

**Environmental  
Protection Agency**

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

April 22, 2011

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 March 30, 2011, a Compliance Evaluation Inspection (CEI) was conducted at the City of Avon Lake Wastewater Treatment Plant. Present during the inspection were you and Mr. Jeremy Pijor, representing the City of Avon Lake, and this writer.

During the March 30<sup>th</sup> inspection, the following observations were made:

- 1) The grit removal system was operating satisfactorily. Grit removed is hauled to the Republic Waste landfill in Oberlin for disposal. One 2 cubic yard container is transported to the landfill approximately every 2 weeks.
- 2) All three primary settling tanks were in use. Contents were slightly turbid gray, and some algal growth was present in the effluent troughs.
- 3) Both aeration tanks were in operation, and contents were brown, with some crisp white foam on the surface. Ferrous chloride is added to the aeration tanks for improved solids removal. There were some floatables present on the water surface.
- 4) All three final settling tanks were in use, and contents of the tanks were clear. Fiberglass covers have been removed from 2 of the 3 tanks, with the covers on the third tank being planned for removal this summer.
- 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) Effluent from the WWTP was visually clear and free of solids.
- 7) The sludge filter press is used 4 to 5 days per week, approximately 10 hours per day. Dewatered sludge is hauled by Kurtz Brothers to the Rumpke solid waste landfill in the Mansfield area.

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The last Compliance Evaluation Inspection (CEI) conducted at the Avon Lake WWTP was on February 5, 2009. 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  
 (Jan.1, 2009 – Apr. 1, 2011)**

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
January 2009	Mercury, Total (Low Level)	30D Conc	12	101.	1/1/2009
January 2009	Mercury, Total (Low Level)	30D Qty	0.0003	.00165	1/1/2009
January 2009	pH, Minimum	1D Conc	6.5	6.4	1/20/2009
January 2009	pH, Minimum	1D Conc	6.5	6.3	1/21/2009
January 2009	pH, Minimum	1D Conc	6.5	6.3	1/22/2009
January 2009	pH, Minimum	1D Conc	6.5	6.4	1/24/2009
January 2009	pH, Minimum	1D Conc	6.5	6.4	1/25/2009
January 2009	pH, Minimum	1D Conc	6.5	6.4	1/26/2009
January 2009	pH, Minimum	1D Conc	6.5	6.4	1/28/2009
February 2009	Total Suspended Solids	7D Qty	737	880.939	2/8/2009
February 2009	CBOD 5 day	7D Qty	566	784.883	2/8/2009
February 2009	pH, Minimum	1D Conc	6.5	6.	2/17/2009
March 2009	pH, Minimum	1D Conc	6.5	6.38	3/3/2009
March 2009	pH, Minimum	1D Conc	6.5	6.35	3/4/2009
March 2009	pH, Minimum	1D Conc	6.5	6.38	3/5/2009
March 2009	Total Suspended Solids	7D Qty	737	1086.70	3/8/2009
March 2009	pH, Minimum	1D Conc	6.5	6.39	3/10/2009
March 2009	pH, Minimum	1D Conc	6.5	6.47	3/11/2009
March 2009	pH, Minimum	1D Conc	6.5	6.27	3/16/2009
March 2009	pH, Minimum	1D Conc	6.5	6.33	3/17/2009
March 2009	pH, Minimum	1D Conc	6.5	6.28	3/18/2009
March 2009	pH, Minimum	1D Conc	6.5	6.44	3/19/2009
March 2009	pH, Minimum	1D Conc	6.5	6.46	3/21/2009
March 2009	pH, Minimum	1D Conc	6.5	6.27	3/22/2009
March 2009	pH, Minimum	1D Conc	6.5	6.42	3/23/2009
March 2009	pH, Minimum	1D Conc	6.5	6.4	3/24/2009
February 2010	pH, Minimum	1D Conc	6.5	6.25	2/7/2010
February 2010	pH, Minimum	1D Conc	6.5	6.35	2/8/2010
February 2010	pH, Minimum	1D Conc	6.5	6.46	2/9/2010
February 2010	pH, Minimum	1D Conc	6.5	6.48	2/14/2010
February 2010	pH, Minimum	1D Conc	6.5	6.47	2/17/2010
March 2010	pH, Minimum	1D Conc	6.5	6.46	3/31/2010
April 2010	pH, Minimum	1D Conc	6.5	6.26	4/10/2010

