

Environmental  
Protection Agency

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

May 18, 2012

Robert Dile, Mayor  
Danville WWTP  
PO Box W  
Danville, OH 43014

Re: **Danville WWTP**  
**NPDES Permit 4PC00100/ OH0024872**  
**Compliance Evaluation Inspection**  
**Knox County**

Dear Mr. Dile:

This correspondence serves as **Notice of Violation** for the unauthorized bypassing of flow around wastewater treatment units at the Village of Danville wastewater treatment plant.

On May 2, 2012, a Compliance Evaluation Inspection was conducted at the Danville WWTP. Present for the inspection were Robert Shipley and Lonnie McGhee representing the Village of Danville and myself of the Ohio EPA, Central District Office, Division of Surface Water.

The purpose of the inspection was to evaluate compliance with the terms and conditions of your NPDES permit and to evaluate the operation and maintenance of the plant. The inspection raised several concerns which must be addressed in the following areas:

**Unauthorized Bypass** – At the time of the inspection, it was observed that a portion of the plant flow was being bypassed around lagoon cells 5 and 6. The operator reinstalled the slide gate following the inspection to eliminate the bypass. Please be advised that this bypass constitutes a violation of Part III. 11. (Unauthorized Discharges) of the effective NPDES permit.

**Bank Erosion** – Lagoon cells 5 and 6 have been rip-rapped to prevent bank erosion, however; similar rip-rap protection is not provided in cells 1-4. I would recommend that erosion protection be provided in these cells. If the entire perimeter of the lagoon can't be protected it might be prudent to focus on the east bank of each lagoon since they appear most susceptible to wind and wave erosion.

Robert Dile, Mayor  
Danville WWTP  
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If you have any questions or comments concerning the enclosed inspection report, please contact me at (614) 728-3848 or e-mail at [mike.sapp@epa.ohio.gov](mailto:mike.sapp@epa.ohio.gov).

Sincerely,

A handwritten signature in black ink that reads "Michael Sapp". The signature is fluid and cursive, with the first name "Michael" written in a larger, more prominent script than the last name "Sapp".

Michael Sapp  
Compliance and Enforcement Unit  
Division of Surface Water  
Central District Office

Enclosures

c: Lonnie McGhee w/enclosures

ec: Mike Sapp

MP/nsm Danville 2012

**NPDES Compliance Inspection Report**

**SECTION A: NATIONAL DATA SYSTEM CODING**

Permit #	NPDES #	Inspection Type	Inspector	Facility Type
4PC00100	OH0024872	CEI	S	Public
Inspection Date	Entry Time	Exit Time	Notice of Violation	Significant Non-Compliance
5/2/2012	9:30 AM	11:30 AM	No	No

**SECTION B: FACILITY DATA**

Name and Location of Facility Inspected	Permit Effective Date
Danville WWTP 617 Richards Street Danville, Ohio 43014	8/1/2011
	Permit Expiration Date
	7/31/2016
Name(s) and Title(s) of On-Site Representatives	Phone Numbers
Robert Shipley – Village Administrator	(740) 599-6888
Lonnie McGhee – Contract Operator	(419) 886-4716
Name and Title of Responsible Official	Phone Number
Robert Dile, Mayor	(740) 599-6888

**SECTION C: AREAS EVALUATED DURING INSPECTION**

Key: S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated

U	NPDES Compliance	Unsatisfactory due to unauthorized bypass
S	Operations & Maintenance	
S	Facility Site Review	
S	Collection System	
S	Flow Measurement	
M	Receiving Waters	Marginal due to effluent violations
S	Laboratory	

Comments:

Signatures

	5/7/12		5/8/12
Mike Sapp, Inspector Compliance & Enforcement Division of Surface Water Central District Office	Date	Erin Sherer, Reviewer Compliance & Enforcement Supervisor Division of Surface Water Central District Office	Date

**SECTION D: PERMIT VERIFICATION**

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

Comments:

