



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

April 25, 2013

**Re:** Belmont County  
Village of Shadyside WWTP  
Compliance Evaluation Inspection  
Ohio EPA Permit OPC00009\*FD  
Correspondence (PWW)

Board of Public Affairs  
Village of Shadyside  
50 East 39th Street  
Shadyside, Ohio 43947

Dear Board Members:

On April 8, 2013, Jennifer Witte and I conducted a Compliance Evaluation Inspection (CEI) at the Shadyside Wastewater Treatment Plant (WWTP). We met with Doug Beekman and Lloyd Christy, who represented the village during the inspection.

The purpose of the inspection was to evaluate the WWTP's status of compliance with the NPDES permit, federal number OH0027383, state number OPC00009\*FD. Wastewater samples were not taken. A copy of the inspection report form is attached.

As a result of the inspection and file review, I have the following comments:

1. A review of the facility's electronic Discharge Monitoring Reports (eDMRs) from January 2012 to present showed one violation for exceeding the fecal coliform limit in July 2012.
2. **Part II, Item F of NPDES Permit OPC00009\*FD:** "The permittee shall maintain in good working order and operate as efficiently as possible the 'treatment works' and 'sewerage system' as defined in ORC 6111.01 to achieve compliance with the terms and conditions of this permit..."
  - a. The current NPDES permit contains a compliance schedule to develop a plan to address Inflow and Infiltration (I/I). A review of the data from January 2012 through February 2013 showed that the daily flow exceeded the average daily design flow of the plant 44 times. I/I in the collection system continues to be negatively affecting the treatment plant and results in hydraulic overloading of the plant. Please continue to follow the plan to address I/I and submit an annual report by January 15 each year detailing work completed in the collection system. In addition, the staffing level should be evaluated and staffing may need to be increased to address sources of I/I.

- b. The effluent flow meter (Mag. meter) was last calibrated in 2009. The effluent flow meter should be calibrated on an annual basis. Please have the meter calibrated and notify me with the date of this calibration.
  - c. The two final clarifiers showed a moderate buildup of solids and algae on the weirs and baffles. Cleaning of the weirs and baffles should be done as needed to prevent buildup of algae on the weirs and trough which may lead to solids violations. The operator must document in log book when cleaning occurs.
  - d. During the inspection, it was noted that the effluent composite sampler refrigerator was not maintaining a proper temperature. The temperature in the sampler refrigerator needs to be operated within the range of 38 - 42 degrees F (3-5.5 degrees C). The temperature should be checked every time a sample is taken and a log of the temperature kept on site. In addition, a thermometer shall be held in a water bath.
  - e. The treatment plant currently does not have an Operation and Maintenance manual. In order to ensure proper plant operation and maintenance, it is required that the plant compile a written Operation and Maintenance manual. Provide a date as to when this manual will be completed.
3. **Part II, Item G of NPDES Permit 0PC00009\*FD:** "Composite samples shall be comprised of a series of grab samples collected over a 24-hour period and proportionate in volume to the sewage flow rate at the time of sampling." The effluent composite sampler is currently set up as time-based instead of flow proportional, as required above. The facility must take action to ensure that flow proportionate samples are collected on the plant effluent.
4. The operator log book was reviewed during the inspection. The operators are required to include the times of arrival/departure at the facility and the identification of the operator making the entries in the log book.
5. A review of the lab was performed during the inspection. The lab currently analyzes pH, chlorine, dissolved oxygen, and temperature on-site. Currently no calibration logs (records) are kept for any of the equipment used to analyze these parameters. According to Mr. Christy, the pH meter, chlorine meter, and dissolved oxygen meter are calibrated every day before they are used. You are required to document this calibration in a log book. In addition, the analyst shall include their initials on the bench sheet.
6. Mr. Christy stated during the inspection that the facility does not routinely test the Mixed Liquor Suspended Solids (MLSS) in the aeration chamber. I highly recommend this test (or other process testing) be conducted on a regular basis to maintain the proper concentration in the aeration basin. During our discussion with Mr. Beekman and Mr. Christy, we stated that we would recommend contacting our Compliance Assistance Unit (CAU). This unit meets with operators at treatment plants to provide

guidance to efficiently operate treatment plants. There is no cost to the facility to utilize this resource. The contact name and phone number for the CAU is Mark Stump at (614) 644-2028.

