



**Environmental
Protection Agency**

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



1PD0000520090612

DARKE

GREENVILLE WWTP

MILLER, JOSEPH

2009/06/12



State of Ohio Environmental Protection Agency

Southwest District Office

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Dayton, Ohio 45402

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

June 11, 2009

Mayor and Council
City of Greenville
100 Public Square
Greenville, OH 45331

**RE: Compliance Evaluation Investigation (CEI)
City of Greenville Wastewater Treatment Plant
NPDES Permit 1PD00005*LD/OH0025429
Greenville, Darke County**

Mayor and Council:

On June 8, 2009, I conducted a Compliance Evaluation Investigation at the City of Greenville wastewater treatment works. This inspection was conducted to determine compliance with the NPDES discharge permit. Vaughn Downey, WWTP Superintendent, represented the City during this inspection.

Overall, the facility was rated as Satisfactory, with two items rated as Marginal. Additional information is provided in the attached detailed inspection report.

Provide a response to the "Items Requiring a Response" section of the inspection report by **July 2, 2009**. Your response should include items completed or planned to be completed to address identified issues. If you have any questions, I can be reached at (937) 285-6109 or by email at joe.miller@epa.state.oh.us.

Sincerely,

Joe Miller
Division of Surface Water
Compliance and Enforcement

CC: Vaughn Downey, Greenville WWTP
Darke County Health Department

**City of Greenville WWTP
Compliance Evaluation Inspection (CEI)
June 8, 2009**

Overview

The Greenville wastewater treatment works discharges to Greenville Creek in Darke County. The City of Greenville WWTP is designed to treat an average daily flow of 3.5 million gallons per day (MGD). Average flow from October 2007 to 2009 was reported to be 2.5 MGD. This may be artificially low, due to reporting of flows in excess of 6 MGD as "AF", or High Stream Water Inundates Sampling Site. This coding was used 12 times in 2008. This method of reporting has been used since January 2006.

The wastewater treatment train consists of raw screening bar racks, coarse and fine screening, grit and grease removal, flow equalization, activated sludge aeration oxidation ditches, secondary clarification, disinfection chlorination, and dechlorination. Solid stream processes are sludge stabilization by aerobic digestion followed by land application at agronomic rates. Sludge is pumped off-site by force main to a sludge storage lagoon near the closed city landfill. The city's sludge disposal is contracted with Synagro, Inc. Synagro land applies sludge to area approved fields via subsurface injection.

The City of Greenville wastewater staff includes:
Vaughn Downey, Class III WW, Wastewater Superintendent
Lucian Blier, Class III WW, Laboratory Analyst
Chuck Hapner, Class II WW, Operator
Dave Sturgill, Class I WW, Operator

The City has hired URS Engineering to complete the design of improvements for the Greenville wastewater treatment works. The contracted design includes: improvements to provide reduction of total effluent phosphorus to meet the Stillwater River Watershed TMDL limitations, sludge processing upgrades on-site (rather than pumped to the landfill sludge handling facility), hydraulic evaluation and improvements (including effluent pumping during high stream conditions), and plant-wide SCADA improvements.

The Greenville NPDES permit includes a schedule of compliance for reducing the loading of effluent total phosphorus to Greenville Creek. The next milestone on this schedule requires an update on the results of a study to determine the capability of the wastewater treatment plant to maximize the reduction of total phosphorus in the effluent.

Currently the WWTP operations staff is conducting a study on the reduction of phosphorus using anoxic zones in the oxidation ditches. They have profiled dissolved oxygen levels in the oxidation ditches while maintaining low effluent nitrogen-ammonia. Levels of dissolved oxygen in anoxic zones are around 0.2 mg/l and then brought up to a range of 2.0-3.0 mg/l following aeration by ditch rotors. An update on the results of these measures is due to be reported to Ohio EPA by August 2009.

Collection System

In order to evaluate the City of Greenville's collection system, the city was provided USEPA's Collection System Performance Indicator Data Collection Form in advance of the inspection for completion. Unfortunately, this form was not completed thoroughly or accurately. In order to conduct an effective collection system maintenance and management program, it is important to establish baseline knowledge of the collection system. Aging sewer infrastructure requires continued review and maintenance to limit emergency situations and infiltration and inflow.

Ohio Administrative Code 3745-7-04 establishes classifications of collection systems and thereby the required credentials for the operator of record for this collection system. Since the Greenville WWTP is categorized as a Class III wastewater facility, the collection system tributary to the WWTP is categorized as a Class II system. The operator of record for this collection system needs to have, at minimum, Class II Wastewater Collection certification.

Operation and Maintenance

Preventative maintenance is currently done informally, with the operators aware of monthly service needs. A formalized routine and preventative maintenance program is advised to ensure good record keeping of work completed, expenditures, and trends. This program should be memorialized in writing and all operators trained accordingly.

Effluent Violations

No numeric effluent violations were reported during the period of time reviewed (October 2007 to May 2009). Code violations noted during the period of time reviewed were those instances when "AF" was used for flow rate. This is discussed in the attached inspection form. Frequency effluent violations occurred in June 2008 when wastewater staff started using the NPDES permit effective August 2008 for determining sampling frequency. All instances of non-compliance were followed up by self-notification of non-compliance as required by the NPDES permit.