**SECTION E: COMPLIANCE**

- (a) Any significant violations since the last inspection ..... Y\*
- (b) Permittee is taking actions to resolve violations ..... Y\*
- (c) Permittee has a compliance schedule ..... Y\*
- (d) Permittee is meeting compliance schedule ..... Y

Comments:

**SECTION F: OPERATION AND MAINTENANCE**

- (a) Standby power available ..... Y\*  
If yes, what type?
- (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 ..... II
- (e) Operator of Record holds unexpired license of class required by Permit ..... Y  
Class held: III
- (f) Copy of certificate of Operator of Record displayed on-site ..... Y
- (g) Minimum operator staffing requirements fulfilled ..... Y
- (h) Routine and preventative maintenance scheduled and 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 ..... N  
By MOR  and/or Spill Hotline (1-800-282-9378)
- (m) Any hydraulic or organic overloads since last inspection ..... Y

Comments:

**SECTION G: RECORD KEEPING**

- a) Log book provided ..... Y
- b) Format of log book (i.e. computer log, hard bound book) unbound sheets
- 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
- e) Has the Operator of Record submitted written notification to the permittee, Ohio EPA and any applicable local environmental agencies when a collection system overflow, treatment plant bypass or effluent limit violation has occurred?.... NA

Comments:

**SECTION H: COLLECTION SYSTEM**

- a) Percent combined system: ..... 0%
- b) Any collection system overflows since last inspection ..... N  
CSO  SSO
- c) Regulatory agency notified of overflows ..... NA
- d) CSO O&M plan provided and implemented ..... NA
- e) CSOs monitored and reported in accordance with permit ..... NA
- f) Portable pumps are used to relieve system ..... N
- g) Lift station alarms provided and maintained ..... NA\*
- h) Lift stations equipped with permanent standby power or equivalent ..... NA
- 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
- l) Are operations changed during high-flow events? ..... N

Comments:

**SECTION I: SLUDGE MANAGEMENT**

- a) Sludge management plan (SMP) last audited by Ohio EPA:  
Audit Date:
- b) Sludge adequately disposed ..... NA  
Method:
- c) If sludge is incinerated, where is ash disposed of ..... NA\*
- d) Is sludge disposal contracted ..... N  
Name:
- e) Has amount of sludge generated changed significantly ..... NA
- f) Adequate sludge storage provided at plant ..... NA
- g) Records kept in accordance with State and Federal law ..... NA
- h) Any complaints received last year regarding sludge ..... N
- i) Is sludge adequately processed (digestion, pathogen control) ..... NA

Comments:

**SECTION J: SELF-MONITORING PROGRAM**

- a) Primary flow measuring device operated and maintained ..... Y\*  
Type of device: Device location:
- b) Calibration frequency adequate ..... Y  
Date of last calibration: monthly
- c) Secondary instruments operated and maintained ..... Y
- d) Flow measurements equipment adequate to handle full range of flows .... Y
- e) Actual flow discharged is measured ..... Y
- f) Flow measuring equipment inspection frequency daily
- g) Sampling location(s) are as specified by permit ..... Y
- h) Parameters and sampling frequency agree with permit ..... Y
- i) 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:

**SECTION K: Laboratory**

- a) EPA applicable analytical testing procedures used (40 CFR 136.3) ..... Y
- b) If alternate procedures are used, are they properly approved? ..... NA
- c) Analysis performed more frequency ..... N/A  
If yes, are results recorded in permittee's report? ..... N/A
- d) Commercial laboratory used: yes  
Name: TCCI  
Parameters analyzed: all parameters except DO, pH and temperature
- e) Quality assurance manual provided and maintained ..... Y
- f) Calibration and maintenance of instruments is satisfactory? ..... Y
- g) Results of last U.S. EPA quality assurance ..... NA  
Date:

Comments:

**SECTION L: EFFLUENT/RECEIVING WATER OBSERVATIONS**

Outfall Number	Outfall sign in place	Oil Sheen	Grease	Turbidity	Foam	Solids	Color	Other
001	Yes	No	No	Slight	No	No	Light green	No