Please respond, in writing, within 30 days of the date of this letter to items 2 through 4 above. If you have any questions, please contact me at (740) 380-52416 or [nick.hammer@epa.ohio.gov](mailto:nick.hammer@epa.ohio.gov).

Sincerely,



Nicholas G. Hammer  
Environmental Specialist  
Division of Surface Water

NH/dh

Enclosure

- c: Doug Beekman, Superintendent
- c: Lloyd Christy, Assistant Superintendent



State of Ohio Environmental Protection Agency  
Southeast District Office

Municipal NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES #	Month/Day/Year	Inspection Type	Inspector	Facility Type
0PC00009*FD	OH0027383	April 8, 2013	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Shadyside WWTP 3995 Riverside Drive Shadyside, Ohio 43947	10:20 a.m.	August 1, 2009
	Exit Time	Permit Expiration Date
	1:10 p.m.	July 31, 2014
Name(s) and Title(s) of On-Site Representative(s)	Phone Number(s)	
Doug Beekman, Superintendent Lloyd Christy, Assistant Superintendent	(740) 676-4748	
Name, Address, and Title of Responsible Official	Phone Number	
Board of Public Affairs Village of Shadyside 50 East 39th Street or 3737 Riverside Drive Shadyside, Ohio 43947	(740) 676-4313	

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

Section D: Summary of Findings (attach additional sheets if necessary)			
See attached letter.			
Inspector		Reviewer	
 Date: 4-25-13		 Date: 4/25/13	
<b>Nicholas G. Hammer</b> Division of Surface Water Southeast District Office		<b>Jennifer M. Witte</b> Compliance & Enforcement Supervisor Division of Surface Water Southeast District Office	

Sections E through 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) Flows and loadings conform with NPDES permit..... Y
- (c) Treatment processes are as described in permit application..... Y
- (d) All discharges are permitted..... Y
- (e) Number and location of discharge points are as described in permit..... Y
- (f) Storm water discharges properly permitted..... Y

Comments/Status:

### Section F: Compliance

- (a) Any significant violations since the last inspection..... N
- (b) Appropriate Non-compliance notification of violations..... Y
- (c) Permittee is taking actions to resolve violations..... Y
- (d) Permittee has a compliance schedule..... Y
- (e) Compliance schedule contained in..... Y
- (f) Permittee is in compliance with schedule..... Y
- (g) Has biomonitoring shown toxicity in discharge since last inspection..... N/A

Comments/Status:

Compliance Schedule contained in current NPDES permit.

### Section G: Operation and Maintenance

Treatment Works:

Treatment facility properly operated and maintained

- (a) Standby power available generator  or dual feed ..... Y
  - i. What does the back-up power source operate  

Everything at the plant with the exception of the blowers
  - ii. How often is the generator tested under load  

Weekly

- (b) Which components have an alarm system available for power or equipment failures  
 Y
- (c) All treatment units in service other than backup units ..... Y
- (d) What method is used for scheduling routine and preventative maintenance (calendar, software, etc.)  
 Y
- (e) Any major equipment breakdown since last inspection ..... N
- (f) Operation and maintenance manual provided and maintained ..... N
- (g) Any plant bypasses since last inspection ..... N
- (h) Any plant upsets since last inspection ..... N

**Comments/Status:**

Facility needs a written Operation and Maintenance manual.  
 Heavy build-up of solids and algae located on weirs of clarifiers.  
 Additional testing should be conducted to determine MLSS and/or Solids concentration.

