

1 15A NCAC 13B .1201 is readopted with changes as published in 33:24 NCR 2365 as follows:

2
3 **SECTION .1200 - MEDICAL WASTE MANAGEMENT**

4
5 **15A NCAC 13B .1201 DEFINITIONS**

6 For the purpose of ~~the~~ this Section, the following definitions apply:

- 7 (1) "Blood and body fluids" means liquid blood, serum, plasma, other blood products, emulsified human
8 tissue, spinal fluids, and pleural and peritoneal fluids. Blood and body fluids does not include
9 dialysates, feces, or urine if not removed during surgeries and autopsies. ~~Dialysates are not blood or~~
10 ~~body fluids under this definition.~~
- 11 (2) "Generator" and "Generating facility" ~~means~~ mean any business, integrated medical facility, and
12 volunteer or non-profit healthcare services where medical waste is produced, ~~first becomes a waste,~~
13 including ~~but not limited to~~ any medical or dental facility, mortuary, funeral home, laboratory,
14 veterinary ~~hospital~~ hospital, and blood ~~bank.~~ bank; but does not include households.
- 15 (3) "Integrated medical facility" means one or more health service facilities as defined in G.S.
16 131E-176(9b) that are:
- 17 (a) located in a single county or two contiguous counties;
- 18 (b) affiliated with a university medical school or that are under common ownership and
19 control; and
- 20 (c) serve a single service area.
- 21 (4) "Medical waste" ~~as~~ means the term defined in G.S. 130A-290(17a), 130A-290(18).
- 22 (5) "Microbiological waste" means the term defined in Rule .0101(26) of this Subchapter. ~~cultures and~~
23 ~~stocks of infectious agents, including but not limited to specimens from medical, pathological,~~
24 ~~pharmaceutical, research, commercial, and industrial laboratories.~~
- 25 (6) "~~Microwave treatment~~" ~~means treatment by microwave energy for sufficient time to render waste~~
26 ~~non-infectious.~~
- 27 (7) "~~Off site~~" ~~means any site which is not "on site".~~
- 28 (8) "~~On site~~" ~~means the same or geographically contiguous property which may be divided by public~~
29 ~~or private right of way.~~
- 30 (6) "Non-hazardous pharmaceutical waste" is a medical [waste. It is] waste and means a medical drug
31 that is expired, unused, contaminated, damaged, or no longer needed or used for its prescribed
32 purpose and that is not a hazardous waste as defined in G.S. [130A-290(8).] 130A-290(a)(8).
- 33 (7) "Nuisance" means odorous outside of the property boundary or transport vehicle; or attracting
34 vermin or disease vectors.
- 35 (8) "Package" is the total contents of a box, drum, or vessel containing medical waste, including labeling
36 and markings.

- 1 (9) "Pathological waste" means the term defined in Rule .0101(31) of this Subchapter. human tissues,
2 organs and body parts; and the carcasses and body parts of all animals that were known to have been
3 exposed to pathogens that are potentially dangerous to humans during research, were used in the
4 production of biologicals or in vivo testing of pharmaceuticals, or that died with a known or
5 suspected disease transmissible to humans.
- 6 (10) "Record" means any data required to be kept on file by the operator or responsible party, or
7 submitted to the Division in accordance with the rules of this Section. A record may be a paper copy
8 [in hard copy (paper)] or electronic format that is legible and in English.
- 9 (11)(10) "Regulated Medical Waste" means the term defined in Rule .0101(34) of this Subchapter. blood and
10 body fluids in individual containers in volumes greater than 20 ml, microbiological waste, and
11 pathological waste that have not been treated pursuant to Rule .1207 of this Section.
- 12 (12) "Responsible party" means the entity that is in possession of and has accepted the regulated medical
13 waste.
- 14 (13)(11) "Sharps" means mean the term as defined in G.S. 130A-309.26(a)(1). and includes needles, syringes
15 with attached needles, capillary tubes, slides and cover slips, and scalpel blades.
- 16 (14) "Trace chemotherapy waste" means medical waste containing no more than three percent by weight
17 of a medical drug used for [chemotherapy.]chemotherapy, but is not a radioactive waste. Trace
18 chemotherapy waste includes gowns, gloves, wipes, and other handling, preparation, administration,
19 cleaning, and decontamination items [associated] used in association with chemotherapy.
- 20 (15) "Transfer or storage operations" is the act of, and process by which, regulated medical waste is
21 removed from a transport vehicle and placed in another transport vehicle or in storage awaiting
22 transport.
- 23 (16) "Transport vehicle" means a vehicle or other conveyance type used to transport regulated medical
24 waste to and from transfer or storage operations or to and from a treatment facility.
- 25 (17)(12) "Treatment" as means the term as defined in G.S. 130A-309.26(a)(2).
- 26 (18) "Treatment facility" means a regulated medical waste treatment facility permitted by the Division
27 in accordance with the rules of this Section.[Subchapter.]
- 28 (19) "Solid waste" means the term defined in G.S. 130A-290(a)(35).

29
30 *History Note: Authority G.S. 130A-309.26;*
31 *Eff. October 1, 1990;*
32 *Amended Eff. April 1, 1993- 1993;*
33 *Readopted Eff. November 1, 2019.*
34

1 15A NCAC 13B .1202 is readopted with changes as published in 33:24 NCR 2365 as follows:

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3 **15A NCAC 13B .1202 GENERAL REQUIREMENTS FOR MEDICAL WASTE**

4 (a) Medical waste is subject to the ~~requirements in all applicable rules in 15A NCAC 13B.~~ 13B, "Solid Waste
5 Management."

6 (b) Sharps and other sharp objects such as syringes with attached needles, capillary tubes, slides and cover slips,
7 lancets, auto injectors, connection needles and sets, exposed ends of dental wires, and objects that can penetrate the
8 skin ~~At the generating facility, sharps shall be placed in a rigid, leak-proof when in an upright position, and puncture-~~
9 ~~resistant container, and container which is rigid, leak proof when in an upright position and puncture resistant.~~
10 Contained sharps shall not be compacted prior to off-site transportation, transportation unless placed in a sealed
11 compactor unit that is hauled off for disposal by the transporter. After leaving the generating facility, the container
12 and its contents shall be handled in a manner that avoids human contact with the sharps.

13 (c) Blood and body fluids in individual containers in volumes of 20 milliliters ml or less ~~which are not stored in a~~
14 ~~secured area restricted to authorized personnel prior to off site transportation shall be packaged in accordance with~~
15 ~~the regulated medical waste packaging requirements as described in Rule .1204(a)(1) of this Section or in a container~~
16 ~~suitable for sharps. Containers of blood and body fluids which are packaged in accordance with Rule .1204(a)(1) of~~
17 ~~this Section or in a container suitable for sharps as required by this Rule shall be stored in [a-secured] an area accessible~~
18 only to the responsible party or their designated representative, and shall not be compacted prior to off-site
19 transportation.

20 (d) Regulated medical waste shall not be ~~compacted.~~ compacted prior to treatment.

21 (e) Only the responsible party or their designated representative shall have access to regulated medical waste.

22 (f) Medical waste shall not become putrescent. [Putrescent medical] Medical waste shall be disposed of or treated
23 within three calendar [days.] days of becoming putrescent.

24 (g) Medical waste shall not become a nuisance.

25 (h) Medical waste accepted at transfer or storage operations or a treatment facility shall not be subject to the
26 requirements of Rule .1203(a) and (b)(2) of this Section.

27 (i) Medical waste treatment and disposal methods:

28 (1) Blood and body fluids in individual containers in volumes greater than 20 milliliters shall be
29 disposed of by sanitary sewer if the local sewage treatment authority has been notified; or treated
30 by incineration or steam sterilization.

31 (2) Microbiological waste shall be treated by incineration, steam sterilization, ozonation, microwave,
32 or chemical treatment.

33 (3) Non-hazardous pharmaceutical waste shall be treated by incineration [incineration, returned to the
34 vendor, reused,] or disposed of at a municipal solid waste landfill. The requirements of this
35 Subparagraph shall not prevent non-hazardous pharmaceuticals from being returned to the vendor.

36 (4) Pathological waste shall be treated by incineration or ozonation.

37 (5) Trace chemotherapy waste shall be treated by incineration or ozonation.

1 (6) Noninfectious medical waste and blood and body fluids in individual containers in volumes of 20
2 milliliters[ml] or less may be [recycled,] disposed of in a municipal solid waste landfill, [landfill or
3 sanitary sewer,] or treated by the treatment methods as described in this Paragraph. Blood and body
4 fluids in individual containers in volumes of 20 milliliters or less may also be disposed of in a
5 sanitary sewer. The requirements of this Subparagraph shall not prevent noninfectious medical
6 waste such as textiles, plastic, glass, or metal from being recycled.

7 (j) Medical waste treated at the generating facility is not subject to the requirements of Paragraphs (o), (p), and (q) of
8 this Rule, and Rule .1204(b)(1), (b)(3), and (b)(8) of this Section.

9 (k) Crematoriums are not subject to the requirements of this Section.

10 (l) Transport vehicles, transfer or storage operations, and treatment facilities shall:

11 (1) be kept free of leaked, spilled, and unpackaged medical waste;

12 (2) not contain porous floor coverings;

13 (3) be ventilated;

14 (4) not create a nuisance; and

15 (5) have a method of leak control or spill cleanup, including decontamination.

16 (m) A responsible party shall be present when regulated medical waste is being transferred by means of transfer or
17 storage operations.

18 (n) Regulated medical waste shall be transported and stored in a manner that prevents exposure to the environment
19 and inclement weather.

20 (o) Unrefrigerated regulated medical waste shall be treated within 21 calendar days of shipment from the generator.

21 (p) Refrigeration at an ambient temperature of a maximum of 45 degrees Fahrenheit (7.22 degrees Celsius) shall be
22 maintained for regulated medical waste not treated within 21 calendar days of shipment from the generator.

23 (q) All regulated medical waste shall be treated within 60 calendar days of shipment from the generator.

24
25 *History Note: Authority G.S. 130A-309.26;*

26 *Eff. October 1, 1990;*

27 *Amended Eff. January 4, 1993; March 1, 1991. 1991;*

28 *Readopted Eff. November 1, 2019.*

1 15A NCAC 13B .1204 is readopted with changes as published in 33:24 NCR 2365 as follows:

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3 **15A NCAC 13B .1204 REQUIREMENTS FOR GENERATORS THE TREATMENT OF REGULATED**
4 **MEDICAL WASTE**

5 (a) ~~A person who ships regulated medical waste from the generating facility for off site treatment shall meet the~~
6 ~~following requirements:~~

- 7 (1) ~~Regulated medical waste shall be packaged in a minimum of one plastic bag placed in a rigid~~
8 ~~fiberboard box, rigid drum, or other rigid container constructed in a manner that prevents leakage~~
9 ~~of the contents. The plastic bag shall be impervious to moisture and have a strength sufficient to~~
10 ~~preclude ripping, tearing or bursting the waste filled bag under normal conditions of usage and~~
11 ~~handling. Each bag shall be constructed of material of sufficient single thickness strength to pass~~
12 ~~the 165 gram dropped dart impact resistance test as prescribed by Standard D-1709-91 of the~~
13 ~~American Society for Testing and Materials, which is incorporated by reference including~~
14 ~~subsequent amendments and editions, and certified by the bag manufacturer. A copy is available for~~
15 ~~inspection at the Department of Environment, Health, and Natural Resources, Division of Solid~~
16 ~~Waste Management, 401 Oberlin Road, Raleigh, North Carolina. Copies may be requested by mail~~
17 ~~at American Society for Testing and Materials, 1916 Race Street, Philadelphia, P.A. 19103 or by~~
18 ~~calling (215) 299-5400 for a cost of twelve dollars (\$12.00) plus one dollar and fifty cents (\$1.50)~~
19 ~~for shipping and handling unless prepaid, then the fee is twelve dollars (\$12.00).~~
- 20 (2) ~~Regulated medical waste shall be stored in a manner that maintains the integrity of the packaging at~~
21 ~~all times.~~
- 22 (3) ~~Each package of regulated medical waste shall be labeled with a water resistant universal biohazard~~
23 ~~symbol.~~
- 24 (4) ~~Each package of regulated medical waste shall be marked on the outer surface with the following~~
25 ~~information:~~
- 26 (A) ~~the generator's name, address, and telephone number;~~
 - 27 (B) ~~the transporter's name, address, and telephone number;~~
 - 28 (C) ~~storage facility name, address, and telephone number, when applicable;~~
 - 29 (D) ~~treatment facility name, address and telephone number;~~
 - 30 (E) ~~date of shipment; and~~
 - 31 (F) ~~"INFECTIOUS WASTE" or "MEDICAL WASTE".~~

32 (b) ~~Records of regulated medical waste shall be maintained for each shipment and shall include the information listed~~
33 ~~in this Paragraph. This information shall be maintained at the generating facility for no less than three years.~~

- 34 (1) ~~amount of waste by number of packages (piece count);~~
35 (2) ~~date shipped off site;~~
36 (3) ~~name of transporter;~~
37 (4) ~~name of storage or treatment facility.~~

1 ~~The requirements of this Paragraph shall not apply to persons who generate less than 50 pounds of regulated medical~~
2 ~~waste per month.~~

3 ~~(e) A plan to ensure proper management of regulated medical waste shall be prepared and maintained at the generating~~
4 ~~facility.~~

5 (a) General requirements for treated regulated medical waste:

6 (1) Treated regulated medical waste shall be covered to prevent exposure to the environment and
7 inclement weather.

