

Hickory Hills Corresp



Environmental
Protection Agency

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

February 24, 2011

Hickory Hills Lake Company
Attn: Ms. Elaine Bray
5900 Hickory Hills Drive
Hillsboro, OH 45133

**RE: Hickory Hills Lake Company WWTW/Compliance Evaluation Inspection
NPDES Permit No. OH0137707/OEPA PERMIT NO. 1PX00063*AD**

Dear Ms. Bray:

On February 16, 2011, I conducted a NPDES Compliance Evaluation Inspection at the Hickory Hills Lake Company wastewater treatment works (WWTW). Ernie Napier, Operator of Record and Facilities Director, Keith Penix and Troy Byrd were present during this inspection. The purpose of the inspection was to evaluate compliance with the terms and conditions of the NPDES Permit. A copy of the report is provided within.

As noted in the report, there are deficient areas that need addressed without delay. **Please pay special attention to the "items requiring correction" shown in bold type; for there are compliance schedules associated with these items.**

Thank you for your time extended during the inspection process. If you have any questions, please feel free to contact me by phone at (937) 285-6029 or by e-mail at joshua.jackson@epa.state.oh.us.

Respectfully,

Joshua Jackson
Environmental Specialist II
Division of Surface Water

Cc: Ernie Napier, Hickory Hills Lake Company (w/report)

Enclosures

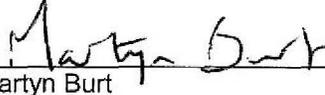


State of Ohio Environmental Protection Agency
Southwest District Office

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
1PX00063*AD	OH0137707	2/16/2011	C	S	2

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Hickory Hill Lake Company WWTW 5900 Hickory Hills Drive Hillsboro, Highland County	10:20 a.m.	7/1/2007
	Exit Time	Permit Expiration Date
	12:00 p.m.	6/30/2012
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Ernie Napier, Operator of Record Keith Penix and Troy Byrd (Maintenance)	937-466-2081	
Name, Address and Title of Responsible Official	Phone Number	
Elaine Bray, Treasurer Hickory Hill Lake Company 5900 Hickory Hills Drive Hillsboro, OH 45133	513-405-9555	

Ohio EPA Inspector	Ohio EPA Reviewer
 Joshua Jackson Division of Surface Water Southwest District Office	 Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office
2-24-11 Date	2/24/11 Date

Average Daily Design Flow:	21,000 Gallons/Day
Plant Serves:	20-25 perm. houses / 140 seasonal units
Average Daily Flow: (Period of Review):	10,000 Gallons/Day (January - December 2010)
Method of flow monitoring:	Parshall Flume with Level Sensor
Type of alarms for plant:	high level alarms (EQ tank and sand filter dosing chamber)

Pretreatment

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

Comments/Status:

Mark Edenfield pumped this tank in September 2010. There was no evidence of trash debris in the aeration tank or the clarifiers (which would indicate a trash trap in need of emptying)

**Secondary Treatment
(Aeration)**

Color of sludge: **Light Brown**
 Quality of Sludge: **Thin**
 Foam: **Light (white)**
 Odor: **No objectionable odor present**

	Yes	No		Yes	No
Aeration is taking place	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plant is septic	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Blowers are operating	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Blowers are on a timer	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Skimmers are operating	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plant is flooded	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Diffusers are operating	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Grating is present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sludge return is operating	<input checked="" type="checkbox"/>	<input type="checkbox"/>			

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

Comments/Status:

**Secondary Treatment
(Settling)**

Clarity: **Clear**
 Condition of Weir: **Some algae in the effluent trough**
 Weir is level: **Yes**

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Effluent in weir: **Clear**
Clarifier walls need scraped: **Yes**

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

Comments/Status:

Tertiary Treatment

	Yes	No		Yes	No
Surface sand Filters: Slow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Subsurface	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Distribution box operating	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Beds alternated	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are filters ponding/flooding	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Beds raked	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sand filters overgrown	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Chlorination present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
UV present	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Dechlorination present	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Overall maintenance of components is: **Good**

Comments/Status:

Sludge Handling/Storage Disposal

Hauler name: **Mark Edenfield Septic Disposal**
Disposal Site: **Rocky Fork WWTW**
Sludge wasted from: **Aeration basin to sludge holding tank**
How often is sludge wasted: **Sludge has not been wasted yet**
Sludge drying beds: **No** Sludge holding tank: **Yes**

Overall maintenance of components is: **Good**

Comments/Status:

Plant Discharge

Discharge point is a: **Stream**
Name of discharge point: **Heads Branch**
Discharge is visible: **Yes** Quality of Effluent: **Clear**

Comments/Status:

**Inspection Findings
(Items for Correction in Bold Type)**

Hickory Hills Lake Company wastewater treatment works (WWTW)
EFFLUENT LIMIT VIOLATIONS
(Period of Review: January – December 2010)

