

26. Where feasible, the facility subsystems shall be equipped with automatic process controls which contain the necessary instrumentation and related feedback mechanisms to ensure that process operational parameters are being met. Automated systems shall be equipped with manual override capabilities. Instrumentation displays and related control mechanisms shall be positioned within the facility in such a manner as to be readily accessible and highly visible for monitoring purposes;

27. The design of the facility shall not place a demand exceeding the remaining use capability of existing physical utilities including, but not limited to, potable and non-potable water supplies, waste water and stormwater collection and treatment, energy supply and transmission, transportation systems, or any other site related infrastructure subsystems, except in those cases where plans have been developed or are being implemented to provide for the expansion of existing utility systems or establishment of new utility systems which will meet the additional demand generated by the construction and operation of the facility. Copies of existing utility expansion plans and implementation time frames shall be submitted in those cases where such expansions are needed to meet the additional demand described above; and

28. All thermal destruction facilities shall be equipped with an independent, auxiliary power system capable of supplying energy in the case of a power supply failure sufficient to complete a controlled facility shutdown.

Amended by R.1989 d.216, effective April 17, 1989.
See: 20 N.J.R. 2668(a), 21 N.J.R. 1002(b).

On-site and off-site hyphenated throughout rule, "vehicles" replaced by "solid waste vehicles" and "hauling" replaced by "transporting".
Amended by R.1996 d.578, effective December 16, 1996.
See: 28 N.J.R. 2114(a), 28 N.J.R. 5248(a).

Substantially amended section.

Case Notes

Waste control authority complied with regulatory provision requiring it to identify proposed disposal locations for facility-generated waste residues. Matter of Pennsauken Solid Waste Management Authority, 238 N.J.Super. 233, 569 A.2d 826 (A.D.1990).

Evidence sustained air pollution control permit for resource recovery facility. Matter of Stream Encroachment Permit No. 12400, 231 N.J.Super. 443, 555 A.2d 1123 (A.D.1989).

7:26-2B.5 Additional engineering design submission requirements and design requirements for transfer stations and materials recovery facilities

(a) The requirements of this section are in addition to the requirements of N.J.A.C. 7:26-2.10.

(b) All solid waste transfer stations and materials recovery facilities, except for those regulated pursuant to N.J.A.C. 7:26-2.4(c)2, and except as noted in (g) below, shall be designed in accordance with the following:

1. Facilities shall be designed with a system capable of collecting, storing, treating and disposing of wastewater

generated during normal operations, including the wash-out and cleaning of equipment, trucks and floors, in compliance with the applicable rules regarding wastewater and stormwater management at N.J.A.C. 7:14A;

2. Facilities shall be designed with facility processing, tipping, sorting, loading, storage and compaction areas located within the confines of an enclosed building.

3. Facilities shall be designed with concrete or equivalent tipping floors or ramps to ensure the proper containment and channeling of wastewater to sanitary sewer connections or corrosion resistant holding tanks and to withstand heavy vehicle usage, in compliance with the applicable rules regarding the discharge of wastewater and the utilization of holding tanks at N.J.A.C. 7:14A and 7:14B;

4. Facilities' on site roadways and storage areas shall be designed with concrete or asphalt paving in those areas subject to vehicle loading and unloading activities;

5. Facilities shall be designed with sufficient internal storage areas for unprocessed incoming solid waste to ensure an environmentally sound operation and for proper processing of the maximum permitted daily incoming waste loading;

6. Facilities and all appurtenances, including all vehicles while onsite, shall be designed, positioned and buffered in such a manner that the sound levels generated by the operation shall not exceed limits established pursuant to the Noise Control Regulations, N.J.A.C. 7:29;

7. Facilities shall be designed in a manner which will prevent the migration of odors and dust outside the confines of the enclosed building;

8. Facilities shall be designed in such a manner so as to afford fluid vehicular movement onsite in accordance with the approved on-site queuing plan and prevent traffic backups and related traffic hazards on access roads servicing the facility;

9. Offsite truck routes for the conveyance of solid waste shall be defined and delineated in such a manner as to minimize impacts on surrounding residential development or similar sensitive receptor. The truck traffic to and from the proposed facility shall not result in an unacceptable decrease in the level of service, as described and defined in the New Jersey Department of Transportation (NJDOT) Highway Access Management Code (N.J.A.C. 16:47), at major intersections located along the designated truck routes;

