



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

September 30, 2013

Warren County Board of Commissioners
406 Justice Drive, P.O. Box 530
Lebanon, Ohio 45036

RE: Warren County, Sycamore Trails WWTP, Compliance Evaluation Inspection

Commissioners:

On September 24, 2013, I conducted a compliance evaluation inspection at the Sycamore Trails WWTP (NPDES Permit No. OH0072541; OEPA Permit No. 1PG00077*FD). Representing this facility was Chris Brausch, Mike Carter and Todd Stephenson. A copy of my inspection report is enclosed.

The inspection report contains one unsatisfactory area. The Records/Reports Section was rated unsatisfactory as a result of the failure to report the surface sand filter bypasses. The county indicated that future reports would be submitted as required by the NPDES Permit.

Finally, the wastewater flows were noted as being 35% greater than the WWTP design. In addition, the WWTP is now 35 years old. Typically, treatment plants last between 20 to 30 years. The county has taken steps to determine the location and cost for connecting to another regional WWTP. Pursuing this option may be necessary sooner than later.

The areas noted in the report summary are currently being addressed. Therefore, no response is required at this time.

If you have any questions, please call me at (937) 285-6096.

Sincerely,

A handwritten signature in blue ink, which appears to read "Ned Sarle".

Ned Sarle
Environmental Specialist
Division of Surface Water – Permits Section

NS/tb

Enclosure

ec: Chris Brausch, Warren County Water and Sewer Department



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 |
| 1PG00077*FD | OH0072541 | 9/24/2013 | C | S | 1 |

| Section B: Facility Data | | |
|--|-----------------|------------------------|
| Name and Location of Facility Inspected | Entry Time | Permit Effective Date |
| Sycamore Trails WWTP End of Wind Forest Drive Springboro, Ohio 45066 | 9:30 AM | 3/11/2011 |
| | Exit Time | Permit Expiration Date |
| | 11:40 AM | 2/29/2016 |
| Name(s) and Title(s) of On-Site Representatives | Phone Number(s) | |
| Chris Brausch, County Sanitary Engineer | (513) 315-2509 | |
| Mike Carter, Collections Superintendent | (513) 509-1674 | |
| Todd Stephenson, Foreman | (513) 267-8974 | |
| Name, Address and Title of Responsible Official | Phone Number | |
| Warren County Board of Commissioners 406 Justice Drive, PO Box 530 Lebanon, Ohio 45036 | (513) 925-1377 | |

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

| Section D: Summary of Findings (Attach additional sheets if necessary) | |
|---|--|
| See Attached Summary of Findings / Comments. | |
| Inspector | Reviewer |
| Ned Sarle Division of Surface Water Southwest District Office | Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office |
| Date 9/30/13 | Date 9/30/13 |

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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) Flows and loadings conform with NPDES permit..... | N |
| (c) Treatment processes are as described in permit application... | Y |
| (d) All discharges are permitted..... | Y |
| (e) Number and location of discharge points are as described in permit..... | Y |
| (f) Storm water discharges properly permitted..... | N/A |

Comments/Status:

See Attached Summary of Findings / Comments.

Section F: Compliance

- | | |
|---|-----|
| (a) Any violations since the last inspection..... | Y |
| (b) Appropriate Non-compliance notification of violations..... | Y |
| (c) Permittee is taking actions to resolve violations..... | Y |
| (d) Permittee has a compliance schedule..... | N |
| (e) Compliance schedule contained in...N/A | |
| (f) Permittee is in compliance with schedule..... | N/A |
| (g) Has biomonitoring shown toxicity in discharge since last inspection | N/A |

Comments/Status:

See Attached Summary of Findings / Comments.

Section G: Operation & Maintenance

Treatment Works:

Treatment facility properly operated and maintained

(a) Standby power available.....generator or dual feed Y

i. What does the back-up power source operate.....

Facility has a portable generator that may be brought to the WWTP. The generator can operate the whole WWTP.

ii. How often is the generator tested under load.....

