

**Environmental
Protection Agency**

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Krieski, Director

June 4, ²⁰¹⁰~~2008~~

RE: LORAIN COUNTY
CITY OF LORAIN BRP WWTP
NPDES NO. OH0026093
OEPA NO. 3PE00005

Mr. Corey Timko, Director
City of Lorain
Municipal Utilities Dept.
1106 First Street
Lorain, OH 44052

Dear Mr. Timko:

On May 18, 2010, a Compliance Evaluation Inspection (CEI) was conducted at the City of Lorain BRP wastewater treatment plant. Present during the inspection were Messrs. Tony Dore and Alex Berki, representing the City of Lorain; Mr. John Sabo, of the Lorain County Health Department; and this writer.

The purpose of the inspection was to evaluate the treatment plant processes, effluent discharge quality, and general compliance with the current NPDES permit, and to discuss the forthcoming NPDES permit renewal. The last CEI conducted at the Lorain BRP WWTP was on July 17, 2008.

At the time of the May 18th inspection, the following observations were made and information was obtained:

- The grit removal and bar screen at the plant headworks had recently been taken out of operation for service, and had been put back into operation a few days prior to the inspection. Contents of the grit removal tank were turbid gray.
- One pre-aeration tank was taken down approximately 2 weeks prior, had the diffusers changed, and put back into service. The second pre-aeration tank is scheduled to be taken down for diffuser changing in the near future.
- All 3 primary settling tanks were in operation, and contents of the tanks were turbid gray. At the time of the inspection, the WWTP was experiencing hydraulic surging due to heavy rainfall the night prior to the inspection. The effluent weirs of the settling tanks were almost submerged due to the high flow rates.
- A positive displacement pump is being replaced within the next couple of months.
- When necessary, the secondary internal bypass is manually activated until hydraulic flows subside. The secondary internal bypass is activated in order to protect the biological portion of the WWTP during high flows. The settled, bypassed flow is chlorinated prior to combining with the WWTP final effluent, for

discharge at Station 001. At the time of the inspection, although flows were approaching the plant's hydraulic capacity, the internal bypass was still not activated.

- All 4 aeration tanks were in operation. Contents of the aeration tanks were rusty brown in color, with a crisp brown foam. MLSS levels are maintained in the 2100 ppm range in the summer, and 2400 ppm in the winter. Dissolved oxygen levels are maintained in the 1.8-2.5 ppm range.
- Diffusers in the #3 aeration tank were replaced since the last inspection, and the diffusers in tanks #2 and #4 are to be replaced this summer.
- Approximately 250#/day of ferrous chloride is manually metered and gravity fed to the aeration tanks.
- The 2 final settling tanks were in use, and effluent from the tanks was clear with a slight pinfloc.
- The west final settling tank was taken down last year for cleaning and internal repairs. The east final settling tank will be taken down, cleaned, and repaired this summer.
- Chlorination and dechlorination facilities were in operation. Approximately 100#/day of chlorine is used for disinfection during average daily flows (200#/day during high flows), and approximately 18 gallons/day of sodium bisulfite is used for dechlorination.
- A visual observation of the treatment plant outfall found the effluent to be clear and free of foam or solids. The mixing zone was clear where the effluent was mixing with the muddy water of the Black River.
- Raw and waste activated sludge is sent to the sludge thickener. From the thickener the sludge is sent to the primary digester, then secondary digester. Digested sludge is pressed 5 days/week on a 2 meter belt filter press. Sludge enters the press @ 4% solids, polymer is added, and sludge cake generated is approximately 23% solids.
- Sludge is hauled by Agri-Sludge, and land applied in Medina County by Albrecht Trucking. The sludge cake generated is rated as a Class B sludge.

A review of the electronic Discharge Monitoring Reports (eDMRs) submitted for the Lorain BRP WWTP, and covering the period of July 1, 2008 through May 1, 2010, indicates the Lorain Black River WWTP experienced the following incidences of non-compliance with its NPDES Permit effluent limits:

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**LORAIN BRP WWTP
 Effluent Numeric Limit Violations
 NPDES Permit No. 3PE00005
 (July 1, 2008 through May 1, 2010)**

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
September 2008	pH, Minimum	1D Conc	6.5	6.4	9/3/2008
September 2008	pH, Minimum	1D Conc	6.5	6.35	9/4/2008
August 2008	pH, Minimum	1D Conc	6.5	6.4	8/21/2008
August 2008	pH, Minimum	1D Conc	6.5	6.3	8/22/2008
August 2008	pH, Minimum	1D Conc	6.5	6.4	8/23/2008
August 2008	pH, Minimum	1D Conc	6.5	6.45	8/24/2008
February 2009	Total Suspended Solids	7D Qty	1703	2163.68	2/8/2009

