



State of Ohio Environmental Protection Agency

Northeast District Office

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Lee Fisher, Lieutenant Governor
Chris Korleski, Director

November 30, 2007

RE: MEDINA COUNTY
GRANGER TOWNSHIP
HIGHLAND LOCAL SCHOOL DISTRICT
WWTP INSPECTION
(NPDES NO. 3PT00111)

School Superintendent
Highland Local School District
3880 Ridge Road
Medina, OH 44256

CERTIFIED MAIL

Dear Superintendent:

On November 1, 2007, a Compliance Evaluation Inspection (CEI) was conducted on the Highland Local School District wastewater treatment plant (WWTP). Present during the inspection were Mr. Gary Loomis, representing the school system, and this writer, of the Ohio EPA.

The purpose of the visit was to evaluate the Operation and Maintenance of the WWTP, and to evaluate the facility's compliance with National Pollutant Discharge Elimination System (NPDES) permit effluent limits, as well as the terms and conditions of the permit.

At the time of the inspection the general operation and maintenance of the plant could be rated as marginal. The following items were observed at the WWTP:

- 1) One of two aeration tanks was in use, and its contents were medium to dark brown.
- 2) One half of the settling tanks were in use. Contents of the settling tanks were typical, and there was a slight amount of floating grease on the water surface. The skimmer was properly adjusted, and the effluent trough was clean.
- 3) One quarter of the fixed media clarifier was in use. The fixed media which was in use was typical in appearance.
- 4) One of the four surface sand filter cells was in use. The sand in all four cells was clean and level.
- 5) Effluent from the WWTP is disinfected using Ultra Violet disinfection. The disinfection season is from May 1st through October 31st of each year.
- 6) Treated effluent from the WWTP is post aerated prior to discharge.

During the period January 1, 2003, through November 1, 2007, the Highland Local Schools WWTP reported the following NPDES permit effluent violations in their monthly operating reports (MORs):

HIGHLAND LOCAL SCHOOL DISTRICT
NPDES Permit No. 3PT00111
NPDES Numeric Effluent Limit Violations
(January 1, 2003 through November 1, 2007)

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
November 2003	Total Suspended Solids	30D Conc	10	13.	11/1/2003
November 2003	Total Suspended Solids	7D Conc	15	16.	11/1/2003
November 2003	CBOD 5 day	30D Conc	8	9.	11/1/2003
December 2003	Total Suspended Solids	30D Conc	10	19.	12/1/2003
December 2003	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	8.935	12/1/2003
December 2003	Total Suspended Solids	7D Conc	15	22.	12/8/2003
December 2003	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	16.2	12/8/2003
January 2004	Total Suspended Solids	30D Conc	10	11.	1/1/2004
January 2004	CBOD 5 day	30D Conc	8	9.	1/1/2004
February 2004	Total Suspended Solids	30D Conc	10	13.	2/1/2004
February 2004	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	22.	2/1/2004
February 2004	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	22.	2/1/2004
March 2004	Total Suspended Solids	30D Conc	10	18.	3/1/2004
March 2004	Total Suspended Solids	7D Conc	15	29.	3/1/2004
March 2004	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	20.5	3/1/2004
March 2004	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	13.	3/1/2004
March 2004	Nitrogen, Ammonia (NH3-N)	30D Qty	0.58	.60556	3/1/2004
March 2004	Total Suspended Solids	7D Conc	15	23.	3/8/2004
March 2004	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	23.25	3/8/2004
March 2004	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	25.25	3/22/2004
April 2004	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	3.06333	4/1/2004
May 2004	Nitrogen, Ammonia (NH3-N)	30D Conc	1.0	2.54333	5/1/2004
May 2004	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	6.15	5/1/2004
August 2004	Total Suspended Solids	30D Conc	10	12.	8/1/2004
August 2004	Total Suspended Solids	7D Conc	15	21.	8/22/2004
August 2004	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	1.98	8/22/2004
September 2004	Nitrogen, Ammonia (NH3-N)	30D Conc	1.0	2.03	9/1/2004
September 2004	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	2.9	9/8/2004
September 2004	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	2.88	9/15/2004
October 2004	Total Suspended Solids	30D Conc	10	10.25	10/1/2004
October 2004	Nitrogen, Ammonia (NH3-N)	30D Conc	1.0	4.25	10/1/2004
October 2004	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	9.1	10/8/2004
October 2004	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	3.45	10/15/2004
November 2004	Total Suspended Solids	30D Conc	10	13.5	11/1/2004
November 2004	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	34.8333	11/1/2004
November 2004	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	15.25	11/1/2004
November 2004	Nitrogen, Ammonia (NH3-N)	30D Qty	0.58	.89981	11/1/2004

