Chapter NR 502

SOLID WASTE STORAGE, TRANSPORTATION, TRANSFER, INCINERATION, AIR CURTAIN DESTRUCTORS, PROCESSING, WOOD BURNING, ONE TIME DISPOSAL, SMALL DEMOLITION FACILITIES, AND MUNICIPAL SOLID WASTE COMBUSTORS

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NR 502.01 Purpose. The purpose of this chapter is to help ensure that efficient, nuisance-free and environmentally accepted solid waste management procedures are practiced in Wisconsin and to outline the requirements regarding licensing and operational requirements for solid waste storage, transportation, transfer, incinerators, air curtain destructors, processing, woodburning, one time disposal, small demolition facilities and municipal solid waste combustors. This chapter is adopted under ss. 144.43 to 144.47, and 227.11, Stats.

History: Cr. Register, January, 1988, No. 385, eff. 2-6-88; am. Register, May, 1992, No. 437, eff. 6-1-92.

NR 502.02 Applicability. (1) Except as otherwise provided, this chapter governs all solid waste storage, transportation, transfer, incinerators, air curtain destructors, processing, wood burning, one time disposal, small demolition facilities and municipal solid waste combustors as defined in s. 144.43 (5), Stats., except hazardous waste facilities as defined in s. 144.61 (5m), Stats., and regulated under chs. NR 600 to 685, and metallic mining operations as defined in s. 144.81 (5), Stats., and regulated under ch. NR 182.

(2) This chapter does not apply to the design, construction or operation of industrial wastewater facilities, sewerage systems and waterworks treating liquid wastes approved under s. 144.04, Stats., or permitted under ch. 147, Stats., nor to facilities used solely for the disposal of liquid municipal or industrial wastes which have been approved under s. 144.04, Stats., or permitted under ch. 147, Stats., except for facilities used for the disposal of solid waste.

History: Cr. Register, January, 1988, No. 385, eff. 2-6-88; am. (1), Register, May, 1992, No. 437, eff. 6-1-92; correction in (1) made under s. 13.93 (2m) (b) 7, Stats., Register, May, 1992, No. 437.

NR 502.03 Definitions. The terms used in this chapter are defined in s. NR 500.03.

History: Cr. Register, January, 1988, No. 385, eff. 2-6-88.

NR 502.04 Location and performance standards. (1) GENERAL. An applicant for an initial license or for approval of an expansion of an existing facility regulated under this chapter with the exception of collection and transportation services shall demonstrate to the department that the proposed facility will comply with all of the applicable locational standards of this section for which no exemption has been granted.

(2) LOCATION STANDARDS. No person may establish, construct, operate, maintain or permit the use of property for any facility regulated under this chapter within the following areas:

(a) Within 1,000 feet of any navigable lake, pond or flowage.

(b) Within 300 feet of any navigable river or stream.

(c) Within a floodplain.

(d) Within 1,000 feet of the nearest edge of the right-of-way of any state trunk highway, interstate or federal aid primary highway or the boundary of any public park, unless the facility is screened by natural objects, plantings, fences or other appropriate means so that it is not visible from the highway or park.

(e) Within 10,000 feet of any airport runway used or planned to be used by turbojet aircraft or within 5,000 feet of any airport runway used only by piston type aircraft or within other areas where a substantial bird hazard to aircraft would be created. This criterion is applicable only when the facility will be used for handling putrescible waste.

(f) Within 1,200 feet of any public or private water supply well.

(3) PERFORMANCE STANDARDS. No person may establish, construct, operate, maintain or permit the use of property for any facility regulated under this chapter within an area where there is a reasonable probability that the facility will cause:

(a) A significant adverse impact on wetlands.

(b) A significant adverse impact on critical habitat areas.

(c) A detrimental effect on any surface water.

(d) A detrimental effect on groundwater quality or will cause or exacerbate an attainment or exceedance of any preventive action limit or enforcement standard at a point of standards application as defined in ch. NR 140. For the purposes of design, the point of standards application is defined by s. NR 140.22 (1).

(e) The migration and concentration of explosive gases in any facility structures, excluding any leachate collec-

tion system or gas control or recovery system components or in the soils or air at or beyond the facility property boundary in excess of 25% of the lower explosive limit for such gases of any time.

(f) The emission of any hazardous air contaminant exceeding the limitations for those substances contained in s. NR 445.03

History: Cr. Register, January, 1988, No. 385, eff. 2-6-88.

NR 502.05 Storage facility requirements. (1) GENERAL. (a) No person may operate or maintain a solid waste storage facility unless the person has obtained an operating license from the department, unless the facil
ity is exempt under sub. (2) or (4). The operating license for a storage facility is transferable.

(b) No person may operate or maintain a facility for the storage of residue produced by the burning of municipal solid waste unless the person has obtained an operating license from the department under this section.

(c) All waste shall be stored in containers unless its volume precludes practical containerized storage in which case it shall meet the noncontainerized storage requirements of this section unless exempted under sub. (2).

(d) No person may operate or maintain a storage facility for infectious waste unless the person complies with s. NR 526.09.

(2) EXEMPTIONS. The following storage facilities are exempt from licensing and all requirements of this section:

(a) Garbage cans for household wastes located on the property where the waste is generated.

(b) Containerized storage facilities such as lugger boxes and rolloff containers for solid waste serving apartments, commercial establishments, business establishments and industries which are located on the premises served.

(c) Pit silos used for the storage of by-products from fruit, vegetable or grain processing operations where such by-products are to be used for animal feed.

(d) Facilities for high volume industrial waste or wood residue where the waste is stored at the point of generation for less than 72 hours prior to being transported for disposal or beneficial reuse and the facility is operated and maintained in an environmentally sound and nuisance free manner.

(e) On site storage at a municipal solid waste combustor.

(f) Infectious waste storage facilities which are exempt from licensing under s. NR 526.09.

(g) Facilities that store used oil which is managed in compliance with ch. NR 590.

(3) OPERATIONAL REQUIREMENTS FOR CONTAINERIZED STORAGE FACILITIES. No person may operate or maintain a containerized storage facility except in conformance with the following minimum requirements:

(a) Storage containers shall be durable, rust resistant, nonabsorbent, leak-proof, easy to clean and effectively contain the stored waste. If garbage or similar putrescible wastes are stored, the containers shall have close-fitting, fly-tight covers and be constructed of light-weight durable material.

(b) Covers and containers shall be maintained in good condition.

(c) Containers handling municipal solid waste shall be removed and emptied at least once per week, or more often if conditions warrant. Containers handling nonputrescible industrial waste shall be removed and emptied as necessary, but at least once every 90 days.

(d) All weather access shall be provided and maintained.

(e) Effective means shall be provided to control flies, rodents and other vectors.

(f) Objects too large for the containers shall be stored in a nuisance-free manner.

(g) Periodic clean-up and maintenance of the storage container and surrounding area shall be conducted to keep it aesthetically pleasing and nuisance-free. This maintenance shall be the responsibility of the property owner where the containers are located as well as the owner of the containers.

(h) Access restrictions including a lockable gate and attendant may be required by the department to prevent nuisance conditions or if mechanical compaction equipment is part of the facility.

(i) Disposal of solid waste is not allowed at a storage facility.

(j) No burning of solid waste may be conducted.

(k) The facility shall be operated and maintained in a sanitary, nuisance-free manner so as to protect the environment and the public health.

(4) NONCONTAINERIZED STORAGE FACILITIES. Facilities which meet the following criteria may be exempted in writing by the department from licensing and the plan submittal requirements of this section. All other noncontainerized storage requirements of this section shall apply. Any person intending to establish or construct a noncontainerized storage facility shall contact the department to arrange for an initial inspection. The department shall issue an exemption in writing if the operator demonstrates that the facility meets all the following criteria:

(a) The solid waste does not include residue produced by the burning of municipal solid waste or putrescible waste such as garbage and municipal refuse.

(b) The waste is free of noxious odors and not readily transported by wind or water unless it is stored to prevent such transport.

(c) The facility exists less than 6 months from the time of initial storage to the removal of all waste.

(d) The volume of waste stored at the facility does not exceed 2,500 cubic yards at any time during the 6 month period.

(e) The total volume of waste stored at the facility during the allowable 6 month period does not exceed 5,000 cubic yards.

(5) PLAN OF OPERATION. No person may establish or construct a solid waste storage facility or expand an existing facility unless the person has obtained a plan of operation approval from the department. The plan of operation shall specify the intent and objectives of the proposal and indicate methods and procedures to minimize adverse environmental impacts. Unless otherwise approved by the department in writing, the plan shall be submitted in accordance with s. NR 500.05 and shall contain, at a minimum, the following information:

(a) A legal description of the facility.

(b) The present ownership of the property.

(c) The proposed facility size, property boundaries and present land use of the facility and the area within ¼ mile of the facility.

(d) The area served, including population and major industries.

(e) The consistency of facility development with areawide solid waste plans and land use plans.

(f) The predominant types of vegetation and wildlife within the proposed facility boundaries.

(g) A complete materials balance for the storage facility, specifying amounts and characteristics of solid waste.

(h) The types of vehicles and access routes used to transport solid waste to and from the facility including the estimated traffic flow patterns within the facility, and an estimate of the increased quantities of traffic on access routes to and from the facility.

(i) The estimated quantities and characteristics of wastes containing free liquids resulting from facility operations and methods of their storage or disposal.

(j) The persons responsible for facility construction and operation.

(k) Any additional procedures for the control of dust, odors, fire, windblown materials and potential explosions and for the handling of the waste in the case of major facility breakdown.

(l) The tentative operating schedule for the facility.

(m) Provisions for protection of groundwater and surface waters during facility construction and operation.

(n) A discussion of possible operational hazards and necessary safety precautions.

(o) A discussion of design features and logic including the equipment capacity or size. Information shall be included to justify the size and configuration of the receiving area; methods of handling wastes containing free liquids resulting from operations such as floor drains, sewers and water treatment facilities; sizing of surface water drainage control structures; traffic flow patterns; design life of any building and facility equipment; methods of controlling windblown materials; and methods of screening the facility from the surrounding area.

(p) An operations and maintenance manual which specifies the operating and maintenance procedures; operating personnel responsibilities; hours of operation; daily operating schedule; equipment maintenance schedules; methods of controlling explosions, fire, odors and windblown materials; special waste handling procedures; methods of controlling access; daily cleanup procedures; person responsible for operation; facility licensee and owner; record keeping procedures; emergency procedures for handling of freezeup during cold weather; methods to prevent solid waste from burning; and any other pertinent information.

(6) ENGINEERING PLANS. The plan of operation shall include a set of engineering plans and maps which contain the following information unless an exemption is granted in writing by the department:

(a) An existing conditions map, which shows the entire facility and the area within ½ mile. The minimum scale shall be 1″ = 400′. This map shall include the proposed facility boundary, property lines, easements and right-of-way; building foundations, roads, utilities and other structures; topography, drainage swales, surface waters, wetlands, floodplains and similar drainage features; wooded areas; location of soil borings and test pits; features of historical and archaeological significance; and other features as appropriate.

(b) A facility plan which shall include proposed facility access roads and traffic patterns, buildings, scales, utility lines, drainage diversion, screening, means of access control, final topography, areas to be cleared of vegetation, and other design features. The extent of coverage and scale shall be the same as that for the existing conditions map.

(c) A proposed layout plan which shows the receiving, storage and loadout areas. The minimum scale shall be 1″ = 20′. Plan details shall include conceptual design for receiving area configuration and traffic flow patterns, storage area and equipment configuration, loadout area and equipment configuration, and other design features.

(d) At least one cross section shall be drawn through the receiving, storage and loadout areas indicating existing topography, limits of excavation, proposed final grades and other pertinent design features. More cross sections may be necessary depending on the complexity of the facility design.

(7) CONSTRUCTION DOCUMENTATION REPORT. The department may require the applicant to submit a construction documentation report for any noncontainerized storage facility. When a documentation report is required, it shall be prepared in accordance with the department's plan approval and s. NR 500.05. Operation of the facility may not commence until the report is approved in writing by the department and a license is issued. The department may issue a license prior to facility construction or construction documentation.

