

LEAF AND YARD WASTE COMPOSTING OPERATION PLAN (Revised August 2005)

BACKGROUND INFORMATION (8.1.04)

The following information is submitted with the Town's registration to operate a Composting Facility.

- A. **FACILITY OPERATOR AND LANDOWNER**
Town of North Kingstown
80 Boston Neck Road
North Kingstown, Rhode Island 02852
401-294-3331 (Town Hall)
The Public Works Offices located at 2050 Davisville Road, oversees the operation of the facility (268-1500, x 600).
- B. **COMPOST FACILITY LOCATION:**
345 Devils Foot Road
North Kingstown, Rhode Island 02852
401-295-4766
- C. Property acreage is 4.75 acres.
- D. **ANNUAL WASTE VOLUME COMPOSTED:** The Town will process approximately 2,000 tons of compost each year.
- E. **COMPOST FACILITY ACREAGE:** Composting and processing area is 0.7 acres.
- F. **PRIMARY CONTACT PERSON:** Phil Bergeron, PE, Director of Public Works for the Town of North Kingstown. Address and telephone number provided in Part A above.

FACILITY OPERATING PLAN (8.1.05)

- A. **FACILITY CONTROL/USAGE AGREEMENT:** The composting facility and the property in which it is located is owned and operated by the Town of North Kingstown. The operations of the composting facility fall under the responsibility of the Public Works Department and the Director of Public Works. The Transfer Station Foreman, who reports to the Director of Public Works, supervises the day-to-day operations at the facility. Transfer Station and

Composting Facilities rules and regulations are as set forth in the State of Rhode Island Laws, Appropriate Town Ordinance governing garbage, trash and refuse, and adopted Transfer Station Rules and Regulations.

- B. OPERATING HOURS: The Transfer Station and Composting Facility operating hour are Tuesday through Saturday, 7:30 a.m. – 3:00 p.m.
- C. COMPOSTING PROCEDURES AND PROCESSES: Leaf and yard waste brought to the site will be deposited in the receiving area located west of the tipping building. The scale house operator will be responsible for preliminary checking of the material for compliance to the facility rules and regulations. Preliminary waste screening and inspection of in-coming yard waste will take place at the scale house. Signs will be installed near the scale house instructing residents on acceptable composting material. The foreman will be responsible for final checking of the material for compliance to the facility rules and regulations and will direct the heavy equipment operator as to when and where to move the material from the receiving area. Depending on the time of year, this may happen as often as once an hour. As a minimum, the receiving area will be cleared at the end of the day and placed in windrows for processing. Bulking agents (such as wood chips, dry straw, sawdust) may be added to feedstock materials to maintain adequate porosity and help to maintain aerobic conditions in the compost pile during the mixing process. The collected material will be run through a tub grinding operation to shred the leaf and yard waste prior to final placement in windrows. The tub grinding operation is performed a minimum of twice each year, typically in the spring and fall. After the tub grinding, the material will be moved to the appropriate windrow where monitoring and aeration through windrow turning will take place. It will be the foreman's responsibility to monitor the composting operations. A daily record of site and weather conditions will be kept at the scale house, with copies sent to the Public Works Director weekly and the State DEM quarterly.
- D. PREVAILING WINDS: The prevailing wind direction is from the west and southwest directions. There is a tree buffer along the north and east perimeter of the site. The west and south perimeter of the site abut State owned property for the sediment basin (west) and the new Route 403 (south). The closest structures are over 300 feet away from the composting operation and are separated by a tree buffer between the two. On site personnel will be responsible for litter control and maintenance of the compost site.
- E. DAILY RECORD KEEPING: The site foreman is responsible for record keeping and corrective actions, if necessary.
- F. PERSONNEL AND DUTIES: Two permanent fulltime employees staff this facility. A site foreman/heavy equipment operator is responsible for the day-to-day supervision and operations. One clerical person operates the scale house and performs miscellaneous duties. Both employees, at various times, are responsible for monitoring vehicles for compliance.

- G. EROSION, SEDIMENTATION AND SURFACE DRAINAGE CONTROLS: Stormwater runoff from the transfer station site and the composting pad will be collected in a drainage basin located in the northwest corner of the site, and will be cleaned out as necessary. Erosion problems are monitored and repaired immediately. Hay bales are used if needed to prevent washouts.
- H. FIRE PREVENTION AND CONTROL METHODS: Fire hydrants located on the property will provide adequate fire protection and are the source for windrow watering.
- I. COMPOST END USES AND MARKETS: The final compost product will be given away to residents of North Kingstown. If supplies allow, the product will also be made available to the commercial market. All excess material will be processed, blended, and used by the Town for either landfill cover or roadside mulch following road-paving projects.
- J. COMPOST QA/QC: A certified lab will be contracted by the Town to conduct quarterly sampling of the compost material. Test parameters will be in accordance with the rules and regulations for Composting Operations by the State of Rhode Island. These results will be forwarded to the State DEM and will be used to reduce the Town's liability associated with residential use.
- K. WASTE DISPOSAL CONTINGENCIES: Hazardous waste found to be contaminating the compost product, will be removed from the site by properly licensed personnel and disposed of by only those methods approved by law. Non-hazardous material contaminating the compost product will be separated and if allowed, blended and used as landfill cover.

