Environmental
Protection Agency

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

April 13, 2012

Richard Felton, Superintendent
Sunbury WWTP
PO Box 508
Village of Sunbury, OH 43074

Re: **Sunbury WWTP**
NPDES Permit 4PB00010/ OH0055093
Compliance Evaluation Inspection
Delaware County

Dear Mr. Felton:

On March 27, 2012, a Compliance Evaluation Inspection was conducted at the Sunbury WWTP. Present for the inspection were yourself, representing the Village of Sunbury 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.

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.

Sincerely,

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

ec: Mike Sapp

MS/nsm Sunbury WWTP 12

Central District Office
50 West Town Street, Suite 700
P.O. Box 1049
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NPDES Compliance Inspection Report

SECTION A: NATIONAL DATA SYSTEM CODING				
Permit #	NPDES #	Inspection Type	Inspector	Facility Type
4PB00010	OH0055093	CEI	S	
Inspection Date	Entry Time	Exit Time	Notice of Violation	Significant Non-Compliance
3/27/2012	9:30 AM	11:30 AM	No	No

SECTION B: FACILITY DATA	
Name and Location of Facility Inspected	Permit Effective Date
Sunbury WWTP South Columbus Street and Middleview Road Sunbury, Ohio 43074	6/1/2009 Permit Expiration Date 5/31/2014
Name(s) and Title(s) of On-Site Representatives	Phone Numbers
Richard Felton, Plant Superintendent	(740) 965-5380
Name and Title of Responsible Official	Phone Number
Richard Felton, Plant Superintendent	(740) 965-5380

SECTION C: AREAS EVALUATED DURING INSPECTION		
Key: S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated		
S	NPDES Compliance	
S	Operations & Maintenance	
S	Facility Site Review	
S	Collection System	
S	Flow Measurement	
S	Receiving Waters	
S	Laboratory	

Comments:

Signatures	
Mike Sapp 4/9/12	Erin Sherer for 4/11/12
Mike Sapp, Inspector Date Compliance & Enforcement Division of Surface Water Central District Office	Erin Sherer, Reviewer Date Compliance & Enforcement Supervisor Division of Surface Water Central District Office

SECTION D: PERMIT VERIFICATION

(a) Correct name and mailing address of permittee.....
(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 ..... Y
(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 ..... N*
(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? generator
(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 III
(e) Operator of Record holds unexpired license of class required by Permit Y*
Class held: IV
(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 N*
(l) Regulatory agency notified of bypasses Y
By MOR ☐ and/or Spill Hotline (1-800-282-9378) ☐
(m) Any hydraulic or organic overloads since last inspection N

Comments:

SECTION G: RECORD KEEPING

a) Log book provided ..... Y
b) Format of log book (i.e. computer log, 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) ..... 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? .... Y

Comments:

SECTION H: COLLECTION SYSTEM

a) Percent combined system: .....
b) Any collection system overflows since last inspection ..... N
   CSO ☐ SSO ☐
c) Regulatory agency notified of overflows ..... Y
d) CSO O&M plan provided and implemented .....
e) CSOs monitored and reported in accordance with permit ..... Y
f) Portable pumps are used to relieve system ..... Y*
g) Lift station alarms provided and maintained ..... Y*
h) Lift stations equipped with permanent standby power or equivalent ..... N*
i) Is there an inflow/infiltration problem (separate sewer system), or were there any major repairs to collection system since last inspection ..... N
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: unknown

b) Sludge adequately disposed ..... Y*
Method:

c) If sludge is incinerated, where is ash disposed of .....

d) Is sludge disposal contracted .....
Name:

e) Has amount of sludge generated changed significantly ..... N

f) Adequate sludge storage provided at plant ..... Y*

g) Records kept in accordance with State and Federal law ..... Y

h) Any complaints received last year regarding sludge ..... N

i) Is sludge adequately processed (digestion, pathogen control) ..... Y

Comments:

SECTION J: SELF-MONITORING PROGRAM

a) Primary flow measuring device operated and maintained ..... Y*
Type of device: Ultrasonic Device location: Effluent Flume

b) Calibration frequency adequate ..... Y*
Date of last calibration: Aug. 5, 2011

