



Environmental
Protection Agency

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



1PC0001320100624

GREENE YELLOW SPRINGS WWTP

ZIMMERMAN, MICH 2010/06/24

**Environmental
Protection Agency**

Tec. Stroszinski, Governor
Lee Fisher, Lt. Governor
Chris Kottese, Director

July 1, 2010

Village of Yellow Springs *-Corresp.*
Attn: Mr. Mark Cundiff
100 Dayton Street
Yellow Springs, OH 45387

**RE: Village of Yellow Springs WWTW/Reconnaissance Inspection Report
NPDES Permit No. OH0028215/OEPA PERMIT NO. 1PC00013*HD**

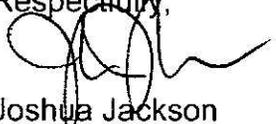
Dear Mr. Cundiff:

On June 23, 2010, I conducted an NPDES Compliance Evaluation Inspection at the Village of Yellow Springs wastewater treatment works (WWTW). Joe Bates (Operator of Record) was present during the inspection. The purpose of the inspection was to check on the construction progress and observe how the WWTW was operating.

A copy of the report on the inspection is enclosed. **Please pay attention to the "items requiring correction" in bold type, as there compliance schedules associate with them.**

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: Joe Bates, Village of Yellow Springs (w/report)

Enclosure



State of Ohio Environmental Protection Agency
Southwest District Office

NPDES Compliance Inspection Report

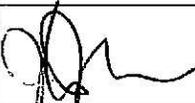
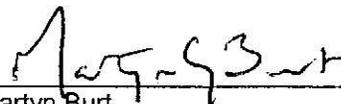
Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
1PC00013*HD	OH0028215	6/23/2010	R	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Village of Yellow Springs WWTW 3835 Grinnell Road Yellow Springs, Greene County	9:40 a.m.	9/1/2005
	Exit Time	Permit Expiration Date
	11:20 p.m.	8/31/2010
Name(s) and Title(s) of On-Site Representatives		Phone Number(s)
Joe Bates, Operator of Record		937-767-7208
Name, Address and Title of Responsible Official		Phone Number
Mark Cundiff, Village Manager Village of Yellow Springs 100 Dayton Street Yellow Springs, OH 45387		937-7671279

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

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

See attached report.

Inspector	Reviewer
 Joshua Jackson Division of Surface Water Southwest District Office	 Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office
7-1-10 Date	7/2/10 Date

Inspection Report
(Items for Correction in Bold Type)

The Village of Yellow Springs wastewater treatment works (WWTW) is designed to treat an average daily of 0.6 million gallons/day. A review of the discharge monitoring reports (DMRs) for December 2009 – May 2010 show an average daily flow of 0.5 MGD.

The Village started construction of the WWTW upgrade in October 2009 (Ohio EPA Permit to Install was issued to the Village on July 1, 2009). The Director's Final Findings & Orders issued to the Village on March 12, 2010, requires construction completed and the WWTW operational by no later than May 1, 2011. In general, this upgrade will include installation/construction of the following salient features:

- Earthen overflow basin (Overflow box will divert influent flow in excess of 3.93 MGD to the overflow basin until flows subside. Wastewater in the overflow basin will then be pumped back to the head of the plant.)
- Mechanical fine screen (6.0 MGD capacity – ¼ inch openings)
- Grit Removal (4.0 MGD capacity – "Vortex")
- Conversion of existing extended aeration activated sludge system to a biological nutrient removal plant (~500,000 gallons of tank volume)
- Conversion of existing aerobic digester and sludge storage tank to a "Sequencing Facultative Digester"
- Side stream Phosphorus treatment for digester supernatant and sludge dewatering filtrate
- Back-up Generator (350 KW – which will power all essential equipment)
- Supervisor Control and Data Acquisition (SCADA) system via DeviceNet.

The main purpose of the inspection was to check on the construction progress and observe how the WWTW was operating. According to Mr. Bates, the construction of the new facilities is approximately 50% completed.

