**15A NCAC 02T .0113 PERMITTING BY REGULATION**

(a) The following disposal systems as well as those in Permitting By Regulation rules in this Subchapter (i.e., Rules .0203, .0303, .0403, .1003, .1103, .1203, .1303, .1403, and .1503) are deemed to be permitted pursuant to G.S. 143-215.1(b) and it shall not be necessary for the Division to issue individual permits or coverage under a general permit for construction or operation of the following disposal systems provided the system does not result in any violations of surface water or groundwater standards, there is no direct discharge to surface waters, and all criteria required for the specific system is met:

(1) Swimming pool and spa filter backwash and drainage, filter backwash from aesthetic fountains, and filter backwash from commercial or residential water features such as garden ponds or fish ponds, that is discharged to the land surface;
(2) Backwash from raw water intake screening devices that is discharged to the land surface;
(3) Condensate from residential or commercial air conditioning units that is discharged to the land surface;
(4) Discharges to the land surface from individual non-commercial car washing operations;
(5) Discharges to the land surface from flushing and hydrostatic testing water associated with utility distribution systems, new sewer extensions, or new reclaimed water distribution lines;
(6) Street wash water that is discharged to the land surface;
(7) Discharges to the land surface from fire fighting activities;
(8) Discharges to the land surface associated with emergency removal and treatment activities for spilled oil authorized by the federal or state on-scene coordinator when such removals are undertaken to minimize overall environmental damage due to an oil spill;
(9) Discharges to the land surface associated with biological or chemical decontamination activities performed as a result of an emergency declared by the Governor or the Director of the Division of Emergency Management and that are conducted by or under the direct supervision of the federal or state on-scene coordinator and that meet the following criteria:
    (A) the volume produced by the decontamination activity is too large to be contained onsite;
    (B) the Division is informed prior to commencement of the decontamination activity; and
    (C) the wastewater is not radiologically contaminated or classified as hazardous waste;
(10) Drilling muds, cuttings, and well water from the development of wells or from other construction activities including directional boring, except such wastes generated in the construction and development of oil and gas wells regulated by Article 27 of G.S. 113;
(11) Purge water from groundwater monitoring wells;
(12) Composting facilities for dead animals, if the construction and operation of the facilities is approved by the North Carolina Department of Agriculture and Consumer Services; the facilities are constructed on an impervious, weight-bearing foundation, operated under a roof; and the facilities are approved by the State Veterinarian pursuant to G.S. 106-403;
(13) Overflow from elevated potable water storage facilities;
(14) Mobile carwashes if:
    (A) all detergents used are biodegradable;
    (B) no steam cleaning, engine cleaning, or parts cleaning is being conducted;
    (C) notification is made prior to operation by the owner to the municipality, or if not in a municipality, then the county where the cleaning service is being provided; and
    (D) all non-recyclable washwater is collected and discharged into a sanitary sewer or wastewater treatment facility upon approval of the facility's owner;
(15) Mine tailings where no chemicals are used in the mining process;
(16) Mine dewatering where no chemicals are used in the mining process; and
(17) Wastewater created from the washing of produce, with no further processing on-site, on farms where the wastewater is irrigated onto fields so as not to create runoff or cause a discharge.

(b) Nothing in this Rule shall be deemed to allow the violation of any assigned surface water, groundwater, or air quality standards, and in addition any such violation shall be considered a violation of a condition of a permit. Further, nothing in this Rule shall be deemed to apply to or permit disposal systems for which a state National Pollutant Discharge Elimination System permit is otherwise required.

(c) Any violation of this Rule or discharge to surface waters from the disposal systems listed in Paragraph (a) of this Rule or the activities listed in other Permitted By Regulation rules in this Subchapter shall be reported in accordance with 15A NCAC 02B .0506.

