



State of Ohio Environmental Protection Agency

Southwest District Office

401 E. Fifth St.
Dayton, Ohio 45402

TELE: (937) 285-6357 FAX: (937) 285-6249
www.epa.state.oh.us

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

March 26, 2007

Mayor and Council
Village of Rushsylvania
P.O. Box 204
Rushsylvania, OH 43347

**RE: Compliance Evaluation Investigation (CEI)
Village of Rushsylvania Wastewater Treatment Plant
Rushsylvania, Logan County**

Mayor and Council:

On March 8, 2007, I conducted a Compliance Evaluation Investigation at the Village of Rushsylvania wastewater treatment works. This inspection was conducted to determine compliance with the NPDES discharge permit and to discuss renewal of this permit. Dave Wilson, wastewater operator, represented the Village. Martyn Burt, Ohio EPA-DSW, and Alauddin Alauddin, Ohio EPA-DEFA, were also in attendance.

Included in this inspection report are comments that are specific to the upcoming wastewater improvements for this facility. These comments are intended not only for the Village Council, but also for review by your engineering firm, GGJ, and for Ohio EPA-DEFA to consider in their evaluation.

As you know, the current wastewater plant and collection system have shortcomings that will hopefully be corrected or improved with the upcoming wastewater plant construction. The wastewater plant was rated as marginal in the accompanying report. This rating is due, in part, to effluent violations and overflows from the treatment system. The detailed inspection report is attached.

Provide a response to the "Items Requiring a Response" section of the inspection report by **April 20, 2007**. 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.

Sincerely,

Joe Miller
Division of Surface Water
Compliance and Enforcement

CC: Bill Boyle, GGJ Engineering
Alauddin Alauddin, DEFA



**Village of Rushsylvania Wastewater Treatment Plant
Compliance Evaluation Investigation (CEI)
March 8, 2007**

General Observations

The Village of Rushsylvania WWTP serves a population of 543 (2000 Census). The mechanical wastewater treatment plant was constructed in 1967. The wastewater plant consists of the following components: Influent chamber with bypass to equalization lagoon, bar screen, grit tank, oxidation ditch, clarifier, chlorine contact tank, and dechlorination. The wastewater treatment plant was designed to treat 100,000 gallons per day. Discharge from this facility is to Rush Creek.

Compliance issues at the wastewater treatment plant have prompted the pursuit of wastewater infrastructure improvements. Excessive infiltration and inflow into the collection system overwhelms the wastewater treatment during storm events and snow melt which results in a bypass to the equalization lagoon and subsequent discharge when the lagoon capacity is exceeded. During calendar year 2006 discharges from the equalization lagoon numbered 37 occurrences.

Numeric effluent violations are attached for the period of June 2006 to January 2007. Dave Wilson believes that the CBOD5 in January 2007 as well as Nitrogen, Ammonia in September and October 2006 were due to high flows to the treatment plant hindering treatment. Plans to address the numerous chlorine violations should be provided in response to the "Items Requiring a Response" section that follows.

Code violations during this period included AB, AK, and AF. AB coding (Analytical Data Lost) was reported due to not conducting flow rate monitoring in June 2006. This was due to a dead flow meter battery. In order to avoid non-recording of flow in the future, Dave Wilson has added a check of the battery light to his plant inspection routine. The appropriate "A" code for this type of incident is AD (Automatic Sampler Out of Service). Fecal Coliform violations of too numerous to count (AK) were recorded in June and September 2006. Dave Wilson believes these incidences were due to flow short circuiting the chlorine contact tank. Dave believes that by sealing a gate in the chlorine contact tank, this will be prevented in the future. The AF code (High Flow Inundates Sampler Site) was used for the lagoon overflow (outfall 002) in June 2006.

The proposed improvements include the removal of accumulated sludge in the equalization lagoon, Miami Road sanitary sewer replacement, pump station improvements, and upgrades to the wastewater treatment plant. The WWTP improvements involve new aeration equipment in the oxidation ditch, the addition of a second clarifier unit, rehabilitation of the existing clarifier, a new mechanical fine screen, installation of an electric operated gate to utilize both clarifiers during high flows, and an upgrade of electrical service with permanent stand-by power. The Miami Road sanitary sewer improvements include the replacement of ~520 feet of gravity sewer and pump station improvements. Lift station upgrades include the installation of new duplicate

pumps in existing lift stations without redundancy. The above improvements are intended to allow the Village of Rushsylvania to comply with effluent limitations.

