



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

June 20, 2013

RE: LORAIN COUNTY  
PLUM CREEK WWTP  
COMPLIANCE EVALUATION INSPECTION  
NPDES NO. 3PG00052

Lorain County Commissioners  
Administration Building  
216 Middle Avenue  
Elyria, OH 44035

Dear Commissioners:

On May 29, 2013, a Compliance Evaluation Inspection (CEI) was conducted on the Plum Creek Wastewater Treatment Plant (WWTP). Present during the inspection were Mr. Steve Hicks, of the Lorain County Sanitary Engineer's Office; Mr. John Sabo, of the Lorain County Health Department; and this writer, of Ohio EPA.

The purpose of the inspection was to evaluate the operation and maintenance condition of the Plum Creek WWTP, and to evaluate its compliance with the terms and conditions of its current National Pollutant Discharge Elimination System (NPDES) permit, prior to its renewal.

At the time of the May 29<sup>th</sup> inspection, the following observations were made:

- 1) Contents of the flow equalization tank were typical (turbid gray), and were being well aerated. Both pumps in the flow equalization tank were in the 'AUTO' mode, and were operational when manually tested.
- 2) Contents of the extended aeration tank were dark brown in color, and were being well aerated. The return sludge line was operating, returning brown water to the aeration tank from the settling tank. According to Mr. Hicks, the 30-minute settling test for the aeration tank contents resulted in approximately 330 ml/1000 ml (33%).
- 3) Settling tank contents were clear, and the effluent trough was free of solids or algae deposition. The skimmer line was returning clear water to the aeration tank, and the mechanical scrapers were operating. At the time of the inspection there was only a trickle of effluent being discharged from the settling tank.
- 4) One of two upflow clarifiers was in use (east cell), and water above the plastic media was clear, with no solids deposition. Use of the upflow clarifier cells is alternated weekly.
- 5) Both pumps in the surface sand filter dosing station were in the 'AUTO' position, and were operational when manually tested.

- 6) The south cell of the surface sand filter was dosed when the pumps were tested, and the sand contained vegetative growth. The sand in the filter cells did need to be raked level.
- 7) Final effluent disinfection is accomplished with chlorine and dechlorination tablets. Both the chlorination and dechlorination units are four tube units, and both units contained only one tube. Each unit contained tablets.

According to Mr. Hicks, approximately 10 chlorine tablets, and five dechlorination tablets, are used per week.

- 8) At the time of the inspection, only a trickle of effluent was being discharged from the WWTP.
- 9) The Aerated Sludge Holding tank was approximately half-full of medium brown colored sludge, and was being well aerated.
- 10) Flow measurement at the Plum Creek WWTP is obtained from a totalizer on the pump station at the WWTP.

The last CEI conducted at the Plum Creek WWTP was on July 12, 2012. Since the last CEI, the Plum Creek WWTP has reported the following NPDES Permit effluent violations in their monthly electronic Discharge Monitoring Reports (eDMR):

**PLUM CREEK WWTP  
 NPDES PERMIT NO. 3GH00052  
 EFFLUENT LIMIT VIOLATIONS  
 (8/1/12 – 6/1/13)**

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
August 2012	Total Suspended Solids	30D Conc	12	23.7	8/1/2012
August 2012	Total Suspended Solids	7D Conc	18	53.	8/8/2012
October 2012	Total Suspended Solids	30D Conc	12	18.5	10/1/2012
October 2012	Total Suspended Solids	30D Qty	1.8	9.69288	10/1/2012
November 2012	Nitrogen, Ammonia (NH3-N)	30D Conc	5.5	5.72	11/1/2012
November 2012	Total Suspended Solids	7D Conc	18	20.9	11/8/2012
November 2012	Nitrogen, Ammonia (NH3-N)	7D Conc	8.3	10.7	11/8/2012
January 2013	Total Suspended Solids	7D Conc	18	20.	1/8/2013

A review of the eDMRs for the same period also found the following monitoring frequency violations:

**PLUM CREEK WWTP  
NPDES PERMIT NO. 3PG00052  
REPORTING FREQUENCY VIOLATIONS  
(8/1/12 –6/1/13)**

Reporting Period	Parameter	Sample Frequency	Expected	Reported	Violation Date
December 2012	Total Suspended Solids	1/Week	1	0	12/22/2012
December 2012	Nitrogen, Ammonia (NH3-N)	1/2Weeks	1	0	12/15/2012
December 2012	CBOD 5 day	1/Week	1	0	12/22/2012
January 2013	Total Suspended Solids	1/Week	1	0	1/1/2013
January 2013	CBOD 5 day	1/Week	1	0	1/1/2013

Items discussed with Mr. Hicks during the May 29<sup>th</sup> inspection at the Plum Creek WWTP include the following:

- 1) Since the last inspection, MLSS concentrations in the aeration tanks have been kept at lower operating levels, and sludge wasting has increased. The number of suspended solids violations has been somewhat reduced, but the Plum Creek WWTP is still experiencing problems with suspended solids violations, mostly during times of precipitation events.
- 2) The County has continued with its efforts in Inflow & Infiltration (I/I) reduction in the Plum Creek sanitary sewer system. Sewer main lining and smoke testing of laterals has been conducted in the development.
- 3) A total of 50 residences were smoke tested, with 4 found to have illegal connections or lateral repairs needed. Approximately 3 of those needing illegal connections removed, or repairs needed, were made as of October 2012.
- 4) The forthcoming NPDES permit renewal will contain a few minor changes to the final effluent table (STA 001).
  - a. There will be an interim table in effect the first 11 months, in which fecal coliform limits will be kept as in the old permit, and E. coli will be monitored. As of 12 months after the permit effective date, the final table will become effective, and the fecal coliform monitoring will be eliminated, and replaced with E. Coli limits. Also, upstream and downstream fecal coliform monitoring will be replaced with E. coli monitoring.
  - b) Monitoring for nitrate-nitrite nitrogen, and total dissolved solids, will be required in the final effluent.
  - c) The renewed NPDES permit will also require posting of a sign at the WWTP outfall, which identifies the discharge as effluent from the WWTP, its permit number, and a contact telephone number.
  - d) The renewed permit will include additional operator record keeping requirements in the form of an operator's log book. The log book will need to

be hardbound, with numbered pages, and at a minimum, contain the following recorded information:

- Date and times of arrival and departure for the operator of record, and another operator in attendance.
  - Specific O&M activities performed at the WWTP which affect, or have the potential to affect the quality or quantity of effluent being produced.
  - Results of tests performed, and samples taken, unless documented on a lab sheet.
  - Performance of preventative maintenance and repairs, or requests for repairs of equipment, having the potential to affect the quality or quantity of effluent being produced.
  - Identification of the persons making entries into the log book for that day.
- 5) Mr. Hicks indicated he would be retiring from the Lorain County Sanitary Engineers office by the end of June 2013. He was instructed to submit a written notification to this office, indicating when he would no longer be the responsible person in charge of the operation of the WWTP.
- 6) Upon Mr. Hicks' retirement, the County needs to name a properly licensed person as the Operator of Record for the WWTP, and submit the necessary ORC Form (EPA Form 5121) to this Agency.

The last Plum Creek WWTP CEI report to the County (dated August 9, 2012) required the submission of an SNC Compliance Plan Report to the Ohio EPA. The SNC Compliance Plan Report was to address the significant effluent violations at the WWTP caused by the I/I problem in the development; summarize the County's efforts and capital expended to try and correct the I/I problem; and to evaluate if there was a correlation between precipitation events and final effluent limit violations. The required SNC report was received October 16, 2012, and addressed all 4 County WWTPs.

This office is requesting a follow-up meeting, preferably by August 1, 2013, to discuss the continuing effluent violations at the Plum Creek WWTP; to discuss the results presented in the SNC Compliance Plan; and to agree upon what additional efforts will be extended by the County to bring the Plum Creek WWTP back into continued compliance.

If there are questions or comments regarding this correspondence, please contact this writer at (330) 963-1110.

Respectfully,



Charles E. Allen  
Environmental Engineer  
Division of Surface Water

CEA/cs