(d) Disposal systems deemed permitted under this Subchapter shall remain deemed permitted, notwithstanding any violations of surface water or groundwater standards or violations of this Rule or other Permitted By Regulation rules in this Subchapter, until such time as the Director determines that they shall not be deemed permitted in accordance with the criteria established in this Rule.
(e) The Director may determine that a disposal system should not be deemed to be permitted in accordance with this Rule or other Permitted By Regulation rules in this Subchapter and require the disposal system to obtain an individual permit or a certificate of coverage under a general permit. This determination shall be made based on existing or projected environmental impacts, compliance with the provisions of this Rule or other Permitted By Regulation rules in this Subchapter, and the compliance history of the facility owner.

*History Note:* *Authority G.S. 130A-300; 143-215.1(a); 143-215.1(b)(4)(e); 143-215.3(a);*
*Eff. September 1, 2006;*
*Amended Eff. March 19, 2015; June 18, 2011.*

**15A NCAC 02T .1303 PERMITTING BY REGULATION**

(a) The following systems are deemed permitted pursuant to Rule .0113 of this Subchapter provided the system meets the criteria in Rule .0113 of this Subchapter and all criteria required for the specific system in this Rule:

(1) Systems that do not meet the criteria of an animal operation permitted under Rule .1304 or Rule .1305 of this Subchapter and all other systems not specifically mentioned in this Section. If waste is land applied to land owned by the waste generator or under the waste generators authority, agronomic rates must be met.

(2) Poultry operations which use a dry litter system with more than 30,000 birds and that do not meet the criteria specified in Rule .1305 of this Subchapter if:

(A) records are maintained for three years which include the dates the litter was removed, the estimated amount of litter removed and the location of the sites where the litter was land applied by the poultry operation;

(B) the waste is applied at no greater than agronomic rates;

(C) litter is stockpiled not closer than 100 feet from a perennial stream or perennial waterbody;

(D) litter is not stockpiled uncovered for greater than 15 days; and

(E) if a manure hauler is used, records must be maintained of the dates the litter was removed, the estimated amount of litter removed, and name, address and phone number of the manure hauler.

(3) Land application sites under separate ownership from the waste generator, receiving animal waste from animal waste management systems which are deemed permitted, when all the following conditions are met:

(A) the waste is applied at no greater than agronomic rates; and

(B) a vegetative buffer (separation) of at least 25 feet is maintained from a perennial stream or perennial waterbody.

(b) The Director may determine that a system should not be deemed permitted in accordance with this Rule and Rule .0113 of this Subchapter. This determination shall be made in accordance with Rule .0113(e) of this Subchapter.

*History Note:* *Authority G.S. 143-215.1; 143-215.3(a); 143-215.10A;*
*Eff. September 1, 2006.*

## SECTION .1400 - SOLID WASTE COMPOST FACILITIES

This Solid Waste Section publication of rules in Section .1400 corrects typographical errors currently found in the North Carolina Administrative Code.

### .1401 REQUIREMENT FOR PERMIT

(a) All persons whose purpose is or includes the production of compost from solid waste or solid waste co-composted with other wastes shall not construct, operate, expand or modify a facility until a currently valid permit for a solid waste compost facility is issued by the Division. This provision also applies to facilities that accept, store, or produce compost or mulch from yard waste or from residues from agricultural products and processing. General Provisions, siting, design, application, operational, distribution, and reporting requirements shall be in accordance with Rules .1402, .1403, .1404, .1405, .1406, .1407, and .1408 of this Section.

(b) Plans for a Large Type 3 or Type 4 Solid Waste Compost Facility Permit, or a permit for any facility located over a closed out disposal area shall be submitted in accordance with Rule .0202(a)(3) of this Subchapter. A minimum of four sets of plans shall be submitted within each application.

*History Note:* *Authority G.S. 130A-294; 130A-309.03; 130A-309.11; 130A-309.29; Eff. December 1, 1991; Amended Eff. May 1, 1996.*

### .1402 GENERAL PROVISIONS FOR SOLID WASTE COMPOST FACILITIES

(a) Applicability. The provisions of this Rule apply to compost facilities that compost solid waste or co-compost solid waste with sludges that are not classified as a solid waste, functioning as a nutrient source. Facilities that co-compost with sewage sludge shall comply with all applicable federal regulations regarding sludge management at 40 CFR 501 and 503. 40 CFR 503, subpart B is hereby incorporated by reference, including subsequent amendments or additions. Copies of the Code of Federal Regulations may be obtained from the Solid Waste Section at 401 Oberlin Road, Suite 150, Raleigh, NC 27605 at no cost.