Comments:

**SECTION M: 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:

## **ADDITIONAL INFORMATION**

Village of Danville WWTP  
4PC00100 - OH0024872

### **General**

The Village of Danville WWTP consists of an aerated lagoon system with a design treatment capacity of 0.20 MGD and a direct discharge to the East Branch of Jelloway Creek. Wet stream process provided at the facility include mechanical bar screens, influent pump station, two complete mix aerated lagoons (the first for BOD reduction and the second for nitrification), two partial mix lagoons for sludge settling and stabilization, two facultative polishing lagoons, chlorination, dechlorination and post aeration.

### **Section D. - Permit Verification**

- (d.) The average daily flow at outfall 001, for the time period from November 2010 – March 2012 was 247,000 gpd. The maximum daily flow experienced during this time period was 650,000 on February 25, 2012. Please note that the average daily flow at this facility exceeds the design average flow rate.
- (f.) The Village recently completed an upgrade of the influent pump station which included a rebuild on both influent pumps and improved phase detection capabilities. New electrical wiring and cables were installed on the lagoon mixers.

### **Section E. - Compliance Schedule Violations**

- (a.) The attached table contains a list of NPDES permit violations at the plant since the previous inspection was performed in November 2010. The frequency and magnitude of violations, most notably pH violations, has decreased significantly since the previous inspection. With the exception of one E. coli violation and a mercury violation all of the remaining exceedences were for loading violations.
- (b.) The Village is undertaking several projects to remove I/I and has hired an engineering firm to perform a Sanitary Sewer Evaluation Study and Collection System Rehabilitation Schedule (SSES).
- (c.) The effective permit contains a schedule of compliance to submit a SSES no later than February 1, 2013. The schedule also include milestone for flow monitoring and repairs in the collection system. The Village is also required to submit a preliminary plan, on or before August 1, 2015, to upgrade the plant to meet new winter and summer effluent ammonia limits.

## **Section F. - Operation and Maintenance**

- (a.) The plant has sufficient back-up power to operate all three influent pumps.
- (b.) An autodialer is installed on the influent pump station which alarms in the event of power failure, high wet well levels, phase failure and over crank on the generator.
- (h.) The bearings in the surface mixers are greased twice a year and the influent pumps are greased on a monthly basis.
- (k.) At the time of the inspection, a portion of the flow was being bypassed around lagoon cells 5 and 6. The operator reinstalled the slide gate following the inspection to eliminate the bypass.

## **Section H. - Collection System**

- (g.) There are no lift stations in the collection system tributary to the Danville WWTP.
- (i.) A significant inflow and infiltration problem exists in the collection system such that the average flow for the past year exceeds the design flow of the plant. Additionally, the plant experiences periodic violations of permitted loading limits. Village personnel have performed a number of repairs to the collection system but have generally concluded that the inflow and infiltration is a systemic problem attributable to aging sewers and a high ground water condition. The Village will begin pressure grouting selected precast manholes. A water line leak into the sanitary system was recently identified and eliminated.

## **Section I. - Sludge Management**

- (b) No sludge has been removed from the lagoons since the plant was upgraded in the early 1990s. Based on monitoring of solids levels in cells 3 and 4 it is not anticipated that sludge removal will be necessary any time in the near future.

## **Section J. - Self Monitoring Program**

- (a.) Influent flows are measured using an ultrasonic unit over a parshall flume. Effluent flows are measured with an ultrasonic and a v-notch weir. Internal calibrations of these units are performed monthly.

