

## Chapter NR 656

### WOOD PRESERVING LISTINGS AND STANDARDS

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**NR 656.01 Purpose.** The purpose of this chapter is to specify standards for drip pads used to collect treated wood drip-page. These standards include requirements for drip pad design and operation, inspections, and closure.

**History:** Cr. Register, May, 1995, No. 473, eff. 6-1-95.

**NR 656.02 Applicability.** This chapter applies to the owners and operators of facilities where drip pads are used to assist in the collection of treated wood drippage. These standards include requirements for drip pad design and operation, inspections and closure. Generators may be eligible for a 90-day generator exemption from licensing if their pads meet all of the technical standards for drip pads.

**History:** Cr. Register, May, 1995, No. 473, eff. 6-1-95.

**NR 656.03 Definitions.** The definitions in s. NR 600.03 apply to this chapter.

(1) "Existing F032 drip pad" means a drip pad handling F032 waste constructed before December 6, 1990 and those for which the owner or operator entered into binding financial or other agreements for construction prior to December 6, 1990.

(2) "Existing F034 or F035 drip pad" means a drip pad handling either F034 or F035 waste constructed before June 1, 1995 and those for which the owner or operator entered into binding financial or other agreements for construction prior to June 1, 1995.

(3) "New F032 drip pad" means a drip pad handling F032 waste constructed after December 6, 1990 and those for which the owner or operator did not enter into binding financial or other agreements for construction prior to December 6, 1990.

(4) "New F034 or F035 drip pad" means a drip pad handling either F034 or F035 waste constructed after June 1, 1995 and those for which the owner or operator did not enter into binding financial or other agreements for construction prior to June 1, 1995.

**History:** Cr. Register, May, 1995, No. 473, eff. 6-1-95.

**NR 656.04 Exemptions.** (1) The following materials are excluded from regulation under this chapter:

- (a) Spent wood preserving solutions that have been reclaimed and reused for their original intended purpose; and
- (b) Wastewaters from the wood preserving process that have been reclaimed and are reused to treat wood.

(2) A generator who accumulates hazardous waste on-site for 90 days or less and is in compliance with ch. NR 615 is exempt from all the requirements in s. NR 656.06.

(3) Management of infrequent and incidental drippage in storage yards is exempt from regulation under this chapter provided that the owner or operator maintains and complies with a written contingency plan that describes how the owner or operator will respond immediately to the discharge of such infrequent and incidental drippage. At a minimum, the contingency plan shall describe how the owner or operator will comply with all of the following:

- (a) Clean up the drippage.
- (b) Document the cleanup of the drippage.
- (c) Retain documents regarding cleanup for 3 years.

(d) Manage the contaminated media in a manner consistent with state regulations.

**History:** Cr. Register, May, 1995, No. 473, eff. 6-1-95.

**NR 656.05 General.** Except as otherwise provided in s. NR 656.04, no person may maintain or operate a drip pad, which manages hazardous wastes, unless the person has obtained an interim license, final operating license, variance or waiver from the department, in accordance with the requirements of s. NR 600.09 or ch. NR 680.

**History:** Cr. Register, May, 1995, No. 473, eff. 6-1-95.

**NR 656.06 Feasibility and plan of operation report.** Unless specifically exempted in s. NR 656.04, no person shall establish, construct or expand a drip pad used to convey treated wood drippage, precipitation or surface water runoff or be issued an initial operating license under s. NR 680.34 without first obtaining written approval of a feasibility and plan of operation report from the department. The purpose of the feasibility and plan of operation report is to determine whether the site has potential for use as a hazardous waste drip pad and to identify and to address any operating conditions which are necessary for the proper operation of the facility. Favorable feasibility determination and plan approval under this section does not guarantee final licensure. The feasibility and plan of operation report shall be submitted in accordance with the requirements of ss. 289.24 and 289.30, Stats., and ss. NR 680.05 to 680.09. The feasibility and plan of operation report shall also contain the following:

(1) A list of hazardous wastes placed or to be placed on each drip pad.

(2) If an exemption is sought to ch. NR 635, detailed plans and an engineering report describing how the requirements of ss. NR 635.05 (1) (b), 635.07 and 635.12 (3) (a) will be met.

