

15A NCAC 02T .1310

Proposed Language for Readoption

(a) This Rule applies to the treatment, storage, transportation, use, and disposal of animal waste residuals to be applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land. Not regulated under this Rule is the treatment, storage, transportation, use, or disposal of:

- (1) animal waste residuals applied to agricultural land in accordance with Rule .1303, Rule .1304, Rule 1305, Rule .1307, or Rule .1403 of this Section;
- (2) up to four cubic yards of animal waste residuals distributed from a facility subject to regulation under Rule .1303 or Rule .1304 of this Section per visit to individuals for personal use, with a maximum of ten cubic yards per year per individual;
- (3) oil, grease, grit and screenings from wastewater treatment facilities;
- (4) septage from wastewater treatment facilities;
- (5) ash that is regulated in accordance with Section .1200 of this Subchapter;
- (6) residuals that are regulated in accordance with Section .1100 of this Subchapter;
- (7) residuals that are prepared for land application, used, or disposed of in a solid waste management facility permitted by the Division of Waste Management;
- (8) residuals that are disposed of in an incinerator permitted by the Division of Air Quality;
- (9) residuals that are transported out of state for treatment, storage, use, or disposal; and
- (10) residuals that meet the definition of a hazardous waste in accordance with 40 CFR 260.10 as adopted by reference in 15A NCAC 13A .0102(b) or that have a concentration of polychlorinated biphenyls equal to or greater than 50 milligrams per kilogram of total solids (i.e., dry weight basis).

(b) For new and modified sources of animal waste residuals, the application shall submit a permit application in writing to the Division that includes the following:

- (1) Site maps shall be provided to the Division by the applicant depicting the location of the source and demonstrate compliance with siting setbacks applicable to animal waste management systems established in G.S. 106-803, and NRCS standards at the time of construction;
- (2) A complete analysis of the animal waste residuals. The analysis may include all pollutants identified in Paragraph (c) in this Rule, nutrients and micronutrients, and proof of compliance with pathogen and vector requirements in Paragraphs (f) and (g) of this Rule if applicable;
- (3) A sampling/monitoring plan that describes how compliance with Paragraphs (c), (f), and (g) of this Rule if applicable shall be provided to the Division by the applicant;
- (4) A marketability statement detailing destinations and approximate amounts of the final product to be distributed; and
- (5) A copy of the label/information sheet that complies with Paragraph (h) of this Rule.

(c) Bulk animal waste residuals shall not be applied to a lawn, home garden, or public contact use site nor shall animal waste residuals be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in that residual exceeds the ceiling concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis):

<u>Pollutant</u>	<u>Ceiling Concentration</u> <u>(milligrams per kilogram)</u>
<u>Arsenic</u>	<u>75</u>
<u>Cadmium</u>	<u>85</u>
<u>Copper</u>	<u>4,300</u>
<u>Lead</u>	<u>840</u>
<u>Mercury</u>	<u>57</u>
<u>Molybdenum</u>	<u>75</u>
<u>Nickel</u>	<u>420</u>
<u>Selenium</u>	<u>100</u>

Zinc 7,500

(d) Bulk animal waste residuals shall not be applied to a lawn, home garden, or public contact use site nor shall animal waste residuals be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in that residual exceeds the concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis):

<u>Pollutant</u>	<u>Monthly Average Concentration</u> <u>(milligrams per kilogram)</u>
<u>Arsenic</u>	<u>41</u>
<u>Cadmium</u>	<u>39</u>
<u>Copper</u>	<u>1,500</u>
<u>Lead</u>	<u>300</u>
<u>Mercury</u>	<u>17</u>
<u>Nickel</u>	<u>420</u>
<u>Selenium</u>	<u>100</u>
<u>Zinc</u>	<u>2,800</u>

(e) The Class A pathogen requirements shall be met when bulk animal waste residuals are applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land.

(f) For animal waste residuals to be classified as Class A with respect to pathogens, the requirements of Rule .1106(b) of this Subchapter shall be met.