(8) LOCATIONAL CRITERIA. Noncontainerized storage facilities shall meet the location and performance standards specified in s. NR 502.04. Exemptions from the requirements of s. NR 502.04 (2) (a), (b), (d), (e) and (f) and (3) (b), (e) and (f) may be granted only upon demonstration by the applicant of circumstances which warrant the exemption. Exemptions from compliance with s. NR 502.04 (3) (a) may be granted only in accordance with the standards in s. NR 1.95. Exemptions from compliance with s. NR 502.04 (3) (d) may be granted only according to the proce-

dures in ch. NR 140. Exemptions from compliance with s. NR 502.04 (2) (c) and (3) (c) will not be granted.

(9) OPERATIONAL REQUIREMENTS FOR NONCONTAINERIZED STORAGE FACILITIES. No person may operate or maintain a noncontainerized storage facility except in conformance with an approved plan of operation and the following minimum requirements:

(a) All weather access shall be provided and maintained.

(b) Effective measures shall be taken to control flies, rodents and other vectors.

(c) Periodic maintenance or clean-up of the facility shall be conducted to keep it aesthetically pleasing and nuisance-free.

(d) Gates, fencing and an attendant shall be provided as specified by the department.

(e) Solid waste shall be disposed of at a licensed facility approved by the department.

(f) Solid waste shall not be burned.

(g) The facility shall be operated and maintained in a sanitary, nuisance-free manner so as to protect the environment and the public health.

(h) Adequate drainage shall be maintained on and around the facility.

(10) MONITORING. The department may require the owner or operator to perform surface water, groundwater, unsaturated zone or gas monitoring of noncontainerized storage facilities. Monitoring shall be conducted as specified by the department. Monitoring may be required after facility closure.

(11) CLOSURE. Any person who owns or operates a noncontainerized storage facility or who permits the use of property for such purpose shall close the facility in accordance with any plan approval issued by the department and the following minimum practices:

(a) The owner or operator shall notify the department in writing at least 60 days prior to the closing of the facility.

(b) All solid waste shall be removed from the facility in accordance with the conditions of the approved plan of operation. The waste shall be properly utilized or disposed.

(c) The surface of the facility shall be restored in conformity with the approved plan of operation, or restored to its original condition to the extent practicable.

(12) FINANCIAL RESPONSIBILITY. The department may require that the owner or operator provide proof of financial responsibility for the removal, transportation and ultimate disposal of the stored material.

(13) STORAGE OF RESIDUE PRODUCED BY BURNING MUNICIPAL SOLID WASTE. (a) Except for on-site storage at a municipal solid waste combustor approved under s. NR 502.14, no person may maintain or operate a storage facility for residue produced by burning municipal solid waste unless the person has obtained an operating license under sub. (1), and written approval of a plan of operation under sub. (5), for the facility. Residue storage areas shall be designed, operated and maintained in compliance with the applicable portions of this section.

(b) The residue shall be wetted at all times during storage to prevent dust emissions. Alternative methods of dust control shall be approved by the department prior to implementation. Provisions shall be made to prevent the release of residue into the air in the residue handling areas.

(c) The storage area shall have an impervious surface on which the residue is stored and a collection system for any liquids coming into contact with the residue. All liquid that comes into contact with the residue which is not used as makeup water in the quench tank shall be treated at a wastewater treatment plant approved by the department.

(d) Access to the temporary storage areas shall be restricted to authorized personnel only. Fencing or other means of access control acceptable to the department shall be maintained around the storage facility.

History: Cr. Register, January, 1988, No. 385, eff. 2-6-88; am. (4) (a), renum. (1) (b) to be (1) (c), cr. (1) (b), (2) (e) and (13), Register, May, 1992, No. 437, eff. 6-1-92, cr. (1) (d), (2) (f), am. (5) (intro.), Register, October, 1994, No. 466, eff. 11-1-94; cr. (2) (g), Register, May, 1995, No. 473, eff. 6-1-95.

NR 502.06 Collection and transportation service requirements. (1) GENERAL. (a) No person may operate or maintain a collection or transportation service unless the person has obtained an operating license from the department, unless the facility is exempt under sub. (2).

(b) No person may maintain or operate a facility for the collection and transportation of residue produced by burning municipal solid waste unless the person has obtained a written approval of a plan of operation for the facility under sub. (4).

(c) No person may transport or ship infectious waste or items mixed with infectious waste, unless the person complies with s. NR 526.10.

(2) EXEMPTIONS. The following collection or transportation services are exempt from all requirements of this section:

(a) Services for the collection and transportation of only gravel pit spoils, quarry materials, earth materials or salvageable materials other than those listed in s. 159.07 (3) or (4), Stats.

(am) Services for the collection and transportation of the materials listed in s. 159.07 (3) and (4), Stats., after the materials have been processed for reuse or recycling by conversion into a consumer product or a product which is used as a raw material in a commercial or industrial process, or which are not part of an approved effective recycling program.

(b) Services for the collection and transportation of only ordinary solid waste from a single household or ordinary household solid waste amounting to less than 20 tons per year.

(c) Services for the collection and transportation of sludge from municipal wastewater or water supply treatment plants provided it is handled in accordance with ch. 147, Stats.

(d) Services for the collection and transportation of only waste materials regulated and licensed under s. 146.20, Stats.

(e) Governmental services consisting solely of vehicles used to collect and transport roadside litter from town, village, city, county, state and federal highway right-of-way. Litter shall be disposed of at a licensed disposal facility.

(f) Services for the collection and transportation of dredge material regulated by permit or contract under s. 30.20, Stats.

(g) Services for the collection and transportation of wastes generated by an industrial company which do not travel on public roads and which utilize vehicles owned by the company.

(h) Services for the collection and transportation of whey or waste materials from fruit or vegetable processing operations.

(i) Persons who transport infectious waste or items mixed with infectious waste and who comply with s. NR 526.10.

(3) TRANSPORTATION OF ASBESTOS WASTE. All services collecting and transporting asbestos shall meet the minimum requirements of the applicable air management rules.

(4) PLAN OF OPERATION FOR TRANSPORTATION OF RESIDUE PRODUCED BY BURNING MUNICIPAL SOLID WASTE. (a) No person may maintain or operate a facility for the collection and transportation of residue produced by burning municipal solid waste unless the person has obtained an operating license and written approval of a plan of operation for the facility.

(b) The plan of operation shall specify the intent and objectives of the proposal and indicate methods and procedures to minimize adverse environmental impacts. Unless an exemption is granted by the department in writing, the plan shall be submitted in accordance with s. NR 500.05 (1) to (3) and shall contain, at a minimum, the following information:

1. A legal description of the property and the facility boundaries.

2. The present ownership of the proposed facility property.

3. The operator of the facility.

4. The types of vehicles used to haul residue to a landfill or processing facility.

5. The names and locations of all solid waste disposal facilities to which residue may be hauled.

6. The names and locations of all facilities that residue produced by burning municipal solid waste will be collected from.

7. The method used to restrict access to the residue transport vehicles to authorized personnel only.

8. The methods used to prevent spillage and wind blown residue.

(c) Any licensed residue collection and transportation service which is in operation on June 1, 1992 shall submit a plan of operation in accordance with this subsection no later than 3 months after June 1, 1992.

(d) No residue collection or transportation service may begin initial operation after June 1, 1992, unless a plan of operation under this section has been approved by the department.

(5) TRANSPORTATION OF RESIDUE PRODUCED BY BURNING MUNICIPAL SOLID WASTE. (a) The transportation of residue produced by burning municipal solid waste shall be in accordance with the applicable portions of this section.

(b) The residue shall contain sufficient moisture during transportation to prevent dust emissions. Alternative methods of dust control shall be approved by the department prior to implementation. Provisions shall be made to prevent the release of residue into air in the residue handling areas.

(c) Prior to transportation of the residue, free liquids shall be drained until no more free liquids remain. All vehicles that transport the residue shall be designed and operated as necessary to prevent leakage during operation.

(d) Access to the residue transport vehicles shall be restricted to authorized personnel only.

(e) All transportation vehicles shall be covered to adequately prevent spillage and wind blown residue during transport.

(6) OPERATIONAL REQUIREMENTS. No person may operate or maintain a solid waste collection and transportation service except in accordance with the following minimum requirements:

(a) Each vehicle shall have "WDNR" followed by the license number lettered on the driver's door. The letters shall be at least 2 inches high with a minimum ½ inch brush stroke. The lettering shall contrast with the background so it is easy to read.

(b) Solid waste shall be transported only to facilities which are licensed or approved by the department, or to facilities which are exempt from regulation by the department.

(c) Vehicles or containers used for the collection and transportation of solid waste shall be durable, easy to clean and leak-proof, if necessary, considering the type of waste and its moisture content. All vehicles and containers shall be cleaned as frequently as necessary to prevent nuisances or insect breeding and shall be maintained in good repair.

(d) Vehicles or containers used for the collection and transportation of solid waste shall be loaded and moved in such a manner that the contents do not fall, spill or leak. Covers shall be provided to prevent littering and spillage. If spillage does occur, the operator shall immediately return spilled materials to the vehicle and shall properly clean the spill area. In the event of a spill of a hazardous substance the department shall be notified under s. 144.76, Stats., and the spill material shall be collected and the environment restored as provided in ch. NR 158.

(e) Services for the collection and transportation of recyclable materials listed in s. 159.07, Stats., shall comply with the prohibitions on land disposal and incineration in that section.

(f) Services for the collection and transportation of recyclable materials shall maintain the cleanliness of those materials for recycling purposes.

(g) Upon the request of the department, a service for the collection and transportation of recyclable materials shall provide satisfactory documentation to the department that the recyclable materials have been delivered to brokers, processors or end users of the materials. Records shall be retained for a period of 3 years from the time of delivery.

Note: A collection and transportation service which transports less than 20 tons of ordinary household solid waste per year is not required to be licensed under s. NR 502.06.

(7) EXPANSION OR TERMINATION. The owner or operator shall notify the department in writing of any expansion or termination of a service or of any change in disposal facilities used at least 30 days prior to the effective date of such action.

(8) RESPONSIBILITY. A person generating solid waste shall be responsible for the collection and transportation of the waste to a solid waste disposal facility licensed by the department unless the person contracts with a collection and transportation service licensed by the department for that purpose.

History: Cr. Register, January, 1988, No. 385, eff. 2-6-88; renum. (1) and (4) to (6) to be (1) (a) and (6) to (8), cr. (1) (b), (4) and (5), Register, May, 1992, No. 437, eff. 6-1-92; am. (2) (a), cr. (2) (am) and (6) (e) to (g), Register, September, 1993, No. 453, eff. 10-1-93, cr. (1) (c), (2) (i), Register, October, 1994, No. 466, eff. 11-1-94.

NR 502.07 Transfer facilities. (1) GENERAL. No person may operate or maintain a solid waste transfer facility unless the person has received an operating license from the department, except as otherwise provided in sub. (2) or (2m). Any person intending to establish or construct a solid waste transfer facility shall contact the department to arrange for an initial inspection. No person may operate or maintain a transfer facility for infectious waste or items mixed with infectious waste unless the person complies with s. NR 526.09.

(2) EXEMPTIONS. Transfer facilities at which waste from individual users or from hand unloaded vehicles not exceeding one ton in capacity are exempt from the plan approval requirements of this chapter and licensing but shall be operated and maintained in conformance with the following practices:

(a) Containers shall be leak-proof and manufactured of nondegradable material such as metal, plastic or concrete.

(b) Where mechanical equipment is a part of the operation, access shall be limited to those times that an attendant is on duty. Access restrictions and an attendant may be required by the department for a nonmechanical facility.

(c) Containers shall be removed or emptied at least once per week and more frequently if conditions warrant.

(d) The transfer station and adjacent area shall be kept clean and free of litter.

(e) Burning of solid waste may not be conducted.

(f) Effective means shall be provided to control flies, rodents and other insects or vermin.

(g) An all-weather access road and parking area shall be provided and maintained.

