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

June 25, 2008

RE: LORAIN COUNTY
CITY OF ELYRIA WWTP
COMPLIANCE EVALUATION INSPECTION
(OH0025003 / 3PD00034)

Terry Korzan, Superintendent
City of Elyria
Water Pollution Control Plant
1194 Gulf Road
Elyria, OH 44035

Dear Terry Korzan:

On June 3, 2008, a Compliance Evaluation Inspection (CEI) was conducted at the City of Elyria wastewater treatment plant. Present during the inspection were Messrs. Steve Baytos, Tony Nigro, Tom Shaugen, and you, representing the City of Elyria; Mr. John Sabo of the Lorain County Health Department; and this writer. The purpose of the inspection was to evaluate the facility's compliance with the terms and conditions of its NPDES permit, and to review the current status of the treatment plant processes. The most recent CEI conducted at the Elyria WWTP was on July 31, 2007.

At the time of the June 3rd inspection, the general operation and maintenance of the plant could be rated as satisfactory, and the following observations were made:

1) Both influent bar screens (East and West side) were operational.

2) Both detritus tanks were operating and their contents were the typical turbid gray color.

3) Three of the six primary settling tanks were online. Primary settling tanks #1, #4, and #5 were offline. Primary settling tank #5 is typically put back online when wastewater flows to the WWTP are high.

4) All 4 trickling filters have been permanently taken offline. Their continued use was determined to be more detrimental, than helpful, to the well operation of the WWTP. As a result of the trickling filter removal, F/M ratios are now where they are expected.

5) Six of nine aeration basins were in use. Contents of the aeration basins were being well aerated, and they were rusty brown in color with a slight light brown foam in the corners. Two additional aeration basins are being considered for removal from the treatment process in the future. Dissolved oxygen levels in the aeration basins are maintained in the 4 mg/l range.

6) Addition of ferric chloride has been relocated, from its former location at the plant headworks, to the flow channel into the aeration tanks.

7) Two of 3 final settling tanks were in operation, and their contents were a slightly turbid gray. The effluent troughs in the final settling tanks were clean and free of solids. Polymer is added to the flow channel prior to the wastewater entering the final settling tanks.

8) Baffle rings have been added onto the outside of the effluent troughs of the final settling tanks to improve solids retention.

9) Effluent from the final clarifiers was being chlorinated / dechlorinated prior to discharge to the Black River. Post aeration is provided by a cascade waterfall at the end of the chlorine contact tank.

10) Two of 4 sludge presses are usually operated at a time, 8 hours per day, Tuesdays and Thursdays, unless increased sludge dewatering capacity is necessary.

A review of the electronic Discharge Monitoring Reports (eDMR's) since August 1, 2007, found the following NPDES Permit final effluent violations:

City of Elyria WWTP
Effluent Numeric Limit Violations
(August 1, 2007 through June 1, 2008)

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
August 2007	001	Chlorine, Total Residual	1D Conc	0.020	.055	8/8/2007
September 2007	001	Chlorine, Total Residual	1D Conc	0.020	.053	9/26/2007

A review of the eDMRs for the same period also found the following effluent reporting code violations:

City of Elyria WWTP
Effluent Code Violations
(August 1, 2007 through June 1, 2008)

Permit No	Reporting Period	Station	Reporting Code	Parameter	Reported Value	Violation Date
3PD00034*JD	August 2007	001	50050	Flow Rate	AD	8/7/2007
3PD00034*JD	August 2007	001	50050	Flow Rate	AD	8/16/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/6/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/7/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/8/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/9/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/10/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/11/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/12/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/13/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/14/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/15/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/16/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/17/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/18/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/19/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/20/2007

Permit No	Reporting Period	Station	Reporting Code	Parameter	Reported Value	Violation Date
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/21/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/22/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/23/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/24/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/25/2007
3PD00034*JD	September 2007	601	00530	Total Suspended Solids	AF	9/26/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/26/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/27/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/28/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/29/2007
3PD00034*JD	September 2007	001	00010	Water Temperature	AD	9/30/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/1/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/2/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/3/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/4/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/5/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/6/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/7/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/8/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/9/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/10/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/11/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/12/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/13/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/14/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/15/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/16/2007
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3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/21/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/22/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/23/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/24/2007
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3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/26/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/27/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/28/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/29/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/30/2007
3PD00034*JD	October 2007	001	00010	Water Temperature	AD	10/31/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/1/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/2/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/3/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/4/2007