10. Facility layout design shall conform to the configuration of the site. A setback area shall be provided to allow for adequate buffering of the site. All main building enclosures shall be designed with a minimum setback of 50 feet from the facility property line. The Department shall allow a reduction in the setback limit if the applicant satisfactorily demonstrates that such a reduction

will not pose an adverse impact on the adjacent land use activities;

11. Facilities shall be designed with alarm and fire protection systems capable of detecting, controlling, and extinguishing any and all fires that may occur. All fire protection systems shall be designed to comply with N.J.A.C. 5:23-3.17 and the standards established by the National Fire Protection Association (NFPA);

12. The interior layout shall provide for system installations that maximize accessibility for repairs, maintenance, and cleaning, while affording employee safety;

13. Facilities shall be designed and constructed in full conformance with the specifications and requirements of the Uniform Construction Code, N.J.A.C. 5:23;

14. The facility shall be designed so as not to place a demand exceeding the remaining use capability of existing physical utilities including, but not limited to, water supply, wastewater and stormwater collection and treatment systems, energy supply and transportation systems; and

15. The proposed ultimate disposal facility and location for all waste processed by the facility shall be identified.

(c) The site plan map shall include the following:

1. A layout of all facility buildings, structures and roadways which shall indicate the type of construction materials;

2. Profile views of all structures and enclosures showing dimensions. Plan views showing building setback, side and rear distances between the proposed structure and other existing or proposed structures, roadways, parking areas, and site boundaries;

3. Interior floor plan showing the layout, profile view and dimensions of the processing lines, interior unloading, sorting, storage and loading areas; and

4. A description with detailed specifications of the proposed onsite and offsite transportation system which shall indicate the type of construction materials.

(d) The engineering report shall include:

1. Descriptive and detailed specifications of all process equipment to be used, including the equipment's rated and designed capacity. Schematic diagrams shall be provided;

2. Equipment specifications including information pertaining to the make, model and manufacturer, if available, and the related processing equipment, reliability and efficiency shall be submitted;

3. A discussion of the maximum length of time that waste and, where applicable, recyclable materials will be stored at the facility; and

4. A description of any materials recycling or reclamation activities to be operated in conjunction with the facility.

(e) If the facility is to handle liquid or liquid-solid waste mixtures, the proposed methods to protect and monitor the quality of groundwater and nearby surface waters shall be indicated.

(f) If the materials recovery facility is designed with mechanical size reduction equipment, an explosion suppression system shall be included in the engineering design.

(g) Owners or operators of transfer stations who receive, store, treat or transfer only ID 72 liquid wastes are not required to comply with (b)2, 3, 5 and 7 above.

(h) Additional engineering design submission requirements and design requirements for ID 72 liquid waste transfer stations are as follows:

1. ID 72 liquid waste transfer stations are subject to all applicable Spill Prevention, Control and Countermeasure requirements found at 40 C.F.R. Part 112 and all applicable discharge prevention, containment and countermeasure and discharge cleanup and removal requirements found at N.J.A.C. 7:1E, in addition to the requirements of this section.

2. Owners or operators of ID 72 liquid waste transfer stations shall not store or treat ID 72 liquid wastes in units other than containers and/or aboveground tanks.

3. Containers and aboveground tanks used to store or treat ID 72 liquid wastes at transfer stations shall be:

- i. In good condition (no severe rusting, apparent structural defects or deterioration); and
- ii. Not leaking (no visible leaks).

4. Containers and aboveground tanks used to store or treat ID 72 liquid wastes at a transfer station shall be equipped with a secondary containment system meeting the following:

- i. The entire containment system, including walls and floor, shall be sufficiently impervious to waste materials to prevent any waste materials released into the containment system from migrating out of the system to the soil, groundwater, or surface water; and
- ii. The secondary containment system shall consist of, at a minimum:

(1) Dikes, berms, or retaining walls, and a floor which shall cover the entire area within the dike, berm, or retaining wall; or

(2) A secondary containment system equivalent to (h)4ii(1) above.

Amended by R.1996 d.578, effective December 16, 1996.
See: 28 N.J.R. 2114(a), 28 N.J.R. 5248(a).

