



Environmental  
Protection Agency

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

March 9, 2011

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

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

Dear Mr. Timko:

On February 8, 2011, a Compliance Evaluation Inspection (CEI) was conducted at the City of Lorain BRP wastewater treatment plant. Present during the inspection were Messrs. Bob Gall 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. The last CEI conducted at the Lorain BRP WWTP was on May 18, 2010.

At the time of the February 8<sup>th</sup> inspection, the following observations were made and information was obtained:

- 1) The headworks grit removal and bar screen were in operation, and contents of the grit removal tank were turbid gray.
- 2) Both pre-aeration tanks were in operation. Since the last inspection, a second pre-aeration tank was taken down for diffuser cleaning / changing.
- 3) All 3 primary settling tanks were in operation, and contents of the tanks were typical.
- 4) A positive displacement pump is to be replaced this spring 2011.
- 5) All 4 aeration tanks were in operation, with contents being a rusty brown color. Mixed Liquor Suspended Solids concentrations were in the 2400 ppm range due to winter operation. Dissolved oxygen levels are maintained in the 2.0 - 2.5 ppm range.
- 6) Diffusers in the #2 and #4 aeration tanks are to be replaced this summer 2011.

*W. J. / LORAIN BRP*

- 7) Approximately 300 # / day of ferrous chloride is manually metered and gravity fed to the aeration tanks.
- 8) Both final settling tanks were in operation, and effluent from the tanks was clear with a slight pinfloc. The effluent troughs were free of algae and solids.
- 9) Chlorination and dechlorination facilities were not in operation, due to the time of year. Effluent disinfection is not required from November 1<sup>st</sup> through April 30<sup>th</sup>.
- 10) Observation of the treatment plant outfall found the effluent to be visually 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.
- 11) 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.
- 12) Class B sludge cake generated at the BRP WWTP is hauled by Agri-Sludge, and land applied in Medina County, by Albrecht Trucking.

A review of the electronic Discharge Monitoring Reports (eDMRs) submitted for the Lorain BRP WWTP, and covering the period of May 1, 2010 through February 1, 2011, indicates the Lorain Black River WWTP experienced the following incidences of non-compliance with its NPDES Permit effluent limits:

**LORAIN BRP WWTP**  
**Effluent Numeric Limit Violations**  
**NPDES Permit No. 3PE00005**  
**(May 1, 2010 through Feb. 1, 2011)**

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
August 2010	Dissolved Oxygen	1D Conc	5.0	4.9	8/2/2010
August 2010	Dissolved Oxygen	1D Conc	5.0	4.8	8/26/2010
September 2010	Dissolved Oxygen	1D Conc	5.0	4.8	9/2/2010
September 2010	Dissolved Oxygen	1D Conc	5.0	4.9	9/6/2010
September 2010	Dissolved Oxygen	1D Conc	5.0	4.9	9/27/2010
September 2010	Dissolved Oxygen	1D Conc	5.0	4.2	9/28/2010
October 2010	Dissolved Oxygen	1D Conc	5.0	2.1	10/1/2010