8 (2) Treated regulated medical waste may be placed uncovered in or under a weather resistant structure
9 while dewatering or while in the process of being covered.

10 (3) Treated regulated medical waste shall be stored no longer than 14 calendar days after treatment
11 unless the facility's operations plan states that the storage unit is a necessary part of the operation of
12 the treatment process and is enclosed, sealed, and watertight.

13 (4) Treated regulated medical waste storage and transport containers, compactors, trailers, and cargo
14 bays shall be maintained in accordance with the manufacturer's specifications.

15 (5) Treated regulated medical waste shall not be transported off site uncovered.

16 (6) The exterior of treated regulated medical waste storage and transport containers, compactors,
17 trailers, and cargo bays shall be free of solid waste and solid waste residue.

18 (7) Treated regulated medical waste shall not become putrescent. Putrescent treated regulated medical
19 waste shall be disposed of within three calendar days.

20 (8) Treated regulated medical waste shall not become a nuisance.

21 (9) Treated regulated medical waste shall be noninfectious.

22 (b) General requirements for treatment facilities:

23 (1) The treatment facility shall be compliant with Rule .1202(o), (p), and (q) of this Section.

24 (2) The treatment facility shall issue a written record notifying the generating facility if it becomes
25 aware of a package of medical waste received that is not in compliance with Rule .1202(i) of this
26 Section for the treatment method utilized. A copy of the record shall be maintained at the treatment
27 facility.

28 (3) The treatment facility shall maintain a record of each shipment of regulated medical waste received
29 for treatment for a period of three years to include the following information:

30 (A) the number of packages;

31 (B) the generator name, physical address, and phone number;

32 (C) the transporter name, physical address, and phone number;

33 (D) the date each package was picked up from the generator;

34 (E) the date each package was received at the treatment facility;

35 (F) the weight of each package in pounds; and

36 (G) the date each package was treated.

1 (4) The treatment facility shall submit a facility operations plan to the Division with the permit
2 application required in accordance with the rules of this Subchapter that shall include the following
3 information:

4 (A) the name, mailing address, physical address, office and mobile phone numbers, and email
5 address for the responsible party(s), owner(s), and operator(s);

6 (B) the physical address and the county GIS property data for the facility location;

7 (C) types and estimated amounts of medical waste to be accepted at and shipped out from the
8 facility;

9 (D) a description of the treatment process or ~~processes;~~ processes, and treatment unit
10 specifications;

11 (E) procedures for how the medical waste will be received, handled, stored, transferred, or
12 treated at the facility;

13 (F) procedures for sampling or testing required by the rules of this Section;

14 (G) procedures that the facility shall use to prevent medical waste from becoming a nuisance
15 or putrescent, and procedures for abatement if medical waste becomes a nuisance or
16 putrescent;

17 (H) contingency plan identifying risks and describing how the facility or transporter will
18 respond to incidents or emergencies, including a phone number for a facility or transporter
19 representative that is available to respond 24 hours a day and seven days a week, and how
20 regulated medical waste will be handled or redirected when facilities or transport vehicles
21 are unavailable due to maintenance, adverse weather, or other emergencies; and

22 (I) additional information that the Division may request pertaining to the facility operations if
23 it is necessary to determine compliance with the rules of this Section.

24 A copy of the operations plan shall be kept at the facility and shall be available for review by the
25 Division during facility inspections or upon request by the Division. If the information required by
26 this Paragraph changes, the facility shall submit a revised facility operations plan to the Division
27 and update the copies of the plan kept by the facility.

28 (5) The treatment facility shall maintain a record of the disposal facility's contact information including
29 the facility name, permit number, physical location and mailing address, and contact name and
30 phone number.

31 (6) The treatment facility shall maintain a record of the dates and tonnages of treated regulated medical
32 waste sent for disposal.

33 (7) The treatment facility shall maintain operating records and monitoring, testing, and maintenance
34 records required in accordance with the rules of this Section for a period of three years.

35 (8) The facility shall submit an annual report to the Division in accordance with G.S. 130A-309.09D(b).

36 (c) Steam sterilization treatment requirements:

- 1 (1) Steam under pressure shall be provided to maintain a temperature of not less than 250 degrees
2 Fahrenheit for 45 minutes at 15 pounds per square inch of gauge pressure during each cycle.
- 3 (2) The steam sterilization unit shall have a device that records the start and end time of each cycle.
- 4 (3) The steam sterilization unit shall have a device that records the pressure and a device that records
5 the temperature throughout each cycle.
- 6 (4) Testing of treatment under conditions of full loading to confirm compliance with Subparagraph
7 (a)(9) of this Rule shall be performed no less than once per week using a biological indicator of
8 Geobacillus stearothermophilus spores having a population of not less than 1.0×10^4 placed within
9 the waste load.
- 10 (5) A record of each test performed shall be maintained and shall include the type of indicator used, the
11 test date, the start and end times, and the test result.

12 (d) Incineration treatment requirements:

- 13 (1) The Division shall not issue a solid waste management permit in accordance with the rules of this
14 Subchapter to the treatment facility unless the Division of Air Quality (DAQ) has issued a permit
15 for operation of the incinerator.
- 16 (2) The treatment facility shall maintain the DAQ permit for the operation of the incinerator.
- 17 (3) Regulated medical waste shall be subjected to a burn temperature in the primary chamber of not less
18 than 1200 degrees Fahrenheit.
- 19 (4) The incinerator shall have a monitoring device that records the primary chamber temperature. A
20 record of the continuous monitoring of the primary chamber temperature while in use shall be
21 maintained.
- 22 (5) Interlocks or other process control devices shall be provided to prevent the introduction of regulated
23 medical waste into the primary chamber until the secondary chamber achieves operating
24 temperature as defined in the permit for incinerator operation issued by DAQ.
- 25 (6) Procedures for obtaining uniform representative composite ash samples shall be submitted to the
26 Division for approval in the facility operations plan in accordance with Rule .1204(b)(4) of this
27 Section. Ash sampling procedures shall be approved if the procedures are compliant with the
28 requirements of this Subchapter, are protective of human health and the environment, and if the
29 samples collected using the procedures are representative of the incinerator ash shipped from the
30 facility for disposal.
- 31 (7) The ash samples shall be collected from the dewatered ash collection container or containers.
- 32 (8) For the first three months of incinerator operation, the ash sampling procedures required by
33 Subparagraph (6) of this Paragraph shall include the collection of a representative ash sample of one
34 kilogram (2.2 pounds):
 - 35 (A) once for every eight hours of operation for an incinerator that is operated on a continuous
36 schedule;

1 (B) once for every 24 hours of operation for an incinerator that is operated on an intermittent
2 schedule; or

3 (C) once for every batch for an incinerator that is batch-loaded.

4 The ash samples shall be composited in a closed container weekly and shall be mixed and reduced
5 to a uniform ash sample. The weekly ash samples shall be composited into a monthly ash sample,
6 and the monthly ash sample shall be analyzed.

7 (9) For the remainder of the first year of incinerator operation, a representative ash sample shall be
8 collected once per month using the procedures described in the facility operations plan. The monthly
9 ash samples shall be composited and reduced to a uniform quarterly ash sample, and the quarterly
10 ash samples shall be analyzed.

11 (10) After the first year of incinerator operation, representative composite ash samples shall be collected
12 using the procedures described in the facility operations plan twice per calendar year, with no less
13 than four months between sample collection, and the samples shall be analyzed.

14 (11) Ash samples required to be analyzed in accordance with Subparagraphs (8) through (10) of this
15 Paragraph shall be analyzed in accordance with 40 CFR 261.24 for the eight metals listed in Table
16 1 (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver). 40 CFR 261 is
17 incorporated by reference including subsequent amendments and editions; and can be accessed at
18 no cost at <https://www.gpo.gov/>.

19 (12) A record of the testing and analysis results shall be submitted to the Division for the first year of
20 incinerator operation, and upon request from the Division thereafter. ~~operation, and thereafter~~ The
21 record shall be maintained at the facility and available for inspection by the Division. ~~Division, and~~
22 shall be submitted upon request from the Division, and] The record shall include:

23 (A) the composite ash sample date and time;

24 (B) the ash sample date and time;

25 (C) the ash sample identification number;

26 (D) the ash sample analysis results; and

27 (E) the testing laboratory name and contact information and certification number.

28 (13) The Division may require the treatment facility to collect additional composite ash samples or
29 analyze the samples for the full contaminant list in accordance with 40 CFR 261.24 Table 1 if the
30 results of the analysis required in Subparagraphs (8) through (11) of this Paragraph indicate an
31 exceedance of the regulatory level provided in 40 CFR 261.24 Table 1; or during a permitting action,
32 a facility inspection, or when a complaint is received if it is necessary to determine compliance with
33 the rules of this Subchapter. The requirements of this Paragraph shall not prevent a municipal solid
34 waste landfill that is accepting incinerator ash from a treatment facility from requiring that additional
35 ash samples be taken and analyzed to determine compliance with the rules of this Subchapter before
36 the ash is accepted for disposal.

37 (e) Chemical treatment requirements:

- 1 (1) Microbiological waste shall be treated with 10 percent chlorine solution for no less than one hour.
- 2 (2) Testing of treatment under conditions of full loading to confirm compliance with Subparagraph
3 (a)(9) of this Rule shall be performed no less than once per week using a biological indicator of
4 Bacillus atrophaeus spores having a population of not less than 1.0 x 10⁶.
- 5 (3) A record of each test performed shall be maintained and shall include the type of indicator used, the
6 test date, the start and end times, and the test results.

7 (f) Microwave treatment requirements:

- 8 (1) Microwave energy of appropriate output frequency shall be provided at a temperature of not less
9 than 203 degrees Fahrenheit (95 degrees Celsius) for no less than 30 minutes each cycle.
- 10 (2) The microwave treatment system shall be provided with a monitoring device that records time and
11 temperature of each cycle. A record of the monitoring of the time and temperature of each cycle
12 shall be maintained.
- 13 (3) Testing of treatment under conditions of full loading to confirm compliance with Subparagraph
14 (a)(9) of this Rule shall be performed no less than once per week using a biological indicator of
15 Bacillus atrophaeus spores having a population of not less than 1.0 x 10⁶ and in accordance with the
16 equipment manufacturer's instructions.
- 17 (4) A record of each test performed shall be maintained and shall include the type of indicator used, the
18 test date, the start and end times, and the test result.

19 (g) Ozonation treatment requirements:

- 20 (1) Testing of treatment under conditions of full loading to confirm compliance with Subparagraph
21 (a)(9) of this Rule shall be performed no less than once per week using a biological indicator of
22 Bacillus atrophaeus spores having a population of not less than 1.0 x 10⁶ and in accordance with the
23 equipment manufacturer's instructions.
- 24 (2) Once every six months samples collected under conditions of full loading shall be submitted to an
25 independent laboratory to confirm compliance with Subparagraph (a)(9) of this Rule.
- 26 (3) A record of each test performed shall be maintained and shall include the type of indicator used, the
27 test date, the start and end times, [the ozonation time, the incubation time,] and the test result.

28 (h) Alternative treatment methods.