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
April 2010	pH, Minimum	1D Conc	6.5	6.47	4/22/2010
June 2010	Mercury, Total (Low Level)	30D Conc	12	31.	6/1/2010
June 2010	Mercury, Total (Low Level)	30D Qty	0.0003	.0006	6/1/2010
September 2010	pH, Minimum	1D Conc	6.5	6.	9/20/2010
October 2010	Fecal Coliform	7D Conc	2000	2000.	10/1/2010
October 2010	CBOD 5 day	30D Conc	15	74.7307	10/1/2010
October 2010	CBOD 5 day	7D Conc	23	310.5	10/1/2010
October 2010	CBOD 5 day	30D Qty	369	2954.90	10/1/2010
October 2010	CBOD 5 day	7D Qty	566	12609.2	10/1/2010
November 2010	pH, Minimum	1D Conc	6.5	6.2	11/19/2010
December 2010	Mercury, Total (Low Level)	30D Conc	1.3	1.89	12/1/2010
December 2010	Mercury, Total (Low Level)	30D Qty	0.0000	.00004	12/1/2010
January 2011	Mercury, Total (Low Level)	30D Conc	1.3	1.71	1/1/2011
January 2011	Mercury, Total (Low Level)	30D Qty	0.0000	.00003	1/1/2011
February 2011	Mercury, Total (Low Level)	30D Conc	1.3	5.12	2/1/2011
February 2011	Mercury, Total (Low Level)	30D Qty	0.0000	.0002	2/1/2011

Items discussed during the inspection included the following:

- 1) The list of NPDES permit numeric effluent violations was discussed. It was indicated that pH readings are still manually obtained by grab sample, and pH meter calibration is closely watched.
- 2) Effluent sample analysis is conducted either by the Avon Lake Wastewater Lab, or the Avon Lake Water Lab. Mercury sample analysis is conducted by Jones & Henry Lab, and bio assays are conducted by Enviro Science.
- 3) The most recent DMRQA analysis (DMRQA Study No. 30) was submitted for review in the fall of 2010, with all results coming back as acceptable.
- 4) A PTI was issued in early 2009 for improvements to the Avon Lake WWTP. The City tried to get ARRA funding for a portion of the project. However, no funding was awarded, the improvements were not made, and the PTI has since expired.
- 5) Consideration is being given to plans for future improvements at the WWTP which will include:
  - A new sludge press with double the capacity of the current sludge press, and elimination of the old press. A centrifuge is planned as backup.
  - New screening for debris;

- A new grit removal system;
  - New RAS pumps;
  - A new UV disinfection system; and
  - A new SCADA system, as the WWTP currently does not have one.
- 6) Since the last inspection, the following maintenance items were conducted at the WWTP:
- The ultrasonic monitor was replaced.
  - The filter cloth on the sludge filter press was replaced.
  - Several plates on the sludge filter press were replaced.
  - The final feed pump on the filter press was replaced.
  - The shaft and chain on the C3 primary tank was replaced.
  - Two valves on the primary sludge pumps were replaced.
  - Two mazerators were reconditioned.
  - A continuous reading temperature monitor is now being used.
- 7) As required by the Ohio EPA, dewatered sludge is no longer being disposed of in the WWTP on-site monofill. The search for a consultant is underway, and once retained, a monofill closure plan will be prepared and submitted to the Ohio EPA for approval. Once approved, the monofill closure plan will be implemented.

NPDES permit compliance schedule-related items were also discussed during the pre-inspection meeting:

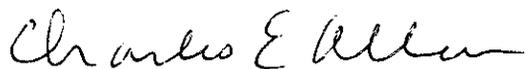
- 1) Moorewood Avenue Ditch: Ditch flow was eliminated prior to January 2007, thus reducing flow to the D-1 Regulator (STA 007). Sewer separation and D-1 Regulator elimination is planned for 2016.
- 2) Curtis Drive Separation: Sewer separation was completed in December 2008, and the CSO (STA 006) was eliminated.
- 3) Moore Road Separation: Sewer separation was completed in August 2008, and CSO Regulator C-3 (STA 004) was eliminated.
- 4) Miller Road Separation: Sewer separation was completed in July 2007, and CSO Regulator C-1 (STA 002) was eliminated.
- 5) Jaycox Road Separation: Sewer separation was completed in November 2010, and CSO Regulator D-8 (STA 014) was eliminated.

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- 6) Phase II Sewer Separation Flow Monitoring: A remodeling of the Lake Road Interceptor and post separation flow monitoring was completed in March 2009. Study results recommended continued flow monitoring after future combined sewer separations, with the possibility of future overflow storage needed at the Center Road Pump Station, and the WWTP. (A copy of the flow monitoring report has since been received).
- 7) Several past due SSO Annual Reports were discussed, and it was agreed upon that an updated SSO Annual Report would be submitted within several weeks (the report has since been received).
- 8) 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. A mercury variance request is to be submitted by the end of April 2011. Once approved, the City will begin implementation of the variance requirements.
- 9) Remaining Compliance Schedule-related items (sewer separation projects for Regulator Areas C-4, D-1, D-2, and D-10) were discussed. Tentative schedules for completion of these projects were to be submitted to the Ohio EPA by the end of April 2011. (A copy of the proposed completion schedules has since been received).

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/P&C