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
October 2010	Mercury, Total (Low Level)	30D Qty	0.0000	.00008	10/1/2010
October 2010	Dissolved Oxygen	1D Conc	5.0	2.1	10/3/2010
October 2010	Dissolved Oxygen	1D Conc	5.0	4.3	10/4/2010
October 2010	Dissolved Oxygen	1D Conc	5.0	4.1	10/5/2010
October 2010	Dissolved Oxygen	1D Conc	5.0	3.5	10/26/2010
November 2010	Mercury, Total (Low Level)	30D Conc	1.3	3.68	11/1/2010
November 2010	Mercury, Total (Low Level)	30D Qty	0.0000	.00014	11/1/2010
November 2010	Dissolved Oxygen	1D Conc	5.0	4.8	11/5/2010
November 2010	Dissolved Oxygen	1D Conc	5.0	4.8	11/9/2010
November 2010	Dissolved Oxygen	1D Conc	5.0	4.7	11/10/2010
November 2010	Dissolved Oxygen	1D Conc	5.0	4.1	11/11/2010
November 2010	Dissolved Oxygen	1D Conc	5.0	4.9	11/16/2010
November 2010	Dissolved Oxygen	1D Conc	5.0	4.5	11/21/2010
November 2010	Dissolved Oxygen	1D Conc	5.0	3.8	11/22/2010
November 2010	Dissolved Oxygen	1D Conc	5.0	4.2	11/23/2010
November 2010	Dissolved Oxygen	1D Conc	5.0	4.5	11/24/2010
November 2010	Dissolved Oxygen	1D Conc	5.0	1.9	11/25/2010
November 2010	Dissolved Oxygen	1D Conc	5.0	2.1	11/26/2010
November 2010	Dissolved Oxygen	1D Conc	5.0	2.4	11/30/2010
December 2010	Dissolved Oxygen	1D Conc	5.0	2.7	12/1/2010
December 2010	Mercury, Total (Low Level)	30D Conc	1.3	1.83	12/1/2010
December 2010	Mercury, Total (Low Level)	30D Qty	0.0000	.00008	12/1/2010
December 2010	Dissolved Oxygen	1D Conc	5.0	4.2	12/4/2010
December 2010	Dissolved Oxygen	1D Conc	5.0	3.6	12/5/2010
December 2010	Dissolved Oxygen	1D Conc	5.0	3.3	12/6/2010
December 2010	Dissolved Oxygen	1D Conc	5.0	4.	12/7/2010
December 2010	Dissolved Oxygen	1D Conc	5.0	3.4	12/8/2010
December 2010	Dissolved Oxygen	1D Conc	5.0	3.4	12/9/2010
December 2010	Dissolved Oxygen	1D Conc	5.0	3.2	12/10/2010
December 2010	Dissolved Oxygen	1D Conc	5.0	2.8	12/11/2010
December 2010	Dissolved Oxygen	1D Conc	5.0	3.2	12/12/2010
December 2010	Dissolved Oxygen	1D Conc	5.0	4.1	12/13/2010

**\*\* No Reporting Code Violations for period.**

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

- 1) Since the last inspection, the full time superintendent position at the BRP WWTP was filled by Mr. Bob Gall, Class IV licensed operator. Mr. Gall started in the superintendent position on August 9, 2010.
- 2) The BRP WWTP receives approximately 24,000 gallons per week from the PQM WWTP for processing.

- 3) Both the primary and secondary sludge digesters were cleaned during September / October 2010.
- 4) The screw / auger in the grit removal equipment is to be replaced this year.
- 5) Installation of a chemical feed pump is planned for the ferrous chloride system.
- 6) Consideration is being given to switching from chlorine gas to sodium hypochlorite as a source of chlorine for disinfection. Please note a Permit To Install would be required for the installation.
- 7) The BRP WWTP does not accept hauled waste for treatment.
- 8) A new electrical substation and backup generator were installed within the last year.
- 9) The BRP WWTP currently employs 21 full time employees, 24/7.
- 10) The use of an operator's log book has been implemented at the BRP WWTP. However, the logbook is not of the required hardbound type. Mr. Gall indicated the logbook would be switched.
- 11) The Operator of Record Notification Form (ORC) was submitted to the Ohio EPA for the BRP WWTP on January 10, 2011, naming Mr. Gall as the Operator of Record. Please note all 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>.
- 12) DMRQA-30 unknown sample results were analyzed by the BRP wastewater lab. Analytical results were within acceptable standards except for COD, copper, nickel, silver, and zinc. These parameters were re-tested, and results were within the acceptable range.
- 13) The new NPDES reporting station, STA 602 (internal bypass of secondary treatment), was discussed, and the sample location observed. The sample location appears to meet the intent of the NPDES permit.
- 14) Copies of NPDES permit-required items were requested, as they could not be found in Ohio EPA files. Mr. Gall provided copies of: the Annual SSO Report for 2009; the Annual Sludge Report for 2010; the ORC Form.

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- 15) The NPDES permit-required effluent outfall sign posting, which was required to have been erected by December 1, 2010, still needs to be posted.
- 16) The NPDES permit-required letter submittal, stating the Lorain BRP WWTP can meet the new E.coli limits, was due February 1, 2011, and needs to be submitted.
- 17) The reasons for Dissolved Oxygen (DO) violations was discussed with Mr. Gall. He indicated that previous NPDES permits contained no DO limits due to the discharge location being considered as Lake Erie, and not the Black River, due to the lake influence in the area. Mr. Gall indicated he may submit a permit modification request to the Ohio EPA for the elimination of the DO limits.
- 18) The Pretreatment program for the City of Lorain is now under the coordination of Ms. Mary Garza.

The Lorain BRP WWTP should continue with all efforts that will enable the WWTP to consistently meet its NPDES Permit limits. Written correspondence regarding the City's actions on the above items should be submitted to this office with 14 days of the receipt of this letter.

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