(b) The provisions of this Section do not apply to compost facilities that compost sludge with municipal solid waste functioning only as a bulking agent.

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

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

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

(f) Solid waste compost facilities shall be classified based on the types and amounts of materials to be composted.

(1) Type 1 facilities may receive yard and garden waste, silvicultural waste, untreated and unpainted wood waste or any combination thereof.

(2) Type 2 facilities may receive pre-consumer meat-free food processing waste, vegetative agricultural waste, source separated paper or other source separated specialty wastes, which are low in pathogens and physical contaminants. Waste acceptable for a Type 1 facility may be composted at a Type 2 facility.

(3) Type 3 facilities may receive manures and other agricultural waste, meat, post

consumer-source separated food wastes and other source separated specialty wastes or any combination thereof that are relatively low in physical contaminants, but may have high levels of pathogens. Waste acceptable for a Type 1 or 2 facility may be composted at a Type 3 facility.

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

(5) The listed waste types in Subparagraph (f)(2) of this Rule shall be considered to be low in pathogens and physical contaminants if handled so as to prevent development of contaminants or exposure to physical contamination. The listed waste types in Subparagraph (f)(3) of this Rule are likely to have high pathogens and low physical contamination. In determining whether a specific waste stream is acceptable for composting in a Type 2 or Type 3 facility, the Division shall consider the method of handling the waste prior to delivery to the facility as well as the physical characteristics of the waste. Testing for pathogens and physical contaminants may be required where a determination cannot be made based upon prior knowledge of the waste. Test methods shall be in accord with Appendices A and B to meet requirements of Table 3.

(6) Small facilities are those that receive less than 1000 cubic yards of material for composting per quarter, and occupy less than two acres of land, except that a Small Type 1 facility shall process or store less than 6,000 cubic yards of material per quarter.

(7) Large facilities are those that receive 1000 cubic yards or more of material for composting per quarter or occupy two acres or more of land, except that a Large Type 1 facility shall process or store more than 6,000 cubic yards of material per quarter.

(g) A permit is not required for the following operations:

(1) Backyard composting.

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

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

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

(i) Facility location;

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

(iii) Type and amount of wastes received;

(iv) Composting process to be used; and

(v) Intended distribution of the finished product.

(B) Agreement to operate in accordance with operational requirements as set forth in Rule.1406 and the setbacks in Rule .1404(a)(1) - (10) of this Section.

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

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

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

*History Note:* *Authority G.S. 130A-294; 130A-309.03; 130A-309.11; 130A-309.29; Eff. December 1, 1991; Amended Eff. May 1, 1996.*

**.1403 GENERAL PROHIBITIONS FOR SOLID WASTE COMPOST FACILITIES**

(a) Neither hazardous waste nor asbestos containing waste shall be accepted at a facility or processed into compost.

(b) Household hazardous waste shall not be accepted by a facility, except in an area designated by facility site plans for storage, and shall not be processed into compost.

(c) Any compost made from solid waste which cannot be used pursuant to the requirements of this Rule shall be reprocessed or disposed of pursuant to the requirements of 15A NCAC 13B.

*History Note:* *Authority G.S. 130A-294; 130A-309.03; 130A-309.11; 130A-309.29; Eff. December 1, 1991; Amended Eff. May 1, 1996.*

**.1404 SITING/DESIGN REQUIREMENTS FOR SOLID WASTE COMPOST FACILITIES**

(a) A site shall meet the following requirements at the time of initial permitting and shall continue to meet these requirements throughout the life of the permit only on the property owned or controlled by the applicant or by the landowner(s) at the time of permitting:

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

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

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

(4) A 100-foot minimum buffer is required between all wells and compost areas, except monitoring wells;

(5) A 50-foot minimum buffer is required between perennial streams/rivers and compost areas;

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

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

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

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

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

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

(C) A site shall not cause non-point source pollution of waters of the state that violates assigned water quality standards;

