Summary
Composting Facility Operating Requirements—2014 Solid Waste Rules

General Operating Requirements

1. A facility, including associated equipment, containers and vehicles, shall be operated and maintained in a manner that controls to the greatest extent practicable:
    a. Dust;
    b. Litter;
    c. Insects;
    d. Odors;
    e. Vectors;
    f. Spills;
    g. The production of leachate;
    h. Fire hazards including spontaneous combustion;
    i. The generation of methane and other hazardous or explosive gases;
    j. Noise; and
    k. Nuisances.
2. Regularly inspect, monitor and maintain the facility to assure compliance with the permit and the solid waste rules.
3. Execute facility repairs and correct, abate and remediate facility operating problems in a timely manner and as directed by the department in conformance with the solid waste rules.
4. Restrict unauthorized entry and use of the facility by restricting access, regularly inspecting the waste received and managed at the facility, and other appropriate measures.
5. Conduct facility operations in a manner that does not allow incoming or exiting vehicles to obstruct the safe passage of traffic on any public road leading to and from the facility.
6. Conduct facility operations in a manner as to accommodate on-site traffic flow in a safe and efficient manner.
7. Post legible signs at or near each public entrance to the facility, including the following information:
    a. Facility name and permit #
    b. Name, address and telephone # of the permittee
    c. Days and hours the facility is open;
    d. Type of wastes accepted; and
    e. Statement that unlawful dumping is subject to fine and prosecution.
8. Prominently display copy of permit.
9. Prominently display operator certification certificates.
10. Annually communicate with the host solid waste management district to assure that:
    a. All operating requirements established for the facility pursuant to the provisions of RSA 149-M:11, XI pertaining to the requirements of RSA 149-M:11, III(c) and RSA 149-M:12, I(b) are being met by the facility; and
    b. Facility operations meet other relevant planning needs and requirements identified or established by the district, to the extent allowed by the permit.
11. Maintain an up to date Operating Plan at the facility, conforming to Env-Sw 1105.11.

Compost Quality / Classification

1. *Class AA:* Compost produced from the following source-separated wastes and materials is classified as Class AA compost and can be land applied without restriction:
    a. Yard waste and farming crop residuals;
    b. Food waste;
    c. Animal manure; or

d. Approved bulking agents, including waste derived products certified for distribution and use as composting bulking agents.

2. *Class A:* Compost shall be designated as Class A compost if it meets the following criteria. It can be applied to land, except where crops are grown for direct human consumption. However, Class A compost may be used on land where food chain crops are grown, such as crops that are fed to livestock but not consumed directly by humans.
   a. The finished compost shall be sufficiently stable that it shall not reheat upon standing to greater than 20ºC above ambient temperature;
   b. The concentration of heavy metals in the finished compost shall not exceed the ceiling concentrations provided in Env-Ws 800 for sludge and sludge mixtures, determined on the basis of representative samples using EPA test procedures in EPA manual SW 846 (2007);
   c. The finished compost shall contain less than one ppm dry weight total polychlorinated biphenyls (PCB);
   d. The finished compost shall not exceed 10 millimeters (0.39 inch) particle size;
   e. The finished compost shall be produced from a composting process which:
      (1) Has a minimum retention time, including active composting and curing, of 90 days; or
      (2) Achieves 60 percent reduction in organic matter;
   f. The finished compost shall contain no glass, metal or plastic of size or shape that could cause injury;
   g. The finished compost shall contain no more than 2% non-organic and non-mineral material not including sand and other inorganic soils, by weight; and
   h. If the finished compost is produced using sludge or septage, the Class A pathogen reduction requirements in 40 CFR 503.32(a) shall apply.

3. *Off-Specification Compost:* Compost which is not Class AA or Class A shall be:
   a. Managed as residual waste in accordance with the facility's residuals management plan; and
   b. Not certified for distribution and use as compost to be applied to land.