Items Noted During the Inspection

- The existing automatic screens were not on-line due to a bad gear box. Mr. Bates was evaluating whether to spend the money for a new gear box or see if the installation of the new automatic screen could be expedited. Since the time of the inspection, Mr. Bates informed Ohio EPA that the new screens will be installed within 30 days.
- Current density baffles had been installed in both clarifiers and the drive unit rehabilitation had been completed for the East Clarifier, however, Mr. Bates will wait until all other construction is completed before the drive unit work is performed on the West Clarifier (the use of both clarifiers is essential at this point).

Both clarifiers are operational but the East Clarifier is being used for sludge holding (figure 1) as the North Digester is down for improvements.



It is expected that the North Digester will be down for 30 days. According to Mr. Bates, a level sensor is being installed in the main collection system pump station by July 2, 2010. This sensor will alert Village staff of high flow events so that the East Clarifier can be brought back on-line for treatment. An autodialer is being installed simultaneously so that staff can be alerted during off hours.

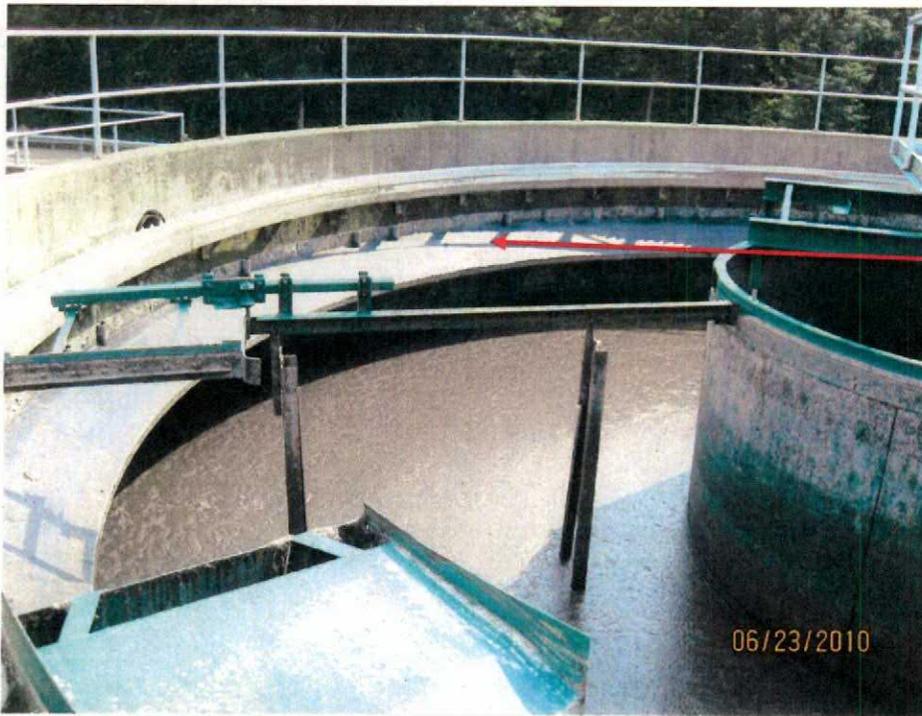
At the time of the inspection, a small layer of solids was observed on the top of the current density baffles in the West Clarifier (apparently from a previous high flow event); however, the effluent from the clarifier was clear.

- During the inspection conducted on January 6, 2010, large floating solids were observed in the chlorine contact tank. Ohio EPA instructed the Village to clean the tank and install floating baffles so that these solids could be captured before discharging to Yellow Springs Creek.

The Village has since cleaned the tank and installed an air hose near the front of the tank to provide an air curtain for keeping any floating solids from progressing towards the outfall. At the time of the inspection, this appeared to be effective. Mr. Bates stated that an aluminum baffle will also be installed toward the end of the tank by July 2, 2010.

At the time of the inspection, the effluent from the chlorine contact tank was clear and free of observable solids. (figure 2)

- The earthen overflow basin had been constructed and seeded.
- The influent diversion box (figure 3), with an overflow weir to the detention basin, had been constructed (the overflow pipe to the basin was plugged).
- The covered sludge storage pad was completed.



*Current density
baffles in
secondary
clarifier.*

Figure 1





Discharge from chlorine contact tank to the rock outfall to Yellow Springs Creek

Figure 2



Influent diversion chamber with overflow to earthen detention basin.

