



State of Ohio Environmental Protection Agency

Northeast District Office

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

October 21, 2009

RE: WAYNE COUNTY
ORRVILLE WWTP
33PD00017

Mr. Robert Auten
Orrville WWTP Superintendent
City of Orrville
207 North Main Street
P.O. Box 107
Orrville, Ohio 44667

Dear Mr. Auten:

On September 18, 2009, this writer, met with you to conduct an inspection of the sewage treatment plant serving the City of Orrville (City). The intent of the visit was to evaluate operations and maintenance of the treatment system prior to drafting the next National Pollutant Discharge Elimination System (NPDES) permit.

At the time of the inspection, all the treatment plant processes were in operation. General operation and maintenance of the plant could be rated as good. The effluent being discharged was clear, contained no visible solids or foam, and was causing no visible impact upon the stream at the time.

Since the last inspection, the following updates were completed at the treatment plant:

- A sanitary sewer connection from the Orrville Municipal Power Plant discharge was installed in April 2009.
- The facility switched over to 150 gallon cylinders for gas chlorine verses the ton cylinders which were in use previously.
- Began use of a new flow train which involves an emergency bypass "high flow bypass" during heavy rain events. The emergency bypass was installed under Ohio EPA PTI #547512 to eliminate the overflow from the flow equalization basin to the Little Chippewa Creek. The project involved the extension of a sewer line from the flow equalization basin to the treatment plant immediately ahead of the secondary aeration tank.
- Trickling filter distributor arms were replaced on two of the three filters.

The City continues to investigate phosphorus removal technologies at the wastewater treatment plant. Currently, the wastewater plant has conducted sodium aluminate feed which cut down the phosphorus to 3.0 mg/l. It is understood the influent phosphorus concentrations are normally between 5-6 mg/l. This office recommends the City continue investigating phosphorus treatment options to prepare for a phosphorus limit in the NPDES permit. In addition, the pretreatment audit conducted by this office recommended the City consider a local limit for phosphorus in addition to the current surcharge.

The City had several eDMR submittal errors earlier this year. It is understood this was attributed to the eDMR being submitted late or submitted prior to all the samples collected for the month. It is understood you have since undertaken the entering and reporting of data in the

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edmr. In addition, this office has been made aware of an incident that has been occurring with SCADA glitches. You indicated the effluent pH spikes to around 10 for approximately 20 seconds and the effluent pH prior to the glitch was 8.75 so the City is affirmed the spike to 10 in a short period of time is not possible. As such, the City has reported the glitches on the eDMR using the AH code and providing an explanation. You also indicated the reason for these glitches may be any given number of items such as power outages, snail crawling across the sensor or the power plant utilizing too much effluent and lowering the level of the effluent tank for a short period of time (power plant is part of the reuse water system).

The City's toxicity issue was discussed at length. The City currently collects biomonitoring samples at outfall 001 and 901 (sample results attached). The City has biomonitoring data available for over the past 6 years. Biomonitoring data at outfall 001 shows there may be some toxicity issues present. Please note, the permit support documents have not been finalized by our Central Office water quality support staff. Once the permit support documents are released, this office will have a better understanding of any toxicity issues that may be present at the Orrville WWTP and whether the renewal NPDES permit will be impacted.

On November 28, 2006, the Ohio EPA issued for approval, the modification to the City of Orrville's Pretreatment Program by approving No Limit for the following parameters: Copper, Lead, Mercury, Silver and Zinc. In April 2009, the Ohio EPA conducted an audit of the Pretreatment Program in operation at the City of Orrville. The audit revealed the City of Orrville is in compliance with the Pretreatment Program with the following recommendations:

"Mr. Auten indicated that he was evaluating phosphorus discharges to the WWTP, had instituted a surcharge for phosphorus, and was continuing to study the costs associated with phosphorus removal. This office recommends that these investigations continue, and that Orrville consider a local limit for phosphorus in addition to a surcharge.

The SIU permit contains a list of prohibited discharges, but this list does not contain all the prohibited discharges contained in the SUO. The City should reconcile the lists, either by providing a complete list in the SIU permit or stating in the SIU permit that there are additional prohibitions in the SUO, providing the specific citation."

If you should have any questions regarding the pretreatment program, please contact Ms. Donna Kniss at (330) 963-1285.

