



John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Scott J. Nally, Director

May 2, 2013

RE: LORAIN COUNTY  
SHEFFIELD VILLAGE  
SHEFFIELD MIDDLE / HIGH SCHOOL WWTP  
CEI  
(NPDES NO. 3PT00088)

Sheffield-Sheffield Lake City Schools  
1824 Harris Road  
Sheffield Village, OH 44054  
Attn: Will Folger, Superintendent

Dear Mr. Folger:

A Compliance Evaluation Inspection (CEI) was conducted at the Sheffield Middle/High School wastewater treatment plant (WWTP) on April 2, 2013. Present during the inspection were Ms. Christina Faith, of Uni-Tech, representing the school system; Mr. John Sabo, of the Lorain County Health Department; and this writer, of the Ohio EPA.

The purpose of the visit was to evaluate the facility's operation and maintenance; to discuss the WWTP compliance with NPDES Permit effluent limits; and to also discuss what next steps the Ohio EPA will require the School System take to bring the facility back into compliance. The most recent inspection of the WWTP was November 22, 2011.

At the time of the April 2<sup>nd</sup> inspection, the following items were observed at the WWTP:

- 1) Contents of the trash trap were typical, although there were some floating plastic feminine hygiene products. Signage has been placed in the women's restrooms, indicating proper disposal of plastic feminine hygiene products was to be into provided receptacles. There were no floatables observed on the ground around the trash trap, as was seen in previous inspections.

Since the last inspection, trash trap pumping on a quarterly basis has been initiated. Pumping is performed by J&L Septic.

- 2) Aeration tank contents were well aerated, and were medium brown in color. The return sludge lines were operating, returning a dark brown liquid. Return sludge lines have been cleaned since the last inspection.

According to Ms. Faith, no solids settling tests are run on the contents of the aeration tanks.

The gratings on all aeration tanks have been repaired or replaced since the last inspection, as structural integrity of the gratings was suspect.

- 3) Contents of the settling tanks contained a slight floating scum, with some scum on the water surface behind the inlet baffle as well.

- 4) There was some solids deposition in the eastern and western settling tank effluent troughs, and the middle settling tank effluent trough was relatively clean.
- 5) The surface sand filter dosing pumps in the pump station were on 'AUTO', and operated satisfactorily when tested manually. The high level alarm was also functional when manually tested. Elapsed time meters are connected to the dosing pumps.

Since the last inspection, dosing station pumping on a quarterly basis has been initiated.

- 6) At the time of the inspection, one of four filter cells was online (southwest cell). The northwest cell contained a slight growth of vegetation, and the remaining two cells were free of solids or vegetation, and were raked level.
- 7) 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>. Two of four tablet tubes and caps were observed missing on the tablet chlorination unit. Treated effluent was being post aerated prior to discharge.

During the period November 1, 2011 through April 1, 2013, the Sheffield Middle / High School WWTP reported the following NPDES Permit effluent violations in their monthly operating reports (MORs):

**Sheffield Lake Middle/High School WWTP**  
**NPDES Permit No. 3PT00088**  
**Effluent Limits Violations**  
**(Nov. 1, 2011 through Apr. 1, 2013)**

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
January 2013	CBOD 5 day	1D Conc	15	19.	1/24/2013
September 2012	Dissolved Oxygen	1D Conc	6.0	5.72	9/5/2012
September 2012	Dissolved Oxygen	1D Conc	6.0	5.84	9/20/2012
September 2012	Dissolved Oxygen	1D Conc	6.0	5.21	9/28/2012
October 2012	Dissolved Oxygen	1D Conc	6.0	5.61	10/3/2012
December 2011	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	5.4	12/8/2011
January 2012	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	7.4	1/1/2012
January 2012	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	13.5	1/19/2012
February 2012	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	9.75	2/1/2012
February 2012	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	11.	2/2/2012
February 2012	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	8.5	2/21/2012
March 2012	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	27.	3/1/2012
March 2012	Nitrogen, Ammonia (NH3-N)	30D Qty	0.28	.36185	3/1/2012
March 2012	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	22.5	3/7/2012
March 2012	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	25.25	3/15/2012
March 2012	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	33.25	3/22/2012
April 2012	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	11.975	4/1/2012
April 2012	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	19.25	4/5/2012
April 2012	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	4.7	4/20/2012
May 2012	Nitrogen, Ammonia (NH3-N)	1D Conc	3.0	4.2	5/4/2012

