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*1PC0010020080917*

HIGHLAND HILLSBORO STP JACKSON, JOSHUA 2008/09/17

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Hillsboro Corresp.

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

September 17, 2008

Mayor & Council
City of Hillsboro
130 North High Street
Hillsboro, OH 45133

**RE: Notice of Violation**
**Hillsboro WWTW/Compliance Evaluation Inspection**
**NPDES Permit No. OH0020389/OEPA PERMIT NO. 1PC00100*HD**

Ladies & Gentlemen:

On September 3, 2008, I conducted a NPDES Compliance Evaluation Inspection at the City of Hillsboro wastewater treatment works (WWTW). Brandon Leeth and Bob Creamer, who represented the City, were present during this inspection; a follow-up telephone call was also made to Randy Barr. 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, several areas received below "satisfactory" ratings; justifications for these ratings are noted as well. **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

Enclosures

**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** |
| 1PC00100*HD | OH0020389 | 9/3/2008 | C | S | 1 |

| Section B: Facility Data | | |
|---|---|---|
| **Name and Location of Facility Inspected** | **Entry Time** | **Permit Effective Date** |
| City of Hillsboro WWTW<br>1520 North High Street<br>Hillsboro, Highland County | 9:30 a.m. | 12/1/2007 |
| | **Exit Time** | **Permit Expiration Date** |
| | 12:45 p.m. | 7/31/2011 |
| **Name(s) and Title(s) of On-Site Representatives** | **Phone Number(s)** | |
| Brandon Leeth, Operator of Record<br>Bob Creamer, Brian Williamson, Operators<br>Randy Barr, Collection System | 937-393-4831 | |
| **Name, Address and Title of Responsible Official** | **Phone Number** | |
| Ralph Holt, Village Administrator<br>City of Hillsboro<br>130 North High Street<br>Hillsboro, OH 45133 | 937-393-5219 | |

**Section C: Areas Evaluated During Inspection**
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

| | | | | | |
|---|---|---|---|---|---|
| S | Permit | M | Flow Measurement | N | Pretreatment |
| S | Records/Reports | S | Laboratory | M | Compliance Schedule |
| S | Operations & Maintenance | M | Effluent/Receiving Waters | S | Self-Monitoring Program |
| S | 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 |
|---|---|
| 9-17-08 | 9/17/08 |
| Joshua Jackson<br>Division of Surface Water<br>Southwest District Office<br>Date | Martyn Burt<br>Compliance & Enforcement Supervisor<br>Division of Surface Water<br>Southwest District Office<br>Date |

Permit # : 1PC00100*HD
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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) 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..... | N |
| (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 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 NPDES Permit | |
| (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.. | Y |
| (c) | All treatment units in service other than backup units..... | N |
| (d) | Wastewater Treatment Works classification (OAC 3745-7)..... | III |
| (e) | Operator of Record holds unexpired license of class required by permit..... | Y |
| | Class: III | |
| (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..... | Y |
| (l) | Regulatory agency notified of bypasses..... | Y |
| | 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..... | 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 (if applicable) any local environmental agencies when a collection system overflow, treatment plant bypass or effluent limit violation has occurred..... | Y |

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## Section G: Operation & Maintenance (con't)

**Collection System:**

| | | |
|---|---|---|
| (a) | Percent combined system: 0% | |
| (b) | Any collection system overflows since last inspection (CSO ☐ and/or SSO ☒) | Y |
| (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 | N |
| (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 | Y |

Comments/Status:

1 of the 2 comminuters was out of service at the time of the inspection.

There are 6 lift stations in town; all have telemetry for alarm system.

## 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:land application)
(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 requirements for the City are contained within the facilities NPDES permit.

## 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:Influent magnetic meter)

(b) Calibration frequency adequate ..... N
(Date of last calibration: 2006)
(c) Secondary instruments operated and maintained.....N
(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:**

## 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..... N
  (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..... Y
(c) Analyses being performed more frequently than required by permit. N
(d) If (c) is yes, are results in permittee's self-monitoring report..... Y
(e) Commercial laboratory used..... Y
Parameters analyzed by commercial lab: All parameters except pH, DO and temperature.
Lab name: Belmont Labs

*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:**

Permit # : 1PC00100*HD
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## Section J: Effluent/Receiving Water Observations

| Outfall Number | Oil sheen | Grease | Turbidity | Visible Foam | Visible Floating Solids | Color | Other |
|---|---|---|---|---|---|---|---|
| 001 | None | None | mild | mild | none | clear | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

**Comments/Status:**

Outfall sign was constructed per Part II, Item Q, of the City's 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:**

Inspection Findings

The City of Hillsboro wastewater treatment works (WWTW) is designed to treat and discharge an average daily flow of 1.2 million gallons/day (MGD) to Clear Creek, which is several miles upstream of Rocky Fork Lake. A review of the records from January 2007 – July 2008, shows an average daily flow 1.49 MGD.

The City has submitted a permit-to-install application (PTI) to Ohio EPA's Division of Environmental and Financial Assistance for a WWTW upgrade, which will expand the average daily design flow to 1.5 MGD and peak hourly design flow of 6.0 MGD. The purpose of the expansion is to eliminate the existing equalization bypass during wet weather events. There have been 9 different occurrences in 2008, in which there was an equalization basin bypass (the bypassed wastewater is disinfected prior to recombining with fully treated WWTW effluent).

As stated, the City has submitted a permit to install application to Ohio EPA for the WWTW upgrade; however, due to changes in floodplain protection for the WWTW, revisions to the original detailed plans are needed. Momentum for this project has slowed to the point where the City has violated the NPDES compliance schedule (advertise for construction bids no later than August 31, 2008). For this reason, a rating of "Marginal" was given to the "Compliance Schedule" section of this report. The City should prioritize revising the detailed plans and resubmitting these to Ohio EPA DEFA as soon as possible, so that the upgrade to the WWTW can proceed.