Substantially amended (b); in (c)1, inserted reference to roadways; and in (c)5, inserted reference to energy system.

Administrative change.

See: 30 N.J.R. 3948(a).

Amended by R.2001 d.86, effective March 5, 2001.

See: 32 N.J.R. 2536(a), 33 N.J.R. 880(a).

Rewrote section.

Amended by R.2002 d.181, effective June 17, 2002.

See: 33 N.J.R. 4218(a), 34 N.J.R. 2049(a).

In (b), inserted "and except as noted in (g) below," in the introductory paragraph; added (g) and (h).

7:26-2B.6 Additional engineering requirements for solid waste composting and co-composting facilities

(a) The requirements of this section are in addition to the requirements of N.J.A.C. 7:26-2.10.

(b) Co-composting facilities require a SWF permit and may also require one or more NJPDES permits from the Department in accordance with N.J.A.C. 7:14A.

(c) The engineering report for these facilities shall include the following:

1. A discussion of the quantity and composition of the waste streams entering the proposed facility in terms of:

i. Municipality of origin; and

ii. Weight, volume and corresponding load density characteristics.

2. If sewage sludge is to be co-composted with solid waste, identify the quantity and physical/chemical characteristics of each source of sewage sludge. Sludge characteristics will be reviewed by the Department for a determination of their suitability for acceptance and processing at the proposed solid waste composting facility. The following information shall be submitted for each individual source of sludge:

i. Identify the type of processing carried out at the sewage treatment plant source prior to dewatering (e.g. lime stabilization, digestion, long term storage, other);

- ii. Identify the dewatering processes instituted, including a description of the equipment or technique used, the chemical reagents employed and a determination of the percent solids achieved;
 - iii. Express quantities on a dry weight basis and volume of the percent solids delivered to the facility. Identify the maximum, minimum and average delivery rates anticipated; and
 - iv. Provide a physical/chemical analysis for the sludge from each source, in accordance with the Sludge Quality Assurance regulations, N.J.A.C. 7:14-4. The Department may require additional testing where conditions dictate.
3. A description of the number, type, capacity and delivery or removal frequency (indicate both average and peak periods) of all transport vehicles. Describe on-site parking capabilities, loading and unloading facilities, access and exit points and mechanisms and features employed to provide for an even flow of traffic onto, on and away from the site. Describe the related material construction specifications and details;
 4. Identify, locate and describe the utilities intended to service the proposed facility including, but not limited to, the storm water drainage system, sanitary sewer system, water supply system, electrical or other energy system;
 5. Process management should be based on specific and objective processing goals. Processing goals should be identified including, but not limited to, rapid processing, drying method, materials handling, nitrogen retention, etc. Describe the underlying conceptual basis or strategy upon which the process management will be based. A rationale should be given for the management strategy chosen in reference to others;
 6. Describe all process steps including, but not limited to, waste delivery, storage, mixing, composting methods, curing, screening, finishing, packaging and related process equipment and pollution control systems, instrumentation and monitoring mechanisms, if applicable. Within the context of the process description, identify the mix ratio of solid waste to sludge as well as the bulk weight and porosity of the mix. Provide an indication of the period of time during which active composting is to take place and the temperatures to be reached and maintained within that period. Identify the rate of aeration afforded and the time frame established for compost curing. Submit equipment specifications relating to make, model, manufacturer, processing capacity, reliability, efficiency and the relevant design and operating criteria that directly relates to the equipment's intended performance, plus the number of equipment units which will be available at the facility. Information on individual unit synchronization with upstream and downstream equipment, if applicable, shall also be provided;
 7. A comprehensive materials balance for the proposed facility shall be submitted. The materials balance shall account for every handling and processing step starting with waste delivery scheduling to the facility and ending with final product and waste/residue removal from the site. Quantification and qualification of sidestream process pollutants, if any, shall also be provided for in the materials balance. If any materials recovery is anticipated, document the anticipated materials recovery rates in tons per hour for each recovered component;
 8. A discussion of the contingency disposal options to be utilized if the composted end product cannot be marketed. These disposal options shall be in accordance with the approved district solid waste management plan and Departmental requirements established for the distribution of sewage sludge compost, if applicable;
 9. A process flow diagram of the proposed processing steps involved in recovering recyclable materials and mixed organic material from solid waste, any processing of recovered recyclable materials, and the composting, curing and storage of the mixed organic fraction;
 10. Profile views of all structures and enclosures showing dimensions;
 11. In addition to the requirements of N.J.A.C. 7:26-2.10(b)9, the operation and maintenance manual for the facility shall include the following information:
 - i. A description of the anticipated types, quantity, variation over time, and sources of waste to be received and a description of any additives used in the process;
 - ii. Designation of persons responsible for operation, control and maintenance of facility;
 - iii. Methods for measuring incoming waste;
 - iv. Methods to control the types of waste received (for example, inspection procedures);
 - v. Methods for removing and recovering for recycling or disposing of non-compostable wastes from the incoming waste stream, including procedures for removal, storage and disposal of any hazardous wastes;
 - vi. Methods to control traffic and to expedite unloading;
 - vii. Methods to maintain biological conditions;
 - viii. Methods to minimize, manage and monitor odors;
 - ix. Leachate and National Pollutant Discharge Elimination System storm water control measures;
 - x. Vector, dust and litter control measures;
 - xi. Contingency operations plan (in the event of equipment failure, power outages, natural disasters, fire, receipt of prohibited materials), including designation of permitted disposal sites for incoming waste, leachate, and for hazardous wastes;

