



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

May 7, 2013

RE: GEauga COUNTY
NPDES PERMIT COMPLIANCE INSPECTION
BROADWOOD HILLS WWTP
NPDES # 3PG00011

Geauga County Board of Commissioners
470 Center Street, Building #3
Chardon, OH 44024

Dear Commissioners:

On May 3, 2013, an inspection was conducted at the Broadwood Hills wastewater treatment plant (WWTP) operated and maintained by Geauga County. Mr. Jim Reider of Geauga County Water Resources was interviewed and the facility was inspected in his presence. The intent of the inspection was to assess the operations, maintenance and National Pollutant Discharge Elimination System (NPDES) permit compliance of the facility as part of a routine compliance inspection.

NPDES PERMIT COMPLIANCE

Discharge monitoring reports from January 1, 2011 through March 1, 2013 were reviewed for compliance with the current NPDES permits at each facility. A violation summary for the Broadwood Hills WWTP has been attached to this letter.

The current WWTP has an average design flow of 27,500 gpd. According to discharge monitoring report data, the flow reported at the WWTP for the above noted review period averaged 18,598 gpd.

FACILITY INSPECTION

The following is a summary of the inspection of the facility:

At the time of the inspection, all WWTP units were operational. The WWTP consists of a trash trap, bar screen, flow equalization tank, two aeration tanks in parallel, two final settling tanks, dosing tank, surface sand filter divided into four equal beds, an ultraviolet (UV) disinfection unit and a sludge holding tank. The plant discharges to an unnamed tributary (Dietrich Ditch) to West Branch Cuyahoga River. The NPDES permit for the Broadwood Hills WWTP expires June 30, 2014.

The trash trap and the influent screen appeared to be in satisfactory condition. The two blowers serving the flow equalization tank were in satisfactory condition and the air circulation within the flow equalization tank appeared satisfactory. The two blowers serving the aeration tanks appeared to be in satisfactory condition. The aeration tanks contained mixed liquor that was a brown color. The tanks were provided with good mixing and there appeared to be adequate air supplied to both tanks. The sludge return lines were in operation and the skimmer return line was also in operation and appeared to be in satisfactory condition.

The settling tanks contained some large floating solids on the surface of the tank. The skimmer was visible on the surface of the tank. The influent baffle had some solids buildup and the effluent weirs had some solids accumulation. The settling tanks must be scraped down periodically to maintain a solids balance to the aeration tanks. The effluent weir did not appear level at the time of the inspection. It is understood the weir was to be worked on that same day. The effluent from the settling tanks appeared clear. The skimmer was set at an adequate level. It is understood the sludge holding tank has been out of service due to groundwater infiltration into the tank. As such, solids from the WWTP are wasted from the system and hauled offsite. This office recommends the County evaluate the solids hauling schedule for this facility as it appears solids may be accumulating in the settling tanks.

The dosing tank and dosing pumps were in satisfactory condition. The surface sand filters were in operation and appeared to be operating satisfactorily. The raked solids and sand were piled on the sides of the filter beds. It is understood the County hauls these solids to McFarland WWTP for further treatment. As a part of routine maintenance for the sand filter beds, the solids removed from the filter beds must not be piled on the sand beds for an extensive length of time. These solids should be effectively removed from the sand beds so not to interfere with the treatment of the wastewater.

The UV system was in operation and appeared to be in satisfactory condition. The final effluent from the UV tank appeared clear. The final outfall is located in a small creek near the WWTP. The final outfall appeared to be clear and in satisfactory condition.

The operator log book was located on site and was reviewed during the inspection. No deficiencies were noted in the log book. The ORC's on file for this WWTP are Joe Hutnyak, Corey Allen, Brian Cain, Dave Osborn and Jim Reider. Please be sure to update the ORC list and remove any operators no longer associated with the facility.

SUMMARY

In summary, the following items must be completed within the required deadline:

- 1) Evaluate the weirs in the settling tanks and ensure they are level.
- 2) Ensure the WWTP is removing solids routinely and complete updates to the sludge holding tank as soon as possible.
- 3) Notify this office once the items in item #1 and #2 are completed. This should be completed as soon as possible but no later than June 17, 2013.