- 29 (1) A treatment facility owner or operator may request to use a method of, or procedures for, regulated
30 medical waste treatment not listed or described in this Rule by submitting a request to the Division
31 for approval. The request shall include documentation that describes the alternative treatment
32 method, explains the procedures and provides analysis results to demonstrate that the treatment
33 method will render the regulated medical waste noninfectious, and describes how the treatment
34 method meets the requirements of the rules of this Section.
- 35 (2) A request for an alternate method of chemical treatment shall also describe the chemical used to
36 treat the specific microbiological agent(s) of concern for the regulated medical waste type, and shall

1 consider factors such as temperature, contact time, pH, concentration, and the presence and state of
2 dispersion, penetrability, and reactivity of organic material at the site of application.

3 (3) The Division [may] shall approve the alternative treatment method by issuing the permit or an
4 approval letter if the alternative treatment method renders the regulated medical waste
5 noninfectious, and the alternative treatment method is compliant with the rules of this Section and
6 protective of human health and the environment.

7
8 *History Note: Authority G.S. 130A-309.26;*
9 *Eff. October 1, 1990;*
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12

1 15A NCAC 13B .1401 is readopted with changes as published in 33:24 NCR 2373 as follows:

2
3 **SECTION .1400 - SOLID WASTE COMPOST FACILITIES**

4
5 **15A NCAC 13B .1401 REQUIREMENT FOR PERMIT**

6 (a) ~~All persons whose purpose is or includes the production of compost from solid waste or solid waste co-composted~~
7 ~~with other wastes shall not construct, operate, expand or modify a facility until a currently valid permit for a solid~~
8 ~~waste compost facility is issued by the Division. No person shall construct, operate, expand, or modify a facility that~~
9 ~~produces compost from solid waste or solid waste co-composted with other wastes unless it has been issues a~~
10 ~~currently valid permit issued by the Division for a solid waste compost facility, ~~[facility by the Division,]~~ except as~~
11 ~~provided for in Rule .1402(f) and (g) of this Section. This provision also applies to facilities that accept, store, or~~
12 ~~produce compost or mulch from yard waste or from residues from agricultural products and processing. General~~
13 ~~Provisions, Siting, provisions, siting, design, application, operational, distribution, and reporting reporting, and closure~~
14 ~~requirements shall be in accordance with Rules .1402, .1403, .1404, .1405, .1406, .1407, and .1402 through .1408~~
15 ~~.1410 of this Section.~~

16 (b) ~~Plans for a Large Type 3 or Type 4 Solid Waste Compost Facility, as defined in Rule .1402(e) of this Section,~~
17 ~~Facility Permit, or a permit or plans for any facility located over a closed-out disposal ~~area area,~~ shall be submitted~~
18 ~~with the permit application in accordance with Rule ~~.0201(a)(3) .0202(a)(3)~~ of this Subchapter. ~~A minimum of four~~~~
19 ~~sets of plans shall be submitted within each application.~~

20 (c) ~~Compost permits shall be issued for a period of not more than 10 years. An application for renewal of a permit~~
21 ~~shall be submitted to the Division in accordance with Rule .1405 of this Section no less than four months prior to~~
22 ~~expiration of the existing permit.~~

23 (d) Permit modifications.

24 (1) The owner or operator shall submit to the Division a permit application in accordance with Rule
25 .1405 of this Section for a major modification to the existing permit issued by the Division. For the
26 purpose of this Section, a [A] major modification means ~~[shall be required for]~~ any of the following:
27 a change in ~~[either]~~ the property or facility operator or ownership, a change in facility type as defined
28 in Rule .1402 of this Section, an expansion or relocation of the ~~[approved]~~ operations area in the
29 existing permit,~~[area,]~~ or a ~~[substantial]~~ change to the operations or design ~~[plan.] plan such~~
30 changes in the compost method, waste receipt and handling, feedstock storage, or processing layout.
31 A permit issued by the Division as a result of a permit modification shall be in compliance with
32 Paragraph (c) of this Rule.~~[A major modification requires an application submitted to the Division~~
33 in accordance with Rule .1405 of this Section, including revised design and operational plans and
34 drawings.]

35 (2) The owner or operator shall not be required to submit a permit application to the Division in
36 accordance with Rule .1405 of this Section for a change to a plan that was submitted in accordance
37 with Rule .1405 of this Section if the Division determines that the change does not meet the

1 definition of a major modification provided in Subparagraph (1) of this Paragraph, the change
2 complies with the requirements of this Section, and the owner or operator submits to the Division
3 written notice of the change, including documentation of the updated information such as revised
4 pages or addendums to the plan. The Division shall acknowledge receipt of the change by sending
5 written notice to the owner or operator. [A minor modification shall include a change in the design
6 or operational plan that does not require a substantial change to the design and operations plan and
7 drawings. A minor modification that is approved by the Division shall be approved by written
8 notification. The approval shall be added as an addendum to the approved plan.]

9 [(3) — An approved major modification shall result in the issuance of a new permit with an expiration no
10 more than 10 years from the time of issuance in accordance with Paragraph (c) of this Rule if the
11 modification application meets the criteria for a permit renewal.]

12 (e) For purposes of this Section, "operations area" means the total area used for mixing, grinding, processing,
13 composting, curing, and wood waste and feedstock unloading and storage. Operations area shall not include buffer
14 areas.

15 (f) For purposes of the Section, "material onsite" means wood wastes, feedstocks, mixtures, and active and curing
16 compost, but shall not include finished product.

17
18 *History Note: Authority G.S. 130A-294; 130A-309.03; 130A-309.11; 130A-309.29;*
19 *Eff. December 1, 1991;*
20 *Amended Eff. May 1, ~~1996~~, 1996;*
21 *Readopted Eff. November 1, 2019.*
22

1 15A NCAC 13B .1402 is readopted with changes as published in 33:24 NCR 2373 as follows:

2
3 **15A NCAC 13B .1402 GENERAL PROVISIONS FOR SOLID WASTE COMPOST FACILITIES**

4 (a) Applicability. The provisions of this Rule shall apply to the following facilities:

- 5 (1) facilities that produce compost or mulch from yard waste or from residues from agricultural products
6 and processing;
7 (2) vermicomposting facilities;
8 (3) anaerobic digestion facilities; and
9 (4) compost facilities that compost solid waste or co-compost solid waste with sludges that are not
10 classified as a solid ~~waste~~ waste, functioning as a nutrient source.

11 (b) Facilities that co-compost with sewage sludge shall comply with all applicable ~~Federal~~ federal regulations
12 regarding sludge management ~~at in~~ 40 CFR 501 and 503. 40 CFR 503, subpart B 503, which is hereby incorporated
13 by ~~reference,~~ reference including subsequent amendments ~~or additions.~~ and editions. Copies of the Code of Federal
14 Regulations may be obtained from the U.S. Government Publishing Office website at www.gpo.gov Solid Waste
15 Section at 401 Oberlin Road, Suite 150, Raleigh, NC 27605 at no cost.

16 (c)~~(b)~~ The provisions of this Section ~~do~~ shall not apply to compost facilities that compost only wastewater treatment
17 sludge with municipal solid waste functioning only as a bulking agent.

18 (e) ~~Solid Waste Compost Facilities that have been permitted prior to the effective date of this Rule shall meet the~~
19 ~~requirements of this Section within one year of the effective date of this Rule, or, within two years if more than one~~
20 ~~hundred thousand dollars (\$100,000) of capital investment is necessary to comply with changes.~~

21 (d) Solid waste compost produced outside the State of North Carolina and imported into the state shall comply with
22 the requirements specified in Rule .1407 of this Section.

23 (e) ~~Compost that is disposed shall not count toward waste reduction goals.~~

24 (e)~~(f)~~ Solid waste compost facilities shall be classified based on the types and amounts of materials to be composted.
25 composted as follows:

- 26 (1) Type 1 facilities may receive yard and garden waste, silvicultural waste, and untreated and unpainted
27 wood waste ~~waste, or any combination thereof.~~
28 (2) Type 2 facilities may receive pre-consumer meat-free food processing waste, vegetative agricultural
29 waste, source separated ~~paper paper,~~ or and other source separated specialty ~~wastes, which~~ wastes
30 that are low in pathogens and physical contaminants. Waste acceptable for a Type 1 facility may be
31 composted at a Type 2 facility.
32 (3) Type 3 facilities may receive manures and other agricultural waste, meat, ~~post-consumer source~~
33 ~~separated~~ post-consumer source-separated food ~~wastes~~ wastes, and other ~~source separated~~ specialty
34 source-separated specialty wastes ~~or any combination thereof~~ that are ~~relatively~~ low in physical
35 ~~contaminants,~~ contaminants but may have high levels of pathogens. Waste acceptable for a Type 1
36 or 2 facility may be composted at a Type 3 facility.

1 (4) Type 4 facilities may receive ~~mixed municipal solid waste, post-collection separated or processed~~
2 ~~waste~~, industrial solid waste, ~~non-solid~~ non-solid waste sludges functioning as a nutrient source or
3 other similar compostable organic ~~wastes~~ wastes, or any combination thereof. Waste acceptable for
4 a Type 1, ~~2~~ 2, or 3 facility may be composted at a Type 4 facility.

5 ~~(5) The listed waste types in Subparagraph (f)(2)-(2) of this Rule [Paragraph] shall be considered to be~~
6 ~~low in pathogens and physical contaminants if handled so as to prevent development of contaminants or~~
7 ~~exposure to physical contamination. The listed waste types in Subparagraph (f)(3)-(3) of this Rule~~
8 ~~[Paragraph] are likely to have high pathogens and low physical contamination. In determining whether a~~
9 ~~specific waste stream listed in Subparagraphs (1) through (4) of this Paragraph is [shall be]~~ acceptable for
10 ~~composting in a Type 2 or Type 3 facility, composting,~~ the Division shall consider the method of handling
11 the waste prior to delivery to the facility as well as the physical characteristics of the waste. Testing for
12 pathogens and physical contaminants ~~may~~ shall be required ~~where~~ if a determination cannot be made based
13 upon prior knowledge of the waste. Test methods ~~and constituents tested shall be in accord~~ comply with Rule
14 .1407(b)(2), (b)(3), [and (b)(5)](b)(5), and (b)(6) of this Section. ~~Appendices A and B to Table 3.~~

15 (6) Small facilities.

16 (A) Small Type 1 facilities shall have an operations area less than two acres in size and shall
17 be limited to no more than 6,000 cubic yards material onsite at any given time, including
18 finished product.

19 (B) Small Type 2, 3, and 4 facilities shall have an operations area less than two acres in size
20 and shall be limited to no more than 1,000 cubic yards material onsite at any given time.
21 Small facilities are those that receive less than 1000 cubic yards of material for composting
22 per quarter, and occupy less than two acres of land, except that a Small Type 1 facility shall
23 process or store less than 6,000 cubic yards of material per quarter.

24 (7) Large facilities.

25 (A) Large Type 1 facilities shall have an operations area of two or more acres in size or have
26 more than 6,000 cubic yards material onsite at any given time.

27 (B) Large Type 2, 3, and 4 facilities shall have an operations area of two or more acres in size
28 or have more than 1,000 cubic yards material onsite at any given time.
29 Large facilities are those that receive 1000 cubic yards or more of material for composting
30 per quarter or occupy two acres or more of land, except that a Large Type 1 facility shall
31 process or store more than 6,000 cubic yards of material per quarter.

32 ~~(f)(g)~~ A permit is not required for the following operations: The following operations shall be exempt from the
33 requirements of this Section:

34 (1) ~~Backyard Composting.~~ backyard composting;

35 (2) ~~Farming~~ farming operations and silvicultural operations ~~where~~ if the compost is produced from
36 materials grown on the owner's land and re-used on the owner's land or ~~in his~~ associated farming
37 operations and not offered to the public. ~~public.~~ [public and;] public; and

1 (3) persons receiving no more than 30 cubic yards of leaves from an offsite source on an annual basis.

2 ~~(3) Small Type 1 Facilities meeting the following conditions:~~

3 ~~(A) Notification of the Solid Waste Section prior to operation and on an annual basis as to:~~

4 ~~(i) Facility location;~~

5 ~~(ii) Name, address and phone number of owner and operator;~~

6 ~~(iii) Type and amount of wastes received;~~

7 ~~(iv) Composting process to be used; and~~

8 ~~(v) Intended distribution of the finished product.~~

9 ~~(B) Agreement to operate in accordance with operational requirements as set forth in Rule and~~
10 ~~the setbacks in Rule .1404(a)(1) – (9) of this Section.~~

11 ~~(C) Facility operates in accordance with all other state or local laws, ordinances, rules,~~
12 ~~regulations or orders.~~

13 ~~(D) Facility is not located over closed-out disposal site.~~

14 ~~(E) Safety measures are taken to prevent fires and access to fire equipment or fire fighting~~
15 ~~services is provided.~~

16 (g) The following operations shall be exempt from the permitting requirements in ~~Rule .1405~~ Rule .1401 of this
17 Section:

18 (1) Small Type 1 Facilities meeting the following conditions:

19 (A) notification ~~of~~ to the Division prior to operation and on an annual basis as to:

20 (i) the facility location;

21 (ii) the name(s) and contact information of the owner and operator;

22 (iii) type and amount of wastes received;

23 (iv) the composting process to be used;

24 (v) the intended distribution of the finished product; and

25 (vi) for new facilities only, a letter from the unit of government having zoning
26 jurisdiction over the site that states that the proposed use is allowed within the
27 existing zoning, if any, and that any necessary zoning approval or permit has been
28 obtained;

29 (B) the facility operates in accordance with the operational requirements as set forth in Rule
30 .1406(1) through (11) and (16) of this Section and the setbacks in Rule .1404(a)(1) through
31 (a)(10) of this Section;

32 (C) the facility operates in accordance with all other state or local laws, ordinances, rules,
33 regulations or orders;

34 (D) the facility shall not be located over a closed-out disposal site; and

35 (E) ~~the~~ safety measures shall be taken to prevent fires and access to fire equipment or fire-
36 fighting services shall be provided.

37 (2) Compost facilities meeting the following conditions:

- 1 (A) the site ~~[may receive]~~ receives for composting pre- and post-consumer food waste, manure,
2 vegetative agricultural waste, yard and garden waste, land-clearing debris, untreated and
3 unpainted wood waste, ~~[and] or~~ source separated paper;
4 (B) material onsite, not including finished compost, shall not exceed 100 cubic yards at any
5 time;
6 (C) the operations area shall be less than 1.0 acres total;
7 (D) the site operates in accordance with operational requirements as set forth in Rule .1406 of
8 this Section and the setbacks in Rule .1404(a)(1) through (a)(10) of this Section, except
9 that the buffer between property line and operations area shall be at least 50 feet and the
10 buffer between the operations area and residences or dwellings not owned and occupied by
11 the operator shall be at least 200 feet;
12 (E) the site is operated to prevent the release of particulates and odors outside of the property
13 boundary, and the site does not attract vectors such as insects and rodents; ~~[operates in such~~
14 a manner that dust and odors do not constitute a public nuisance;]
15 (F) for facilities producing compost that is distributed to the public or used in public areas,
16 compost produced from the facility shall meet the pathogen testing and record keeping
17 requirements per Rule .1407(b) and Rule .1408(a) of this Section; and
18 (G) the site operates in accordance with all applicable State or local laws, ordinances, rules,
19 regulations, or orders.
20

21 *History Note: Authority G.S. 130A-294; 130A-309.03; 130A-309.11; 130A-309.29;*
22 *Eff. December 1, 1991;*
23 *Amended Eff. May 1, ~~1996.~~ 1996;*
24 *Readopted Eff. November 1, 2019.*
25

1 15A NCAC 13B .1404 is readopted with changes as published in 33:24 NCR 2373 as follows:

2
3 **15A NCAC 13B .1404 SITING/DESIGN REQUIREMENTS FOR SOLID WASTE COMPOST**
4 **FACILITIES**

5 (a) A site shall meet the ~~following~~ requirements of this Rule at the time of initial permitting and shall continue to
6 meet these requirements throughout the life of the permit only on the site property owned or controlled by the applicant
7 or by the landowner(s) at the time of ~~permitting~~; permitting.

8 (1) A site located in a floodplain shall not restrict the flow of the 100-year ~~flood~~; flood, reduce the
9 temporary storage capacity of the ~~floodplain~~; floodplain, or result in washout of solid ~~waste~~ waste,
10 so as to pose a hazard to human life, wildlife, ~~land~~ land, or water ~~resources~~; resources.

11 (2) A 100-foot ~~minimum~~ buffer ~~is~~ shall be maintained ~~required~~ between all property lines and compost
12 areas for Type 3 and 4 facilities, 50-foot for Type 1 or 2 ~~facilities~~; facilities.

13 (3) A 500-foot ~~minimum~~ buffer ~~is~~ shall be maintained ~~required~~ between compost areas and residences
14 or dwellings not owned and occupied by the permittee, except that Type 1 and Small Type 2 and 3
15 facilities shall ~~have~~ maintain a 200-foot ~~minimum~~ ~~buffer~~; buffer.

16 (4) A 100-foot ~~minimum~~ buffer ~~is~~ shall be maintained ~~required~~ between all wells and compost areas,
17 except monitoring ~~wells~~; wells.

18 (5) A 50-foot ~~minimum~~ buffer ~~is~~ shall be maintained ~~required~~ between perennial ~~streams/rivers~~ streams
19 and rivers and compost ~~areas~~; areas.

20 (6) A compost facility shall be located in accordance with 15A NCAC 2B .0200, Classification and
21 Water Quality Standards Applicable to Surface Waters in North ~~Carolina~~; Carolina.

22 (7) All portions of ~~any~~ a compost facility located over a closed-out disposal area shall be designed with
23 a pad adequate to protect the disposal area cap from being disturbed, as defined in Part ~~(a)(10)(E)~~
24 (a)(10)(C) of this Rule, and there shall be no runoff from the pad onto the cap or side slopes of the
25 closed out ~~area~~; area.

26 (8) A 25-foot minimum distance ~~is~~ shall be maintained ~~required~~ between compost areas and swales or
27 ~~berms~~; berms to allow for adequate access of fire fighting equipment;

28 (9) A site shall meet the following surface water requirements:

29 (A) A a site shall not cause a discharge of materials or fill materials into waters or wetlands of
30 the state State that is in violation of Section 404 of the Clean Water Act;

31 (B) A a site shall not cause a discharge of pollutants into waters of the state State that is in
32 violation of the requirements of the National Pollutant Discharge Elimination System
33 (NPDES), ~~under~~ pursuant to Section 402 of the Clean Water Act; and

34 (C) A a site shall not cause non-point source pollution of waters of the state State that violates
35 ~~assigned the~~ water quality standards; ~~[standards.]~~ standards as set forth in 15A NCAC 02B.

36 (10) A site shall meet the following groundwater and operations area pad requirements:

1 (A) A site shall not contravene groundwater standards as set forth in established under
2 [pursuant to] 15A NCAC 02L; 2L;

3 (B) the operations area of Type 1, 2, and 3 facilities shall have one of the following:

4 (i) a soil pad with a soil texture finer than loamy sand. For a Type 1 or 2 facility, the
5 depth to the seasonal high water table shall be maintained at least 12 inches. For
6 a Type 3 facility, the depth to the seasonal high water table shall be maintained at
7 least 24 inches; or

8 (ii) a pad in accordance with Part (C) of this Subparagraph;

9 ~~Portions of a site used for waste receipt and storage, active composting, and curing~~
10 ~~shall have a soil texture finer than loamy sand and the depth to the seasonal high~~
11 ~~water table shall be maintained at least 12 inches for a Type 1 or 2 facility and 24~~
12 ~~inches for a Type 3 facility, unless a pad is provided;~~

13 (C) the operations area of a Type 4 facility shall have a pad with a linear coefficient of
14 permeability no greater than 1×10^{-7} cm/sec. The pad shall consist of one of the following:

15 (i) a non-soil pad, such as concrete and asphalt, designed and constructed to meet the
16 weight requirements of the compost operation and to prevent infiltration of liquids
17 to groundwater; or

18 (ii) a soil pad of at least 18 inches constructed in accordance with Rule [.1624(a)(8)]
19 .1624(b)(8) and Rule .1621 of this Subchapter. A 12-inch soil layer shall be
20 maintained over the pad to protect it from damage and desiccation; and

21 ~~A pad shall be provided for portions of a Type 4 facility used for waste receiving and~~
22 ~~storage, active composting, and curing;~~

23 (D) ~~A pad is not required for storage of finished product that is dried so as to pass the Paint~~
24 ~~Filter Liquids Test (EPA Method 9095), and for which the storage area is prepared in such~~
25 ~~a manner that water does not collect around the base of the stored material, and finished~~
26 ~~product shall be stored where the depth to the seasonal high water table is maintained at~~
27 ~~least 12 inches below ground surface. inches; and~~

28 (E) ~~The linear coefficient of permeability of pads required in accordance with this Rule shall~~
29 ~~not be greater than 1×10^{-7} centimeters per second. If natural soils are used, the liner~~
30 ~~must be at least 18 inches thick.~~

31 ~~(b) For Subparagraphs (a)(2) through (a)(4) and Part (a)(10)(B) of this Rule, (dependent upon waste type, facility~~
32 ~~design, and regional topography) alternative minimum buffers or requirements may be increased if deemed necessary~~
33 ~~by the Division in order to protect public health and the environment or to prevent the creation of a nuisance.~~

34 (b) For Subparagraphs (a)(2) through (a)(4) and Part (a)(10)(B) of this Rule, alternative minimum buffers or
35 requirements may be [increased,] modified by the Division, based on the waste type, facility design, and regional
36 topography, if necessary to protect public health and the environment or to prevent the creation of a nuisance.

37 (c) A site shall meet the following design requirements:

- 1 (1) A a site shall not allow ~~uncontrolled~~ ~~unauthorized~~ public access;
- 2 (2) A a site shall meet the requirements of ~~the Sedimentation Pollution Control Law~~ (15A NCAC ~~04~~);
- 3 4);
- 4 (3) A a site shall meet the requirements of the Air Pollution Control Requirements (15A NCAC ~~2D~~)
- 5 02D) to minimize fugitive emissions and odors; and
- 6 (4) A a site shall be designed to minimize odors at the property ~~boundary~~ ~~boundary by means such as~~
- 7 expanded buffers, consideration of topography and wind patterns, or process layout design.

8

9 *History Note: Authority G.S. 130A-294; 130A-309.03; 130A-309.11; 130A-309.29;*

10 *Eff. December 1, 1991;*

11 *Amended Eff. May 1, ~~1996~~. 1996;*

12 *Readopted Eff. November 1, 2019.*

13

1 15A NCAC 13B .1405 is readopted with changes as published in 33:24 NCR 2373 as follows:

2
3 **15A NCAC 13B .1405 APPLICATION REQUIREMENTS FOR SOLID WASTE COMPOST**
4 **FACILITIES**

5 ~~(a) One paper copy and one electronic copy of a solid waste compost facility permit application shall be submitted to~~
6 ~~the Division. The following information is shall be required for an application for a permit to construct and operate a~~
7 ~~proposed Type 1, or a Small Type 2 or 3 solid waste compost facility; Large Type 1, Small or Large Type 2 or 3 or~~
8 ~~all Type 4 solid waste compost facilities; [facilities] unless the permitting requirements are exempted by Paragraph~~
9 ~~(g) of Rule .1402 [Rule .1402(g) or (h)] of this Section:~~

10 (1) the name and contact information of the facility owner and operator;

11 (2) documentation of property ownership, including:

12 (a) the property owners;

13 (b) a current property deed; and

14 (c) a notarized acknowledgement letter from the landowner of use of the property as a solid
15 waste facility if the landowner is not the facility owner or operator.

16 (3)(1) ~~An an~~ an aerial photograph or scaled drawing, where one inch is at a scale of one inch to less than or
17 equal to 400 feet, accurately showing the area within one-fourth mile of the proposed site's
18 boundaries with the following specifically identified:

19 (a)(A) ~~Entire~~ the entire property owned or leased by the person proposing the facility;

20 (b)(B) ~~Location~~ the location of all homes, wells, industrial buildings, public or private utilities;
21 roads; watercourses; dry runs; utilities, roads, watercourses, and other applicable
22 information regarding the general topography within 500 feet of the proposed facility; and

23 (c)(C) ~~Land~~ the land use zoning of the proposed site.