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 _____

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? ..... Y
c) Analysis performed more frequency ..... N/A
If yes, are results recorded in permittee's report? ..... N/A
d) Commercial laboratory used:
Name:
Parameters analyzed:
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 ..... Y
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	No	No	No	Clear	

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
Sunbury WWTP
4PB00010 – OH0055093

The Sunbury WWTP has a design treatment capacity of 1.125 mgd with a direct discharge to Prairie Run and subsequently Big Walnut Creek. Wet stream processes/equipment provided at the facility include influent screening with mechanically cleaned fine screens followed by grit removal, flow equalization, extended aeration with oxidation ditches, final clarification, ultraviolet disinfection, effluent flow monitoring and post aeration. Solids handling facilities consist of aerobic digestion followed by dewatering with a belt filter press and final disposal through land application.

Section D. - Permit Verification

(d.) The average daily flow at outfall 001, for the time period from July 2010 – February 2012 was 0.68 mgd. The maximum daily flow experienced during this time period was 3.81 mgd which occurred on December 7, 2011. Both the daily average and maximum flows have increased since the previous inspection was performed in July 2010.

(f.) The facility is currently constructing a building to house a chemical feed system for the precipitation of phosphorus. It is anticipated that the chemical feed system will be functional before June 1, 2012.

Section E. - Compliance Schedule Violations

(a.) The attached table contains a list of NPDES permit violations at outfall 001 since the last inspection was performed in July 2010.

(b.) The high fecal counts were attributed to bad ballasts on the UV unit. The plant now keeps a large supply of replacement ballasts so they're readily available for replacement when failure occurs.

(c) The effective NPDES permit contains a schedule with milestones to comply with a final phosphorus limit (1 mg/L) no later than June 1, 2012. The permittee has met all of the required interim milestones in the schedule of compliance and they anticipated that they will meet the final phosphorus limit by June 1, 2012. The permit also contains a schedule to achieve a final total phosphorus effluent load of 2.1 kg/d within 10 years from the effective date of the permit. This schedule will be included in the next permit renewal.

Section F. - Operation and Maintenance

Treatment Works

(a.) The plant is equipped with a back-up diesel generator capable of providing power to the entire plant. This unit is started every Sunday and exercised monthly under load.

(c.) At the time of the inspection all treatment units were in operation with the exception of one of the two oxidation ditches and one final clarifier. These units are functional but were off-line due to low flows. The clarifier in service is alternated every three weeks; the ditches are switched every two years.

(d). The plant is currently staffed during one shift 5 days a week with coverage by a single operator on weekends.

(e.) Rich Felton is the operator of record and currently holds a Class IV license.

(i.) The sludge transfer pumps are inoperable and need replaced. The Village is using a trash pump for decanting the digesters and to transfer sludge to the press for dewatering.

(k) Hydraulic surcharges occur during storm events; however, the upgraded facility is more capable of accommodating the surcharges by filling empty tankage. Consequently, the flow equalization basin is rarely filled during storm events. The basin was filled on only one occasion over the previous year.

Section H. - Collection System

(f) Portable pumps are used at the pump stations during times of power failure.

(g.) There are currently 4 pump stations in the collection system tributary to plant. All of these units are equipped with audible/visual alarms. Only one of the four units (Kitner Road) is not equipped with an autodialer. Spare pumps are available for the two largest stations (Cheshire Road and Sunbury Meadows).

(h.) Permanent standby power is not provided at any of the four stations. A portable generator or portable pump can be hooked-up to these units in the event of a power failure.

(k.) The Village has established an on-going preventative maintenance program in the collection system which has significantly reduced the number of basement back-ups. Root control foam is placed in problematic areas every other year. Regular flushing is also performed by Village personnel. Crews start flushing at the outside of the collection system then work their way in. Once this cycle is completed they start over. Problematic areas (lines serving schools and Rainbow and High Streets) are flushed monthly. A 12-inch cross connection was

recently identified and fixed in the area of High and Rainbow Streets. The ductile iron sewer line at Routes 3 and 37 was replaced since the previous inspection.

Section I. - Sludge Management

(b) The effective sludge management plan is current with Ohio EPA sludge management guidelines. Provisions for land application are included in the effective NPDES permit.