   Compost that meets all of the standards of a Class A compost, except that its particle size exceeds 10 millimeters (0.39 inch) shall be certified for distribution and use as compost in landfill cover systems, pursuant to Env-Sw 1500.

Management of Incoming Waste

1. Incoming waste shall be actively managed.
2. Incoming wastes shall be inspected and, if necessary, sampled and analyzed to assure the facility accepts authorized waste only.
3. Unauthorized waste shall be rejected by the facility.
4. The permittee shall advise the transporter of a rejected waste as to potentially available alternative facilities which the permittee believes or knows to be authorized to receive the type of waste being rejected.
5. Incoming waste shall not be stored for a period of time that results in a condition adversely affecting the environment, public health or safety, including conditions that attract insects and vectors, generate odors, decomposition gasses, or leachate, or have the potential to cause fire or explosion.
6. All wastes received by the facility shall be inspected to identify and remove wastes that are not suitable for composting, including wastes that are not organic in nature and wastes which are prohibited wastes and any other waste having the potential to adversely affect the capabilities for producing either a Class AA or Class A compost.
7. Prohibited wastes are:

a. Asbestos;
b. Batteries;
c. Explosive or contained gaseous wastes;
d. White goods;
e. Construction and demolition debris;
f. Bulky wastes;
g. Recyclable materials other than paper or cardboard products certified for distribution and use as a composting bulking agent pursuant to Env-Sw 1500;
h. Household hazardous waste and hazardous waste;
i. Liquid wastes;
j. Infectious waste or treated infectious waste;
k. Deceased persons;
l. Contaminated soils or absorbent media;
m. Radioactive materials as defined and regulated by the New Hampshire rules for the control of radiation, He-P 2000 and He-P 4000; and
n. Sludge or septage as defined by RSA 485-A:2, except in accordance with a permit issued pursuant to RSA 485-A, as applicable.

Bypass and Residual Waste Management (including off-spec compost)

1. All solid waste leaving the facility shall be transferred to an authorized facility.
2. Facility operations shall include provisions to properly manage residual waste.
3. A facility shall obtain and maintain access to at least two authorized locations where adequate capacity exists to handle the type and quantity of all residual waste that the facility regularly generates.
4. A residual waste shall not be distributed for use unless certified for distribution and use in accordance with Env-Sw 1500 (i.e., either approved by rule or by the department based on an application for approval).

Processing/Treatment Requirements

1. A composting facility shall operate in a manner to meet the pathogen reduction criteria specified in 40 CFR 503 and consistently produce either a Class AA or Class A compost.
2. Using the windrow composting method:
   a. The solid waste shall be maintained under aerobic conditions during the compost process;
   b. A minimum of 5 turnings shall be required during a period of 15 consecutive days when the temperature of the mixture shall not be less than 55ºC (131ºF) at 6 to 8 inches below the surface of the pile; and
   c. In turning the compost pile, the exterior of the compost pile shall be turned into the interior of the compost pile to assure that all solid waste is exposed to composting conditions;
3. Using the aerated static pile composting method, the compost pile shall be insulated and a temperature of not less than 55ºC (131ºF) shall be maintained throughout the compost pile for at least 3 consecutive days; or
4. Using the enclosed vessel composting method, the mixture shall be maintained at a temperature of not less than 55ºC (131ºF) throughout the mixture for at least 3 consecutive days.
5. The composting facility shall have sufficient temperature monitoring to ensure that the pathogen reduction criteria specified in 40 CFR 503 are met, such as the following:
   a. For a windrow or an aerated static pile process, monitoring 6 to 8 inches and 18 to 24 inches below the pile surface;

b. For an aerated static pile process, monitoring 6 to 8 inches and 18 to 24 inches from the outlet of the aeration pipe; and
c. For an enclosed vessel system, monitoring 6 to 8 inches and 18 to 24 inches inside the vessel wall and 6 to 8 inches from the aeration piping when operating in the positive aeration mode.