**Record Keeping/Operator of Record:**

- (a) Wastewater Treatment Works classification (OAC 3745-7) ..... II
- (b) Operator of Record holds unexpired license of class required by Permit ..... Y
- (c) Copy of certificate of Operator of Record displayed on-site ..... Y
- (d) Has the Operator of Record submitted an ORC Notification form ..... Y
- (e) Minimum operator staffing requirements fulfilled (OAC 3745-7) ..... Y
- (f) If a Staffing Reduction plan has been approved, are the stipulations of the plan being met ..... N/A
- (g) Operator of Record log book provided ..... Y
- (h) Format of log book (e.g. computer log, hard bound book)
- (i) Log book kept onsite (in an area protected from weather) ..... Y
- (j) 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 ..... N
  - III. Daily record of operator and maintenance activities (including preventative maintenance, repairs and request for repairs, process control test results, etc.) ..... Y
  - IV. Laboratory results (unless documented on bench sheets) ..... N/A
  - V. Identification of person making entries ..... N
- (k) Has the Operator of Record submitted written notifications 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

**Comments/Status:**

Operator log book needs times of arrival/departure of operator recorded and identification of person making entries.

**Collection System:**

- (a) Are there pump stations in the collection system ..... Y
  - I. How many publicly-owned pump stations equipped with permanent standby power or equivalent 1
  - II. How many pump stations have telemetered alarms..... 0
  - III. How many pump stations have operable alarms..... 2
- (b) Any chronic collection system overflows since last inspection ..... N
- (c) Regulatory agency notified of all overflows ..... Y
- (d) Are there CSOs in the collection system ..... N  
 If so, what is the LTCP status
- (e) How are CSOs monitored (chalk, block, level sensor, etc.)
- (f) Portable pumps available for collection system maintenance ..... Y
- (g) RDII Program established and active ..... N/A
- (h) Any WIB complaint received since last inspection..... Y
- (i) Is there a WIB response plan..... Y
- (j) Is any portion of the collection system at or near dry weather capacity ..... N

**Comments/Status:**

Inflow and Infiltration (I/I) from the collection system is negatively impacting plant. Staffing level may need to be increased to address sources of I/I.

**Section H: Sludge Management**

- (a) Method of Sludge Disposal.....
- Land Application
  - Haul to Another NPDES Permittee
  - Haul to a Mixed Solid Waste Landfill

\*if one of the selected methods is land application, complete applicable charts.

**Class A – Exception Quality Sewage Sludge (monitoring station 584)**

Pathogen Reduction Alternative	84370 Vector Attraction Reduction Options							
	Option 1 – 38% Volatile Solids Reduction	Option 2 – Anaerobic Bench Scale Analysis	Option 3 – Aerobic Bench Scale Analysis	Option 4 – Specific Oxygen Uptake Rate	Option 5 – Aerobic Time and Temperature	Option 6 – Alkali Addition	Option 7 - >75% Solids without Unstabilized Solids	Option 8 - >75% Solids with Unstabilized Solids
Alternative 1 – Time and Temperature Regime (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 – High pH and High Temperature (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 3 – Other Processes (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 4 – Unknown Processes (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 – Composting (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 – Heat Drying (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 – Heat Treatment (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 – Thermophilic Aerobic Digestion (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 – Beta Ray Irradiation (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 – Gamma Ray Irradiation (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 – Pasteurization (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 6 – Approved Equivalent Process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Class B – Sewage Sludge (monitoring station 581)**