(h) If recycling facilities are provided, they shall be clearly labeled and maintained in a nuisance-free manner.

(2m) EXEMPT USED OIL FACILITIES. Transfer facilities for used oil which is managed in compliance with ch. NR 590 are exempt from the plan approval and licensing requirements of this chapter.

(3) PLAN OF OPERATION. No person may establish or construct a transfer station prior to obtaining approval in writing from the department of a plan of operation for the facility. The plan of operation shall specify the intent and objectives of the proposal and indicate methods and procedures to minimize adverse environmental impacts. Unless an exemption is granted by the department in writing, the plan shall be submitted in accordance with s. NR 500.04 and shall contain, at a minimum the following information:

(a) A legal description of the property and the facility boundaries.

(b) The present ownership of the proposed facility property.

(c) Land use within ¼ mile of the proposed facility.

(d) The operator of the facility.

(e) The size of the facility.

(f) A USGS 7½ minute or 15 minute quadrangle map of the facility property.

(g) The proposed methods of screening waste handling operations from the surrounding area.

(h) A discussion of the consistency of facility development with areawide solid waste management plans, land use plans or other areawide plans. Alternatives considered in the project planning phase shall be discussed.

(i) The population and area to be served by the facility and projections for changes in use in the future.

(j) The type and quantity of waste to be handled, and specific waste types which will not be accepted at the facility. The method for screening the incoming waste to eliminate unacceptable material such as asbestos, infectious waste, explosive wastes, hazardous waste or other materials from endangering the operators' safety shall be identified. Transfer of infectious waste is regulated under s. NR 526.09.

(k) The persons responsible for structural improvements, building maintenance and daily operation and control of the facility.

(l) The types of vehicles used to transport solid waste into and out of the facility.

(m) The vehicle traffic routing at the facility and provisions for access to connecting roadways.

(n) The source of the facility's water supply and the method of wastewater treatment.

(o) The methods of volume reduction to be used such as compacting, grinding, compression or tamping.

(p) The design criteria used to select equipment capacity and building configuration and sizing.

(q) Daily clean-up procedures.

(r) The names and locations of all solid waste disposal facilities to which waste from the transfer station may be hauled.

(s) The procedures for alternate routing of waste during inoperable periods at the facility.

(t) The procedures to handle heavy or bulky items and locations for storage of solid waste beyond the end of the working day.

(u) The equipment and procedures designed to control dust, odors, noise, fire and windblown paper.

(v) The proposed life expectancy of the facility.

(w) A detailed discussion of the safety equipment and procedures to be used at the facility.

(4) ENGINEERING PLANS. The plan of operation shall include a set of engineering plans and maps which contain the following information unless an exemption is granted in writing by the department:

(a) An existing conditions map, which shows the entire facility and the area within ½ mile. The minimum scale shall be 1″ = 400′. This map shall include the facility boundary, property lines, easements and right-of-way; building foundations, roads, utilities and other structures; existing topography, drainage swales, surface waters, wetlands, floodplains and similar drainage features; wooded areas; location of soil borings and test pits; features of historical and archaeological significance; and other features as appropriate.

(b) A facility plan which shall include the proposed facility access roads and traffic patterns, buildings, scales, utility lines, drainage diversion, screening, means of access control, final topography, areas to be cleared of vegetation and other design features. The extent of coverage and scale shall be the same as that for the existing conditions map.

(c) A proposed process layout plan which shows the receiving, storage and loadout areas. The minimum scale shall be 1″ = 20′. The plans shall include design details for the receiving area configuration and traffic flow patterns, storage area and equipment configuration, loadout area and equipment configuration, and other design features.

(5) CONSTRUCTION DOCUMENTATION REPORT. The department may require the applicant to submit a construction documentation report for any transfer facility. When a documentation report is required, it shall be prepared in accordance with the department's plan approval and s. NR 500.05. Operation of the facility may not begin until the report is approved in writing by the department and a license is issued. The department may issue a license prior to facility construction or construction documentation.

(6) LOCATIONAL CRITERIA. Transfer facilities shall meet the locational criteria specified in s. NR 502.04 (2) (c) and the performance standards specified in s. NR 502.04 (3). Exemptions from the requirements of s. NR 502.04 (3) (b), (e) and (f) may be granted only upon demonstration by the applicant of circumstances which warrant such exemptions. Exemptions from compliance with s. NR 502.04 (3) (a) may be granted only in accordance with the standards in s. NR 1.95. Exemptions from compliance with s. NR 502.04 (3) (d) may be granted only in accordance with the procedures in ch. NR 140. Exemptions from compliance with s. NR 502.04 (2) (c) and (3) (c) will not be granted.

(7) OPERATIONAL REQUIREMENTS. No person may operate or maintain a transfer facility except in conformance with an approved plan of operation and the following minimum requirements:

(a) A sign shall be prominently posted at the entrance to the facility, which indicates the name, license number, the hours of operation, waste types accepted, necessary safety precautions and any other pertinent information specified by the department.

(b) A building, roofed and enclosed on at least 3 sides or otherwise enclosed to satisfactorily control dust, papers, and other waste materials, shall be provided.

(c) Screening of waste handling operations shall be provided for a transfer facility located within 500 feet of any residence, unless a signed waiver is received from all residents located within 500 feet of the facility.

(d) The facility shall be operated under the direct supervision of responsible individuals who are thoroughly familiar with the requirements and the operational procedures of the transfer facility.

(e) Access shall be restricted except when an attendant is on duty.

(f) There may be no storage of solid waste on the premises for a period greater than 24 hours except in conformance with s. NR 502.05 or unless the waste is contained in vehicles used by a licensed collection and transportation service. Longer storage periods may be authorized by the department for certain industrial and commercial waste depending on the design of the facility.

(g) Unloading of solid waste shall take place only within the enclosed structure and only in approved designated areas.

(h) Solid waste shall be confined to the unloading, loading and handling area.

(i) The transfer facility and adjacent area shall be kept clean and free of litter.

(j) Sewage solids, sludge or wastes containing free liquids may not be accepted unless special handling plans for these wastes have been submitted to the department and approved in writing. Asbestos, infectious or hazardous waste may not be accepted under any circumstances.

(k) Dust and odor generated by the unloading of solid waste and the operation of the transfer facility shall be controlled at all times.

(l) Burning of solid waste may not be conducted.

(m) Solid waste which is burning or is at a temperature likely to cause fire or is flammable or explosive may not be accepted.

(n) Equipment shall be provided to control accidental fires and arrangements shall be made with the local fire protection agency to provide immediate services when needed.

(o) Means shall be provided to control flies, rodents and other insects or vermin.

(p) Provisions shall be made for adequate maintenance of the transfer facility after each day of operation.

(q) Means of communication shall be provided for emergency purposes.

(r) An approved alternative method of waste processing or disposal shall be provided in the event that the transfer facility is rendered inoperable.

(s) Recyclable material may be separated from the incoming waste and stored provided that no fire hazard or nuisance conditions are created.

(8) CLOSURE. Any person who operates or maintains a transfer facility or who permits the use of property for such purpose shall close the facility in accordance with any plan approval issued by the department and the following minimum practices:

(a) The operator shall notify the department and all users of the facility in writing at least 60 days prior to closure.

(b) Access shall be restricted through the use of a fence, gate, plantings or other appropriate means upon closure of the facility.

(c) The operator shall post a sign in a prominent location notifying users of the date at which the facility will close.

History: Cr. Register, January, 1988, No. 385, eff. 2-6-88; am. (1), (3) (j), Register, October, 1994, No. 466, eff. 11-1-94; am. (1), cr. (2m), Register, May, 1995, No. 473, eff. 6-1-95.

NR 502.08 Solid waste processing facilities. (1) GENERAL. No person may operate or maintain a solid waste processing facility unless the person has obtained an operating license from the department, except as provided in sub. (2). An applicant intending to establish or construct a solid waste processing facility shall contact the department to arrange for an initial inspection. This section does not apply to incinerators, air curtain destructors, wood burning facilities or municipal solid waste combustors which are regulated under ss. NR 502.09 to 502.11 or 502.14. Persons treating infectious waste shall submit a plan of operation and obtain a license for operating a solid waste processing facility under this section and shall comply with s. NR 526.12.

(2) EXEMPTIONS. The following facilities are exempt from licensing and the requirements of this section:

(a) Composting facilities used for processing solid waste from a single family or household, a member of which is the owner, occupant or lessee of the property used for the solid waste processing operation and the facility is operated in a nuisance free and environmentally sound manner.

(b) Composting facilities used for processing grasses, leaves, yard and food waste which do not exceed 50 cubic yards per year provided the facility is operated in a nuisance free and environmentally sound manner.

(c) Facilities for the processing of scrap iron, steel or nonferrous metal using large machines to produce a principal product of scrap metal for sale or use for remelting purposes and facilities which use large machines to sort, grade, compact, bale or process clean wastepaper, textiles, clean wood, glass, rubber, demolition debris, pavement or plastics, not mixed with other solid waste, for sale or use for recycling purposes.

(d) Private alcohol fuel production systems provided the waste product is stored in an environmentally sound storage facility and disposed of using an environmentally safe land spreading technique and the disposal is confined to the property of the owner.

(e) Facilities utilizing fly ash that conforms to ASTM-C618 Class F and C specifications provided the testing, reporting, storage and other requirements specified by the department in writing are complied with.

(f) Infectious waste treatment facilities which are exempt from licensing under s. NR 526.12 (2).

(g) Facilities that process used oil which is managed in compliance with ch. NR 590.

(3) FACILITIES FOR THE REUSE OF HIGH VOLUME INDUSTRIAL WASTES. Except for those facilities which are exempt under sub. (2), facilities where solid wastes are processed for reuse or recycling by being incorporated into a structural material such as a concrete or asphalt or converted into a consumer product which is used as a raw material in a commercial or industrial process are exempt from licensing and all other requirements of this section. The solid waste generator must obtain written approval from the department to use the waste for these purposes, comply with the performance standards specified in s. NR 502.04 (3), unless an exemption is granted, and operate the facility in a nuisance-free and aesthetic manner. To obtain approval, the solid waste generator shall submit the necessary laboratory and field tests to show that the specific waste types to be used would not release quantities of contaminants into the environment such that a potential hazard to public health or the environment would be created.

(4) COMPOSTING OPERATIONS FOR GRASS CLIPPINGS, LEAVES, CHIPPED WOOD AND YARD WASTE WHICH EXCEED 50 CUBIC YARDS PER YEAR BUT DO NOT EXCEED 20,000 CUBIC YARDS. Except as provided in sub. (2) (a), no person may establish or construct a composting operation for processing more than 50 cubic yards per year but less than 20,000 cubic yards of grass clippings, leaves, chipped wood or yard waste at one location unless the person can demonstrate compliance with s. NR 502.04 and obtain approval in writing from the department of a report prepared in accordance with s. NR 500.05 and this section. The report shall contain, at a minimum, the following information:

(a) The location of the property where the facility is proposed to be located.

(b) A brief description of the project, including the area served, an estimate of the volume of material to be

processed and a brief description of the operational practices.

(c) The proposed size of the facility, including property boundaries and present land use within ½ mile of the facility.

(d) Potential markets for the compost.

(e) Names and location of solid waste disposal facilities at which any waste generated from the composting operation will be disposed.

(5) PLAN OF OPERATION - NONEXEMPT PROCESSING FACILITIES. No person may establish or construct a solid waste processing facility prior to obtaining approval in writing from the department of a plan of operation for the facility. Unless otherwise approved by the department in writing, the plan shall be submitted in accordance with s. NR 500.05 and shall contain, at a minimum, the following information:

(a) A legal description of the property and the facility boundaries.

(b) The present ownership of the proposed facility property.

(c) Land use within ¼ mile of the proposed facility. Particular note shall be made of parks, hospitals, nursing homes and areas of archaeological and historical significance.

(d) The areas served, including population and major industries.

(e) The consistency of facility development with areawide solid waste plans and land use plans. All alternatives considered shall be discussed.