(3) Detailed plans and an engineering report describing how the drip pad is or will be designed, constructed, operated and maintained to meet the requirements of s. NR 656.07 (4), including the as-built drawings and specifications. This submission shall address the following items as specified in s. NR 656.07 (4):

- (a) The design characteristics of the drip pad.
- (b) The liner system.
- (c) The leakage detection system, including the leak detection system and how it is designed to detect the failure of the drip pad or the presence of any releases of hazardous waste or accumulated liquid at the earliest practicable time.
- (d) Practices designed to maintain drip pads.
- (e) The associated collection system.
- (f) Control of run-on to the drip pad.
- (g) Control of run-off from the drip pad.
- (h) The interval at which drippage and other materials will be removed from the associated collection system and a statement demonstrating that the interval will be sufficient to prevent overflow onto the drip pad.

(i) Procedures for cleaning the drip pad at least once every 7 days to ensure the removal of any accumulated residues of waste or other materials, including but not limited to rinsing, washing with detergents or other appropriate solvents, or steam cleaning

and provisions for documenting the date, time and cleaning procedure used each time the pad is cleaned.

(j) Operating practices and procedures that will be followed to ensure that tracking of hazardous waste or waste constituents off the drip pad due to activities by personnel or equipment is minimized.

(k) Procedures for ensuring that, after removal from the treatment vessel, treated wood from pressure and non-pressure processes is held on the drip pad until drippage has ceased, including recordkeeping practices.

(L) Provisions for ensuring that collection and holding units associated with the run-on and run-off control systems are emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system.

(m) If treatment is carried out on the drip pad, details of the process equipment used, and the nature and quality of the residuals.

(n) A description of how each drip pad, including appurtenances for control of run-on and run-off, will be inspected in order to meet the requirements of s. NR 656.07 (4) (d). This information shall be included in the inspection plan submitted under s. NR 680.06 (3) (e).

(o) A certification signed by an independent qualified, professional engineer, registered in the state of Wisconsin, stating that the drip pad design meets the requirements of s. NR 656.07 (4) (a) to (f).

(p) A description of how hazardous waste residues and contaminated materials will be removed from the drip pad at closure, as required under s. NR 656.08 (1) (a). For any waste not to be removed from the drip pad upon closure, the owner or operator shall submit detailed plans and an engineering report describing how ss. NR 660.16 (1) (a) and 660.17 (2) will be complied with. This information shall be included in the closure plan and, where applicable, the long-term care plan submitted under ss. NR 680.21 (1) (b) and (c), 685.05 (2) and 685.06 (5).

**History:** Cr. Register, May, 1995, No. 473, eff. 6-1-95; correction in (intro.) made under s. 13.93 (2m) (b) 7., Register, May, 1998, No. 509.

**NR 656.07 Drip pad standards.** (1) DRIP PADS. (a) The requirements of this section apply to the owners and operators of facilities that use drip pads to convey treated wood drippage, precipitation or surface water run-off to an associated collection system. Existing and new drip pads are defined in s. NR 656.03. The requirements of sub. (4) (b) 3. to install a leak collection system apply to new drip pads constructed after December 24, 1992 and those F032 drip pads for which the owner or operator entered into binding financial or other agreements for construction prior to December 24, 1992.

(b) The owner or operator of any drip pad that is inside or under a structure that provides protection from precipitation so that neither run-off nor run-on is generated is not subject to regulation under sub. (4) (e) or (f) as appropriate.

(c) The requirements of this section are not applicable to infrequent and incidental drippage managed in accordance with s. NR 656.04 (3):

(2) ASSESSMENT OF EXISTING DRIP PAD INTEGRITY. (a) For each existing drip pad as defined in s. NR 656.03, the owner or operator shall evaluate the drip pad and determine that it meets all of the requirements of this section, except the requirements for liners and leak detection systems of sub. (4) (b). No later than June 1, 1995, the owner or operator shall obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by an independent, qualified professional engineer registered in the state of Wisconsin that attests to the results of the evaluation. The assessment shall be reviewed, updated and re-certified annually until all upgrades, repairs or modifications necessary to achieve compliance with all of the standards of sub. (4) (b) are complete. The evaluation shall document the extent to which the drip pad meets each of the design and operating standards of sub.

