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\*1PB0004520070201\*

MIAMI

LAURA WWTP

MILLER, JOSEPH

2007/02/01

Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
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State of Ohio Environmental Protection Agency

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Ted Strickland, Governor  
Lee Fisher, Lieutenant Governor  
Laura Powell, Acting Director

January 31, 2007

Mayor and Council  
Village of Laura  
P.O. Box 202  
Laura, OH 45337

**RE: NOTICE OF VIOLATION, Compliance Evaluation Investigation (CEI)  
Village of Laura Wastewater Treatment Plant  
Laura, Miami County**

Mayor and Council:

On January 25, 2007, I conducted a Compliance Evaluation Investigation at the Village of Laura wastewater treatment works. This inspection was conducted to determine compliance with the NPDES discharge permit and to discuss renewal of this permit. Ted Wiant, wastewater operator, represented the Village.

Overall the wastewater facility was rated as marginal. Violations were noted with respect to the NPDES Schedule of Compliance, an unpermitted discharge, and effluent limit violations. A detailed inspection report is attached.

Provide a response to the "Items Requiring a Response" section of the inspection report by **February 28, 2007**. Your response should include items completed or planned to be completed to address identified issues. If you have any questions, I can be reached at (937) 285-6109.

Sincerely,

Joe Miller  
Division of Surface Water  
Compliance and Enforcement

CC: Ted Wiant, Village of Laura  
Miami County Health Department





**Village of Laura Wastewater Treatment Plant  
Compliance Evaluation Investigation (CEI)  
January 25, 2007**

**Overview**

The Village of Laura wastewater treatment plant provides wastewater collection and treatment for approximately 500 residents. Properties have individual septic tanks which flow to a small diameter collection system. The collection system connects to a single influent lift station at the wastewater treatment. The wastewater treatment plant includes the following treatment units: bar screen, extended aeration, clarification, upflow media filters, slow surface sand filters, chlorination/dechlorination, post-aeration, sludge holding and sludge removal by "desludger". The treatment plant was installed in 1991.

**Infiltration and Inflow**

The treatment plant is designed to treat an average daily flow of 60,000 gallons per day (gpd). During dry weather the average flow rate is approximately 50,000 gpd. During storm events, flow to the wastewater plant exceeds the design capacity of the wastewater plant drastically. In January 2005, November 2005, and January 2006 the flows were estimated at 550,000 gpd, 810,000 gpd, and 3,600,000 gpd, respectively. Prior to the rehabilitation of the slow surface sand filters in March 2006, flow of this magnitude would wash out the activated sludge from the aeration and flow over the sand filters. Presently large storm flows wash out sludge to the sand filters. Ohio EPA's Compliance Assistance recommended the installation of a "storm mode" contact stabilization, which requires the installation of piping to be used to prevent "wash-out" during high flows. Currently, only one side of the aeration system is set up to be used in this manner.

A Schedule of Compliance in the Village of Laura NPDES permit requires that immediate steps be taken to remove the excessive infiltration and inflow (I&I) in the collection system. The Schedule requires that clean water connections be prohibited by enforcement of a Village ordinance. This item has been completed. The Schedule of Compliance also requires the Village to conduct sewer system studies and implement the recommendations to eliminate/reduce I&I. Finally, the Schedule of Compliance requires the completion of all work necessary to eliminate flows exceeding the wastewater plant design capacity. A report summarizing the results of the effort to reduce I&I to comply with these requirements was to be submitted to this office by August 2005.

The Village of Laura agreed to submit updates with regards to I & I reduction measures completed. These reports have not been received since Dick Beck retired and need to be reinstated. One particular area of concern is the Pemberton Rd./SR 571 sanitary sewer which has heavy flows during storm events. Rocks and debris may be indicative of problems in the collection system.

**Water Treatment Plant Discharge**

The backwash from the water treatment plant and softener recharge wastewater must be connected to the sanitary sewer. Currently wastewater from the water treatment plant is bypassing the red water filters and discharging to the surface of the ground towards Hog Run. This discharge is in violation of Ohio Revised Code 6111.04 and must be discontinued immediately.



## Sludge Storage

Currently sludge is being processed by the use of the Geyser Pump "Desludger", which collects sludge in filter bags by adding a polymer for dewatering and thickening. This component is installed above the aeration basin and sludge holding tank. Filled bags are presently being stacked on the ground next to the wastewater plant. This is an unacceptable means of storage. An alternative means of storage needs to be provided that allows wastewater to drain into the wastewater plant. The current temporary arrangement for the Desludger is a safety issue for the operator that needs to maintain and process the filter bags. Additionally, the generation of sludge has increased since solids are no longer being washed over the sand filters. The sludge disposal for this wastewater plant needs to be re-evaluated. An elevated roll-off dumpster with larger filter bags which drains to the wastewater plant may be an alternative. Increased sludge storage tank capacity is another possibility.