OPERATING STANDARDS (8.2.00)

Buffer Site Information Includes:

1. 200 feet to surface water
2. 100 feet to property line
3. 250 feet to off-premise occupied building
4. 200 feet to bedrock public wells
5. 1000 feet to gravel pack public wells
6. 200 feet to private wells

Drilling data indicates no ground water to within 2 feet of ground surface and greater than 3 feet to bedrock.

The site does not cause or contribute to the taking of any endangered or threatened species.

Existing leaf and yard waste composting activities do not impact any freshwater wetlands and is not sited on property out of compliance with the Rhode Island General Laws.

The site is in compliance with the State Air Pollution Control Act, and will be monitored daily for objectionable odors and air contaminants. Fire extinguishers will be located in the operator's house and on site equipment.

Site access will be restricted outside of normal working hours. Security will remain as presently exists. The traffic pattern to the composting operation is in a counter clockwise direction around the transfer station site in a one- way traffic pattern and is adequate and safe.

COMPOSTING PAD (8.2.14) AND DRAINAGE CONTROLS (8.2.15)

The compost pad is paved and designed to support heavy equipment. The pad is an asphalt surface on a bituminous sub-base, constructed at an average gradient of approximately 1%. The pad is pitched to drain to the center and towards the detention basin. Windrows are positioned parallel to the drainage gradient in a flattened "V" pattern with a final windrow positioned across the low point of the pad south of the detention basin. Storm runoff is directed towards the detention basin only. Hay bales will be maintained along the top edge of the detention basin to prevent as much sediment as possible from storm runoff from entering the basin. A drainage swale along the top of the detention basin provides additional sedimentation protection. Town personnel as needed shall clean out the detention basin. Accumulated silt and sediment will be removed at a minimum of every 10 years or more frequently if the accumulated depth of sediment exceeds 3 inches. The leaf and yard waste composting operation is not located within the 100 year flood plain.

WASTE HANDLING AND OPERATIONS (8.2.18)

All information contained in the above referenced section is officially incorporated into the Operation Plan. All operational requirements are incorporated into personnel job descriptions and requirements, and will be posted at the site in the scale house.

COMPOST DISTRIBUTION (8.2.22)

Compost product offered for distribution shall meet the requirements of Rhode Island General Laws Chapter 22 "Rhode Island Soil Amendment Law".

COMPOST SAMPLING AND TESTING REQUIREMENTS (8.8.02) – (This rule applies to all composting facilities).

(A) Compost Sampling and Testing Requirements:

1. The Department shall establish an appropriate sampling and testing schedule for the start-up period (first year of operation).
2. The frequency of sampling and testing shall be performed as specified in the facility's approved QA/QC plan, but it shall occur at a frequency not less than the following schedule, after the start-up period, unless otherwise approved by the Department:

Parameter Set #1 – semi-annual

Parameter Set #1 – heavy metals (arsenic, cadmium, chromium (total), copper, lead, mercury, molybdenum, nickel, selenium and zinc), total solids, total volatile solids, total Kjeldahl nitrogen, ammonia nitrogen, nitrate, total phosphorus, total potassium and pH.

Parameter Set #2 – annually

Parameter Set #2 – PCB's (total), percent for matter, particle size distribution, electrical conductivity (soluble salts) and product stability (° C reheat or other approved measure).

The frequencies are based upon the expected production of compost to be an average less than one dry ton per day.

3. The Department may decrease or increase the frequency of required sampling due to changes in the make-up of the facility's input waste stream, results of the monitored data, changes in the rate of compost production or other appropriate factors.
4. The Department may add or delete parameters to be analyzed due to changes in the makeup of the facility's input waste stream, changes in the pre-processing of waste prior to composting, results of the monitored data, Federal requirements (if any) or other appropriate factors.

(B) QA/QC Requirements

1. Sampling and analysis shall be performed, using approved EPA protocols, and per the facility's QA/QC plan that has been approved by the Department.
2. A laboratory acceptable to the Department must perform all analyses.
3. Reports of Analyses shall include copies of laboratory results with all results reported on a dry weight basis except pH, total solids, and total volatile solids.

COMPOST UTILIZATION, DISTRIBUTION AND LABELING REQUIREMENTS (8.8.03)

AMENDED

12/11/07

This rule applies to compost produced in all types of composting facilities subject to these regulations. Class “A”, Class “B”, and Class “C” compost are defined, according to compost quality standards, in Rule 8.8.01. Any facility that produces and/or distributes compost must comply with the Department’s Office of Natural Resource Services Commercial Fertilizer Law, as amended (Rhode Island General Law 2-7) and any other Rules and Regulations pertaining to fertilizer and soil amendment products. All fertilizer and soil amendment products must be registered with the Rhode Island Office of Natural Resource Services before being offered for sale.

- (A) Class “A” Compost Utilization: Unrestricted use – this class of compost may be distributed for agricultural and non-agricultural use including, but not limited to the following:
 - (a) Agricultural uses.
 - (b) Homeowner use.
 - (c) Nurseries and tree farms.
 - (d) Floriculture and turf-grass production.
 - (e) Other agricultural and horticultural uses.
 - (f) For landscape applications, including also highway medians and roadsides.
 - (g) For public parks and grounds, sports fields and stadiums, golf courses, cemeteries, and similar applications.
 - (h) On forestlands.