Sewage

Environmental Protection Agency

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

November 18, 2010

Mr. Richard Keebler
City of Oxford
101 East High Street
Oxford, Ohio 45056

Re: Butler County, Oxford WWTP, Compliance Evaluation Inspection

Dear Mr. Keebler:

On November 12, 2010, I conducted a Compliance Evaluation Inspection at this facility (NPDES Permit No. OH0026930; OEPA Permit No. 1PD00007*LD). Representing this facility was Jeff Ratliff, Dean Lake and Dave Barrett. A copy of my inspection report is enclosed.

The inspection report contains one marginal area. The Effluent / Receiving Waters section was rated marginal as a result of the NPDES Permit violations.

The areas noted in the report summary will require a written response by December 10, 2010. The response should include a description of the actions proposed to correct the violations and the dates anticipated for completion of these actions.

If you have any questions, please call me at (937) 285-6096.

Sincerely,

Ned Sarle
Division of Surface Water
Permits Section

Enclosure

ec: Jeff Ratliff, City of Oxford

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

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OhioEPA

State of Ohio Environmental Protection Agency
Southwest District Office

NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
1PD00007*LD	OH0026930	11/12/2010	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Oxford WWTP 501 McKee Avenue Oxford, Ohio 45056	10:00 A.M.	7/1/2008
	Exit Time	Permit Expiration Date
	1:40 P.M.	6/30/2013
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Jeff Ratliff, Chief Operator Dean Lake, Acting Collection Manager David Barrett, Laboratory Technician	(513) 523-2911 (513) 523-2017 (513) 523-2911	
Name, Address and Title of Responsible Official	Phone Number	
Richard Keebler, Mayor 101 East High Street Oxford, Ohio 45056	(513) 524-5201	

Section C: Areas Evaluated During Inspection (S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)					
S	Permit	S	Flow Measurement	N	Pretreatment
S	Records/Reports	S	Laboratory	S	Compliance Schedule
S	Operations & Maintenance	M	Effluent/Receiving Waters	S	Self-Monitoring Program
S	Facility Site Review	S	Sludge Storage/Disposal	N	Other
S	Collection System				

Section D: Summary of Findings (Attach additional sheets if necessary)

See Attached Summary of Findings / Comments.

Inspector	Reviewer
Ned Sarle 11/18/10	Martyn Burt 11/18/10
Ned Sarle Division of Surface Water Southwest District Office Date	Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office Date

NPDES Permit #: OH0026930
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Sections E thru K: Complete on all inspections as appropriate
Y – Yes, N – No, N/A – Not Applicable, N/E – Not Evaluated

Section E: Permit Verification

Inspection observations verify the permit

(a) Correct name and mailing address of permittee	Y
(b) Correct name and location of receiving waters.....	Y
(c) Product(s) and production rates conform with permit application (Industries).....	N/A
(d) Flows and loadings conform with NPDES permit.....	Y
(e) Treatment processes are as described in permit application...	Y
(f) New treatment process(es) added since last inspection.....	N/A
(g) Notification given to State of new, different or increased discharges.....	N/A
(h) All discharges are permitted.....	Y
(i) Number and location of discharge points are as described in permit.....	Y

Comments/Status:

None.

Section F: Permit Violations / Compliance Schedules

(a) Any significant violations since the last inspection.....	Y
(b) Permittee is taking actions to resolve violations.....	Y
(c) Permittee has a compliance schedule.....	N/A
(d) Compliance schedule contained in	
(e) Permittee is meeting compliance schedule.....	N/A

Comments/Status:

See Attached Summary of Findings / Comments.

