



**Environmental
Protection Agency**

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korieski, Director

September 2, 2010

RE: LORAIN COUNTY
VILLAGE OF GRAFTON WWTP
COMPLIANCE EVALUATION INSPECTION
NPDES No. 3PB00024

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

Dear Mayor and Council:

On August 3, 2010, a Compliance Evaluation Inspection (CEI) was conducted at the Village of Grafton wastewater treatment plant (WWTP). Present during the inspection were Messers. Hobart Wells, Jarrett Gott, and Chad Riffle, representing the Village of Grafton; Mr. John Sabo, of the Lorain County Health Department; and this writer.

The purpose of the inspection was to evaluate the overall operation and maintenance of the WWTP; the facility's compliance with the effluent limits, terms, and conditions of its NPDES Permit; and to discuss the facility's upcoming NPDES permit renewal. The last WWTP CEI inspection was conducted on January 6, 2009.

The following observations were made, and items discussed, during our August 3rd inspection:

- 1) All four SBR's were in operation at the time of the inspection. At the particular time of the inspection, Reactor 1 was in the react phase; Reactor 2 in the idle phase; Reactor 3 in the react / fill phase; and Reactor 4 was in the settling phase.
- 2) The Grafton WWTP continues to experience operation and maintenance problems due to shredded plastic, which State Prisons are discharging to the Grafton sanitary sewer system. The shredded plastic is causing clogging problems with the Aqua Disk tertiary filters, requiring excessive maintenance time to manually remove the shredded material. The shredded plastic is also causing Aqua Disk pump cavitation, and subsequently additional pump repair, and expenditure of time and money. Installation of a headworks fine perforated screen may be necessary to eliminate the shredded plastic problem.

- 3) According to Mr. Wells, the State Prisons are also potential sources of higher than normal concentrations of influent copper and zinc coming into the Grafton WWTP. Wastewater from State Prison machine shops, used for training purposes, at times have metal filings/grindings which are potential sources of the two metals.

Sampling of the effluent from the prisons has found copper concentrations in the 40 to 50 ug/l range, and zinc concentrations in the 60 to 130 ug/l range. The Grafton WWTP currently only monitors zinc, but does have copper limits for the effluent.

Mr. Wells' concern with the copper and zinc are focused more on their concentrating in the sludge, potentially creating a sludge disposal problem in the future if metals concentrations exceed ceiling limits.

- 4) It is strongly recommended that Grafton address both the shredded plastic, and potential metals problems, with the State Prisons before they cause the WWTP to violate any effluent limits in the Village's NPDES permit.
- 5) At the time of the inspection all processes were operational. However, there was no effluent being discharged due to the phase of treatment in the batch reactor process. Both the Aqua Disks and Ultra Violet disinfection units were in the standby mode, awaiting flow for treatment.
- 6) It was noted that light bank #1 of the UV disinfection unit was the one in standby mode. Mr. Wells indicated that the UV channel is cleaned weekly, to prevent buildup of algae.
- 7) Approximately 165 dry tons of sludge was disposed of last year. The pressed sludge was landfilled by Agri-Sludge, Inc. at the Kimble Landfill in Dover, Ohio. Screenings from the mechanical bar screen (approx. 2 c.y./mo.) are put into a dumpster and then hauled to the BFI Landfill.
- 8) The Village of Grafton is still awaiting an update on the current status of the mercury variance request made in 2008. The Village will be informed on the status of the request in the near future.
- 9) A contracted outside laboratory (North Coast Labs) runs analysis on CBOD₅, Oil & Grease, Fecal Coliform, Total Kjeldahl Nitrogen, low level 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 (#30) unknown sample analyses were run by the WWTP and contracted outside lab. All results came back within acceptable analytical limits, with the exception of the result for Total Suspended Solids. Upon investigation by Mr. Wells, it was determined that the balance used for the test was problematic. A new Mettler Balance (XS 204) was purchased in July 2010, and the unknown sample re-tested. Results on the sample unknown came back acceptable.
- 11) Final effluent flow is measured at the end of the Ultra Violet disinfection channel. The raw flow meter was calibrated May 20, 2010, by Control Associates.
- 12) There are three 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 11 AM. 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.
- 13) Chad Riffle has passed his Class II Wastewater Operators License. Jarrett Gott is taking educational coursework in preparation for his Class I Operators License exam.
- 14) The forthcoming NPDES permit renewal was discussed. Mr. Wells was informed that the new permit will have new monitoring, and within a year effluent limits, for E. coli. Twelve months after the effective date of the renewed permit, the Fecal Coliform limit will be eliminated, and replaced with the E. coli limits. The permit will also contain a compliance schedule requiring the WWTP be studied to determine if it can meet the new E. coli limits, and inform this Agency within a certain period of time of that fact.
- 15) Mr. Wells was also informed that the renewed NPDES permit will lower the Certified Operators License requirement for the Grafton WWTP from a Class IV to a Class III operator.
- 16) The new NPDES permit will also include record keeping requirements containing specific information on operator hours spent at the plant; specific O&M activities; results of laboratory tests; performance of preventative maintenance; etc. The record should be kept in a hard bound book with consecutively number pages.

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According to analytical data contained in the electronic Discharge Monitoring Reports (eDMR) submitted to the Ohio EPA since the last inspection (December 1, 2008 through August 1, 2010), the Grafton WWTP has reported the following numeric violations for the final effluent:

VILLAGE OF GRAFTON
NPDES PERMIT NO. 3PB00024
NUMERIC EFFLUENT VIOLATIONS
(DEC. 1, 2008 – Aug. 1, 2010)

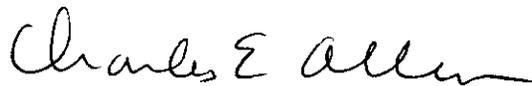
Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
August 2009	Dissolved Oxygen	1D Conc.	6.0	5.72	8/14/2009

*No reporting code or frequency violations were noted during the period.

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:bo