N/A.

(b) Which components have an alarm system available for power or equipment failures.....

WWTP power, flow equalization high water and secondary clarifier drive failure.

(c) All treatment units in service other than backup units..... Y

(d) What method is used for scheduling routine & preventative maintenance (calendar, software, etc.).....

O&M manual plus historic knowledge.

(e) Any major equipment breakdown since last inspection..... N

(f) Operation and maintenance manual provided and maintained..... Y

(g) Any plant bypasses since last inspection..... Y

(h) Any plant upsets since last inspection..... N

Comments/Status:

See Attached Summary of Findings / Comments.

Section G: Operation & Maintenance con't

Record Keeping/Operator of Record:

- (a) Wastewater Treatment Works classification (OAC 3745-7)..... I
- (b) Operator of Record holds unexpired license of class required by Permit..... Y
- (c) Copy of certificate of Operator of Record displayed on-site..... Y
- (d) Has the Operator of Record submitted an ORC Notification form. Y
- (e) Minimum operator staffing requirements fulfilled (OAC 3745-7).... Y
- (f) If a Staffing Reduction plan has been approved, are the stipulations of the plan being met..... N/A
- (g) Operator of Record log book provided..... Y
- (h) Format of log book (e.g. computer log, hard bound book)

Hard bound book.
- (i) Log book kept onsite (in an area protected from weather)..... Y
- (j) 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 operator and maintenance activities (including preventative maintenance, repairs and request for repairs, process control test results, etc.)..... Y
 - iv. Laboratory results (unless documented on bench sheets)... Y
 - v. Identification of person making entries..... Y
- (k) Has the Operator of Record submitted written notifications 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

Comments/Status:

Section G: Operation & Maintenance con't

Collection System:

- (a) Are there pump stations in the collection system..... Y
 - i. How many publicly-owned pump stations equipped with permanent standby power or equivalent.....1
 - ii. How many pump stations have telemetered alarms.....1
 - iii. How many pump stations have operable alarms.....1

- (b) Any chronic collection system overflows since last inspection..... N
- (c) Regulatory agency notified of all overflows..... N/A
- (d) Are there CSOs in the collection system..... N/A
if so, what is the LTCP status.....

- (e) How are CSOs monitored (chalk, block, level sensor, etc.).....

- (f) Portable pumps available for collection system maintenance..... Y
- (g) RDII Program established and active..... Y
- (h) Any WIB complaint received since last inspection..... N
- (i) Is there a WIB response plan..... Y
- (j) Is any portion of the collection system at or near dry weather capacity..... N

Comments/Status:

See Attached Summary of Findings / Comments.

Section H: Sludge Management

- (a) Method of Sludge Disposal... Land Application
 Haul to Another NPDES Permittee
 Haul to a Mixed Solid Waste Landfill

*if one of the selected methods is land application, complete applicable charts.

Class A - Exception Quality Sewage Sludge (monitoring station 584)

| Pathogen Reduction Alternative | 84370 Vector Attraction Reduction Options | | | | | | | |
|--|--|--|---|--|---|----------------------------|--|---|
| | Option 1 -38% Volatile Solids Reduction | Option 2 -Anaerobic Bench Scale Analysis | Option 3 – Aerobic Bench Scale Analysis | Option 4 – Specific Oxygen Uptake Rate | Option 5 – Aerobic Time and Temperature | Option 6 – Alkali Addition | Option 7 – >75% Percent Solids without Unstabilized Solids | Option 8 - >75% Percent Solids with Unstabilized Solids |
| Alternative 1 – Time and Temperature Regime (84369) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 2 – High pH and High Temperature (84369) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 3 – Other Processes (84369) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 4 – Unknown Processes (84369) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 5 – Composting (84397) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 5 – Heat Drying (84397) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 5 – Heat Treatment (84397) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 5 – Thermophilic Aerobic Digestion (84397) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 5 – Beta Ray Irradiation (84397) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 5 – Gamma ray Irradiation (84397) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 5 – Pasteurization (84397) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 6 - Approved Equivalent Process | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

