UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

MEMORANDUM

TO: RCRA Directors
Regions 1 - 10

SEP 2 4 2003

FROM: Robert Springer
Director, Office of Solid Waste

SUBJECT: Options for CCA Wood Treatment Plants Converting to Preservatives that do not Generate Hazardous Waste

As you may already know, as of January 1, 2004, many wood treatment plants that currently use chromated copper arsenate (CCA) will be required to convert to an alternative preservative. In fact, this conversion is already underway. The attached guidance explains options available to owners and operators who will be converting from using CCA to using preservatives that do not result in the generation of hazardous waste. The reason for issuing this guidance is that most wood treatment plants using CCA are hazardous waste generators, and are subject to certain closure requirements for their "drip pad" waste management units after switching to preservatives that do not result in the generation of hazardous waste. Because this conversion is occurring within a relatively short time frame, this document has been developed to provide guidance on three options for complying with RCRA closure requirements. Our goal is to minimize potential disruption to this industry, while ensuring protection of human health and the environment.

The guidance was developed for federal and state hazardous waste regulators overseeing owners and operators of those wood treatment plants during and after their conversion. This guidance supplements and does not supersede earlier federal guidance for wood treatment plants that change preservatives. We are also aware that some states have developed similar guidelines, and we believe the attached guidance is compatible with those guidelines.

Several of the Regions have assisted in the preparation of this guidance, as have several states, and we appreciate that assistance. We will be distributing this guidance to the states through the Association of State and Territorial Solid Waste Management Officials (ASTSWMO).

If you have any questions regarding this guidance, please contact Ross Elliott of my staff at 703-308-8748, or at elliott.ross@epa.gov.

Attachment

cc: ASTSWMO

Options for Drip Pads at Wood Treating Plants
Converting from Chromated Copper Arsenate (CCA) Preservative to Preservatives that do not Generate Hazardous Waste

Introduction

A. Background

In February 2002, the four registrants of chromated copper arsenate (CCA) products submitted requests to EPA for the voluntary termination of most residential uses of CCA products by December 31, 2003, as well as the voluntary cancellation of other affected products. These actions, which became final on March 17, 2003, will prohibit the CCA treatment of wood that is intended for most residential uses after December 31, 2003.[1] The termination of CCA-treated wood products for residential uses will reduce exposure from arsenic, principally where children may come in contact with the treated wood.[2] "Residential" uses of wood treated with CCA include wood used in play-structures, decks, picnic tables, landscaping timbers, residential fencing, patios, and walkways/boardwalks. Products not included in the termination include wood used for marine and some farm applications, piles, and round poles and posts used in building construction.

The purpose of the transition (or "phase-out") period, from the February 2002 announcement to the December 31, 2003 effective date, is to provide consumers with increasingly more alternatives to CCA-treated wood, while allowing adequate time for the industry to convert wood treating plants with minimal economic disruption. EPA estimates that approximately 380 plants may be affected by the cancellation of the use of CCA for residential uses. Normally, any wood treatment plant that uses CCA may choose to convert to a different preservative at any time. This phase-out, however, means that many wood treaters may be converting (or possibly choosing to close) within a relatively short time period. Because wood preserving plants using CCA preservative generate hazardous waste, they are subject to the hazardous waste requirements of the Resource Conservation and Recovery Act (RCRA). Therefore, if a plant switches to a preservative that does not result in the generation and management of hazardous waste, that plant has a number of options as to whether, or how, it may subsequently be regulated under RCRA.

---

[1]The EPA announced these requests in the February 22, 2002 *Federal Register* (67 *FR* 8244), and requested public comment at that time. The cancellation order, which became final on March 17, 2003, was announced in the April 9, 2003 *Federal Register* (68 *FR* 17366).

[2]While the Agency has not concluded at this time that exposure to CCA treated wood poses unacceptable risks, arsenic is a known human carcinogen and any reduction in exposure is desirable. EPA is currently evaluating the risks associated with the use of CCA, especially risks to children from exposure to decks and play structures.

B. Purpose of Guidance

The purpose of this guidance is to describe a number of options available to generators regarding "closure" under the federal hazardous waste regulations for wood treatment plants that convert from using CCA to using alternative preservatives that do not result in the generation of RCRA hazardous waste. The guidance explains generally how wood treatment plant owners and operators may operate in continued compliance with the requirements of subparts W (Drip Pads) and G (Closure and Post-Closure) of 40 CFR part 265, as they convert from using CCA to other wood preservatives that do not result in the generation of RCRA hazardous waste. The guidance is directed to federal and state hazardous waste regulators to assist the owners and operators of wood treatment plants currently using CCA as a wood preservative. EPA is aware that some states have developed guidelines for the conversion process, and believes that this guidance is compatible with those guidelines.

C. Scope

This guidance addresses options related to the proper management of drip pads, regulated under subpart W of 40 CFR part 265, when converting from CCA to an alternative preservative that does not result in the generation of hazardous waste. While the intent is to give guidance to wood treaters that currently use CCA and will be converting before January 1, 2004, the guidance is also applicable for conversion after that date. This guidance does not address the specifics of process equipment cleaning and/or replacement, nor does it address the disposal of CCA treated wood. The cleaning and/or replacement of wood preserving process equipment (e.g., retort vessel, product storage tanks, valves, etc.) will likely be required as a result of switching preservatives, regardless of the option chosen for drip pad management, and any waste generated from the cleaning must be managed as RCRA hazardous waste. The guidance also does not address tanks and ancillary piping and equipment used in managing hazardous waste at wood treatment plants. These topics are important, and should be addressed by the appropriate federal or state regulatory authority.