(10) A site shall meet the following groundwater requirements:

(A) A site shall not contravene groundwater standards as established under 15A NCAC 2L;

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

(C) A pad shall be provided for portions of a Type 4 facility used for waste receiving and storage, active composting, and curing;

(D) A pad is not required for storage of finished product that is dried so as to pass the Paint Filter Liquids Test (EPA Method 9095), and for which the storage area is prepared in such a manner that water does not collect around the base of the stored material, and where the depth to the seasonal high watertable is maintained at least 12 inches; and

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

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

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

(1) A site shall not allow uncontrolled public access;

(2) A site shall meet the requirements of the Sedimentation Pollution Control Law (15A NCAC 4);

(3) A site shall meet the requirements of the Air Pollution Control Requirements (15A NCAC 2D) to minimize fugitive emissions and odors; and

(4) A site shall be designed to minimize odors at the property boundary.

*History Note:* *Authority G.S. 130A-294; 130A-309.03; 130A-309.11; 130A-309.29; Eff. December 1, 1991; Amended Eff. May 1, 1996.*

## .1405 APPLICATION REQUIREMENTS FOR SOLID WASTE COMPOST FACILITIES

(a) The following information is required for an application for a permit to construct and operate a proposed Type 1, or a Small Type 2 or 3 solid waste compost facility; unless the permitting requirements are exempted by Paragraph (g) of Rule .1402 of this Section:

(1) An aerial photograph or scaled drawing, where one inch is less than or equal to 400 feet, accurately showing the area within one-fourth mile of the proposed site's boundaries with the following specifically identified:
    (A) Entire property owned or leased by the person proposing the facility;
    (B) Location of all homes, wells, industrial buildings, public or private utilities, roads, watercourses, dry runs, and other applicable information regarding the general topography within 500 feet of the proposed facility; and
    (C) Land use zoning of the proposed site.

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

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

(4) A detailed report indicating the following:
    (A) Waste type(s), source and estimated quantity of the solid waste to be composted, including the source and expected quantity of any bulking agent or amendment (if applicable), any expected recycle of bulking agent or compost, and any seasonal variations in the solid waste type or quantity; and
    (B) For facilities that utilize natural soils as a pad, a soil evaluation of the site conducted by a soil scientist down to a depth of four feet, or to bedrock or evidence of a seasonal high watertable, to evaluate all chemical and physical soil properties and depth of the seasonal high water table.

(5) Site plan at a scale where one inch is less than or equal to 100 feet to the inch that delineates the following:
    (A) Existing and proposed contours, at intervals appropriate to the topography;
    (B) Location and elevations of dikes, trenches, and other water control devices and structures for the diversion and controlled removal of surface water;
    (C) Designated setbacks and property lines;
    (D) Proposed utilities and structures; and
    (E) Areas for unloading, processing, active composting, curing, and storing of material.

(6) A description of the operation of the facility, which must include at a minimum:
    (A) Name, address and phone number for the person responsible for the operation of the facility;
    (B) List of personnel required and the responsibilities of each position;
    (C) Operation plan for the facility;

(D) Special precautions or procedures for operating during wind, heavy rain, snow, freezing or other adverse conditions;

(E) A description of actions to be taken to minimize noise, vectors, air borne particulates, and odors; and

(F) A description of the ultimate use for the finished compost, method for removal from the site, and a contingency plan for disposal or alternative usage of residues or finished compost that cannot be used in the expected manner due to poor quality or change in market conditions.

(7) A report on the design of the facility, including:

(A) Design capacity of the facility;

(B) A process flow diagram of the entire facility, including the type, size, and location of all major equipment, and feedstock flow streams. The flow streams shall indicate the quantity of materials on a wet weight and volumetric basis;

(C) The means for measuring, shredding, mixing, and proportioning input materials;

(D) Anticipated process duration, including receiving, preparation, composting, curing, and distribution;

(E) A description of the location of all temperature, air and any other type of monitoring points, and the frequency of monitoring;

(F) A description of how the temperature control and monitoring equipment will demonstrate that the facility meets the requirements in Rule .1406 Items (10), (11), or (12) of this Section, as appropriate for the feedstock;

(G) The method of aeration provided and the capacity of aeration equipment; and

(H) A description of the method to control surface water run-on and run-off; and the method to control, collect, treat, and dispose of leachate generated.