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Class B Sewage Sludge (monitoring station 581)

| Pathogen Reduction Alternative | 84370 Vector Attraction Reduction Options | | | | | | | | | |
|---|--|--|---|--|---|----------------------------|---|--|---------------------------|-------------------------------------|
| | Option 1 -38% Volatile Solids Reduction | Option 2 -Anaerobic Bench Scale Analysis | Option 3 - Aerobic Bench Scale Analysis | Option 4 - Specific Oxygen Uptake Rate | Option 5 - Aerobic Time and Temperature | Option 6 - Alkali Addition | Option 7 - >75% Percent Solids without Unstabilized | Option 8 - >75% Percent Solids with Unstabilized | Option 9 - Land Injection | Option 10 - Immediate Incorporation |
| Alternative 1 - Geometric Mean of Seven Fecal Samples (84369) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 2 - Aerobic Digestion (46396) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 2 - Air Drying (46396) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 2 - Anaerobic Digestion (46396) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 2 - Composting (46396) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 2 - Lime Treatment (46396) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Alternative 3 - Approved Equivalent Process | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- (b) Has amount of sludge generated changed significantly since the last inspection..... N
- (c) How much sludge storage is provided at the plant.....

30 days.
- (d) Records kept in accordance with State and Federal law (5 years according to OAC 3745-40-06)..... Y
- (e) Any complaints received in last year regarding sludge..... N
- (f) 5/8" sc reen at headworks for facilities that land apply sludge..... N/A
- (g) Are sludge application sites inspected to verify compliance with NPDES permit..... N/A
- (h) Is a contractor used for sludge disposal..... N
 If so, what is the name of the contractor.....

Comments/Status:

See Attached Summary of Findings / Comments.

Section I: Self-Monitoring Program

Flow Measurement:

- (a) Primary/Secondary flow measuring devices (e.g. weir with ultrasonic level sensor):

| |
|---|
| Ultrasonic level sensor and V-Notch weir. |
|---|
- (b) Flow meter calibrated annually Y
(Date of last calibration: 6/19/2013)
- (c) 24-hour recording instruments operated and maintained..... Y
- (d) Flow measurement equipment adequate to handle full range of flows..... Y
- (e) All discharged flow is measured..... Y

Comments/Status:

None.

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
(see GLC page)
- (d) 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/Status:

The individual samples collected for the composite sample must be maintained at ≤ 6.0 °C.

Section I: Self-Monitoring Program (con't)

Laboratory:

General

- (a) Does the Quality Assurance Manual contain written Standard Operating Procedures (SOP's) for all analysis performed onsite..... N/E
- (b) Do SOP's include the following if applicable..... N/E
 - Title
 - Scope and Application
 - Summary
 - Sample Handling and Preservation
 - Interferences
 - Apparatus and Materials
 - Reagents
 - Procedure
 - Calculations
 - Quality Control
 - Maintenance
 - Corrective Action
 - Reference (Parent Method)

Note: Standard Methods 1020A establishes that "Quality assurance (QA) is the definitive program for laboratory operation that specifies the measure required to produce defensible data of known precision and accuracy. Standard operating procedures are to be used in the laboratory in sufficient detail that a competent analyst unfamiliar with the method can conduct a reliable review and/or obtain acceptable results." SOPs should be developed for each analytical procedure.

- (c) EPA approved analytical testing procedures used (40 CFR 136.3).. N/E
- (d) If alternate analytical procedures are used, proper approval has been obtained..... N/E
- (e) Analyses being performed more frequently than required by permit. N/E
- (f) If (e) is yes, are results in permittee's self-monitoring report..... N/E
- (g) Satisfactory calibration and maintenance of instruments/equipment. N/E (see score from GLC page)
- (h) Commercial laboratory used..... N/E
Parameters analyzed by commercial lab:

Lab name:

Discharge Monitoring Report Quality Assurance (DMRQA)

- (a) Participation in latest USEPA quality assurance performance sampling..... N/E
Date:
- (b) Were any parameters "Unsatisfactory"..... N/E
- (c) Reasons for "Unsatisfactory" parameters.....

