



**Environmental
Protection Agency**

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



1PB0003820090313

CLINTON SABINA STP

JACKSON, JOSHUA 2009/03/13



State of Ohio Environmental Protection Agency

Southwest District Office

401 East Fifth Street
Dayton, Ohio 45402-2911

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

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March 12, 2009

Mayor & Council
Village of Sabina
101 North Howard Street
Sabina, OH 45169

Corresp.

**RE: Village of Sabina WWTW/Compliance Evaluation Inspection
NPDES Permit No. OH00221281/OEPA PERMIT NO. 1PB00038*GD**

Ladies & Gentlemen:

On March 5, 2009, I conducted a NPDES Compliance Evaluation Inspection of the Village of Sabina wastewater treatment works (WWTW). Randy Fair (Operator of Record) and Rob Dean (Village Administrator) were present during this inspection. The purpose of the inspection was to evaluate compliance with the terms and conditions of the NPDES Permit. A copy of the report is provided within.

As noted in the report, three areas within the report rated as "Unsatisfactory". **Please pay special attention to the "items requiring correction" shown in bold type, for there are compliance schedules associated with these items.**

Thank you for your time extended during the inspection process. If you have any questions, please feel free to contact me by phone at (937) 285-6029 or by e-mail at joshua.jackson@epa.state.oh.us.

Respectfully,

Joshua Jackson
Environmental Specialist II
Division of Surface Water

Cc: Rob Dean, Village of Sabina (w/report)
Randy Fair, Village of Sabina (w/report)

Enclosures



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
1PB00038*GD	OH00221281	3/5/2009	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Village of Sabina WWTW 700 Mill Street Sabina, Clinton County	9:45 am	2/1/2008
	Exit Time	Permit Expiration Date
	12:15 pm	1/31/2013
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Randy Fair, WWTW Operator of Record Rob Dean, Village Administrator	937-584-2131 937-584-4323	
Name, Address and Title of Responsible Official	Phone Number	
Mayor Dean Carnahan Village of Sabina 101 North Howard Street Sabina, OH 45169	937-584-4323	

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

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

See Attached Report.

Inspector	Reviewer
 Joshua Jackson Division of Surface Water Southwest District Office Date: 3-12-09	 Martyh Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office Date: 3/13/09

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)..... Y
- (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..... Y
- (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:

Section F: 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..... 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) Wastewater Treatment Works classification (OAC 3745-7)..... II
- (e) Operator of Record holds unexpired license of class required by permit..... Y
 Class: II
- (f) Copy of certificate of Operator of Record displayed on-site..... Y
- (g) Minimum operator staffing requirements fulfilled (OAC 3745-7)... Y
- (h) Routine and preventative maintenance scheduled/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..... N/A
 On MORs and/or Spill Hotline (1-800-282-9378)
- (m) Any hydraulic and/or organic overloads since last inspection..... Y

Record Keeping:

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

Hard bound

- (c) Log book(s) kept onsite (in an area protected from weather)..... Y
- (d) Log book contains the following:
 - I. Identification of treatment works..... N
 - II. Date/times of arrival/departure for Operator of Record and any other operator required by OAC 3745-7..... N
 - III. Daily record of operation and maintenance activities (including preventative maintenance, repairs and request for repairs)..... N
 - IV. Laboratory results (unless documented on bench sheets)... N/A
 - V. Identification of person making log entries..... N
- (e) Has the operator of record submitted written notification 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

Section G: Operation & Maintenance (con't)

Collection System:

- (a) Percent combined system: 0%
- (b) Any collection system overflows since last inspection..... Y
(CSO and/or SSO)
- (c) Regulatory agency notified of overflows (SSOs)..... Y
- (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..... 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..... Y

Comments/Status:

Ohio EPA is negotiating with the Village of Sabina over the elimination of 4 illegal sanitary sewer overflows (SSOs) within the collection system. Because of these overflows, a rating of "Unsatisfactory" was given in the "Collection System" portion of this report.

WWTW generator starts automatically in the event of power failure. A contractor will perform a full load test on the generator this summer.

Auto dialer notifies WWTW staff for high influent wet well alarms.

Comminutor is off-line. Operator uses manual bar screen only.

There are 4 lift stations in the collection system. The village has a portable generator for servicing three of the lift stations. The Rose Avenue lift station utilizes the WTP generator for back-up power.

A copy of OAC 3745-07-09 "Record Keeping Requirements" was forwarded to Randy Fair so that he can bring the "Operator of Record Log Book" in compliance.

There are 4 known sanitary sewer overflows (SSOs) within the Village of Sabina sewage collection system. Ohio EPA is currently negotiating with the Village for the elimination of these overflows.

There is an issue with basement back-up at 37 Eden Avenue (near the Krebs Drive SSO). This overflow should be eliminated with the Rose Avenue Relief Sewer, which is proposed in the "SSO Elimination and System Improvements Plan of Action, July 2008", prepared by URS.

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: Geotextile sludge dewatering bag to landfill)
- (d) If sludge is incinerated, where is ash disposed of
- (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..... 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:

Sludge disposal is discussed further in the report.

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:)

- (b) Calibration frequency adequate Y
(Date of last calibration: 6/1/2008)
- (c) Secondary instruments operated and maintained..... Y
- (d) Flow measurement equipment adequate to handle full range
of flows..... N
- (e) Actual flow discharged is measured..... Y
- (f) Flow measuring equipment inspection frequency
 Daily Weekly monthly other

Comments/Status:

URS has identified the Village's flow monitor for replacement (Village of Sabina Wastewater Treatment Plant Study, January 2009) because, when compared with collection system flow meters, it was found to be inaccurate. Flows are currently calculated by measuring the depth of flow over two 5-foot weirs and multiplying the measurement by two. This has produced inaccurate results.

Section I: Self-Monitoring Program (cont)

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: All with the exception of temperature, pH, dissolved oxygen and chlorine residual.
Lab name: MASI

Quality Control/Quality Assurance

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

Comments/Status:

Section J: Effluent/Receiving Water Observations

Outfall Number	Oil sheen	Grease	Turbidity	Visible Foam	Visible Floating Solids	Color	Other
001	none	none	low	minimal	none observed	clear	

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?

Comments/Status:

Inspection Report
 (Items for Correction in Bold Type)

Treatment Units at the Sabina Wastewater Treatment Works (WWTW)

- The average daily design flow of the WWTW is 0.38 MGD. A review of monthly operating reports from January of 2008 – January 2009 shows an average daily flow of 0.43 MGD .
- Comminution (not in service)/ Manual Bar Screen
- Grit Removal
- (1) Off-line Storage tank (207,210 gallon capacity)
- (2) Oxidation Ditches (163,535 gallons each/21 hour detention)
- (2) Clarifiers (95,000 gallons each)
- (2) Chlorine Contact tanks (55,711 gallons each)
- (1) Dechlorination tank (11,444 gallons)
- (2) Post Aeration tanks (7,630 gallons)
- (2) Sludge Holding/Digestion tanks (69,312 gallons each/ 104 days detention total)

*Note - The information given above was based on the December 13, 1988 Permit to Install (90-154) report prepared by Ohio EPA's Division of Environmental Financial Assistance. This report based the information on a WWTP design flow of 0.38 MGD.

EFFLUENT LIMIT VIOLATIONS
 (Period of Review: January 2008 – January 2009)

7D = Weekly 30D = Monthly 1D = Daily
 Conc. = Concentration (mg/l) Qty. = Quantity (Kg/Day)

Reporting Period	Parameter	Limit Type	Limit	Reported Value
January 2008	Nitrogen, Ammonia (NH3)	7D Qty	7.2	7.23503
February 2008	Total Suspended Solids	7D Qty	25.9	30.9764
March 2008	Total Suspended Solids	30D Qty	17.3	112.075
March 2008	Total Suspended Solids	7D Qty	25.9	131.176

March 2008	CBOD 5 day	30D Qty	14.4	48.0330
March 2008	CBOD 5 day	7D Qty	21.6	29.2656
March 2008	Total Suspended Solids	7D Conc	18	21.
March 2008	Total Suspended Solids	7D Qty	25.9	285.271
March 2008	CBOD 5 day	7D Qty	21.6	156.053
June 2008	Total Suspended Solids	30D Qty	17.3	59.3043
June 2008	Total Suspended Solids	7D Qty	25.9	224.885
June 2008	Nitrogen, Ammonia (NH3	30D Qty	2.2	2.89042
June 2008	Nitrogen, Ammonia (NH3	7D Qty	3.3	11.2442
June 2008	CBOD 5 day	30D Qty	14.4	30.7124
June 2008	CBOD 5 day	7D Qty	21.6	114.151
December 2008	CBOD 5 day	7D Qty	21.6	29.6762

All of the violations shown above are loading violations and are directly attributed to high wastewater flows caused by rain events. URS has proposed improvements to the Sabina WWTW with the intention of addressing these WWTW inadequacies.

Items Observed During the Inspection

1. The raw and final effluent samplers had thermometers lying on the bottom of the sampler. The tips of the thermometers should be immersed in liquid and not touching anything to verify the storage temperature of $\pm 6^{\circ}$ C. The sampler line and the samplers (themselves) were also very dirty.
The Village must have an appropriate thermometer setup in both samplers by no later than March 20, 2009. Within this same time frame, both samplers (and tubing) must be thoroughly cleaned.
2. The grit channel had just been unplugged at the time of the inspection. Mr. Fair was in the process of cleaning out the accumulated grit in the channel.
3. The oxidation ditches were chocolate brown in color and had an earthy smell. There was a large amount of solids build-up on top of the channel just prior to the aerators that were shut off (in both oxidation ditches).
4. There was a large amount of non-putrescible materials that had accumulated in the center well of both integral clarifiers. The presence of this material displays the ineffectiveness of the influent bar screen. URS has proposed an automatic influent screen for the WWTW upgrade. The effluent from both clarifiers was clear with a small amount of scum and algae build-up in the effluent channel.
5. Half of WWTW storage building had been blown away by strong winds. The other three buildings on the property are in need of repair for they are several years old. URS has identified the possibility of replacing three of these buildings with a new administration/maintenance/storage building with an attached garage. Ohio EPA believes replacing these buildings should be prioritized as part of the WWTW upgrade so that Village-owned equipment (vehicles, samplers, electrical, lab equipment, etc.) will be protected from the elements.

6. It is also a recommendation of this office that the Village pursue designing the WWTW upgrade with ultraviolet disinfection technology. Municipalities all over the state are moving away from the use of chemicals for disinfection for various reasons including safety and liability concerns (storage, transportation and the potential for chemical leaks), and production of harmful by-products.

Sludge Storage

At the time of the inspection, both digesters were full of sludge. The geotextile bag that had been used to dewater sludge had been removed in November of 2008. Without a replacement bag and no other means to dewater or remove sludge from the WWTW, the solids inventory has become unmanageable; to the point that Mr. Fair began using the storm overflow basin as a sludge holding tank. The purpose of the storm overflow basin is to capture and detain flows that exceed the peak treatment capacity of WWTW; this typically occurs during an intense rain event or snow melt. Once influent flows subside, wastewater in the overflow basin can be drained back into the WWTW for treatment. There is also an overflow point on this basin so that once full, wastewater is conveyed through the chlorine contact tank for disinfection and then discharged without biological treatment. If this tank is now being used for sludge storage, a storm event can trigger the discharge of all these solids to the stream. This is unacceptable and for this reason, a rating of "Unsatisfactory" was given for "Sludge Storage/Disposal" section of this report.

The Village must remove/properly dispose of the sludge from the overflow basin as soon as possible but no later than March 27, 2009 (I verbally informed Mr. Dean and Mr. Fair of this deadline at the time of the inspection). This basin must be kept empty during normal operation so that it can be properly used during high flow periods.

In the past, the Village has stated that their long-term solution for dewatering sludge will be a geotextile woven bag located on a concrete pad. Up to this point, the Village had just placed geotextile bags on the bare ground next to the digesters; filtrate from the bags has runoff to a neighboring farm field (which is a liability to the Village). On March 11, 2009, I spoke with Rob Dean (Village Administrator) and he stated that a concrete pad was currently being constructed with a drain conveying filtrate to the head of the WWTW. He stated that this pad would be ready for the dewatering process by March 24, 2009. **The permanent solution for sludge dewatering process must be in place by April 3, 2009.**