(g) Animal waste residuals shall not be applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land unless the requirements of one of the vector attraction reduction alternatives have been met. The vector attraction reduction alternatives shall be as follows:

- (1) 38-Percent Volatile Solids Reduction. The mass of the volatile solids in the animal waste residuals shall be reduced by a minimum of 38 percent between the time that the animal waste residuals enter the digestion process and the time it is land applied.
- (2) 40-Day Bench Scale Test. A portion of previously anaerobically-digested animal waste residuals shall be further anaerobically-digested in the laboratory in a bench-scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. The volatile solids in the animal waste residuals shall be reduced by less than 17 percent as measured from the beginning to the end of the test.
- (3) 30-Day Bench Scale Test. A portion of previously aerobically-digested animal waste residuals shall be further aerobically-digested in the laboratory in a bench-scale unit for 30 additional days at a temperature of 20 degrees Celsius. The previously aerobically-digested animal waste residuals shall either have a concentration of two percent total solids or less or shall be diluted with effluent down to two percent total solids at the start of the test. The volatile solids in the animal waste residuals shall be reduced by less than 15 percent as measured from the beginning to the end of the test.
- (4) Specific Oxygen Uptake Rate Test. The specific oxygen uptake rate (SOUR) for animal waste residuals treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (i.e., dry weight basis) corrected to a temperature of 20 degrees Celsius.
- (5) 14-Day Aerobic Processes. The animal waste residuals shall be treated in an aerobic process for 14 days or longer. During that time the temperature of the animal waste residuals shall be higher than 40 degrees Celsius, and the average temperature of the animal waste residuals shall be higher than 45 degrees Celsius.
- (6) Alkaline Stabilization. The pH of the animal waste residuals shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.
- (7) Drying of Stabilized Residuals. The animal waste residuals shall be dried to 75 percent total solids if the animal waste residuals contain no unstabilized solids from a primary wastewater treatment process. Mixing of the animal waste residuals with other materials shall not be used to meet this alternative.
- (8) Drying of Unstabilized Residuals. The animal waste residuals shall be dried to 90 percent total solids if the animal waste residuals contain unstabilized solids from a primary wastewater treatment process. Mixing of the animal waste residuals with other materials shall not be used to meet this alternative.

(h) For animal waste residuals that are sold or given away in a bag or other container for application to the land, either a label shall be affixed to the bag or other container or an information sheet shall be provided to the person who receives the animal waste residuals. The label/information sheet shall contain the following information:

- (1) The name and address of the person who prepared the animal waste residuals;
- (2) A statement that land application of the animal waste residuals shall be prohibited except in accordance with the instructions on the label/information sheet;
- (3) A statement that animal waste residuals shall be applied at agronomic rates and recommended rates for intended uses;
- (4) A statement that the animal waste residuals shall not be applied to any site that is flooded, frozen, or snow covered;
- (5) A statement that adequate procedures shall be provided to prevent surface runoff from carrying any disposed or stored animal waste residuals into any surface waters;
- (6) A statement which identifies that this material shall be prevented from entering any public or private water supply source (including wells), stream, lake, or river;
- (7) Pollutant concentration for pollutants listed in Paragraph (c) of this Rule; and
- (8) Nitrogen and phosphorous concentration.

(i) Monitoring and Reporting.

- (1) Animal waste residuals applied shall be monitored for pollutants as listed in Paragraph (b) of this Rule as well as Paragraph (e) of this Rule and Paragraph (f) of this Rule as applicable at the frequency as stipulated in the following for each residuals source facility:

<u>Metric Tons per 365 day period</u>	<u>Monitoring Frequency</u>
<u>(Dry Weight Basis)</u>	
<u>Greater than zero but less than 290</u>	<u>Once per year</u>
<u>Equal to or greater than 290 but less than 1,500</u>	<u>Once per quarter (four times per year)</u>
<u>Equal to or greater than 1,500 but less than 15,000</u>	<u>Once per 60 days (six times per year)</u>
<u>Equal to or greater than 15,000</u>	<u>Once per month (12 times per year)</u>

- (2) A report of all monitoring and reporting requirements as specified in the permit shall be submitted to the Division by the permittee annually on or before March 1st of each calendar year.
- (3) All records shall be retained for a minimum of five years.