xii. Plans for monitoring, sampling and testing the composting materials for process control and product quality assurance as specified at N.J.A.C. 7:26-2B.7(i); and

xiii. Plans for marketing the finished compost; and

12. A final closure plan containing a schedule and description of the steps necessary to close the facility and financial assurance information.

(d) If a natural ground surface is to be used for storage or if any surface impoundments, lagoons, or other structures for storage or conveyance of leachate, runoff or condensate are proposed, soil borings of the property shall be provided in accordance with the following:

<u>Acreage</u>	<u>Minimum Number of Borings</u>	<u>Minimum Depth of Borings</u>
1-10	4	10 feet or
10-50	8	to the ground
50-100	14	water table
100-200	20	
Over 200	24	

(e) The site plan map shall depict the facility layout on the property and include profile views of all structures, utilities and enclosures showing height, breadth and bulk dimensions. Dimensions for loading, unloading, storage (for example, incoming waste, outgoing product), processing, composting and curing areas shall be provided. Identify the type of drainage system, run-off and leachate control systems. Building setbacks and the distances of any onsite proposed or existing structure, processing area or treatment area, and streets from the site boundaries shall be indicated. The site plan map shall include interior floor plans showing the layout, profile view and dimensions of the interior unloading, sorting, storage, processing, and loading areas as well as auxiliary functional areas such as offices and employees' facilities.

(f) Solid waste composting and co-composting facility engineering design requirements are as follows:

1. The composting structure must withstand wear and tear of normal operations. A roof shall cover the receiving, processing, production and curing areas. Floor structure must be impermeable (10^{-7} cm/sec) and be sloped to prevent ponding of liquids and to direct leachate to a leachate collection system. Leachate control shall be provided wherever leachate is generated.

2. All building enclosures shall be designed with a minimum setback of 100 feet from the property line of the facility. Any part of facility operations open to the environment shall be designed with a minimum setback of 2,500 feet from the nearest sensitive environmental receptor.

3. The facility design plan must address management of storm water and leachate:

i. Storm water which does come in contact with material on site shall be considered leachate.

ii. The leachate collection and removal system shall be designed for reuse in processing or treatment as dictated by local authorities.

4. The facility design must provide for:

i. Effective barriers to unauthorized entry and dumping (fencing, gates, locks, etc.);

ii. Adequate access roads to the site;

iii. Appropriate signs (at facility entrance, directing traffic flow, public information);

iv. Access to scales, if applicable;

v. Equipment and methods for achieving odor, noise, vector, dust, and litter control; and

vi. Fire protection and control features.

5. The facility shall have sufficient capacity to handle projected incoming volumes of waste.

6. The facility design must address specific storage issues, including:

i. Capacity for incoming wastes waiting to be processed (three days plus contingency storage);

ii. Capacity for proper handling, storage, and removal of hazardous or other non-permitted wastes delivered to or generated by the facility; and

iii. Capacity for finished compost storage, not to exceed 15 months' production, in accordance with a compost marketing plan.

7. The facility shall have sufficient structural support for operations (waste, equipment, buildings, etc.).

8. The facility design plan should include provisions for operations during wind, heavy rain, snow, freezing or other inclement weather conditions.

9. An occupational health and safety plan established in conformance with the safety and health standards of the Federal Department of Labor, Occupational Safety and Health Administration pursuant to 29 C.F.R. 1926 and 1910 Safety and Health Standards and Industrial Standards.

10. A written training plan which shall include the type and amount of both the initial and annual follow-up training to be provided to facility personnel;

11. The composting process shall meet the criteria for a process to further reduce pathogens (PFRP) as required by the U.S. EPA (40 C.F.R. Part 257). Three methods are accepted:

i. Windrow method, which meets PFRP as follows:

(1) Maintain aerobic conditions; and

(2) A minimum of five turnings over 15 consecutive days, maintaining a temperature of not less than 55 degrees Celsius/131 degrees Fahrenheit.

ii. Aerated static pile method which meets PFRP as follows:

(1) Pile insulated with six to 12 inches of insulating material (for example, sawdust, cured compost, or wood chips); and

(2) Temperature of at least 55 degrees Celsius/131 degrees Fahrenheit maintained throughout mixture for three consecutive days.

iii. Enclosed (within) vessel composting method which meets PFRP by:

(1) Temperature maintained at 55 degrees Celsius/131 degrees Fahrenheit throughout mixture for at least three consecutive days.

iv. Any future PFRP provided by Federal or State regulation.

Amended by R.1996 d.578, effective December 16, 1996.

See: 28 N.J.R. 2114(a), 28 N.J.R. 5248(a).

Substantially amended (b) and (c); in (d), inserted "Minimum depth of borings" column; and added (f).

Administrative change.
See: 30 N.J.R. 3948(a).

7:26-2B.7 Additional operational requirements for solid waste composting and co-composting facilities

(a) The requirements of this section are in addition to the general operational requirements of N.J.A.C. 7:26-2.11 and the solid waste facilities records maintenance requirements of N.J.A.C. 7:26-2.13.

(b) The owner and/or operator shall submit a quarterly report to the Department within 30 days after the end of each calendar quarter. The quarterly report shall include the following:

1. The quantity, type and source of incoming waste;
2. The quantity and types of recovered recyclables;
3. The quantity of compost produced;
4. The results of compost analysis;
5. The quantity, before blending, of compost sold or distributed, and markets;
6. The quantity of disposed residue, and sites;
7. Daily temperature readings and retention times during the composting process;
8. A summary of leachate management (collected, reused, and treated/ disposed);
9. A summary of major maintenance on leachate, temperature or other monitoring and control systems in operation; and

10. The standard procedures to assure data reliability.

(c) All compost analysis shall be performed by a laboratory certified pursuant to N.J.A.C. 7:18.

(d) The facility shall be operated under the supervision and control of properly trained individuals during all hours of operation, and access to facility shall be prohibited when facility is closed.

1. The owner and/or operator shall train all employees in appropriate facility operations, maintenance procedures, and safety and emergency procedures in accordance with the training plan developed pursuant to N.J.A.C. 7:26-2B.6(d)10.

(e) The owner and/or operator shall monitor and record the temperature of composting materials daily to ensure that the pathogen reduction criteria at N.J.A.C. 7:26-2B.6(f)11 are met.

(f) The owner and/or operator shall begin processing all incoming waste within three days. Any waste that is not processed within three days shall be sent for disposal. The owner and/or operator shall begin processing incoming waste containing grass within 24 hours unless the receiving area is fully enclosed and equipped with odor controls. For facilities without fully enclosed receiving areas, any waste containing grass that is not processed within 24 hours shall be sent for disposal.

(g) Incoming, unprocessed waste shall not be mixed with finished compost.

(h) Stored finished compost that is not sold or distributed within 15 months shall be removed for disposal or reprocessed for sale or distribution.

(i) In addition to the information required by N.J.A.C. 7:26-2.13(a), the daily record of facility operations shall include:

1. Daily temperature and moisture monitoring of the composting process;
2. Laboratory analyses;
3. The retention time of the composted material; and
4. The sale and distribution of recovered materials.

