Ohio | Environmental Protection Agency

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

November 21, 2011

Darke County Commissioners
County Administration Building
520 South Broadway
Greenville, OH 45331

**RE: NOTICE OF VIOLATION – Darke County Commissioners WWTPs**
**Compliance Evaluation Inspections (CEIs)**
**Rolin Acres WWTP, 1PG00090*CD/OH0085561**
**Stillwater Golf Estates WWTP, 1PX00014*CD/OH0119067**
**Darke County Home WWTP, 1PG00105*BD/OH0133612**
**Darke County Jail WWTP, 1PG00104*BD/OH0133621**

Ladies and Gentlemen:

On November 1, 2011, I conducted Compliance Evaluation Inspections at the four package wastewater treatment plants operated by the Darke County Commissioners. These inspections were conducted to evaluate performance of the wastewater treatment facilities and compliance with respective NPDES permits. Bill Marker, Operator of Record, accompanied me on these inspections.

Detailed inspection reports are attached for each of the facilities along with a listing of effluent limitation violations reported for each of the facilities.

Provide a response to the "**ITEMS REQUIRING A RESPONSE**" section in the inspection report by **December 21, 2011**. If you have any questions, I can be reached at (937) 285-6109.

Sincerely,

Joe Miller
Division of Surface Water

ec: William Marker, Operator of Record
Darke County Health Department

**Southwest District Office**
401 East Fifth Street
Dayton, OH 45402-2911

937 | 285 6357
937 | 285 6249 (fax)
www.epa.ohio.gov

**Darke County Commissioners**
**Wastewater Treatment Plant Inspections**
**November 1, 2011**

## ITEMS REQUIRING A RESPONSE

1. **Disinfection Violations** – Effluent limitation violations related to disinfection were reported for all four wastewater treatment facilities. The current means of wastewater disinfection in all four facilities is tablet chlorination and tablet dechlorination. Tablets clogging and difficulty balancing the chemicals were reasons cited for these violations. Installation of in-pipe ultraviolet disinfection is strongly recommended for these facilities to avoid continued effluent limitation violations.

2. **Inflow and Infiltration** – The following is an excerpt from the May 2011 Rolin Acres Inspection. A response was not received to this item. Provide the requested plan for the Rolin Acres facility.

    i. ***Excessive Infiltration and Inflow*** – *Reported flows were as high as five times the design flow of the wastewater treatment plant. High flows contribute to effluent limitation violations. While this has been a longstanding issue with this facility, substantive improvements have not been completed to remedy the situation. Provide a detailed plan with a proposed date for submittal of a Permit to Install for equalization of influent.*

3. **pH Meter** – Currently pH testing is being sent to the contract laboratory for testing on each of the wastewater facilities. Purchasing a pH meter, allowing the operator to take required samples for all facilities along with the ability to troubleshoot treatment components, is recommended.

4. **Sand Filter Media** – The sand filter media needs to be replaced in the sand filters in the County Jail, County Home, Stillwater Golf Estates, and the East sand filter at Rolin Acres. Provide a schedule for replacement.

5. **Sand Filter Walls** – The sand filter walls at the County Home and County Jail are in poor condition, with exposed rebar and cracks allowing leakage. Repair and patch the sand filter walls.

6. **Effluent Violations** – Detail the reasons for the listed violations. Your response should include dates, either actual or proposed, for completion of actions to prevent future violations. ***Non-compliance notification is required for all violations as detailed in the NPDES permit, Part III, Item 12. Any future incidences must be reported in this manner.***

7. **Skimmer at Stillwater Golf Estates** – The skimmer on the south side of the treatment plant is too high and needs to be adjusted.

8. **Clarifier Maintenance** – Overall maintenance of wastewater plant clarifiers needs to be improved. Algae and sludge deposits were observed in the effluent weirs. Sludge wasting frequency may need to be increased along with clarifier weir cleaning.