ITEMS REQUIRING A RESPONSE

1. **Wastewater Treatment Plant Improvements** – The following questions and comments were noted regarding the upcoming wastewater treatment plant improvements:
 - A. **Current Proposed Improvements** – During the inspection, it was noted that some of the originally proposed improvements had been dropped in the interest of trimming costs. Provide an update of the proposed improvements and list items have been removed from the planned upgrade.
 - B. **Chlorine Violations** – The plant has a history of chlorine residual violations. Describe the means by which the plant improvements will provide disinfection without resulting in chlorine and/or Fecal Coliform violations.
 - C. **Headworks** – The improvements to the headworks includes enclosure in a building. The building wall is currently designed too close to the bar screen channel. The building orientation should be revised to provide safe access for the operator.
 - D. **Clarifier flexibility** – The plant design should provide the ability to drain one clarifier without affecting operation of the other clarifier. It appears that the current design will not allow separate draining of clarifiers. Please revise the proposed design to allow independent operation as needed.
 - E. **Clarifier location** – The proposed location of the new clarifier appeared to be very close to the waterway. Please coordinate a site visit with Ted Walton of DEFA to discuss alternative arrangements.
 - F. **Operations and Maintenance Manual** – An Operations and Maintenance Manual will need to be provided for wastewater plant including improvements.
 - G. **Composite Sampling** – Composite samplers should be included in the WWTP improvements.
2. **Infiltration and Inflow** – Provide an update on efforts to reduce the amount of infiltration and inflow into the collection system. Also, describe plans for upcoming infiltration and inflow reduction projects.
3. **QA/QC** - The Quality Assurance/ Quality Control manual requested in the last two inspections has not yet been provided. Provide a QA/QC manual for the operators to ensure accurate and precise laboratory methods and reporting.

Village of Rushsylvania Effluent Limit Violations June 2006 to January 2007

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
June 2006	Chlorine, Total Residual	1D Conc	0.021	.05	6/19/2006
July 2006	Dissolved Oxygen	1D Conc	5.0	4.5	7/6/2006
July 2006	Dissolved Oxygen	1D Conc	5.0	4.	7/20/2006
September 2006	Nitrogen, Ammonia (NH3)	7D Conc	2.1	2.5	9/8/2006
September 2006	Chlorine, Total Residual	1D Conc	0.021	.05	9/12/2006
September 2006	Chlorine, Total Residual	1D Conc	0.021	.05	9/13/2006
September 2006	Chlorine, Total Residual	1D Conc	0.021	.05	9/18/2006
September 2006	Chlorine, Total Residual	1D Conc	0.021	.06	9/19/2006
September 2006	Chlorine, Total Residual	1D Conc	0.021	.05	9/27/2006
September 2006	Chlorine, Total Residual	1D Conc	0.021	.05	9/29/2006
October 2006	Nitrogen, Ammonia (NH3)	30D Conc	1.4	2.05	10/1/2006
October 2006	Nitrogen, Ammonia (NH3)	30D Qty	0.53	.67354	10/1/2006
October 2006	Chlorine, Total Residual	1D Conc	0.021	.05	10/2/2006
October 2006	Chlorine, Total Residual	1D Conc	0.021	.06	10/3/2006
October 2006	Chlorine, Total Residual	1D Conc	0.021	.05	10/7/2006
October 2006	Chlorine, Total Residual	1D Conc	0.021	.05	10/8/2006
October 2006	Chlorine, Total Residual	1D Conc	0.021	.05	10/9/2006
October 2006	Chlorine, Total Residual	1D Conc	0.021	.05	10/11/2006
October 2006	Chlorine, Total Residual	1D Conc	0.021	.07	10/12/2006
October 2006	Chlorine, Total Residual	1D Conc	0.021	.05	10/13/2006
October 2006	Nitrogen, Ammonia (NH3)	7D Conc	2.1	4.	10/15/2006
October 2006	Nitrogen, Ammonia (NH3)	7D Qty	0.80	1.31718	10/15/2006
January 2007	CBOD 5 day	30D Qty	5.7	9.06602	1/1/2007
January 2007	CBOD 5 day	7D Qty	8.7	29.7501	1/1/2007

Permit #: 1PB00025*DD
 NPDES #: OH0020575



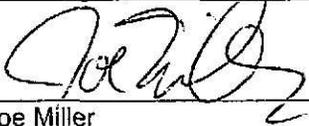
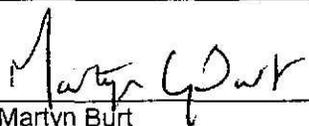
State of Ohio Environmental Protection Agency
 Southwest District Office

NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
1PB00025*DD	OH0020575	3/08/2007	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Village of Rushsylvania WWTP 235 East Mill Street Rushsylvania, Ohio 43347	10:15 AM	3/1/2002
	Exit Time	Permit Expiration Date
	12:45 PM	2/28/2007
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Dave Wilson, Wastewater Operator I	937-468-7014	
Name, Address and Title of Responsible Official	Phone Number	
Mayor and Council Village of Rushsylvania P.O. Box 204 Rushsylvania, OH 43347	937-468-2444	

