

**Environmental
Protection Agency**

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

December 22, 2010

RE: WASTEWATER
FFY 2011 CEI
NPDES PERMIT NO. 3PR00442

Mr. George Beaver
Angels for Animals
4630 South Range Road
Canfield, OH 44406

Dear Mr. Beaver:

On December 20, 2010, this writer conducted an inspection of the wastewater treatment plant for Angels for Animals. The intent of the inspection was to evaluate operations and maintenance, and to review compliance with the NPDES Permit. Representing Animal Charities during the inspection was the certified operator, Mr. Firl Byers. Mr. Byers indicated that he maintains the system on a daily basis.

Observations

The condition of the treatment system was satisfactory at the time of the inspection. The color of the mixed liquor in the aeration tanks and the return sludge was medium brown indicating a healthy microbe colony necessary for treatment. Much improvement in the system is apparent since Mr. Byers identified the splitter box in the equalization tank as causing hydraulic surcharges in the aeration tank. Since Mr. Byers adjusted the weirs in the splitter box, the aeration tank has been able to maintain a healthy biomass.

The east sand filter was in operation at the time of the inspection. The west filter was frozen. Sand used in the filters was questioned regarding its particle distribution relative to Ohio EPA guidelines. The Ohio EPA guideline recommends that sand be washed, have an effective size between 0.4 and 1.0 mm, and have a uniformity coefficient not greater than 3.00. The sieve analysis for any sand used in the filters should be provided by the supplier and should demonstrate conformity with the recommended particle distribution. It may be necessary to remove all of the sand from the filters and replace it with filter sand that meets the recommended distribution in order to prevent ponding in the filters.

Other issues identified during the inspection are as follows:

1. The hour meters for the influent pumps appeared to be inoperable. If the meters are not operational, they must be repaired or replaced so that flow rate can be estimated.

2. It was understood that the blower meters overheat periodically. It was also understood that the motors overheat because of insufficient power available to the motors. As we discussed, the power supply system should be upgraded to provide the power necessary to enable the motors to operate efficiently.
3. The east side of the east sand filter was leaking at the time of the inspection. The filter must be sealed when weather conditions permit. Both filters should be checked to ensure all seals between precast sections are intact.
4. The storage lagoon was nearly full at the time of the inspection and was near overflowing into the storm water pond. It was understood from Mr. Byers that the lagoon was emptied in the fall of 2010. It may be necessary to either excavate the accumulated sediment out of the lagoon, or raise the elevation of the banks to increase capacity of the lagoon. To allow the wastewater lagoon to overflow to the storm water pond would be considered an unpermitted discharge of wastewater.
5. It was understood from Mr. Byers that the spray irrigation pump was not operational when last checked. Be advised that the pump must be repaired if necessary as soon as possible. Considering the level of wastewater in the storage lagoon, the pump must be ready for operation when weather conditions enable distribution of wastewater over the spray field.
6. During the last inspection in April 2010, only nine spray heads were operational and several of the nozzles did not cover the area required to distribute wastewater over the entire field. The spray irrigation system should be checked annually to make sure that all nozzles are active and that the nozzles are not partially plugged with debris.

Compliance Review

Following the inspection, the monthly operating reports were reviewed for the period covering January 2009 through March 2010. The reports were reviewed for compliance with the NPDES Permit. In the past there have been problems submitting the reports to the Ohio EPA. However, for this review period, all months were present in the database indicating that the reporting problems have been addresses.

Comparing the reported data submitted by Angels for Animals to the permit limits identified the following violations in the Ohio EPA compliance tracking system.

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Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
April 2010	Nitrogen, Ammonia	30D Conc	1.0	3.66	4/1/2010
April 2010	Nitrogen, Ammonia	1D Conc	1.5	3.66	4/12/2010
April 2010	E. coli	1D Conc	2.0	3.	4/12/2010
May 2010	Nitrogen, Ammonia	30D Conc	1.0	3.721	5/1/2010
May 2010	Nitrogen, Ammonia	1D Conc	1.5	3.721	5/4/2010
June 2010	Nitrogen, Ammonia	30D Conc	1.0	1.46	6/1/2010
September 2010	Nitrogen, Ammonia	30D Conc	1.0	1.11	9/1/2010
October 2010	Total Suspended Solids	30D Conc	12.0	22.	10/1/2010
October 2010	Total Suspended Solids	1D Conc	18.0	22.	10/21/2010

Be advised that the violations noted above demonstrate that Angels for Animals has a problem maintaining the permit limit for ammonia. However, effluent quality appears to have improved since May 2010.

Angels for Animals must continue to observe the system closely and make any additional modifications to operations necessary to bring the system into consistent compliance. The cause of ammonia violations could be the blower problems identified in Item 2 above, it could be sludge accumulated on the sand filters releasing ammonia, it could be a deficiency of alkalinity in the wastewater, or it could possibly be other problems yet unidentified.

You may contact this writer at (330) 963-1251 or at john.kwolek@epa.state.oh.us to discuss any questions you may have.

Sincerely,



John Kwolek
District Engineer
Division of Surface Water

JK:bo

pc: Joe Mansky, Mahoning County Department of Health