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
November 2004	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	47.25	11/8/2004
November 2004	Nitrogen, Ammonia (NH3-N)	7D Qty	0.88	1.21076	11/8/2004
November 2004	Total Suspended Solids	7D Conc	15	22.	11/22/2004
November 2004	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	42.	11/22/2004
November 2004	Nitrogen, Ammonia (NH3-N)	7D Qty	0.88	1.00787	11/22/2004
December 2004	Total Suspended Solids	30D Conc	10	15.75	12/1/2004
December 2004	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	6.71	12/1/2004
December 2004	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	13.75	12/8/2004
December 2004	Total Suspended Solids	7D Conc	15	20.	12/15/2004
December 2004	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	5.5	12/15/2004
December 2004	Total Suspended Solids	7D Conc	15	18.	12/22/2004
January 2005	Total Suspended Solids	30D Conc	10	13.75	1/1/2005
January 2005	Total Suspended Solids	7D Conc	15	24.	1/15/2005
February 2005	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	39.625	2/1/2005
February 2005	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	40.	2/1/2005
February 2005	Nitrogen, Ammonia (NH3-N)	30D Qty	0.58	1.01727	2/1/2005
February 2005	Nitrogen, Ammonia (NH3-N)	7D Qty	0.88	.99016	2/1/2005
February 2005	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	39.25	2/22/2005
February 2005	Nitrogen, Ammonia (NH3-N)	7D Qty	0.88	1.04439	2/22/2005
March 2005	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	56.25	3/1/2005
March 2005	Nitrogen, Ammonia (NH3-N)	30D Qty	0.58	1.79014	3/1/2005
March 2005	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	54.25	3/8/2005
March 2005	Nitrogen, Ammonia (NH3-N)	7D Qty	0.88	1.82749	3/8/2005
March 2005	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	58.25	3/15/2005
March 2005	Nitrogen, Ammonia (NH3-N)	7D Qty	0.88	1.75279	3/15/2005
April 2005	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	14.375	4/1/2005
April 2005	Nitrogen, Ammonia (NH3-N)	30D Qty	0.58	.63236	4/1/2005
April 2005	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	28.5	4/22/2005
April 2005	Nitrogen, Ammonia (NH3-N)	7D Qty	0.88	1.25564	4/22/2005
May 2005	Nitrogen, Ammonia (NH3-N)	30D Conc	1.0	18.	5/1/2005
May 2005	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	31.25	5/1/2005
May 2005	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	4.75	5/22/2005
June 2005	Nitrogen, Ammonia (NH3-N)	30D Conc	1.0	3.79	6/1/2005
June 2005	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	10.85	6/1/2005
August 2005	Total Suspended Solids	30D Conc	10	10.5	8/1/2005
August 2005	pH	1D Conc	6.5	6.	8/1/2005
August 2005	Total Suspended Solids	7D Conc	15	17.	8/8/2005
September 2005	Nitrogen, Ammonia (NH3-N)	30D Conc	1.0	6.89	9/1/2005
September 2005	Nitrogen, Ammonia (NH3-N)	30D Qty	0.19	.42722	9/1/2005
September 2005	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	12.95	9/22/2005
September 2005	Nitrogen, Ammonia (NH3-N)	7D Qty	0.29	.83817	9/22/2005
October 2005	Nitrogen, Ammonia (NH3-N)	30D Conc	1.0	13.825	10/1/2005
October 2005	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	7.15	10/1/2005

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
October 2005	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	20.5	10/15/2005
November 2005	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	21.875	11/1/2005
November 2005	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	11.25	11/1/2005
November 2005	Nitrogen, Ammonia (NH3-N)	30D Qty	0.58	.89534	11/1/2005
November 2005	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	32.5	11/15/2005
November 2005	Nitrogen, Ammonia (NH3-N)	7D Qty	0.88	1.46877	11/15/2005
December 2005	Total Suspended Solids	30D Conc	10	11.5	12/1/2005
December 2005	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	4.625	12/1/2005
December 2005	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	8.25	12/1/2005
December 2005	Total Suspended Solids	7D Conc	15	33.	12/8/2005
January 2006	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	4.7	1/1/2006
January 2006	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	9.25	1/22/2006
February 2006	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	15.	2/1/2006
February 2006	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	21.25	2/8/2006
February 2006	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	8.75	2/22/2006
March 2006	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	19.	3/1/2006
March 2006	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	24.25	3/1/2006
March 2006	Nitrogen, Ammonia (NH3-N)	30D Qty	0.58	.69109	3/1/2006
March 2006	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	13.75	3/15/2006
May 2006	Nitrogen, Ammonia (NH3-N)	30D Conc	1.0	21.315	5/1/2006
May 2006	Nitrogen, Ammonia (NH3-N)	30D Qty	0.19	.50439	5/1/2006
May 2006	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	33.38	5/8/2006
May 2006	Nitrogen, Ammonia (NH3-N)	7D Qty	0.29	.89325	5/8/2006
May 2006	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	9.25	5/22/2006
September 2006	Nitrogen, Ammonia (NH3-N)	30D Conc	1.0	6.375	9/1/2006
September 2006	Nitrogen, Ammonia (NH3-N)	30D Qty	0.19	.22758	9/1/2006
September 2006	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	4.75	9/8/2006
September 2006	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	8.	9/15/2006
September 2006	Nitrogen, Ammonia (NH3-N)	7D Qty	0.29	.33308	9/15/2006
October 2006	Nitrogen, Ammonia (NH3-N)	30D Conc	1.0	8.33333	10/1/2006
October 2006	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	11.	10/1/2006
October 2006	Nitrogen, Ammonia (NH3-N)	30D Qty	0.19	.37112	10/1/2006
October 2006	Nitrogen, Ammonia (NH3-N)	7D Qty	0.29	.4226	10/1/2006
October 2006	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	7.25	10/15/2006
October 2006	Nitrogen, Ammonia (NH3-N)	7D Qty	0.29	.38418	10/15/2006
October 2006	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	6.75	10/22/2006
October 2006	Nitrogen, Ammonia (NH3-N)	7D Qty	0.29	.30659	10/22/2006
November 2006	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	3.85	11/1/2006
February 2007	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	34.5	2/1/2007
February 2007	Nitrogen, Ammonia (NH3-N)	30D Qty	0.58	.58668	2/1/2007
February 2007	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	30.25	2/8/2007
February 2007	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	38.75	2/15/2007
February 2007	Nitrogen, Ammonia (NH3-N)	7D Qty	0.88	1.17335	2/15/2007