Comments/Status:

None.

Section J: Effluent/Receiving Water Observations

Outfall # 001

Outfall Description: WWTP outfall pipe.

Receiving Stream: Clear Creek via unnamed tributary.

Receiving Stream Description: No adverse effects were noted.

Comments/Status:

WWTP outfall sign posted as required by NPDES Permit.

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:

None.

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See Attached Summary of Findings / Comments

A review of the Discharge Monitoring Reports (DMRs) for September 2010 through August 2013 indicated one effluent violation. This violation is listed below. The facility has adequately addressed this violation. Future violations must continue to be reported as required by the NPDES Permit as detailed in Part III.12 titled "Noncompliance Notification."

| Reporting Period | Parameter | Limit Type | Units | Permit Limit | Reported Value |
|------------------|------------|------------|--------|--------------|----------------|
| October 2012 | CBOD 5 day | Weekly | kg/day | 3.64 | 4.05 |

The WWTP consists of a bar screen, flow equalization tank, two aeration tanks, two secondary clarifiers / aeration tanks, two secondary clarifiers, two upflow fixed media clarifier, a dosing tank, five surface sand filters, a chlorine contact tank and a dechlorination tank. The two tanks used for the secondary clarifiers / aeration tanks are used in different manners during different WWTP flow events. During normal flow, the tanks are used as aeration tanks. When flows exceed 120,000 gpd, the tanks are used as secondary clarifiers. Finally, the five surface sand filters are typically used at all times unless they are being cleaned.

Sludge is stored in an aerobic sludge holding tank. In 2012, the county hauled 55.43 dry tons of sludge to the Warren County Lower Little Miami WWTP. The sludge was ultimately disposed at the Rumpke Landfill.

The treatment system is designed for an average daily flow of 0.08 MGD. The design peak daily flow is not known. A review of the DMRs for the noted period indicated an average daily flow of 0.108 MGD and a peak daily flow of 0.568 MGD. The average daily flow is 35% over the design average daily flow for this WWTP. Based on past flow monitoring records, the flow appears to increase significantly between 2010 and 2011. This is not due strictly to the significant rainfall that occurred in 2011. The county should investigate the source of these high flow readings. They may be the result of problems with the flow monitoring equipment or other changes with the sewage collection system.

For the noted period, no sewage collection system bypasses were reported. However, several bypasses occurred from the surface sand filters in 2011. These bypasses were not reported as required by the NPDES Permit as detailed in Part III, Section 12 titled "Noncompliance Notification." Future bypasses must be reported as required by the NPDES Permit.

The WWTP is required to be staffed by a Class I wastewater operator. The certified operator must be at the WWTP three times a week for a minimum of 1.5 hours. Mike Carter is a Class II wastewater operator, and Todd Stephenson is a Class I wastewater operator. The minimum staffing requirements are being provided as required by the

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NPDES Permit. Finally, both WWTP operators are within 5 years of retirement. It may be advisable for the county to have another county employee assist at this WWTP. This would allow for a smoother transition once they do retire.

The sewage collection system is approximately 4 miles long. In 2006, the collection system was cleaned and visually inspected. Sources of infiltration and inflow were eliminated as much as possible. Individual homes were also inspected to determine if any infiltration and inflow sources could be eliminated. Several sump pump discharges were rerouted at that time.

Staff for sampling the WWTP discharge is based out of the Lower Little Miami WWTP. Portable testing equipment is calibrated at this WWTP before being brought to the field. Field testing is done for temperature, pH, DO and chlorine. All other wastewater samples are transported to the Lower Little Miami WWTP for testing.