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	M	Laboratory	N	Compliance Schedule
M	Operations & Maintenance	M	Effluent/Receiving Waters	S	Self-Monitoring Program
U	Facility Site Review	S	Sludge Storage/Disposal	N	Other
M	Collection System				

Section D: Summary of Findings (Attach additional sheets if necessary)	
See attached inspection report.	
Inspector	Reviewer
 Date: 3/27/07	 Date: 3/27/07
Joe Miller Division of Surface Water Southwest District Office	Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office

Permit # : 1PB00025*DD
NPDES #: OH0020575

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..... N
- (e) Treatment processes are as described in permit application... Y
- (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:

Flows exceed plant capacity during storm events. Excess flow (above 0.1 MGD) is bypassed to equalization lagoon. When lagoon capacity is exceeded, discharges occur from lagoon outfall 002. WWTP upgrade will begin soon. Planned improvements include: new mechanical fine screen at headworks, new aeration equipment in oxidation ditch, rehab existing clarifier, install new clarifier, install gate for flow splitting, clean out equalization lagoon, upgrade electrical service with standby power, lift station improvements.

Section E: Permit Verification

- (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
- (d) Compliance schedule contained in
- (e) Permittee is meeting compliance schedule..... N/A

Comments/Status:

Effluent violations attached to inspection report. WWTP improvements and Infiltration and Inflow (I/I) reductions are intended to resolve effluent violations. Flow rate Code violations in June 2006 due to flow meter being out of service.

Section G: Operation & Maintenance

Treatment Works:

Treatment facility properly operated and maintained

- (a) Standby power available.....generator or dual feed N
- (b) Adequate alarm system available for power or equipment failures.. N
- (c) All treatment units in service other than backup units..... Y
- (d) Operator holds unexpired license of class required by permit..... Y
 Class: I (*Dave Wilson obtained Class I certification November 2006*)
- (f) Routine and preventative maintenance schedule/performed on time..... Y
- (g) Any major equipment breakdown since last inspection..... N
- (h) Operation and maintenance manual provided and maintained..... N*
- (i) Any plant bypasses since last inspection..... Y
- (j) Regulatory agency notified of bypasses..... Y
 On MORs x and/or Spill Hotline (1-800-282-9378)
- (k) Any hydraulic and/or organic overloads since last inspection..... Y

Collection System:

- (a) Percent combined system: 0%
- (b) Any collection system overflows since last inspection..... 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..... Y
- (g) Lift station alarms provided and maintained..... N*
- (h) Are lift stations equipped with permanent standby power or equivalent.....(trailer mounted portable pump)..... 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..... Y

Comments/Status:

O&M Manual needs to be updated with WWTP improvements. Compile and edit changes to treatment works. Emergency generator will be included in WWTP improvements. Lift station improvements will include alarms.
 Ongoing I/I program: camera, smoke testing, dye testing; removal of storm culvert to sanitary on 274; AAA flex-pipe. Bypasses from lagoon must be reported as per NPDES and prevented when possible.

Section H: Sludge Management

- (a) Sludge management plan (SMP)
Submitted date: 12/04 Approval #: 05441PW
- (b) Sludge management plan current..... Y
- (c) Sludge adequately disposed..... Y
(Method: haul to Indian Lake WPCD)
- (d) If sludge is incinerated, where is ash disposed of N/A
- (e) Is sludge disposal contracted..... N
(Name: _____)
- (f) Has amount of sludge generated changed significantly since last inspection..... N
- (g) Adequate sludge storage provided at plant..... (40,000 gal).... Y
- (h) Land application sites monitored and inspected per SMP..... N/A
- (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:

"

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 flow meter X Other
- (b) Calibration frequency adequate N
(Date of last calibration: installation)
- (c) Secondary instruments operated and maintained..... N
- (d) Flow measurement equipment adequate to handle full range of flows..... N/A
- (e) Actual flow discharged is measured..... N
- (f) Flow measuring equipment inspection frequency
Daily Weekly monthly other

Comments/Status:

New effluent flow meter to be installed with updates. Flow meter calibration needs to be added to the O&M plan and done routinely.

Current flow metering is on influent after bypass to EQ lagoon. Also, in-pipe flow meter on outfall 002 from EQ lagoon.

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

Parameters analyzed by commercial lab: CBOD5, TSS, Fecal Coliform, Ammonia Nitrogen
Lab name: MASI

Quality Control/Quality Assurance

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

Date:

Comments/Status:

As discussed in 2003 & 2005 inspection reports, a QA/QC program needs to be implemented. This includes laboratory methods, calibration procedures, lab equipment maintenance, and sampling regimen for quality assurance purposes.

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	no	

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