Public Comments – General

40 CFR 503 Does Not Apply

1. According to email from Sam Sampath of Region 4 EPA, "Manure derived products are not covered under 40 CFR Part 503. Sewage Sludge is regulated under 503, the definition of which doesn't include animal waste." These regulations may wish to refrain from using language that mentions Class A and its standards as it should not be required to meet the performance requirements of 02T .1100 which were patterned after the 40 CFR Part 503. – R. Branch
2. Need to specify Class A treatment standards. Per Sam Sampath, EPA Region 4, manure derived products are not subject to 40 CFR 503, so this is not applicable to animal waste rules. – R. Branch
3. EPA 40 CFR 503 requirements are intended for the use of domestic biosolids and were not intended to regulate animal waste residuals. – Farm Bureau

Terminology

4. The EMC proposes to define "bulk animal waste residuals" to mean "animal waste residuals that are transported and not sold or given away in a bag or other container for application to land." Yet, two subsections of the proposed rule state that "bulk animal waste residuals" shall not be "sold or given way in a bag or other container for application to land" in specified circumstances. Either those subsections should apply to all animal waste residuals, or they should be amended to reduce confusion given the definition of included terms. Similarly, the proposed rule

states "The Class A pathogen requirements shall be met when bulk animal waste residuals are . . . sold or given away in a bag or other container for application to the land. "This internal inconsistency should be corrected before the rule is finalized. – Amer. Rivers et.al.

5. The term 'residual' should be more narrowly defined. 'Residual' has a historic and meaning related to municipal solid waste. Expanding its use broadly could lead to confusion. The term residual (as it relates to animal waste management systems) should be used for referring to solids or semi-solids recovered following some anaerobic treatment process, e.g. anaerobic lagoon solids separation. – NCDA&CS
6. Language as proposed is not accurate in regard to current use of "bulk" when compared to 02T 0.1100. "bulk" should be deleted to ensure consistency with 02T 0.1100. where it is being deleted. – Farm Bureau
7. In item (c) it is proposed to refer to animal waste and animal waste residuals separately for clarity. For example, 'Bulk animal waste or animal waste residuals shall not....' – NCDA&CS

General Comments

8. Proposed 15A NCAC 02T .1310 might be somewhat longer and more complex than necessary. We fear the proposed rule is excessively long and complicated. We think that greater understanding and compliance in the field would be achieved through a more streamlined approach. We would be willing to work with the agency to develop a final rule that might be easier to understand and be followed. – NCPF
9. Suggest restrictions on land application like those stated in 02T .1109(b) "if the vertical separation of the seasonal high water table and the depth of residuals application is less than one foot. – Amer. Rivers et.al.
10. Recommend inclusion of setback provisions similar to those applicable to the land application of biological residuals suggest restrictions on land application like those stated in 02T .1109(b), prohibitions of land application "if the application causes prolonged nuisance conditions;" "within the 100-year flood elevation" absent certain conditions. – Amer. Rivers et.al.
11. "...we commend the agency for closing this loophole and reasserting its regulatory authority. We also appreciate the inclusion of a requirement for permittees to annually submit a summary of their monitoring and reporting activities. – Amer. Rivers et.al.
12. Supportive of consistent permitting format, and flexibility while protecting human health. – Farm Bureau

Hearing Officer Response

40 CFR 503 Does Not Apply – Based upon EPA's review and clarification of both 40 CFR 503 and 40 CFR 122 (CAFO Rule), the proposed rule is being modified to provide protection to public health and the environment with treatment and monitoring requirements that are appropriate to the source material.

Terminology – Based upon EPA's review and clarification of both 40 CFR 503 and 40 CFR 122 (CAFO Rule), the proposed rule is being modified to provide protection to public health and the environment. Due to these modifications, the term "bulk animal waste residuals" has been eliminated. Also see Hearing Officers' Response to ["Animal Waste Residuals" comments](#) addressed for in 15A NCAC 02T .1302(2).

General Comments

Comments 9 and 10. Rule 02T .1109(b) exempts Class A residuals (similar to the animal waste residuals) that are sold or given away from the setbacks listed in 02T .1109(a) to which the commenter refers. The vertical separation and setbacks referenced are not applicable.

For clarification purposes, the Hearing Officers recommend modifying the language as shown below.

