State of Ohio Environmental Protection Agency

Southeast District Office

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Logan, Ohio 43138

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Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

May 13, 2009

Re: Jackson County
Village of Oak Hill WWTP
Ohio EPA Permit No. 0PB00055*GD
NPDES Permit No. OH0026859
Compliance Evaluation Inspection
Correspondence (PWW)

Mayor Paul McNeal and Council
Village of Oak Hill
415 N. Front Street
Oak Hill, Ohio 45656

Dear Mayor McNeal and Council:

On April 15, 2009, Ohio EPA conducted a Compliance Evaluation Inspection at the village's wastewater treatment plant. The purpose of the inspection was to determine compliance with terms and conditions of National Pollutant Discharge Elimination System (NPDES) permit number 0PB00055*GD and to evaluate the wastewater treatment systems performance. Mr. Dave Carpenter represented the Village during the inspection.

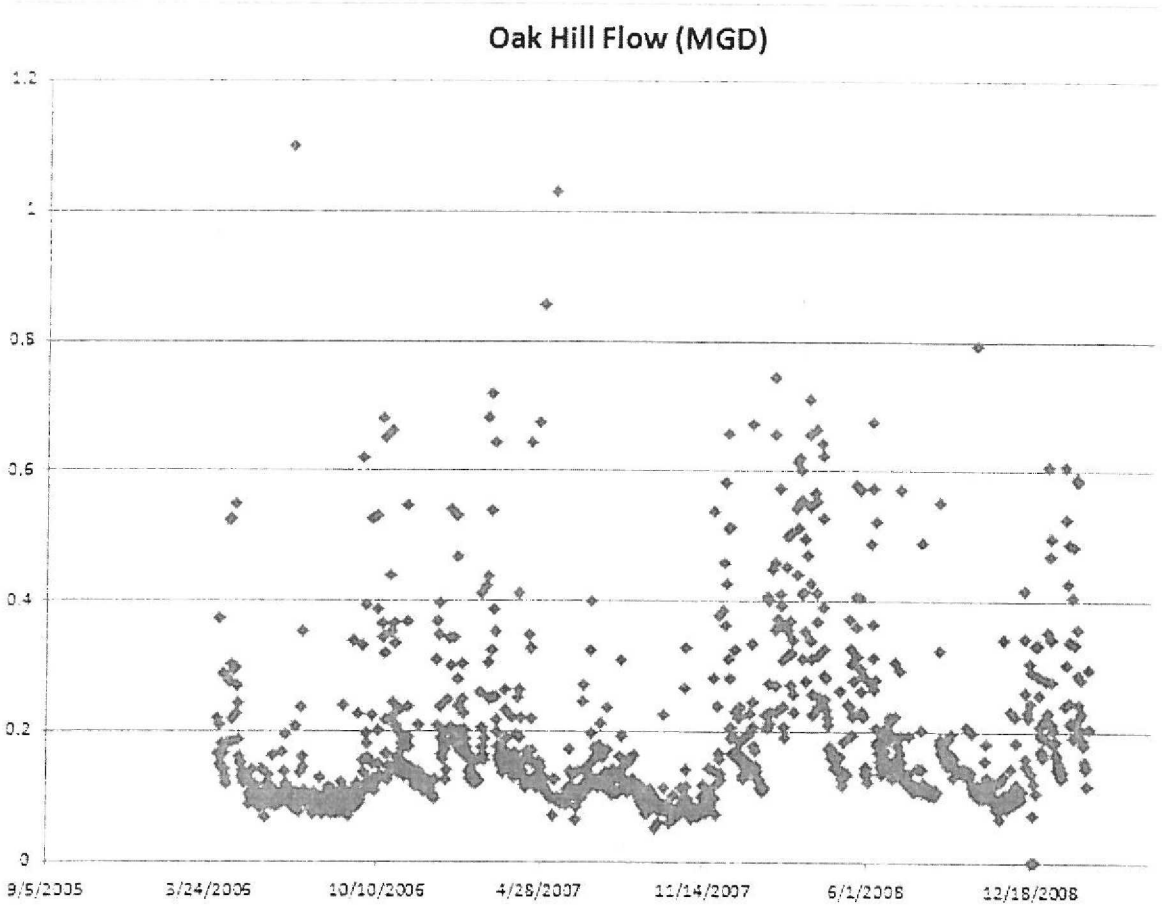
We have received self-monitoring reports covering the months of October 2008 through February 2009 for the referenced facility. Our review indicated the following violation of the conditions of your NPDES permit.

Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
001	50060	Chlorine, Total Residual	1D Conc	0.019	1.51	10/14/2008
581	01148	Selenium, Total In Slu	1D Conc	100	290.	12/4/2008
001	00400	pH	1D Conc	6.5	6.4	1/7/2009
001	00400	pH	1D Conc	6.5	6.1	2/2/2009
001	00400	pH	1D Conc	6.5	6.1	2/3/2009
001	00400	pH	1D Conc	6.5	6.4	2/4/2009

The Village is required by the permit to contact our agency when non-compliance is occurring and/or recently occurred. For reporting non-compliance, I suggest entering http://www.epa.state.oh.us/dsw/permits/permits.html#noncompliance into an internet browser. Once opened go to the bottom left box called Non-compliance Notification. There are two different Word documents that can be sent via e-mail. One is for reporting plant bypasses or upsets, the other is for reporting when a permit limit has been exceeded. The recommended notification for compliance with Part III .12 of the

permit is to route the completed forms to my e-mail address aaron.pennington@epa.state.oh.us. A separate form for Sanitary Sewer Overflows in the collection system can be found at http://www.epa.state.oh.us/dsw/permits/sso%205%20day%20report%20final%2008%2004_fis.pdf

The permit requires on page 10 Part I, C. that an Inflow and Infiltration Control Plan to be submitted to the Ohio EPA, Southeast District by October 1, 2007. The Village hired Jones & Henry Engineers. A copy of the plan had been sent to the Village; the agency is still waiting on a copy. Please identify in your response to this letter a timeframe for completing the submission of the Inflow and Infiltration Control Plan. As seen in the charted data below, I&I is a relevant issue with a design flow of 0.3MGD.



Some notable ongoing maintenance included: Pump motor replacements, Blower replacement, and replacing a buried conductor.

During the inspection, a plant bypass was described to have occurred on 12-24-08. The influent pumps had failed due to a blown fuse/conductor short. The influent headworks jumped the grit channel and also overflowed the sludge basins, entering through the supernatant return.

It was raining the day of the inspection and the effluent visually appeared clear. The Village's influent is typically characteristic of a weak wastewater. The North basin has some noticeable diffuser issues with spotty distribution, and appeared dark with a heavy scum layer typical to overoxidized sludge meaning time to waste sludge, and/or scum control issues, and/or high Oil & Grease in the influent. It may be a combination of all three at the Village's WWTP.

Below is a picture of one of the clarifies with symptoms of the same three items contributing to the dark, heavy scum layer in the aeration basin.

I strongly encourage visiting all the local users with oil and grease interceptors to inspect their maintenance practices. Another approach dealing with the condition of the treatment plant is to investigate adding scum removal controls, perhaps diverting the draw off from the clarifiers to the sludge basins.

The operator reportedly operates the plant at a Settled Sludge Volume SSV between 200-300mL with regimented wasting typically 2-3 times per week. The village should minimize the potential of solids pass through by optimizing wasting. One common method for controlling the amount of sludge to be wasted is implementing a constant F:M(Food:Micro-organisms)ratio. Since the Village is designed without primary clarification and has a weak wastewater, balancing an F:M ratio seems conducive. The M (micro-organisms) is often representative of the MLVSS (volatile solids) where the F(food) is often representative of the organic strength as BOD. Alternatively, using a constant(seasonal) SRT may be applicable.

During the inspection, I noted that the D.O. in the North basin was below 1.0. The ideal value range for an aeration basin is between 2-3 mg/L D.O.

The southern aeration basin was not receiving air, and reportedly out of service. The South basin is scheduled to be drained in upcoming months for maintenance to the diffuser system. The South basin should be drained as soon as possible to minimize offensive odors.

Please respond in writing within thirty days to the above highlighted comment. A copy of the inspection report is enclosed. The assistance and cooperation received during the inspection was appreciated. If you have any questions, please feel free to contact me at (740) 380-5272.

