



**Environmental  
Protection Agency**

John R. Kasich, Governor

Mary Taylor, Lt. Governor

Scott J. Nally, Director

December 19, 2011

RE: LORAIN COUNTY  
COLUMBIA TOWNSHIP  
SHEFFIELD MIDDLE SCHOOL  
WWTP INSPECTION  
(NPDES NO. 3PT00088)

Sheffield-Sheffield Lake City Schools  
1824 Harris Road  
Sheffield Village, OH 44028  
Attn: Will Folger, Superintendent

Dear Superintendent Folger:

On November 22, 2011, a Compliance Evaluation Inspection (CEI) was conducted at the Sheffield Middle School wastewater treatment plant (WWTP), located at 1919 Harris Road, Sheffield. Present during the inspection were Ms. Christina Douglas of Uni-Tech, representing the Sheffield Middle School system; Mr. John Sabo of the Lorain County Health Department; and this writer, of Ohio EPA.

The purpose of the inspection was to evaluate the WWTP's operation and maintenance condition, as well as the facility's compliance with the terms and conditions of its National Pollutant Discharge Elimination System (NPDES) permit. The last CEI conducted at the Sheffield Middle School WWTP was on February 15, 2011.

At the time of the November 22<sup>nd</sup> inspection of the WWTP, the following observations were made:

- 1) Aeration tank contents were well aerated, and were light brown in color. Return sludge lines were returning a light brown liquid.
- 2) Settling tank contents contained a slight floating scum, with some duckweed on the water surface of the east settling tank.

The western and middle settling tank effluent troughs contained a solids deposition, and the eastern settling tank effluent trough was clean.

The western settling tank trough was not level, and in need of leveling.

- 3) Both pumps in the sand filter dosing station were set on 'AUTO', and operated when tested manually. The high level alarm was functional when manually tested.
- 4) All four surface sand filter cells were online, and contained some vegetative growth.
- 5) The tablet chlorinator/dechlorinator units were not in use, as disinfection is not required from November 1<sup>st</sup> through April 30<sup>th</sup>. The four dechlorination tablet tubes were missing from the unit. Effluent from the WWTP was being post aerated before being discharged.

A review of effluent data reported to Ohio EPA for the Sheffield Middle School WWTP, submitted in the electronic Discharge Monitoring Reports (eDMRs) during the period February 1, 2010 through November 1, 2011, found the following NPDES Permit numeric effluent violations:

**Sheffield Lake City Schools**  
**NPDES Permit No. 3PT00088**  
**Effluent Limits Violations**  
**(Feb. 1, 2011 through Nov. 1, 2011)**

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
February 2011	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	13.195	2/1/2011
February 2011	Nitrogen, Ammonia (NH3-N)	30D Qty	0.28	1.24858	2/1/2011
February 2011	Total Suspended Solids	1D Qty	1.70	1.70325	2/18/2011
February 2011	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	26.25	2/18/2011
February 2011	Nitrogen, Ammonia (NH3-N)	1D Qty	0.43	2.48391	2/18/2011
February 2011	Dissolved Oxygen	1D Conc	6.0	5.	2/18/2011
March 2011	Total Suspended Solids	30D Conc	12	12.4	3/1/2011
March 2011	Total Suspended Solids	30D Qty	1.14	1.17335	3/1/2011
March 2011	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	12.55	3/1/2011
March 2011	Nitrogen, Ammonia (NH3-N)	30D Qty	0.28	1.18754	3/1/2011
March 2011	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	17.25	3/3/2011
March 2011	Nitrogen, Ammonia (NH3-N)	1D Qty	0.43	1.63228	3/3/2011
March 2011	Total Suspended Solids	1D Conc	18	34.	3/10/2011
March 2011	Total Suspended Solids	1D Qty	1.70	3.21725	3/10/2011
March 2011	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	13.	3/18/2011
March 2011	Nitrogen, Ammonia (NH3-N)	1D Qty	0.43	1.23013	3/18/2011
March 2011	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	7.4	3/30/2011
March 2011	Nitrogen, Ammonia (NH3-N)	1D Qty	0.43	.70023	3/30/2011
April 2011	Total Suspended Solids	1D Conc	18	20.	4/21/2011
May 2011	Nitrogen, Ammonia (NH3-N)	30D Conc	2.0	4.025	5/1/2011
May 2011	Nitrogen, Ammonia (NH3-N)	1D Conc	3.0	7.8	5/27/2011
June 2011	Total Suspended Solids	1D Conc	18	26.	6/23/2011
June 2011	Total Suspended Solids	1D Qty	1.70	2.46025	6/23/2011
July 2011	Total Suspended Solids	30D Conc	12	135.	7/1/2011
July 2011	Total Suspended Solids	30D Qty	1.14	12.7743	7/1/2011
July 2011	Total Suspended Solids	1D Conc	18	462.	7/6/2011
July 2011	Total Suspended Solids	1D Qty	1.70	43.7167	7/6/2011
July 2011	Total Suspended Solids	1D Conc	18	68.	7/28/2011
July 2011	Total Suspended Solids	1D Qty	1.70	6.4345	7/28/2011
August 2011	Total Suspended Solids	30D Conc	12	37.5	8/1/2011
August 2011	Total Suspended Solids	30D Qty	1.14	3.54844	8/1/2011
August 2011	Total Suspended Solids	1D Conc	18	141.	8/17/2011
August 2011	Total Suspended Solids	1D Qty	1.70	13.3421	8/17/2011
September 2011	Nitrogen, Ammonia (NH3-N)	30D Conc	2.0	3.	9/1/2011
September 2011	Nitrogen, Ammonia (NH3-N)	30D Qty	0.19	.28388	9/1/2011