(4), except the standards for liners and leak detection systems, specified in sub. (4) (b).

(b) The owner or operator shall develop a written plan for upgrading, repairing and modifying the drip pad to meet the requirements of sub. (4) (b) and submit the plan to the department no later than 2 years before the date that all repairs, upgrades and modifications are complete. This written plan shall describe all changes to be made to the drip pad in sufficient detail to document compliance with all the requirements of sub. (4). The plan shall be reviewed and certified by an independent qualified professional engineer registered in the state of Wisconsin.

(c) Upon completion of all upgrades, repairs and modifications, the owner or operator shall submit to the department the as-built drawings for the drip pad together with a certification by an independent, qualified professional engineer registered in the state of Wisconsin attesting that the drip pad conforms to the drawings.

(d) If the drip pad is found to be leaking or unfit for use, the owner or operator shall comply with the provisions of sub. (4) (m) or close the drip pad in accordance with s. NR 656.08.

(3) DESIGN AND INSTALLATION OF NEW DRIP PADS. Owners and operators of new drip pads shall ensure that the pads are designed, installed and operated in accordance with one of the following:

(a) All of the requirements of subs. (4) and (5) and s. NR 656.08 except sub. (4) (b), or

(b) All of the requirements of subs. (4) and (5) and s. NR 656.08 except sub. (4) (a) 4.

(4) DESIGN AND OPERATING REQUIREMENTS. (a) The owner or operator shall obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by an independent, qualified professional engineer registered in the state of Wisconsin that attests to the results of the evaluation. The assessment shall be reviewed, updated and recertified annually. The evaluation shall document the extent to which the drip pad meets the design and operating standards of this section, except for par. (b). Drip pads shall:

1. Be constructed of non-earthen materials, excluding wood and non-structurally supported asphalt.

2. Be sloped to free-drain treated wood drippage, rain and other waters, or solutions of drippage and water or other wastes to the associated collection system.

3. Have a curb or berm around the perimeter.

4. Have a hydraulic conductivity of less than or equal to  $1 \times 10^{-7}$  centimeter per second. Existing concrete drip pads shall be sealed, coated or covered with a surface material with a hydraulic conductivity of less than or equal to  $1 \times 10^{-7}$  centimeters per second such that the entire surface where the drippage occurs or may run across is capable of containing such drippage and mixtures of drippage and precipitation, materials or other wastes while being routed to an associated collection system. This surface material shall be maintained free of cracks and gaps that could adversely affect its hydraulic conductivity, and the material shall be chemically compatible with the preservatives that contact the drip pad. The requirements of this subparagraph apply only to existing drip pads and those drip pads for which the owner or operator elects to comply with sub. (3) (a) instead of sub. (3) (b).

5. Be of sufficient structural strength and thickness to prevent failure due to physical contact, climatic conditions, the stress of installation and the stress of daily operations, including variable and moving loads such as vehicle traffic or movement of wood.

**Note:** The department will generally consider applicable standards established by professional organizations generally recognized by the industry such as the American Concrete Institute (ACI) or the American Society of Testing Materials (ASTM) in judging the structural integrity requirement of this paragraph.

(b) If an owner or operator elects to comply with sub. (3) (b) instead of sub. (3) (a), the drip pad shall have all of the following:

1. A synthetic liner installed below the drip pad that is designed, constructed and installed to prevent leakage from the

drip pad into the adjacent subsurface soil or groundwater or surface water at any time during the active life, including the closure period, of the drip pad. The liner shall be constructed of materials that will prevent waste from being absorbed into the liner and to prevent releases into the adjacent subsurface soil or ground water or surface water during the active life of the facility. The liner shall be:

a. Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients, including static head and external hydrogeologic forces, physical contact with the waste or drip pad leakage to which they are exposed, climatic conditions, the stress of installation and the stress of daily operation, including stresses from vehicular traffic on the drip pad.

b. Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression or uplift.

c. Installed to cover all surrounding earth that could come in contact with the waste or leakage.