Since the last inspection, log books have been implemented and appropriate outfall signage has been posted.

ITEMS REQUIRING A RESPONSE

1. **Collection System** - Complete the previously provided collection system performance indicator data collection form and submit to this office.
2. **Collection System Operator** – Provide a plan and schedule for providing an operator of record for the collection system with Class II Wastewater Collection certification.
3. **Unsewered Areas** – Provide an update on providing sewer service to the properties on Winchester Avenue along with a schedule for completion of this project.

Permit #: 1PD00005*KD
 NPDES #: OH0025429



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
1PD00005*KD	OH0025429	6/08/09	C	S	1

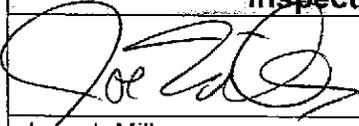
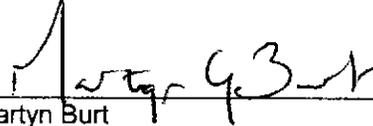
Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
City of Greenville WWTP 209 North Ohio Street Greenville, OH 45331	9:05 AM	8/1/08
	Exit Time	Permit Expiration Date
	12:10 PM	1/31/2013
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Vaughn Downey, Wastewater Superintendent	937-548-3530	
Name, Address and Title of Responsible Official	Phone Number	
Mayor and Council City of Greenville 100 Public Square Greenville, OH 45331	937-548-1482	

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

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

Flow measurement recorded as AF during high flows due to back up of effluent in flow measurement, chlorine contact tank, and post-aeration tank. For this reason, flow measurement was rated as marginal.

Collection system was rated as marginal due to sanitary sewer overflow occurrences and lack of a certified operator of record.

Inspector	Reviewer
 Date: 6/11/09	 Date: 6/11/08
Joseph Miller Division of Surface Water Southwest District Office	Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office

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... N
- (f) New treatment process(es) added since last inspection..... N
- (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:

3 of 4 final clarifiers on line due to low average flow.

Section F: Permit Verification

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

Comments/Status:

Compliance schedule for reduction of total effluent phosphorus requires update on the evaluation of the capability of the WWTP to reduce total effluent phosphorus loading by August 2009.

Monitoring of flow rate in January 2008, February 2008, March 2008, June 2008, July 2008, and February 2009 was recorded with an "AF" Code (High Stream Water Inundates Sample Site). Proposed WWTP improvements would include the capability of effluent pumping when Greenville Creek rises above the discharge location, thus allowing measurement of flow during these periods.

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..... N
- (d) Wastewater Treatment Works classification (OAC 3745-7)..... III
- (e) Operator of Record holds unexpired license of class required by permit..... Y
 Class: III
- (f) Copy of certificate of Operator of Record displayed on-site..... Y
- (g) Minimum operator staffing requirements fulfilled (OAC 3745-7)... Y
- (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..... Y
 On MORs and/or Spill Hotline (1-800-282-9378)
- (m) Any hydraulic and/or organic overloads since last inspection..... N

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)... N/A
 - 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..... Y
(CSO and/or SSO)
- (c) Regulatory agency notified of overflows (SSOs)..... Y
- (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..... Y
- (g) Lift station alarms provided and maintained..... Y
- (h) Are lift stations equipped with permanent standby power
or equivalent.....(11 of 13) 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 N
- (k) Are any portions of the sewer system at or near capacity..... N

Comments/Status:

13 lift stations are alarmed, but no telemetry. Lift stations are checked daily for proper operation.
11 of 13 lift stations have standby power. (standby power generator available)
-the only lift station exceptions being the North Park restroom and sludge
City has a vac truck and portable 3" trash pump.
Street department receives and evaluates merit of basement backup/flooding calls.
Infiltration and inflow reduction program included the installation of saucers in manholes
(north of Greenville Creek completed in 2007, south of G. Creek completed in 2008)

Section H: Sludge Management

- (a) Sludge management plan (SMP)
Submitted date: 4/99 Approval #: 05-392PW Not submitted N/A
- (b) Sludge management plan current..... Y
- (c) Sludge adequately disposed..... Y
(Method: land application)
- (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..... N/E
- (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:

Sludge terraces near landfill have accumulation of sludge from past usage.

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: continuous w/ SCADA)
- (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: Discharge flow backs up into chlorine contact tank and post-air tank during high flows making flow measurement inaccurate. Operator has reported this as "AF" on monthly reports.

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/A
- (c) Analyses being performed more frequently than required by permit. N
- (d) If (c) is yes, are results in permittee's self-monitoring report..... N/A
- (e) Commercial laboratory used..... Y

TKN, NO2-NO3

Lab name: Belmonte Laboratories

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:

DMRQA results satisfactory

Process control sampling conducted including dissolved oxygen sampling in multiple locations in oxidation ditch as part of phosphorus reduction exercise.

Section J: Effluent/Receiving Water Observations

Outfall Number	Oil sheen	Grease	Turbidity	Visible Foam	Visible Floating Solids	Color	Other
001	No	No	No	No	No	Clear	algae

Comments/Status:

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:

