

TRANSMITTAL SHEET FOR  
NOTICE OF INTENDED ACTION

Control No. 335 Department or Agency Environmental Management  
Rule No. 335-14-5-.23  
Rule Title: Drip Pads

         New      X   Amend             Repeal             Adopt by Reference

Would the absence of the proposed rule significantly harm or endanger the public health, welfare, or safety?

YES

Is there a reasonable relationship between the state's police power and the protection of the public health, safety, or welfare?

YES

Is there another, less restrictive method of regulation available that could adequately protect the public?

NO

Does the proposed rule have the effect of directly or indirectly increasing the costs of any goods or services involved and, if so, to what degree?

NO

Is the increase in cost, if any, more harmful to the public than the harm that might result from the absence of the proposed rule?

NO

Are all facets of the rulemaking process designed solely for the purpose of, and so they have, as their primary effect, the protection of the public?

YES

\*\*\*\*\*  
Does the proposed rule have an economic impact?

NO

If the proposed rule has an economic impact, the proposed rule is required to be accompanied by a fiscal note prepared in accordance with subsection (f) of section 41-22-23, Code of Alabama 1975.

\*\*\*\*\*  
Certification of Authorized Official

I certify that the attached proposed rule has been proposed in full compliance with the requirements of Chapter 22, Title 41, Code of Alabama 1975, and that it conforms to all applicable filing requirements of the Administrative Procedure Division of the Legislative Reference Service.

Signature of certifying officer Marilyn Elliott

Date October 20, 2016

**ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
LAND DIVISION**

**NOTICE OF INTENDED ACTION**

**AGENCY NAME:** Department of Environmental Management

**RULE NO. & TITLE:** 335-14-5-.02 General Facility Standards  
335-14-5-.05 Manifest System, Recordkeeping and Reporting  
335-14-5-.07 Closure and Post-Closure  
335-14-5-.08 Financial Requirements  
335-14-5-.10 Tank Systems  
335-14-5-.19 Special Provisions for Cleanup  
335-14-5-.23 Drip Pads  
335-14-5-.27 Subpart AA - Air Emission Standards For Process Vents  
335-14-5-.28 Subpart BB - Air Emission Standards For Equipment Leaks  
335-14-5-.29 Subpart CC - Air Emission Standards For Tanks, Surface Impoundments, And Containers  
335-14-5-.30 Containment Buildings  
335-14-5 Appendix IX Groundwater Monitoring List

**INTENDED ACTION:** Amend chapter 335-14-5 of the ADEM Administrative Code

**SUBSTANCE OF PROPOSED ACTION**

The Department of Environmental Management proposes to amend portions of the Division 14 Hazardous Waste Program Regulations to make typographical and grammatical corrections, to make clarifications necessary to maintain consistency with analogous federal rules, and to adopt new amendments required by the USEPA which are necessary to maintain the programs fully authorized status.

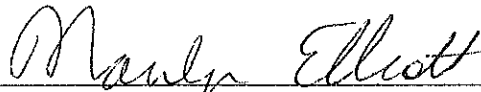
**TIME, PLACE, MANNER OF PRESENTING VIEWS**

Comments may be submitted in writing or orally at a public hearing to be held Wednesday, December 7, 2016 at 2:00 p.m. in the Main Hearing Room at the ADEM Central Office located at 1400 Coliseum Blvd, Montgomery, Alabama 36110.

**FINAL DATE FOR COMMENT AND COMPLETION OF NOTICE**

Wednesday, December 7, 2016 at 5:00 p.m.

**CONTACT PERSON AT AGENCY:** Chip Crockett, Chief of the Industrial Hazardous Waste Branch, ADEM Land Division, (334) 270-5627.



Lance R. LeFleur  
Director

**335-14-5-.23**

**Drip Pads.**

(1) Applicability.

(a) The requirements of 335-14-5-.23 apply to owners and operators of facilities that use new or existing drip pads to convey treated wood drippage, precipitation, and/or surface water run-off to an associated collection system. Existing drip pads are those constructed before December 6, 1990 and those for which the owner or operator has a design and has entered into binding financial or other agreements for construction prior to December 6, 1990. All other drip pads are new drip pads. The requirement of 335-14-5-.23(4)(b)3. to install a leak collection system applies only to those drip pads that are constructed after December 24, 1992, except for those constructed after December 24, 1992 for which the owner or operator has a design and has 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 335-14-5-.23 (4)(e) or (f), as appropriate.

(c) The requirements of 335-14-5-.23 are not applicable to the management of infrequent and incidental drippage in storage yards provided that:

1. 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 must describe how the owner or operator will do the following:

- (i) Clean up the drippage;
- (ii) Document the cleanup of the drippage;
- (iii) Retain documents regarding cleanup for three years; and
- (iv) Manage the contaminated media in a manner consistent with State of Alabama regulations.