Revised Language for Readoption

(a) This Rule applies to the treatment, storage, transportation, use, and disposal of animal waste residuals to be applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land. Not regulated under this Rule is the treatment, storage, transportation, use, or disposal of:

- (1) animal waste residuals applied to agricultural land in accordance with Rule .1303, Rule .1304, Rule 1305, Rule .1307, or Rule .1403 of this Section;
- (2) up to four cubic yards of animal waste residuals distributed from a facility subject to regulation under Rule .1303 or Rule .1304 of this Section per visit to individuals for personal use, with a maximum of ten cubic yards per year per individual;
- (3) oil, grease, grit and screenings from wastewater treatment facilities;
- (4) septage from wastewater treatment facilities;
- (5) ash that is regulated in accordance with Section .1200 of this Subchapter;
- (6) residuals that are regulated in accordance with Section .1100 of this Subchapter;
- (7) residuals that are prepared for land application, used, or disposed of in a solid waste management facility permitted by the Division of Waste Management;
- (8) residuals that are disposed of in an incinerator permitted by the Division of Air Quality;
- (9) residuals that are transported out of state for treatment, storage, use, or disposal; and
- (10) residuals that meet the definition of a hazardous waste in accordance with 40 CFR 260.10 as adopted by reference in 15A NCAC 13A .0102(b) or that have a concentration of polychlorinated biphenyls equal to or greater than 50 milligrams per kilogram of total solids (i.e., dry weight basis) and;
- (11) animal mortality.

(b) For new and modified sources of animal waste residuals, the application shall submit a permit application in writing to the Division that includes the following:

- (1) Site maps shall be provided to the Division by the applicant depicting the location of the source and demonstrate compliance with siting setbacks applicable to animal waste management systems established in G.S. 106-803, and NRCS standards at the time of construction;
- (2) A complete analysis of the animal waste residuals. The analysis may shall include all pollutants identified in Paragraph (c) in this Rule, nutrients and micronutrients, and proof of compliance with pathogen and vector requirements in Paragraphs (f) and (g) of this Rule if applicable;
- (3) A sampling/monitoring plan that describes how compliance with Paragraphs (c), (f), and (g) of this Rule if applicable shall be provided to the Division by the applicant;
- (4) A marketability statement detailing destinations and approximate amounts of the final product to be distributed; and
- (5) A copy of the label/information sheet that complies with Paragraph (h) of this Rule.

(c) Bulk animal waste residuals shall not be applied to a lawn, home garden, or public contact use site nor shall animal waste residuals be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in that residual exceeds the ceiling concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis):

<u>Pollutant</u>	<u>Ceiling Concentration</u> <u>(milligrams per kilogram)</u>
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<u>Nickel</u>	<u>420</u>
<u>Selenium</u>	<u>100</u>
<u>Zinc</u>	<u>7,500</u>

~~(dc) Bulk a~~ Animal waste residuals shall not be applied to a lawn, home garden, or public contact use site nor shall animal waste residuals be sold or given away in a bag or other container for application to the land if the concentration of any pollutant in that residual exceeds the concentration for that pollutant as stipulated in the following (i.e., on a dry weight basis):

Pollutant	Monthly Average Ceiling Concentration (milligrams per kilogram)
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mereury	17
Nickel	420
Selenium	100
Zinc	2,800

~~(ed) The Class A~~ Animal waste residuals shall meet the pathogen requirements of Rule .1106(a)(2) of this Subchapter shall be met when bulk animal waste residuals are to be applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land.

~~(f) For animal waste residuals to be classified as Class A with respect to pathogens, the requirements of Rule .1106(b) of this Subchapter shall be met.~~

~~(g) Animal waste residuals shall not be applied to a lawn, home garden, or public contact use site or sold or given away in a bag or other container for application to the land unless the requirements of one of the vector attraction reduction alternatives have been met. The vector attraction reduction alternatives shall be as follows:~~

