



**Environmental  
Protection Agency**

**John R. Kasich, Governor**

**Mary Taylor, Lt. Governor**

**Scott J. Nally, Director**

February 2, 2012

RE: GEAUGA COUNTY  
MIDDLEFIELD TWP  
BRIDGE LAKE FARM  
NPDES NO. 3PW00029\*BD

Mr. Walter Parnaby  
Bridge Lake Farms  
16770 Bridge Road  
Middlefield, Ohio 44062

Dear Mr. Parnaby:

On January 27, 2012, I met with you to evaluate the sewage treatment plant serving the above referenced facility. The intent of the inspection was to review operations and maintenance of the sewage treatment system and gather information needed to renew the National Pollutant Discharge Elimination System (NPDES) permit. The existing NPDES permit expired on December 31, 2005. The facility is currently discharging under an expired permit. The NPDES permit was submitted to this office along with a permit-to-install (PTI) resubmittal for wastewater treatment plant upgrades.

The wastewater treatment system serves a single family residence and 12, one bedroom efficiency apartments. The existing buildings are served by a 3400 gpd package aeration system with a clarifier, dosing chamber, surface sand filter and ultra violet disinfection which discharges to a private lake in the Swine Creek stream network.

#### NPDES PERMIT COMPLIANCE

The facility is currently discharging under an expired NPDES permit. Agency records indicate the facility has failed to perform effluent monitoring in accordance with the NPDES permit requirements. As such, the facility is in violation of their NPDES permit and Ohio Revised Code (ORC) 6111 for failure to monitor and for discharging without an effective NPDES permit.

According to Agency Records, the renewal NPDES permit was submitted to this office along with a PTI application on May 3, 2011. PTI application #811585 was a resubmittal of PTI 02-14180 for wastewater treatment plant (WWTP) upgrades. The detail plans were originally submitted on September 12, 2000, and a PTI (02-14180) was issued on September 22, 2000. A one year extension of the PTI was granted and expired on May 20, 2003. The PTI included the following improvements:

- Conversion of the existing aeration system tank into an 840-gallon trash trap with a divider wall, maintaining 1800-gallon tankage for future use as an equalization tank if necessary,
- Installation of a new 3500 gpd package aeration plant with clarifier,

- New 500-gallon dosing station (working volume 274 gallons) with dual, alternating submersible pumps (each pump 60 gpm@10 ft TDH); high water alarm; time lapse meters,
- Surface sand filters (272 ft<sup>2</sup>) total,
- Ultra violet (UV) disinfection (Trojan System 3000).

The renewal NPDES permit will include language that will require you to provide a certified operator. The NPDES permit will classify the WWTP as a Class A wastewater treatment facility. As such, the facility is required to obtain the services of, at minimum, a Class A state certified operator. The facility must obtain a certified operator by March 2, 2012. The enclosed operator of record (ORC) form must be completed and submitted to this office by your operator.

New operator and plant certification rules have gone in effect and are found in Ohio Administrative Code (OAC) 3745-7-04. The new regulations provide the plant classification rankings and operator staffing requirements. The minimum staffing requirements for a Class A facility is two days per week for a minimum of one hour per week. More information on obtaining a Class A license can be found at:

[www.epa.ohio.gov/dsw](http://www.epa.ohio.gov/dsw)

#### INSPECTION SUMMARY

Below are the findings and recommendations from the inspection:

The upgraded extended aeration treatment system was installed but was in use as an aerated flow equalization basin. The wastewater was being pumped from the new tank to the existing extended aeration treatment plant. There was no sludge holding provided because the existing WWTP had not been converted. The upgraded dosing chamber was installed. The sand filter upgrades were completed and the filters were in use. The sidewalls to the sand filters were repaired. The UV unit was installed and operable.

The upgrades to the WWTP have not been finalized. The existing aeration system tank must be converted, per the PTI, into an 840 gallon trash trap and 1800 gallons maintained for future use as a flow equalization tank. The conversion would include a divider wall. The existing treatment system was providing adequate aeration and the clarifier appeared to be providing treatment. The effluent from the clarifier appeared clear.

The existing dosing tank and new dosing tank were both in operation at the time of the inspection and both were dosing the surface sand filter. The existing dosing station must be eliminated and the system switched over to the new dosing station once the new system is online.

The surface sand filters were upgraded and the sidewalls were rebuilt. The upgraded filters were clear of solids. The sand provided for the sand filters was piled next to the filters and sliding downhill into the receiving stream. This sand must be stored in a location away from the receiving stream. In addition, the filter sand appeared to be coarser sand. This office will need verification this filter sand meets Ohio EPA filter sand specification. More specifically, filter sand must be clean and washed with an effective size between 0.4 and 1.0 mm with a uniformity coefficient not greater than 3.0. Please submit proper verification this filter sand meets these specifications.

During the inspection, it was mentioned that a sludge holding tank was proposed to be installed near the existing aeration system. Please be aware, installing a sludge holding tank would require you to submit a PTI application as this is not included in the existing PTI for this facility. Installing a sludge holding tank without a PTI is a violation and subject to further enforcement action by this office.

It is understood that Tim Frank Septic Cleaning Co. pumps out solids from the system four times a year. The solids are currently pumped from the 840-gallon trash trap.

The final effluent appeared clear and the receiving stream and lake appeared to be clear and free of solids.

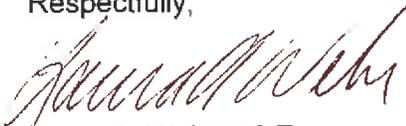
#### SUMMARY

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

- 1) Finalize WWTP upgrades as soon as possible but no later than May 20, 2012. This must include the complete conversion of the existing WWTP tank, finishing the new extended aeration treatment system and new dosing station.
- 2) Obtain the services of a Class A WWTP operator as soon as possible but no later than March 3, 2012.
- 3) Provide information on the sand filter media being used. Information from the supplier is acceptable.
- 4) Relocate the sand media storage area so the sand is not piled next to the receiving stream. No plastic buckets are to be used for the collection of samples. When collecting samples, use the sampling containers provided by the lab. If a bucket must be used, please make sure to choose a metal container.

Your NPDES renewal permit will be drafted in the near future and public noticed. Once the permit is public noticed, you will have 30 days to make any comments. 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

cc: Dave Sage, Geauga County Health Department

File: SemiPublic/Geauga/3PW00029