



State of Ohio Environmental Protection Agency

Northeast District Office

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Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

January 11, 2008

RE: LORAIN COUNTY
VILLAGE OF GRAFTON WWTP
COMPLIANCE EVALUATION INSPECTION
OHIO EPA NO. 3PB00024
(OH0025372)

Village of Grafton
Mayor and Council
1009 Chestnut Street
Grafton, OH 44044

Dear Mayor and Council:

On December 20, 2007, an inspection was conducted at the Village of Grafton wastewater treatment plant. Present during the inspection was Mr. Jarrett Gott, Assistant Superintendent, and this writer. The purpose of the inspection was to evaluate the overall operation of the wastewater treatment plant, and to discuss non-compliant National Pollutant Discharge Elimination System (NPDES) Permit items as reported in the Village's Monthly Operating Reports (MORs) for the period of January 2006 through November 2007. The last WWTP inspection was a CEI conducted on February 16, 2006.

At the time of the inspection, the general operation and maintenance of the plant could be rated as satisfactory. All required treatment processes were in use, and effluent was being discharged. The effluent being discharged was clear, and free of foam and solids, and exhibited no visual impact upon the receiving stream. Ultra Violet (UV) disinfection was not being performed, but is not required, due to the time of year.

According to analytical data contained in the Monthly Operating Reports submitted to the Ohio EPA since the last inspection (January 1, 2006 through November 1, 2007), the treatment plant has had the following numeric violations for the final effluent:

VILLAGE OF GRAFTON
NPDES PERMIT NO. 3PB00024
NUMERIC EFFLUENT VIOLATIONS
(JAN. 1, '06 through NOV. 1, '07)

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
March 2007	Total Suspended Solids	7D Qty	102.3	157.793	3/1/2007
August 2007	Total Suspended Solids	7D Conc	18	18.575	8/15/2007
August 2007	Total Suspended Solids	30D Qty	68.2	75.4423	8/1/2007
August 2007	Total Suspended Solids	7D Qty	102.3	229.969	8/15/2007
August 2007	Phosphorus, Total (P)	7D Qty	8.5	8.74309	8/15/2007
August 2007	Dissolved Oxygen	1D Conc	6.0	5.11	8/20/2007

Based upon MOR data submitted to the Ohio EPA in SWIMS for the same period, there were some apparent violations of sampling and/or reporting frequencies for the following parameters. It is requested that a review of these apparent frequency violations be conducted, and a follow-up be made:

VILLAGE OF GRAFTON
NPDES PERMIT NO. 3PB00024
FREQUENCY VIOLATIONS
(JAN. 1, '06 through NOV. 1, '07)

Reporting Period	Violation Date	Station	Parameter	Sample Frequency	Expected	Reported
January 2006	1/1/2006	601	Zinc, Total Recoverable	1/Quarter	1	0
January 2006	1/1/2006	601	Chromium, Total Recoverable	1/Quarter	1	0
January 2006	1/1/2006	601	Cyanide, Total	1/Quarter	1	0
January 2006	1/1/2006	901	Zinc, Total Recoverable	1/Quarter	1	0
January 2006	1/1/2006	901	Chromium, Total Recoverable	1/Quarter	1	0
January 2006	1/1/2006	901	Cyanide, Total	1/Quarter	1	0
February 2006	2/1/2006	601	Zinc, Total Recoverable	1/Quarter	1	0
February 2006	2/1/2006	601	Chromium, Total Recoverable	1/Quarter	1	0
February 2006	2/1/2006	601	Cyanide, Total	1/Quarter	1	0
February 2006	2/1/2006	901	Zinc, Total Recoverable	1/Quarter	1	0
February 2006	2/1/2006	901	Chromium, Total Recoverable	1/Quarter	1	0
February 2006	2/1/2006	901	Cyanide, Total	1/Quarter	1	0
December 2006	12/1/2006	001	Acute Toxicity, Ceriod	1/Quarter	1	0
December 2006	12/1/2006	001	Chronic Toxicity, Ceri	1/Quarter	1	0
December 2006	12/1/2006	001	Acute Toxicity, Pimeph	1/Quarter	1	0
December 2006	12/1/2006	001	Chronic Toxicity, Pime	1/Quarter	1	0
December 2006	12/1/2006	801	48-Hr. Acute Toxicity	1/Quarter	1	0
December 2006	12/1/2006	801	7-Day Chronic Toxicity	1/Quarter	1	0
December 2006	12/1/2006	801	96-Hr. Acute Toxicity	1/Quarter	1	0
December 2006	12/1/2006	801	7-Day Chronic Toxicity	1/Quarter	1	0
November 2007	#####	001	Nitrogen, Ammonia (NH3-N)	3/Week	3	2