24 (4)(2) ~~A [for all new sites,]~~ a letter from the unit of government having zoning jurisdiction over the site
25 which that states that the proposed use is allowed within the existing zoning, if any, and that any
26 necessary zoning approval or permit has been obtained. approvals or permits have been obtained;

27 (5)(3) ~~An an~~ an explanation of how the site complies with siting and design standards in required by Rule
28 .1404 of this Section. Section;

29 (6)(4) ~~A a~~ detailed report indicating the following:

30 (a)(A) ~~Waste type(s),~~ the waste types, the source and estimated quantity of the solid waste to be
31 composted, composted including the source and expected quantity of any bulking agent or
32 amendment (if applicable), any expected recycle recycling of bulking agent or compost,
33 and any seasonal variations in the solid waste type or quantity; and

34 (b)(B) ~~For for~~ facilities that utilize use natural soils as a pad, a soil evaluation of the site conducted
35 by a licensed soil scientist down to a depth of four feet, feet or to bedrock or evidence of a
36 seasonal high water table, to evaluate evaluating all chemical and physical soil properties
37 and depth of the seasonal high water table. table;

- 1 (7)(5) Site a site plan at a scale ~~where of~~ one inch is to less than or equal to 100 feet ~~to the inch~~ that
2 delineates the following:
- 3 (a)(A) ~~Existing the existing~~ and proposed contours, at intervals appropriate to the topography;
 - 4 (b)(B) ~~Location the location~~ and elevations of dikes, trenches, and other water control devices and
5 structures for the diversion and controlled removal of surface water;
 - 6 (c)(C) ~~Designated the designated~~ setbacks and property lines;
 - 7 (d)(D) ~~Proposed the proposed~~ utilities and structures; ~~and~~
 - 8 (e)(E) ~~Areas the areas~~ for unloading, processing, active composting, curing, and storing of
9 ~~material.~~ material;
 - 10 (f) the access roads and details on traffic patterns;
 - 11 (g) the wetlands, streams, and 100-year floodplains; and
 - 12 (h) the proposed surface and groundwater monitoring locations, if required.
- 13 (8)(6) A description of the operation of the facility, which must include at a minimum: an operations plan
14 that includes the following:
- 15 (a)(A) ~~Name, address and phone number~~ the name and contact information for the person
16 responsible for the operation of the facility;
 - 17 (b)(B) ~~List a list of personnel required~~ and the responsibilities of each position;
 - 18 (c)(C) ~~Operation plan for the facility; a schedule for operations, including days and hours that the~~
19 facility will be open, preparations before opening, and procedures to be followed after
20 closing for the day;
 - 21 (d)(D) ~~Special special~~ precautions or procedures for operating during wind, heavy rain, snow,
22 freezing or other adverse conditions;
 - 23 (e)(E) A a description of actions to be taken to minimize noise, vectors, and air borne ~~particulates,~~
24 particulates; and odors; and
 - 25 (f)(F) A a description of the ultimate use for the finished compost, the method for removal from
26 the site, and a contingency plan for disposal or alternative ~~usage~~ use of residues or finished
27 compost that cannot be used in the expected manner due to poor quality or change in market
28 ~~conditions.~~ conditions;
 - 29 (g) contingency plan describing actions to be taken for equipment breakdown, unauthorized
30 waste arriving at the facility, spills, and fires;
 - 31 (h) a discussion of compliance with the operational requirements listed in Rule .1406 of this
32 Section; and
 - 33 (i) for Large [Type 2 and Type 3] Type 1, Large Type 2, Large Type 3, and all Type 4
34 facilities, include the following:
 - 35 (i) a description of procedures for incoming material inspections;
 - 36 (ii) a description of procedures to meet the final product sampling and analyses
37 requirements specified in in Rule .1407 of this Section;

- 1 (iii) a description of procedures to meet the record keeping requirements specified in
2 Rule .1408 of this Section; and
- 3 (iv) a copy of all applicable local, state, and federal permits and approvals necessary
4 for the operation of the facility.
- 5 (9)(7) A a report on the design of the facility, including:
- 6 (a)(A) Design the design capacity of the facility;
- 7 (b)(B) A a process flow diagram of the entire facility, including the type, size, and location of all
8 major equipment, equipment used in the compost process and feedstock flow streams. The
9 flow streams shall indicate the quantity of materials by ~~on a wet~~ weight and volume;
10 volumetric basis;
- 11 (c) a description and sizing of the storage facilities for feedstocks, amendments, and finished
12 compost;
- 13 (d)(C) The the means for measuring, shredding, mixing, and proportioning input materials;
- 14 (e)(D) Anticipated the anticipated process duration, including receiving, preparation, composting,
15 curing, and distribution;
- 16 (f)(E) A a description of the location of all temperature, air [air,] temperature and any other type
17 of monitoring points, points within the compost windrow, and the frequency of monitoring;
- 18 (g)(F) A a description of how the temperature control and monitoring equipment will demonstrate
19 that the facility meets the requirements in Rule .1406(11), (12), or (13) .1406 Items (10),
20 (11), or (12) of this Section, as appropriate for the feedstock;
- 21 (h)(G) The the method of aeration provided and the capacity of aeration equipment; and
- 22 (i)(H) A a description of the method to control surface water run-on and run-off; run-off and the
23 method to control, collect, treat, and dispose of leachate generated, generated;
- 24 (j) the separation, processing, storage, and ultimate disposal of non-compostable materials, if
25 applicable;
- 26 (k) a description of dust control and other air emission control measures; and
- 27 (l) a description of recycling or other material handling processes used at the facility.
- 28 (10) Odor Control Plan. Operators of Large Type 2, Large Type 3, and all Type 4 facilities shall prepare,
29 submit to the Division, and implement an odor control plan that details site specific conditions to
30 meet the design requirement in Rule .1404(c)(4) of this Section. Existing facilities permitted prior
31 to the readopted effective date of this Rule shall meet these requirements at the time of permit
32 renewal. The plan shall contain the following:
- 33 (a) an identification of all onsite potential odor sources;
- 34 (b) a description of onsite weather conditions that [would] may affect odor migration, such as
35 prevailing wind direction, topography, and seasonal variations;

- 1 (c) a plan to monitor onsite odor and record odor data for the odor sources with the potential
2 to migrate offsite. Data shall include date, time, site specific conditions, weather
3 conditions, wind direction, and characteristics and intensity of odor;
- 4 (d) a description of the facility's odor complaint protocol, including forms used, odor
5 verification by operator both onsite and offsite, what the response will be, and who will be
6 contacted;
- 7 (e) a description of complaint record keeping; and
- 8 (f) a description of odor control design and operating best management practices to be used
9 onsite, including:
- 10 (i) personnel training;
- 11 (ii) feedstock characteristics;
- 12 (iii) the initial mixing of feedstocks to reach targeted carbon to nitrogen (C:N) ratios,
13 ratios and moisture levels;
- 14 (iv) maintenance of compost piles for moisture;
- 15 (v) aeration methods, frequency, and protocol;
- 16 (vi) leachate and liquids management;
- 17 (vii) weather monitoring and protocol;
- 18 (viii) management of airborne emissions; and
- 19 (ix) windrow covering, covering;
- 20 (8) A description of the label or other information source that meets the requirements of Rule .1407(k)
21 of this Section.
- 22 (11)(9) Plans engineering plans and specifications for the facility, including manufacturer's performance
23 data for all equipment selected, selected; and
- 24 (12) documentation that the local fire protection authority has been notified of the site use.
- 25 ~~(12) — a description of procedures for permanent closure of the facility, in accordance with Rule .1410 of~~
26 ~~this Section, should the facility close.]~~
- 27 (10) — A detailed operation and maintenance manual outlining:
- 28 (A) A quality assurance plan for the process and final product which lists the procedures used
29 in inspecting incoming material; monitoring, sampling and analyzing the compost process
30 and final product, testing schedule, and recordkeeping requirements;
- 31 (B) Contingency plans detailing corrective or remedial action to be taken in the event of
32 equipment breakdown; non conforming waste delivered to the facility; spills, and
33 undesirable conditions such as fires, vectors and odors; and
- 34 (C) An explanation of how the facility will comply with operational requirements as outlined
35 in Rule .1406 of this Section, detailed operational information and instruction, an outline
36 of reports to be submitted in compliance with this Section, and safety instructions.
- 37 (11) — As built drawings where applicable.

1 ~~(b) The following information is required for an application for a permit to construct a proposed Large 2 or 3 or a~~
2 ~~Type 4 solid waste compost facility:~~

3 (1) ~~— An aerial photograph or scaled drawing, where one inch is less than or equal to 400 feet, accurately~~
4 ~~showing the area within one fourth of the mile of the proposed site's boundaries with the following~~
5 ~~specifically identified:~~

6 (A) ~~— Entire property owned or leased by the person proposing the site;~~

7 (B) ~~— Location of all homes, wells, industrial buildings, public or private utilities and roads,~~
8 ~~watercourses, dry runs, and other applicable information regarding the general topography~~
9 ~~within one fourth mile; and~~

10 (C) ~~— Land use and zoning of the proposed site.~~

11 (2) ~~— A letter from the unit of government having zoning jurisdiction over the site which states that the~~
12 ~~proposed use is allowed within the existing zoning, if any, and that any necessary zoning approval~~
13 ~~or permit has been obtained.~~

14 (3) ~~— An explanation of how the site complies with siting and design standards in Rule .1404 of this~~
15 ~~Section.~~

16 (4) ~~— A detailed report indicating the following:~~

17 (A) ~~Waste type(s), source and quantity of the solid waste to be composted, including the source~~
18 ~~and expected quantity of any bulking agent or amendment (if applicable), any expected~~
19 ~~recycle of bulking agent or compost, and any seasonal variations in the solid waste type or~~
20 ~~quantity;~~

21 (B) ~~For facilities which utilize natural soils as a pad, a soil evaluation of the site conducted by~~
22 ~~a soil scientist down to a depth of four feet or to bedrock or evidence of a seasonal high~~
23 ~~water table, to evaluate all chemical and physical soil properties and depth of the seasonal~~
24 ~~high water table.~~

25 (5) ~~Site plans at a scale where one inch is less than or equal to 100 feet to the inch that delineates the~~
26 ~~following:~~

27 (A) ~~Existing and proposed contours, at intervals appropriate to the topography;~~

28 (B) ~~Location and elevations of dikes, trenches, and other water control devices and structures~~
29 ~~for the diversion and controlled removal of surface water;~~

30 (C) ~~Designated setbacks, buffer zones and property lines;~~

31 (D) ~~Proposed utilities and structures;~~

32 (E) ~~Access roads, details on traffic patterns;~~

33 (F) ~~Areas for unloading, processing, active composting, curing, and storage of material;~~

34 (G) ~~Areas for unloading, processing, and storing recyclables, household hazardous waste, and~~
35 ~~other materials, where applicable;~~

36 (H) ~~Proposed surface and groundwater monitoring locations;~~

37 (I) ~~Flood plains and wetlands; and~~

- 1 ~~(J) Benchmarks.~~
- 2 (6) ~~A description of the operation of the facility, which must include at a minimum:~~
- 3 ~~(A) Name, address and phone number for the person responsible for the operation of the~~
- 4 ~~facility;~~
- 5 ~~(B) Operation plan for the facility;~~
- 6 ~~(C) List of personnel required and the responsibilities of each position;~~
- 7 ~~(D) A schedule for operation, including days and hours that the facility will be open,~~
- 8 ~~preparations before opening, and procedures to be followed after closing for the day;~~
- 9 ~~(E) For mixed waste processing facilities, plan for removing and disposal of household~~
- 10 ~~hazardous waste from the waste stream;~~
- 11 ~~(F) Special precautions or procedures for operating during wind, heavy rain, snow, freezing or~~
- 12 ~~other adverse conditions;~~
- 13 ~~(G) A description of actions to be taken to minimize noise, vectors, air borne particulates, and~~
- 14 ~~odors; and~~
- 15 ~~(H) A description of the ultimate use for the finished compost, method for removal from the~~
- 16 ~~site, and a contingency plan for disposal or alternative usage of residues or finished~~
- 17 ~~compost that cannot be used in the expected manner due to poor quality or change in market~~
- 18 ~~conditions.~~
- 19 (7) ~~A report on the design of the facility, including:~~
- 20 ~~(A) Design capacity of the facility;~~
- 21 ~~(B) A process flow diagram of the entire facility, including the type, size, and location of all~~
- 22 ~~major equipment, and feed stock flow streams. The flow streams shall indicate the quantity~~
- 23 ~~of material on a wet weight and volumetric basis;~~
- 24 ~~(C) A description and sizing of the storage facilities for amendment, bulking agent, solid waste,~~
- 25 ~~recyclables, household hazardous waste and finished compost;~~
- 26 ~~(D) The means for measuring, shredding, mixing, and proportioning input materials;~~
- 27 ~~(E) Anticipated process duration, including receiving, preparation, composting, curing, and~~
- 28 ~~distribution;~~
- 29 ~~(F) The separation, processing, storage, and ultimate disposal of non compostable materials,~~
- 30 ~~if applicable;~~
- 31 ~~(G) A description of the location of all temperature, air and any other type of monitoring points,~~
- 32 ~~and the frequency of monitoring;~~
- 33 ~~(H) A description of how the temperature control and monitoring equipment will demonstrate~~
- 34 ~~that the facility meets the requirements in Rule .1406 Items (10), (11), or (12) of this~~
- 35 ~~Section, as appropriate for the feedstock;~~
- 36 ~~(I) The method of aeration, including turning frequency or mechanical aeration equipment and~~
- 37 ~~aeration capacity;~~