A review of the discharge monitoring report (DMR) data that was submitted by the City of Hillsboro (January 2007 – July 2008) shows the following violations:

EFFLUENT LIMIT VIOLATIONS
(Period of Review: January 2007 – July 2008)

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

| Reporting Period | Parameter | Limit Type | Limit | Reported Value |
|---|---|---|---|---|
| January 2007 | Nitrogen, Ammonia (NH3) | 7D Qty | 10.5 | 13.5342 |
| January 2007 | Phosphorus, Total (P) | 7D Conc | 1.5 | 2.72 |
| January 2007 | Phosphorus, Total (P) | 30D Qty | 4.5 | 5.57535 |
| January 2007 | Phosphorus, Total (P) | 7D Qty | 6.8 | 22.8244 |
| May 2007 | Dissolved Oxygen | 1D Conc | 7.0 | 6.9 |
| July 2007 | Nitrogen, Ammonia (NH3) | 7D Conc | 2.3 | 2.4 |
| October 2007 | Phosphorus, Total (P) | 7D Conc | 1.5 | 4.11 |
| October 2007 | Phosphorus, Total (P) | 7D Qty | 6.8 | 14.0473 |
| February 2008 | Mercury, Total (Low Level) | 30D Qty | 0.0000 | .00016 |

| | | | | |
|---|---|---|---|---|
| April 2008 | Mercury, Total (Low Level) | 30D Qty | 0.0000 | .0001 |
| May 2008 | Mercury, Total (Low Level) | 30D Qty | 0.0000 | .0001 |
| June 2008 | Nitrogen, Ammonia (NH3) | 7D Conc | 2.3 | 3.46667 |
| June 2008 | Nitrogen, Ammonia (NH3) | 7D Qty | 10.5 | 13.7925 |
| July 2008 | Phosphorus, Total (P) | 7D Conc | 1.5 | 2. |
| July 2008 | Phosphorus, Total (P) | 7D Qty | 6.8 | 8.00149 |

Due to the violations reported above, a rating of "Marginal" was given for the "Effluent/Receiving Waters" section of this report.

In July of 2006, the City of Hillsboro completed the upgrade of the South Lift Station (Muntz Street), which included a 650,000-gallon detention basin to offset surge influent flows during wet weather. The intent of the design was to eliminate illegal sanitary sewer overflows (SSOs) at this location and a manhole on Belfast Pike. Since the project was completed the City has still experience SSOs at the pump station. In 2008, the South Lift Station has overflowed on 7 different occasions. There have been no further overflows at the Belfast Pike locations.

In an effort to reduce the amount of rain derived inflow and infiltration (RDII) within the sewage collection system, with the highest priority given to that area tributary to the South Lift Station, the City has investigated (through CCTV) several sewer mains within the City; and will be investigating several more areas in the future. As a result of the current findings, the City has submitted a permit to install application to Ohio EPA for the replacement of approximately 5,000 feet of deteriorated sewers upstream of the South Lift Station. Once this project is completed, the City will perform collection system flow monitoring to quantify the amount of clean water removed from the system.

This past year the City also reported rain-induced SSOs at Lanewood Drive and Holmes Street. These overflows were caused by grease build-up within the sewer line. The City will perform routine cleaning of these sewer lines in the future to prevent overflows from reoccurring. Hillsboro has also contracted with an engineering firm to design a relief sewer in an effort to stream line this stretch of pipe. This project should reduce the amount of grease and debris build-up.

For the reasons stated above, a rating of "Marginal" was given to the "Collection System" section of this report.

Items Noted During the Inspection

- The mixed liquor in the vertical loop reactors were light brown in color with no objectionable odors.
- Although the center well in the secondary clarifiers was full of foam and non-putrescible matter, the clarifiers were transparent several feet down from the surface. There were no noticible solids overflowing the weirs.

Operations staff stated that the sludge blanket was approximately 2 feet at the time of the inspection.

- One of the two comminutors was down for repair.
- According to Part II, H. of the City's NPDES permit, *"Composite samples shall be comprised of a series of grab samples collected over a 24-hour period and proportionate in volume to the sewage flow rate at the time of sampling. Such samples shall be collected at such times and locations, and in such a fashion, as to be representative of the facility's overall performance".*

  At the time of the inspection, operations staff stated that neither the influent nor the effluent composite sampler was "synced" to the plant flow meter (influent magnetic meter) for flow-proportioned sampling. For this reason, a rating of "Marginal" was given to the "Self-Monitoring" section of this report.

  **The City of Hillsboro shall provide automatic, flow-proportioned, influent and effluent sampling as soon as possible but no later than October 15, 2008.**
- Operations staff were performing a 1-point calibration for the pH meter instead of a 2-point calibration. QA/QC protocol was changed at the time of the inspection to reflect the 2-point calibration.
- Operations staff were not performing an "air calibration" of the dissolved oxygen meter. QA/QC protocol for this calibration was changed at the time of the inspection to reflect the correct method (as provided by the manufacturer).
- The "operator's log book" required by the operator certification rules was up-to-date. A request was made that more detail be given for day-to-day decisions made concerning the operations of the WWTW. WWTW staff will also begin to document "entry" and "exit" time for the first operator to arrive and last operator to leave (Operator of Record already documents "entry" and "exit" times).
- For the purposes of QA/QC, the main WWTW flow meter should be calibrated at least once per year. It has been two years since the influent flow meter (magnetic) has been calibrated at the Hillsboro WWTW. For this reason, a rating of "Marginal" was given for the "Flow Monitoring" section of this report. **The influent flow meter shall be calibrated as soon as possible but no later than October 15, 2008.**