## Effluent Violations

The following effluent limit violations occurred from January 2005 to December 2006:

Parameter	Limit Type	Limit	Reported Value	Violation Date
Dissolved Oxygen	1D Conc	5.0	3.0	1/3/2005
Dissolved Oxygen	1D Conc	5.0	2.6	1/4/2005
Dissolved Oxygen	1D Conc	5.0	3.7	1/5/2005
Dissolved Oxygen	1D Conc	5.0	4.9	1/7/2005
Chlorine, Total Residual	1D Conc	0.038	0.097	6/16/2005
Chlorine, Total Residual	1D Conc	0.038	0.199	5/23/2005
Chlorine, Total Residual	1D Conc	0.038	0.06	9/20/2006
Chlorine, Total Residual	1D Conc	0.038	0.6	9/21/2006
Chlorine, Total Residual	1D Conc	0.038	1.07	9/28/2006
CBOD 5 day	7D Conc	23.0	65.	8/8/2006
CBOD 5 day	7D Qty	5.2	7.8728	8/8/2006
CBOD 5 day	30D Conc	15.0	15.6	8/1/2006
Nitrogen, Ammonia (NH3)	7D Conc	6.0	8.6	6/22/2006
Chlorine, Total Residual	1D Conc	0.038	0.817	6/9/2006
Chlorine, Total Residual	1D Conc	0.038	0.963	6/12/2006
Chlorine, Total Residual	1D Conc	0.038	1.14	6/13/2006
Chlorine, Total Residual	1D Conc	0.038	0.388	6/14/2006
Chlorine, Total Residual	1D Conc	0.038	0.346	6/15/2006
Chlorine, Total Residual	1D Conc	0.038	0.206	6/20/2006
Chlorine, Total Residual	1D Conc	0.038	0.143	6/21/2006
Chlorine, Total Residual	1D Conc	0.038	0.2	6/29/2006
Chlorine, Total Residual	1D Conc	0.038	1.53	10/16/2006
Chlorine, Total Residual	1D Conc	0.038	2.0	10/23/2006
Chlorine, Total Residual	1D Conc	0.038	1.0	10/24/2006
Chlorine, Total Residual	1D Conc	0.038	15.6	10/27/2006

Effluent limit violations have included numerous chlorine violations. A Permit to Install was approved by Ohio EPA on October 16, 2006 for the installation of an ultraviolet disinfection system which should eliminate chlorine violations in the future. The expected installation of this treatment unit is prior to disinfection season 2007. An explanation and plan for prevention for the non-chlorine violations is required.



## **Quality Assurance/Quality Control**

As discussed the past inspection reports of January 21, 2004 and March 21, 2005, a Quality Assurance/Quality Control (QA/QC) Manual needs to be provided and updated for the Village of Laura wastewater laboratory. This manual needs to include all lab testing methods step-by-step as well as lab equipment testing methods. In a letter from Mayor Edward Guess dated February 18, 2004, this manual was to be provided "as soon as possible."

## **Operations and Maintenance Manual**

The Operations and Maintenance (O&M) manual for the Village of Laura WWTP was last updated at the time of construction of the plant. The O&M manual needs to be updated to reflect changes to the treatment plant. Ted Wiant has started to put together a list of routine maintenance items which is an important component of any O&M manual.

## **Items Requiring a Response**

1. **Water Treatment Plant Discharge** – This discharge must be eliminated immediately and connected to the sanitary sewer. Provide a schedule for connection.
2. **Infiltration and Inflow (I & I)** – Provide an update detailing work done to meet the requirements of the Schedule of Compliance to eliminate I&I in the collection system. Provide a plan and schedule for additional removal to address this requirement.
3. **Contact Stabilization** – Complete the installation of piping to provide contact stabilization "storm mode". Provide the date of completion in your response.
4. **Effluent Violations** – Provide an explanation for effluent limit violations listed above and the plan for preventing these violations in the future.
5. **Sludge Processing, Storage, and Disposal** – An evaluation of sludge alternatives needs to be completed. Storage of sludge filter bags on the ground must be discontinued. Safety of the operator working with the sludge needs to be considered. Provide a plan for addressing sludge concerns.
6. **QA/QC** – Provide a QA/QC plan for the laboratory to ensure lab results are accurate, repeatable, and defensible.
7. **O&M Manual** – Update the O&M manual to include changes made to the treatment plant and to include a schedule for routine and preventative maintenance.
8. **Quarterly Reports** – Submit quarterly reports to Ohio EPA Southwest Office detailing improvements to reduce I & I.