## OVERVIEW

The Darke County Commissioners own and operate four small extended aeration treatment plants. These facilities are located at the Rolin Acres Subdivision, Stillwater Golf Estates, the Darke County Home, and the Darke County Jail. The average design flow and average daily flow rates are as follows:

| WWTP Facility | Average Design Flow | Average Daily Flow |
|---|---|---|
| Rolin Acres Subdivision | 24,000 GPD | 17,600 GPD |
| Stillwater Golf Estates | 7,500 GPD | 7,170 GPD |
| Darke County Home | 10,000 GPD | 7,993 GPD |
| Darke County Jail | 10,000 GPD | 2,183 GPD |

Bill Marker is the Wastewater Operator or Record for these facilities. In addition, he will be the Operator of Record for the recently completed Osgood-North Star-Yorkshire regional treatment facility. He also monitors the Rossburg lift station at Ansonia for the county.

Infiltration and Inflow has been a problem in both the Stillwater Golf Estates and Rolin Acres Subdivision wastewater treatment collection systems. During periods of heavy storm flows, flows to the wastewater treatment exceed plant design resulting in the washout of solids to the sand filters and effluent limitation violations.

The Darke County Home and Darke County Jail are both located less than a mile from the City of Greenville's sanitary sewer collection system. The sewer is located along State Route 49 to the north. A number of businesses and residences are located along State Route 49 between the County properties and the sanitary sewer that have old or failing on-site septic systems. A sewer project to connect the County properties and the properties along State Route 49 would correct the conditions and eliminate the need for NPDES permits and monitoring.

Permit # : 1PG00104*BD
NPDES #: OH0133621

**State of Ohio Environmental Protection Agency**
**Southwest District Office**

# NPDES Compliance Inspection Report
# Semi-Public Sewage Disposal Inspection Form

| Section A: National Data System Coding | | | | | |
|---|---|---|---|---|---|
| **Permit #** | **NPDES#** | **Month/Day/Year** | **Inspection Type** | **Inspector** | **Facility Type** |
| 1PG00104*BD | OH0133621 | 11/1/11 | C | S | 1 |

| Section B: Facility Data | | |
|---|---|---|
| **Name and Location of Facility Inspected** | **Entry Time** | **Permit Effective Date** |
| Darke County Jail<br>5185 County Home Road<br>Greenville, OH 45331 | 1:20 PM | 5/1/2008 |
| | **Exit Time** | **Permit Expiration Date** |
| | 1:40 PM | 4/30/2013 |
| **Name(s) and Title(s) of On-Site Representatives** | **Phone Number(s)** | |
| Bill Marker | 937-459-2317 | |
| **Name(s), Address and Title(s) of Operator of Record** | **Phone Number(s)** | |
| Bill Marker | 937-459-2317 | |
| **Name, Address and Title of Responsible Official** | **Phone Number** | |
| Darke County Commissioners<br>County Administration Building<br>520 South Broadway<br>Greenville, OH 45331 | 937-547-7370 | |

| Ohio EPA Inspector | Ohio EPA Reviewer |
|---|---|
| 11/22/11 | 11/22/11 |
| Joe Miller<br>Division of Surface Water<br>Southwest District Office<br>Date | Martyn Burt<br>Compliance & Enforcement Supervisor<br>Division of Surface Water<br>Southwest District Office<br>Date |

| | |
|---|---|
| Average Daily Design Flow: | 10,000 Gallons/Day |
| Plant Serves: | County Jail (Criminal Justice Center) |
| Average Daily Flow: (Period of Review): | 2183 Gallons/Day (August 2010 to September 2011) |
| Method of flow monitoring: | Elapsed Time on dosing pumps |
| Type of alarms for plant: | unknown |

## Pretreatment

Type of Pretreatment: **Comminutor**
Does the Trash Trap need pumped: **No**
Maintenance of pretreatment components is: **Good**

**Comments/Status:**

Comminutor and trash trap, trash trap recently pumped

## Secondary Treatment (Aeration)

Color of sludge: **Dark Brown**
Quality of Sludge: **Heavy**
Foam: **Heavy (dark)**
Odor: **No objectionable odor present**

| | Yes | No | | Yes | No |
|---|---|---|---|---|---|
| Aeration is taking place | ☒ | ☐ | Plant is septic | ☐ | ☒ |
| Blowers are operating | ☒ | ☐ | Blowers are on a timer | ☒ | ☐ |
| Skimmers are operating | ☒ | ☐ | Plant is flooded | ☐ | ☒ |
| Diffusers are operating | ☒ | ☐ | Grating is present | ☒ | ☐ |
| Sludge return is operating | ☒ | ☐ | | | |