(8) A description of the label or other information source that meets the requirements of Rule .1407(g) of this Section.

(9) Plans and specifications for the facility, including manufacturer's performance data for all equipment selected.

(10) A detailed operation and maintenance manual outlining:

(A) A quality assurance plan for the process and final product which lists the procedures used in inspecting incoming material, monitoring, sampling and analyzing the compost process and final product, testing schedule, and recordkeeping requirements;

(B) Contingency plans detailing corrective or remedial action to be taken in the event of equipment breakdown; non-conforming waste delivered to the facility; spills, and undesirable conditions such as fires, vectors and odors; and

(C) An explanation of how the facility will comply with operational requirements as outlined in Rule .1406 of this Section, detailed

operational information and instruction, an outline of reports to be submitted in compliance with this Section, and safety instructions.

(11) As built drawings where applicable.

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

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

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

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

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

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

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

(4) A detailed report indicating the following:

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

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

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

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

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

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

(D) Proposed utilities and structures;

(E) Access roads, details on traffic patterns;

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

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

(H) Proposed surface and groundwater monitoring locations;
(I) Flood plains and wetlands; and
(J) Benchmarks.

(6) A description of the operation of the facility, which must include at a minimum:
(A) Name, address and phone number for the person responsible for the operation of the facility;
(B) Operation plan for the facility;
(C) List of personnel required and the responsibilities of each position;
(D) A schedule for operation, including days and hours that the facility will be open, preparations before opening, and procedures to be followed after closing for the day;
(E) For mixed waste processing facilities, a plan for removal and disposal of household hazardous waste from the waste stream;
(F) Special precautions or procedures for operating during wind, heavy rain, snow, freezing or other adverse conditions;
(G) A description of actions to be taken to minimize noise, vectors, air borne particulates, and odors; and
(H) A description of the ultimate use for the finished compost, method for removal from the site, and a contingency plan for disposal or alternative usage of residues or finished compost that cannot be used in the expected manner due to poor quality or change in market conditions.

(7) A report on the design of the facility, including:
(A) Design capacity of the facility;
(B) A process flow diagram of the entire facility, including the type, size, and location of all major equipment, and feed stock flow streams. The flow streams shall indicate the quantity of material on a wet weight and volumetric basis;
(C) A description and sizing of the storage facilities for amendment, bulking agent, solid waste, recyclables, household hazardous waste and finished compost;
(D) The means for measuring, shredding, mixing, and proportioning input materials;
(E) Anticipated process duration, including receiving, preparation, composting, curing, and distribution;
(F) The separation, processing, storage, and ultimate disposal of non-compostable materials, if applicable;
(G) A description of the location of all temperature, air and any other type of monitoring points, and the frequency of monitoring;
(H) A description of how the temperature control and monitoring equipment will demonstrate that the facility meets the requirements in Rule .1406 Items (10), (11), or (12) of this Section, as appropriate for the feedstock;
(I) The method of aeration, including turning frequency or

mechanical aeration equipment and aeration capacity;

(J) A description of the air emission and control technologies;

(K) A description of the method to control surface water run-off; and the method to control, collect, treat, and dispose of leachate generated; and

(L) A description of any recycling or other material handling processes used at the facility.

(8) A description of the label or other information source that meets the requirements of Rule .1407(g) of this Section.

(9) Engineering plans and specifications for the facility, including manufacturer's performance data for all equipment selected.