The following items were discussed during our December 20th inspection:

- 1) All 3 SBR's were in operation at the time of the inspection.
- 2) The Grafton WWTP continues to experience operational, maintenance, and clogging problems with their tertiary filters, due to shredded plastic floatables which are discharged from the State Prisons.

The existing mechanical bar screen at the head of the Grafton WWTP has a bar spacing which is larger than the shredded material, allowing the shredded plastic material to work through the SBRs, and subsequently onto the tertiary filters. The plastic material needs to be manually removed with a swimming pool skimmer, consuming many unnecessary man-hours.

- 3) Possible solutions to the problems caused by the shredded material were discussed:
 - a) The Village may have to install new bar screens at the head of the WWTP, with appropriately sized smaller spacings between bars, to capture the shredded material.
 - b) The Village may require the prison to eliminate the Muffin Monster (shredder) and use their mechanical barscreen as in the past.
 - c) The Village may require the prison to pretreat their wastewater on their own property before discharging to the Village WWTP.
 - d) The Village may surcharge the prison for the additional O&M labor or capital cost of any improvements needed at the Village WWTP.
- 4) Sludge is fed to the two filter presses approximately one day per week, but they may be used on a more frequent basis, as needed. Liquid polymer is added to the sludge prior to pressing.
- 5) Pressed sludge is landfilled by Agri-Sludge, Inc. Screenings from the mechanical bar screen are put into a dumpster and then hauled to the BFI landfill, approximately every month and a half.
- 6) As the NPDES Permit holder, the Village of Grafton is ultimately responsible for the quality of its effluent, and may take any actions necessary to ensure the quality of their effluent.
- 7) Hobart Wells, Plant Superintendent, has recently received his Class IV wastewater operator's license.
- 8) Based upon recent high test results for mercury levels in the WWTP effluent, Mr. Wells believes a mercury variance request will be needed for the Grafton WWTP. It was originally felt that the mercury variance request would not be needed because mercury levels were typically low and in compliance with NPDES Permit conditions. However, the recent higher levels have prompted Mr. Wells to reconsider the variance request.

- 9) A contracted outside laboratory (North Coast Labs) runs analysis on CBOD₅, Oil & Grease, Fecal Coliform, Total Kjehldahl Nitrogen, mercury, heavy metals, and nitrate-nitrite nitrogen. The Grafton WWTP laboratory runs analysis on pH, temperature, dissolved oxygen, total suspended solids, ammonia, phosphorus, and volatile solids.
- 10) The most recent DMRQA Study unknown sample analyses were run by the WWTP and contracted outside lab. The majority of the results were satisfactory, with the exception of ammonia (WWTP lab) and nitrate-nitrite (North Coast Labs). Retests were conducted for the two parameters, and results are pending.
- 11) There are 3 full time employees at the Grafton WWTP, with coverage Monday through Friday from 7 to 3:30. Coverage Saturday and Sunday is from 7 to 9. When the WWTP is unmanned the WWTP is monitored by computers, and in the event of an emergency, the Verbatim System autodial a call down list of superintendent and operators until someone is reached.

The Village of Grafton should continue their implementation the positive steps which enabled the WWTP to consistently meet its NPDES Permit limits.

If there are any questions or comments regarding the contents of the report or this letter, please contact me at (330) 963-1110.

Respectfully,



Charles E. Allen
Environmental Engineer
Division of Surface Water

CEA/ams