



Environmental  
Protection Agency

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

May 25, 2011

RE: GUILFORD LAKE WWTP  
33395 STATE ROUTE 172  
COMPLIANCE EVALUATION INSPECTION  
NPDES PERMIT NO. 3PH00043  
HANOVER TOWNSHIP  
COLUMBIANA COUNTY

Mr. Troy Graft, P.E.  
Chief Engineer  
Columbiana County Engineer  
105 South Market Street  
Lisbon, OH 44432

Dear Mr. Graft:

On May 17, 2011, this writer conducted a compliance evaluation inspection of the Columbiana County Guilford Lake Wastewater Treatment Plant located at the above referenced address. The County was represented by Mr. Chuck Webber.

The following is a summary of the inspection:

- 1) The wastewater treatment plant consists of a comminutor, influent pumps, oxidation ditch, final clarifiers, and chlorination/dechlorination facilities. At the time of the inspection the comminutor was not in service. With the motor located on the influent line, it burns out with any flooding when the plant experiences high flow. The facility is utilizing the by-pass bar screen. The oxidation ditches had a nice brown color and the effluent being produced by the clarifiers contained some solids. The final effluent was typical of a secondary plant and although the creek was at high flow, there did not appear to be any adverse impact on the stream.
- 2) There was some sludge on the side walk from a cracked line or problem with the sludge return pump. The spilled sludge should be cleaned up and the problem repaired.
- 3) The County must come up with an alternative to keep the comminutor operational at all times. Maybe the motor could be elevated. Ten State Standards section 62.35 states motors shall be protected against accidental submergence. The corrective measures must be reported to this office in writing.
- 4) The wastewater treatment plant effluent data was reviewed from January 1, 2009 through March 31, 2011. The effluent violations for this facility are attached to this letter. Most of the violations were phosphorus limits being exceeded. The

County must respond in writing the cause of the violations and what measures are being taken to prevent future ones.

- 5) The County was to submit a general plan to comply with the interim phosphorus limit by April 2010. The treatment plan was to achieve compliance of the interim limit of phosphorus of 1.0 mg/l by November 2010. This plant has been in violation of this limit since that date. The County must respond in writing the actions that will be taken to remedy this violation.
- 6) The schedule of compliance in the NPDES permit required a report in writing to be submitted to the Columbus office by November 2010 regarding the compliance with the mercury limit. Please provide the date this letter was sent to Columbus.
- 7) Staffing levels at the various County run wastewater treatment plants is a concern. Mr. Webber indicated that there are roughly 4 licensed operators (one of which is used as maintenance staff) and a maintenance worker. The staffing classifications and requirements are outlined in OAC 3745-07. The County must provide an Operator of Record form to the Columbus Office for each wastewater treatment plant. In order to be eligible to sign the monthly operating reports they must comply with the following from the rule:

*The operator of record shall, at a minimum, be physically present at the treatment works and fulfill the time requirements in the following table and perform technical operation as assigned by the permittee of the treatment works.*

*-Minimum staffing requirements for the operator of record –*

<i>System classification</i>	<i>Staffing requirement</i>
<i>Class A</i>	<i>2 days per week for a minimum of 1 hour per week</i>
<i>Class I</i>	<i>3 days per week for a minimum of 1.5 hours per week</i>
<i>Class II</i>	<i>5 days a week for a minimum of 20 hours per week</i>
<i>Class III and IV</i>	<i>5 days a week for a minimum of 40 hours per week</i>

Please provide a written response as to your compliance with this rule at the current staffing levels. Please keep in mind that this is for operation only. Most of your staff is also expected to perform maintenance, sampling, laboratory analysis, reporting and supervision. Based on the above, Mr. Daniels would be full time at the Elkton plant, and Mr. Webber could cover Guilford Lake and Beaver Local. That would leave one operator to handle approximately 7 plants.

This office is not sure how the current staff is maintaining operations let alone all the other job duties.

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- 8) The Commissioners should have begun long range planning to expand this plant or add tertiary treatment. What is the current status of those plans? During the time frame mentioned above, the plant is averaging 0.238 mgd, and the plant design is 0.4 mgd. The peak flow was 0.516 mgd. Besides the phosphorus compliance issues, there appear to be Infiltration and Inflow issues at this plant and several of the other county plants. The County must respond in writing the actions that will be taken to remedy these issues.

Should you have any comments or questions, feel free to contact me at (330) 963-1193.