Maintenance of aerating equipment is...**Good**

**Comments/Status:**

## Secondary Treatment (Settling)

Clarity: **Solids Present**
Condition of Weir: **Excessive Algae/Solids Build Up**
Weir is level: **Yes**

Permit # : 1PG00104*BD
NPDES #: OH0133621

Effluent in weir: **Heavy Solids**
Clarifier walls need scraped: **Yes**

Overall maintenance of settling components is: **Poor**

**Comments/Status:**

Algae and sludge in effluent weir, walls need to be scraped and weir cleaned

## Tertiary Treatment

| | Yes | No | | Yes | No |
|---|---|---|---|---|---|
| Surface sand Filters: **Slow** | ☒ | ☐ | **Subsurface** | ☐ | ☒ |
| Distribution box operating | ☒ | ☐ | Beds alternated | ☒ | ☐ |
| Are filters ponding/flooding | ☐ | ☒ | Beds raked | ☒ | ☐ |
| Sand filters overgrown | ☐ | ☒ | Chlorination present | ☐ | ☒ |
| UV present | ☐ | ☒ | Dechlorination present | ☐ | ☒ |

Overall maintenance of components is: **Good**

Comments/Status:

Sand needs to be replaced in both filters. Sand filter walls in poor condition, areas with concrete worn down to rebar and cracked. Repair and patch the sand filter walls. Some dried sludge observed in area near sand filters. Dispose of sludge properly. Visual alarm. Not disinfection season.

## Sludge Handling/Storage Disposal

Hauler name: **Mike's Sanitation Inc. (MSI)**
Disposal Site: **MSI Facility**
Sludge wasted from: **Sludge Holding tank**
How often is sludge wasted: **Unknown**
Sludge drying beds: **No** Sludge holding tank: **Yes**

Overall maintenance of components is: **Good**

**Comments/Status:**

## Plant Discharge

Discharge point is a: **Ditch**
Name of discharge point: **unnamed tributary of Bridge Creek**
Discharge is visible: **Yes** Quality of Effluent: **Clear**

**Comments/Status:**

Permit # : 1PG00104*BD
NPDES #: OH0133621

## EFFLUENT LIMIT VIOLATIONS
## (Period of Review: 8/1/10-9/30/11)

7D = Weekly; 30D = Monthly; 1D = Daily; Conc. = Concentration (mg/l);Qty.= Quantity (Kg/Day)

| Reporting Period | Parameter | Limit Type | Limit | Reported Value | Violation Date |
|---|---|---|---|---|---|
| September 2010 | CBOD 5 day | 30D Conc | 10 | 12.3 | 9/1/2010 |
| October 2010 | CBOD 5 day | 30D Conc | 10 | 14.9 | 10/1/2010 |
| November 2010 | CBOD 5 day | 30D Conc | 10 | 12.635 | 11/1/2010 |
| November 2010 | CBOD 5 day | 7D Conc | 15 | 20. | 11/1/2010 |
| December 2010 | Dissolved Oxygen | 1D Conc | 6.0 | 2.8 | 12/16/2010 |
| December 2010 | Dissolved Oxygen | 1D Conc | 6.0 | 2.5 | 12/28/2010 |
| May 2011 | Chlorine, Total Residual | 1D Conc | 0.019 | .0594 | 5/12/2011 |
| May 2011 | Chlorine, Total Residual | 1D Conc | 0.019 | .08 | 5/24/2011 |
| June 2011 | CBOD 5 day | 30D Conc | 10 | 12.8 | 6/1/2011 |
| June 2011 | Chlorine, Total Residual | 1D Conc | 0.019 | .05 | 6/7/2011 |
| June 2011 | Chlorine, Total Residual | 1D Conc | 0.019 | .05 | 6/28/2011 |