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
September 2011	Total Suspended Solids	1D Conc	18	27.	9/28/2011
September 2011	Total Suspended Solids	1D Qty	1.70	2.55488	9/28/2011
September 2011	Nitrogen, Ammonia (NH3-N)	1D Conc	3.0	5.05	9/28/2011
September 2011	Nitrogen, Ammonia (NH3-N)	1D Qty	0.28	.47786	9/28/2011

Items also discussed with Ms. Douglas prior to the November 22<sup>nd</sup> inspection were the following:

- 1) The gratings on some of the aeration tanks still need the side support rails replaced/installed, as this represents a safety/fall hazard should someone step on the grating. The rails were observed on-site, but need to be welded / affixed to the tank gratings.
- 2) A continuous recording flow meter, which was purchased in November 2010, has yet to be installed. The facility's NPDES permit requires actual flow rates to be reported, not daily estimates.
- 3) The electrical box in the blower room remains open, with no panel cover, and electrical wiring is exposed. This presents a severe shock hazard, and the panel cover should be replaced as soon as possible.
- 4) In order to meet NPDES permit requirements, an operator's logbook needs to be kept at all permitted facilities, and there was an operator's logbook located in the blower building at the WWTP. There are specific record keeping criteria which need to be included in the logbook, of which a major requirement is log in/log out times for the WWTP operator. The operator log in/log out times were not observed to be present.
- 5) The aeration tank contents, and the area immediately surrounding the aeration tank, were littered with plastic feminine hygiene products. For ease of WWTP operation and maintenance, as well as housekeeping around the WWTP, it is recommended signs be posted in the ladies restroom indicating these items should not be flushed down the toilets.
- 6) The included list of numeric effluent violations were discussed with Ms. Douglas. Ammonia and Suspended Solids violations are the majority of the excursions.

Based upon data submitted to Ohio EPA by the Uni-Tech for the Sheffield Middle School WWTP, the facility is considered to be in Significant Non-Compliance (SNC) for total suspended solids and Ammonia Nitrogen. The attached document details the parameters in SNC for the last six month period (May 2011 through October 2011).

Ms. Douglas was informed that WWTPs which are in SNC with their NPDES permit effluent limits must be returned to compliance in a timely manner.

The means by which an entity in SNC is brought back into compliance, and kept in compliance,

is through a Compliance and Enforcement Plan developed by the District Office with jurisdiction over that entity.

SNC is defined by the United States Environmental Protection Agency (USEPA) as a 40% exceedance of specific conventional pollutant limits (1.4 x parameter effluent limit), or a 20% exceedance of toxic pollutant limits (1.2 x parameter effluent limit), at a given discharge point for any two or more months, during any two consecutive quarter period reviewed.

- a) Conventional pollutants include: BOD/CBOD; total suspended solids; nutrients such as nitrogen (ammonia) and phosphorus; oil & grease.
- b) Toxic pollutants include: total chlorine residual; heavy metals; cyanide.

This correspondence shall serve as the initial step in the development and implementation of a plan to bring your facility back into compliance with your NPDES permit.

**You are directed to contact this office, within 14 days of the receipt of this letter, to set up a meeting at Ohio EPA's Northeast District Office.** The purpose of the meeting will be to discuss the facility's NPDES permit violations and the actions the School Board has taken, or intend to take, to come into compliance with the facility's NPDES permit effluent limits. Results of the compliance meeting may require additional enforcement actions be taken by Ohio EPA should compliance not be attained.

The Sheffield-Sheffield Lake School System should continue with the implementation of positive steps which enable the WWTP to consistently meet its NPDES Permit limits.

If there are any questions or comments regarding the contents of the report or this letter, please contact this office.

A copy of this inspection report is being forwarded to Uni-Tech and Mr. Sabo. If you have any comments or questions about this document, you may contact me at (330) 963-1110.

Respectfully,



Charles E. Allen  
Environmental Engineer  
Division of Surface Water

CEA/cs

cc: Uni-Tech, Attn. Christina Douglas  
Lorain County Health Dept., Attn: John Sabo

# SHEFFIELD MIDDLE SCHOOL

## NPDES PERMIT NO. 3PT00088

Get Detail  
for Selected  
Permit

### Facilities in Significant Non-Compliance \*\*

Period: May-11 Oct-11

Permit #	Facility Name	Major	Station Code	Param Code	Parameter Name	Max % Exceed	# Months Signif Exceed (1)**	# Months Exceed (2)**
3PT00088	Sheffield Middle School		1	00530	Total Suspended Solids	2471.6	4	4
3PT00088	Sheffield Middle School		1	00610	Nitrogen, Ammonia (NH3-N)	160	2	2

3PT00088

Period: 5/1/2011 10/31/2011

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Sheffield Middle School	May 2011	Nitrogen, Ammonia (NH3-N)	1D Conc	3.0	7.8	5/27/2011
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Sheffield Middle School	Jul 2011	Total Suspended Solids	30D Conc	12	135.	7/1/2011
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