(c) The following information is required for reviewing an application for a permit to operate a Type 4 or Large Type 2 or 3 solid waste composting facility:

(1) Contingency plans detailing corrective or remedial action to be taken in the event of equipment breakdown; air pollution; non-conforming waste delivered to the facility; spills, and undesirable conditions such as fires, particulates, noise, vectors, odors, and unusual traffic conditions;

(2) A detailed operation and maintenance manual. The manual must contain general design information, a discussion of compliance with operational requirements as outlined in Rule .1406 of this Section, detailed operational information and instruction, equipment maintenance, list of personnel, required personnel training, outline of reports to be submitted in compliance with this Section, and safety instructions;

(3) A quality assurance plan for the process and final product which lists the procedures used in inspecting incoming materials; monitoring, sampling and analyzing the compost process and final product, testing schedule, and record keeping requirements;

(4) A fact sheet and process flow diagram that summarizes actual equipment sizing, aeration capacity, detention times, storage capacity, and flow rates (wet weight and volumetric) for the system and equipment chosen;

(5) As-built drawings;

(6) A copy of all applicable local, state, and federal permits and approvals necessary for the proper operation of the facility; and

(7) Product marketing and distribution plan.

(d) An application for a permit modification shall be required for changes in facility ownership, an increase in facility capacity, or the addition of new feedstock materials.

*History Note:* *Authority G.S. 130A-294; 130A-309.03; 130A-309.11; 130A-309.29; Eff. December 1, 1991; Amended Eff. May 1, 1996.*

**.1406 OPERATIONAL REQUIREMENTS FOR SOLID WASTE COMPOST FACILITIES**

Any person who maintains or operates a solid waste compost facility shall maintain and operate the site to conform with the following practices:

(1) Plan and Permit Requirements:

(A) Construction plans and conditions of permit shall be followed; and

(B) A copy of the permit, plans, and operational reports shall be

maintained on site at all times.

(2) Adequate erosion control measures shall be practiced to prevent on-site erosion and to control the movement of soil or contaminants from the site.

(3) Surface water shall be diverted from the operational, compost curing, and storage areas.

(4) Leachate shall be contained on site or treated to meet the standards of the off-site disposal method.

(5) Access and Security Requirements:

(A) Large sites shall be secured by means of gates, chains, berms, fences, or other security measures demonstrated to provide equivalent protection approved by the Division, to prevent unauthorized entry.

(B) An operator shall be on duty at the site at all times while the facility is open for public use to ensure compliance with operational requirements and access to such facilities shall be controlled.

(C) The access road to the site shall be of all-weather construction and maintained in good condition.

(6) A site shall only accept those solid wastes that it is permitted to receive.

(7) Safety Requirements:

(A) Open burning of solid waste is prohibited.

(B) Equipment shall be provided to control accidental fires and arrangements made with the local fire protection agency to immediately provide fire-fighting services when needed.

(C) Personnel training shall be provided to insure that all employees are trained in site specific safety, remedial, and corrective action procedures.

(8) Sign Requirements:

(A) Signs providing information on waste that can be received, dumping procedures, the hours during which the site is open for public use, the permit number and other pertinent information shall be posted at the site entrance.

(B) Traffic signs/markers shall be provided as necessary to promote an orderly traffic pattern to and from the discharge area and to maintain efficient operating conditions.

(C) Signs shall be posted stating that no hazardous waste, asbestos containing waste, or medical waste can be received at the site.

(9) Monitoring Requirements:

(A) Specified monitoring and reporting requirements shall be met.

(B) The temperature of all compost produced shall be monitored sufficiently to ensure that the pathogen reduction criteria is met.

(10) Compost process at Type 1 facilities shall be maintained at or above 55 degrees Celsius (131 degrees F) 3 days and aerated to maintain elevated temperatures.

(11) Types 2, 3 and 4 facilities shall maintain the compost process at a temperature above 40 degrees Celsius (104 degrees F) for 14 days or longer and the average temperature for that time shall be higher than 45 degrees Celsius (113 degrees F) or, Types 2, 3 and 4 facilities shall meet the vector attraction reduction requirements in 40 CFR 503.33(b)(4) or (7). Requirements of 40 CFR 503.33(b)(4) and (7) are hereby incorporated by reference, including any

subsequent amendments or additions.

(12) The composting process shall qualify as a process to further reduce pathogens for all Type 3 and Type 4 facilities. The following are acceptable methods:

(A) The windrow composting method, in which the following requirements apply: Aerobic conditions shall be maintained during the compost process. A temperature of 131 degrees F (55 degrees Celsius) or greater shall be maintained in the windrow for at least 15 days. During the high temperature period, the windrow shall be turned at least five times.