- 1 (J) A description of the air emission and control technologies;
- 2 (K) A description of the method to control surface water run-off; and the method to control,
- 3 collect, treat, and dispose of leachate generated; and
- 4 (L) A description of any recycling or other material handling processes used at the facility.
- 5 (8) A description of the label or other information source that meets the requirements of Rule .1407(k)
- 6 of this Section.
- 7 (9) Engineering plans and specifications for the facility, including manufacturer's performance data for
- 8 all equipment selected.
- 9 ~~(c) The following information is required for reviewing an application for a permit to operate a Type 4 or Large Type~~
- 10 ~~2 or 3 solid waste composting facility:~~
- 11 (1) Contingency plans detailing corrective or remedial action to be taken in the event of equipment
- 12 breakdown; air pollution; non conforming waste delivered to the facility; spills, and undesirable
- 13 conditions such as fires, particulates, noise, vectors, odors, and unusual traffic conditions;
- 14 (2) A detailed operation and maintenance manual. The manual must contain general design information,
- 15 a discussion of compliance with operational requirements as outlined in Rule .1406 of this Section,
- 16 detailed operational information and instruction, equipment maintenance, list of personnel, required
- 17 personnel training, outline of reports to be submitted in compliance with this Section, and safety
- 18 instructions;
- 19 (3) A quality assurance plan for the process and final product which lists the procedures used in
- 20 inspecting incoming materials; monitoring, sampling and analyzing the compost process and final
- 21 product, testing schedule, and record keeping requirements;
- 22 (4) A fact sheet and process flow diagram that summarizes actual equipment sizing, aeration capacity,
- 23 detention times, storage capacity, and flow rates (wet weight and volumetric) for the system and
- 24 equipment chosen;
- 25 (5) As built drawings;
- 26 (6) A copy of all applicable local, state, and Federal permits and approvals necessary for the proper
- 27 operation of the facility; and
- 28 (7) Product marketing and distribution plan.
- 29 ~~(d) An application for a permit modification shall be required for changes in facility ownership, an increase in facility~~
- 30 ~~capacity, or the addition of new feedstock materials.~~

31

32 *History Note:* Authority G.S. 130A-294; 130A-309.03; 130A-309.11; 130A-309.29;

33 Eff. December 1, 1991;

34 Amended Eff. May 1, 1996. 1996;

35 Readopted Eff. November 1, 2019.

36

1 15A NCAC 13B .1406 is readopted with changes as published in 33:24 NCR 2373 as follows:

2
3 **15A NCAC 13B .1406 OPERATIONAL REQUIREMENTS FOR SOLID WASTE COMPOST**
4 **FACILITIES**

5 ~~Any~~ A person who maintains or operates a solid waste compost facility shall maintain and operate the site to conform
6 with the ~~following practices:~~ practices and operational requirements of this Rule.

- 7 (1) Plan and Permit ~~Requirements:~~ Requirements.
8 (a)(A) ~~Approved Construction~~ plans and conditions of ~~the~~ permit shall be ~~followed.~~ followed, and
9 (b)(B) A copy of the permit, plans, and operational reports shall be maintained on site at all times.
10 (2) ~~Adequate erosion~~ Erosion control measures shall be practiced to prevent on-site erosion and to
11 control the movement of silt or contaminants from the site.
12 (3) ~~Stormwater Surface water~~ shall be diverted from the operations area. ~~operational, compost curing,~~
13 ~~and storage areas.~~
14 (4) Leachate shall be contained on site or treated prior to discharge. ~~[and] treated to meet the standards~~
15 ~~of the [applicable] off site disposal method. A National Pollutant Discharge Elimination System~~
16 ~~(NPDES) permit may be required in accordance with 15A NCAC 02B prior to the discharge of~~
17 ~~leachate to surface waters.~~
18 (5) Access and Security ~~Requirements:~~ Requirements.
19 (a)(A) Large sites facilities as defined in Rule .1402(e)(7) of this Section shall be secured to
20 prevent unauthorized entry by means such as ~~of~~ gates, chains, berms, or fences. ~~fences, or~~
21 other security measures demonstrated to provide equivalent protection [and be] approved
22 by the Division, [Division.] ~~to prevent unauthorized entry.~~
23 (b)(B) An operator shall be on duty at the site at all times while the facility is open for public ~~use~~
24 use, to ensure compliance with operational requirements and shall prevent unauthorized
25 access to such facilities shall be controlled. ~~the facility operations area.~~
26 (c)(C) The access road to the site shall be of all-weather construction and maintained. ~~maintained~~
27 ~~in good condition.~~
28 (6) A site shall only accept those solid wastes that it is permitted to receive.
29 (7) Safety ~~Requirements:~~ Requirements.
30 (a)(A) Open burning of solid waste ~~is~~ shall be prohibited.
31 (b)(B) Equipment shall be provided to control accidental fires and arrangements made with the
32 local fire protection agency to ~~immediately~~ provide fire-fighting services when needed.
33 (c)(C) Personnel training shall be provided to ~~insure~~ ensure that all employees are trained in site
34 specific safety, remedial, and corrective action procedures.
35 (8) Reporting Fires. Fires shall be reported to the Division orally within 24 hours of the incident and in
36 writing within 15 days of the incident.
37 (9)(8) Sign Requirements: Requirements.

- 1 (a)(A) Signs providing information on waste that ~~can~~ may be received, dumping procedures, the
2 hours during which the site is open for public use, and the permit number and other
3 pertinent information shall be posted at the site entrance.
- 4 (b)(B) Traffic ~~signs/markers~~ signs and markers shall be provided ~~as necessary to promote an~~
5 orderly traffic pattern to direct traffic to and from the discharge area. area and to maintain
6 efficient operating conditions.
- 7 (c)(C) Signs shall be posted stating that no hazardous waste, asbestos containing waste, or medical
8 waste ~~can~~ may be received at the site.
- 9 (10)(9) Monitoring Requirements: Requirements.
- 10 (a)(A) ~~Specified monitoring and reporting requirements shall be met. Temperature monitoring~~
11 shall meet the record-keeping requirements in Rule .1408 of this Section.
- 12 (b)(B) The temperature of all compost produced shall be monitored sufficiently to ensure that the
13 pathogen reduction criteria ~~is~~ are met. Onsite thermometers shall be calibrated annually
14 and records of calibration shall be maintained.
- 15 (11)(10) Compost process at Type 1 and Type 2 facilities shall be maintained at or above 55 degrees Celsius
16 (131 degrees F) ~~3~~ for three days and aerated to maintain elevated temperatures.
- 17 (12)(11) Vector Attraction Reduction (VAR). Types 2, 3 and 4 facilities shall maintain the compost process
18 at a temperature above 40 degrees Celsius (104 degrees F) for 14 days or longer and the average
19 temperature for that time shall be higher than 45 degrees Celsius (~~113 degrees F~~). (~~113 degrees F~~)
20 ~~or, Types 2, 3 and 4 facilities shall meet the vector attraction reduction requirements in 40 CFR~~
21 ~~503.33(b)(4) or (7). Requirements of 40 CFR 503.33(b)(4) and (7) are hereby incorporated by~~
22 ~~reference, including any subsequent amendments or additions.~~
- 23 (13)(12) Process to Further Reduce Pathogens (PFRP). The composting process shall qualify as a process to
24 further reduce pathogens for all Type 3 and Type 4 facilities. The following ~~are~~ shall be acceptable
25 methods:
- 26 (a)(A) ~~The the~~ windrow composting method, in which the following requirements apply: ~~Aerobic~~
27 ~~conditions shall be maintained during the compost process. A temperature of 131 degrees~~
28 ~~F (55 degrees Celsius) or greater shall be maintained in the windrow for at least 15 days.~~
29 ~~During the high temperature period, the windrow shall be turned at least five times.~~
- 30 (i) aerobic conditions shall be maintained during the composting process;
31 (ii) a temperature of 131 degrees F (55 degrees Celsius) or greater shall be maintained
32 in the windrow for at least 15 days; and
33 (iii) during the high temperature period, the windrow shall be turned at least five times.
- 34 (b)(B) ~~The the~~ static aerated pile composting method, in which the following requirements apply:
35 ~~Aerobic conditions shall be maintained during the compost process. The temperature of the~~
36 ~~compost pile shall be maintained at 131 degrees F (55 degrees Celsius) or greater for at~~
37 ~~least three days.~~

- 1 (i) aerobic conditions shall be maintained during the composting process; and
- 2 (ii) the temperature of the compost pile shall be maintained at 131 degrees F (55
- 3 degrees Celsius) or greater for at least three days.
- 4 (c)(C) The the within-vessel composting method, in which the temperature in the compost piles
- 5 shall be maintained at a minimal temperature of 131 degrees F (55 degrees Celsius) for
- 6 three days.
- 7 ~~(14)(13) Nitrogen bearing wastes shall be incorporated as necessary to minimize odor and the migration of~~
- 8 ~~nutrients. Putrescible feedstocks added to the compost process shall be incorporated [in such a~~
- 9 ~~manner to control odor.] using methods to minimize odor such as reducing mixing time or the~~
- 10 ~~addition of organic material.~~
- 11 (15) The finished compost shall meet the classification, testing, and distribution requirements in Rule
- 12 .1407 of this Section.
- 13 (16) The amount of compost stored at the facility shall not exceed the designed storage capacity.
- 14 (17) The site shall be operated to minimize odors at the property ~~[boundary.]~~ boundary by means such as
- 15 ~~windrow covers, maintaining design process indicator parameters, and maintaining carbon to~~
- 16 ~~nitrogen design ratios.~~
- 17 (18) Odor Corrective Action.
- 18 (a) If the Odor Control Plan prepared in accordance with Rule .1405(10) of this Section has
- 19 been followed and ~~the Division determines during a site visit that~~ offsite odors are not being
- 20 minimized, the owner or operator shall submit ~~to [for approval by]~~ the Division an Odor
- 21 Corrective Action Report. The report shall contain the following:
- 22 (i) a summary of the actions taken in the Odor Control Plan;
- 23 (ii) an identification of onsite odor sources, in order of severity;
- 24 (iii) an evaluation and identification of odorous feedstocks as they relate to odor
- 25 complaints;
- 26 (iv) an evaluation of current operation process indicators including carbon to nitrogen
- 27 (C:N) ratio, pH, moisture content, oxygen levels, temperature, porosity, and
- 28 particle size;
- 29 (v) an evaluation of the compost recipe calculation with C:N ratio testing that is
- 30 performed by an independent laboratory for each feedstock;
- 31 (vi) an identification of potential offsite odor receptors based on their proximity to the
- 32 odor sources and on weather patterns;
- 33 (vii) a description of new odor reduction methods, if proposed, and an evaluation of
- 34 their feasibility, in terms of effectiveness, cost, and equipment needs;
- 35 (ix) an evaluation of the elimination of specific odorous feedstocks; and
- 36 (x) recommendations for implementing new ~~corrective action measures for~~ odor
- 37 ~~minimization, [minimization practices,]~~ including a schedule.

- 1 (b) The owner or operator shall implement the new corrective action measures for odor
2 minimization recommended in the Odor Corrective Action Report if the Division
3 determines that the new corrective measures will reduce odors outside of the property
4 boundary and will comply with the requirements of this Section. The Division may require
5 the elimination of specific odorous feedstocks if a facility fails to meet the odor
6 minimization ~~criteria~~ required by Item (17) of this Rule. The Division shall provide
7 written notice to the owner or operator of the determination.
- 8 (c) The owner or operator shall develop and implement additional [Additional] corrective
9 action measures [shall be developed and implemented as] if necessary to meet the
10 requirements of Item (17) of this Rule to minimize odors at the property boundary.