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
March 2007	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	10.75	3/1/2007
March 2007	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	19.	3/15/2007
April 2007	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	17.125	4/1/2007
April 2007	Nitrogen, Ammonia (NH3-N)	7D Conc	4.5	31.5	4/15/2007
April 2007	Nitrogen, Ammonia (NH3-N)	7D Qty	0.88	1.0182	4/15/2007
May 2007	Nitrogen, Ammonia (NH3-N)	30D Conc	1.0	34.5	5/1/2007
May 2007	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	33.75	5/1/2007
May 2007	Nitrogen, Ammonia (NH3-N)	30D Qty	0.19	1.4219	5/1/2007
May 2007	Nitrogen, Ammonia (NH3-N)	7D Qty	0.29	.73708	5/1/2007
May 2007	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	35.25	5/15/2007
May 2007	Nitrogen, Ammonia (NH3-N)	7D Qty	0.29	2.10672	5/15/2007
June 2007	Nitrogen, Ammonia (NH3-N)	30D Conc	1.0	2.195	6/1/2007
June 2007	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	4.25	6/8/2007
September 2007	Nitrogen, Ammonia (NH3-N)	30D Conc	1.0	21.25	9/1/2007
September 2007	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	13.	9/1/2007
September 2007	Nitrogen, Ammonia (NH3-N)	30D Qty	0.19	.67123	9/1/2007
September 2007	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	29.5	9/15/2007
September 2007	Nitrogen, Ammonia (NH3-N)	7D Qty	0.29	1.09201	9/15/2007
October 2007	Nitrogen, Ammonia (NH3-N)	30D Conc	1.0	14.645	10/1/2007
October 2007	Nitrogen, Ammonia (NH3-N)	30D Qty	0.19	.45273	10/1/2007
October 2007	Nitrogen, Ammonia (NH3-N)	7D Conc	1.5	28.75	10/8/2007
October 2007	Nitrogen, Ammonia (NH3-N)	7D Qty	0.29	.88034	10/8/2007

Items discussed with Mr. Loomis during the inspection were the following:

- All three schools discharge to the existing WWTP. Theoretical design flows of 52,000 gpd from the schools are far in excess of the actual daily flow of 6,000 gpd to 8,000 gpd.
- Due to the fact that the actual wastewater flows are so much less than the predicted design flow, Mr. Loomis is having trouble properly operating the WWTP. In an effort to try and correct the operational problems, Mr. Loomis is operating only half of the WWTP.
- During warmer months, the plant is on a timer and is aerated for one hour, and then it is off for two hours. In the colder months, the plant is aerated continuously.
- As is evidenced by the data reported on the Monthly Operating Reports, the WWTP is having trouble meeting its ammonia effluent limits for both summer and winter. Reported ammonia concentrations (30-day average) ranged from 2.03 mg/l (September 2004) to 56.2 mg/l (March 2005). The ammonia permit limit (30-day average) for the summer months (May 1 through October 31) is 1.0 mg/l; the ammonia permit limit (30-day average) for the winter months (November 1 through April 30) is 3.0 mg/l.

School Superintendent
Highland Local School District
November 30, 2007
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Please be advised that the Highland Local School District is in significant noncompliance with its NPDES permit, due to the many continuing effluent violations as indicated in the enclosed table. As such, the School District is being required to take corrective actions necessary to bring the WWTP back into compliance with its NPDES permit.

It is recommended that a professional engineer familiar with sewage treatment, or other suitably licensed consultant, be contracted to study the WWTP and make recommendations for bringing the WWTP back into compliance. Continued noncompliance with the NPDES permit may be cause for escalated enforcement actions against the School District.

Please inform this office in writing, within 10 days of the receipt of this correspondence, as to what actions will be taken and when.

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

Respectfully,



Charles E. Allen
Environmental Engineer
Division of Surface Water

CEA/mt

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