(f.) The plant produces approximately 79 dry tons/year of Class B sludge. At the time of the inspection, sludge was being stored on a grassed area outside of the sludge storage pad. The sludge had been accumulating since it was last hauled in November 2010 and it became too wet to haul. All of the dewatered sludge was hauled out of the plant during the week following the inspection. The Village will construct a roof over the storage pad this summer to protect the dewatered sludge from precipitation.

(h.) The Village currently has 25 approved sites for land application although the majority of their sludge goes to a sod farm.

Section J. - Self Monitoring Program

Flow Measurement

(a.) Effluent flows are measured using a parshall flume and an ultrasonic unit. Influent flows are measured using a magmeter. The influent magmeter overestimates the total flow since it includes digester decant and press filtrate.

(b.) The effluent flow meter was last calibrated in August 2011.

Section K - Laboratory

(a.) The influent sampler is located where it captures recycle streams such as digester decant. Please evaluate the feasibility of relocating this sampler to collect a more representative influent sample.

(b.) SOP's were available for the analyses performed in-house; however, they should be updated to include the minimum components contained in the inspection report checklist.

(g) The Sunbury lab performs in-houses analyses for dissolved oxygen, suspended solids and pH. External ERA standards are analyzed twice a year for pH and suspended solids. Duplicates are performed with every analysis. Calibration appeared to be satisfactory on all instrumentation.

SUMMARY OF FINDINGS AND COMMENTS

1. At the time of the inspection, the following general observations were made regarding the operation and maintenance of the plant:

    - The rotors on the oxidation are on timers to save energy and create anoxic zones in the tank for denitrification.

    - Sludge blankets in the clarifiers are maintained below 4 feet.

    - The plant plans to utilize sodium aluminate for the chemical precipitation of phosphorus. The system will be designed with four feed points for the sodium aluminate.

    - The belt filter press is operated three days a week and produces a sludge cake with a solids concentration of approximately 16% solids.

    - The plant is evaluating the installation of a recycle system for the filter press since the plant does not have a non-potable water system.

    - MLSS concentrations are maintained in the range of 4000 mg/L for optimal treatment.

2. Currently, the influent and effluent composite samplers collect time-weighted composite samples. Please evaluate the feasibility of modifying the effluent sampler to collect a flow-weighted composite sampler. Part II.H. (page 16) of your effective permit requires composite samples to be comprised of at least three grab samples proportionate in volume to the sewage flow rate at the time of sampling.

3. The four pump stations are inspected 3 times/week. These inspections include readings of pump run times, autodialer checks, checks of the audible and visual alarms, and calls from the plant.

4. The plant is placed into storm mode during sustained high flow events. The first course of action is to place an additional clarifier in service followed by a second oxidation ditch, if necessary. The normal depth in the influent wet well is 6.6 feet. Depths above 14 feet are automatically diverted to the flow equalization basin.

5. The sampling location for the influent sampler currently captures return flows such as digester decant and press filtrate. Please evaluate the feasibility of relocating this unit to a location that does not capture any return flows.

Compliance Data for Sunbury WWTP between 7/1/2010 to 2/28/2012

Summary

Permit Effluent Limit Violations: 3
Permit Effluent Code Violations: 4
Permit Effluent Frequency Violations: 0
Compliance Schedule Violations: 0

Limit Violations						
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
March 2011	001	Copper, Total Recovera	1D Qty	0.12	.17618	3/11/2011
September 2011	001	Copper, Total Recovera	1D Conc	29	31.	9/6/2011
September 2011	001	Copper, Total Recovera	1D Qty	0.12	.12021	9/6/2011

Code Violations				
Reporting Period	Station	Parameter	Reported Value	Violation Date
August 2010	001	Fecal Coliform	AK	8/20/2010
August 2010	001	Fecal Coliform	AK	8/25/2010
October 2010	901	Fecal Coliform	AK	10/6/2010
October 2011	001	Fecal Coliform	AK	10/26/2011

Flow Data for Sunbury WWTP between 7/1/2010 and 2/28/2012

	Date	Flows (MGD)
Ten Highest Flows	12/7/2011	3.807
	4/6/2011	3.594
	3/11/2011	2.738
	10/21/2011	2.628
	3/1/2011	2.542
	4/21/2011	2.502
	3/7/2011	2.500
	10/20/2011	2.449
	1/28/2012	2.366
	3/6/2011	2.283
Average Flow Rate		0.680