



**Environmental
Protection Agency**

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



1PB0002920080429

CHAMPAIGN SAINT PARIS WWTP

REYNOLDS, JOSEP ; 2008/04/29



State of Ohio Environmental Protection Agency

Southwest District Office

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Dayton, Ohio 45402

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

April 29, 2008

Village of St. Paris
Board of Public Affairs
135 West Main Street
P. O. Box 572
St Paris, Ohio 43072

RE: Village of Saint Paris Waste Water Treatment Plant Compliance Evaluation Inspection.

Dear Board Members:

On April 1, 2008 a representative of the Ohio EPA (Mr. Joe Reynolds) conducted a Compliance Evaluation Inspection at the Saint Paris waste water treatment plant. The inspection was conducted as part of the National Pollutant Discharge Elimination System (NPDES) permit renewal process for the facility.

The inspection report is attached. There are four items that require a response. A written response must be submitted to this office by no later than May 26, 2008. You will be receiving a draft NPDES permit (the renewal permit will remain draft for a period of 30 day to allow for public comment) in the near future. If you have questions, comments, or correction concerning the draft, you should contact the district (Joe Reynolds, 937 285 – 6097) during the 30 day comment period.

If you have any questions regarding the report, please feel free to contact Mr. Reynolds at the number above.

Sincerely,

Martyn Burt, Environmental Supervisor
Division of Surface Water

cc: Joe Sampson, Waste Water Superintendent
Rodney Callison, Operator



Permit #: 1PB00029*FL
 NPDES #: OH0021806



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
1PB00029*FD	OH0021806	4/1/2008	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
St. Paris Waste Water Treatment Plant 454 Huffman Drive St. Paris, Ohio 43072	9:30 AM	6/1/2003
	Exit Time	Permit Expiration Date
	11:45 AM	5/31/2008
Name(s) and Title(s) of On-Site Representatives		Phone Number(s)
Joe Sampson, Waste Water Superintendent Rodney Callison, Operator		(937) 663 - 5523
Name, Address and Title of Responsible Official		Phone Number
Board of Public affairs 135 West Main Street St. Paris, Ohio 43072		(937) 663 - 4329

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

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

See attached report.

Inspector	Reviewer
 Date: 4/27/08 Joseph Reynolds Division of Surface Water Southwest District Office	 Date: 4/29/08 Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office



Permit #: 1PB00029*FL
NPDES #: OH0021806

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..... Y
- (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
- (h) All discharges are permitted..... Y
- (i) Number and location of discharge points are as described in permit..... Y

Comments/Status:

Section E: Permit Verification

- (a) Any significant violations since the last inspection..... N
- (b) Permittee is taking actions to resolve violations..... N/A
- (c) Permittee has a compliance schedule..... N
- (d) Compliance schedule contained in
- (e) Permittee is meeting compliance schedule..... N/A

Comments/Status:



Section G: Operation & Maintenance

Treatment Works:

Treatment facility properly operated and maintained

- (a) Standby power available.....generator or dual feed Y
- (b) Adequate alarm system available for power or equipment failures.. Y
- (c) All treatment units in service other than backup units..... Y
- (d) Operator holds unexpired license of class required by permit..... Y
Class: III
- (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..... Y
- (i) Any plant bypasses since last inspection..... N
- (j) Regulatory agency notified of bypasses..... N/A
On MORs and/or Spill Hotline (1-800-282-9378)
- (k) Any hydraulic and/or organic overloads since last inspection..... N

Collection System:

- (a) Percent combined system: 0%
- (b) Any collection system overflows since last inspection..... N
(CSO and/or SSO)
- (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..... N
- (g) Lift station alarms provided and maintained..... Y
- (h) Are lift stations equipped with permanent standby power or equivalent..... 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 Y
- (k) Are any portions of the sewer system at or near capacity..... N

Comments/Status:

Infiltration and Inflow in the collection system contributes to elevated flows during storm events. The use of storm mode operations has helped the village to maintain compliance with final effluent limits. Peaks of 1.2 million gallons have been treated through the plant without effluent violations. As part of the sewer system work completed to date, sumps and downspouts were removed from the main street sewer.