2. A leakage detection system immediately above the liner that is designed, constructed, maintained and operated to detect leakage from the drip pad. The leakage detection system shall be:

a. Constructed of materials that are both chemically resistant to the waste managed in the drip pad and the leakage that might be generated; and of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying materials and by any equipment used at the drip pad.

b. Designed and operated to function without clogging through the scheduled closure of the drip pad.

c. Designed so that it will detect the failure of the drip pad or the presence of a release of hazardous waste or accumulated liquid at the earliest practicable time.

3. A leakage collection system immediately above the liner that is designed, constructed, maintained and operated to collect leakage from the drip pad such that it can be removed from below the drip pad. The date, time and quantity of any leakage collected in the system and removed shall be documented in the operating log.

(c) Drip pads shall be maintained such that they remain free of cracks, gaps, corrosion or other deterioration that could cause hazardous waste to be released from the drip pad.

**Note:** See sub. (4) (m) for remedial action required if deterioration or leakage is detected.

(d) The drip pad and associated collection system shall be designed and operated to convey, drain and collect liquid resulting from drippage or precipitation in order to prevent run-off.

(e) Unless protected by a structure, as described in sub. (1) (b), the owner or operator shall design, construct, operate and maintain a run-on control system capable of preventing flow onto the drip pad during peak discharge from at least a 24-hour, 25-year storm, unless the system has sufficient excess capacity to contain any run-on that might enter the system, or the drip pad is protected by a structure or cover, as described in sub. (1) (b).

(f) Unless protected by a structure or cover, as described in sub. (1) (b), the owner or operator shall design, construct, operate and maintain a run-off management system to collect and control at least the water volume resulting from a 24-hour, 25-year storm.

(g) The drip pad shall be evaluated to determine that it meets the requirements of pars. (a) to (f) and the owner or operator shall obtain a statement from an independent, qualified professional engineer registered in the state of Wisconsin certifying that the drip pad design meets the requirements of this section.

(h) Drippage and accumulated precipitation shall be removed from the associated collection system as necessary to prevent overflow onto the drip pad.

(i) The drip pad surface shall be cleaned thoroughly in a manner and frequency such that accumulated residues of hazardous wastes or other materials are removed, with residues being properly managed as hazardous wastes, so as to allow weekly inspections of the entire drip pad surface without interference or hindrance from accumulated residues of hazardous wastes on the drip pad. The owner or operator shall document the date and time of each cleaning and the cleaning procedure used in the facility's operating log.

(j) Drip pads shall be operated and maintained in a manner to minimize tracking of hazardous waste or hazardous waste constituents off the drip pad as a result of activities by personnel or equipment.

(k) After being removed from the treatment vessel, treated wood from pressure and non-pressure processes shall be held on the drip pad until drippage has ceased. The owner or operator shall maintain records sufficient to document that all treated wood is held on the pad following treatment in accordance with this paragraph.

(L) Collection and holding units associated with run-on and run-off control systems shall be emptied or otherwise managed as soon as possible after storms to maintain design capacity of the system.

(m) Throughout the active life of the drip pad and as specified in the license, if the owner or operator detects a condition that could lead to or has caused a release of hazardous waste, the condition shall be repaired within a reasonably prompt period of time following discovery, in accordance with the following procedures:

1. Upon detection of a condition that may have caused or has caused a release of hazardous waste, the owner or operator shall:

**Note:** Detection of a condition that may have caused or has caused a release of hazardous waste would include detection of leakage in the leak detection system.

a. Enter a record of the discovery in the facility operating log.

b. Immediately remove the portion of the drip pad affected by the condition from service.

c. Determine what steps shall be taken to repair the drip pad and clean up any leakage from below the drip pad, and establish a schedule for accomplishing the repairs.

d. Within 24 hours after discovery of the condition, notify the department of the condition and, within 10 working days, provide written notice to the department with a description of the steps that will be taken to repair the drip pad and clean up any leakage, and the schedule for accomplishing this work.

2. The department shall review the information submitted, make a determination regarding whether the pad shall be removed from service completely or partially until repairs and clean up are complete, and notify the owner or operator of the determination and the underlying rationale in writing.

