspended Solids	7D Conc	30	31.1428	4/22/2008
May 2008	001	Fecal Coliform	7D Conc	2000	2000	5/1/2008
July 2008	001	Phosphorus, Total (P)	30D Conc	1.0	1.06375	7/1/2008
July 2008	001	pH, Minimum	1D Conc	6.5	6.43	7/29/2008
August 2008	001	pH, Minimum	1D Conc	6.5	6.44	8/26/2008
August 2008	001	pH, Minimum	1D Conc	6.5	6.49	8/29/2008
August 2008	001	pH, Minimum	1D Conc	6.5	6.43	8/31/2008
September 2008	001	pH, Minimum	1D Conc	6.5	6.48	9/1/2008
September 2008	001	pH, Minimum	1D Conc	6.5	6.44	9/6/2008
September 2008	001	pH, Minimum	1D Conc	6.5	6.48	9/18/2008

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
September 2008	001	pH, Minimum	1D Conc	6.5	6.48	9/21/2008
September 2008	001	pH, Minimum	1D Conc	6.5	6.42	9/23/2008
September 2008	001	pH, Minimum	1D Conc	6.5	6.48	9/24/2008
November 2008	001	pH, Minimum	1D Conc	6.5	6.48	11/9/2008
November 2008	001	pH, Minimum	1D Conc	6.5	6.46	11/23/2008
November 2008	001	pH, Minimum	1D Conc	6.5	6.49	11/24/2008
November 2008	001	pH, Minimum	1D Conc	6.5	6.44	11/25/2008
November 2008	001	pH, Minimum	1D Conc	6.5	6.47	11/29/2008
December 2008	001	pH, Minimum	1D Conc	6.5	6.45	12/14/2008
December 2008	001	pH, Minimum	1D Conc	6.5	6.46	12/19/2008
December 2008	001	pH, Minimum	1D Conc	6.5	6.39	12/25/2008
December 2008	001	pH, Minimum	1D Conc	6.5	6.47	12/26/2008
December 2008	001	pH, Minimum	1D Conc	6.5	6.49	12/29/2008
December 2008	001	pH, Minimum	1D Conc	6.5	6.47	12/31/2008

Items discussed during the inspection included the following:

- 1) The list of pH numeric violations was discussed. It was indicated that readings are taken by grab sample and not by continuous monitoring. Proper calibration of the pH meter should be stressed, and pH readings may be reported to the nearest tenth, instead of hundredth, in the future. Consideration may be given to obtaining a continuous measuring pH meter.
- 2) The most recent DMRQA analysis (DMRQA Study No. 28) was submitted for review in the fall of 2008, and all results were acceptable.
- 3) Analysis of the majority of effluent samples is conducted either by the Avon Lake Wastewater Lab, or the Avon Lake Water Lab. However, mercury sample analysis is conducted by Jones & Henry Lab, and bio assays are conducted by Enviro Science.
- 4) Detail plans for improvements to the Avon Lake WWTP are forthcoming. The improvements are to include:
  - A new gravity thickener for the sludge from the water treatment plant;
  - A new sludge press with double the capacity of the current sludge press;
  - Addition of a 4<sup>th</sup> clarifier;
  - New screening for debris;
  - A new grit removal system;
  - New RAS pumps;
  - A new UV disinfection system; and
  - A new SCADA system.

- 5) Since the last inspection, the following maintenance items were conducted at the WWTP:
  - The fire tubes in the sludge anaerobic digester heat exchanger were replaced;
  - A backup final feed pump in the sludge press building was installed/repared;
  - A gear box on one of the final clarifiers was replaced;
  - The filter cloth on the sludge filter press was changed;
  - 28 plates were purchased for the plate and frame sludge filter press; and
  - An ultra sonic monitor was installed on the outside ferrous tank.
- 6) Effluent from the WWTP was clear, with no visible sign of solids or foam.

A meeting was also held on February 5th, prior to the WWTP inspection, at the Utilities Department. Present at the meeting were Mr. Balmert, John Kniepper, and you, representing the City of Avon Lake, and Mr. Ron Bell and this writer. Items included in the discussion were:

- 1) An update on the current status of detail plans the City prepared for the extension of an express sanitary sewer down SR 83, to pick up sewage which will be collected by the future LORCO sewer system Phase I.
- 2) A progress update on the construction of scheduled CSO eliminations, as required in the NPDES Compliance Schedule. The Moorewood Avenue, Moore Road, and Miller Road CSO regulator elimination / sewer separation projects have been completed on time. The Curtis Drive project was to be completed by the end of February 2009.
- 3) The Jaycox Road CSO elimination project, due to be completed by December 31, 2010, may not be completed on time. Detail plans are completed, but the actual construction may extend beyond the December 2010 date.
- 4) Also discussed were the status of a couple of missing CSO elimination status reports, and an upcoming status report due April 1, 2009. It was agreed upon that the missing April 1, 2008, and October 1, 2008, status report would be included in the upcoming April 1, 2009 status report.
- 5) Also past due were SSO Annual Reports which were due on March 31<sup>st</sup> of 2007 and 2008. It was agreed upon that the information from those reports would be included in the SSO Annual Report which is due by March 31, 2009.

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- 6) Per the NPDES Permit Compliance Schedule, post-Phase II separation flow monitoring was to be conducted by October 1 2008. The flow monitoring has been conducted, but not yet reported. A report on the monitoring will be submitted in the near future.
- 7) Based upon an evaluation of mercury data, the City indicated it would not be able to consistently meet the mercury limits as outlined in the NPDES Permit, and the Ohio EPA was informed. However, a mercury variance request was not submitted, as there is some confusion as to when the mercury variance request is/was to be submitted. NEDO is following up on the due date, and will advise the City of the due date.

The City of Avon Lake should continue with all efforts that will enable the WWTP to consistently meet its NPDES Permit limits, and eliminate CSOs as planned. If there are 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: Muni/AvonLake/Permit