(f) The predominant types of vegetation and wildlife within the proposed facility boundaries.

(g) A complete materials balance for the facility, specifying amounts and characteristics of solid waste received and amounts and characteristics of products and wastes generated by the facility.

(h) The types of vehicles and access routes used to transport solid waste to and from the facility including the estimated traffic flow patterns within the facility, and an estimate of increased quantities of traffic on access routes to and from the facility.

(i) The estimated quantities and characteristics of wastes containing free liquids resulting from facility operation and methods of their treatment or disposal.

(j) The persons responsible for plant construction and operation.

(k) The quality and quantity of air discharge from plant operations and the need for any permits.

(l) Any additional procedures for the control of dust, odors, fire, windblown materials and potential explosions and for the handling of the waste in the case of major processing facility breakdown.

(m) The names and locations of all solid waste disposal facilities at which solid waste from the processing plant will be disposed.

(n) Overall facility layout including conceptual building design, sizing of receiving areas, methods of processing, and the size of major process equipment and process areas.

(o) Potential markets for recovered solid wastes and potential contractual arrangements for recovered products.

(p) A timetable for facility construction, shakedown and operation.

(q) The tentative operating schedule for the facility.

(r) Provisions for protection of groundwater and surface waters during facility construction and operation.

(s) A discussion of possible operational hazards and necessary safety precautions.

(t) A discussion of design features and logic including equipment capacity or size. Information shall be included to justify the size and configuration of the receiving area; size and configuration of processing equipment and areas, conveyors, blowers or other transport equipment; air pollution control units and associated duct work; methods of handling wastes containing free liquids resulting from operations such as floor drains, sewers and water treatment facilities; heat balances, residence time and process temperature for thermal processing equipment; size and configuration of loadout and storage facilities for process outputs; sizing of surface water drainage control structures; traffic flow patterns; design life of any building and facility equipment; methods of controlling windblown materials; and methods of screening the facility from the surrounding area.

(u) A discussion of personnel training; solid waste sources, quantities and characteristics of the waste to be processed; process line startup procedures and equipment performance evaluations; process raw materials on hand at startup; process outputs testing; and other appropriate startup procedures.

(v) A discussion of operating personnel responsibilities; hours of operation; daily processing schedule; routine process monitoring including monitoring quantity and quality of waste input; process output testing; equipment maintenance schedules; methods of controlling explosions, fire, odors, and windblown materials; special waste handling procedures; methods of controlling access; daily cleanup procedures; facility bypass procedures during major breakdowns and alternative means of disposal; persons responsible for operation; facility licensee and owner; record keeping; emergency procedures for handling of freezeup during cold weather; methods to prevent solid waste from burning; and other pertinent information.

(6) ENGINEERING PLANS. The plan of operation shall include a set of engineering plans and maps which contain the following information unless an exemption is granted by the department in writing.

(a) An existing conditions map, which shows the entire facility and the area within ½ mile. The minimum scale shall be 1″ = 400′. This map shall include the proposed facility boundary, property lines, easements and right-of-way, buildings foundations, roads, utilities and other structures; topography, drainage swales, surface waters, wetlands, floodplains and similar drainage features;

wooded areas; location of soil borings and test pits; features of historical and archaeological significance; and other features as appropriate.

(b) A facility plan which includes the proposed facility access roads and traffic patterns, buildings, scales, utility lines, drainage diversion, screening, means of access control, final topography, areas to be cleared of vegetation, and other design features. The extent of coverage and scale shall be the same as that for the existing conditions map.

(c) A proposed process layout plan which shows the receiving, processing, and loadout areas. The minimum scale shall be 1" = 20'. Plan details shall include conceptual design for receiving area configuration and traffic flow patterns, processing area and equipment configuration, loadout area, equipment configuration, and other design features.

(d) At least one cross section shall be drawn through the receiving area, each process line, and the loadout area indicating existing topography, limits of excavation, proposed final grade, and other pertinent design features. More cross sections may be necessary depending on the complexity of the facility design.

(7) LOCATIONAL CRITERIA. (a) Processing facilities not located within a building shall meet the location and performance standards specified in s. NR 502.04. Processing facilities located within a building shall meet the locational criteria specified in s. NR 502.04 (2) (c) and the performance standards specified in s. NR 502.04 (3). Exemptions from the requirements of s. NR 502.04 (2) (a), (b), (d), (e) and (f) and (3) (b), (e) and (f) may be granted only upon demonstration by the applicant of circumstances which warrant such an exemption. Exemptions from compliance with s. NR 502.04 (3) (a) may be granted only in accordance with the standards in s. NR 1.95. Exemptions from compliance with s. NR 502.04 (3) (d) may be granted only according to the procedures in ch. NR 140. Exemptions from compliance with s. NR 502.04 (2) (c) and (3) (c) will not be granted.

(8) MINIMUM DESIGN REQUIREMENTS FOR NEW FACILITIES. A plan of operation for a solid waste processing facility shall be prepared in accordance with s. NR 500.05 and the following requirements:

(a) Screening shall be provided for any processing facility located within ¼ mile of any residence.

(b) Dust within a facility shall be controlled so that operators are not exposed to undue health risk.

(c) Access to the processing facility shall be limited by means of fencing, natural barriers or other methods. Access roads utilized shall be of all-weather construction.

(d) All wastewater resulting from the process shall be discharged into a sanitary sewer or other system approved by the department.

(e) Thermal processing facilities shall be designed to provide adequate temperature and residence time in the reaction chambers to assure complete processing and shall be equipped with the necessary air pollution control equipment to meet state air pollution control regulations.

Note: These facilities may be subject to other regulations including OSHA requirements.

(9) MINIMUM OPERATIONAL REQUIREMENTS FOR NEW AND EXISTING FACILITIES. No person may operate or maintain a solid waste processing facility except in conformance with any approved plan of operation and the following minimum requirements:

(a) A sign, acceptable to the department, shall be posted at the entrance to the facility which indicates the name, license number, the hours of operation, a list of all prohibited wastes, the penalty for unauthorized use, all necessary safety precautions and other pertinent information.

(b) Access to the processing facility shall be limited to those times that an attendant is on duty.

(c) A processing facility shall be operated under the close supervision of responsible individuals who are thoroughly familiar with the requirements and operational procedures of the plant.

(d) All solid waste, with the exception of that in the process line, shall be stored in conformance with s. NR 502.05.

(e) Unloading of solid waste shall take place only in approved, designated areas.

(f) The processing facility and adjacent area shall be kept clean and free from litter.

(g) All operators shall be trained to use appropriate safety equipment and who to contact in case of an emergency.

(h) Waste containing free liquids and sludge waste shall be excluded unless plans specifically addressing the handling of these materials have been submitted to the department and approved in writing.

(i) Equipment shall be provided to control accidental fires and arrangements shall be made with the local fire protection agency to provide immediate services when needed.

(j) Effective means shall be taken to control flies, rodents and other insects or vermin.

(k) The operation shall be conducted in a manner to prevent public health hazards and nuisances.

(l) Asbestos or solid waste which is flammable or explosive may not be accepted. Infectious waste may be accepted only in accordance with s. NR 526.12.

(m) Open burning of solid waste may not be conducted.

(n) Materials resulting from composting or similar processes and offered for sale shall be stabilized to eliminate pathogenic organisms, and to not reheat upon standing, and shall be free of sharp particles which could cause injury to persons handling the compost.

(o) Means of communication with emergency facilities shall be provided.

(p) Dust generated by the unloading of solid waste and the operation of the processing facility shall be controlled in accordance with the state air management rules so as not to create nuisance conditions.

(q) The department may require that permanent records of facility performance be maintained and submitted to the department with the relicensing application or as specified in the plan approval. Records shall indicate types, sources and amounts of solid waste processed, minor plant modifications performed, process monitoring data, amounts and characterization testing of process outputs, and other data as required by the department when granting the license.

(r) An approved solid waste disposal facility shall be provided for use in the event that the processing facility is rendered inoperable or is not able to completely process the solid waste.

(s) By-products or residues shall be disposed of in facilities approved to receive such waste or shall be handled by an alternative method approved by the department.

(10) ADDITIONAL DESIGN REQUIREMENTS APPLICABLE TO NEW AND EXPANDING FACILITIES. A plan of operation for a solid waste processing facility shall be prepared in accordance with ss. NR 500.05, 502.08 (5) and the following additional requirements:

(a) All access roads shall be constructed with a maximum grade no greater than 10%. The intersection of the access road with an existing highway shall be designed to provide sufficient sight distance and provide for minimum interference with traffic on existing highways.

(b) All installed processing equipment shall be enclosed to prevent nuisance conditions from developing.

(c) All buildings enclosing processing equipment shall have a sloped concrete floor with floor drains connected to a sanitary sewer or other system approved by the department.

(d) Maximum soil slopes for disturbed areas shall be 3 horizontal to one vertical.

(e) All areas disturbed during facility construction shall be graded, covered with 6 inches of topsoil and seeded or otherwise protected from soil erosion.

(f) Processing, receiving or storage areas not enclosed by a building shall be graded at minimum 1% slope and surfaced with a material which will adequately support heavy equipment, resist frost action, provide a wearing surface and prevent contamination of groundwater. Runoff from these areas shall be directed to a sanitary sewer or other system approved by the department.

(g) Explosion-prone equipment such as primary shredders shall be placed in a separate room with explosion venting or explosion suppression equipment.

(h) The receiving area and all dry processing units such as shredders, screens, air classification devices, magnetic separators and similar equipment and all conveyor transfer points where dust is generated shall be shrouded and equipped with dust collection and removal equipment. Any air collected in this manner shall be directed through appropriate air pollution control equipment before being discharged.

(11) ADDITIONAL OPERATING REQUIREMENTS FOR NEW AND EXPANDED FACILITIES. No person may operate or maintain a new solid waste processing facility or expand an existing facility except in accordance with the requirements of s. NR 502.08 (9), the terms and conditions of any plan of operation approval, and the following additional requirements:

(a) All borrow areas shall be abandoned in accordance with Wisconsin department of transportation procedures.

(b) All facilities operated more than 4 hours per day shall be equipped with a toilet and wash basin or have such facilities available within a reasonable distance.

(12) CONSTRUCTION DOCUMENTATION. The department may require that a registered professional engineer document facility construction and render an opinion whether the facility has been constructed in substantial conformance with the approved plan. When a documentation report is required, it shall be prepared in accordance with the department's plan approval and s. NR 500.05. Operation of the facility may not commence until the report is approved in writing by the department and a license is issued. The department may issue a license prior to facility construction or construction documentation.

(13) MONITORING. Specific monitoring requirements and testing procedures for new, expanded and existing processing facilities will be determined by the department based on a review of the potential for environmental pollution. The department may require the owner or operator of any processing facility or any person who permits the use of property for such purpose to conduct monitoring as follows:

(a) Air quality monitoring.

(b) Product testing and waste characterization. The frequency of testing and parameters to be analyzed will be determined based on a review of the proposal and complexity of the product. The quality control program will correlate with the nature of the solid waste to be processed and final uses proposed for the material.

(c) Groundwater and surface water monitoring. The frequency and type of monitoring and analysis will be determined based on a review of the project.

(d) Periodic assessments of plant operation, process feasibility and marketability analyses of processed materials.

(14) CLOSURE. Any person who maintains or operates a processing facility or who permits the use of property for such purpose shall close the facility in accordance with the following practices unless otherwise specified by the department in writing:

(a) The operator shall notify the department and all users of the facility in writing at least 120 days prior to ceasing to accept solid waste.

(b) A sign shall be placed at the entrance to the facility notifying all users that the facility is no longer accepting solid waste.

(c) Access to the facility shall be restricted through the use of a fence, gate or other appropriate means.

(d) The department may require the continuance of groundwater, surface water and air quality monitoring after closure of the facility.

(e) The operator shall submit to the department for approval at least 120 days prior to facility closure, a plan for facility closure. The department shall review the plan and notify the operator of the acceptability and completeness of the plan. If additional items are needed to properly close the facility the operator shall be notified and appropriate additions shall be made to the closure plan.