Pathogen Reduction Alternative	84370 Vector Attraction Reduction Options									
	Option 1 – 38% Volatile Solids Reduction	Option 2 – Anaerobic Bench Scale Analysis	Option 3 – Aerobic Bench Scale Analysis	Option 4 – Specific Oxygen Uptake Rate	Option 5 – Aerobic Time and Temperature	Option 6 – Alkali Addition	Option 7 - >75% Solids without Unstabilized Solids	Option 8 - >75% Solids with Unstabilized Solids	Option 9 – Land Injection	Option 10 – Immediate Incorporation
Alternative 1 – Geometric Mean of Seven Fecal Samples (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 – Aerobic Digestion (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 – Air Drying (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 – Anaerobic Digestion (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 – Composting (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 – Lime Treatment (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 3 – Approved Equivalent Process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- (b) Has amount of sludge generated changed significantly since the last inspection ..... N
- (c) How much sludge storage is provided at the plant
- (d) Records kept in accordance with State and Federal law (5 years according to OAC 3745-40-06) ..... Y
- (e) Any complaints received in last year regarding sludge ..... N
- (f) 5/8" screen at headworks for facilities that land apply sludge ..... N/A
- (g) Are sludge application sites inspected to verify compliance with NPDES permit ..... N/A
- (h) Is a contractor used for sludge disposal ..... Y  
 If so, what is the name of the contractor

**Comments/Status:**

Hapchuck Inc. removes sludge monthly from aerobic digester. Sludge is dewatered out of stated and disposed of in solid waste landfill in Washington, PA by Hapchuck, Inc.

**Section I: Self-Monitoring Program**

**Flow Measurement:**

- (a) Primary/Secondary flow measuring devices (e.g. weir with ultrasonic level sensor)
- (b) Flow meter calibrated annually ..... N  
 Date of last calibration
- (c) 24-hour recording instruments operated and maintained..... Y
- (d) Flow measurement equipment adequate to handle full range of flows ..... Y
- (e) All discharged flow is measured ..... Y

**Comments/Status:**

Flow meter shall be calibrated annually.

**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 (see GLC page) ..... Y
- (d) 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

**Comments/Status:**

Effluent composite sampler refrigerator does not appear to be operating properly. Temperature should be 4 degrees Celsius. A thermometer shall be held in a water bath in the refrigerator. Effluent composite sampler is not collecting samples that are flow proportionate.

**Laboratory:**

*General*

- (a) Does the Quality Assurance Manual contain written Standard Operating Procedures (SOP's) for all analysis performed onsite..... Y
- (b) Do SOP's include the following if applicable ..... Y

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

*Note: 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. Standard operating procedures are to be used in the laboratory in sufficient detail that a competent analyst unfamiliar with the method can conduct a reliable review and/or obtain acceptable results." SOPs should be developed for each analytical procedure.*

- (c) EPA approved analytical testing procedures used (40 CFR 136.3)..... Y
- (d) If alternate analytical procedures are used, proper approval has been obtained ..... N/A
- (e) Analyses being performed more frequently than required by permit..... N
- (f) If (e) is yes, are results in permittee's self-monitoring report..... N/A
- (g) Satisfactory calibration and maintenance of instruments/equipment (see score from GLC page) ..... N
- (h) Commercial laboratory used..... Y
- Parameters analyzed by commercial lab: **Everything except DO, Chlorine, pH**  
 Lab name: **EORWA and Ream & Haager**

*Discharge Monitoring Report Quality Assurance (DMRQA)*

- (a) Participation in latest USEPA quality assurance performance sampling ..... N  
 Date: **N/A**
- (b) Were any parameters "Unsatisfactory" ..... N/A
- (c) Reasons for "Unsatisfactory" parameters

N/A

**Comments/Status:**

Calibration records shall be kept. Analyst initials shall be placed on bench sheets

**Section J: Effluent/Receiving Water Observations**

Outfall #: **001**

Outfall Description: **Clear, no odor**

Receiving Stream: **Ohio River**

Receiving Stream Description: **Effluent travels under St. Rt. 7 and discharges to Ohio River**

Comments/Status:

**Section K: Multimedia Observations**

- |  |   |
|--|---|
| (a) Are there indications of sloppy housekeeping or poor maintenance in work & 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: