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

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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 # : 1PG00105*BD
NPDES #: OH0133612

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**
1PG00105*BD	OH0133612	11/1/11	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	**Entry Time**	**Permit Effective Date**
Darke County Home 5105 County Home Road Greenville, OH 45331	12:20 PM	3/1/2008
	Exit Time	**Permit Expiration Date**
	1:20 PM	2/28/2013
Name(s) and Title(s) of On-Site Representatives	**Phone Number(s)**	
Bill Marker, Operator of Record	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 County Administration Building 520 South Broadway Greenville, OH 45331	937-547-7370	

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

Permit # : 1PG00105*BD
NPDES #: OH0133612

Average Daily Design Flow:	10,000 Gallons/Day
Plant Serves:	County Retirement Home
Average Daily Flow: (Period of Review):	7993 Gallons/Day (August 2010 to September 2011)
Method of flow monitoring:	Elapsed Time on dosing pumps
Type of alarms for plant:	Dosing alarm

Pretreatment

Type of Pretreatment: **Bar Screen**
Does the Trash Trap need pumped: **N/A**
Maintenance of pretreatment components is: **Good**

Comments/Status:

Installation of trash trap should be evaluated

Secondary Treatment (Aeration)

Color of sludge: **Dark Brown**
Quality of Sludge: **Heavy**
Foam: **Light (dark)**
Odor: **Slight**

	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...**Fair**

Comments/Status:

Sludge return (RAS) is coming back too hard to influent bar screen; Some grating rusted; Considering Geyser pumps for RAS improvement; Timers are set at 90 minutes on and 60 minutes off

Secondary Treatment (Settling)

Clarity: **Cloudy**
Condition of Weir: **Excessive Algae/Solids Build Up**
Weir is level: **Unknown**
Effluent in weir: **Light Solids**
Clarifier walls need scraped: **Yes**

Permit # : 1PG00105*BD
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Overall maintenance of settling components is: **Poor**

Comments/Status:

Need to scrape and clean weir, waste solids

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: **Fair**

Comments/Status:

One sand filter needs cleaned. Not disinfection season. Recommend ultraviolet disinfection. Dosing pump does not have an alarm. Wastewater leaking from cracks in sand filters. Repair immediately.

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: **As needed**
Sludge drying beds: **No** Sludge holding tank: **Yes**

Overall maintenance of components is: **Good**

Comments/Status:

Sludge holding tank 1500 gallons

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:

Regular cleaning of disinfection tanks recommended

Permit # : 1PG00105*BD
NPDES #: OH0133612

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
April 2011	Nitrogen, Ammonia (NH3)	30D Conc	3.0	3.18	4/1/2011
April 2011	Nitrogen, Ammonia (NH3)	30D Qty	0.11	0.22156	4/1/2011
April 2011	Nitrogen, Ammonia (NH3)	7D Qty	0.17	0.22156	4/1/2011
May 2011	Chlorine, Total Residual	1D Conc	0.019	0.05	5/12/2011
May 2011	Chlorine, Total Residual	1D Conc	0.019	0.27	5/24/2011
June 2011	Chlorine, Total Residual	1D Conc	0.019	0.05	6/7/2011
June 2011	Chlorine, Total Residual	1D Conc	0.019	0.05	6/28/2011
September 2011	Fecal Coliform	30D Conc	1000	7500.	9/1/2011
September 2011	Fecal Coliform	7D Conc	2000	7500.	9/1/2011
September 2011	Chlorine, Total Residual	1D Conc	0.019	0.97	9/22/2011