Summary
Composting Facility Design Requirements---2014 Solid Waste Rules

General Design Requirements.

(a) A facility shall employ best practicable technology(s) and sound engineering practices in meeting the applicable design requirements specified in the solid waste rules.

(b) Where options exist relative to design concepts, preference shall be given to the option which provides:

(1) The least complex alternative(s) for facility construction, operation and maintenance;

(2) The required performance standard(s); and

(3) The same or less risk of failure compared to designs that are in common usage in the industry and which comply with current requirements established under the solid waste rules.

(c) The design of a facility shall be compatible and facilitate compliance with the applicable facility operating and closure requirements specified in the solid waste rules

Design Features and Appurtenances.

(a) The design of a composting facility shall include each of the following features and appurtenances, except as provided in (b) below:

(1) Waste receiving and inspection area(s);

(2) Waste sorting area(s), if facility operations involve the sorting of waste;

(3) Hot load segregation and control area(s);

(4) Waste storage areas and devices including, as appropriate for the type of waste being stored, transfer containers, bins, concrete bunkers, covered pallets, buildings and storage pads for stockpiles;

(5) Equipment required to operate the facility in conformance with the solid waste rules including, as applicable to the size and scope of operations, scales, balers, compactors, mechanical sorting devices, fork lifts, trucks and other vehicles;

(6) Equipment storage and cleaning areas;

(7) A closed drainage system or functionally equivalent operating system to manage the discharge of liquids, if any, from waste handling and storage areas and from equipment cleaning area(s);

(8) Lighting;

(9) Active or passive ventilation systems for enclosed areas;

(10) Fire control devices or systems, including smoke detectors, alarms, fire extinguishers, and sprinkler systems as appropriate;

(11) Shelter for facility operators;

(12) Sanitation facilities for facility operators;

(13) First aid station for facility operators;

(14) Emergency communication for facility operators;

(15) Office or other area for maintaining and storing facility records; and

(16) Access control devices such as fencing, gates and bars, locked buildings, and signs.

(b) A design feature or appurtenance listed in (a) above shall not be required if:

(1) The applicant or permittee, as applicable, demonstrates in a permit application, application for permit modification or compliance report, as applicable, that:

a. The underlying facility operating requirements will be met without the design feature or appurtenance or met through use of an alternative feature, appurtenance or practice; and

b. Not incorporating the design feature or appurtenance, as proposed, will not result in a violation of the universal environmental performance requirements in Env-Sw 1002; and

(2) The department provides written approval thereof in the permit or permit modification, specifically including reference to any alternative feature, appurtenance or practice the facility shall employ as a condition of the approval.

General Waste Handling and Storage Area Design Requirements.

(a) A waste handling and storage area shall be designed to collect and contain waste in a manner that is protective of the environment, public health and safety.

(b) A waste handling and storage area shall be delineated and signed to control and assure proper use of the area by facility users and operators, as appropriate based on the following factors:

(1) Whether public access to the area will be allowed;

(2) Whether a full time operator will be present to monitor and control use of the area;

(3) Whether the area will be used to handle wastes requiring segregation from other waste types;

(4) Whether the area will be used to handle wastes requiring no public contact in order to protect the environment, public health or safety; and

(5) Whether the method of assuring the facility receives no excess waste will be based on visually monitoring the extent to which the designated storage area is filled.

(c) A waste handling and storage area shall be designed to manage and store waste in a manner that controls to the greatest extent practicable dust, litter, insects, odors, vectors, spills, the production of leachate, fire hazards including spontaneous combustion, the generation of methane and other hazardous or explosive gases, noise and nuisances.

(d) A waste storage and handling area shall be designed to prohibit public access to any area used for storing or handling a waste that requires special handling to assure protection of the environment, public health and safety.

(e) A facility shall be designed to allow year round access by facility operators to all waste storage areas for the purposes of:

(1) Inspection;

(2) Monitoring;

(3) Maintenance; and

(4) The removal of waste as necessary to protect the environment, public health and safety.

(f) Putrescible waste shall not be collected or stored on the ground.

Additional Design Requirements for Handling and Storage Areas for Waste and Materials. Areas used to handle and store each of the following waste groups and materials shall be designed as provided in (a) through (g) below.

- Incoming waste;
- Residual and bypass waste resulting from the operation of the facility;
- Waste-derived products produced by the facility, (i.e., the finished compost); and
- Materials used by the facility to process or treat waste.

(a) Stockpiles of waste shall be positioned within a footprint identified on the facility site plan.

(b) If a stockpile will be open to precipitation, the footprint of the stockpile shall be:

(1) Underlain by an asphalt, concrete or packed soil surface; and

(2) Graded to prohibit precipitation and surface drainage from surrounding areas from draining through or collecting in the stockpile area.

(c) A waste stockpile shall be located, sized and configured in accordance with (d) below and as required by local fire authorities in order to assure that available local firefighting equipment and resources will be able to effectively respond to a fire at the facility.

(d) At a minimum, a facility shall be designed to:

(1) Provide access to all waste stockpiles for fire control purposes, including the placement and maintenance of fire lanes between and around all stockpiles of combustible waste;

(2) Limit the height of the stockpiles to a height compatible with local firefighting equipment response capabilities; and

(3) Provide a water supply within a distance and in a quantity sufficient for local firefighting needs.

(e) A stockpile shall be sized and configured to be physically stable against slides, collapse or other conditions that might result in personal injury or destruction of property.