Section G: Operation & Maintenance

Treatment Works:

Treatment facility properly operated and maintained

(a)	Standby power available.....generator ☒ or dual feed ☐.....	Y
(b)	Adequate alarm system available for power or equipment failures..	Y
(c)	All treatment units in service other than backup units.....	Y
(d)	Wastewater Treatment Works classification (OAC 3745-7).....	III
(e)	Operator of Record holds unexpired license of class required by permit..... Class: III	Y
(f)	Copy of certificate of Operator of Record displayed on-site.....	Y
(g)	Minimum operator staffing requirements fulfilled (OAC 3745-7)...	N/A
(h)	Routine and preventative maintenance scheduled/performed...	Y
(i)	Any major equipment breakdown since last inspection.....	N
(j)	Operation and maintenance manual provided and maintained.....	Y
(k)	Any plant bypasses since last inspection.....	Y
(l)	Regulatory agency notified of bypasses..... On MORs ☒ and/or Spill Hotline (1-800-282-9378) ☒	Y
(m)	Any hydraulic and/or organic overloads since last inspection.....	Y

Record Keeping:

(a)	Log book provided.....	Y
(b)	Format of log book (i.e. computer log, hard bound book) Hard bound book.	
(c)	Log book(s) kept onsite (in an area protected from weather).....	Y
(d)	Log book contains the following:	
	I. Identification of treatment works.....	Y
	II. Date/times of arrival/departure for Operator of Record and any other operator required by OAC 3745-7.....	Y
	III. Daily record of operation and maintenance activities (including preventative maintenance, repairs and request for repairs).....	Y
	IV. Laboratory results (unless documented on bench sheets)...	Y
	V. Identification of person making log entries.....	Y
(d)	Has the operator of record submitted written notification to the permittee, Ohio EPA and (if applicable) any local environmental agencies when a collection system overflow, treatment plant bypass or effluent limit violation has occurred.....	Y

Section G: Operation & Maintenance (con't)

Collection System:

(a)	Percent combined system: 0%	
(b)	Any collection system overflows since last inspection..... (CSO ☐ and/or SSO ☐)	N
(c)	Regulatory agency notified of overflows (SSOs).....	N/A
(d)	CSO O&M plan provided and implemented.....	N/A
(e)	CSOs monitored and reported in accordance with permit.....	N/A
(f)	Portable pumps used to relieve system.....	N
(g)	Lift station alarms provided and maintained.....	Y
(h)	Are lift stations equipped with permanent standby power or equivalent.....	Y
(i)	Is there an inflow/infiltration problem (separate sewer system), or were there any major repairs to collection system since last inspection.....	Y
(j)	Any complaints received since last inspection of basement flooding	Y
(k)	Are any portions of the sewer system at or near capacity.....	Y

Comments/Status:

The collection system has one pump station. This pump station has a backup generator and provision for a bypass pump. The alarm system consists of a telemeter system that calls in emergencies. The collection system also has one private pump station at the Miami Village Apartments. An overflow was reported from this private pump station on August 24-25, 2009.

Section H: Sludge Management

(a) Sludge management plan (SMP)
Submitted date: Approval #: Not submitted ☐ N/A ☒

(b) Sludge management plan current..... N/A
(c) Sludge adequately disposed..... Y
(Method: Land application and landfilled)
(d) If sludge is incinerated, where is ash disposed of
(e) Is sludge disposal contracted..... Y
(Name: Synagro)
(f) Has amount of sludge generated changed significantly since last inspection..... N
(g) Adequate sludge storage provided at plant.....Y
(h) Land application sites monitored and inspected per SMP..... Y
(i) Records kept in accordance with State and Federal law..... Y
(j) Any complaints received in last year regarding sludge..... N
(k) Is sludge adequately processed (digestion, pathogen control)..... Y

Comments/Status:

See Attached Summary of Findings / Comments.

Section I: Self-Monitoring Program

Flow Measurement:

(a) Primary flow measuring device operated and maintained..... Y
Type of device: Ultrasonic & Parshall flume ☐ Ultrasonic & Weir ☒ Weir ☐
Calculated from influent ☐ Other ☐(Specify:)

(b) Calibration frequency adequate ..... Y
(Date of last calibration: 1/27/2010)
(c) Secondary instruments operated and maintained.....Y
(d) Flow measurement equipment adequate to handle full range of flows..... Y
(e) Actual flow discharged is measured..... Y
(f) Flow measuring equipment inspection frequency
☒Daily ☐Weekly ☐monthly ☐other

Comments/Status:

Flow measurement equipment may monitor flows between 0-10 MGD.