(f) All aspects of facility closure other than monitoring shall be completed within 6 months after ceasing to accept solid waste.

(15) MANAGEMENT OF RESIDUE PRODUCED BY BURNING MUNICIPAL SOLID WASTE. (a) No person may operate or maintain a facility for the treatment of residue produced by burning municipal solid waste unless the person has obtained an operating license from the department and a written plan approval under sub. (5). Residue treatment areas shall be designed, operated and maintained in accordance with the applicable portions of this section.

(b) All treatment or mixing shall be performed in a manner which controls air and water emissions.

History: Cr. Register, January, 1988, No. 385, eff. 2-6-88; am. (1), cr. (15), Register, May, 1992, No. 437, eff. 6-1-92; am. (1), (2) (f), (9) (l), Register, October, 1994, No. 466, eff. 11-1-94; cr. (2) (g), Register, May, 1995, No. 473, eff. 6-1-95.

NR 502.09 Incinerators. (1) GENERAL. No person may operate a solid waste incinerator unless the person has obtained an operating license from the department, except as provided in sub. (2), and a written approval from the department of a plan of operation under sub. (4), for the facility. An applicant intending to establish or construct a solid waste incinerator shall contact the department to arrange for an initial inspection.

(2) EXEMPTIONS. (a) Incinerators having a capacity of 500 pounds per hour or less are exempt from all requirements of this section except sub. (5). The facility shall be designed and operated in conformance with emission limitations of state air pollution control regulations.

(b) Incinerators burning only clean wood waste are exempt from all requirements of this section except sub. (5).

(c) Incinerators which are regulated under s. NR 502.14 are not subject to regulation under this section.

(d) Incinerators which burn used oil which is managed in compliance with ch. NR 590 are exempt from all requirements of this section except sub. (5).

(3) LOCATION CRITERIA. Incinerators shall meet the locational criteria specified in s. NR 502.04 (2) (c) and the performance standards specified in s. NR 502.04 (3). Exemptions from the requirements of s. NR 502.04 (3) (b), (e) and (f) may be granted only upon demonstration by the applicant of circumstances which warrant such exemptions. Exemptions from compliance with s. NR 502.04 (3) (a) may be granted only in accordance with the standards in s. NR 1.95. Exemptions from compliance with s. NR 502.04 (3) (d) may be granted only in accordance with the procedures in ch. NR 140. Exemptions from compliance with s. NR 502.04 (2) (c) and (3) (c) will not be granted.

(4) PLAN OF OPERATION. No person may establish or construct an incinerator facility or expand an existing incinerator after June 1, 1992 prior to obtaining approval in writing from the department of a plan of operation for the facility. An operator of a solid waste incinerator which is in operation on June 1, 1992 shall submit a plan of operation in accordance with this section no later than 3 months after June 1, 1992. The plan of operation for an incinerator shall contain, at a minimum, the following information.

(a) A map or aerial photograph of the area showing land use and zoning within ¼ mile of the site. The map or aerial photograph shall be of sufficient scale to show all homes, industrial buildings, roads and other applicable details and the details shall be identified and indicated on the map or aerial photograph.

(b) A plot plan of the incinerator site including means of limiting access such as fencing, gates, natural barriers; methods of acceptably screening the facility from the surrounding area; general layout of equipment and flow pattern; road access; and location of existing and proposed utilities serving the incinerator.

(c) A report which shall include the following information:

1. Population, area and facilities to be served by the incinerator.

2. Anticipated type and quantity of waste to be handled by the incinerator.

3. Persons responsible for incinerator operations.

4. Methods of treating or disposing of any liquid wastes or waste waters resulting from the operation of the incinerator.

(d) Appurtenances and procedures intended to store refuse beyond the end of the working day and to control dust, odors, fire outside the burning chamber and windblown materials.

(e) Methods of volume reduction including compaction, compression, baling, shredding, grinding, tamping, separating or classifying.

(f) Daily clean up procedures.

(g) Incinerator inspection and maintenance schedule and procedures.

(h) Detailed drawings and specifications of all structures, equipment and site.

(i) A report which includes furnace design criteria and expected performance data, including emission data.

(j) The site at which the ash residue will be disposed and alternative sites available for use when the primary site is inoperative.

(5) OPERATIONAL REQUIREMENTS. No person may operate or maintain an incineration facility except in conformance with the following minimum requirements, unless an exemption is granted by the department in writing:

(a) The incinerator shall be situated, equipped, operated, and maintained as to minimize interference with other activities in the area.

(b) Adequate shelter and sanitary facilities shall be available for personnel.

(c) A sign shall be prominently posted at the entrance to the facility which indicates the name, license number, the hours of operation, necessary safety precautions and any other pertinent information.

(d) All incoming solid waste shall be confined to the designated storage area.

(e) Solid waste shall be stored in conformance with s. NR 502.05.

(f) Dust shall be controlled in the unloading and charging areas.

(g) Permanent records shall be maintained including the weights of material incinerated, the quantity of resulting residue, hours of plant operation, combustion temperatures, residence time and other pertinent information.

(h) Appropriate fire-fighting equipment shall be available in the storage and charging areas and elsewhere as needed.

(i) Arrangements shall be made with the local fire protection agency to provide adequate emergency fire-fighting forces.

(j) Means of communication with emergency facilities shall be provided.

(k) Adequate equipment shall be provided to allow cleaning after each day of operation or as may be required in order to maintain the plant in a sanitary condition.

(l) The charging openings as well as all equipment throughout the plant shall be provided with adequate safety equipment.

(m) The incinerator shall be designed and operated such that it will not cause a nuisance because of the emission of noxious odors, gases, contaminants or particulate matter or exceed emission limitations established by state air management rules.

(n) Residue shall be disposed of at a solid waste facility licensed by the department to accept the material or be handled by an alternate method approved in writing by the department. Approval will be issued on a case-by-case basis after review of the information contained in sub. (5).

(o) All wastewater from the incinerator shall be discharged into a sanitary sewer or other system approved in writing by the department.

(p) Upon completion of construction of a new incinerator and at least 10 days prior to initial operation, the department shall be notified to allow inspection of the incinerator both prior to and during any performance tests and initial operation.

(q) Open burning of solid waste shall not be conducted.

(r) An approved alternative method shall be used for solid waste disposal during any time that the incinerator is inoperable.

(s) The incoming waste shall be screened to eliminate unacceptable material from entering the facility such as hazardous waste, asbestos, explosive materials or other materials which may endanger operator safety.

(6) WASTE CHARACTERIZATION. The owner or operator of an incineration facility shall undertake a testing program as follows:

(a) An ash testing program shall be completed within 60 days of construction and shake-down of the incinerator. Representative samples of both fly ash and bottom ash shall be tested for physical characteristics, bulk chemical composition, analysis using the appropriate leaching test and analysis using the EP toxicity test or other test to determine the wastes' regulatory status under federal or state hazardous waste laws. Test methods, the number of tests, detection limits, and parameters to be tested for will be specified by the department.

(b) A long-term ash testing program shall be established. For the first year of operation, quarterly testing of at least one sample of bottom ash and one sample of fly ash shall be performed using approved methods and procedures. Thereafter, annual sampling and testing shall be performed. The department may specify an alternate testing program.

History: Cr. Register, January, 1988, No. 385, eff. 2-6-88; r. and recr. (1), renum. (4) and (5) to be (5) and (6), cr. (2) (c) and (4), Register, May, 1992, No. 437, eff. 6-1-92; cr. (2) (d), Register, May, 1995, No. 473, eff. 6-1-95.

NR 502.10 Air curtain destructors. (1) GENERAL. No person may operate or maintain an air curtain destructor unless the person has obtained an operating license from the department. Any person intending to establish or construct an air curtain destructor shall contact the department to arrange for an initial inspection.

(2) PLAN OF OPERATION. No person may establish or construct an air curtain destructor or expand an existing air curtain destructor prior to obtaining approval in writing from the department of a plan of operation for the facility. The air curtain destructor shall comply with all applicable emission requirements of the state air management rules. The plan of operation shall include at a minimum the following:

(a) A map or aerial photograph of the area showing land use, zoning, homes, industrial buildings and roads within ¼ -mile of the facility.

(b) A plot plan of the air curtain destructor facility showing means of restricting access, method of screening the facility from the surrounding area, general layout of equipment, access roads and waste material storage areas.

(c) Construction plans for the burning pit.

(d) Plans and specifications for the blower unit and appurtenances.

(e) A report indicating the type and quantity of waste material to be consumed, planned method of charging, startup procedures, safety features to be used at the facility both during and after burning, proposed pit clean-out procedures and methods to be employed in conforming to the minimum requirements of the state air management rules.

(f) The facility at which the ash residue will be disposed and any alternative facilities available for use when the primary facility is inoperative.

(3) LOCATIONAL CRITERIA. Air curtain destructors shall meet the locational criteria specified in s. NR 502.04 (2) (c) and the performance standards specified in s. NR 502.04 (3). Exemptions from the requirements of s. NR 502.04 (3) (b), (e) and (f) may be granted only upon demonstration by the applicant of circumstances which warrant such exemptions. Exemptions from compliance with s. NR 502.04 (3) (a) may be granted only in accordance with the standards in s. NR 1.95. Exemptions from compliance with s. NR 502.04 (3) (d) may be granted only in accordance with the procedures in ch. NR 140. Exemptions from compliance with s. NR 502.04 (2) (c) and (3) (c) will not be granted.

(4) OPERATIONAL REQUIREMENTS. No person may construct, operate or maintain an air curtain destructor except in conformance with any approved plan of operation and the following minimum requirements:

(a) The burning pit shall be constructed of a material which will result in a pit of permanent dimensions. Unconsolidated soils are not an acceptable material for construction of the burning pit. Maintenance shall be performed on the pit to keep its dimensions constant to keep the air curtain destructor working properly.

(b) The burning pit floor shall be constructed in a manner which provides for proper drainage.

(c) The burning pit shall be oriented perpendicular to the prevailing wind with the plenum chamber and blower on the downwind side.

(d) The charging area shall be paved with the concrete pad for a distance of at least 10 feet from the edge of the burning pit and sloped away from the chamber. Adequate safety devices shall be provided to prevent loading equipment from falling into the burning pit.

(e) Only clean wood, brush and baled paper wastes may be burned in an air curtain destructor.

(f) The stockpile of waste material shall be kept a minimum of 100 feet from the burner. The stockpile shall be limited to one week of accumulation. The department may grant an exemption to the one week limitation upon demonstration of need by the operator.

(g) Charging shall be done to prevent damage to the pit wall and floor.

(h) Waste shall be carefully placed so not to have waste extending above the burning pit or interfering with air circulation.

(i) Start-up shall be accomplished by using kindling material to ignite larger materials rather than using fuel oil, tires, or other rubber materials. Where sufficient quantities of kindling materials are unobtainable, other methods approved by the department in writing may be used.

(j) Burning may be conducted only during daylight hours. Quantities of materials to be burned shall be restricted to allow for complete burnout while the facility is attended.

(k) Fire-fighting equipment shall be kept at the facility in case of emergency. Arrangements shall also be made with the local government to provide fire protection. Fire breaks shall be provided for a distance of at least 100 feet from the air curtain destructor. Greater setbacks may be specified by the department.

(l) The burning pit shall be cleaned out on a regular schedule. Ashes may not be allowed to accumulate to a depth of greater than 3 feet. The department may specify a lesser depth.

(m) A minimum separation distance of ¼ mile shall be maintained between the burner and the nearest residence unless written consent is obtained from all adult residents within ¼ mile of the licensed operation. If an air curtain destructor is located at an existing land disposal operation, a minimum separation distance of 200 feet shall be maintained between the burner and the working face of the land disposal operation.

(n) The burner shall be screened from the surrounding area.

(o) The air curtain destructor shall be surrounded by a fence with a lockable gate. The gate shall be kept locked when no attendant is on duty.

(p) An attendant shall be on duty at all times when the blower unit is in operation. All fires shall be out when the blower unit is shut off.

(q) Warning signs shall be posted at intervals around the entire air curtain destructor installation notifying people to keep out of the area.

