



**Environmental
Protection Agency**

John R. Kasich, Governor

Mary Taylor, Lt. Governor

Scott J. Nally, Director

January 26, 2012

RE: MEDINA COUNTY
LAFAYETTE TOWNSHIP
CHIPPEWA WTP
NPDES NO. 3IY00081

Mr. Dave Bazilevich, Supt. of Treatment
Medina County Sanitary Engineers
791 West Smith Road
P.O. Box 542
Medina, Ohio 44256

Dear Mr. Bazilevich:

On January 10, 2012, a Compliance Evaluation Inspection (CEI) was conducted at the Chippewa Water Treatment Plant (WTP), located at 85 Ridge Road, in Lafayette Township. Present for the inspection were you, representing the Medina County Sanitary Engineer's Office, and this writer.

The purpose of the inspection was to evaluate the operation and maintenance of the WTP filter backwash filter, prior to renewal of its National Pollutant Discharge Elimination System (NPDES) permit to discharge.

At the time of the January 10th inspection, the following items were discussed and/or information was obtained:

- 1) Water is withdrawn from the well field from three separate wells. The water is metered, then passes through an air stripper to remove hydrogen sulfide gas which is naturally present in the well water.
- 2) Following the air stripper, the well water passes through two pressure vessel filters, which remove any filterable solids. Following the pressure vessel filters, the treated water is chlorinated, and discharged out into the water distribution system.
- 3) The pressure filter vessels are backwashed to remove the filtered solids, and the backwash water is discharged to a filter backwash water sand filter located outside of the WTP. The filtered backwash water is discharged to an unnamed tributary of the Inlet to Chippewa Lake.
- 4) Backwash of the pressure vessel filters is conducted on one filter per day per week, at a rate of 400 gpm for 10 minutes, totaling approximately 4000 gallons per day.
- 5) Up until January 2010, the pressure vessel filters were both backwashed in the same day. However, it was found that backwashing both filters in one day was causing NPDES permit limit exceedances of both the concentration and loadings limits for suspended iron. Once the backwash was changed to one pressure vessel filter per day, the permit violations for suspended iron were ceased.

- 6) As needed, spent sand from the filter backwash sand filter is removed for a depth of approximately 2" to 3", and replenished with fresh sand. The removed sand is stored in the recycle area, and then eventually disposed of at the landfill.
- 7) In July 2009 the entire filter backwash sand filter was revamped. All sand was removed and replaced, and the under drain collection pipes were replaced.
- 8) The current NPDES permit to discharge for the sand filter treatment process (3IY00081*DD) will expire on March 31, 2012. The application for renewal of the NPDES permit was due into the Ohio EPA 180 days prior to the permit expiration date. The application for renewal of the permit has been received, and the renewed permit should be forthcoming within the next several months.

A review of the electronic Discharge Monitoring Reports (eDMR's) submitted for the Chippewa WTP for the period of January 1, 2007 through January 1, 2012, found the following effluent limit numeric violations:

CHIPPEWA WATER TREATMENT PLANT
NPDES Permit No. 3IY00081
(Jan. 1, 2007 – Jan. 1, 2012)
Numeric Effluent Violations

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
February 2007	Total Suspended Solids	1D Qty	0.27	.35484	2/1/2007
February 2007	Iron, Suspended (Fe)	1D Qty	0.012	.01583	2/1/2007
February 2007	Iron, Suspended (Fe)	30D Qty	0.006	.00759	2/1/2007
March 2007	Total Suspended Solids	30D Qty	0.18	.18698	3/1/2007
March 2007	Iron, Suspended (Fe)	30D Qty	0.006	.00763	3/1/2007
March 2007	Total Suspended Solids	1D Qty	0.27	.31226	3/9/2007
March 2007	Total Suspended Solids	1D Qty	0.27	.34065	3/16/2007
April 2007	Iron, Suspended (Fe)	30D Qty	0.006	.00838	4/1/2007
May 2007	Iron, Suspended (Fe)	30D Qty	0.006	.00937	5/1/2007
May 2007	Iron, Suspended (Fe)	1D Qty	0.012	.01248	5/31/2007
June 2007	Total Suspended Solids	30D Qty	0.18	.28608	6/1/2007
June 2007	Iron, Suspended (Fe)	30D Qty	0.006	.01406	6/1/2007
June 2007	Total Suspended Solids	1D Qty	0.27	.4542	6/14/2007
June 2007	Iron, Suspended (Fe)	1D Qty	0.012	.02608	6/14/2007
August 2007	Total Suspended Solids	30D Qty	0.18	.56775	8/1/2007
August 2007	Iron, Suspended (Fe)	30D Qty	0.006	.01343	8/1/2007
August 2007	Total Suspended Solids	1D Qty	0.27	.56775	8/17/2007
August 2007	Iron, Suspended (Fe)	1D Qty	0.012	.01343	8/17/2007
September 2007	Iron, Suspended (Fe)	30D Qty	0.006	.01152	9/1/2007
September 2007	Iron, Suspended (Fe)	1D Qty	0.012	.01751	9/20/2007
September 2007	Iron, Suspended (Fe)	1D Qty	0.012	.01329	9/27/2007
October 2007	Total Suspended Solids	30D Qty	0.18	.18215	10/1/2007
October 2007	Iron, Suspended (Fe)	30D Qty	0.006	.01164	10/1/2007
October 2007	Iron, Suspended (Fe)	1D Qty	0.012	.0158	10/25/2007

