



Hazardous Wastes From Wood Treating Operations

Waste/Hazardous Waste #3.72, July 1997
(rev. June 2003)

This fact sheet is intended for businesses that use chemical preservatives to treat wood.

Inside

Environmental Concerns	1
Wood Preservative Wastes	1
Chlorophenolic Formulations	1
Drip Pad Requirements for Wood Treating Operations	2
Drip Pad Standards:	
Design	2
Operation	2
Inspections	3
Closure	3
More Information	3

Environmental Concerns

Many types of chemical wood preservatives such as chlorophenolics, creosote, arsenic and chromium are used for treating wood. The same properties that make these chemicals effective preservatives also make their wastes hazardous to human health and the environment.

Because of their hazardous nature, many wood preservative wastes are listed hazardous wastes and must be managed according to the Minnesota Hazardous Waste Rules. *(For information on general hazardous waste requirements, see Minnesota Pollution Control Agency (MPCA) hazardous waste fact sheet #1.00).*

Wood Preservative Wastes

Wood preservative wastes listed as hazardous are unused wood preservative formulation wastes including:

- **F027:** discarded unused formulations containing tri-, tetra-, or pentachlorophenol, or compounds derived from these chlorophenolics (not including formulations containing hexachlorophene synthesized from prepurified 2,4,5-trichlorophenol as the sole component)
- **U051:** unused or off-specification creosote product that is discarded; used wood preservative formulation wastes from wood preserving processes
- **F032:** wastewaters, process residuals, preservative drippage, and spent formulations from wood preserving

processes that currently use or previously used chlorophenolic formulations

- **F034:** wastewaters, process residuals, preservative drippage, and spent formulations from wood preserving processes that use creosote formulations
- **F035:** wastewaters, process residuals, preservative drippage, and spent formulations from wood preserving processes that use formulations containing arsenic or chromium
- **K001:** bottom sediment sludge from the treatment of wastewaters from wood preserving processes that use creosote and/or pentachlorophenol

Chlorophenolic Formulations

Wastes generated from wood treating processes at operations that previously used chlorophenolic formulations are listed as F032 hazardous wastes, even if the current formulations used do not contain chlorophenolics. In order to prevent all future wastes generated from the operation from being listed as F032 waste, generators must either clean or replace all equipment at the operation that has ever come into contact with chlorophenolic formulations.

Decontamination of equipment is necessary to ensure that chlorophenolic cross contamination of newly generated wastes does not occur.

Hazardous waste generators replacing all equipment contaminated by chlorophenolics must manage the contaminated equipment as F032 hazardous waste.



Hazardous waste generators choosing to clean contaminated equipment must:

- prepare an equipment cleaning plan, including the method and type of solvent to be used;
- remove all visible residues from process equipment and rinsing equipment with solvent until dioxins and dibenzofurans are removed below allowable levels; and
- manage all cleaning wastes as F032 hazardous waste.

All equipment cleaning and replacement must be documented by the generator. For more specific equipment cleaning and replacement requirements, see Minn. R. pt. 7045.0145.

Wood treating operations which use preservatives other than chlorophenolics, creosote, arsenic, or chromium must evaluate the wastes they generate to determine if they exhibit any of the characteristics of hazardous waste.

Drip Pad Requirements for Wood Treating Operations

The U.S. Environmental Protection Agency has adopted regulations which require wood treating operations to use drip pads to prevent wood preservative wastes from entering the environment. (*Drip pads are not required if treated wood is held in or above treatment vessels until all drippage has ceased.*) Meeting some of the following standards will require the assistance of an independent, qualified registered professional engineer. (*For details on drip pad standards, see 40 CFR 264.570 to 264.575 and 265.440 to 265.445.*)

Drip Pad Standards

1. Design

Drip pads must be:

- made of non-earthen material, other than wood or non-structurally supported asphalt;
- sloped to freely drain preservative drippage and other liquids from the pad to an associated collection system to prevent run-off;
- curbed or bermed;
- sufficiently strong to withstand the stress of additional weight, climatic conditions, and physical contact;
- equipped with a run-off and run-on management system capable of preventing run-off and run-on from occurring during a 24-hour, 25-year storm, unless

protected by a structure that prevents run-off and run-on from the pad; and

- **either** impermeable **or** have a liner and leak detection system (and in some cases a lead collection system). For drip pads, impermeability is defined as less than 1×10^{-7} cm/sec hydraulic conductivity. As shown below, the age of the drip pad and the type of wood preservative that may have gotten on the pad determine which requirements must be met, and the deadlines by which they must be met.

Drip pads used to manage wood treated with chlorophenolics constructed before December 6, 1990, must be:

- evaluated to determine if they meet the above drip pad standards, (excluding liner and leak detection standards); and
- upgraded to meet the above drip pad standards, including **either** being impermeable or having a liner and leak detection system.

If they were constructed after December 6, 1990, these drip pads must be impermeable **or** have a liner, a leak detection system and a leak collection system.

Drip pads used to manage wood treated with creosote, arsenic and/or chromium constructed before July 25, 1994, must be:

- evaluated to determine if they meet the above drip pad standards, (excluding other than the liner and leak detection standards); and
- upgraded to meet the above drip pad standards, including either being impermeable or having a liner and leak detection system.

If they were constructed after July 25, 1994, these drip pads must **either** be impermeable **or** have a liner, a leak detection system and a leak collection system.

2. Operation

Drip pads must be:

- maintained so that they are free of cracks, gaps, corrosion, or other deterioration. This includes shutting down drip pads if they fail to contain hazardous waste, and reporting defects, repair plans, and repair completion to the MPCA;
- operated so that run-on and run-off do not occur;
- operated so that collection systems do not overflow onto the drip pad or into the environment;
- cleaned weekly to remove residues of hazardous



waste and other materials (*cleaning procedures, times, and dates must be recorded in an operating log*);

- operated to prevent workers from tracking hazardous waste residues off the drip pad; and
- used to hold treated wood until preservative is no longer dripping from the wood (*keep all records documenting this procedure*).

All wood treating operations must have and follow a written contingency plan for immediate cleanup of incidental drippage in storage yards.

Operations that exceed their time limits for accumulation of hazardous waste on drip pads (*90 days for large quantity generators; 180 days for small and very small quantity generators*) must obtain a hazardous waste permit and follow the requirements listed in 40 CFR 170.26.

3. Inspections

During and after installation, liners and cover systems must be inspected for imperfections and damage. During operation, drip pads must be inspected weekly and after storms to detect problems with the integrity of the drip pad surface, run-on and run-off control systems, and leak detection systems.

4. Closure

At closure, all waste residues, drip pads and associated equipment and contaminated soils must be decontaminated or removed and managed as hazardous waste. If contaminated soils cannot be removed, the closure and post-closure care requirements for hazardous waste landfills must be followed for the wood treating operation.

More Information

Your metropolitan county and the Minnesota Pollution Control Agency have staff available to answer waste management questions. For more information, contact your metropolitan county hazardous waste office or the MPCA office closest to your county.

Metro County Hazardous Waste Offices

Anoka County	(763)422-7093
Carver County	(952)361-1800
Dakota County	(952)891-7020
Hennepin County	(612)348-8100
Ramsey County	(651)773-4466
Scott County	(952)496-8177
Washington County	(651)430-6655

Minnesota Pollution Control Agency

Toll free	(800)657-3864
Brainerd	(218)828-2492
Detroit Lakes	(218)847-1519
Duluth	(218)723-4660
Marshall	(507)537-7146
Rochester	(507)285-7343
St. Paul	(651)297-2274
Willmar	(320)214-3786

Web Site <http://www.pca.state.mn.us>