(f) A stockpile shall be covered when required to protect the environment, public health or safety.

(g) If a waste exhibits a characteristic which has the potential to cause groundwater or surface water contamination when placed in contact with the ground surface, the waste shall be stockpiled in a manner as to prevent the contamination by means of a leachate collection system or functionally equivalent control system.

Roads and Traffic Control.

(a) The design of the facility as it relates to the management of traffic on roads leading to and from the facility's entrance and exit points shall meet all applicable local standards if the roads are municipal streets or roads or, if the roads are state roads, shall meet the requirements of the New Hampshire department of transportation.

(b) A facility shall be designed to prevent entering and exiting vehicles from obstructing the safe flow of traffic on any public road leading to or from facility.

(c) Adequate on-site area at the facility's entrance and exit points shall be provided to allow the number and types of waiting vehicles expected to use the facility during peak times to safely queue off the public road(s) and right-of-way.

(d) A facility shall be designed to accommodate on-site traffic flow in a safe and efficient manner in all weather conditions.

(e) Separate on-site access for passenger vehicles shall be provided at facilities where public drop-off is allowed.

(f) A facility shall be designed to assure that traffic conflicts shall not occur between bulk transport vehicles, passenger vehicles and pedestrians at the facility site.

(g) The on-site road surface and the road base shall be suitable for heavy vehicles and capable of withstanding expected loads.

Drainage.

(a) Site drainage features shall be designed in accordance with the requirements of RSA 485-A:17.

(b) Detention basins and other drainage structures shall be located and designed to minimize the potential to adversely impact any landfill closure system located at or near the site.

(c) Surface drainage shall be collected and directed to discharge points having no potential to affect the performance of any groundwater or surface water monitoring system, leachate collection and removal system, or any other component of a landfill closure system.

Protection of Landfill Closure Systems. The design of a facility shall include measures or features to avoid damage during construction and operation of the facility to any component of a landfill closure system, including:

(a) Ground control markers;

(b) The capping system;

(c) Leachate collection system risers and clean-outs;

(d) Groundwater monitoring wells; and

(e) Decomposition gas control devices.

Wastewater Systems. All wastewater collection, transmission and treatment features which are part of or specifically serve a facility shall be designed in accordance with RSA 485-A.

Equipment.

(a) The installation and use of manufactured equipment at a facility shall conform to the manufacturer's specifications and recommendations, unless the permittee provides a written statement by a qualified professional engineer certifying that the non-conforming installation and use shall not adversely affect the environment, public health or safety.

(b) Pursuant to RSA 149-M:10, II, municipalities and waste haulers shall affix ownership identification or facility or company logo to all waste containers used in conjunction with the operation of a facility.

Access Control.

(a) The perimeter of a facility site shall be fenced in a manner as to restrict unauthorized access to the facility, except no fence shall be required if natural site features restrict access to the site, or all waste handling, storage and disposal areas at the facility are wholly contained within locked structures or devices when the facility operator is not present.

(b) Weather-resistant signs, which state that access is restricted, shall be posted around the perimeter of a facility site wherever fencing is not required by (a) above.

(c) The lawful access points to the facility shall be secured by locked gates or the equivalent during times when the facility operator is not be present.

Surrounding Properties. The design of a facility shall incorporate features to minimize adverse impacts, if any, to surrounding properties, such as the use of stockade fencing where appropriate to shield waste storage and handling areas from view and to control the off-site transport of dust and windblown litter, and the use of landscaping berms or other vegetation for similar purposes.

Design Plans and Specifications, Content and Format. Facility plans and specifications, including preliminary and final plans submitted with an application shall conform to the following requirements:

(a) Plans and specifications shall bear the date of preparation and, for a facility already permitted, the facility permit number;

(b) Plans and specifications shall be clearly readable;

(c) Plans and specifications shall be prepared in accordance with standard engineering practices, including dimensions, labels, details and other graphic elements;

(d) Plans and specifications shall be stamped by a qualified professional engineer as required by RSA 310-A;

(e) Except as provided by (f) below, plans shall:

(1) Be prepared at a scale of no less than one inch equals 50 feet;

(2) Be presented on paper no larger than 24 inches by 36 inches;

(3) Show profiles drawn to standard scales with a ratio of 10 horizontal to 1 vertical (10:1), such as 40:4 and 50:5;

(4) Show elevations of the surface to the nearest 0.1 foot;

(5) Show elevations of the piping, sewer, and manhole inverts to the nearest 0.01 foot;

(6) Report all elevations in feet and tenths and reference all elevations to a standard datum, which shall be indicated on the plans, based on mean sea level; and

(7) Show contours at a minimum interval of 2 feet on all plan views.

(f) Alternatives to (e) above shall be accepted if, prior to submitting the plans, the applicant requests approval of the alternative(s) and shows in the request that, based on the size of the land area being shown, the size of the detail being shown or the margin of error acceptable, the information to be presented on the plans will be as clear and understandable prepared according to the alternative(s) as it would be prepared according to (e) above.

(g) Plans and specifications submitted for construction approval shall include the intended methods for sequencing facility construction, consistent with:

(1) The seasonal restrictions specified in Env-Sw 1104.04;

(2) The construction schedule required by Env-Sw 1104.02; and

(3) For landfills constructed in phases over time, the requirements in Env-Sw 805.11(d).

(h) Plans and specifications shall be submitted with all calculations and design related documentation required to support and verify the adequacy of the proposed design and construction.