Sincerely,

Aaron Pennington
District Representative
Division of Surface Water

AMP/dh

Enclosure

c: Dave Carpenter

NPDES
Compliance Inspection Report

A. NATIONAL DATA SYSTEM CODING

Permit No.	NPDES No.	Date	Inspection Type	Inspector	Facility Type
0PB00055*GD	OH0026859	April 15, 2009	C	S	1

B. FACILITY DATA

Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Village of Oak Hill WWTP Township Road 726 Oak Hill, Ohio 45656	1:00 p.m.	October 1, 2006
	Exit Time	**Permit Expiration Date**
	3:30 p.m.	September 30, 2011

Name(s) and Title(s) of On-Site Representative(s)	Phone Number(s)
Dave Carpenter, Plant Operator	(740) 441-5772
Name, Address and Title of Responsible Official	**Phone Number**
Mayor Paul McNeal Village of Oak Hill 415 N. Front Street Oak Hill, Ohio 45656	(614) 682-6301

C. AREAS EVALUATED DURING INSPECTION

S	Permit	S	Flow Measurement	N	Pretreatment
S	Records/Reports	N	Laboratory	U	Compliance Schedules
S	Operations & Maintenance	S	Effluent/Receiving Waters	S	Self-Monitoring Program
S	Facility Site Review	M	Sludge Storage/Disposal		Other
U	Collection System				

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

D. SUMMARY OF FINDINGS/COMMENTS (attach additional sheets if necessary)

See attached cover letter.

Aaron Pennington, Inspector, Ohio EPA, Southeast District Office — Date: 5-14-09

Timothy M. Campbell, Reviewer, Ohio EPA, Southeast District Office — Date: 5/14/09

Sections E through K: Complete on all inspections as appropriate (N/A = Not Applicable N/E = Not Evaluated)

E. PERMIT VERIFICATION

Inspection Observations Verify the Permit	Yes	No	N/A	N/E
a. Correct name and mailing address of permittee	X			
b. Correct name and location of receiving waters	X			
c. Product(s) and production rates conform with permit application (industries)			X	
d. Flows and loadings conform with NPDES permit		X*		
e. Treatment processes are as described in permit application/briefing memo	X			
f. New treatment process(es) added since last inspection		X		
g. Notification given to state of new, different, or increased discharges			X	
h. All discharges are permitted	X			
i. Number and location of discharge points are as described in permit	X			

*The Plant has a high inflow and infiltration problem which can attribute to loading violations as pass through.

F. COMPLIANCE SCHEDULES/VIOLATIONS

	Yes	No	N/A	N/E
a. Any significant violations since the last inspection	X			
b. Permittee is taking actions to resolve violations	X*			
c. Permittee has compliance schedule	X			
d. Compliance schedule contained in: _____	X			
e. Permittee is meeting compliance schedule		X		

*The permit requires on page 10 Part I, C a compliance schedule that an Inflow and Infiltration Control Plan be submitted to the Ohio EPA, Southeast District by October 1, 2007. The Village hired Jones & Henry Engineers. A copy of the plan had been sent to the Village; the agency is still waiting on a copy. Flows contributed to a bypass event on 12/24/08 in connection with pump failures.

G. OPERATION AND MAINTENANCE

Treatment Facility Properly Operated and Maintained	Yes	No	N/A	N/E
a. Standby power available: Generator: X Started every Wed.	X			
b. Adequate alarm system available for power or equipment failures (Omni-site)	X			
c. All treatment units in service other than backup units	X			
d. Sufficient operating staff provided: 5 Days/Week: (1 employee)	X			
e. Operator holds unexpired license of class required by permit Class: I for Class II plant		X*		
f. Routine and preventive maintenance schedule/performed on time	X			
g. Any major equipment breakdown since last inspection	X**			
h. Operation and maintenance manual provided and maintained	X			
i. Any plant bypasses since last inspection	X***			
j. Regulatory agency notified of bypasses: called SEDO	X			
k. Any hydraulic and/or organic overloads experienced since last inspection	X			

*Operator is reportedly scheduled to take Class II test in upcoming month(s).
**RAS Pump, Influent Pump(s), Blower, and had a short in some buried conductors.
***Plant experienced a bypass event on 12/24/08.