Section I: Self-Monitoring Program (con't)

Sampling:

(a) Sampling location(s) are as specified by permit..... Y
(b) Parameters and sampling frequency agree with permit..... Y
(c) Permittee uses required sampling method..... Y
(d) Sample collection procedures are adequate..... Y
  (i) Samples refrigerated during compositing..... Y
  (ii) Proper preservation techniques used..... Y
  (iii) Containers and sample holding times prior to analysis conform with 40 CFR 136.3..... Y
(e) Monitoring records (i.e., flow, pH, DO) maintained for a minimum of three years including all original strip chart recordings (i.e, continuous monitoring instrumentation, calibration and maintenance records)..... Y
(f) Adequate records maintained of sampling date, time, location, etc.. Y

Laboratory:

General
(a) EPA approved analytical testing procedures used (40 CFR 136.3).. Y
(b) If alternate analytical procedures are used, proper approval has been obtained..... N
(c) Analyses being performed more frequently than required by permit. Y
(d) If (c) is yes, are results in permittee's self-monitoring report..... Y
(e) Commercial laboratory used..... Y
Parameters analyzed by commercial lab: Metals, Oil & Grease, Cr+6, Cn and TKN (Advance Analytics); Sludge (Belmonte); and Biomonitoring (Great Lakes Environmental Center). Lab name: See above.

Quality Control/Quality Assurance
(f) Quality assurance manual provided and maintained..... Y
(g) Satisfactory calibration and maintenance of instruments/equipment. Y
(h) Adequate records maintained..... Y
(i) Results of latest USEPA quality assurance performance sampling program:
☒ Satisfactory ☐ Marginal ☐ Unsatisfactory
Date:

Comments/Status:

None.

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Section J: Effluent/Receiving Water Observations

Outfall Number	Outfall signage	Oil sheen	Grease	Turbidity	Visible Foam	Visible Floating Solids	Color	Other
001	Yes	-	-	-	-	-	clear	

Comments/Status:

None.

Section K: Multimedia Observations

(a) Are there indications of sloppy housekeeping or poor maintenance in work and storage areas or laboratories..... N
(b) Do you notice staining or discoloration of soils, pavement or floors.. N
(c) Do you notice distressed (unhealthy, discolored, dead) vegetation.. N
(d) Do you see unidentified dark smoke or dust clouds coming from sources other than smokestacks..... N
(e) Do you notice any unusual odors or strong chemical smells..... N
(f) Do you see any open or unmarked drums, unsecured liquids, or damaged containment facilities..... N

If any of the above are observed, ask the following questions:
(1) What is the cause of the condition?
(2) Is the observed condition or source a waste product?
(3) Where is the suspected contaminant normally disposed?
(4) Is this disposal permitted?
(5) How long has the condition existed and when did it begin?

Comments/Status:

None.

Summary of Findings / Comments

Areas Requiring a Response

The NPDES Permit requires the influent composite sample be flow proportioned. The influent sampler is currently time based. This does not comply with the NPDES Permit. A flow based composite sampler must be provided as soon as possible.

The storm water pollution prevention plan (SWPPP) is still being drafted. The NPDES Permit required the SWPPP be completed within 6 months of the effective date of the permit or by January 1, 2009. This requirement is addressed in Part IV, Section A of the NPDES Permit. The SWPPP must be completed immediately.

Areas Not Requiring a Response

A review of the Discharge Monitoring Reports (DMRs) for April 2009 through September 2010 indicated three NPDES Permit violations. These violations are listed on Attachment I. The City of Oxford (Oxford) has reported these violations in accordance to the NPDES Permit. Future violations must continue to be reported as required by the NPDES Permit as detailed in Part III.12 titled "Noncompliance Notification."

