Ohio | Environmental Protection Agency

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

1PB0003720070725

CHAMPAIGN MECHANICSBURG WWTP REYNOLDS, JOSEP 2007/07/25

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Southwest District Office

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

July 25, 2007

Mayor and Village Administrator
Village of Mechanicsburg
18 North Main Street
Mechanicsburg, Ohio 43044

RE: Mechanicsburg Compliance Evaluation Inspection / Notice of Violation

Dear Mayor and Administrator:

On June 20, 2007 Martyn Burt and I performed a Compliance Evaluation Inspection at the Mechanicsburg Waste water Treatment Plant.

The inspection was performed to determine the village's compliance status with respect to their NPDES permit and Findings and Orders. The village is currently in significant non-compliance with the Findings and Orders.

The inspection findings are included in the attached report. The report contains several items which require a response. The response dates for each of the items are noted in the " Items Requiring a Response" section of the report.

If you have any question concerning the inspection please contact me at (937) 285 - 6097.

Sincerely,

Joseph Reynolds
Division of Surface Water

cc: John Grosse, R.D. Zande
Wendell Cornelison, Maintenance Supervisor

OhioEPA

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
1PB00037	OH0022209	6/20/2007	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	**Entry Time**	**Permit Effective Date**
Village of Mechanicsburg 90 Mill Street Mechanicsburg, Ohio 43044	9:30 AM	8/1/2007
	Exit Time	**Permit Expiration Date**
	1:15 PM	7/31/2012
Name(s) and Title(s) of On-Site Representatives	**Phone Number(s)**	
John Grosse, Operator of Record; Wendell Cornelison, Maintenance Supervisor; John Beedy, Mayor Greg Kimbell, Council President	(614) 679 - 5647 (937) 834 - 3858	
Name, Address and Title of Responsible Official	**Phone Number**	
Mayor and Council 18 North Main Street Mechanicsburg, Ohio 43044	(937) 834 - 3187	

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

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

See Attached Report.

Inspector	Reviewer
Joseph Reynolds 7/25/07	
Joseph Reynolds Date Division of Surface Water Southwest District Office	Martyn Burt Date Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office

Permit # : 1PB00037
NPDES #: OH0022209

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	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:

A new liquid chlorine feed system was installed at the plant.

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	Y
(d) Compliance schedule contained in	Findings and Orders
(e) Permittee is meeting compliance schedule	N

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..	N
(c)	All treatment units in service other than backup units.....	Y
(d)	Operator holds unexpired license of class required by permit..... Class: I	Y
(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..... On MORs ☐ and/or Spill Hotline (1-800-282-9378) ☐	Y
(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..... (CSO ☐ and/or SSO ☐)	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.....	N
(g)	Lift station alarms provided and maintained.....	N
(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	N
(k)	Are any portions of the sewer system at or near capacity.....	N

Comments/Status:

The standby generator can run the entire plant. It is run under load every couple months. John Grosse is the Operator of Record for the plant. John is a Class III certified operator.

Section H: Sludge Management

(a) Sludge management plan (SMP)
Submitted date: Approval #: 05-203PW Not submitted ☐ N/A ☐

(b) Sludge management plan current..... N
(c) Sludge adequately disposed..... Y
(Method:Land Application)
(d) If sludge is incinerated, where is ash disposed of
(e) Is sludge disposal contracted..... Y
(Name:Burch Hydro)
(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
(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 ☐ Other ☐(Specify:)

(b) Calibration frequency adequate ..... Y
(Date of last calibration:)
(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:

Flow is measured at the post aeration (final tank).

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 collected at splitter box prior to aeration. Effluent samples are collected at the post aeration (final tank).

Permit # : 1PB00037
NPDES #: OH0022209

Section J: Effluent/Receiving Water Observations

Outfall Number	Oil sheen	Grease	Turbidity	Visible Foam	Visible Floating Solids	Color	Other
001	none	none	none	slight	yes	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..... Y
(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 Findings

The Village of Mechanicsburg was issued National Pollutant Discharge Elimination System (NPDES) permit number 1PB00037*CD. This renewal permit was issued June 27, 2007 and replaces permit 1PB00037*BD. The renewal permit contains new final effluent limits that reflect permit loadings based upon the water quality studies performed as part of the Darby Creek Total Maximum Daily Load (TMDL).

The treatment system consist of the following units, main lift station with muffin monster and bar rack, treatment plant bar screen, flow equalization lagoon, Sequential Batch Reactor, chlorination / dechlorination tank and post aeration tank.

The village currently contracts with R.D. Zande for plant oversight. John Grosse (Class III waste water operator) is the Operator of Record in responsible charge of plant operations. Wendell Cornelison (working on Class I certification) is the Maintenance Superintendent. Wendell oversees day to day plant operations.

The old treatment lagoons are currently being used for flow equalization. The lagoons were pumped down this spring and can provide 3 million gallons of storage capacity. Flows up to 0.3 MGD are treated through the system. Flows above 0.3 MGD are equalized.

The levy on the North lagoon and the effluent valve have been repaired.

The lagoon aerators are not being used at this time.

The lagoon monitoring well system was sampled in April, 2006. The sampling frequency for the wells (quarterly samples were originally requested) is currently being evaluated.

Infiltration and Inflow in the collection system continues to be an issue. The village is working on a 20 year plan to address both water and waste water issues. The village has acquired Ohio Water Development Authority (OWDA) money to perform this planning. The plan is scheduled to be complete in less than 120 days.

Wendell Cornelison schedules monthly maintenance activities for the plant. Maintenance forms are used by plant staff when non-scheduled maintenance is required. Operation and Maintenance logs as required by Ohio Administrative Code 3745 – 7 – 09 are not being maintained (see attached).

Inspection Findings (continued)

Burch Hydro removed liquid sludge from the plant in October, 2006. Plant operations have stabilized enough to allow for daily wasting of solids. The village is looking at contract hauling for sludge disposal.

In the spring of 2007 the village converted over from a gas chlorine feed system to a liquid chlorine feed system. The switch was made in part to address safety concerns involving chlorine gas.

Between April 1, 2006 and May 31, 2007 Mechanicsburg reported 59 final effluent violations. These violations include: 7 Fecal Coliform, 12 Suspended Solids, 23 CBOD, 8 Chlorine, 7 Ammonia, and 2 Dissolved Oxygen.

On August 4, 2005 the village agreed to Findings and Orders issued by the Director Ohio EPA in order to resolve non-compliance issues with their NPDES permit. A summary of the orders is as follows:

Mechanicsburg Findings and Orders
August 4, 2005

Order #	Comp. Date	Order	Date Comp.
1.a	7 days (Aug. 11, 2005)	Record influent flows daily.	Viol./Pending
1.b	7 days (Aug. 11, 2005)	Record daily rainfall.	Comp./Pending
1.c	7 days (Aug. 11, 2005)	Record Lagoon Elev.	Comp./Pending
1.d	7 days (Aug. 11, 2005)	Submit WPCLF nom. form.	Viol. /Pending
1.e	30 days (Sept. 3, 2005)	Notification of vio. Of permit/ord.	Comp./Pending
1.f	120 days(Dec. 2, 2005)	Submit plan loan app.	Viol./Pending
1g.	180 days(Jan. 31, 2006)	Gen. Plan for I/I & WWTP upgrade	Viol./Pending
1.h	365 days(Aug. 4, 2006)	Comp. PTI app. / schedule.	Viol./Pending
2.	90 days (Nov. 2, 2005)	Begin I/I evaluation.	11/01/2005
3.	90 days (Nov. 2, 2005)	Submit revised SMP.	Viol./ Pending

4.	90 days (Nov. 2, 2005)	Submit NPDES renewal.	05/30/2002
5.	210 days (Mar. 2, 2006)	Update O & M manual.	Viol./Pending
6.	See item 7	Pay $7,276.00.	NA
7.	30 days (Sept. 3, 2005)	Pay $2,200.00.	08/25/05
8.	30 days (Sept. 3, 2005)	either Pay $ 5,076 or pay SEP.	06/24/2005
9.	30 days (After SEP)	Submit SEP completion doc.	NA
10.	30 days (No SEP)	Pay $5,076 if SEP not comp.	NA

Please be advised all compliance schedule violations are significant violations. These violations need to be addressed immediately. The village will be contacted in the near future to begin negotiation of a revised compliance schedule.

Facility Inspection

Plant flows are pumped from the main lift station to a splitter box which divides flow between the two Sequential Batch Reactors. Both reactors are receiving influent on a continuous basis (Influent Continues Extended Aeration System (ICEAS) mode). The manual influent gates are going to be replaced with automatic gates.

The temperature in the influent sampler was at 4 degrees.

There is a diversion pipe from the splitter box that sends excess flow to the equalization Lagoons. This pipe was blocked off. During storms the plug is removed and excess flows are equalized. Equalized flows are returned to the system at a rate of 50 gpm.

The batch reactor was being mixed uniformly. The mixed liquor was chocolate brown. There were floating solids on the surface of the tank in settle mode. Solids are manually wasted at the end of each cycle. In storm mode (manual switch over) the aerators are shut off and the decant arm is lowered to the water surface. The Programmable Logic Control is used to control treatment cycles during dry weather.

Facility Inspection (cont.)

Three aeration blowers are used to provide air to the system. One serves the aeration tank, one serves the digester, and one is a back-up. All three were working at the time of the inspection.

There were a lot preliminary solids in the secondary system. Similar solids were noted at the final outfall.

The aerobic sludge digester was pumped down. Solids were removed in October of last year.

Site maintenance (fill in sink holes around the plant grounds) should be performed as a safety measure.

The waste water in the chlorine contact tank had a dark tint. Denitrification bubbles were noted (indication of old solids in the tank). A fine black solid (ash) was noted leaving the tank. The chlorine feed rate is adjusted manually. The dechlorination feed is triggered by the lowering of the decant arm.

The post aeration mixer was making a lot of noise. The tank was being rapidly mixed.

Effluent samples are collect at the post aeration tank. The sampler and sample lines were clean.

The effluent was clear. The outfall / receiving stream has a large amount of solids deposited. A lot of non-biological solids were noted in the effluent channel.

Items Requiring a Response

1. The 20 year plan and preliminary implementation schedule need to be submitted to this office by no later than November 2, 2007. This plan must address treatment and collection system upgrades designed to bring the village back into compliance with their NPDES permit. The installation of a preliminary treatment system must be evaluated as part of the 20 year plan. This system must be designed to prevent preliminary solids from entering the secondary treatment system which then can pass through the system to the final outfall.

2. Site maintenance (filling of sink holes) should be performed as soon as possible. Written verification as to the completion of this work must be submitted to this office by no later than August 29, 2007.

Items Requiring a Response (cont.)

3. The chlorine contact tank should be cleaned to address any solids build-up in the tank. Written verification as to the completion of this work must be provided by no later than August 29, 2007.

4. The post aeration system was making a lot of noise. The system needs to be evaluated in order to determine the source of the noise. A written summary of the findings and actions taken to address the noise must be submitted to this office by no later than August 29, 2007.

5. Solids which have collected at the final outfall must be collected and disposed at an approved treatment / disposal facility. Written verification as to the completion of this work must be provided by no later than August 29, 2007.

6. 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 August 29, 2007.