



State of Ohio Environmental Protection Agency

Northeast District Office

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

January 2, 2008

RE: WAYNE COUNTY
APPLE CREEK WWTP
SEWAGE SLUDGE INSPECTION

Mayor and Council
63 East Main Street
P.O. Box 208
Apple Creek, OH 44606

Dear Mayor and Council:

On November 29, 2007, a sewage sludge inspection was conducted in order to determine compliance with Ohio Administrative Code (OAC) Rule 3745-40, Ohio's sewage sludge rules, at the Apple Creek wastewater treatment plant (WWTP). Mr. Chuck Ogle, Operator, was present during the sewage sludge inspection and provided information regarding the WWTP's sewage sludge operations and records. The sewage sludge inspection consisted of a review of the WWTP's contact information, completion of a compliance checklist, a review of the WWTP's sewage sludge records, and a walk through of the WWTP sewage sludge units.

The WWTP currently has an average daily flow of approximately 160,000 gallons per day. Sewage sludge generated at the WWTP is treated via two (2) aerobic digesters (2 x 93,000 gallons). The WWTP also has an additional two (2) aerobic digesters (2 x 20,000 gallons) available for use at a secondary WWTP that is not currently in use.

OAC Rule 3745-40-05(M) requires that "[o]ne of the vector attraction reduction [VAR] requirements in paragraphs (Q)(1) to (Q)(10) of this rule shall be met when sewage sludge is applied to the land." According to the WWTP's 2007 Annual Sewage Sludge Report, the WWTP generates a class B sewage sludge by satisfying VAR option No. 4, the specific oxygen uptake rate [SOUR]. WWTP records do not indicate that the required monitoring for VAR is being performed to ensure that the class B sewage sludge is protective of human health and the environment. During the inspection, Mr. Ogle stated that he was unsure if a VAR was being performed and committed to contacting the WWTP's contractor, Agri-Sludge, Inc., to confirm that a VAR option is not being performed. **Effective immediately, the WWTP is not permitted to land apply the generated sewage sludge until such time as a VAR option is satisfied.** The monitoring of VAR must be performed annually, in accordance with OAC Rule 3745-40-06(A). Ohio EPA recommends that the WWTP immediately begin performing VAR option No. 10, immediate incorporation. For your convenience, the VAR options can be located within OAC Rule 3745-40-05(Q) at the following Internet address:

<http://www.epa.state.oh.us/dsw/rules/3745-40.html>.

OAC Rule 3745-40-05(K) requires "...one of the class B pathogen requirements in paragraphs (O)(1) to (O)(3) of this rule and, when applicable, the site restrictions in paragraph (P) of this rule, shall be met when sewage sludge is applied to the land." The WWTP is performing pathogen reduction alternative 1, geometric mean of seven fecal samples, incorrectly. Mr. Ogle stated that the WWTP only collects two (2) fecal coliform samples from the aerobic digesters for

analysis. **In order to perform the correct monitoring, the WWTP must collect seven (7) fecal coliform samples over a two (2) week period collected from representative locations of the aerobic digesters.** The geometric mean is then calculated utilizing the results of the collected samples. Please refer to page 36 of USEPA's "Control of Pathogens and Vector Attraction in Sewage Sludge" manual, which is available at the following Internet address <http://www.epa.gov/nrmrl/pubs/625r92013/625R92013.pdf>, for additional information regarding satisfying the monitoring requirements of pathogen reduction alternative 1.

OAC rule 3745-40-06(I) requires the WWTP to "...develop the following information, shall retain the information for five years, and shall make the information available to the division upon request:

- (1) The concentration of each pollutant listed in paragraph (F) of rule 3745-40-05 of the Administrative Code;
- (2) A description of how the pathogen reduction requirements of rule 3745-40-05 of the Administrative Code are met;
- (3) When applicable, a description of how the vector attraction reduction requirements in paragraphs (Q)(1) to (Q)(8) of rule 3745-40-05 of the Administrative Code are met;
- (4) The results of all analyses required by paragraphs (A), (B), (C), (D), (F), and (G) of this rule; and
- (5) The following certification statement signed by the permittee: "I certify, under penalty of law, that the information that will be used to determine compliance with class (insert A or B) pathogen reduction alternative (insert one of the class A alternatives in paragraphs (N)(1) to (N)(6) of rule 3745-40-05 of the Administrative Code or one of the class B alternatives in paragraphs (O)(1) to (O)(3) of rule 3745-40-05 of the Administrative Code) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."; and
- (6) When applicable, the following certification statement signed by the permittee: "I certify, under penalty of law, that the information that will be used to determine compliance with vector attraction reduction requirement (insert one of the vector attraction reduction requirements in paragraphs (Q)(1) to (Q)(8) of rule 3745-40-05 of the Administrative Code) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

The WWTP was unable to produce records to document that the required information has been recorded for the previous five years. **The WWTP must immediately begin recording and maintaining the required information in accordance with OAC Rule 3745-40-06(I).** Mr. Ogle

stated that WWTP records were taken by the former operator's wife. The WWTP must obtain the taken records and begin maintaining the required records at the WWTP.