- ~~(1) 38 Percent Volatile Solids Reduction. The mass of the volatile solids in the animal waste residuals shall be reduced by a minimum of 38 percent between the time that the animal waste residuals enter the digestion process and the time it is land applied.~~
- ~~(2) 40 Day Bench Scale Test. A portion of previously anaerobically digested animal waste residuals shall be further anaerobically digested in the laboratory in a bench scale unit for 40 additional days at a temperature between 30 and 37 degrees Celsius. The volatile solids in the animal waste residuals shall be reduced by less than 17 percent as measured from the beginning to the end of the test.~~
- ~~(3) 30 Day Bench Scale Test. A portion of previously aerobically digested animal waste residuals shall be further aerobically digested in the laboratory in a bench scale unit for 30 additional days at a temperature of 20 degrees Celsius. The previously aerobically digested animal waste residuals shall either have a concentration of two percent total solids or less or shall be diluted with effluent down to two percent total solids at the start of the test. The volatile solids in the animal waste residuals shall be reduced by less than 15 percent as measured from the beginning to the end of the test.~~
- ~~(4) Specific Oxygen Uptake Rate Test. The specific oxygen uptake rate (SOUR) for animal waste residuals treated in an aerobic process shall be equal to or less than 1.5 milligrams of oxygen per hour per gram of total solids (i.e., dry weight basis) corrected to a temperature of 20 degrees Celsius.~~
- ~~(5) 14 Day Aerobic Processes. The animal waste residuals shall be treated in an aerobic process for 14 days or longer. During that time the temperature of the animal waste residuals shall be higher than 40 degrees Celsius, and the average temperature of the animal waste residuals shall be higher than 45 degrees Celsius.~~
- ~~(6) Alkaline Stabilization. The pH of the animal waste residuals shall be raised to 12 or higher by alkali addition and, without the addition of more alkali, shall remain at 12 or higher for two hours and then at 11.5 or higher for an additional 22 hours.~~
- ~~(7) Drying of Stabilized Residuals. The animal waste residuals shall be dried to 75 percent total solids if the animal waste residuals contain no unstabilized solids from a primary wastewater treatment process. Mixing of the animal waste residuals with other materials shall not be used to meet this alternative.~~
- ~~(8) Drying of Unstabilized Residuals. The animal waste residuals shall be dried to 90 percent total solids if the animal waste residuals contain unstabilized solids from a primary wastewater treatment process. Mixing of the animal waste residuals with other materials shall not be used to meet this alternative.~~

(he) For animal waste residuals that are sold or given away in a bag or other container for application to the land, either a label shall be affixed to the bag or other container or an information sheet shall be provided to the person who receives the animal waste residuals. The label/information sheet shall contain the following information:

- (1) The name and address of the person who prepared the animal waste residuals;
- (2) A statement that land application of the animal waste residuals shall be prohibited except in accordance with the instructions on the label/information sheet;
- (3) A statement that animal waste residuals shall be applied at agronomic rates and recommended rates for intended uses;
- (4) A statement that the animal waste residuals shall not be applied to any site that is flooded, frozen, or snow covered;
- (5) A statement that adequate procedures shall be provided to prevent surface runoff from carrying any disposed or stored animal waste residuals into any surface waters;
- (6) A statement which identifies that this material shall be prevented from entering any public or private water supply source (including wells), stream, lake, or river;
- (7) Pollutant concentration for pollutants listed in Paragraph (c) of this Rule; and
- (8) Nitrogen and phosphorous concentration.

(f) Monitoring and Reporting.

- (1) Animal waste residuals applied shall be monitored for pollutants as listed in Paragraph (bc) of this Rule as well as and for pathogens as described in Paragraph (ed) of this Rule and Paragraph (f) of this Rule as applicable at the frequency as stipulated in the following for each residuals source facility:

<u>Metric Tons per 365 day period</u>	<u>Monitoring Frequency</u>
<u>(Dry Weight Basis)</u>	
<u>Greater than zero but less than 290</u>	<u>Once per year</u>
<u>Equal to or greater than 290 but less than 1,500</u>	<u>Once per quarter (four times per year)</u>
<u>Equal to or greater than 1,500 but less than 15,000</u>	<u>Once per 60 days (six times per year)</u>
<u>Equal to or greater than 15,000</u>	<u>Once per month (12 times per year)</u>

- (2) A report of all monitoring and reporting requirements as specified in the permit shall be submitted to the Division by the permittee annually on or before March 1st of each calendar year.
- (3) All records shall be retained for a minimum of five years.

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