Permit #: 1PB00045\*BD  
 NPDES #: OH0112704



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
1PB00045*BD	OH0112704	1/25/2007	C	S	11

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Village of Laura WWTP 505 South Main Street Laura, Ohio 45337	9:25 AM	5/1/2002
	Exit Time	Permit Expiration Date
	12:45 PM	4/30/2007
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Ted Wiant, Operator	937-947-1050	
Name, Address and Title of Responsible Official	Phone Number	
Mayor and Council Village of Laura P.O. Box 202 Laura, OH 45337	937-947-1050	

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

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

See attached.

Inspector	Reviewer
 Date: 2/1/07	 Date: 2/1/07
Joe Miller Division of Surface Water Southwest District Office	Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office



Permit # : 1PB00045\*BD  
NPDES #: OH0112704

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 ..... N
- (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..... N
- (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:

Facility address should be 505 S. Main Street. Flows during storm events exceed design capacity of wastewater treatment plant. Geyser Pump sludge removal via polymer and filter bags added, partial contact stabilization ability added, post-aeration line added.

**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:

NPDES permit includes a Schedule of Compliance for removal of Infiltration and Inflow (I&I). The Village has completed some of the requirements, however much work remains to be completed and the Schedule dates have lapsed.

Village is addressing chlorine effluent violations; ultraviolet disinfection is being installed in the next few months.



**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: I (*Ted Wiant is currently attending Class I courses; Tom Yount, Class III Wastewater Operator currently signing reports.*)
- (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..... 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..... Y

**Collection System:**

- (a) Percent combined system: 0%
- (b) Any collection system overflows since last inspection..... N
- (c) Regulatory agency notified of overflows (SSOs)..... N/A
- (d) CSO O&M plan provided and implemented..... N
- (e) CSOs monitored and reported in accordance with permit..... N/A
- (f) Portable pumps used to relieve system..... N/A
- (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 N
- (k) Are any portions of the sewer system at or near capacity..... Y

**Comments/Status:**

O&M Manual needs to be updated, last updated in 1992. Compile and edit changes to treatment works. Dialer system added to alert operator of system malfunctions. Hydraulic overloads occur during storm events, since sand filter rehabilitation in March 2006, system has been able to handle these flows. I & I is a problem, ongoing work being done to improve: 10 risers added, grinder pump added, door to door inspections for clean water connections.



**Section H: Sludge Management**

- (a) Sludge management plan (SMP)  
Submitted date: 10/93      Approval #: 05301    Not submitted     N/A
- (b) Sludge management plan current..... N
- (c) Sludge adequately disposed..... N/E  
(Method:Land application)
- (d) If sludge is incinerated, where is ash disposed of      N/A
- (e) Is sludge disposal contracted..... Y  
(Name: Sludge hauled to Fairborn WWTP by Bob's Excavating)
- (f) Has amount of sludge generated changed significantly since  
last inspection..... Y
- (g) Adequate sludge storage provided at plant.....N
- (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:**

"Desludger" from Geyser Pump Co. being used for processing. This involves filter bags with polymer addition. Current practice of piling sludge bags on ground is unacceptable. Sludge is hauled to Fairborn WWTP. Adequate storage is unavailable.

**Section I: Self-Monitoring Program**

**Flow Measurement:**

- (a) Primary flow measuring device operated and maintained..... Y  
Type of device: Ultrasonic & Parshall flume    Ultrasonic & Weir X    Weir   
Calculated from influent       Other  (Specify:Pressure transducer)
- (b) Calibration frequency adequate ..... N  
(Date of last calibration: installation)
- (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:**

New flow meter installed. Flow meter calibration needs to be added to the O&M plan and done routinely.



**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).. 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

*Coliform*

Lab name: Belmonte Laboratories

*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..... N
- (i) Results of latest USEPA quality assurance performance sampling program:  Satisfactory  Marginal  Unsatisfactory

Date:

**Comments/Status:**

As discussed in my January 2004 inspection report, a QA/QC manual needs to be provided and maintained. A manual has not been provided.



**Section J: Effluent/Receiving Water Observations**

Outfall Number	Oil sheen	Grease	Turbidity	Visible Foam	Visible Floating Solids	Color	Other
001	no	no	no	no	no	no	

**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