(B) The static aerated pile composting method, in which the following requirements apply: Aerobic conditions shall be maintained during the compost process. The temperature of the compost pile shall be maintained at 131 degrees F (55 degrees Celsius) or greater for at least three days.

(C) The within-vessel composting method, in which the temperature in the compost piles shall be maintained at a minimal temperature of 131 degrees F (55 degrees Celsius) for at least three days.

(13) Nitrogen bearing wastes shall be incorporated as necessary to minimize odor and the migration of nutrients.

(14) Miscellaneous Requirements:

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

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

(C) The final product shall be approved by the Solid Waste Section as outlined in Rule .1407 Paragraph (e) of this Section.

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

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

*History Note:* *Authority G.S. 130A-294; 130A-309.03; 130A-309.11; 130A-309.29*
*Eff. December 1, 1991; RRC objection Eff. April 18, 1996 due to lack of statutory authority; Amended Eff. June 1, 1996.*

## .1407 CLASSIFICATION/DISTRIBUTION OF SOLID WASTE COMPOST PRODUCTS

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

Table 1

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

(b) Solid waste compost shall be classified based on Table 2:

Table 2

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

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

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

(1) Grade A compost shall have unlimited, unrestricted distribution. This product may be distributed directly to the public;

(2) Grade B compost shall be restricted to distribution for land and mine reclamation, silviculture, and agriculture (on non-food chain crops) projects; and

(3) Compost or mulch that is produced at a Type 1 facility and that contains minimal pathogenic organisms, is free from offensive odor, and contains no sharp particles that would cause injury to persons handling the compost, shall have unrestricted applications and distributions if directions are provided with the compost product.

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

(f) The applicant is responsible for meeting any applicable requirements of the North Carolina

Department of Agriculture, Fertilizer Section concerning the distribution of this product.

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

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

*History Note:* *Authority G.S. 130A-309.11; Eff. December 1, 1991;*
*RRC objection Eff. April 18, 1996 due to lack of statutory authority;*
*Amended Eff. June 1, 1996.*

**.1408 METHODS FOR TESTING AND REPORTING REQUIREMENTS**

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

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

Table 3

| Parameter | Unit | Facility | Test Method |
|---|---|---|---|
| Foreign Matter | % | all | see Subparagraph (5) 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 |

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

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

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

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

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

(5) Foreign matter content shall be determined by passing a dried, weighed sample of the compost product through a one-quarter inch screen. EPA Method 160.3 shall be used to dry the sample. The material remaining on the screen shall be visually inspected, and the foreign matter that can be clearly identified shall be separated and weighed. The weight of the separated foreign matter divided by

the weight of the total sample shall be determined and multiplied by 100. This shall be the percent dry weight of the foreign matter content.

(b) Record Keeping: All facility owners or operators shall record and maintain records for a minimum of five years. Records shall be available for inspection by Division personnel during normal business hours and shall be sent to the Division upon request:

(1) Daily operational records must be maintained, which include, at a minimum, temperature data (length of the composting period) and quantity of material processed;
(2) Analytical results on compost testing;
(3) The quantity, type and source of waste received;
(4) The quantity and type of waste processed into compost;
(5) The quantity and type of compost produced by product classification; and
(6) The quantity and type of compost removed for use or disposal, by product classification, and the market or permitted disposal facility.

(c) Annual Reporting: An annual report for the period July 1 to June 30 shall be submitted by all facility owners or operators to the Division by August 1, 1996 and every August 1 thereafter and shall contain:

(1) The facility name, address, and permit number;
(2) The total quantity in tons, with sludge values expressed in dry weight, and type of waste received at the facility during the year covered by the report, including tons of waste received from local governments of origin;
(3) The total quantity in tons, with sludge values expressed in dry weight, and type of waste processed into compost during the year covered by the report;
(4) The total quantity in tons and type of compost produced at the facility, by product classification, during the year covered by the report;
(5) The total quantity in tons and type of compost removed for use or disposal from the facility, by product classification, along with a general description of the market if for use during the year covered by the report;
(6) Monthly temperature monitoring to support Rule .1406 of this Section; and
(7) Results of tests required in Table 3 of this Rule.