Collection System		Yes	No	N/A	N/E
a.	Percent combined system: _____ %		X		
b.	Any collection system overflows since last inspection: CSO _____ SSO: _____		X		
c.	Regulatory agency notified of overflow (SSOs)			X	
d.	CSO O and M plan provided and implemented			X	
e.	CSOs monitored and reported in accordance with permit			X	
f.	Portable pumps used to relieve system		X		
g.	Lift station alarm systems provided and maintained (1 LS) Visual	X			
h.	Are lift stations equipped with permanent standby power or equivalent		X		
i.	Is there an inflow/infiltration problem (separate sewer system), or were there any major repairs to collection system since last inspection	X			
j.	Any complaints received since last inspection of basement flooding		X		
k.	Are any portions of the sewer system at or near capacity	X*			

*Being determined during I&I study.

H. SLUDGE MANAGEMENT

		Yes	No	N/A	N/E
a.	Sludge adequately disposed (Method: Land application)	X			
b.	If sludge is incinerated, where is ash disposed of? _____		X		
c.	Is sludge disposal contracted (Name: _____)		X		
d.	Has amount of sludge generated changed significantly since last inspection		X		
e.	Adequate sludge storage provided at facility	X			
f.	Land application sites monitored and inspected per state rules				X
g.	Records kept in accordance with state rules				X
h.	Any complaints received in last year regarding sludge	X			
i.	Is sludge adequately processed (aerobic digestion) – Important to note it was affected during bypass with influent coming through the supernatant return then overflowing sludge basins.	X			

Sludge Management Plan: Need to locate and keep accessible.
The current Sludge Management Plan should be revisited frequently. Fields need to be tested at a minimum of every two years to determine applicable application rates (prior to use). Files shall be kept for a minimum of 5 years and each field shall be approved through the Ohio EPA.

I. SELF-MONITORING PROGRAM

Part 1 – Flow Measurement		Yes	No	N/A	N/E
a.	Primary flow measuring device properly operated & maintained. Type of device: _____ ultrasonic & parshall flume _____ calculated from influent _____ weir _____ other __X__ ultrasonic & weir specify:	X			
b.	Calibration frequency adequate (date of last calibration: 8/27/08)	X			
c.	Secondary instruments (totalizers, recorders, etc.) properly operated and maintained	X			
d.	Flow measurement equipment adequate to handle expected ranges of flows	X			
e.	Actual flow discharged is measured	X			
f.	Flow measuring equipment inspection frequency: __X__ Daily _____ Weekly _____ Monthly _____ Other				

Part 2 – Sampling	Yes	No	N/A	N/E
a. Sampling location(s) are as specified by permit	X			
b. Parameters and sampling frequency agree with permit	X			
c. Permittee uses required sampling method	X			
d. Sample collection procedures are adequate				X
i. Samples refrigerated during compositing	X			
ii. Proper preservation techniques used				X
Conform with 40 CFR 136.3				X
e. Monitoring records (e.g., flow, pH, D.O., etc.) maintained for a minimum of three years including all original strip chart recordings (e.g., continuous monitoring instrumentation, calibration, and maintenance records)	X			
f. Adequate records maintained of sampling date, time, exact location, etc.	X			

Part 3 – Laboratory, General	Yes	No	N/A	N/E
a. EPA approved analytical testing procedures used (40 CFR 136.3)				X
b. If alternate analytical procedures are used, proper approval has been obtained				X
c. Analyses being performed more frequently than required by permit	X*			
d. If (c) is yes, are results reported in permittee's self-monitoring report			X	
e. Commercial laboratory used: 1. Parameters analyzed by commercial lab: TSS, BOD, NH3, Fecals, Sludge, etc. 2. Lab name: Stantec	X			

*Ammonia is taken much more frequent to determine when operations need to fluctuate for sufficient air and wasting. These tests are performed by Dave and the testing procedure may not satisfy 40 CFR 136.3. Stantec data is submitted with the DMR.

Part 3 – Laboratory, Quality Control/Quality Assurance	Yes	No	N/A	N/E
f. Quality assurance manual provided and maintained				X
g. Satisfactory calibration and maintenance of instruments and equipment				X
h. Adequate records maintained				X
i. Results of latest U.S. EPA quality assurance performance sampling program: Date: N/A ____ Satisfactory ____ Marginal ____ Unsatisfactory				

J. EFFLUENT/RECEIVING WATER OBSERVATIONS

Outfall #	Oil Sheen	Grease	Turbidity	Visible Foam	Visible Float Solids	Color	Other
001	None	None	None	None	None	Clear	