Figure 3



EFFLUENT LIMIT VIOLATIONS
(Period of Review: December 2009 – May 2010)

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

Reporting Period	Parameter	Limit Type	Limit	Reported Value
February 2010	Nitrogen, Ammonia (NH3)	30D Conc	1.9	2.22875
February 2010	Nitrogen, Ammonia (NH3)	7D Conc	2.9	5.515
February 2010	Nitrogen, Ammonia (NH3)	7D Qty	6.6	9.59246
May 2010	Phosphorus, Total (P)	30D Conc	1.0	2.11
May 2010	Phosphorus, Total (P)	7D Conc	1.5	2.11
May 2010	Phosphorus, Total (P)	30D Qty	2.3	2.85113

Mr. Bates reported that the February ammonia violations were likely caused by the following condition: the East Clarifier was off-line (drive unit rehabilitation work) and the return pump to the West Clarifier became clogged. Mr. Bates utilized a 4"-trash pump to return activated sludge to the aeration basins until the blockage was cleared.

Phosphorus

According to the design, the WWTW will be able remove phosphorus biologically once the construction work is completed. The Village's existing permit contains effluent limitations for total phosphorus that are in effect for the months of May – October. At this point there is no means chemically to remove phosphorus from the waste stream, so it is anticipated that the total phosphorus effluent violations reported for the month of May will continue throughout the summer if no temporary treatment measure is brought in.

The Village of Yellow Springs should have a temporary chemical mixing/injection station set up to precipitate total phosphorus from the wastewater no later than August 2, 2010. Notification should be given to Ohio EPA seven day prior to the work being completed.

Pump Station Overflows

The Village has reported the following overflows at the pump station located at 405 U.S. 68 North since 2006:

- 10/17-2006 thru 10/20/2006
- 3/2/2007
- 3/15/2007
- 3/24/2008
- 6/4/2008 thru 6/6/2008
- 6/24/2010 thru 6/25/2010

Many of the overflows listed above occurred during/after rain events. Please be advised that these sanitary sewer overflows are a violation of Ohio Revised Code 6111.04 "Water Pollution and Sludge Management Violations Prohibited". Ohio EPA will be inserting a compliance schedule in the upcoming NPDES permit renewal for the Village of Yellow Springs WWTW that requires the elimination of all illegal overflows and establishes a Capacity, Management, Operation and Maintenance (CMOM) program; the language in the permit will look similar to the following:

CAPACITY, MANAGEMENT, OPERATION AND MAINTENANCE (CMOM)

1. General Standards

You, the permittee, must:

- properly manage, operate and maintain, at all times, all parts of collection system that you own or over which you have operational control;
- provide adequately capacity to convey base flows and peak flows for all parts of the collection system you own or have operational control;
- take all feasible steps to stop, and mitigate the impact of, sanitary sewer overflows in portions of the collection system you own or have operational control;
- provide notification to parties with a reasonable potential for exposure to pollutants associated with the overflow event; and
- develop a written summary of your CMOM program and make it, and the audit under section (5), available to any member of the public upon request.

2. Management Program

You must develop a capacity, management, operation and maintenance (CMOM) program to comply with paragraph (1). If you believe that any element of this section is not appropriate or applicable for your CMOM program, your program does not need to address it, but your written summary must explain why that element is not applicable. The Director will consider the quality of the CMOM program, its implementation and effectiveness in any relevant enforcement action, including but not limited to any enforcement action for violation of the prohibition of any municipal sanitary sewer system discharges described at 40 CFR 122.42(g). The program must:

Goals:

Identify with specificity the major goals of your CMOM program, consistent with the general standards identified above.

Organization:

Identify:

- administrative and maintenance positions responsible from implementing measures in your CMOM program, including lines of authority by organization chart or similar document; and

- The chain of communication for reporting SSOs under Part II of the NPDES permit from receipt of a complaint or other information to the person responsible for reporting to the NPDES authority, or where necessary, the public.