3. Upon completing all repairs and clean up, the owner or operator shall notify the department in writing and provide a certification, signed by an independent, qualified professional engineer registered in the state of Wisconsin, that the repairs and clean up have been completed according to the written plan submitted in accordance with subd. 1.d.

(n) Should a license be necessary, the department shall specify in the license all design and operating practices that are necessary to ensure that the requirements of this section are satisfied.

(o) The owner or operator shall maintain, as part of the facility operating log, documentation of past operating and waste handling practices. This shall include identification of preservative formulations used in the past, a description of drippage management practices and a description of treated wood storage and handling practices.

**(5) INSPECTIONS.** (a) During construction or installation, liners and cover systems shall be inspected for uniformity, damage and imperfections. Immediately after construction or installation,

liners shall be inspected and certified as meeting the requirements of this subsection by an independent qualified, professional engineer, registered in the state of Wisconsin. This certification shall be maintained at the facility as part of the facility operating record. After installation, liners and covers shall be inspected to ensure tight seams and joints and the absence of tears, punctures or blisters.

**Note:** Liners and cover systems include membranes, sheets and coatings. Nonuniformity, damage and imperfections include holes, cracks, thin spots or foreign materials.

(b) While a drip pad is in operation, it shall be inspected weekly and after storms to detect evidence of any of the following:

1. Deterioration, malfunctions or improper operation of run-on and run-off control systems.
2. The presence of leakage in and proper functioning of leak detection system.
3. Deterioration or cracking of the drip pad surface.

**Note:** See sub. (4) (m) for remedial action required if deterioration or leakage is detected.

**History:** Cr. Register, May, 1995, No. 473, eff. 6-1-95; am. (1) (a) and (4) (a), Register, May, 1998, No. 509, eff. 6-1-98.

**NR 656.08 Closure and long term care. (1) CLOSURE.**

Unless specifically exempted, the owner or operator of a drip pad unit that manages hazardous waste shall meet the requirements in ss. NR 685.05 and 685.06 and all of the following requirements for each drip pad:

(a) At closure, remove or decontaminate all waste and waste residues, contaminated secondary containment system components, such as liners and drip pads, contaminated soils, structures and equipment that are contaminated with hazardous waste, and manage them as hazardous waste. The department may require monitoring of groundwater or surface waters, if the operation or design of the facility in relation to the hazard of wastes handled at the facility warrants monitoring. The closure plan, closure activities, cost estimates for closure and financial responsibility

for tank systems shall meet all of the requirements specified in ss. NR 600.03, 685.02, 685.05, 685.06, 685.07 and 685.08.

(b) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in par. (a), then the owner or operator shall close the facility and perform long-term care in accordance with the closure and long-term care requirements that apply to landfills in ss. NR 660.18 (10), 660.21 and 660.22. In addition, for the purposes of closure, long-term care and financial responsibility, the drip pad is then considered to be a landfill, and the owner or operator shall meet all of the requirements for landfills specified in ss. NR 600.03, 685.02, 685.05, 685.06, 685.07 and 685.08.

(c) The owner or operator of an existing drip pad, as defined in s. NR 656.03, that does not comply with the liner requirements of s. NR 656.07 (4) (b) 1. shall do all of the following:

1. Include both a plan for complying with par. (a) and a contingent plan for complying with par. (b).
2. Prepare and submit a contingent long-term care plan for complying with par. (b) as part of the feasibility and plan of operation report.
3. The cost estimates calculated for closure and long-term care shall reflect the costs of complying with the contingent closure plan and contingent long-term care plan, if those costs are greater than the costs of complying with the closure plan prepared for the expected closure under par. (a).
4. Financial assurance shall be based upon the cost estimates in subd. 3.
5. For the purposes of the contingent closure and long-term care plans, the drip pad is considered to be a landfill, and the contingent plans shall meet all of the closure, long-term care and financial responsibility requirements for landfills under ch. NR 660 and ss. NR 600.03, 685.05, 685.06, 685.07 and 685.08.

**(2) FINAL DISPOSAL.** Final disposal of hazardous waste may not be permitted at a hazardous waste storage or treatment facility, unless the facility has a separate license for disposal.

**History:** Cr. Register, May, 1995, No. 473, eff. 6-1-95.