(j) The owner and/or operator shall develop a quality assurance (QA)/quality control (QC) plan to be included in the final operation and maintenance manual. Such plan shall outline the monitoring, sampling and analysis plans for testing the compost process and product.

(k) The Department shall set an appropriate monitoring and sampling schedule for the start-up period (one year) as part of the facility permit.

(l) Using information gained during the start-up period, a monitoring and sampling schedule for ongoing operations will be developed with the Department based on statistical methods for quality assurance.

(m) Representative samples of the compost shall be obtained in accordance with the approved plan. Samples of the compost produced at the facility shall be analyzed for the compost quality monitoring parameters listed in the Appendix to this subchapter, incorporated herein by reference, in accordance with the appropriate methods as approved in the sampling plan.

(n) Results of all laboratory analyses for each parameter shall be recorded and maintained at the facility and shall be reported to the Department as specified at (b) above.

(o) Any package containing compost offered for sale or distribution shall be labeled with the recommended safe uses and application rates, and restrictions, if any, on use of the product. If compost is offered for bulk sale or distribution, signs or printed literature containing such information shall be made available.

(p) Compost offered for sale or distribution shall satisfy the standards established by the USEPA at 40 C.F.R. 503. Specifically, compost offered for sale or distribution shall meet the pollutant concentrations in 40 C.F.R. 503.13(b)(3), the Class A pathogen requirements in 40 C.F.R. 503.32(A), and one of the vector attraction reduction requirements in 40 C.F.R. 503.33(b)(1) through 503.33(b)8. Compost not satisfying the standards established by the USEPA may be used only as authorized by the Department, or it shall be disposed.

(q) This subsection shall govern the closure and post-closure care of all composting and co-composting facilities.

1. The owner and/or operator of a permitted composting or co-composting facility shall not revise the final closure plan submitted pursuant to (c)12 above without prior approval of the Department. The owner and/or operator may submit an updated final closure plan, containing the proposed revisions to the Department at any time, provided that all revisions are submitted at least 180 days prior to termination of operations at the facility.

2. The owner and/or operator shall notify the Department, in writing, return receipt requested, at least 60 days prior to the date of termination of operations at the facility.

3. The owner and/or operator shall publish notice of termination of operations at the facility in a newspaper of general circulation in the district where the facility is located and in the district(s) or municipality(ies) sending at least 25 percent of their waste to the facility at least 30 days prior to the date of termination of operations at the facility.

4. Within 10 days of ceasing operation, all residuals and waste shall be removed from the site and recycled or disposed and the owner and/or operator shall arrange for a final cleaning of any containers, equipment, machines, floors and facility surfaces having come in contact with solid waste.

5. A composting facility shall be considered finally closed when all the requirements of the closure plan have been met.

New Rule, R.1996 d.578, effective December 16, 1996.
See: 28 N.J.R. 2114(a), 28 N.J.R. 5248(a).

7:26-2B.8 Additional operational requirements for thermal destruction facilities

(a) The requirements of this section are in addition to the general requirements of N.J.A.C. 7:26-2.11;

(b) Subsequent to completion of the facility construction phase and prior to the initiation of facility operations, the New Jersey licensed professional engineer retained by the applicant to supervise the construction of the facility shall certify in writing to the Department that he or she has personally examined the facility during each major stage of construction and that the facility has been constructed in accordance with the documents, statements, designs and plans submitted to and as approved by the Department.

(c) The owner and/or operator of the facility shall provide written notification to the Department of the intent to initiate the start up of operations at the facility at least 30 days in advance of the planned date. During this initial period of facility start up the Department reserves the right to have a representative present at the facility to observe any equipment testing that is being conducted as well as the right to collect samples to verify results.

(d) Immediately following the initiation of operations, facility personnel shall begin routine inspections for equipment malfunction or deterioration and operating effectiveness, in accordance with the following:

1. The owner or operator shall conduct inspections as indicated in the approved final O and M manual in order to identify and remedy any problems; and

2. The owner and/or operator shall record the results of the inspections in a log book or by means of an electronic storage system approved by the Department which shall be accessible at the facility at all times for inspection by the Department. These records shall include the date and time of the inspection, the name of the inspector, a notation of observations and recommendations and the date and nature of any repairs or other remedial actions taken.