(r) A sign, acceptable to the department, shall be posted at the entrance to the operation which indicates the name, acceptable wastes, license number, the hours of operation, penalty for nonauthorized use, necessary safety precautions and any other pertinent information.

(s) Surface water shall be diverted away from the active operating area, storage area and access areas.

(t) Ash resulting from the operation shall be disposed of at a facility approved by the department to receive such material.

(u) The facility shall be operated in a nuisance-free manner consistent with this chapter and in accordance with the state air management rules.

(5) CLOSURE. Any person who operates or maintains an air curtain destructor, or permits the use of property for such purpose, shall close the facility in accordance with any plan approval issued by the department and the following minimum practices:

(a) The pit shall be cleaned out and properly backfilled.

(b) Means for recycling, processing and alternate disposal of the solid waste shall be provided.

(c) The facility area shall be cleaned up and all debris and litter collected and properly disposed.

(d) The department shall be notified in writing at least 60 days prior to the proposed closure date.

History: Cr. Register, January, 1988, No. 385, eff. 2-1-88.

NR 502.11 Woodburning facilities. (1) GENERAL. No person may operate or maintain a woodburning facility unless the person has obtained an operating license from the department. Any person intending to establish or con-

struct a woodburning facility shall contact the department to arrange for an initial inspection.

(2) LOCATIONAL CRITERIA. Woodburning facilities shall meet the locational criteria specified in s. NR 502.04 (2) (c) and the performance standards specified in s. NR 502.04 (3). Exemptions to s. NR 502.04 (2) (a), (b), (d), (e) and (f) and (3) (b), (e) and (f) may be granted only upon demonstration by the applicant of circumstances which warrant such exemptions. Exemptions from compliance with s. NR 502.04 (3) (a) may be granted only in accordance with the standards in s. NR 1.95. Exemptions from compliance with s. NR 502.04 (3) (d) may be granted only according to the procedures in ch. NR 140. Exemptions from compliance with s. NR 502.04 (2) (c) and (3) (c) will not be granted.

(3) PLAN OF OPERATION. No person may establish or construct a woodburning facility or expand an existing woodburning facility prior to obtaining approval in writing from the department of a plan of operation for the facility. The woodburning facility shall comply with all applicable requirements of the state air management rules. Unless otherwise approved by the department in writing, the plan of operation shall include at a minimum the following:

(a) A map or aerial photograph of the area showing land use, zoning, homes, industrial buildings and roads within ¼ -mile of the facility.

(b) A plot plan of the facility showing means of restricting access, method of screening the facility from the surrounding area, access roads and waste material storage areas.

(c) Construction plans for the burning pad. The burning pad may be constructed of concrete, compacted gravel, compacted mineral soil or other materials approved in writing by the department.

(d) A report indicating the type and quantity of waste material to be burned, planned method of charging, startup procedures, safety features to be used at the facility both during and after burning, proposed cleanup procedures and methods to be employed in conforming to the minimum requirements of the state air management rules.

(e) The facility at which the ash residue will be disposed and any alternative facilities available for use when the primary facility is inoperative.

(4) OPERATIONAL REQUIREMENTS. No person may construct, operate or maintain a woodburning facility except in conformance with any approved plan of operation and the following minimum requirements:

(a) All burning shall be done on a burning pad or pit which is surrounded by a firebreak of mineral soil scraped free of vegetation for a minimum distance of 100 feet around the burning pad or pit. Greater setback distances may be specified by the department.

(b) Only clean wood, brush, stumps or trees may be burned at a woodburning facility.

(c) Waste material may be placed or stored on the burning pad. Any additional accumulation of waste material must be stockpiled a minimum of 100 feet from the burning pad. The stockpile should be limited to one week of accumulation unless safe burning conditions do not exist.

(d) Start-up shall be accomplished by using kindling material to ignite larger materials rather than using waste oil, tires or other rubber materials. Where sufficient quantities of kindling materials are unobtainable, other methods approved by the department in writing may be used.

(e) Burning may be conducted only during daylight hours. Quantities of materials to be burned shall be restricted to allow for complete burnout while the facility is attended.

(f) Fire-fighting equipment shall be kept at the facility in case of emergency, unless the services of a local fire protection agency are arranged.

(g) A minimum separation distance of ¼ mile shall be maintained between the burning pad and the nearest residence unless a written consent is obtained from all adult residents with ¼ mile of the licensed operation. If a woodburning facility is located at an existing land disposal operation, a minimum separation distance of 200 feet shall be maintained between the burning pad and the working face of the land disposal operation.

(h) The burning pad shall be screened from the surrounding area.

(i) The burning pad shall be surrounded by a fence with a lockable gate. The gate shall be kept locked when no attendant is on duty.

(j) An attendant shall be on duty at all times when burning is taking place. All fires shall be out before the attendant leaves the facility.

(k) Warning signs shall be posted at intervals around the facility notifying people to keep out of the area.

(l) A sign, acceptable to the department, shall be posted at the entrance to the operation which indicates the name, acceptable wastes, license number, the hours of operation, penalty for nonauthorized use, necessary safety precautions and any other pertinent information.

(m) Surface water shall be diverted away from the burning pad, storage area and access areas.

(n) Ash resulting from the operation shall be disposed of at a facility approved by the department to receive such material.

(o) The facility shall be operated in a nuisance-free manner consistent with all local burning regulations and permits, this chapter and in accordance with the state air management rules. A burning permit must be obtained during fire season if the facility is located in a fire control area.

(5) CLOSURE. Any person who operates or maintains a woodburning facility, or permits the use of property for such purpose, shall close the facility in accordance with any plan approval issued by the department and the following minimum practices:

(a) The burning pad or pit shall be cleaned out and properly backfilled.

(b) Means for recycling, processing and alternate disposal of the solid waste shall be provided.

(c) The facility area shall be cleaned up and all debris and litter collected and properly disposed.

(d) The department shall be notified in writing at least 60 days prior to the proposed closure date.

History: Cr. Register, January, 1988, No. 385, eff. 2-1-88.

NR 502.12 One time disposal. (1) GENERAL. No person may operate or maintain a facility for the one-time disposal of agricultural or demolition solid waste unless the person has obtained a written plan approval from the department, except as otherwise provided in s. NR 500.08. Facilities approved under this section are exempt from the licensing requirements of ss. 144.44 to 144.47, Stats.

(2) LOCATIONAL CRITERIA. One-time disposal facilities shall meet the location and performance standards specified in s. NR 502.04. Exemptions to s. NR 502.04 (2) (a), (b), (d), (e), and (f) and (3) (b), (e) and (f) may be granted only upon demonstration by the applicant of circumstances which warrant an exemption. Exemptions from compliance with s. NR 502.04 (3) (a) may be granted only in accordance with the standards in s. NR 1.95. Exemptions from compliance with s. NR 502.04 (3) (d) may be granted only according to the procedures in ch. NR 140. Exemptions from compliance with s. NR 502.04 (2) (c) and (3) (c) will not be granted.

(3) INITIAL INSPECTION. Any person intending to establish or construct a facility under the provisions of this chapter shall contact the department to arrange for an initial inspection of the property prior to submitting a report.

(4) REPORT REQUIREMENTS. Any person intending to establish a facility for the one-time disposal of agricultural or demolition solid waste shall submit a report to the department which contains the information specified in s. NR 502.13 (4) unless the department waives specific requirements of that section in writing. The applicant shall address the alternatives considered, including disposal at a licensed solid waste disposal facility, and the reasons why other economically feasible alternatives are not available. The department may require any additional information as specified in ch. NR 512 or 514, if it determines that the information is necessary to complete the review of the project.

(5) OPERATIONAL REQUIREMENTS. No person may construct, operate or maintain a one-time disposal facility except in conformance with the following minimum requirements and with the terms and conditions of the plan approval for the facility:

(a) The facility life may not exceed 6 months.

(b) The design capacity of the facility may not exceed 10,000 cubic yards.

(c) The facility shall be operated, maintained and closed in a nuisance-free manner. Screening shall be provided from all residences within ¼ mile unless requirement is waived in writing by the department.

(d) A minimum 10-foot separation distance from the water table shall be maintained unless the disposal facility is in a clay soil environment.

(e) Access to the facility shall be restricted through the use of fencing or other means if approved by the department.

(6) MONITORING. The department may require installation of groundwater and leachate monitoring wells or other devices, groundwater and leachate quality sampling and analysis programs, gas monitoring and provisions to protect against detrimental effects of leachate and gas migration from any one-time disposal facility.

(7) CLOSURE. Any person who operates or maintains a one-time disposal facility, or who permits the use of property for such purposes shall close the facility within 6 months after disposal begins in the following manner:

(a) The entire area previously used for disposal purposes shall be covered with at least 2 feet of compacted earth sloped adequately to allow surface water runoff. A specific soil type may be required by the department for this 2-foot layer. Fine grain soils shall be utilized to minimize infiltration unless this requirement is waived in writing by the department. Top slopes shall be no less than 2%. Side slopes shall be no steeper than 33%.

(b) Surface water shall be diverted to limit the potential for erosion and sedimentation. Wherever possible, surface water shall be diverted around previously filled areas. Where it is necessary to divert drainage over previously filled areas, the department may require that drainage be conveyed by clay lined drainage swales having a minimum thickness of 2 feet.

(c) The finished surface of the filled area shall be covered with a minimum of 6 inches of topsoil.

(d) Seeding, fertilizing and mulching of the finished surface shall be accomplished in accordance with the facility's final use. The seed type and amount of fertilizer shall be selected depending on the type and quality of topsoil and compatibility with native vegetation.

(e) Following closure of the one time disposal facility, the facility shall be inspected and maintained by the owner or operator until it becomes stabilized or until the responsibility of the owner or operator terminates in accordance with the plan approval.

(8) EXPANSIONS. Any person who wishes to expand an existing one-time disposal facility shall comply with all provisions of this section. The department shall interpret expansions to include any new facility within 1,000 feet of an existing facility. The department may deny any request for an expansion if, in the department's opinion, the disposal of additional waste may result in a detrimental effect on surface or groundwater or cause or exacerbate an attainment or exceedance of any standard in ch. NR 140. The local geology, hydrogeology, and topography shall be considered in this decision.

History: Cr. Register, January, 1988, No. 385, eff. 2-1-88.

NR 502.13 Small demolition waste landfills. (1) GENERAL. No person may operate or maintain a small demolition facility unless the person has obtained written plan approval from the department except as otherwise provided in s. NR 500.08 or 502.12. Demolition waste disposal facilities having a design capacity of less than 50,000 cubic yards are exempt from the licensing requirement of ss. 144.44 to 144.47, Stats.

(2) LOCATIONAL CRITERIA. Demolition waste disposal facilities having a design capacity of less than 50,000 cubic yards shall meet the location and performance standards specified in s. NR 502.04. Exemptions to s. NR 502.04 (2) (a), (b), (d), (e), and (f) and (3) (b), (e) and (f) may be granted only upon demonstration by the applicant of circumstances which warrant an exemption. Exemptions from compliance with s. NR 502.04 (3) (a) may be granted only in accordance with the standards in s. NR 1.95. Exemptions from compliance with s. NR 502.04 (3) (d) may be granted only according to the procedures in ch. NR 140. Exemptions from compliance with s. NR 502.04 (2) (c) and (3) (c) will not be granted.

(3) INITIAL INSPECTION. Any person intending to establish a small demolition waste disposal facility shall contact the department to arrange for an initial inspection of the property prior to submitting a report.

(4) REPORT REQUIREMENTS. Any person intending to establish a small demolition waste disposal facility shall submit a report to the department which contains the following information:

(a) General facility information which identifies the project title; name, address, and telephone number of the primary contact persons and consultants; present property owner; proposed facility owner and operator; facility location by quarter-quarter section; total acreage of property and facility; proposed facility life and disposal capacity; municipalities and industries to be served; estimated waste types and quantities to be disposed; anticipated covering frequency; equipment to be used and mode of operation.