Permit No	Reporting Period	Station	Reporting Code	Parameter	Reported Value	Violation Date
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/5/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/6/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/7/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/8/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/9/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/10/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/11/2007
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3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/21/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/22/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/23/2007
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3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/25/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/26/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/27/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/28/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/29/2007
3PD00034*JD	November 2007	001	00010	Water Temperature	AD	11/30/2007
3PD00034*JD	December 2007	001	00010	Water Temperature	AD	12/1/2007
3PD00034*JD	December 2007	001	00010	Water Temperature	AD	12/2/2007
3PD00034*JD	December 2007	001	00010	Water Temperature	AD	12/3/2007
3PD00034*JD	December 2007	001	00010	Water Temperature	AD	12/4/2007
3PD00034*JD	December 2007	001	00010	Water Temperature	AD	12/5/2007
3PD00034*JD	December 2007	001	00010	Water Temperature	AD	12/6/2007
3PD00034*JD	December 2007	001	00010	Water Temperature	AD	12/7/2007
3PD00034*JD	December 2007	001	00010	Water Temperature	AD	12/8/2007
3PD00034*JD	December 2007	001	00010	Water Temperature	AD	12/9/2007
3PD00034*JD	December 2007	001	00010	Water Temperature	AD	12/10/2007
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3PD00034*JD	December 2007	001	00010	Water Temperature	AD	12/20/2007

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3PD00034*JD	December 2007	001	00010	Water Temperature	AD	12/30/2007
3PD00034*JD	December 2007	001	00010	Water Temperature	AD	12/31/2007
3PD00034*JD	January 2008	001	00010	Water Temperature	AD	1/1/2008
3PD00034*JD	January 2008	001	00010	Water Temperature	AD	1/2/2008
3PD00034*JD	January 2008	001	00010	Water Temperature	AD	1/3/2008
3PD00034*JD	January 2008	001	00010	Water Temperature	AD	1/4/2008
3PD00034*JD	January 2008	001	00010	Water Temperature	AD	1/5/2008
3PD00034*JD	January 2008	001	00010	Water Temperature	AD	1/6/2008

Items discussed during the inspection include the following:

1) Dom Armelie retired March 31, 2008. Mr. Armelie's position was taken by Steve Baytos.

2) The eDMR list of numeric effluent and reporting code violations was discussed. The numeric chlorine residual violations were satisfactorily explained in monthly reports to NEDO. It was explained that the numerous "AD" reporting codes for temperature was due to a broken continuously reading thermometer.

   It was explained that the temperatures were, however, taken manually, and their records kept, but not reported on the eDMRs. It was agreed upon that the grab samples for the daily temperatures would be averaged, and that number reported to Ohio EPA in an amended eDMR for those months where "AD" was reported.

3) You determined through process testing that the trickling filters were no longer needed as a part of the treatment scheme. In fact, the trickling filters were adding to operational problems further downstream in the treatment process.

4) It was also determined that the dissolved oxygen level in the aeration tanks needed to be increased, and maintained around 4 mg/l, contrary to what a consulting engineering firm had recommended the previous year.

5) Average dry weather daily flows to the Elyria WWTP have noticeably decreased the past several years.

6) The City still hauls their sludge to PPG in Barberton as their primary method of sludge disposal. Grit and screenings are disposed of at the Allied Waste (former BFI) landfill.

7) The City has appropriated money for rehab of the sludge filter presses sometime this year.

8) The headworks bar screen on the influent from the West Side Interceptor is planned for replacement, hopefully this year (2008).

9) The Elyria water treatment plant (WTP) sends approximately 18,000 gpd of alum sludge to the Elyria WWTP for treatment. Any WTP alum sludge in excess of the 18,000 gpd is sent to the North Ridgeville French Creek WWTP for treatment.

10) There are approximately 55 full time employees working at the WWTP, with coverage 24/7. Of the 55 employees, approximately 7 have their Class III wastewater operator's license, and 3 are pursuing a Class IV license.

11) The City is working on getting a backup, on-site generator designed and installed at the WWTP in 2009. The WWTP is currently served by two separate electrical power sources. The City does have portable generators for pump stations in the sewer system.

The City of Elyria should continue with all efforts that will enable the WWTP to consistently meet its NPDES Permit limits. If there are any comments or questions concerning this document, you may contact me at (330) 963-1110.

Respectfully,

Charles E. Allen

Charles E. Allen
Environmental Engineer
Division of Surface Water

CEA/mt

File: Muni/Elyria/P&C