



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

September 18, 2013

RE: MEDINA COUNTY
MEDINA COUNTY SD NO. 500 WWTP
NPDES PERMIT NO. OH0043567
OHIO EPA PERMIT NO. 3PK00004*ND
SEWAGE SLUDGE INSPECTION

David Bazilevich
Medina County Sanitary Engineers
791 West Smith Road
Medina, OH 44256

Dear Mr. Bazilevich:

On September 3, 2013, a sewage sludge inspection was conducted in order to determine compliance with Ohio Administrative Code Chapter (OAC) 3745-40, Ohio's sewage sludge rules, at the Medina County S.D. #500 Liverpool wastewater treatment plant (WWTP). The facility was represented by Phil Cummins, Superintendent, and Matt Gaugler, Assistant Superintendent, who provided information regarding the WWTP's sewage sludge operations. The sewage sludge inspection consisted of a review of the WWTP's contact information and sewage sludge records, completion of a compliance checklist, and an inspection of the sewage sludge treatment units.

WWTP Information

The WWTP has a design treatment capacity of fifteen million gallons of wastewater per day (MGD) and currently treats approximately ten MGD. Sewage sludge is treated within a Zimpro low pressure oxygen (LPO) process using a high heat and high pressure process. The Zimpro process oxidizes sewage sludge utilizing 360 to 400 PSI with an average temperature of 350°F. The sewage sludge treatment time exceeds twenty minutes.

Two Zimpro LPO storage tanks are utilized for holding sewage sludge before and after the Zimpro LPO process. The LPO raw storage feed tank has a 30,000 gallon capacity and the storage tank after the LPO process has a 250,000 gallon capacity. In addition, the WWTP utilizes a gravity thickener prior to the initial storage tank and two plat and frame filter presses with a 180 ft x 90 ft covered concrete storage pad after the final storage tank. Onsite sewage sludge storage capacity is approximately ninety days.

Sewage Sludge Management

An exceptional quality (EQ) biosolid is generated utilizing pathogen reduction alternative 8, time and temperature regime (less than seven percent solids), and vector attraction option 4, specific oxygen uptake rate (SOUR). The treated EQ biosolids are beneficial used by Agri-Sludge, Inc. on agricultural ground. Appropriate PR and VAR records are being maintained; however, the SOUR calculations had not yet been completed for 2013 and were calculated during the inspection. Ohio EPA highly recommends that the WWTP modify its current record maintenance practices to ensure that a VAR (i.e. SOURs) has been satisfied, per the NPDES monthly reporting frequency, prior to the beneficial use of biosolids.

Fecal Coliform Monitoring

The WWTP is currently compositing fecal coliform samples when the plat and frame press is utilized, which is approximately every four days. Per the Federal Register, fecal coliform sample analysis should begin as soon as possible after receipt, but must be started no later than 8 hours from time of collection. Unfortunately, while the WWTP's current sampling practice exceeds the minimum monthly monitoring frequency, it is actually resulting in invalid data (i.e. results from samples that have exceeded a holding time) to be generated and reported to Ohio EPA. The collection procedures for fecal coliform monitoring must be immediately modified and implemented to ensure that fecal coliform analysis is initiated prior to eight hours of sample collection.

Onsite Record Retention

An example of the notice and necessary information (NANI) that is provided to the beneficial user, land owner, and farm operator is required to be maintained at the WWTP and was not available. The WWTP committed to contacting the Administration Office to confirm if this information is being maintained. Please be aware that the example of the NANI is required to be maintained at the WWTP.

Via a September 9, 2013 email, Mr. Cummins submitted a copy of the spreadsheet to Ohio EPA that the WWTP provides to Agri-Sludge, Inc. Unfortunately, the information contained within the spreadsheet does not satisfy all of the requirements established within OAC 3745-40-05 as it did not include:

1. The address and telephone number of the permittee;
2. The following statement: "The material you are receiving is or contains biosolids that have been treated to meet the requirements in Chapter 3745-40 of the Administrative Code";
3. The PR and the VAR, as identified in OAC 3745-40-04, that have been satisfied; and
4. A statement that the biosolids shall be further treated, stored, transferred, disposed of or beneficially used in accordance with this chapter.

Standard Operating Procedure

OAC 3745-40-09(C)(3)(c) requires the WWTP to develop a standard operating procedure (SOP) for PR, including fecal coliform, and VAR. While portions of the information required to be developed was available within different reference manuals and locations, the WWTP had not yet developed an SOP that, at a minimum, includes the following information regarding PR and VAR:

1. Sample collection or monitoring locations;
2. The frequency at which sample collection or monitoring is to occur;
3. Sample collection or monitoring procedures;
4. Sample storage and preservation procedures; and
5. Sample or monitoring analysis procedures, including any calculations required for sample or monitoring analysis.

The WWTP must develop a SOP that includes the above information as it pertains to PR, including fecal coliform, and VAR.

NPDES Permit Compliance Review

A review of the electronic discharge self-monitoring reports (eDMR) received by Ohio EPA for the period September 1, 2009 through September 1, 2013, indicates the following issues:

Reporting Station 584

The following pollutant concentrations were reported to Ohio EPA:

Reporting Code	Parameter	Units	Date	Reported Value
31641	Fecal Coliform in Sludge	MPN/G	9/9/2010	1860
31641	Fecal Coliform in Sludge	MPN/G	9/15/2010	4200
31641	Fecal Coliform in Sludge	MPN/G	10/13/2010	3000
31641	Fecal Coliform in Sludge	MPN/G	7/7/2011	AK

Since these results reported for Station 584 exceed the OAC 3745-40-04(B) narrative requirement of 1,000 most probable number per gram of total solids, the generated biosolids were not classified as exceptional quality during the applicable reporting period.

Corrective Action

- The WWTP must modify its fecal coliform sample collection procedures to ensure that the applicable eight hour fecal coliform sample holding time is not exceeded;
- A SOP for PR, VAR, and fecal coliform sampling must be developed and maintained at the WWTP;
- The NANI must be revised to satisfy OAC 3745-40-05; and
- Information regarding how the biosolids that did not satisfy the exceptional quality requirements (Reporting Station 584 above) were managed (i.e. retreated and resampled, as a Class B biosolid, disposal within a landfill, or transferred to another permittee). If the biosolids were managed as Class B, applicable records must be submitted to Ohio EPA to document compliance with OAC 3745-40-09(C)(3) and (4).

Should you have any questions regarding the sewage sludge inspection, please contact me at your earliest convenience at (330) 963-1118 or via email at chris.moody@epa.ohio.gov.

Sincerely,



Chris Moody
Environmental Specialist II
Division of Surface Water

CM:ddw

cc: Phil Cummins, Superintendent, Medina County S.D. #500
ec: Andrew Gall, DSW-NWDO
Betsy VanWormer, DSW-CO
Tom Abraham, Agri-Sludge, Inc. (toma@wif7.com)