Respectfully,

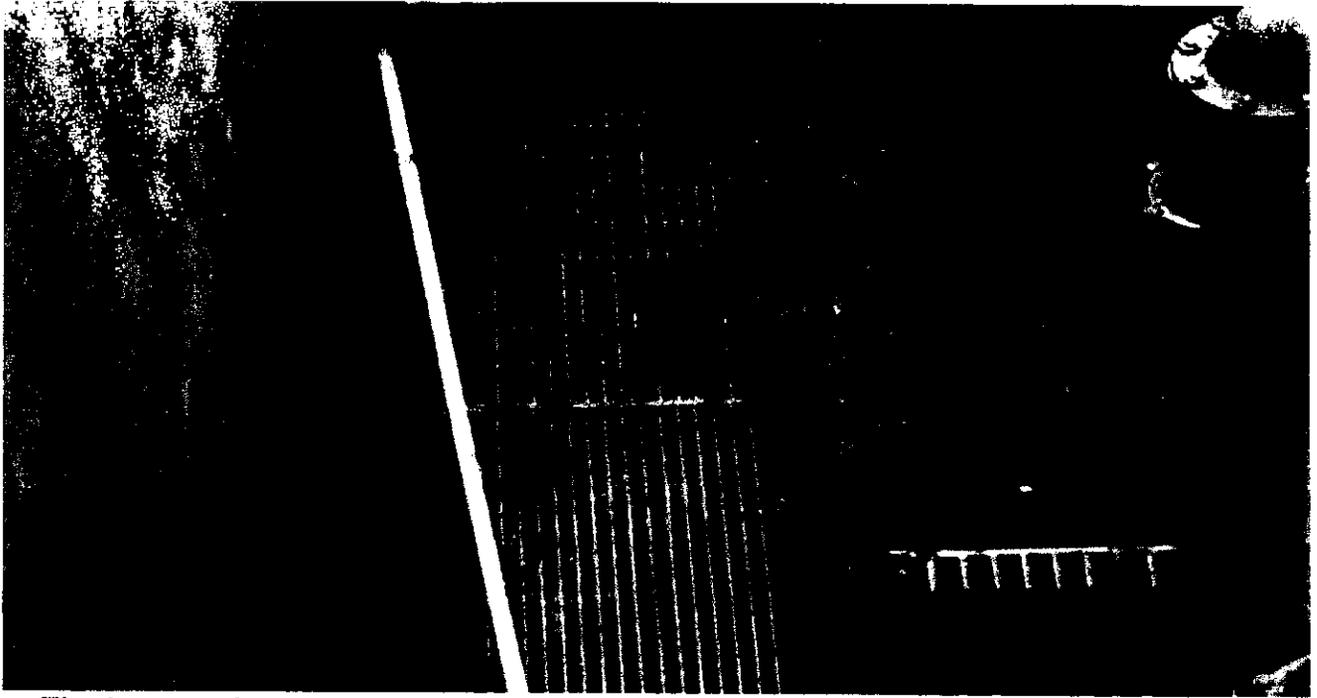


Joseph E. Trocchio, P.E.  
Environmental Engineer  
Division of Surface Water

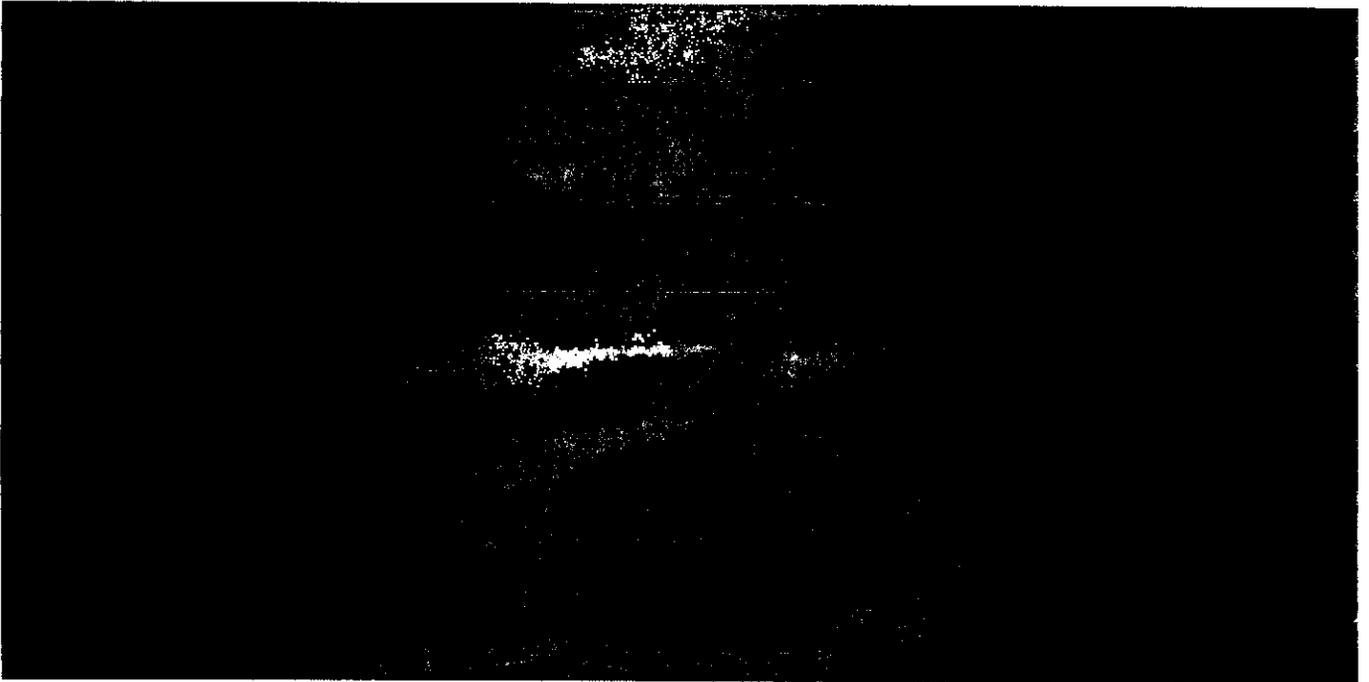
JET/mt

cc: Lori J. Barnes, Columbiana County Health Dept.  
Bert Dawson, P.E., Columbiana County Engineer  
Chuck Weber, Columbiana County Engineers  
Troy Graft, P.E., P.S., Columbiana County Engineers  
Columbiana County Commissioners

File: Public/Permit Compliance/Columbiana County/Guilford Lake WWTP



The by-pass bar screen is being utilized for screenings with comminutor out.



Sludge spill on the plant site must be cleaned up

### Guilford Lake WWTP Effluent Violations: January 2009 - March 2011

Permit No	Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
3PH00043*GD	January 2011	Phosphorus, Total (P)	30D Conc	1.0	1.35	1/1/2011
3PH00043*GD	February 2011	Phosphorus, Total (P)	30D Conc	1.0	1.88	2/1/2011
3PH00043*GD	February 2011	Phosphorus, Total (P)	7D Conc	1.5	1.88	2/1/2011
3PH00043*GD	February 2011	Dissolved Oxygen	1D Conc	5.0	4.2	2/3/2011
3PH00043*GD	February 2010	Oil and Grease, Hexane	1D Conc	10.0	21.2	2/10/2010
