

*** DRAFT - NOT YET FILED ***

TO BE RESCINDED

3745-40-06

Land application monitoring and reporting.

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules and federal statutory provisions referenced in this rule, see rule 3745-40-01 of the Administrative Code.]

- (A) For land applied sewage sludge, the frequency of monitoring for the pollutants established in rule 3745-40-05 of the Administrative Code, the pathogen reduction requirements established in paragraphs (N)(1) to (N)(6) and (O)(1) of rule 3745-40-05 of the Administrative Code, and the vector attraction reduction requirements established in paragraphs (Q)(1) to (Q)(8) of rule 3745-40-05 of the Administrative Code, shall be in accordance with table A-1 of this rule.

Table A-1

Amount of sewage sludge generated (dry U.S. tons per calendar year)	Frequency of monitoring
Greater than zero but less than seventy	annually
Greater than or equal to seventy but less than three hundred twenty	semi-annually
Greater than or equal to three hundred twenty but less than one thousand six hundred fifty	quarterly
Greater than or equal to one thousand six hundred fifty but less than sixteen thousand five hundred	monthly
Greater than or equal to sixteen thousand five hundred	semi-monthly

- (B) For land applied sewage sludge, the frequency of monitoring for total Kjeldahl nitrogen, ammonia nitrogen, phosphorus, potassium, pH, and, when applicable for a liming material, effective neutralizing power, fineness index, and standard of fineness, shall be in accordance with table B-1 of this rule.

Table B-1

Amount of sewage sludge generated (dry U.S. tons per calendar year)	Frequency of monitoring

Greater than zero but less than seventy	annually
Greater than or equal to seventy but less than three hundred twenty	quarterly
Greater than or equal to three hundred twenty	monthly

- (1) The total Kjeldahl nitrogen, ammonia nitrogen, total phosphorus, and total potassium content of the sewage sludge shall be reported in milligrams per kilogram (dry weight basis); and
- (2) The total Kjeldahl nitrogen, available phosphorus, and soluble potassium content of the sewage sludge shall be reported as a "grade".
- (C) For land applied sewage sludge, the frequency of monitoring for the per cent total solids, per cent volatile solids, and weight in dry metric tons shall be in accordance with Table C-1 of this rule.

Table C-1

Amount of sewage sludge generated (dry U.S. tons per calendar year)	Frequency of monitoring
Greater than zero but less than seventy	monthly
Greater than or equal to seventy but less than three hundred twenty	weekly
Greater than or equal to three hundred twenty	daily

- (D) After the sewage sludge has been monitored for two years at the frequencies specified by this rule, the director may, upon request of the permittee, reduce the frequency of monitoring for the pollutants established in rule 3745-40-05 of the Administrative Code and for the pathogen density requirements established in paragraphs (N)(3)(b) and (N)(3)(f) of rule 3745-40-05 of the Administrative Code.
- (E) For authorized 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.

(F) Within six months of the effective date of this rule, and annually thereafter, all treatment works with an average daily final effluent flow greater than or equal to one million gallons per day shall monitor for dioxin in sewage sludge, as the term dioxin is defined in rule 3745-40-01 of the Administrative Code. Within six months of the effective date of this rule, and within six months of each NPDES permit renewal thereafter, all treatment works with an average daily final effluent flow greater than or equal to one hundred thousand gallons per day but less than one million gallons per day shall monitor for dioxin in sewage sludge, as the term dioxin is defined in rule 3745-40-01 of the Administrative Code. All analysis for dioxin in sewage sludge required in this rule shall be performed by a laboratory equipped to provide accurate results.

(1) The 2, 3, 7, 8-TCDD total toxicity equivalence of the dioxin in sewage sludge, calculated from the twenty-nine dioxin congeners defined in rule 3745-40-01 of the Administrative Code, shall be reported as part of the permittees monthly operating report.

(2) All dioxin in sewage sludge monitoring results shall be retained by the permittee for five years and shall be submitted to the division upon request. The results shall include the following:

(a) Total class concentrations of the dibenzo-p-dioxins and dibenzofurans in parts per trillion;

(b) Concentrations of the twenty-nine individual congeners in parts per trillion; and

(c) Calculation of the 2, 3, 7, 8-TCDD total toxicity equivalence in parts per trillion.

(3) The following analytical methods shall be used for the analysis of dioxin in sewage sludge.

(a) United States environmental protection agency method number 1613B shall be used for the seven 2, 3, 7, 8 chlorinated dibenzo-p-dioxin congeners and ten 2, 3, 7, 8 chlorinated dibenzofuran congeners.

[Comment: Method number 1613B may be obtained from: "National Technical Information Service No. PB93-236024, (800) 553-NITS, or Educational Resources Information Center Number W-105, (800) 443-ERIC".]

- (b) United States environmental protection agency method number 1668A (USEPA number 821/C-97-005821/C-97-005) shall be used for the twelve coplanar polychlorinated biphenyl congeners.

[Comment: Method number 1668A may be obtained from: "Office of Water Methods and Guidance Diskette 2, Office of Water Resource Center, (202) 260-7786".]

- (4) Non-detected values shall be reported as one half of the detection limit.
- (5) The toxicity equivalence factors (TEF) listed in table F-1 of this rule shall be used in the calculation of the 2, 3, 7, 8-TCDD total toxicity equivalence.