Legal Authority:

Include legal authority, through sewer use ordinances, service agreements or other legally binding documents, to:

- Control infiltration and connections from inflow sources;
- Require that sewers and connections be properly designed and constructed;
- Ensure proper installation, testing, and inspection of new and rehabilitated sewers (such as new or rehabilitated collector sewers and new or rehabilitated service laterals);
- Address flows from satellite municipal collection systems; and
- Implement the general and specific prohibitions of the national pretreatment program that you are subject to under 40 CFR 403.5.

Measures and Activities:

Your CMOM program must address the elements listed below that are appropriate and applicable to your system and identify the person or position in your organization responsible for each element.

- Maintenance of facilities;
- Maintenance of a map of the collection system;
- Management of information and use of timely ; relevant information to establish and prioritize appropriate CMOM activities (such as the immediate elimination of dry weather overflows or overflows into sensitive waters such as public drinking water supplies and their source waters, swimming beaches and waters where swimming occurs, shellfish beds, designated Outstanding National Resource Waters, National Marine Sanctuaries, waters within federal, state, or local parks, and water containing threatened or endangered species or their habitat), and identify and illustrate trends in overflows; such as frequency and volume;
- Routine preventive operation and maintenance activities
- Assessment of the current capacity of the collection system and treatment facilities which you own or over which you have operational control;
- Identification and prioritization of structural deficiencies and identifying and implementing short-term and long term rehabilitation actions to address each deficiency;
- Appropriate training on a regular basis; and
- Equipment and replacement parts inventories including identification of critical replacement parts.

Design and Performance Provisions:

You must establish:

- requirements and standards for the installation of new sewers, pumps and other appurtenances; and rehabilitation and repair projects; and

- procedures and specifications for inspecting and testing the installation of new sewers, pumps, and other appurtenances and for rehabilitation and repair projects.

Monitoring, Measurement and Program Modifications:

You must monitor the implementation and, where appropriate measure the effectiveness of each element of your CMOM program. You must update program elements as appropriate based on monitoring or performance evaluations. You must modify the summary of your CMOM program as appropriate to keep it updated and accurate.

3. Overflow Response Plan

You must develop and implement an overflow response plan that identifies measures to protect public health and the environment by, including but not limited to, mechanisms to:

- ensure that you are made aware of all overflows (to the greatest extent possible);
- ensure that overflows are appropriately responded to, including ensuring that reports of overflows are immediately dispatched to appropriate personnel for investigation and appropriate response;
- ensure appropriate reporting pursuant to 40 CFR 122.42(e).
- ensure appropriate notification to the public, health agencies, and other impacted entities (e.g. water suppliers) pursuant to 40 CFR 122.42(h). The CMOM should identify the public health and other officials who will receive immediate notification;
- ensure that appropriate personnel are aware of and follow the plan and appropriately trained; and
- provide emergency operations.

4. System Evaluation and Capacity assurance plan:

You must prepare and implement a plan for system evaluation and capacity assurance if peak flow conditions are contributing to an SSO discharge unless you have either (1) already taken steps to correct the hydraulic deficiency or (2) the discharge meets the criteria of 122.42(g)(2). At a minimum the plan must include:

- Evaluation: Steps to evaluate those portions of the collection system which you own or over which you have operational control which are experiencing or contributing to an SSO discharge caused by hydraulic deficiency or to noncompliance at a treatment plant. The evaluation must provide estimates of peak flows (including flows from SSOs that escape from the system) associated with conditions similar to those causing overflow events, provide estimates of the capacity of key system components, identify hydraulic deficiencies, including components of the system with limiting capacity and identify the major sources that contribute to the peak flows associated with overflow events;
- Capacity Enhancement Measures: Establish short and long term actions to address each hydraulic deficiency including prioritization, alternative analysis, and a schedule; and

- Plan updates: The plan must be updated to describe any significant change in proposed actions and/or implementation schedule. The plan must also be updated to reflect available information on the performance of measures that have been implemented.

5. CMOM Program Audits

As part of the NPDES permit application, you must conduct an audit, appropriate to the size of the system and the number of overflows, and submit a report of such audit, evaluating your CMOM and its compliance with this subsection, including its deficiencies and steps to respond to them.

6. Communications:

The permittee should communicate on a regular basis with various interested parties on the implementation and performance of its CMOM program. The communication system should allow interested parties to provide input to the permittee as the CMOM program is developed and implemented.