(d) Yearly totals of solid waste received and composted shall be reported back to the local government of origin for annual recycling reporting.

*History Note:* *Authority G.S. 130A-294; 130A-309.03; 130A-309.11; 130A-309.29; Eff. December 1, 1991; RRC objection Eff. April 18, 1996 due to lack of statutory authority; Amended Eff. June 1, 1996.*

**.1409 APPROVAL OF ALTERNATIVE PROCEDURES AND REQUIREMENTS**

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

(1) The specific facility for which the exception is requested;
(2) The specific provisions of this Section for which the exception is requested;
(3) The basis for the exception;
(4) The alternate procedure or requirement for which the approval is sought and a demonstration that the alternate procedure or requirement provides equivalent

protection of the public health and the environment; and

(5) A demonstration of the effectiveness of the proposed alternate procedure.

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

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

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

(3) The specific time frame for the project;

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

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

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

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

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

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

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

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

*History Note:* *Authority G.S. 130A-294; 130A-309.03; 130A-309.11; 130A-309.29; Eff. December 1, 1991; RRC objection due to lack of statutory authority Eff. April 18, 1996; Amended Eff. June 1, 1996.*

# APPENDIX A

Methods for the Analysis of Metals

| Pollutants | Sample Preparation and Analytical Methodologies SW-846* |
|---|---|
| Arsenic | EPA Methods 3050/3051 - 7061+ 7060 |
| Cadmium | EPA Methods 3050/3051 - 6010/7131/7130 |
| Chromium | EPA Methods 3050/3051 - 6010/7191/7190 |
| Copper | EPA Methods 3050/3051 - 6010/7210 |
| Lead | EPA Methods 3050/3051 - 6010/7421/7420 |
| Mercury | EPA Method 7471/7470 |
| Molybdenum | EPA Methods 3050/3051 - 6010/7481/7480 |
| Nickel | EPA Methods 3050/3051 - 6010/7520 |
| Selenium | EPA Methods 3050/3051 - 6010/7741/7740 |
| Zinc | EPA Methods 3050/3051 - 6010/7950 |

**Test Methods for Evaluating Solid Waste. Physical/Chemical Methods.* EPA Publication SW-846, Second Edition (1982) with Updates I (April 1984) and II (April 1985) and the Third Edition (November 1986) with Revision I (December 1987) and Update I (July 1992). The Second Edition Updates I and II (PB-87-120-291) are available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. The Third Edition and Revision I and Update I (Document number 955-001-00000-1) are available from the Superintendent of Documents Government Printing Office, 941 North Capitol Street, NE, Washington, DC 20002. Future updates will be noticed in the *Federal Register*.

# APPENDIX B

Analytical Methods for Pathogen Testing

| Sample Type | Method |
|---|---|
| Enteric Viruses | ASTM Designation: D 4994-89. Standard Practice for Recover of Viruses from Wastewater Sludges, Annual Book of ASTM Standards: Section 11, Water and Environmental Technology. ASTM, Philadelphia, PA, 1992. |
| Fecal Coliform | Part 9221 E or Part 922 D. Standard Methods for the Examination of Water and Wastewater, 18th edition. American Public Health Association, Washington, DC, 1992 |
| Helminth Ova | Yanko, W.A., Occurrence of Pathogens in Distribution and Marketing Municipal Sludges, EPA/600/1-87/014, 1987. PB 88-154273/AS, National Technical Information Service, Springfield, VA:(800)553-6847. |
| *Salmonella* sp. Bacteria | Part 9260 D, Standard Methods for Examination of Water and Wastewater, 18th edition, American Public Health Association, Washington, DC 1992; or Kenner, B.A. and H.P. Clark. Detection and Enumeration of *Salmonella* and *Pseudomonas aeruginosa*, J. Water Pollution Control Federation, 46(9):2163-2171, 1974. |