(b) Geotechnical information shall be obtained by drilling a minimum of 5 soil borings which extend to 25 feet below the anticipated facility base grade or to bedrock, whichever is less unless an alternative geotechnical program is approved by the department in writing. The borings shall be distributed on a grid pattern throughout the area. A minimum of 3 representative samples shall be taken from each major soil layer encountered during installation of the borings and shall be analyzed for grain size distribution and classified according to the unified soil classification system.

(c) Water table observation wells shall be installed to adequately define the water table surface and hydraulic gradients. At a minimum, 3 water table observation wells shall be installed. The well locations shall be chosen in an effort to place one well upgradient and the other 2 downgradient at the proposed facility.

(d) The results of the subsurface investigations shall be summarized using a series of geologic sections which connect the soil borings performed. Each section shall show present topography, borings, wells, major soil layers, water table and bedrock.

(e) Topographic survey information shall be displayed on a plan sheet showing the proposed fill area, property boundaries, proposed facility boundaries, soil borings performed and wells installed. The minimum scale shall be 1" = 200' with a maximum contour interval of 5 feet. This map may consist of a blow-up of a USGS map, with supplemental information added as appropriate. Drainage patterns shall be shown. In addition, the plan sheet shall show all roads adjacent to or near the proposed facility; homes, water supply wells and wetlands or water courses within ¾ mile of the facility.

(f) A topographic plan sheet showing the proposed base grades and the sequence of filling shall be prepared. A contour interval of 2 feet should be used and all drainage patterns shown.

(g) A topographic plan sheet showing the proposed final grades shall be prepared.

(h) Cross-sections, both north-south and east-west, shall be drawn through the fill area delineating present topography, soils information, groundwater, base grades, and final contours. This information may be shown on the geologic cross-sections required in par. (d) if clarity is not compromised.

(i) An appendix shall be prepared which includes all raw data such as boring logs, soil tests, well construction data and water level measurements; a plat map of the area; a soil conservation service soil map and interpretation and references.

(5) CONSTRUCTION DOCUMENTATION REPORT. The department may require the applicant to submit a construction documentation report for any small demolition waste disposal facility. When a documentation report is required it shall be prepared in accordance with the department's plan approval and s. NR 500.05. Operation of the facility may not begin until the report is approved in writing by the department.

(6) OPERATIONAL REQUIREMENTS. Any person operating a facility for the disposal of less than 50,000 cubic yards of demolition wastes shall meet the operational requirements listed in s. NR 502.12 (5) (c), (d) and (e), and comply with the terms and conditions of the plan approval for the facility.

(7) MONITORING. The department may require installation of groundwater and leachate monitoring wells or other devices, groundwater and leachate sampling and analysis programs, gas monitoring and provisions to protect against detrimental effects of leachate and gas migration from any small demolition waste disposal facility.

(8) CLOSURE REQUIREMENTS. The closure of the facility shall meet the requirements listed in s. NR 502.12 (7), and the terms and conditions of the plan approval for the facility.

(9) EXPANSIONS. Any person who wishes to expand an existing small demolition waste disposal facility shall comply with all provisions of this section. The department shall interpret expansions to include any new facility within 1,000 feet of an existing facility. The department may deny any request for an expansion, if in the department's opinion, the disposal of additional waste may result in a detrimental effect on surface or groundwater or cause or exacerbate an attainment or exceedance of any standard in ch. NR 140. The local geology, hydrology, hydrogeology and typography shall be considered in this decision.

History: Cr. Register, January, 1988, No. 385, eff. 2-6-88.

NR 502.14 Municipal solid waste combustors. (1) GENERAL. No person may operate or maintain a municipal

solid waste combustor unless the person has obtained an operating license and a written approval of a plan of operation under sub. (3).

(2) LOCATIONAL CRITERIA. Municipal solid waste combustors shall meet the locational criteria specified in s. NR 502.04 (2) (c) and the performance standards specified in s. NR 502.04 (3). Exemptions from the requirements of s. NR 502.04 (3) (b), (e) and (f) may be granted only upon demonstration by the applicant of circumstances which warrant such exemptions. Exemptions from compliance with s. NR 502.04 (3) (a) may be granted only in accordance with the standards in s. NR 1.95. Exemptions from compliance with s. NR 502.04 (3) (d) may be granted only in accordance with the procedures in ch. NR 140. Exemptions from compliance with s. NR 502.04 (2) (c) and (3) (c) may not be granted.

(3) PLAN OF OPERATION. No person may establish or construct a municipal solid waste combustor or expand an existing facility after June 1, 1992 prior to obtaining approval in writing from the department of a plan of operation for the facility. The operator of a municipal solid waste combustor which is in operation on June 1, 1992 shall submit a plan of operation in accordance with this subsection no later than 3 months after June 1, 1992. The plan of operation for the municipal solid waste combustor shall contain, at a minimum, the following information:

(a) A map or aerial photograph of the area showing land use and zoning within ¼ mile of the site. The map or aerial photograph shall be of sufficient scale to show all homes, industrial buildings, roads and other applicable details and such details shall be identified and indicated on the map or aerial photograph.

(b) A plot plan of the municipal solid waste combustor site including means of limiting access such as fencing, gates, natural barriers; methods of acceptably screening the facility from the surrounding area; general layout of equipment and flow pattern; road access; and location of existing and proposed utilities serving the municipal solid waste combustor.

(c) A report which shall include the following information:

1. Population, area and facilities to be served by the municipal solid waste combustor.

2. Anticipated type and quantity of waste to be handled by the municipal solid waste combustor.

3. Persons responsible for the municipal solid waste combustor operations.

4. Methods of treating or disposing of any liquid wastes or waste waters resulting from the operation of the combustor.

(d) Appurtenances and procedures intended to store refuse beyond the end of the working day and to control dust, odors, fire outside the burning chamber and windblown materials.

(e) Methods of volume reduction including compaction, compression, baling, shredding, grinding, tamping, separating or classifying.

(f) Daily clean up procedures.

(g) Municipal solid waste combustor inspection and maintenance schedule and procedures.

(h) Detailed drawings and specifications of all structures, equipment and site.

(i) A report which includes furnace design criteria and expected performance data, including emission data.

(j) The site at which the residue will be disposed and alternative sites available for use when the primary site is inoperative.

Note: Municipal solid waste combustors must also have the air management permits required under s. 144.391, Stats.

(6) OPERATIONAL REQUIREMENTS. No person may operate or maintain a municipal solid waste combustor except in conformance with the following minimum requirements, unless an exemption is granted by the department in writing:

(a) The municipal solid waste combustor shall be situated, equipped, operated and maintained to minimize interference with other activities in the area.

(b) Adequate shelter and sanitary facilities shall be available for facility personnel.

(c) A sign shall be prominently posted at the entrance to the facility which indicates name, license number, hours of operation, necessary safety precautions and any other pertinent information.

(d) All incoming solid waste shall be confined to the designated storage area.

(e) Incoming and bypass solid waste shall be stored in conformance with s. NR 502.05 (9).

(f) Dust shall be controlled in the unloading and charging areas.

(g) Permanent records shall be maintained in accordance with sub. (9).

(h) Appropriate fire-fighting equipment shall be available in the storage and charging areas and elsewhere as needed.

(i) Arrangements shall be made with the local fire protection agency to provide adequate emergency fire-fighting forces.

(j) Means of communication with emergency facilities shall be provided.

(k) Adequate equipment shall be provided to allow cleaning after each day of operation or as may be required in order to maintain the plant in a sanitary condition.

(l) The charging openings as well as all equipment throughout the plant shall be provided with adequate safety equipment.

(m) The municipal solid waste combustor shall be designed and operated so that it will not cause a nuisance because of the emission of noxious odors, gases, contaminants or particulate matter or exceed emission limitations established by state air management rules.

(n) Residue shall be disposed of at a solid waste facility licensed by the department to accept the material or be handled by an alternate method approved in writing by

the department. Approval shall be issued on a case-by-case basis after review of the information contained in sub. (8).

(o) All wastewater from the combustor shall be discharged into a sanitary sewer or other system approved in writing by the department.

(p) Upon completion of construction of a new municipal solid waste combustor and at least 10 days prior to initial operation, the department shall be notified to allow inspection of the combustor both prior to and during any performance tests and initial operation.

(q) Open burning of solid waste may not be conducted.

(r) An approved alternative method shall be used for solid waste disposal during any time that the municipal solid waste combustor is inoperable.

(s) The incoming waste shall be screened to eliminate unacceptable material from entering the municipal solid waste combustor such as hazardous waste, asbestos, explosive materials or other materials as defined in sub. (11).

(t) Residue storage at the municipal solid waste combustor shall be in accordance with the following:

1. The residue shall be wetted at all times during storage to prevent dust emissions. Alternative methods of dust control shall be approved by the department prior to implementation. Provisions shall be made to prevent the release of residue into the air in the residue handling areas.

2. The storage area shall have an impervious surface on which the residue is stored and a collection system for any liquids coming into contact with the residue. All liquid that comes into contact with the residue which is not used as makeup water in the quench tank shall be treated at a wastewater treatment plant approved by the department.

3. Access to the temporary storage areas shall be restricted to authorized personnel only. Fencing or other means of control acceptable to the department shall be maintained around the storage facility.

(u) All treatment or mixing of residue shall be performed in a manner which controls air and water emissions.

(v) Treatment or mixing of residue at a facility other than at the municipal solid waste combustor shall require a processing license under s. NR 502.08.

(7) RESIDUE SAMPLING. (a) Representative samples of residues produced by burning municipal solid waste shall be collected over a minimum one-week period every quarter within 2 weeks of March 15, June 15, September 15 and December 15, except as provided in par. (f). Minimum 2 gallon volume samples shall be obtained hourly by using the appropriate procedure described in ASTM Method D2234-89. The hourly samples shall be composited daily. Each daily sample shall then be composited together at the end of the testing period to result in a minimum of one representative sample. Compositing shall be performed in a manner acceptable to the department.

Note: A copy of this sample collection procedure can be obtained from the Department of Natural Resources, Bureau of Solid Waste Management, 101 S. Webster Street, Madison, Wisconsin 53707. Copies of this test method are also available for inspection at the offices of the Revisor of Statutes and the Secretary of State. Personal copies may be obtained from ASTM, 1916 Race Street, Philadelphia, PA 19103-1187.

(b) Unless the residues are mixed as part of an internal, mechanical process, air pollution control equipment residue samples shall be collected separately from bottom-ash samples. If the mixing is part of an internal mechanical process, then the sampling shall be performed after the residue is mixed. If an ash treatment process occurs at the municipal solid waste combustor, then the sample shall be collected after treatment.

(c) For a municipal solid waste combustor where the sampling methods established in pars. (a) and (b) would be impractical, alternatives, such as pile testing methods, may be approved by the department.

(d) An adequate volume of each representative composite sample to be tested shall be retained to allow for confirmatory testing if any of the levels established under sub. (8) (g) are exceeded.

(e) In addition to the routine quarterly sampling required in par. (a), representative samples shall be collected within 2 weeks of initial startup and shakedown, and after any significant changes in plant design, operation or waste input, if such changes are expected to cause an increase or decrease in the number or concentrations of the residue parameters listed in sub. (8), Table 1. The operator shall identify, and submit to the department, the changes made and the anticipated effect the changes will have on the residues.

(f) An operator of a municipal solid waste combustor that has a design capacity of less than 10 tons per day shall:

1. Collect representative samples over a minimum one-week period every year within 2 weeks of June 15.

2. Collect representative samples quarterly to test for the 8 heavy metal parameters listed in sub. (8) (g) and within the 2 weeks of initial startup and shakedown and after any significant changes in plant design, operation or waste input, if such changes are expected to cause an increase or decrease in the number or concentrations of the listed parameters in the residue. The operator shall identify, and submit to the department, the changes made and the anticipated effect the changes will have on the residues. Sample collection and compositing procedures shall be performed as provided in par. (a).