6. Temperature shall be monitored as follows and shall be recorded daily:
   a. For a windrow or an aerated static pile process, monitoring 6 to 8 inches and 18 to 24 inches below the pile surface;
   b. For an aerated static pile process, monitoring 6 to 8 inches and 18 to 24 inches from the outlet of the aeration pipe; and
   c. For an enclosed vessel system, monitoring 6 to 8 inches and 18 to 24 inches inside the vessel wall and 6 to 8 inches from the aeration piping when operating in the positive aeration mode.

Testing Requirements

1. Sampling and analysis of the compost shall be performed in accordance with a quality assurance/quality control plan (QA/QC plan) which:
   a. Conforms to the minimum requirements specified in the table below, unless modified by permit condition;
   b. Assures all compost distributed by the facility meets Class A or Class AA specifications; and
   c. Is approved by the department as a condition of the permit.

Table 600-I
Sampling and Analysis of Compost

Average Compost Produced (Dry Tons/Day)	ANALYSES	
	Total Solids; Total Volatile Solids; Total Kjeldahl Nitrogen, Ammonia, Nitrate & Nitrite; Total Phosphorous; Total Potassium; pH; Heavy Metals (Cadmium, Total Chromium, Copper, Lead, Mercury, Nickel, Zinc)	Total Polychlorinated Biphenyls
Less than 1	Semiannually, with 6 grab samples composited monthly	Annually, with 12 grab samples composited monthly
1 to 10	Monthly, with 4 grab samples composited weekly	Semiannually, with 6 grab samples composited monthly
More than 10	Weekly, with 5 grab samples composited daily	Semiannually, with 6 grab samples composited monthly

2. Analysis of nitrogen series, including total kjeldahl nitrogen (TKN), ammonia (NH3), nitrite (NO2), and nitrate (NO3), shall be performed on either fresh grab samples or grab samples that are immediately frozen and remain frozen throughout the pre-analysis storage period;

3. Analysis of nitrogen series, including total kjeldahl nitrogen (TKN), ammonia (NH3), nitrite (NO2), and nitrate (NO3), shall be performed on either fresh grab samples or grab samples that are immediately frozen and remain frozen throughout the pre-analysis storage period;
4. Additional analyses for salts or other pollutants shall be required for the compost if, during the permit application process, the proposed operating procedures and waste through-put characterization indicate that salt or other pollutants are likely to be present in the compost; and
5. If the compost is produced using septage or sludge, the pathogen testing requirements in 40 CFR 503.32 shall apply.

Management of Finished Compost

1. Quality assurance/quality control procedures shall be implemented to assure that the quality of all finished compost distributed by the facility meets class A or class AA specifications.
2. Off-specification compost shall be managed in the same manner as (a) an incoming waste as if the waste will be reprocessed or retreated by the facility; or (b) a residual or bypass waste if the waste will not be reprocessed or retreated by the facility.
3. When an off-specification compost is produced by a P/T facility, the permittee shall:
    a. determine the likely cause and take appropriate steps to correct and avoid a recurrence of the problem;
    b. If the problem is determined to be operational, make the appropriate processing or treatment adjustments to correct the problem before reprocessing or retreating the off-specification material; and
    c. If the problem is due to characteristics of the waste feedstock that cannot be remedied by operational adjustments, manage the off-specification material and all unprocessed and untreated waste of similar characteristics as bypass waste.
4. A facility shall disclose the following information to consumers of the class A and class AA compost:
    a. The content and nature of the waste-derived products (i.e., the finished compost);
    b. The proper uses of the waste-derived products (i.e, the finished compost) and any restrictions related thereto;
    c. Any hazards that might result from use of the compost;
    d. Proper methods for disposal of the compost; and
    e. Other such information as might be required by applicable federal and state consumer protection rules and regulations.
5. Prior to distribution, all Class A compost, both bagged and bulk, shall be clearly marked to:
    a. Show its classification; and
    b. Identify the following:
    c. Type of waste from which it was derived;
    d. Use restrictions;
    e. Recommended safe uses;
    f. Application rates; and
    g. Maximum allowable contaminant levels as provided in Env-Sw 605.05 and average contaminant concentrations to date.