(2) Assessment of existing drip pad integrity.

(a) For each existing drip pad as defined in 335-14-5-.23(1), the owner or operator must evaluate the drip pad and determine that it meets all of the requirements of 335-14-5-.23, except the requirements for liners and leak detection systems of 335-14-5-.23(4)(b). No later than the effective date of 335-14-5-.23, the owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by a qualified Professional Engineer that attests to the results of the evaluation. The assessment must be reviewed, updated and re-certified annually until all upgrades, repairs, or modifications necessary to achieve compliance with all of the standards of 335-14-5-.23(4) are complete. The evaluation must document the extent to which the drip pad meets each of the design and operating

standards of 335-14-5-.23(4), except the standards for liners and leak detection systems, specified in 335-14-5-.23(4)(b).

(b) The owner or operator must develop a written plan for upgrading, repairing, and modifying the drip pad to meet the requirements of 335-14-5-.23(4)(b) and submit the plan to the Director no later than two years before the date that all repairs, upgrades, and modifications are complete. This written plan must describe all changes to be made to the drip pad in sufficient detail to document compliance with all the requirements of 335-14-5-.23(4). The plan must be reviewed and certified by a qualified Professional Engineer.

(c) Upon completion of all upgrades, repairs and modifications, the owner or operator must submit to the Director, the as-built drawings for the drip pad together with a certification by a qualified Professional Engineer 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 must comply with the provisions of 335-14-5-.23(4)(m) or close the drip pad in accordance with 335-14-5-.23(6).

(3) Design and installation of new drip pads. Owners and operators of new drip pads must ensure that the pads are designed, installed, and operated in accordance with one of the following:

(a) All of the requirements of 335-14-5-.23(4) (except (4)(a)4.), (5), and (6), or

(b) All of the requirements of 335-14-5-.23(4) (except (4)(b)), (5), and (6).

(4) Design and Operating requirements.

(a) Drip pads must:

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.(i) Have a hydraulic conductivity of less than or equal to  $1 \times 10^{-7}$  cm/sec, e.g., existing concrete drip pads must be sealed, coated, or covered with a surface material with a hydraulic conductivity of less than or equal to  $1 \times 10^{-7}$  cm/sec such that the entire surface where 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

must be maintained free of cracks and gaps that could adversely affect its hydraulic conductivity, and the material must be chemically compatible with the preservatives that contact the drip pad. The requirements of this provision apply only to existing drip pads and those drip pads for which the owner or operator elects to comply with 335-14-5-.23(3)(b).

(ii) The owner or operator must obtain and keep on file at the facility a written assessment of the drip pad, reviewed and certified by a qualified Professional Engineer that attests to the results of the evaluation. The assessment must be reviewed, updated and recertified annually. The evaluation must document the extent to which the drip pad meets the design and operating standards of 335-14-5-.23(4), except for 335-14-5-.23(4)(b).

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

**Note:** ADEM 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 requirements of 335-14-5-23-.(4).

(b) If an owner/operator elects to comply with 335-14-5-.23(3)(a) instead of 335-14-5-.23(3)(b), the drip pad must have:

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 must be constructed of materials that will prevent waste from being absorbed into the liner and to prevent releases into the adjacent subsurface soil or groundwater or surface water during the active life of the facility. The liner must be:

(i) 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);

(ii) 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; and

(iii) Installed to cover all surrounding earth that could come in contact with the waste or leakage; and

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 must be:

- (i) Constructed of materials that are:
  - (I) Chemically resistant to the waste managed in the drip pad and the leakage that might be generated; and
  - (II) Of sufficient strength and thickness to prevent collapse under the pressures exerted by overlaying materials and by any equipment used at the drip pad;
- (ii) Designed and operated to function without clogging through the scheduled closure of the drip pad; and
- (iii) 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 this system and removed must be documented in the operating log.

(c) Drip pads must 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 335-14-5-.23(4)(m) for remedial action required if deterioration or leakage is detected.

(d) The drip pad and associated collection system must 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 335-14-5-.23(l)(b), the owner or operator must 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-off that might enter the system.

(f) Unless protected by a structure or cover, as described in 335-14-5-.23(1)(b), the owner or operator must 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 must be evaluated to determine that it meets the requirements of 335-14-5-.23(4)(a) through (f), and the owner or operator must obtain a statement from a qualified Professional Engineer certifying that the drip pad design meets the requirements of 335-14-5-.23(4).