3. Comply with all of the other provisions of sub. (7).

(8) RESIDUE CHARACTERIZATION. (a) An operator of a municipal solid waste combustor with a design capacity of 10 tons per day or greater shall test its residue quarterly the first year after an approval has been issued. After the first year of quarterly testing the residues shall be tested on an annual basis, except as provided in par. (m). The testing program listed in Table 1 shall be applied to all samples collected as required by sub. (7) (a) to (d). Test results shall be submitted to the department within 10 days of receiving the test results or within 60 days of the date of collection of the final sample, whichever is sooner.

(b) An operator of a municipal solid waste combustor with a design capacity of less than 10 tons per day shall:

1. Test its residue annually beginning the first June after an approval has been issued, except as otherwise provided in pars. (g) and (m).

2. Apply the testing program listed in Table 1 to all samples collected as required by sub. (7) (f). The dioxin/furan testing may be eliminated from the testing program.

3. Submit test results to the department within 10 days of receiving the test results or within 60 days of the date of collection of the final sample, whichever is sooner.

4. Comply with all of the other provisions of this section.

(c) A leachate sample from the monofill where the residue disposed of may be substituted for the EPA Method 1312 leach procedure listed in Table 1, Section III, after the initial 4 rounds of testing. The leachate sample shall be tested for all of the parameters listed under the EPA Method 1312 leach requirements in Table 1, Section III, unless a reduction in the number of parameters tested for has been approved by the department. The municipal solid waste combustor using the leachate substitute shall be responsible for the testing. If significant levels of any of the listed parameters are detected in the leachate tested from a monofill that receives multiple sources of residue, the department may require all contributing municipal solid waste combustors to perform leach testing of their residue using EPA Method 1312.

Note: A copy of this test method can be obtained from the Department of Natural Resources, Bureau of Solid Waste Management, 101 S. Webster Street, Madison, Wisconsin 53707. Copies of this test method are also available for inspection at the offices of the Revisor of Statutes and the Secretary of State. Personal copies can be obtained from the U.S. Environmental Protection Agency, Office of Solid Waste, 401 M Street SW, Washington D.C. 20460.

(d) The operator of the municipal solid waste combustor may apply to the department at the end of the initial 4 rounds of testing for elimination of those parameters which do not appear in its residues at significant levels.

(e) The provisions of this subsection do not supersede the testing requirements for the 8 heavy metal parameters listed in par. (g) using the EPA Method 1312 leach procedure.

(f) During the scheduled testing period, if any parameter in the bulk analysis is not detected at or above the specified detection limits, then that parameter may be eliminated from further leach testing for that test period.

(g) An operator of a municipal solid waste combustor shall test its residue for the parameters in this paragraph quarterly and within 2 weeks of completing initial startup and shakedown, and after any significant changes in plant design, operation or waste input that significantly affects or changes the residue characteristics by using EPA Method 1312. For municipal solid waste combustors which receive approval to co-dispose under s. NR 504.08 (3) (c), the UW, method R, synthetic leach test shall be used. Multiple samples may be tested separately and the results combined to obtain an arithmetic mean for each parameter. The operator shall immediately notify the department if test results indicate that any of the following limits are exceeded:

1.	Arsenic (As)	5.0 mg/l	5.	Lead (Pb)	5.0 mg/l
2.	Barium (Ba)	100.0 mg/l	6.	Mercury (Hg)	0.2 mg/l
3.	Cadmium (Cd)	1.0 mg/l	7.	Selenium (Se)	1.0 mg/l
4.	Chromium (Cr)	5.0 mg/l	8.	Silver (Ag)	5.0 mg/l

Note: Copies of these test procedures can be obtained from the Department of Natural Resources, Bureau of Solid Waste Management, 101 S. Webster Street, Madison, Wisconsin 53707. Copies of these test methods are also available for inspection at the offices of the Revisor of Statutes and the Secretary of State. Personal copies can be obtained from the U.S. Environmental Protection Agency, Office of Solid Waste, 401 M Street SW, Washington D.C. 20460.

(h) If any of the limits in par. (g) are exceeded, the operator may elect to complete confirmatory testing on the retained sample within 2 weeks of receiving the initial results. If the operator elects to perform the confirmatory testing then, only the constituents exceeding the limits will require testing.

(i) After January 1, 1993, if any of the limits in par. (g) are exceeded and confirmatory testing under par. (h) is not completed, or if the test results of par. (h) confirms the exceedance of the limits for the parameters listed in par. (g), then the residue may be treated to reduce leachable constituents below the threshold values, prior to disposal, or the residue shall be disposed of in a double composite lined landfill in accordance with s. NR 504.08 (3) (b). The treatment of the residue or disposal in a double composite lined landfill shall continue until a significant change to the facility design, operation or waste input can be demonstrated which produces consistent test results that meet the specified limits.

(j) After January 1, 1993, if a significant change to the waste input can be demonstrated, the operator shall confirm this change by completing confirmatory testing of one new sample taken in accordance with sub. (7). In cases where the contributing waste input cannot be isolated, consistent test results meet the specified limits shall be obtained from monthly testing according to the requirements of par. (g) for a minimum of 3 months. Only the constituents exceeding the limits listed in par. (g) will require retesting under this provision.

(k) After January 1, 1993, if none of the limits in par. (g) are exceeded or the confirmatory testing defined in par. (h) is below the specified limits in par. (g), the residue may be disposed of in a single composite lined monofill in accordance with the provisions of s. NR 504.08 (3) (a). In cases where limits in par. (g) were exceeded, but were not exceeded in the confirmatory testing, then additional testing in accordance with par. (g) shall be performed monthly for a minimum of 3 months to confirm that the initial exceedances were not representative of the residue characteristics. Only the constituents exceeding the limits require retesting under this provision. If there are any exceedances during this 3 month period, the residue shall be treated or disposed of in a double composite lined landfill in accordance with the provisions of s. NR 504.08 (3) (b).

(l) All treated residue shall be tested according to the requirements of this section.

(m) Any facility that has completed any portion of the testing requirements of this section, prior to June 1, 1992, is not required to repeat that portion of the test during the testing period, if the residue characteristics have not changed.

(n) The department may require different testing frequency and parameters, if circumstances warrant.

TABLE 1

Parameters and Detection Limits

I. Synthetic Precipitation Leach Test EPA Method 1312: (quarterly)

Arsenic (As)	0.05 mg/l	Barium (Ba)	1.0 mg/l
Cadmium (Cd)	0.01 mg/l	Chromium, Total (Cr)	0.05 mg/l
Lead (Pb)	0.05 mg/l	Mercury (Hg)	0.002 mg/l
Selenium (Se)	0.01 mg/l	Silver (Ag)	0.05 mg/l

II. Bulk chemical analysis:

Aluminum (Al)	0.1 mg/kg	Antimony (Sb)	1.0 mg/kg
Arsenic (As)	0.5 mg/kg	Barium (Ba)	5.0 mg/kg
Boron (B)	1.0 mg/kg	Cadmium (Cd)	0.5 mg/kg
Calcium (Ca)	1.0 mg/kg	Chromium, Total (Cr)	0.4 mg/kg
Iron (Fe)	0.1 mg/kg	Lead (Pb)	0.6 mg/kg
Magnesium (Mn)	0.02 mg/kg	Mercury (Hg)	0.04 mg/kg
Potassium (K)	0.01 mg/kg	Selenium (Se)	0.6 mg/kg
Silver (Ag)	1.0 mg/kg	Sodium (Na)	1.0 mg/kg
Zinc (Zn)	2.0 mg/kg	Total Organic Carbon	
Total Organic Halogen (TOX)	0.25 mg/kg	(TOC)	1.0 mg/kg

III. Synthetic Precipitation Leach Test EPA Method 1312 if ash is mono-filled or U.W. Synthetic Leach test if ash is co-disposed.

A. All of the parameters detected in the bulk chemical analysis (reported in mg/l)

B. DIOXINS AND FURANS The elutriate from the leach shall be tested for dioxins and furans in accordance with USEPA Method 1613. The lowest possible detection limits shall be used.

Note: Copies of these test procedures can be obtained from the Department of Natural Resources, Bureau of Solid Waste Management, 101 S. Webster Street, Madison, Wisconsin 53707. Copies of these test methods are also available for inspection at the offices of the Revisor of Statutes and the Secretary of State. Personal copies can be obtained from the U.S. Environmental Protection Agency, Office of Waster Regs & Std's, 401 M Street SW, Washington D.C. 20460.

C. Alkalinity	1.0 mg/l	Chemical Oxygen Demand (COD)	5.0 mg/l
Chloride	4.0 mg/l	Fluoride	4.0 mg/l
pH	0.1 units	Specific Conductance	10.0 µmhos/cm
Sulphate	1.0 mg/l	Total Dissolved Solids (TDS)	5.0 mg/l
Total Hardness	1.0 mg/l		

IV. Physical test:

Dry Bulk Density	Percent Combustible
Moisture Content as Generated	Grain Size Analysis: Sieve test Hydrometer test

(9) RECORD KEEPING. Operators of municipal solid waste combustor facilities shall maintain a record at the facility available for inspection by department staff during normal business hours. Records shall be compiled on a monthly basis, at a minimum. The department may approve alternative record-keeping programs. The following shall be included in the records:

(a) The hours of plant operation, combustion temperatures and residence time.

(b) The weight of material coming into the facility.

(c) The weight of material rejected by the facility and where it was sent. Where exact weights are not available, estimates shall be made of the weight of rejected hazardous waste, lead-acid batteries, the material sent to a recycler and the material sent to a landfill.

(d) The weight of residue produced and where it was sent. Where exact weights are not available, the volume of residue produced shall be recorded.

(e) A list of the states of origin of solid waste accepted at the facility in the previous year and the amount, by weight, originating in each state.

(f) The recording person's initials and the date of each entry.

(10) ANNUAL REPORT. (a) The facility operator shall compile and submit the records defined in sub. (9) as an annual report.

(b) The report shall cover the calendar year and be submitted no later than April 1 of the following year.

(c) The annual report shall include the results of all testing required under sub. (8) for the previous year.

(11) WASTE SCREENING. (a) The operator or designated agent of a municipal solid waste combustor shall screen the incoming waste to eliminate the materials identified in pars. (b) to (d), from entering the facility.

(b) The screening of materials from the combustion process may be accomplished at the facility or by the contributors of the waste from the area served by the facility that have an effective recycling program. Additional restrictions to waste acceptance for some facilities may exist as specified in s. 159.07, Stats. Alkaline batteries and similar heavy metal sources should not be accepted at municipal solid waste combustor facilities.

(c) Hazardous waste as defined by s. NR 600.03 (87) may not be accepted at a municipal solid waste combustion facility. This includes waste produced by small quantity generators. Household hazardous waste shall be excluded if separated from residential waste, Household hazardous waste may be accepted if not separated from residential waste.

(d) White goods, large metal objects, lead/acid batteries, building materials, and noncombustible furniture, office and farm equipment may not be fed into a municipal solid waste combustor.

(e) Waste oils may be burned only in compliance with state and federal regulations.

(12) WASTE SCREENING PLAN. The operator of a municipal solid waste combustion facility shall evaluate and submit to the department a waste screening and handling plan that contains the following:

(a) Procedures for limiting the items listed in sub. (11) (c) and (d) from entering a combustor.

(b) Identification of other items that will not be accepted by the combustor due to heavy metal content or other reasons.

(c) Procedures for handling and disposing of screened items.

(d) Procedures and authority for enforcement of its requirements.

(e) The plan may include the effective recycling program under s. 159.11, Stats., developed by each responsible unit or units served by the municipal solid waste combustor.

Other waste reduction plans, such as medical waste reduction plans, may be included where appropriate.

(f) Municipal solid waste combustion facilities which began initial operation prior to June 1, 1992 shall submit a waste screening and handling plan to the department no later than 3 months after June 1, 1992 for approval.

(g) No municipal solid waste combustion facility may begin initial operation after 3 months after June 1, 1992 unless a waste screening and handling plan under this section has been approved by the department.

(13) OPERATOR QUALIFICATIONS. The municipal solid waste combustion facility shall be operated by personnel meeting the operator qualification requirements established under s. 144.31 (3), Stats.

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