The City has worked to minimize Inflow and Infiltration by inspecting all new building construction in the City and inspecting City sewer mains and manholes. The City is also camering high potential inflow and infiltration areas and completing repairs as needed.

Included with this letter is a list of NPDES permit violations covering the period January 1, 2007 to October 1, 2009. According to Mr. Auten, the pH limit violations were due to equipment malfunctions. Please review all plant data to determine whether these violations are accurate or if there was a reporting error by the lab or our data collection program. Any reporting errors or eDMR errors must be reported to this office so the error can be resolved. You may contact Mr. James Roberts of this Agency's Central Office at (614) 644-2054 to discuss this issue directly.

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The renewal NPDES permit for this facility will be public noticed when the permit support documents are finalized. Until that time, if you have any questions that you need answered regarding your NPDES permit, please do not hesitate to contact this office. You will have 30 days from the date of the public notice to submit comments to the Ohio EPA regarding the draft permit.

Overall, the results of the inspection were satisfactory. If you have any questions or comments regarding this letter, please contact this office at (330) 963-1299 or laura.weber@epa.state.oh.us.

Respectfully,



Laura A. Weber, P.E.
Environmental Engineer
Division of Surface Water

LAW/mt

pc: Jeff Brediger, Director of Utilities, Orrville Utilities

File: Public/Permit Compliance – Orrville

Effluent Violations:

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
May 2008	001	Dissolved Oxygen	1D Conc	6.0	.	5/15/2008
September 2007	001	pH, Minimum	1D Conc	6.5	4.54	9/14/2007
September 2007	001	pH, Minimum	1D Conc	6.5	5.67	9/16/2007
January 2008	001	pH, Minimum	1D Conc	6.5	4.81	1/26/2008
May 2008	001	pH, Minimum	1D Conc	6.5	LIOT: 5/15	5/15/2008
May 2008	001	pH, Minimum	1D Conc	6.5	.	5/16/2008
May 2008	001	pH, Minimum	1D Conc	6.5	4.52	5/18/2008

Frequency Violations

Reporting Period	Station	Parameter	Sample Frequency	Expected	Reported	Violation Date
March 2007	601	Total Suspended Solids	3/Week	3	0	03/01/2007
March 2007	601	CBOD 5 day	3/Week	3	0	03/01/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/01/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/01/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/02/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/02/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/03/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/03/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/04/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/04/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/05/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/05/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/06/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/06/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/07/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/07/2007
March 2007	601	Total Suspended Solids	3/Week	3	0	03/08/2007
March 2007	601	CBOD 5 day	3/Week	3	0	03/08/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/08/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/08/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/09/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/09/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/10/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/10/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/11/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/11/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/12/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/12/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/13/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/13/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/14/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/14/2007

Reporting Period	Station	Parameter	Sample Frequency	Expected	Reported	Violation Date
March 2007	601	Total Suspended Solids	3/Week	3	0	03/15/2007
March 2007	601	CBOD 5 day	3/Week	3	0	03/15/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/15/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/15/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/16/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/16/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/17/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/17/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/18/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/18/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/19/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/19/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/20/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/20/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/21/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/21/2007
March 2007	601	Total Suspended Solids	3/Week	3	0	03/22/2007
March 2007	601	CBOD 5 day	3/Week	3	0	03/22/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/22/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/22/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/23/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/23/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/24/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/24/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/25/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/25/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/26/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/26/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/27/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/27/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/28/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/28/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/29/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/29/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/30/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/30/2007
March 2007	601	pH, Maximum	1/Day	1	0	03/31/2007
March 2007	601	pH, Minimum	1/Day	1	0	03/31/2007
May 2007	001	Fecal Coliform	3/Week	3	2	05/01/2007
June 2007	601	Total Suspended Solids	3/Week	3	0	06/01/2007
June 2007	601	Total Suspended Solids	3/Week	3	0	06/08/2007
June 2007	601	Total Suspended Solids	3/Week	3	0	06/15/2007
June 2007	601	Total Suspended Solids	3/Week	3	0	06/22/2007
July 2007	001	Phosphorus, Total (P)	1/Week	1	0	07/01/2007
July 2007	601	Total Suspended Solids	3/Week	3	2	07/01/2007

