

**Environmental
Protection Agency**

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

December 1, 2011

RE: HOLMES COUNTY
WALNUT CREEK POTW
NPDES PERMIT NO. 3PH00058
FFY 2012 CEI

Mr. Chris Young
Holmes County Sanitary Engineer
P.O. Box 29
Millersburg, OH 44654

Mr. Young:

On November 3, 2011, this writer inspected the new Walnut Creek POTW. The intent of the inspection was to review the various plant upgrades as a result of the recent expansion of the POTW. Representing the county during the inspection was Scott Watson.

Observations

Following are observation made during the inspection:

1. No concerns regarding the new treatment system were identified during the inspection. The system appeared to be constructed as proposed and approved.
2. The previous extended aeration plant has been replaced by a sequencing batch treatment system that went online in 2011. The batch system aerates and clarifies the wastewater in a single tank rather than in two separate tanks similar to the previous extended aeration system.
3. A screening and new grit removal system precedes the batch aeration tanks. The grit removal system separates inert material from the waste stream prior to aeration. Removing inert material in the grit system improves the effectiveness of the aeration system and sludge digestion. Removing grit from the wastewater at the head of the plant is also important to protecting pumps and other equipment from excessive wear.
4. The sludge handling equipment was expanded and upgraded during the plant expansion. The new sludge system includes three tanks having a total capacity of approximately 171,000 gallons. In addition, a rotary press is available to dewater the sludge prior to disposal. Total sludge storage capacity is 65 days.
5. A new tertiary vertical disc filtration system provides final treatment of the wastewater. The tertiary treatment system removes any residual solids from the wastewater prior to discharge.
6. No discharge from treatment plant was occurring since the batch tanks were in treatment mode at the time of the inspection. However, treated wastewater accumulated in the combined post aeration and nonpotable water tank was clear and free of any odor or turbidity.

Compliance

A review of the compliance record for the Walnut Creek POTW for the period covering April through October 2011 was completed as part of this inspection. The Walnut Creek POTW was upgraded in 2010 and 2011 in response to compliance problems associated with the previous treatment system. Therefore, the period of review is intended to demonstrate improvements to effluent quality since the new system went on line. Following are violations recorded for the review period:

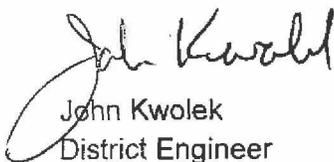
| Reporting Period | Parameter | Limit Type | Limit | Reported Value | Violation Date |
|------------------|------------------------|------------|-------|----------------|----------------|
| April 2011 | Total Suspended Solids | 30D Conc | 12 | 103.375 | 4/1/2011 |
| April 2011 | Total Suspended Solids | 7D Conc | 18 | 39. | 4/1/2011 |
| April 2011 | Total Suspended Solids | 30D Qty | 4.1 | 27.3788 | 4/1/2011 |
| April 2011 | Total Suspended Solids | 7D Qty | 6.1 | 10.6509 | 4/1/2011 |
| April 2011 | Nitrogen, Ammonia (NH3 | 30D Conc | 2.0 | 4.62575 | 4/1/2011 |
| April 2011 | Nitrogen, Ammonia (NH3 | 30D Qty | 0.68 | 1.28447 | 4/1/2011 |
| April 2011 | CBOD 5 day | 30D Conc | 10 | 23.125 | 4/1/2011 |
| April 2011 | CBOD 5 day | 7D Conc | 15 | 15.5 | 4/1/2011 |
| April 2011 | CBOD 5 day | 30D Qty | 3.4 | 6.5859 | 4/1/2011 |
| April 2011 | Phosphorus, Total (P) | 30D Conc | 1.0 | 1.5 | 4/1/2011 |
| April 2011 | Phosphorus, Total (P) | 30D Qty | 0.34 | .43149 | 4/1/2011 |
| April 2011 | Total Suspended Solids | 7D Conc | 18 | 162. | 4/8/2011 |
| April 2011 | Total Suspended Solids | 7D Qty | 6.1 | 34.8825 | 4/8/2011 |
| April 2011 | Nitrogen, Ammonia (NH3 | 7D Conc | 3.0 | 10.135 | 4/8/2011 |
| April 2011 | Nitrogen, Ammonia (NH3 | 7D Qty | 1.0 | 2.23099 | 4/8/2011 |
| April 2011 | CBOD 5 day | 7D Conc | 15 | 37.5 | 4/8/2011 |
| April 2011 | CBOD 5 day | 7D Qty | 5.1 | 8.77174 | 4/8/2011 |
| April 2011 | Total Suspended Solids | 7D Conc | 18 | 202.5 | 4/15/2011 |
| April 2011 | Total Suspended Solids | 7D Qty | 6.1 | 61.5970 | 4/15/2011 |
| April 2011 | Nitrogen, Ammonia (NH3 | 7D Conc | 3.0 | 5.145 | 4/15/2011 |
| April 2011 | Nitrogen, Ammonia (NH3 | 7D Qty | 1.0 | 2.02929 | 4/15/2011 |
| April 2011 | CBOD 5 day | 7D Conc | 15 | 37.5 | 4/15/2011 |
| April 2011 | CBOD 5 day | 7D Qty | 5.1 | 12.8179 | 4/15/2011 |
| May 2011 | Total Suspended Solids | 30D Conc | 12 | 55. | 5/1/2011 |
| May 2011 | Total Suspended Solids | 30D Qty | 4.1 | 13.0341 | 5/1/2011 |
| May 2011 | Fecal Coliform | 30D Conc | 1000 | 1844.43 | 5/1/2011 |
| May 2011 | Fecal Coliform | 7D Conc | 2000 | 5100. | 5/8/2011 |
| May 2011 | Total Suspended Solids | 7D Conc | 18 | 194. | 5/22/2011 |
| May 2011 | Total Suspended Solids | 7D Qty | 6.1 | 45.2591 | 5/22/2011 |
| May 2011 | Fecal Coliform | 7D Conc | 2000 | 4800. | 5/22/2011 |
| May 2011 | CBOD 5 day | 7D Conc | 15 | 16.5 | 5/22/2011 |
| June 2011 | Total Suspended Solids | 30D Conc | 12 | 90.5 | 6/1/2011 |
| June 2011 | Total Suspended Solids | 7D Conc | 18 | 329. | 6/1/2011 |
| June 2011 | Total Suspended Solids | 30D Qty | 4.1 | 17.4999 | 6/1/2011 |
| June 2011 | Total Suspended Solids | 7D Qty | 6.1 | 66.2942 | 6/1/2011 |
| June 2011 | Nitrogen, Ammonia (NH3 | 30D Conc | 2.0 | 2.07713 | 6/1/2011 |
| June 2011 | Nitrogen, Ammonia (NH3 | 7D Conc | 3.0 | 6.977 | 6/1/2011 |
| June 2011 | Nitrogen, Ammonia (NH3 | 7D Qty | 1.0 | 1.40587 | 6/1/2011 |