11 (19) Compost Facility Training Requirements.

- 12 (a) Facilities permitted as Large Type 1, Large Type 2, all Type 3, and all Type 4 shall have
13 an operator, supervisor, or manager trained in accordance with the requirements in G.S.
14 130A-309.25. No less than one trained operator, supervisor, or manager meeting the
15 requirements of this Sub-item shall be onsite during the facility's operating hours or
16 available at a phone number provided in the facility permit.
- 17 (i) Training in accordance with G.S. 130A-309.25(c)[from a Division approved
18 training course] shall be required every five years. [Approval of other training to
19 meet this requirement may be requested by the facility. The Division shall approve
20 other training in cases where the facility can demonstrate other training is at least
21 equivalent to the Division approved training courses.]
- 22 (ii) Persons who have achieved and maintain compost [manager] operator
23 certification [by a Division approved from compost manager certification
24 program approved by the Division, such as certification] by the US Composting
25 Council Certification Commission or equivalent shall be considered as having met
26 [these] the training requirements in G.S. 130A-309.25 for the permitted facility.
- 27 (b) [Facilities] Owners or operators shall [be required to] provide annual training for facility
28 staff, including a review of the operations plan and permit documents.
- 29 (c) Documentation of training required in Sub-items (a) and (b) of this Item shall be
30 maintained at the facility and made available to the Division upon [request unless otherwise
31 approved by the Division.] request.
- 32 (d) Facilities permitted before the readopted effective date of this Rule shall meet the
33 requirements of Sub-item (a) of this Item within three years of the readopted effective date
34 of this Rule. Facilities permitted after the readopted effective date of this Rule shall meet
35 the requirements of Sub-item (a) of this Item within 18 months of permit issuance.

36 (14) Miscellaneous Requirements:

1 (A) ~~The finished compost shall meet the classification and distribution requirements outlined~~
2 ~~in Rule .1407 of this Section.~~

3 (B) ~~The quality of the final product shall determine the allowable uses as outlined in Rule .1407~~
4 ~~of this Section.~~

5 (C) ~~The final product shall be approved by the Solid Waste Section as outlined in Rule .1407~~
6 ~~Subparagraph (6)(b) of this Section.~~

7 (i) ~~Non-compostable solid waste and unacceptable compost shall be disposed in a~~
8 ~~solid waste management facility permitted to receive the particular type of waste under~~
9 ~~15A NCAC 13B.~~

10 (ii) ~~The amount of compost stored at the facility shall not exceed the designed storage~~
11 ~~capacity.~~

12
13 *History Note:* *Authority G.S. 130A-294; 130A-309.03; 130A-309.11; 130A-309.29;*
14 *Eff. December 1, 1991;*
15 *RRC objection Eff. April 18, 1996 due to lack of statutory authority;*
16 *Amended Eff. June 1, ~~1996~~ 1996;*
17 *Readopted Eff. November 1, 2019.*
18

1 15A NCAC 13B .1407 is readopted with changes as published in 33:24 NCR 2373 as follows:

2

3 **15A NCAC 13B .1407 ~~CLASSIFICATION/DISTRIBUTION~~ CLASSIFICATION, TESTING, AND**
4 **DISTRIBUTION OF SOLID WASTE COMPOST PRODUCTS**

5 ~~(a) Compost shall not be applied to the land or sold or given away if the concentration of any metal exceeds the~~
6 ~~concentration in 40 CFR 502.13(b)(3) [See Table 1 below], unless the concentration of all metals are less than the~~
7 ~~values in 40 CFR 503.13(b)(1) and records are maintained to show compliance with the cumulative and annual metal~~
8 ~~levels in 40 CFR 503.13(b)(2) and (4).~~

9

10 ~~Table 1~~

11

Metals	Concentration mg per kg
Arsenic	41
Cadmium	39
Copper	1500
Lead	300
Mercury	17
Nickel	420
Selenium	36
Zinc	2800

12

13 ~~(b) Solid Waste shall be classified based on Table 2:~~

14

15 ~~Table 2~~

16

Grade	Manmade Inerts % dry wt.	Pathogen Reduction	Metal Concentration
	of inerts		
A	≤6	PFRP	Table 1
B	>6	NA	40 CFR 503.13(b)(1)

17

18 ~~(c) Man made inerts shall not exceed 1 inch in size.~~

19 ~~(d) Distribution of the defined grades shall be as follows:~~

- 1 (1) ~~Grade A compost shall have unlimited, unrestricted distribution. This product may be distributed~~
2 ~~directly to the public;~~
- 3 (2) ~~Grade B compost shall be restricted to distribution for land and mine reclamation, silviculture, and~~
4 ~~agriculture (on non food chain crops) projects; and~~
- 5 (3) ~~Compost or mulch that is produced at a Type 1 facility and that contains minimal pathogenic~~
6 ~~organisms, is free from offensive odor, and contains no sharp particles that would cause injury to~~
7 ~~persons handling the compost, shall have unrestricted applications and distributions if directions are~~
8 ~~provided with the compost product.~~

9 ~~(e) Solid waste compost products may not be distributed or marketed until the permittee has provided adequate test~~
10 ~~data to the Division as outlined in Rule .1408 of this Section. Within 30 days of receipt of the test data, the Division~~
11 ~~shall approve or deny the distribution and marketing of the product based upon the compost classification and~~
12 ~~distribution scheme. As long as the test data required in Rule .1408 of this Section continues to verify that compost is~~
13 ~~produced to the specifications of this Rule, the Division's approval to distribute the compost shall be ongoing.~~

14 ~~(f) The applicant is responsible for meeting any applicable requirements of the North Carolina Department of~~
15 ~~Agriculture, Fertilizer Section concerning the distribution of this product.~~

16 ~~(g) If the owner intends to distribute the product, the owner shall provide instructions to the user on any restrictions~~
17 ~~on use and recommended safe uses and application rates. The following information shall be provided on a label or~~
18 ~~an information sheet and a copy of the label or information sheet shall be submitted to the Solid Waste Section:~~

- 19 (1) ~~Classification grade as outlined in Paragraph (d) of this Rule;~~
- 20 (2) ~~Recommended uses;~~
- 21 (3) ~~Application rates;~~
- 22 (4) ~~Restrictions on usage; and~~
- 23 (5) ~~Total N (for products containing sludge).~~

24 (a) Compost or mulch that is produced at a Type 1 ~~facility and that contains minimal pathogenic organisms,~~ facility,
25 is free from offensive odor, ~~and~~ contains no sharp particles, and, for compost, has met the temperature requirements
26 in Rule .1406(11) of this Section shall be classified Grade A and have unrestricted application and distribution.
27 Compost analytical testing shall not be required for Type 1 compost if temperature requirements in Rule .1406(11) of
28 this Section have been met and documented.

29 (b) Compost produced from Type 2, 3, and 4 facilities shall be sampled and analyzed as follows:

- 30 (1) a composite sample of the compost produced at each compost facility shall be analyzed at intervals
31 of every 20,000 tons of compost produced or every six months, whichever comes first, for metals
32 and pathogens;
- 33 (2) compost samples shall be analyzed for the metals listed in 40 CFR 503.13(b)(3), except that analysis
34 for mercury shall not be required for Type 2 and 3 facilities, and analysis for arsenic and selenium
35 shall not be required for Type 2 facilities. The concentration of metals in compost offered for sale
36 or distribution to the public shall not exceed the pollutant concentration limits listed in 40 CFR
37 503.13(b)(3), 40 CFR 503.13 and 40 CFR 503.32 are incorporated by reference including

1 subsequent amendments and editions. Copies of the Code of Federal Regulations may be obtained
2 from the U.S. Government Publishing Office website at www.gpo.gov at no cost;

3 (3) compost samples shall be analyzed for pathogens, either for fecal coliform or salmonella bacteria.
4 The concentration of pathogens in compost offered for sale or distribution to the public shall not
5 exceed the concentration limits listed in 40 CFR 503.32(a)(3);

6 (4) sample collection, preservation, and analysis shall assure valid and representative results. At least
7 three individual samples of equal volume shall be taken from each batch produced in separate areas
8 along the side of the batch. Each sampling point shall be sampled from a depth of two to six feet
9 into the pile from the outside surface of the pile as follows:

10 (A) metals samples shall be composited and accumulated over a six-month period or at
11 intervals of every 20,000 tons of product produced, whichever comes first; and

12 (B) pathogens samples shall be a representative composite sample of the compost and shall be
13 processed within a period of time required by the testing procedure;

14 (5) analytical testing methods shall be in accordance with the procedures of one of the following:

15 (A) EPA publication SW-846, "Test Methods for Evaluating Solid Waste: Physical/Chemical
16 Methods." This document is incorporated by reference, including subsequent amendments
17 and editions, and may be obtained free of charge at <https://www.epa.gov/hw-sw846>;

18 (B) the U.S. Department of Agriculture/U.S. Compost Council publication "Test Methods for
19 the Examination of Composting and Compost" (TMECC). This document is incorporated
20 by reference including subsequent amendments and editions, and may be obtained for a fee
21 of ~~two~~ three hundred fifty dollars ~~(\$250.00)~~ ~~(\$350.00)~~ at
22 <https://compostingcouncil.org/tmecc/> or a copy may be reviewed free of charge at the
23 Division of Waste Management, Solid Waste Section office at 217 West Jones Street,
24 Raleigh, N.C. 27603; or

25 (C) other methods [applicable standards] that are approved by the [Division;] Division as
26 providing equivalent standards of analysis; and

27 (6) the Division may decrease or increase the parameters to be analyzed or the frequency of analysis
28 based upon monitoring data, changes in the waste stream or processing, or information regarding
29 the potential for the presence of contaminants that are not required to be analyzed in this Paragraph.

30 (c) Compost produced from Types 2, 3, and 4 facilities that meet the requirements of Subparagraphs (b)(2) and (b)(3)
31 of this Rule shall be classified Grade A compost and shall have unlimited, unrestricted ~~[distribution.]distribution,~~
32 except as otherwise determined by the Division based on analyses of parameters pursuant to Subparagraph (b)(6) of
33 this Rule.

34 (d) The facility operator shall be responsible for meeting the requirements of the North Carolina Department of
35 Agriculture and Consumer Services Plant Industry Division Seed and Fertilizer Section concerning the distribution of
36 this product.

1 *History Note: Authority G.S. 130A-309.11;*
2 *Eff. December 1, 1991;*
3 *RRC objection Eff. April 18, 1996 due to lack of statutory authority;*
4 *Amended Eff. June 1, ~~1996~~ 1996;*
5 *Readopted Eff. November 1, 2019.*
6

1 15A NCAC 13B .1408 is readopted with changes as published in 33:24 NCR 2373 as follows:

2
3 **15A NCAC 13B .1408 METHODS FOR TESTING RECORDKEEPING AND REPORTING**
4 **REQUIREMENTS**

5 (a) ~~The compost product from Type 2, 3, and 4 facilities shall be sampled and analyzed as follows:~~

- 6 (1) ~~A composite sample of the compost produced at each compost facility shall be analyzed at intervals~~
7 ~~of every 20,000 tons of compost produced or every six months, whichever comes first, for test~~
8 ~~parameters for each Type of facility as designated in Table 3 of this Rule. Standard methods~~
9 ~~equivalent to those in Table 3 may be approved by the Division.~~

10
11 Table 3

12

Parameter	Unit	Facility	Test Method
Foreign Matter	%	all	see Subparagraph (d) of this Rule
Arsenic	mg/kg dry wt.	Type 4	See Appendix A
Cadmium	mg/kg dry wt.	all	
Chromium	mg/kg dry wt.	Type 4	
Copper	mg/kg dry wt.	all	
Lead	mg/kg dry wt.	all	
Mercury	mg/kg dry wt.	Type 4	
Nickel	mg/kg dry wt.	all	
Selenium	mg/kg dry wt.	Type 4	
Zinc	mg/kg dry wt.	all	
Pathogens	See Appendix B	all	See Appendix B
Total N	%	see*	Kjeldahl

13
14 * Total N required for products containing sludge subject to 40 CFR 503.

15 The parameters listed in Table 3 of this Rule may also be determined by methods accepted by the North Carolina
16 Department of Agriculture.