Recordkeeping

1. Records to identify the locations to which or persons to whom the materials are transferred.
2. Operational records shall include:
    a. The source, description and quantity of all materials received at the facility;
    b. For facilities producing other than Class AA compost, a sampling log, which shall identify:
        i. The date and time of sampling;

ii. The person taking the sample;
iii. The sampling method and location;
iv. The lab to which the samples were sent for analysis; and
v. The results of the analysis, including quality assurance and quality control provisions;

3 A daily temperature data log, which shall identify:
vi. The date, time and location of data collection;
vii. The person collecting the data;
viii. Calibration data for the temperature device;
ix. The data collection method; and
x. The data;

4. Quantity of bypass waste removed prior to composting;
5. Quantity of non-compostables and other residual waste removed after composting; and
6. Locations to which or persons to whom Class A compost is distributed.
7. Maintain records at the facility which document all phases of facility operations, including the following information:
    a. Identification of the facility by name, location by street and municipality and permit number;
    b. Identification of the permittee by name, address and telephone number;
    c. Identification of all facility operator(s) by name, address, certificate number, and date(s) of employment at the facility;
    d. Quantity, type, source and destination of all waste received by the facility;
    e. Quantity, type and destination of all waste generated by the facility, if any, including bypass waste and residual waste;
    f. Quantity, type and destination of all compost produced by the facility;
    g. Record of inspections, maintenance, and repairs;
    h. Record of accidents, violations, remedial and emergency event response actions;
    i. Record of complaints received and related response actions;
    j. Data from all environmental monitoring performed at or for the facility, whether required by the solid waste rules or the permit or undertaken voluntarily;
    k. Documentation of contact with the waste management district(s) served by the facility;
    l. Other information and documentation as required by the terms and conditions of the permit.

<u>Reporting</u>

1. The results of laboratory analyses shall be reported to the department on a quarterly basis for those facilities that produce at least one dry ton of compost per day and on a semi-annual basis for those facilities that produce less than one dry ton of compost per day;
2. Reporting of the analyses shall include copies of the laboratory reports, with all results reported on a dry weight basis except pH, total solids and total volatile solids, and a narrative of the findings, trends and results;
3. The permittee shall report to the department all incidents or situations at the facility which involve an imminent and substantial risk to human health, safety or the environment or which constitute a violation of the solid waste rules or the facility permit.
4. The permittee shall report to the department, in writing, complaints made by abutters or other third parties which involve operating conditions or practices having the potential to adversely effect human health, safety or the environment or which involve a recurring or persistent nuisance situation such as noise, litter, odor, dust or vectors.
5. Permittee shall file an Annual Facility Report by March 31 for each prior year of operations.

Operator Qualifications/Facility Staffing

1. Facility operators shall be capable of efficiently operating and maintaining the facility in a manner which is protective of the environment, public health and safety.
2. Facility operators shall demonstrate a level of knowledge and understanding of the solid waste rules sufficient to operate the facility in compliance with all applicable requirements of the solid waste rules and the facility permit.
3. Operators of non-exempt facilities shall be trained and certified pursuant to Env-Sw 1600..
4. A facility shall be staffed with persons qualified by reason of training, experience and performance history to operate the facility in accordance with all applicable requirements of the solid waste rules and the permit.
5. Each facility shall have at least one principal operator certified in accordance with Env-Sw 1600 present at the facility during operation.

Financial Assurance

1. The permittee shall be responsible for the cost of facility closure, including all post-closure obligations.
2. Prior to commencing operation of a facility, the permittee shall assure that adequate funds, in an amount no less than the amount calculated pursuant to Env-Sw 1403.02, are readily available to cover the cost of facility closure.
3. In order to meet the obligation specified by (b) above, the permittee shall provide a formal financial assurance plan when required pursuant to Env-Sw 1400.