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

Reporting Period	Parameter	Limit Type	Limit	Reported Value
June 2010	Chlorine, Total Residualal	1D Conc	0.038	.1
July 2010	Chlorine, Total Residualal	1D Conc	0.038	.09
July 2010	Chlorine, Total Residualal	1D Conc	0.038	.07
July 2010	Chlorine, Total Residualal	1D Conc	0.038	.12
August 2010	Chlorine, Total Residualal	1D Conc	0.038	.16
September 2010	Chlorine, Total Residualal	1D Conc	0.038	.1
October 2010	Total Suspended Solids	30D Conc	12	15.
November 2010	Total Suspended Solids	30D Conc	12	13.
November 2010	CBOD 5 day	30D Conc	10	10.3

Disinfection

As indicated by the table shown above, chlorine residual WWTW effluent violations are a persistent problem. Hickory Hills Lake Co. must submit a plan to Ohio EPA that includes action steps to eliminate these violations. The plan must also contain a date in which the action steps will be completed and the violations will cease. The plan must be submitted to this office no later than April 15, 2011.

During the inspection, I spoke with operations staff about installing an ultraviolet disinfection system. Ohio EPA has seen smaller scale UV systems perform consistently well and can be installed at a relatively low cost. There would also no longer be a need to introduce chemicals (chlorine and sodium bisulfate tablets) in the WWTW effluent. If these option is selected, please contact this office for information about the permit process, as a permit-to-install will be needed prior to installation.

Laboratory

The foundation of the NPDES permitting program is the reliability of data "self-reported" by wastewater dischargers under permit. Part III, 3., of Butler Springs' NPDES permit requires "All wastewater treatment works shall be operated in a manner consistent with the following: At all times, the permittee shall maintain in good working order and operate as efficiently as possible all treatment or control

facilities or systems installed or used by the permittee necessary to achieve compliance with the terms and conditions of this permit. *Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures...* Part III, 5., goes on to say, "Test procedures for the analysis of pollutants shall conform to regulation 40 CFR 136... The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to insure accuracy of measurements."

The federal regulatory benchmark for all water and wastewater sampling/laboratory procedures is 40 CFR 136. This rule lists acceptable sampling and laboratory procedures published in "Standard Methods for the Examination of Water and Wastewater" (Standard Methods) among other resources such as the American Society for Testing and Materials (ASTM). Standard Methods is a comprehensive reference widely used throughout the industry and is cooperatively published by the American Water Works Association, Water Environment Federation and the American Public Health Association.

Standard Methods 1020A establishes that "Quality assurance (QA) is the definitive program for laboratory operation that specifies the measure required to produce defensible data of known precision and accuracy". *Without a QA program, Hickory Hills Lake Company is without defensible data showing compliance with the NPDES permit.* Standard Methods goes on to require the inclusion of Standard Operating Procedures (SOP) for each analytical method within the QA manual. The SOP should include the following applicable categories:

- Title
- Scope and Application
- Summary
- Sample Handling and Preservation
- Interferences
- Apparatus and Materials
- Reagents
- Procedure
- Calculations
- Quality Control (calibration)
- Maintenance
- Corrective Action
- Reference (Parent Method)

As a way to cut costs, operations staff mentioned the possibility of conducting tests for dissolved oxygen, chlorine residual, pH and temperature themselves instead of hiring outside contractors to do the work. Ohio EPA does not object to this, with the understanding that acceptable test equipment and methods that conform with 40 CFR 136/Standard Methods are utilized.

During the inspection a copy of Standard Methods was given to operations staff for the parameters mentioned above. It is expected that Standard Operation Procedures (SOPs) be developed for each of the tests conducted on-site, regardless if they are performed by Hickory Hills Lake Co. staff or outside

contractors. An example SOP was also given to staff to assisting in drafting these documents.

Acceptable SOPs for dissolved oxygen, temperature, pH, chlorine residual and sample collection must be completed by no later than May 2, 2011.

Flow Meter

The flow meter for the WWTW (Parshall Flume with ultrasonic meter) shall be calibrated annually by a qualified third party. This third party must provide certification that the calibration has been completed and that the meter is within acceptable parameters. The certification must be kept on-site for review by Ohio EPA inspectors.

Operator of Record Logbook

Ohio Administrative Code 3745-7-09(A) states the following:

*The owner and operator of record of a public water system, treatment works or sewerage system shall maintain or cause to be maintained operation and maintenance records for each public water system, water treatment plant within a public water system, treatment works, or wastewater treatment facility within a treatment works. Some of the formats in which the records may be maintained include, but are not limited to, **hard bound books with consecutive page numbering**, time cards, separate operation and maintenance records, or well organized computer logs.*

The Operator of Record logbook was not in an appropriate format (hard bound with consecutive page numbering) nor did it have the title of the facility on the cover. Please make the appropriate corrections without delay but no later than March 9, 2011.