



**Environmental
Protection Agency**

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

January 6, 2012

RE: TRUMBULL COUNTY
SOUTHINGTON TOWNSHIP
SOUTHINGTON LOCAL SCHOOLS
WWTP INSPECTION
(NPDES PERMIT 3PT00067)

Southington Local School District
4432 SR 305 NW
Southington, OH 44470
Attn: School District Superintendent

Dear Superintendent:

On December 21, 2011, a meeting was held at the site of the Southington Local School wastewater treatment plant (WWTP), 4432 SR 305 NW, Southington Township. Present for the meeting were Mr. Lucio Velotta, of Scaparotti Construction; Mr. Ed Mosko, of Valley Environmental Labs; and this writer, of the Ohio EPA.

The purpose of the meeting was to discuss the proposal of adding wastewater flow from the Field House building, which is being renovated, and to evaluate the WWTP for its ability to accommodate the proposed additional flow. Operation and maintenance of the existing WWTP was also evaluated and discussed with Mr. Mosko.

A summary of the situation is noted: the old School Building has been demolished; the existing athletic field locker room building (the Field House) has undergone internal renovation, and connected to the existing sewage collection system; the administration building (the Chalker Building), as well as the bus garage, will continue their discharge to the WWTP.

Renovations to the Field House include the installation of 11 toilets, six urinals, eight sinks, and one slop sink. There will be no showers installed in the Field House.

Estimated peak flows to the existing WWTP are projected as follows:

- Field House (Based on peak football game usage):
 - 90 Players @ 20 gpd.....1800 gpd
 - 20 Staff @ 15 gpd..... 300 gpd
 - 120 Band Members @ 10 gpd.....1200 gpd
 - 450 Spectators @ 10 gpd.....4500 gpd

Total Peak Flow.....7800 gpd

- Chalker (Administration) Building (Week Days during School):
 - 2 Employees @ 20 gpd..... 40 gpd

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- Bus Garage (1 toilet, 1 sink, 3 floor drains):
 - Estimated Daily Use..... 100 gpd
- Total Estimated Peak Wastewater Flow.....7940 gpd
WWTP NPDES Permitted Flow.....20,000 gpd

The existing WWTP consists of the following:

- 2575 gallon Trash Trap
- 10,140 gallon Flow Equalization Tank
- 21,020 gpd Extended Aeration Tank
- 5331 gallon Settling Tank
- 3000 gallon Dosing Tank
- 1786 ft² Surface Sand Filter
- 1800 gallon Disinfection Tank (tablet Cl₂ / deCl₂)
- 4018 gallon Aerated Sludge Holding

At the time of the December 21st inspection the following observations were made of the WWTP:

- 1) The trash trap was being utilized and contents were typical. The trash trap was last pumped in the Fall of 2010.
- 2) The flow equalization chamber was being aerated, and the pumps were being utilized and were operating properly.
- 3) The extended aeration tank contents were light watery brown in color, and the return activated sludge (RAS) line was returning almost clear water. Due to the closure of the school, and minimal use by the few remaining personnel present at the site, the organic solids loadings are far below the normal operating range.
- 4) The settling tank contents were relatively clear, the effluent trough was clean, and the skimmer was operating.
- 5) Both pumps in the surface sand filter dosing station were in the 'AUTO' mode, and were operational when tested in the manual mode. The high level alarm was operational.
- 6) The surface sand filters consisted of two cells, of which both cells contained a vegetative growth. The sand should be raked level after removal of any solids or vegetative growth.
- 7) Effluent disinfection is accomplished by tablet chlorination and dechlorination units located in the contact tank. The effluent was not being disinfected, as disinfection is not required for the period of November 1st through April 30th.
- 8) The aerated sludge holding tank was being aerated, and its contents were medium brown.
- 9) Treated effluent being discharged from the WWTP had no visual impact on the receiving stream.

A review of the electronic Discharge Monitoring Reports (eDMR's) submitted to the Ohio EPA for the Southington Local School WWTP, for the period of November 1, 2008 through December 1, 2011, found the following numeric effluent violations for the facility:

**SOUTHINGTON LOCAL SCHOOL
NUMERIC EFFLUENT VIOLATIONS
NPDES PERMIT NO. 3PT00067
(Nov. 1, 2008 through Dec. 1, 2011)**

Reporting Period	Parameter	Limit Type	Limit	Reported Value	Violation Date
June 2009	Fecal Coliform	7D Conc	2000	8433.	6/8/2009
June 2009	Chlorine, Total Residual	1D Conc	0.019	0.05	6/16/2009

This office has no objection to the additional wastewater flow from the renovated Field House being discharged to the existing WWTP. The increased flow and organic loadings should help in the operation and maintenance of the WWTP.

Several additional items were discussed with Mr. Mosko:

1. Because the WWTP was originally designed for hydraulic flows much larger than it is currently, or will be receiving, consideration should be given by the school system to modification of the current WWTP.

The aeration portion of the WWTP appears to consist of two (10,000 gpd) aeration tanks. Modification of the air piping/valves such that only one of the aeration tanks is in use would allow for better treatment and O&M of the sewage system. Should the aeration portion only consist of a single 20,000 gpd tank, the possibility of constructing a dividing wall in the tank should be considered. In either scenario, your consulting engineer would be able to make necessary recommendations.

- 2) Mr. Mosko indicated the National Pollutant Discharge Elimination System (NPDES) required effluent sample is collected at the end of the disinfection tank, prior to post aeration of the effluent, as there is no sampling port following the tank. A small sampling port should be installed in the effluent line after the disinfection tank, prior to the outfall at the receiving stream, as this would be the truly representative sample of the final effluent being discharged.
- 3) Once the Field House upgrades are finished, and the facilities are in normal use, peak flow measurement to the WWTP needs to be obtained to determine actual flow rates to the system.

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Proper operation and maintenance practices should continue to be implemented, which will enable the WWTP to continuously meet its NPDES Permit effluent limits.

A copy of this inspection report is being forwarded to your consulting engineers (GPD Group), and the Trumbull County Health Department. 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: Trumbull County Health Dept.
Attn: Bob O'Connell, Plumbing Inspector

GPD Group
Attn: Gene Hill, PE