If you have any questions or comments regarding this letter, please contact this office at (330) 963-1299.

Respectfully,



Laura A. Weber, P.E.
Environmental Engineer
Division of Surface Water

LAW/cs

Attachments: Violation summary

cc: Doug Bowen, Jerry Morgan, Jim Reider, Department of Water Resources
Geauga County Health Department
File/Public/Geauga County- Broadwood Hills

BROADWOOD WWTP VIOLATION SUMMARY

Broadwood Discharge Violations:

| Reporting Period | Station | Reporting Code | Parameter | Limit Type | Limit | Reported Value | Violation Date |
|------------------|---------|----------------|------------------------|------------|-------|----------------|----------------|
| May 2011 | 001 | 80082 | CBOD 5 day | 7D Qty | 1.56 | 1.58213 | 5/15/2011 |
| July 2011 | 001 | 00400 | pH | 1D Conc | 6.5 | 6.3 | 7/26/2011 |
| July 2011 | 001 | 00400 | pH | 1D Conc | 9.0 | 9.94 | 7/29/2011 |
| August 2011 | 001 | 00400 | pH | 1D Conc | 6.5 | 6.48 | 8/2/2011 |
| September 2011 | 001 | 00400 | pH | 1D Conc | 6.5 | 6.31 | 9/26/2011 |
| November 2011 | 001 | 00400 | pH | 1D Conc | 6.5 | 6.32 | 11/30/2011 |
| December 2011 | 001 | 00530 | Total Suspended Solids | 7D Conc | 18 | 28. | 12/15/2011 |
| December 2011 | 001 | 00530 | Total Suspended Solids | 7D Qty | 1.87 | 3.38947 | 12/15/2011 |
| December 2011 | 001 | 00400 | pH | 1D Conc | 6.5 | 6.42 | 12/29/2011 |

Broadwood NPDES Reporting Code Violations:

| Reporting Period | Station | Reporting Code | Parameter | Limit Type | Limit | Reported Value | Violation Date |
|------------------|---------|----------------|-----------|------------|-------|----------------|----------------|
| October 2011 | 001 | 50050 | Flow Rate | | | AD | 10/12/2011 |
| October 2011 | 001 | 50050 | Flow Rate | | | AD | 10/13/2011 |
| October 2011 | 001 | 50050 | Flow Rate | | | AD | 10/14/2011 |
| October 2011 | 001 | 50050 | Flow Rate | | | AD | 10/15/2011 |
| October 2011 | 001 | 50050 | Flow Rate | | | AD | 10/16/2011 |
| October 2011 | 001 | 50050 | Flow Rate | | | AD | 10/17/2011 |
| October 2011 | 001 | 50050 | Flow Rate | | | AD | 10/18/2011 |
| October 2011 | 001 | 50050 | Flow Rate | | | AD | 10/19/2011 |
| October 2011 | 001 | 50050 | Flow Rate | | | AD | 10/20/2011 |
| January 2013 | 001 | 50050 | Flow Rate | | | AF | 1/28/2013 |
| January 2013 | 001 | 50050 | Flow Rate | | | AF | 1/29/2013 |

Broadwood Frequency Violations:

| Reporting Period | Station | Reporting Code | Parameter | Sample Frequency | Expected | Reported | Violation Date |
|------------------|---------|----------------|-------------------|------------------|----------|----------|----------------|
| December 2011 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 12/2/2011 |
| December 2011 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 12/7/2011 |
| December 2011 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 12/9/2011 |
| December 2011 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 12/16/2011 |
| December 2011 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 12/22/2011 |
| January 2012 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 1/6/2012 |
| January 2012 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 1/12/2012 |
| January 2012 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 1/13/2012 |
| January 2012 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 1/20/2012 |
| January 2012 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 1/26/2012 |
| January 2012 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 1/27/2012 |
| January 2012 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 1/30/2012 |
| February 2012 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 2/3/2012 |
| February 2012 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 2/9/2012 |
| February 2012 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 2/10/2012 |
| February 2012 | 001 | 00010 | Water Temperature | 1/Day | 1 | 0 | 2/29/2012 |