Section H: Sludge Management

- (a) Sludge management plan (SMP)
Submitted date: Approval #: Not submitted N/A
- (b) Sludge management plan current..... N/A
(c) Sludge adequately disposed..... Y
(Method:Haul to Cherokee Run Landfill)
(d) If sludge is incinerated, where is ash disposed of
(e) Is sludge disposal contracted..... Y
(Name: Best Way)
(f) Has amount of sludge generated changed significantly since
last inspection..... N
(g) Adequate sludge storage provided at plant.....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:

The new sludge digester can hold 80 tons (dry wt.) of solids. The plant currently generates 50 tons. Liquid solids are dried on 2 drying beds (updated to wedge wire 4 years ago). The dried solids are loaded into a 30 yard roll off container for disposal at a solid waste landfill.

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 Other (Specify:Pressure transducer)
- (b) Calibration frequency adequate Y
(Date of last calibration: 3/31/2008)
(c) Secondary instruments operated and maintained..... Y
(d) Flow measurement equipment adequate to handle full range
of flows..... Y
(e) Actual flow discharged is measured..... Y
(f) Flow measuring equipment inspection frequency
Daily Weekly monthly other

Comments/Status:

Flows are measured at the end of the chlorine contact tank. A v-notch weir with pressure transducer is used to measure flows. The system is capable of reading the complete range of flows (0 to 2.8 million gallons).



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).. N/E
 - (b) If alternate analytical procedures are used, proper approval has been obtained..... N/E
 - (c) Analyses being performed more frequently than required by permit. N/E
 - (d) If (c) is yes, are results in permittee's self-monitoring report..... N/E
 - (e) Commercial laboratory used..... N/E
- Parameters analyzed by commercial lab:

Lab name:

Quality Control/Quality Assurance

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

Satisfactory Marginal Unsatisfactory

Date:

Comments/Status:

Influent samples are composited at the collection box ahead of the SBR's. Effluent samples are collected after the chlorine contact v-notch weir.



Section J: Effluent/Receiving Water Observations

Outfall Number	Oil sheen	Grease	Turbidity	Visible Foam	Visible Floating Solids	Color	Other
001	none	none	none	minor white	none	none	NE

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

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?



Inspection Findings

The Village of St Paris was issued National Pollutant Discharge Elimination System (NPDES) permit number 1PB00029*FD on April 23, 2003. This permit expires May 31, 2008. A NPDES renewal application was submitted on November 8, 2007.

The following representatives for the village were present during the inspection: Joe Sampson (Waste Water Superintendent, Class III), Rodney Callison (Waste Water Operator, Class III), and Steve Singer (Singer Engineering, consultant).

The treatment system consist of the following units, influent bar rack, two sequential batch reactors, chlorination channel, dechlorination feed (after the chlorine channel), aerobic sludge digestion, and sludge drying beds.

Standby power is provided by a back-up generator which can power the entire plant. The generator is placed under load once per week. A new fuel tank, with built in secondary containment, was recently installed.

The plant is alarmed for power and essential equipment failures. A Supervisory Control and Data Acquisition (SCADA) system is being used to operate and monitor the system. During alarm conditions the system will follow a calling order until some one responds. The system also is being used to monitor which units are on-line, pump and blower operational status, tank levels, treatment cycles, gate controls, lift station status, water tower levels, etc. The system can be accessed from remote locations and can be used to change operational settings.

Due to flow surges during storm event (1.2 million gallon peak, system design 0.5 million gallon) the plant is manually placed into storm mode. Under storm mode the sequencing times are shortened. Cycle times are adjusted based upon process control sampling.

The village is in the process of hiring an engineering firm to do a facilities study plan. This plan will look at treatment needs for the next 20 years. The plan will look at phosphorus removal, filtrate return directly to the head of the plant, the addition of decanting arms to the reactors, and mixers for the reactors. Additionally, the village is looking at adding fine screens to the head of the plant.

Operation and Maintenance activities are currently being scheduled and performed on time. This information is not logged in a central location. Additionally, an operators log has not been created for the facility.



Inspection Findings (continued)

The village produces a Class B sludge. The sludge is processed in an aerobic digester before it is dried on two drying beds. The drying beds were converted to a wedge wire system approximately 4 years ago. Dried solids are disposed of at Cherokee Run Landfill.

In October, 2005 a flow study was performed to determine if there were any cross connections between the sanitary and storm sewer systems at the plant. This investigation was prompted by a review of detailed plans depicting the sanitary and storm systems at the plant. The presence of paper, plastic, and other debris on a storm sewer grate (home plate) further raised questions about the plumbing layout at the plant. The study identifies an issue with surcharging of the effluent manhole. The surcharging was the result of having all three effluent pumps (700 gpm each) in the reactor basin running at one time. The surcharge causes flows to back-up into a storm sewer line connected to the effluent manhole. The back-up eventually surcharges the storm sewer filling the home plate storm basin. During this condition preliminary solids that normally collect in the reactor basin will carry through the system. This is believed to be the source of solids on the home plate grating. A concrete pad was installed around the effluent manhole and home plate storm basin to direct any surcharge flows back to the sand filter filtrate storage tanks.

Radio monitors are being added to all the village lift stations. The stations will be equipped with flow meters and cameras to monitor operations. All of the stations are inspected once per day. The stations are pumped completely down once per week to prevent the build up of grease and solids. Maintenance checks are performed at this time.

Between January 1, 2007 and January 31, 2008 St Paris reported 2 final effluent violations, 1 CBOD and 1 Ammonia violation.

Facility Inspection

Plant flows are introduced into the system through a 6" force main and 15" gravity sewer. A 4" force main returns filtrate and lab water to the head of the plant. A 1" bar screen is being used to remove preliminary solids. Digester decant is introduced down stream of the screen.

The secondary treatment system consists of two Sequential Batch Reactors. Automatic gates control flows into the reactors (one reactor is filled at a time). The reactor cycles include aeration (90 minutes), settling (50 minutes), and decant (40 minutes). A visible floc was forming in the reactor in settle mode.

The chlorine contact tank is cleaned twice per year (spring and fall). A minor amount of solids were noted in the tank. The final effluent was clear.



Facility Inspection (continued)

Final effluent flows are recorded through a v-notch weir at the end of the chlorine tank. A pressure transducer is used to measure flow volumes.

Composite samples are collected from the final effluent line after the chlorine contact tank. The automatic sampler is housed in its own structure.

The final effluent was clear. There were no visible solids or foam at the outfall.

Items Requiring a Response

1. The facilities planning study will need to be submitted to this office upon completion. The plan must address all treatment and collection system upgrades necessary to keep the village in compliance with their NPDES permit. A time line for implementation of the plan, including installation of a preliminary treatment system designed to prevent preliminary solids from entering the secondary treatment system must be included with the submittal. Please provide a written response identifying the initial time line for completion of the facilities planning study by no later than May 26, 2008.
2. Consideration should be given to incorporation of automated switching to storm mode through the SCADA system. A feed back system based upon flows could provide a more immediate response. Please provide a written response detailing any considerations the village has given to this mode of operation. This response must be provided by no later than May 26, 2008.
3. Operation and maintenance logs as required by Ohio Administrative Code 3745 – 7 – 09 must be maintained on site. Written verification as to the implementation of this records keeping must be provided by no later than May 26, 2008.
4. A written description of all operation and maintenance procedures being implemented to prevent preliminary solids from discharging during storm events must be provided by May 26, 2008.



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