Reporting Period	Station	Parameter	Sample Frequency	Expected	Reported	Violation Date
July 2007	601	CBOD 5 day	3/Week	3	2	07/01/2007
July 2007	001	Phosphorus, Total (P)	1/Week	1	0	07/08/2007
July 2007	001	Phosphorus, Total (P)	1/Week	1	0	07/22/2007
August 2007	001	Fecal Coliform	3/Week	3	2	08/22/2007
November 2007	001	pH, Minimum	1/Day	1	0	11/24/2007
February 2008	001	Nitrogen, Ammonia (NH3)	3/Week	3	0	02/01/2008
February 2008	001	Nitrogen, Ammonia (NH3)	3/Week	3	0	02/08/2008
February 2008	601	Total Suspended Solids	3/Week	3	2	02/08/2008
February 2008	001	Nitrogen, Ammonia (NH3)	3/Week	3	0	02/15/2008
February 2008	001	Nitrogen, Ammonia (NH3)	3/Week	3	0	02/22/2008
April 2008	001	pH, Minimum	1/Day	1	0	04/22/2008
May 2008	001	Fecal Coliform	3/Week	3	2	05/22/2008
December 2008	001	Nitrogen, Ammonia (NH3)	3/Week	3	2	12/15/2008
September 2009	001	Fecal Coliform	3/Week	3	0	09/01/2009
September 2009	001	Phosphorus, Total (P)	1/Week	1	0	09/15/2009

Toxicity Reporting:

Permit No	Station	Parameter	Units	Date	Reported Value	A Code	Comments
3PD00017*JD	1	Acute Toxicity, Ceriodaphnia dubia	TUa	3/21/2007		AA	1.
3PD00017*JD	1	Acute Toxicity, Ceriodaphnia dubia	TUa	6/12/2007		AA	1.
3PD00017*JD	1	Acute Toxicity, Ceriodaphnia dubia	TUa	8/1/2007		AA	1.
3PD00017*JD	1	Acute Toxicity, Ceriodaphnia dubia	TUa	12/17/2007		AA	1.
3PD00017*JD	1	Acute Toxicity, Ceriodaphnia dubia	TUa	3/17/2008		AA	1.
3PD00017*JD	1	Acute Toxicity, Ceriodaphnia dubia	TUa	6/1/2008		AA	1.000
3PD00017*JD	1	Acute Toxicity, Ceriodaphnia dubia	TUa	8/20/2008		AA	1.00
3PD00017*JD	1	Acute Toxicity, Ceriodaphnia dubia	TUa	12/17/2008		AA	1.00
3PD00017*JD	1	Acute Toxicity, Ceriodaphnia dubia	TUa	3/3/2009		AA	0.2
3PD00017*JD	1	Acute Toxicity, Ceriodaphnia dubia	TUa	6/9/2009		AA	0.2
3PD00017*JD	1	Acute Toxicity, Ceriodaphnia dubia	TUa	8/2/2009		AA	0.2
3PD00017*JD	801	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	3/6/2007		AA	100.
3PD00017*JD	801	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	6/12/2007		AA	1.
3PD00017*JD	801	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	8/1/2007		AA	1.
3PD00017*JD	801	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	12/4/2007		AA	1.
3PD00017*JD	801	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	3/17/2008		AA	100.
3PD00017*JD	801	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	6/1/2008	10		
3PD00017*JD	801	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	8/20/2008		AA	0.000
3PD00017*JD	801	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	12/16/2008		AA	100
3PD00017*JD	801	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	3/3/2009		AA	0
3PD00017*JD	801	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	6/21/2009		AA	1.0
3PD00017*JD	801	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	8/11/2009		AA	1.0
3PD00017*JD	901	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	3/6/2007		AA	100.
3PD00017*JD	901	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	6/6/2007	10		
3PD00017*JD	901	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	8/1/2007		AA	1.
3PD00017*JD	901	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	12/4/2007		AA	1.
3PD00017*JD	901	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	3/17/2008		AA	100.
3PD00017*JD	901	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	6/1/2008	100		
3PD00017*JD	901	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	8/20/2008		AA	0.000
3PD00017*JD	901	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	12/16/2008		AA	100
3PD00017*JD	901	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	3/3/2009		AA	0
3PD00017*JD	901	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	6/21/2009		AA	1.0
3PD00017*JD	901	7-Day Chronic Toxicity Ceriodaphnia dubia	% Affected	8/11/2009		AA	1.0