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

(i) The drip pad surface must be cleaned thoroughly in a manner and frequency such that accumulated residues of hazardous waste or other materials are removed, with residues being properly managed as hazardous waste, so as to allow weekly inspections of the entire drip pad surface without interference or hindrance from accumulated residues of hazardous waste or other materials on the drip pad. The owner or operator must document the date and time of each cleaning and the cleaning procedure used in the facility's operating log. The owner/operator must determine if the residues are hazardous as per 335-14-3-.01(2) and, if so, must manage them under Chapters 335-14-2 through 335-14-9, and Section 3010 of RCRA.

(j) Drip pads must 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 must be held on the drip pad until drippage has ceased. The owner or operator must maintain records sufficient to document that all treated wood is held on the pad following treatment in accordance with this requirement.

(l) Collection and holding units associated with run-on and run-off control systems must 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 permit, if the owner or operator detects a condition that may have caused or has caused a release of hazardous waste, the condition must 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 (e.g. upon detection of leakage in the leak detection system), the owner or operator must:

(i) Enter a record of the discovery in the facility operating log;

(ii) Immediately remove the portion of the drip pad affected by the condition from service;

(iii) Determine what steps must 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;

(iv) Within 24 hours after discovery of the condition, notify the Director of the condition and within 10 working days, provide written notice to the Director 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 Director will review the information submitted, make a determination regarding whether the pad must be removed from service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing.

3. Upon completing all repairs and cleanup, the owner or operator must notify the Director in writing and provide a certification, signed by an independent, qualified registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with 335-14-5-.23(4)(m)1.(iv).

(n) Should a permit be necessary, the Director will specify in the permit all design and operating practices that are necessary to ensure that the requirements of 335-14-5-.23(4) are satisfied.

(o) The owner or operator must maintain, as part of the facility operating log, documentation of past operating and waste handling practices. This must 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 (e.g., membranes, sheets, or coatings) must be inspected for uniformity, damage, and imperfections (e.g., holes, cracks, thin spots, or foreign materials). Immediately after construction or installation, liners must be inspected and certified as meeting the requirements of 335-14-5-.23(4) by a qualified Professional Engineer. The certification must be maintained at the facility as part of the facility operating record. After installation, liners and covers must be inspected to ensure tight seams and joints and the absence of tears, punctures, or blisters.

(b) While a drip pad is in operation, it must 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 335-14-5-.23(4)(m) for remedial action required if deterioration or leakage is detected.

(c) For inspections performed pursuant to 335-14-5-.23(5)(b), the owner or operator must record inspections in an inspection log or summary and keep these records for at least three years from the date of inspection. At a minimum, these records must include the date and time of the inspection, the name of the inspector, a



notation of the observations made, and the date and nature of any repairs or other remedial actions.

(6) Closure.

(a) At closure, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (pad, liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leakage, and manage them as hazardous waste.

(b) If, after removing or decontaminating all residues and making all reasonable efforts to effect removal or decontamination of contamination components, subsoils, structures, and equipment as required in 335-14-5-.23(6)(a), the owner or operator finds that not all contaminated subsoils can be practically removed or decontaminated, he must close the facility and perform post-closure care in accordance with closure and post-closure care requirements that apply to landfills (335-14-5-.14(11)). For permitted units, the requirement to have a permit continues throughout the post-closure period. In addition, for the purposes of closure, post-closure, and financial responsibility, such a drip pad is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in 335-14-5-.07 and 335-14-5-.08.

(c)1. The owner or operator of an existing drip pad, as defined in 335-14-5-.23(1), that does not comply with the liner requirements of 335-14-5-.23(4)(b)1. must:

(i) Include in the closure plan for the drip pad under 335-14-5-.07(3) both a plan for complying with 335-14-5-.23(6)(a) and a contingent plan for complying with 335-14-5-.23(6)(b) in case not all contaminated subsoils can be practicably removed at closure; and

(ii) Prepare a contingent post-closure plan under 335-14-5-.07(9) for complying with 335-14-5-.23(6)(b) in case not all contaminated subsoils can be practicably removed at closure.

2. The cost estimates calculated under 335-14-5-.07(3) and 335-14-5-.08(5) for closure and post-closure care of a drip pad subject to 335-14-5-.23(6)(c) must include the cost of complying with the contingent closure plan and the contingent post-closure plan, but are not required to include the cost of expected closure under 335-14-5-.23(6)(a).

**Authors:** Stephen C. Maurer, C. Edwin Johnston, Michael B. Champion, Theresa A. Maines, Jonah Harris; Vernon H. Crockett

**Statutory Authority:** Code of Alabama 1975, §§22-30-11, 22-30-16.

**History:** January 25, 1992.

**Amended:** January 1, 1993; January 5, 1995; April 13, 2001; March 15, 2002; April 17, 2003; April 3, 2007; April 3, 2012; XXXXX, XXXX.