OAC rule 3745-40-06(J), located on page 61 of the above Web site, requires "the person who land applies bulk sewage sludge shall develop the following information, shall retain the information for five years, and shall make the information available to the division upon request:

- (1) A description of how the land application agronomic management requirements of rule 3745-40-04 of the Administrative Code are met for each site on which bulk sewage sludge is applied;
- (2) For class B sewage sludge, a description of how the site restrictions of rule 3745-40-05 of the Administrative Code are met for each site on which bulk sewage sludge is applied;
- (3) When applicable, a description of how the vector attraction reduction requirements in paragraphs (Q)(9) to (Q)(10) of rule 3745-40-05 of the Administrative Code are met for each site on which bulk sewage sludge is applied;
- (4) The agronomic rate calculations used to determine the bulk sewage sludge loading rate in dry tons per acre for each site on which bulk sewage sludge is applied;
- (5) The following certification statement signed by the person who land applies bulk sewage sludge: 'I certify, under penalty of law, that the information that will be used to determine compliance with the land application agronomic management requirements of rule 3745-40-04 of the Administrative Code was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.';
- (6) When applicable, the following certification statement signed by the person who land applies bulk sewage sludge: 'I certify, under penalty of law, that the information that will be used to determine compliance with the site restrictions in rule 3745-40-05 of the Administrative Code was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.'; and
- (7) When applicable, the following certification statement signed by the person who land applies bulk sewage sludge: 'I certify, under penalty of law, that the information that will be used to determine compliance with vector attraction reduction requirement (insert one of the vector attraction reduction requirements in paragraphs (Q)(9) to (Q)(10) of rule 3745-40-05 of the Administrative Code) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.'"

The WWTP was unable to produce records to document that Agri-Sludge, Inc. has recorded the required information for the previous five years. **The WWTP must immediately submit information documenting that the information required in OAC Rule 3745-40-06(J), has been maintained for the previous five years.** During the inspection, Mr. Ogle did not know the management practices Agri-Sludge, Inc. was performing. It is highly recommended that the WWTP request Agri-Sludge, Inc. to provide the above required information regularly to the WWTP in order for the WWTP to have complete sewage sludge land application records.

Ohio EPA records also indicate that the WWTP failed to comply with the following parameter's monitoring frequency established within the WWTP's NPDES permit:

Date	Station	Parameter	Frequency
9/1/2004	581	Lead, Total In Sludge	1/Year
9/1/2004	581	Chromium, Total In Sludge	1/Year
9/1/2004	581	Zinc, Total In Sludge	1/Year
9/1/2004	581	Mercury, Total In Sludge	1/Year
9/1/2004	581	Molybdenum In Sludge	1/Year
9/1/2004	581	Copper, Total In Sludge	1/Year
9/1/2004	581	Selenium, Total In Sludge	1/Year
9/1/2004	581	Nickel, Total In Sludge	1/Year
9/1/2004	581	Cadmium, Total In Sludge	1/Year
9/1/2004	581	Arsenic, Total In Sludge	1/Year
9/1/2005	581	Cadmium, Total In Sludge	1/Year
9/1/2005	581	Copper, Total In Sludge	1/Year
9/1/2005	581	Nickel, Total In Sludge	1/Year
9/1/2005	581	Molybdenum In Sludge	1/Year
9/1/2005	581	Chromium, Total In Sludge	1/Year
9/1/2005	581	Zinc, Total In Sludge	1/Year
9/1/2005	581	Mercury, Total In Sludge	1/Year
9/1/2005	581	Lead, Total In Sludge	1/Year
9/1/2005	581	Arsenic, Total In Sludge	1/Year
9/1/2005	581	Selenium, Total In Sludge	1/Year
9/1/2006	581	Arsenic, Total In Sludge	1/Year
9/1/2006	581	Molybdenum In Sludge	1/Year
9/1/2006	581	Nickel, Total In Sludge	1/Year
9/1/2006	581	Lead, Total In Sludge	1/Year
9/1/2006	581	Selenium, Total In Sludge	1/Year
9/1/2006	581	Chromium, Total In Sludge	1/Year
9/1/2006	581	Mercury, Total In Sludge	1/Year
9/1/2006	581	Zinc, Total In Sludge	1/Year
9/1/2006	581	Copper, Total In Sludge	1/Year
9/1/2006	581	Cadmium, Total In Sludge	1/Year

The WWTP must submit information as to why the above monitoring events, provided above, were not performed.

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The WWTP was unable to produce records to document that the sewage sludge application sites have been monitored within the last two years. OAC Rule 3745-40-06(E) provides that "for authorized sewage sludge application sites, the frequency of monitoring for soil pH and soil phosphorus level (Bray-Kurtz P1 extraction or Mehlich 3 extraction) shall be such that the most recent results are not more than two years old at the time of bulk sewage sludge land application." Mr. Ogle did not know if the fields were being analyzed by the WWTP's sewage sludge contractor Agri-Sludge, Inc. **The WWTP must immediately monitor the sewage sludge application sites in accordance with OAC Rule 3745-40-06(E).**

During the inspection, Mr. Ogle inquired what the purpose of the specific oxygen uptake rate (SOUR) test is for. The SOUR test is based on the fact that if aerobically treated sewage sludge consumes very little oxygen, its value as a food source for vectors is very low and therefore vectors are unlikely to be attracted to it. For additional information regarding the rationale behind the SOUR test, please refer to USEPA's "Control of Pathogens and Vector Attraction in Sewage Sludge" manual, provided above.

The WWTP's sewage sludge disposal program appeared to not be in compliance with OAC Rule 3745-40. Should you have any questions regarding the sewage sludge inspection, please contact me at your earliest convenience at (330) 963-1118.

Sincerely,



Chris Moody
Environmental Specialist
Division of Surface Water

CM/mt

cc: Chuck Ogle

ec: Laura Weber, Ohio EPA DSW, NEDO
Andrew Gall, Ohio EPA DSW, NWDO
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