A review of the eDMRs for the same time period found the following frequency reporting violation:

**LORAIN BRP WWTP
 Reporting Frequency Violations
 NPDES Permit No. 3PE00005
 (July 1, 2008 through May 1, 2010)**

Reporting Period	Station	Reporting Code	Parameter	Sample Frequency	Expected	Reported	Violation Date
September 2009	001	31616	Fecal Coliform	3/Week	3	2	09/01/2009

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

**LORAIN BRP WWTP
 Reporting Code Violations
 NPDES Permit No. 3PE00005
 (July 1, 2008 through May 1, 2010)**

Reporting Period	Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
January 2009	801	00010	Water Temperature			AF	1/1/2009
January 2009	801	00610	Nitrogen, Ammonia (NH3-N)			AF	1/1/2009
January 2009	801	00400	pH			AF	1/1/2009
January 2009	801	00300	Dissolved Oxygen			AF	1/1/2009
February 2009	801	00010	Water Temperature			AF	2/1/2009
February 2009	801	00610	Nitrogen, Ammonia (NH3-N)			AF	2/1/2009
February 2009	801	00400	pH			AF	2/1/2009

Reporting Period	Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
February 2009	801	00300	Dissolved Oxygen			AF	2/1/2009
January 2010	801	00010	Water Temperature			AF	1/1/2010
January 2010	801	00610	Nitrogen, Ammonia (NH3-N)			AF	1/1/2010
January 2010	801	00400	pH			AF	1/1/2010
January 2010	801	00300	Dissolved Oxygen			AF	1/1/2010
February 2010	801	00010	Water Temperature			AF	2/1/2010
February 2010	801	00610	Nitrogen, Ammonia (NH3-N)			AF	2/1/2010
February 2010	801	00400	pH			AF	2/1/2010
February 2010	801	00300	Dissolved Oxygen			AF	2/1/2010

Various items discussed with Messrs. Dore and Berki included the following:

- 1) Status of the proposed sludge composting facility, to be built at the former US Steel property, was discussed. A request for detailed information on the project was deferred by Mr. Dore, to the Municipal Utilities Director.
- 2) Status of the alum sludge being discharged from the City water treatment plant was discussed. Alum sludge from the water treatment plant is discharged to the geotubes across from the Municipal Utilities Department. Filtrate from the geotubes is then discharged, with dilution water via sanitary sewers, to the BRP WWTP (approx. 3.6 MGal. / yr).

About twice per year, the filtered material (approx. 200 Tons) from the geotubes is hauled to the landfill for disposal.
- 3) The BRP WWTP does not accept hauled waste for treatment.
- 4) The emergency backup generator, which was installed a couple years ago, was recently used for approximately 2 months while the electrical substation providing power to the WWTP was rebuilt.
- 5) The BRP WWTP currently employs 21 full time employees, 24/7.
- 6) The former Class IV licensed WWTP superintendent, Tony Hoholski, retired March 1, 2010. Mr. Dore, Class III licensed operator, is the acting superintendent until the City hires a new permanent Class IV licensed operator.

Please be reminded that the BRP WWTP NPDES Permit requires the plant to be under the supervision of a Class IV operator, and therefore, the City should be planning the hiring of another licensed Class IV operator as soon as possible.

Presently, the City's Class IV operator at the Lorain PQM WWTP (Doug Brown) is acting as a technical supervisor and signing off on the eDMR reports for the BRP WWTP.

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To date, the City has not implemented use of an operator's log book. Please note that this is a current Ohio EPA requirement, and must be initiated immediately.

Current Ohio EPA operator certification requirements may be reviewed on the Ohio EPA Web site at: <http://www.epa.state.oh.us/dsw/opcert/opcert.aspx>.

- 7) Since the last inspection, the City switched to the new Web-based eDMR (electronic Discharge Monitoring Report) reporting program method of reporting monthly operating data to the Ohio EPA.
- 8) DMRQA-29 unknown sample results were analyzed by the BRP wastewater lab. Analytical results were within acceptable standards except for copper, nickel, and silver. The three parameters were re-tested and results were within the acceptable range.
- 9) The future relocation of the BRP WWTP to the former US Steel property the City has acquired was discussed. A request for detailed information on the project was deferred by Mr. Dore, to the Municipal Utilities Director.
- 10) The SSO elimination schedule as contained in the Ohio EPA Director's Findings & Orders was also discussed. A request for detailed information on the project was deferred by Mr. Dore, to the Municipal Utilities Director.
- 11) The Pretreatment program for the City of Lorain is now under the coordination of Ms. Mary Garza, as the former pretreatment coordinator, Ted Baxter, resigned from City employment.

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

Respectfully,



Charles E. Allen
Environmental Engineer
Division of Surface Water

CEA/mt

File: Muni/LorainBRP/P&C