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Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
October 2012	Nitrogen, Ammonia (NH3-N)	30D Conc	2.0	2.46	10/1/2012
October 2012	Nitrogen, Ammonia (NH3-N)	1D Conc	3.0	4.85	10/3/2012
November 2012	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	7.13	11/1/2012
November 2012	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	12.25	11/14/2012
November 2012	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	9.05	11/20/2012
December 2012	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	10.361	12/1/2012
December 2012	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	12.7	12/6/2012
December 2012	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	18.	12/20/2012
December 2012	Nitrogen, Ammonia (NH3-N)	1D Qty	0.43	.47691	12/20/2012
January 2013	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	9.755	1/1/2013
January 2013	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	7.9	1/8/2013
January 2013	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	8.	1/16/2013
January 2013	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	22.25	1/24/2013
February 2013	Nitrogen, Ammonia (NH3-N)	30D Conc	3.0	13.275	2/1/2013
February 2013	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	13.5	2/6/2013
February 2013	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	15.9	2/12/2013
February 2013	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	10.1	2/18/2013
February 2013	Nitrogen, Ammonia (NH3-N)	1D Conc	4.5	13.6	2/26/2013
November 2011	Total Suspended Solids	1D Conc	18	21.	11/18/2011
January 2012	Total Suspended Solids	30D Conc	12	13.	1/1/2012
January 2012	Total Suspended Solids	1D Conc	18	30.	1/19/2012
February 2012	Total Suspended Solids	1D Conc	18	22.	2/2/2012
March 2012	Total Suspended Solids	30D Conc	12	16.5	3/1/2012
March 2012	Total Suspended Solids	1D Conc	18	24.	3/7/2012
March 2012	Total Suspended Solids	1D Conc	18	20.	3/8/2012
April 2012	Total Suspended Solids	30D Conc	12	23.	4/1/2012
April 2012	Total Suspended Solids	1D Conc	18	45.	4/5/2012
April 2012	Total Suspended Solids	1D Conc	18	21.	4/20/2012
May 2012	Total Suspended Solids	30D Conc	12	23.5	5/1/2012
May 2012	Total Suspended Solids	1D Conc	18	19.	5/11/2012
May 2012	Total Suspended Solids	1D Conc	18	36.	5/18/2012
May 2012	Total Suspended Solids	1D Conc	18	28.	5/25/2012
June 2012	Total Suspended Solids	30D Conc	12	20.25	6/1/2012
June 2012	Total Suspended Solids	1D Conc	18	25.	6/7/2012
June 2012	Total Suspended Solids	1D Conc	18	27.	6/15/2012
July 2012	Total Suspended Solids	30D Conc	12	19.	7/1/2012
July 2012	Total Suspended Solids	1D Conc	18	31.	7/27/2012
January 2013	Total Suspended Solids	30D Conc	12	15.5	1/1/2013
January 2013	Total Suspended Solids	1D Conc	18	37.	1/24/2013
February 2013	Total Suspended Solids	30D Conc	12	25.75	2/1/2013
February 2013	Total Suspended Solids	1D Conc	18	56.	2/12/2013

Discussed during the April 2<sup>nd</sup> inspection were the following items:

- 1) Since the last inspection a new flow meter has been installed, and is currently used to record flow for NPDES reporting purposes.
- 2) Since the last inspection, the use of an operator's logbook has been initiated.
- 3) The electrical box in the blower room has had a new panel cover installed since the last inspection.
- 4) As per the NPDES Permit, samples collected for Total Suspended Solids (TSS), CBOD<sub>5</sub>, and Ammonia Nitrogen (NH<sub>3</sub>), are to be **composite** samples. When asked, Ms. Douglas indicated that an automated composite sampler still needs to be installed to collect the required composite samples. **Please note that the samples collected and reported for these parameters are grab samples, and do not meet the requirements of the NPDES permit. An automatic composite sampler needs to be installed for proper collection of composite samples.**

Since the samples collected for CBOD<sub>5</sub>, TSS, and NH<sub>3</sub> were grab samples, but should have been composite samples, the potential does exist that a number of the listed 30 day average violations for TSS and NH<sub>3</sub> may not have been 30 day average violations.

- 5) In discussion with Ms. Douglas, she indicated Uni-Tech feels the majority of the TSS violations are most probably due to leakage into the chlorine contact tank. It is noted that recent construction of new surface sand filters has only lessened the number of TSS violations, not eliminated them.

The structural integrity of the steel aeration/chlorine tank is very questionable, and there appears to be leakage into the chlorine tank, from holes rusting in the walls shared with the aeration tank.

This leakage could allow additional solids from the aeration tank water to enter into the filtered final effluent water. This addition of solids could cause an increase of suspended solids in the final effluent, resulting in NPDES permit limit violations for TSS.

- 6) Concerns were also expressed that, if the contents of the steel tanks were pumped down to allow repair/welding of the rusted areas, there would be potential for structural failure of the tank itself.

Discussed at our initial enforcement meeting in late 2011, was the possibility that sanitary sewers would potentially become available via agreement between a local developer, the Village of Sheffield, and the School District. Connection to the sanitary sewers, and elimination of the existing WWTP, was an option that all parties agreed would be the best solution to the sewage treatment situation for the Middle and High Schools. This option would also



be the best alternative for sewage treatment for a proposed new high school being considered by the Village. However, in correspondence from Mr. Tim Pelcic, Business Manager for the Sheffield/Sheffield Lake CSD, it was indicated that the local developer had passed away in early April 2012, and the funding for the potential sewers was, and remains, undetermined.

Previous Ohio EPA correspondence (December 19, 2011) served as the initial step in the development and implementation of a plan to bring your facility back into compliance with your NPDES permit. However, the Sheffield Middle/High School WWTP continues to be in Significant Non-Compliance (SNC) with its NPDES permit (for TSS and NH<sub>3</sub>). As a result, Ohio EPA must therefore escalate enforcement measures, in an effort to bring the facility back into compliance.

**You are directed to contact this office, within 14 days of the receipt of this letter, to set up a meeting at the Ohio EPA's Northeast District Office.** The purpose of the meeting will be to discuss the facility's NPDES permit SNC violations, and the actions the School Board will take to come into compliance with the facility's NPDES permit effluent limits.

The outcome sought from this compliance/enforcement meeting is to obtain an agreed upon end date, by which the Village will eliminate SNC violations and return to compliance, and the proposed method by which this will happen.

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

File/SP/Sheffield/Sheffield Schools