## SUMMARY OF FINDINGS AND COMMENTS Village of Danville WWTP

1. At the time of the inspection, the following general observations were made regarding the operation and maintenance of the plant:
  - A dehydrated microbial inoculant (IFM) is added to cell 1 on a weekly basis to help reduce the volume of sludge generated in the lagoons.
  - A spare propane powered influent pump is automatically activated during wet weather events. This pump is float activated when the water depth in the influent wet well reached 16 feet. This pump is exercised weekly.
  - The Operators of Record visit the plant once a week and Danville personnel are at the facility on a daily basis.
  - Screenings from the influent bar screen are disposed of at the Shiloh landfill on a quarterly basis.
  - The plant maintains sufficient dissolved oxygen levels in the first four lagoon cells with only half of the mixers operating at one time.
  
2. At the time of the inspection, a portion of the flow was being bypassed around lagoon cells 5 and 6. The operator reinstalled the slide gate following the inspection to eliminate the bypass. Please be advised that this bypass constitutes a violation of Part III. 11. (Unauthorized Discharges) of the effective NPDES permit.
  
3. The Village installed two new groundwater monitoring wells (MW 8 and MW 9) in October 2009 after high ammonia concentration were detected in down gradient wells. The results of the groundwater monitoring program were not evaluated during the inspection. A follow-up site visit will be performed in the near future with Cal James (Ohio EPA/ Division of Drinking and Groundwater) and the groundwater consultant hired by the Village. **Please submit the results of all quarterly groundwater monitoring, collected since November 2010, to this office for review.**
  
4. Lagoon cells 5 and 6 have been rip-rapped to prevent bank erosion, however; similar rip-rap protection is not provided in cells 1-4. I would recommend that erosion protection be provided in these cells as well. If the entire perimeter of the lagoon can't be protected it might be prudent to focus on the east bank of each lagoon since they appear most susceptible to wind and wave erosion.

Flow Data for Danville WWTP between 11/1/2010 and 4/1/2012

	Date	Flows (MGD)
Ten Highest Flows	2/25/2011	0.650
	5/11/2011	0.462
	3/6/2011	0.461
	5/2/2011	0.461
	3/13/2011	0.459
	5/15/2011	0.457
	4/25/2011	0.455
	5/4/2011	0.455
	5/10/2011	0.455
	3/10/2011	0.452
<b>Average Flow Rate</b>		0.247

## Compliance Data for Danville WWTP between 11/1/2010 to 4/1/2012

### Summary

Permit Effluent Limit Violations: 17  
 Permit Effluent Code Violations: 0  
 Permit Effluent Frequency Violations: 0  
 Compliance Schedule Violations: 0

Limit Violations						
Reported	Permit Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
March 2011	001	Total Suspended Solids	30D Qty	49.2	52.7676	3/1/2011
April 2011	001	Total Suspended Solids	30D Qty	49.2	65.014	4/1/2011
April 2011	001	CBOD 5 day	30D Qty	18.9	20.8616	4/1/2011
April 2011	001	CBOD 5 day	7D Qty	30.3	31.8526	4/1/2011
April 2011	001	Total Suspended Solids	7D Qty	68.2	119.954	4/15/2011
May 2011	001	Total Suspended Solids	30D Qty	49.2	67.6639	5/1/2011
May 2011	001	Total Suspended Solids	7D Qty	68.2	121.659	5/1/2011
August 2011	001	pH	1D Conc	9.0	9.2	8/1/2011
August 2011	001	pH	1D Conc	9.0	9.2	8/3/2011
August 2011	001	pH	1D Conc	9.0	9.2	8/5/2011
August 2011	001	Total Suspended Solids	7D Conc	90	126.	8/15/2011
August 2011	001	Total Suspended Solids	7D Qty	68.2	75.7492	8/15/2011
October 2011	001	E. coli	7D Conc	362	410.6	10/15/2011
December 2011	001	Mercury, Total (Low Le	30D Conc	12	28.	12/1/2011
December 2011	001	Mercury, Total (Low Le	30D Qty	0.0000	.00003	12/1/2011
February 2012	001	CBOD 5 day	7D Qty	30.3	31.7008	2/1/2012
March 2012	001	Total Suspended Solids	7D Qty	68.2	70.7832	3/22/2012