

GUIDELINES FOR SUBMITTING A COMPOST PLANT APPLICATION

NAC 444.670 System to process waste: Compost Plant. (NRS 444.560)

A compost plant must not be established until the site location, design of the plant and proposed method of operation have been approved by the solid waste management authority and a permit to operate the compost plant has been issued in accordance with the requirements of NAC 444.6405 to 444.6435, inclusive. An application for such a permit must include:

- (a) A description of the materials to be composted, including a characterization of the waste sufficient to evaluate the potential for biological or chemical contaminant migration in the event of a release;

Include a complete description of the materials along with an analytical characterization (lab analysis) of the wastes to be composted. It is not necessary include an analysis for common compostables like hay, yard waste etc, but be sure to include an analysis for wastes like Septage, Waste Activated Sludge (WAS), Dewatered Activated Sludge (DAS), Filter Cake. The analysis will vary with the type of composting operation, for example the composting of dairy wastes will differ from the composting of sewage sludge as will the composting of yard waste (or wood wastes etc). Be sure to speak to the nature of the type and volume of waste that is proposed to be composted.

- (b) A layout diagram of the plant showing property boundaries, fencing, roads, principal processing equipment, storage areas for stockpiles of incoming materials and intermediate and final products;

Include a scaled drawing (or drawings) showing the overall plant layout at a scale that provides sufficient detail to delineate the entire plant and individual processing areas. Include it on 1 (or more) 11 x 17 sheets. Include the run-on run-off controls and site boundaries.

- (c) A description of the equipment and personnel necessary to operate the plant;

Include an equipment inventory and a listing of the personnel and their respective job duties and level of authority.

- (d) A description of the process, with a schematic diagram, that shows loading and unloading areas and traffic flow routing;

Describe and show the flow of material through the site and provide it to scale. It should have some relation to the layout diagrams above in (b) but should show the flow of the compostables through the site and their respective staging areas.

- (e) The maximum inventory, by volume, of feed stocks, intermediate materials and products;

Provide the volumes of the raw material (incoming wastes), compost (windrows volumes) and finished product that will be staged onsite at any given time.

- (f) Proposed product specifications and a program to verify conformance with the specifications;

Provide a verification program detailing the sampling regime and procedures that will be used to assure the specifications will be met: Use the following for guidance;

“Example Compost Specifications” available at <http://ndep.nv.gov/bwm/solid.htm>

- (g) A program for monitoring the parameters of the process, including moisture content and temperature;

Describe the daily, weekly, and monthly monitoring program of quality assurance for the type of composting (windrow testing will vary from static piles or drum rolled techniques etc.). Include the type of instrument (s) (temperature probe etc.) proposed for the monitoring program.

- (h) A description of the final use for the compost or the available markets for the compost;

Provide the end use for the compost, depending on the type of material that will be composted (DAS versus yard waste) the end use will determine how much testing and verification may be necessary. For



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example if septage is composted and sold to the public then a strict following of the requirements of 40 C.F.R. § 503.32(a) will be required, with additional testing or quality assurance.

- (i) Provisions for fire prevention and control;

In general provide a fire prevention plan (not letting the pile get too hot, restricting combustibles, keeping flammables away etc). Personnel are not expected to fight a fire. Provide an emergency escape plan for the site with routes of ingress and egress and a notification procedure for the local fire department and emergency services.

- (j) Provisions for odor prevention and control;

Provide any description of actions that will be used to prevent/control odors. This will vary from site to site and will also depend on the proximity to neighbors.

- (k) Provisions for the control of surface water run-on and runoff;

This will vary from site to site, and will incur greater controls for sites that are in areas of greater precipitation. Locate (site plan) and describe the barriers/berms that will be installed to provide run-on (controls used to divert waters away from the site) control and control any runoff (controls that are used to control waters that fall on the site). Include evaporation ponds as necessary.

- (l) Provisions for litter prevention and control;

Include a description of how the site will be policed for stray litter, material, odds and ends.

- (m) Contingency plans to be followed in the event of emergencies and unforeseen circumstances that may occur at the facility. The plans must provide, at a minimum, for an organized and coordinated course of action to be taken and address the following situations:

- (1) A fire at the facility;
- (2) A release of hazardous or toxic materials; and
- (3) The shutdown of the facility for any reason; and

Provide a course/plan of action that accounts for the employees during the event, notifies the authorities and assures that the safety of the employees is considered.

- (n) Provisions for proper disposal of by-products.

For all the by-products that cannot be composted, identify a disposal option (local landfill etc).

2. Any person or municipality which maintains or operates a compost plant shall maintain and operate the site in conformance with the following standards:

- (a) If the compost plant accepts municipal solid waste and is not fully contained within a building, a buffer zone must be maintained of at least 500 feet from the adjoining property and 1,000 feet from any public roads.

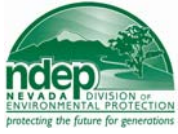
In submitting the plant layouts if either of these occurs, include the buffer zone as a requirement.

- (b) Incoming solid waste must be confined to as small an area as practicable. At the conclusion of each day of operation, all windblown material resulting from the operation must be collected and returned to the area.

This should have been discussed previously. Show the incoming waste and its extent on the diagram, and refer to I above.

The general Requirements for Compost Facilities are:

- (c) Materials resulting from composting and offered for sale:



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- (1) Must meet the requirements relating to the maximum allowable density of fecal coliform or Salmonella sp. bacteria for Class A sewage sludge set forth in 40 C.F.R. § 503.32(a);

See attachment "Example Compost Specifications"

- (2) Must not reheat upon standing;
- (3) Must be innocuous; and
- (4) Must contain no sharp particles which could cause injury to persons handling the compost.
- (d) By-products removed during the processing must be handled in a sanitary and nuisance-free manner and disposed of at a facility approved by the solid waste management authority.

Refer to (n) above

3. A compost plant shall comply with the plans for the design and operation of the facility approved by the solid waste management authority. A compost plant shall not:
 - (a) Contribute to the pollution of the air or waters of this State;
 - (b) Cause an impairment of the environment;
 - (c) Cause a health or safety hazard to employees of the facility or the general public; or
 - (d) Cause a public nuisance.

The entire application should address this and provide for the operation of the site such that this will not occur.

4. The solid waste management authority may suspend or revoke a permit to operate a compost plant if the owner or operator of the facility fails to comply with the provisions of NAC 444.570 to 444.7499, inclusive.

References

<http://www.ciwmb.ca.gov/Organics/>

http://compost.css.cornell.edu/Composting_homepage.html

<http://compost.css.cornell.edu/market-label/guidelines/descriptions.htm>

<http://www.woodsend.org/pdf-files/sampli~1.pdf#search=%22compost%20sampling%22>

Certification Website

<http://tmecc.org/tmecc/>