Table F-1

Congener	TEF
2, 3, 7, 8-tetrachlorodibenzo-p-dioxin	1.0
1, 2, 3, 7, 8-pentachlorodibenzo-p-dioxin	0.5
1, 2, 3, 4, 7, 8-hexachlorodibenzo-p-dioxin	0.1
1, 2, 3, 6, 7, 8-hexachlorodibenzo-p-dioxin	0.1
1, 2, 3, 7, 8, 9-hexachlorodibenzo-p-dioxin	0.1
1, 2, 3, 4, 6, 7, 8-heptachlorodibenzo-p-dioxin	0.01
1, 2, 3, 4, 6, 7, 8, 9-octachlorodibenzo-p-dioxin	0.001
2, 3, 7, 8-tetrachlorodibenzofuran	0.1
1, 2, 3, 7, 8-pentachlorodibenzofuran	0.05
2, 3, 4, 7, 8-pentachlorodibenzofuran	0.5
1, 2, 3, 4, 7, 8-hexachlorodibenzofuran	0.1
1, 2, 3, 6, 7, 8-hexachlorodibenzofuran	0.1
1, 2, 3, 7, 8, 9-hexachlorodibenzofuran	0.1
2, 3, 4, 6, 7, 8-hexachlorodibenzofuran	0.1

1, 2, 3, 4, 6, 7, 8-heptachlorodibenzofuran	0.01
1, 2, 3, 4, 7, 8, 9-heptachlorodibenzofuran	0.01
1, 2, 3, 4, 6, 7, 8, 9-octachlorodibenzofuran	0.001
3, 3', 4, 4'-tetrachlorobiphenyl	0.0001
3, 4, 4', 5-tetrachlorobiphenyl	0.0001
3, 3', 4, 4', 5-pentachlorobiphenyl	0.1
2, 3, 3', 4, 4'-pentachlorobiphenyl	0.0001
2, 3', 4, 4', 5-pentachlorobiphenyl	0.0001
2', 3, 4, 4', 5-pentachlorobiphenyl	0.0001
2, 3, 4, 4', 5-pentachlorobiphenyl	0.0005
3, 3', 4, 4', 5, 5'-hexachlorobiphenyl	0.01
2, 3, 3', 4, 4', 5-hexachlorobiphenyl	0.0005
2, 3, 3', 4, 4', 5'-hexachlorobiphenyl	0.0005
2, 3', 4, 4', 5, 5'-hexachlorobiphenyl	0.00001
2, 3, 3', 4, 4', 5, 5'-heptachlorobiphenyl	0.0001

(G) A permittee shall collect and analyze representative samples of sewage sludge in accordance with this rule. The following methods shall be used to analyze samples of sewage sludge and are adopted by reference in this chapter. Other methods may be used only if such methods are approved by the division.

- (1) Enteric viruses. ASTM designation: ASTM D4994-89.
- (2) Fecal coliform. Part 9221 E. or part 9222 D., "Standard Methods for the Examination of Water and Wastewater".
- (3) Helminth ova. Yanko, W.A. "Occurrence of Pathogens in Distribution and Marketing Municipal Sludges".
- (4) Inorganic pollutants. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods".

- (5) Salmonella sp. bacteria. Part 9260 D., "Standard Methods for the Examination of Water and Wastewater" or Kenner, B.A. and H.P. Clark, "Detection and Enumeration of Salmonella and Pseudomonas aeruginosa," journal of the water pollution control federation, vol. 46, no. 9, September 1974, pp. 2163-2171. Water environment federation, 601 Wythe street, Alexandria, VA 22314.
 - (6) Specific oxygen uptake rate. Part 2710 B., "Standard Methods for the Examination of Water and Wastewater".
 - (7) Total, fixed, and volatile solids. Part 2540 G., "Standard Methods for the Examination of Water and Wastewater".
 - (8) Per cent volatile solids reduction. "Environmental Regulations and Technology - Control of Pathogens and Vector Attraction in Sewage Sludge".
- (H) The permittee who provides treatment to exceptional quality 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) The concentration of each pollutant listed in paragraph (F) of rule 3745-40-05 of the Administrative Code;
 - (2) A description of how the class A pathogen reduction requirements of rule 3745-40-05 of the Administrative Code are met;
 - (3) 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 other analyses required by paragraphs (A), (B), (C), (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 A 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) and 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."

(I) The permittee who provides treatment to 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) 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."

(J) 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.";

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 the information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment."

- (K) The person who land applies bulk sewage sludge subject to the cumulative pollutant loading rates of paragraph (F)(2) of rule 3745-40-05 of the Administrative Code shall develop the following information, shall retain the information indefinitely, and shall make the information available to the division upon request:

- (1) The location, by street address, latitude and longitude, or unique identification number, of each site on which bulk sewage sludge is applied;
- (2) The number of acres in each site on which bulk sewage sludge is applied;
- (3) The date bulk sewage sludge is applied to each site;
- (4) The amount of sewage sludge, in dry tons, applied to each site;
- (5) The cumulative amount of each pollutant listed in paragraph (F)(2) of rule 3745-40-05 of the Administrative Code applied to each site;
- (6) A description of how the requirements to obtain information in paragraph (G) of rule 3745-40-05 of the Administrative Code are met; and
- (7) 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 the requirement to obtain information in paragraph (G) of rule 3745-40-05 of the Administrative Code was prepared, for each site on which bulk sewage sludge was applied, 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."

Effective:

R.C. 119.032 review dates:

Certification

Date

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