- 17 (2) ~~Sample collection, preservation, and analysis shall assure valid and representative results pursuant~~
18 ~~to a Division approved quality assurance plan. At least three individual samples (of equal volume)~~
19 ~~shall be taken from each batch produced in separate areas along the side of the batch. Each sampling~~
20 ~~point shall be at a depth of two to six feet into the pile from the outside surface of the pile. Samples~~
21 ~~that have been analyzed for metals shall be composited and accumulated over a six-month period or~~
22 ~~at intervals of every 20,000 tons of product produced, whichever comes first. Any sample collected~~
23 ~~for testing for pathogens and nutrients shall be a representative composite sample of the compost~~
24 ~~and shall be processed within a period of time required by the testing procedure.~~

1 (3) Compost containing sewage sludge shall be tested in accordance with 40 CFR 503, Subpart B.

2 (4) ~~The Division may decrease or increase the parameters to be analyzed or the frequency of analysis~~
3 based upon monitoring date, changes in the waste stream or processing, or information regarding
4 the potential for presence of toxic substances that are not on the list of monitoring parameters.

5 (5) ~~Foreign matter content shall be determined by passing a dried, weighed sample of the compost~~
6 product through a one quarter inch screen. EPA Method 160.3 shall be used to dry the sample. The
7 material remaining on the screen shall be visually inspected, and the foreign matter that can be
8 clearly identified shall be separated and weighed. The weight of the separated foreign matter divided
9 by the weight of the total sample shall be determined and multiplied by 100. This shall be the percent
10 dry weight of the foreign matter content.

11 (a)(b) Record Keeping: All facility Facility owners or operators shall ~~record and~~ maintain records for a minimum of
12 no less than five years. ~~Records~~ The following records shall be available for inspection by Division personnel during
13 the facility's normal business hours and shall be sent to the Division upon request:

14 (1) ~~Daily~~ daily operational records ~~must be maintained, which include, at a minimum, that include~~
15 temperature data (length of the composting period) and quantity of material processed;

16 (2) ~~Analytical~~ analytical results ~~on~~ of compost testing;

17 (3) ~~The~~ the quantity, ~~type~~ type, and source of waste received;

18 (4) ~~The~~ the quantity ~~and type~~ of waste processed into compost;

19 (5) ~~The quantity and type of compost produced by product classification; and~~ the odor management
20 records required by Rule .1405(10) of this Section; and

21 (6) ~~The~~ the quantity ~~and type~~ of compost removed for use or ~~disposal, by product classification,~~ disposal
22 and the market or permitted disposal facility.

23 (b)(e) Annual Reporting: An annual report for the period July 1 to June 30 shall be submitted by all facility owners
24 or operators to the Division ~~by August 1, 1996 and every~~ by August 1 of each year thereafter and shall contain:

25 (1) ~~The~~ the facility name, address, and permit number;

26 (2) ~~The~~ the total quantity in tons, with sludge values expressed in dry weight, and the type of waste
27 received at the facility during the year covered by the report, including tons of waste received from
28 local governments of origin;

29 (3) ~~The total quantity in tons, with sludge values expressed in dry weight, and type of waste processed~~
30 into compost during the year covered by the report;

31 (3)(4) ~~The~~ the total quantity in tons ~~and type~~ of compost produced at the facility, ~~by product classification,~~
32 facility during the year covered by the report;

33 (4)(5) ~~The~~ the total quantity in tons ~~and type~~ of compost removed for use or disposal from the facility, ~~by~~
34 ~~product classification, along with a general description of the market if for use~~ facility during the
35 year covered by the report;

36 (5)(6) ~~Monthly~~ monthly temperature monitoring to support Rule .1406 of this Section; and

1 15A NCAC 13B .1409 is readopted with changes as published in 33:24 NCR 2373 as follows:

2
3 **15A NCAC 13B .1409 ~~APPROVAL OF ALTERNATIVE PROCEDURES AND~~ PROCEDURES,**
4 **VERMICOMPOSTING, AND ANAEROBIC DIGESTION REQUIREMENTS**

5 (a) An owner or operator of a composting ~~facility,~~ facility subject to the provisions of this ~~Rule, Section~~ may request
6 in writing the approval of an alternative procedure for the facility or the compost that is produced. The following
7 information shall be submitted to the Solid Waste Section:

- 8 (1) ~~The~~ the specific facility for which the exception is requested;
- 9 (2) ~~The~~ the specific provisions of this Section for which the exception is requested;
- 10 (3) ~~The~~ the basis for the exception;
- 11 (4) ~~The~~ the alternate procedure or requirement for which the approval is sought and a demonstration
12 that the alternate procedure or requirement provides equivalent protection of the public health and
13 the environment; and
- 14 (5) ~~A~~ a demonstration of the effectiveness of the proposed alternate procedure.

15 The Division shall approve the request if the alternative procedure is equivalent to procedures provided in the rules of
16 this Section and is protective of the public health and the environment.

17 (b) Vermicompost Facilities. This Paragraph shall be applicable to vermicompost facilities that receive solid waste
18 as defined in G.S. 130A-290. Facilities that receive only animal manure or only municipal wastewater treatment
19 sludge, or both, shall not be subject to this Paragraph.

- 20 (1) The following operations shall be exempt from the requirements of this Section:
 - 21 (A) backyard vermicomposting; and
 - 22 (B) farming operations where the vermicompost is produced from materials grown on the
23 owner's land and re-used on the owner's land.
- 24 (2) Vermicompost facilities meeting the following conditions shall be exempt from the permitting
25 requirements in Rule .1405 of this Section:
 - 26 (A) the site receives pre- and post-consumer food waste, manure, vegetative agricultural waste,
27 yard and garden waste, untreated, unpainted, and uncontaminated wood material, source
28 separated paper, or any combination thereof;
 - 29 (B) no more than 100 cubic yards of material shall be onsite at any time. This volume shall
30 include feedstock storage, processing, pre-composting, and active vermicomposting, but
31 shall not include finished vermicompost;
 - 32 (C) outdoor areas of the site used for feedstock storage, processing, pre-composting, or
33 vermicomposting in open areas or open containers or bins shall meet the siting criteria and
34 setback requirements of Rule .1404(a)(1) through (a)(10) of this Section, except that the
35 minimum setback to the property line shall be at least 50 feet and the minimum setback to
36 residences or dwellings not owned and occupied by the owner or operator shall be at least
37 200 feet;

1 ~~(D)(E)~~ outdoor feedstock storage, processing, pre-composting, and vermicomposting operations
2 areas, that are enclosed on all sides in containers or bins shall maintain a minimum setback
3 to the property line of at least 25 feet;

4 ~~(E)(F)~~ the site is operated to prevent the release of particulates and odors outside of the property
5 boundary, and the site does not attract vectors such as insects and rodents; ~~[operates in such~~
6 ~~a manner that dust and odors do not constitute a public nuisance;]~~

7 ~~(F)(G)~~ surface water shall be diverted from the operational and storage areas. Leachate shall be
8 contained onsite and treated to meet the standards of the applicable off-site disposal
9 method;

10 ~~(G)(H)~~ for facilities producing vermicompost that is distributed to the public or used in public
11 areas, the owner meets the pathogen testing and record keeping requirements of Rule
12 .1407(b) and .1408(a) of this Section for a Type 3 facility; and

13 ~~(H)(I)~~ the site operates in accordance with all applicable State or local laws, ordinances, rules,
14 regulations, or orders.

15 (3) A permit shall be required for vermicompost facilities that do not meet the conditions of
16 Subparagraphs (1) or (2) of this Paragraph. A permit application for a vermicomposting facility shall
17 include the information required by Rules .1404 and .1405 of this Section, except that Rules
18 .1405(9)(f) through (9)(h) of this Section do not apply. Operations or parts of operations that are
19 indoors shall be exempt from the siting requirements of Rule .1404 of this Section. Permitted
20 vermicomposting facilities shall be subject to:

21 (A) ~~[the operational requirements of]~~ Rule .1406(1) through (9), (14), and (16) of this Section;

22 (B) ~~[the sampling and testing requirements of]~~ Rule .1407 of this Section;

23 (C) ~~[the reporting and recordkeeping requirements of]~~ Rule .1408 of this Section; and

24 (D) ~~[the closure requirements of]~~ Rule .1410 of this Section.

25 (c) Anaerobic Digestion Facilities. This Paragraph shall be applicable to anaerobic digestion facilities that receive
26 solid waste as defined in G.S. 130A-290. Facilities that receive only animal manure or only municipal wastewater
27 treatment sludge, or both, shall not be subject to this Paragraph.

28 (1) A solid waste management permit shall be required for the areas of the facility that manage solid
29 waste. These areas shall include the incoming waste receiving area, the digestate handling area, and
30 the digestate final disposition and any other areas of the operation where solid waste is exposed to
31 the environment.

32 (2) A permit application shall contain:

33 (A) the information required by Rules .1404 and .1405 of this Section, with the exception of
34 Rule .1405(9)(f) through (9)(h). Operations or parts of operations that are in buildings
35 enclosed on all sides shall be exempt from the siting requirements of Rule .1404 of this
36 Section; and

37 (B) ~~[detailed]~~ drawings of the following within the waste management areas:

1 (i) hoppers, bays, or vessels, and all other site-specific features related to solid waste
2 management activities; and

3 (ii) for indoor operations, plan and profile drawings of the buildings with areas and
4 features labeled.

5 (3) Permitted anaerobic digestion facilities shall be subject to:

6 (A) [the operational requirements of]Rule .1406(1) through (9), (14), and (16) of this Section;

7 (B) [the sampling and testing requirements of]Rule .1407 of this Section for the digestate;

8 (C) [the reporting and recordkeeping requirements of]Rule .1408 of this Section; and

9 (D) [the closure requirements of]Rule .1410 of this Section.

10 ~~(b) An individual may request in writing the approval of a solid waste composting pilot or demonstration project for~~
11 ~~the purpose of evaluating the feasibility of such a project. The following information shall be submitted to the Solid~~
12 ~~Waste Section:~~

13 (1) ~~The owner, operator, location, and contact numbers for the project;~~

14 (2) ~~The specific primary waste stream for which the project is to be evaluated;~~

15 (3) ~~The specific time frame for the project;~~

16 (4) ~~The estimated amount of each type of waste or bulking material to be composted;~~

17 (5) ~~The basis for running the pilot or demonstration project;~~

18 (6) ~~A description of all testing procedures to be used;~~

19 (7) ~~A description of the process to be used, including the method of composting and details of the~~
20 ~~method of aeration;~~

21 (8) ~~The expected final usage or disposal of the final product; and~~

22 (9) ~~An outline of the final report to be submitted to the Solid Waste Section upon completion of the~~
23 ~~project.~~

24 ~~(c) For Paragraph (a) of this Rule, the Division will review alternative procedures only to the extent that adequate~~
25 ~~staffing is available.~~

26 ~~(d) Permits shall not be required for primary and secondary school educational projects that take place on the school~~
27 ~~grounds and that receive less than one cubic yard of material per week.~~

28

29 *History Note: Authority G.S. 130A-294; 130A-309.03; 130A-309.11; 130A-309.29;*

30 *Eff. December 1, 1991;*

31 *RRC objection due to lack of statutory authority Eff. April 18, 1996;*

32 *Amended Eff. June 1, 1996- 1996;*

33 *Readopted Eff. November 1, 2019.*

34

1 15A NCAC 13B .1410 is adopted with changes as published in 33:24 NCR 2373 as follows:

2

3 **15A NCAC 13B .1410 CLOSURE REQUIREMENTS**

4 (a) When the permitted compost facility ceases operations, the owner or operator shall meet the following conditions:

5 (1) all feedstock and unfinished compost materials shall be removed from the site and taken to a
6 permitted solid waste facility within 180 days; [days, unless otherwise approved by the Division;]

7 (2) finished compost materials left onsite shall comply with G.S. 130A-309.05; and

8 (3) the owner or operator shall notify the Division in writing upon completion of the requirements of
9 Subparagraph (1) of this Paragraph.

10 (b) When a permitted compost facility has been closed in accordance with the requirements of [the Division,]
11 Subparagraph (a) of this Rule, the permit shall be terminated. Future compost operations at the site shall require
12 submittal of a new permit application in accordance with Rule .1405 of [pursuant to] this Section.

13

14 *History Note: Authority G.S. 130A-294; 130A-309.03; 130A-309.11; 130A-309.29;*

15 *Eff. November 1, 2019.*

16