3PH00043*GD	December 2010	Phosphorus, Total (P)	30D Conc	1.0	1.75	12/1/2010
3PH00043*GD	December 2010	Phosphorus, Total (P)	7D Conc	1.5	1.75	12/1/2010
3PH00043*GD	December 2010	Phosphorus, Total (P)	30D Qty	1.52	1.82816	12/1/2010
3PH00043*GD	October 2010	Phosphorus, Total (P)	30D Conc	1.0	2.08	10/1/2010
3PH00043*GD	October 2010	Phosphorus, Total (P)	7D Conc	1.5	2.08	10/1/2010
3PH00043*GD	November 2010	Phosphorus, Total (P)	30D Conc	1.0	1.94	11/1/2010
3PH00043*GD	November 2010	Phosphorus, Total (P)	7D Conc	1.5	1.94	11/1/2010
3PH00043*GD	May 2010	Total Suspended Solids	7D Conc	18	28.	5/15/2010
3PH00043*GD	May 2010	Total Suspended Solids	7D Qty	27.3	34.2693	5/15/2010
3PH00043*GD	September 2010	Nitrogen, Ammonia (NH3)	7D Conc	2.3	2.795	9/8/2010
3PH00043*GD	March 2011	Total Suspended Solids	7D Conc	18	24.75	3/1/2011
3PH00043*GD	March 2011	Total Suspended Solids	30D Qty	18.2	21.2402	3/1/2011
3PH00043*GD	March 2011	Total Suspended Solids	7D Qty	27.3	46.0473	3/1/2011
3PH00043*GD	March 2011	Phosphorus, Total (P)	30D Conc	1.0	1.43	3/1/2011
3PH00043*GD	March 2011	Phosphorus, Total (P)	30D Qty	1.52	2.8037	3/1/2011
3PH00043*GD	March 2011	Phosphorus, Total (P)	7D Qty	2.28	2.8037	3/1/2011