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Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
November 2007	Total Suspended Solids	30D Qty	0.18	.19304	11/1/2007
November 2007	Iron, Suspended (Fe)	30D Qty	0.006	.01714	11/1/2007
November 2007	Total Suspended Solids	1D Qty	0.27	.28388	11/2/2007
November 2007	Iron, Suspended (Fe)	1D Qty	0.012	.03537	11/8/2007
November 2007	Iron, Suspended (Fe)	1D Qty	0.012	.02332	11/23/2007
November 2007	Iron, Suspended (Fe)	1D Qty	0.012	.01326	11/29/2007
December 2007	Iron, Suspended (Fe)	30D Qty	0.006	.01129	12/1/2007
December 2007	Iron, Suspended (Fe)	1D Qty	0.012	.01329	12/6/2007
January 2008	Iron, Suspended (Fe)	30D Qty	0.006	.0081	1/1/2008
January 2008	Total Suspended Solids	1D Qty	0.27	.46839	1/24/2008
January 2008	Iron, Suspended (Fe)	1D Qty	0.012	.01299	1/24/2008
March 2008	Total Suspended Solids	30D Qty	0.18	.76055	3/1/2008
March 2008	Iron, Suspended (Fe)	30D Qty	0.006	.0136	3/1/2008
March 2008	Total Suspended Solids	1D Conc	45	72.	3/13/2008
March 2008	Total Suspended Solids	1D Qty	0.27	2.7252	3/13/2008
March 2008	Iron, Suspended (Fe)	1D Qty	0.012	.02918	3/13/2008
April 2008	Iron, Suspended (Fe)	30D Qty	0.006	.00635	4/1/2008
May 2008	Iron, Suspended (Fe)	1D Qty	0.012	.01304	5/1/2008
May 2008	Iron, Suspended (Fe)	30D Qty	0.006	.01009	5/1/2008
May 2008	Iron, Suspended (Fe)	1D Qty	0.012	.01392	5/29/2008
June 2008	Iron, Suspended (Fe)	30D Qty	0.006	.00616	6/1/2008
July 2008	Iron, Suspended (Fe)	30D Qty	0.006	.01108	7/1/2008
July 2008	Total Suspended Solids	1D Qty	0.27	.27252	7/3/2008
July 2008	Iron, Suspended (Fe)	1D Qty	0.012	.01623	7/17/2008
August 2008	Iron, Suspended (Fe)	30D Qty	0.006	.01203	8/1/2008
August 2008	Iron, Suspended (Fe)	1D Qty	0.012	.01529	8/14/2008
August 2008	Iron, Suspended (Fe)	1D Qty	0.012	.01363	8/21/2008
September 2008	Iron, Suspended (Fe)	30D Qty	0.006	.00893	9/1/2008
September 2008	Iron, Suspended (Fe)	1D Qty	0.012	.0138	9/4/2008
November 2008	Total Suspended Solids	30D Qty	0.18	.31794	11/1/2008
November 2008	Iron, Suspended (Fe)	30D Qty	0.006	.01939	11/1/2008
November 2008	Total Suspended Solids	1D Qty	0.27	.31794	11/26/2008
November 2008	Iron, Suspended (Fe)	1D Qty	0.012	.01939	11/26/2008
December 2008	Total Suspended Solids	30D Qty	0.18	.18925	12/1/2008
December 2008	Iron, Suspended (Fe)	30D Qty	0.006	.00651	12/1/2008
December 2008	Total Suspended Solids	1D Qty	0.27	.33308	12/17/2008
January 2009	Iron, Suspended (Fe)	30D Qty	0.006	.00787	1/1/2009
February 2009	Iron, Suspended (Fe)	30D Qty	0.006	.00669	2/1/2009
May 2009	Total Suspended Solids	1D Qty	0.27	.28463	5/27/2009
May 2009	Iron, Suspended (Fe)	1D Qty	0.012	.01378	5/27/2009
July 2009	Total Suspended Solids	30D Qty	0.18	.33308	7/1/2009
July 2009	Total Suspended Solids	1D Qty	0.27	.33308	7/21/2009
August 2009	Total Suspended Solids	1D Qty	0.27	.28388	8/21/2009
December 2009	Iron, Suspended (Fe)	1D Qty	0.012	.01614	12/3/2009
December 2009	Iron, Suspended (Fe)	1D Qty	0.012	.0141	12/4/2009

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
January 2010	Total Suspended Solids	30D Qty	0.18	.28063	1/1/2010
January 2010	Total Suspended Solids	1D Conc	45	50.	1/7/2010
January 2010	Total Suspended Solids	1D Qty	0.27	1.70325	1/7/2010
November 2011	Total Suspended Solids	30D Qty	0.18	.31226	11/1/2011
November 2011	Total Suspended Solids	1D Conc	45	158.	11/23/2011
November 2011	Total Suspended Solids	1D Qty	0.27	2.39212	11/23/2011
November 2011	Iron, Suspended (Fe)	1D Qty	0.012	.01582	11/23/2011

It is noted that since operations were changed to backwash of one pressure vessel filter per day, the suspended iron effluent violations have been brought under control.

Medina County should continue current operation and maintenance practices, which allow the Chippewa WTP to consistently meet its NPDES Permit limits.

If you have 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

CA/cs