A review of the DMRs for this period indicated an average daily flow of 2.418 MGD and a peak daily flow of 5.360 MGD. The treatment system is designed for an average daily flow of 4.2 MGD and a peak daily flow of 8.0 MGD. The peak influent pumping capacity is designed for 15.0 MGD. No internal WWTP bypasses were reported for this period.

For the note period, no sewage collection system bypasses were reported. Future bypasses must be reported as required by the NPDES Permit.

The secondary wet well bypassed 2,000,000 gallons on June 15, 2009 and 12,300 gallons on December 9, 2009. Both bypasses were the result of a level sensor failure. To address this situation, a wet well high water alarm was installed on June 15, 2009. These bypasses were reported in accordance to the NPDES Permit as detailed in Part III, Section 12 titled "Unauthorized Discharges."

An annual report addressing SSOs and water-in-basement incidents (WIBs) is required to be submitted by March 31 of each year. This NPDES Permit requirement is addressed in Part II, Section H titled "Sanitary Sewer Overflow Reporting Requirements." For the 2009 annual report, only one WIB event was reported.

A hydraulic bottleneck has been noted at 325 West High Street. This area should be addressed as soon as possible. Replacing the sanitary sewer on Chestnut Street at the railroad crossing has also been proposed. The sanitary sewer goes from a 12" to 8" to 6" to 8" to 12" pipe. This obvious hydraulic bottleneck should also be addressed as soon as possible. Permit to Installs for replacing these sanitary sewers were approved by the Ohio EPA on February 13, 2009. However, funding for these sewer projects has

not been found, and the construction has not been started. Finally, the Permit to Install approvals have now expired. New Permit to Install applications must be approved before these construction projects can be started.

The Days MHP sanitary sewer has been noted as a significant source of infiltration and inflow (I/I). The sewers in this park are privately owned. The park is upstream of the two areas noted previously. The city has inspected these sewers and noted I/I sources that should be addressed. However, the park has failed to proceed with the requested work. Oxford should continue their efforts to address this I/I.

Grease has been noted as an issue for the sewage collection system. The applicable water and sewer ordinances dates to 1963 and are in need of being updated. Oxford has been working for the past several years to update these regulations. However, these regulations have not been updated. These regulations should be implemented as soon as possible to prevent grease from causing problems with the sewage collection system.

Oxford maintains approximately 69 miles of sewers. In 2009, Oxford cleaned 11.3 miles and visual inspected 7.1 miles of the sanitary sewer. Spot repairs are completed at the same time. At the noted rate, the sanitary sewers are cleaned approximately once every 7 years.

In 2009, Oxford land applied 374.22 dry tons of sludge. In 2008, Oxford land filled 186.93 dry tons of sludge due to high molybdenum levels. The Miami University Steam Generating Plant has been identified as a significant source of the molybdenum. Oxford should work with the university to control this source as much as possible.

This past summer the three secondary clarifier sludge collection mechanisms were repaired. These repairs eliminated a significant amount of water from the sludge return. In the past, the aeration tank mix liquor has been between 7000-8000 mg/l. Now, the mix liquor is able to be maintained around 3500 mg/l.

A storm water sample was also grabbed and tested as required by the NPDES Permit. These results were submitted to the Ohio EPA on September 9, 2009.

During the inspection, a General Lab Criteria check list was provided. This check list will be used for the next laboratory inspection. In the next year, Standard Operating Procedure must also be written by Oxford for the wastewater sampling and testing.

NPDES Permit #: OH0026930
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Attachment I

Effluent Limit Violations for April 2009 through September 2010

Reporting Period	Parameter	Limit Type	Units	Permit Limit	Reported Value
February 2010	TSS	Weekly	kg/day	716	755
May 2010	TSS	Weekly	mg/l	33	61
May 2010	TSS	Weekly	kg/day	525	542