



State of Ohio Environmental Protection Agency

**Southwest District Office**

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Dayton, Ohio 45402

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

October 16, 2009

Mr. Chris Brausch  
Warren County Sanitary Engineer  
Warren County Water and Sewer Department  
406 Justice Drive, P.O. Box 530  
Lebanon, Ohio 45136

**Re: Warren County Lower Little Miami WWTP  
NPDES Permit No. 1PK00018\*GD; OH0071692  
NPDES Compliance Inspection and Notice of Violation**

Dear Mr. Brausch:

On September 23, 2009 Ron Ware and I conducted a National Pollutant Discharge Elimination System (NPDES) permit compliance inspection at the above referenced facility. Greg Squire, Chief Operator, was present and represented the County during the inspection. The purpose of the inspection was to evaluate several aspects of plant operation and performance, and to assess compliance with the facility's National Pollutant Discharge Elimination System (NPDES) permit.

Observations and findings of the inspection are included in the attached report. Compliance parameters which did not receive satisfactory ratings were 1) Operations and Maintenance, and 2) Effluent/Receiving Waters (refer to Section C of the report). The conditions of the final effluent and the unnamed tributary downstream from the discharge observed during the inspection were acceptable (ie. no significant solids in the discharge). However, exceedances of final effluent limits and plant upsets have occurred over the past nine months. An example is the May 4, 2009 incident, where solids from a secondary clarifier were released to the creek during maintenance activity. As such, these parameters received marginal ratings. The County previously provided explanatory information for these violations. As a follow-up, provide us a copy of the standard operating procedures developed after the May 4<sup>th</sup> incident to prevent recurrence of this type of plant upset.

One item that does require a response from the County concerns the results of the August microbial examination of the aeration basin mixed liquor. Please provide a status report on the steps being taken to address control of filamentous bacterial growth. Also, confirm that both influent fine screens are in service and functioning properly.

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Finally, the Permit to Install for the Phase III Improvements to the plant was issued by the Ohio EPA on August 17, 2009. Hopefully this project is proceeding as planned. Please provide us with an update on the bidding process for the project.

If you have any questions, don't hesitate to contact me at (937) 285-6102.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael W. Zimmerman". The signature is fluid and cursive, with a long horizontal stroke at the end.

Michael W. Zimmerman  
Division of Surface Water

Enclosure

Copy: Carl Gatton, Warren Co. Water and Sewer Department, w/ enclosure  
Greg Squire, Warren Co. Water and Sewer Department, w/ enclosure



State of Ohio Environmental Protection Agency  
Southwest District Office

NPDES Compliance Inspection Report

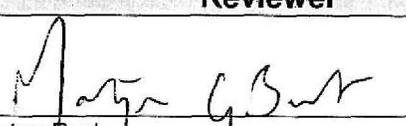
Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
1PK00018*GD	OH0071692	9/23/2009	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Warren County Lower Little Miami WWTP 2086 West U.S. Route 22 & 3 Maineville, Ohio 45039 Mailing: P.O. Box 530, 406 Justice Dr. Lebanon 45036	1:20 pm	9/1/2005
	Exit Time	Permit Expiration Date
	3:10 pm	8/31/2010
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Gregory Squire, WWTP Chief Operator	(513) 683-5808	
Name, Address and Title of Responsible Official	Phone Number	
Chris Brausch, P.E., Sanitary Engineer	(513) 695-1377	
Carl Gatton, Operations Superintendent	(513) 925-1643	

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	S	Laboratory	S	Compliance Schedule
M	Operations & Maintenance	M	Effluent/Receiving Waters	S	Self-Monitoring Program
S	Facility Site Review	S	Sludge Storage/Disposal	N	Other
N	Collection System				

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

Refer to attached page.

Inspector	Reviewer
 Michael W. Zimmerman Division of Surface Water Southwest District Office	 Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office
10-15-09 Date	10/15/09 Date

### Summary of Findings:

1. Repairs have been made to the four older vertical loop reactor aeration basins, with new shafts, gear boxes, and motors. These four basins were being operated in reverse (backward) direction in order to reduce splashing.
2. In March, 2009, the plant started experiencing problems with the two influent fine screens (clogged by debris and rags). Both screens broke down in March; the west screen was put back into service on August 24<sup>th</sup>, while the east screen was being put back into service the following day. The teacup degritters were abandoned shortly after startup. The lack of adequate headworks treatment has created serious periodic problems in the aeration basins and clarifiers.
3. All three sludge digesters were operating (two 250,000-gal and one 500,00-gal). The plant now has three feed pumps for the belt filter press (and one new one on reserve). The conveyor on the sludge belt filter press had broken down and been rebuilt since the last inspection.
4. The plant now has six sludge return pumps, the newest one has a mechanical seal (works great), the older ones have leaky and problematic water seals.
5. All four clarifiers were on-line. Maintenance had been performed on the two older ones approximately two weeks prior to the inspection (taken down and cleaned). The effluent weirs and channels were clean and flowing efficiently. Sludge blankets in the clarifiers were at an acceptable level of 2 - 3 feet.
6. In August, the County sent a MLSS and foam sample to a contract laboratory for microbial examination. The findings indicated the presence of filamentous bacterial growth (ie. primarily *Microthrix parvicella*, also *Nocardia*). The causes stated in the report were high grease and oil, lower F/M (high MLSS concentration and longer sludge age), and wastewater septicity.
7. Heavy rainfall on August 4<sup>th</sup> created high flows through the WWTP, exceeding the flow meter peak measuring capacity of 15 MGD. As a result, exceedances of final effluent permit limits for TSS and NH<sub>3</sub>-N occurred (listed in the table below).
8. The final effluent was relatively clear with a slight amount of suspended solids. Flow meter reading at 2:53 pm was 5.9 MGD.

Permit # : 1PK00018\*GD  
NPDES #: OH0071692

9. Final effluent limits violations from January through August, 2009 are listed in the following table:

**Warren County Lower Little Miami WWTP  
Final Effluent Limitation Violations (Outfall 001)**

;Period of Record: January, 2009 thru August, 2009)

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
April 2009	001	Dissolved Oxygen	1D Conc	5.0	2.7	4/2/2009
May 2009	001	Dissolved Oxygen	1D Conc	5.0	4.5	5/4/2009
May 2009	001	Nitrogen, Ammonia (NH3)	7D Conc	1.2	1.451	5/22/2009
May 2009	001	Nitrogen, Ammonia (NH3)	7D Qty	31	35.2165	5/22/2009
June 2009	001	Total Suspended Solids	7D Qty	827	929.697	6/22/2009
July 2009	001	Nitrogen, Ammonia (NH3)	7D Conc	1.2	1.22083	7/8/2009
August 2009	001	Total Suspended Solids	7D Conc	30	66.8333	8/1/2009
August 2009	001	Total Suspended Solids	30D Qty	551	561.498	8/1/2009
August 2009	001	Total Suspended Solids	7D Qty	827	1940.59	8/1/2009
August 2009	001	Nitrogen, Ammonia (NH3)	7D Qty	31	57.5171	8/1/2009