| | | | | | |
|----------------|------------------------|----------|------|---------|----------|
| June 2011 | Fecal Colliform | 7D Conc | 2000 | 4800. | 6/1/2011 |
| June 2011 | CBOD 5 day | 30D Conc | 10 | 21.25 | 6/1/2011 |
| June 2011 | CBOD 5 day | 7D Conc | 15 | 78.5 | 6/1/2011 |
| June 2011 | CBOD 5 day | 30D Qty | 3.4 | 4.43413 | 6/1/2011 |
| June 2011 | CBOD 5 day | 7D Qty | 5.1 | 15.8705 | 6/1/2011 |
| June 2011 | Dissolved Oxygen | 1D Conc | 5.0 | 4.62 | 6/1/2011 |
| June 2011 | Total Suspended Solids | 7D Conc | 18 | 26. | 6/8/2011 |
| August 2011 | Phosphorus, Total (P) | 30D Conc | 1.0 | 2.15 | 8/1/2011 |
| August 2011 | Phosphorus, Total (P) | 7D Conc | 1.5 | 2.15 | 8/1/2011 |
| August 2011 | Phosphorus, Total (P) | 30D Qty | 0.34 | .62661 | 8/1/2011 |
| August 2011 | Phosphorus, Total (P) | 7D Qty | 0.51 | .62661 | 8/1/2011 |
| September 2011 | Phosphorus, Total (P) | 30D Conc | 1.0 | 4.09 | 9/1/2011 |
| September 2011 | Phosphorus, Total (P) | 7D Conc | 1.5 | 4.09 | 9/1/2011 |
| September 2011 | Phosphorus, Total (P) | 30D Qty | 0.34 | 1.20749 | 9/1/2011 |

The effluent quality appears to have improved significantly with the startup of the new sequencing batch system. As can be seen, effluent data reported prior to July 2011 identified violations for various parameters which are most likely associated with plant construction. However, the treatment plant experienced full compliance in July, and reported violations for only phosphorus in August and September. During the inspection, it was indicated that the cause of the phosphorus violations had been identified and were corrected. In response to those corrections, it appears that the treatment plant returned to full compliance in October 2011.

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

Respectfully,



John Kwolek
 District Engineer
 Division of Surface Water

JK/cs

cc. Scott Watson, Supervisor
 Kevin Dean, Operator, Dean's Backflow Services