Conversion Options

Owners and operators of wood treating plants that generate a hazardous waste, and that use drip pads to convey treated wood drippage, precipitation, and/or surface water runoff to a collection system, are subject to the requirements of subpart W of 40 CFR part 265.[3] Those regulations specify the requirements for the design, operation, inspection and closing of the drip pads. Most of the wood treatment plants operate as generators of hazardous waste, and not treatment, storage, and disposal facilities (TSDFs). Wood treatment plants operating as generators under 40 CFR 262.34(a)(1)(iii) are exempt from RCRA permitting, and are subject to

[3] Absence of a drip pad does not necessarily mean that a wood treatment plant is not subject to subpart W. See 40 CFR 265.440(c)(1).

the generator standards as well as subpart W of Part 265. For generators who own or operate drip pads, the applicable closure standards are the general requirements in 40 CFR 265.111 and 265.114, and the unit-specific requirements in 40 CFR 265.445.

When an owner or operator of a wood treatment plant regulated under subpart W chooses to convert from using CCA to using a preservative that does not result in the generation of a RCRA hazardous waste, we have identified the following three options for timing the drip pad closure activities to minimize the impact of such activities on wood treatment operations. State regulatory agencies may also identify suitable options and should be consulted. A wood treater operating only as a hazardous waste generator, who is subject to subpart W, must eventually follow the closure requirements in subpart W and the applicable requirements of subpart G. These closure requirements would apply for all the following options; the only difference is the timing of the closure activities relative to the conversion to a different wood preserving chemical.

In the past, EPA has provided guidance on this subject, that is, the requirements for wood treaters who either close their wood-treating operations "as RCRA generators,"[4] or switch to a chemical that does not generate any RCRA hazardous waste,[5] while continuing to operate their wood-treatment operation. Today's guidance includes the information from previous guidance, and should be considered a supplement to, not a replacement for, that guidance.

OPTION 1 - Complete Closure Before Converting

An owner or operator of a wood treatment plant may choose to no longer have the drip pad regulated under RCRA when the plant converts from using CCA to using a wood preserving chemical that does not result in the generation of hazardous waste. If so, the owner or operator must close the drip pad as a hazardous waste management unit before converting the wood treatment plant to the alternative preservative. The owner or operator must follow all procedures specified in 40 CFR 265.111, 265.114, and 265.445.

The subpart W regulations require that the drip pad be either "clean closed" or closed as a hazardous waste landfill. If clean closed, all waste residues, structures, equipment, containment system components (including sumps, drip pad and any liners), and contaminated soils must be removed or decontaminated and managed as hazardous waste. EPA has not established specific federal cleanup levels to verify "clean closure." Many states have established cleanup levels, and we recommend that plants work with their appropriate state or federal regulatory authority to determine specific levels of decontamination that are protective of human health and the

[4] EPA Hotline Monthly Report Questions, Faxback #14321 and #14130.

[5] See Section 4-22, Wood Preserving Resource Conservation and Recovery Act Compliance Guide, Office of Compliance, U.S. EPA, June 1996.

environment.[6] If the appropriate regulatory agency determines that the "clean closure" requirements have been satisfied, the wood preserving operation could then "reopen." The decontaminated drip pad, or, if necessary, new drip pad would not be regulated under subpart W.

In the event that "clean closure" is not possible, e.g., not all CCA-contaminated subsoils are removed to levels acceptable to the regulatory authority, the unit will be subject to the post-closure care regulations in 40 CFR 265.310 as a closed hazardous waste landfill. The original drip pad could be decontaminated and used as part of the overall cover for the contaminated area.[7] Depending on the post-closure care requirements, a new drip pad may have to be constructed by the wood treating plant and located separately from the contaminated area. The wood preserving operation could "reopen" using a wood preservative that does not result in the generation of hazardous waste, using either the decontaminated drip pad or a new drip pad. Neither the new drip pad nor the decontaminated original drip pad would be regulated under subpart W. If the original drip pad is used as part of the post-closure landfill cover, however, the post-closure care requirements under 40 CFR 265.310 would apply, whether or not it continues in use as part of the wood treating process.

The contaminated area could be addressed under a post closure permit, or as part of an ongoing corrective action process for other contaminated areas at the plant. The Post-Closure Rule (63 FR 56709, October 22, 1998) allows EPA and authorized states the flexibility of using a variety of authorities, including corrective action, to impose requirements on non-permitted land disposal facilities requiring post-closure care, provided the regulated unit is situated among solid waste management units, a release has occurred, and both the regulated unit and one or more solid waste management units (or areas of contamination) are likely to have contributed to the release (40 CFR 265.110(d)).

OPTION 2 - Continued Operation

Under this option, the owner or operator would continue to operate under subpart W, and to continue to have all wastewaters, process residuals, preservative drippage, spent formulations, etc., that accumulate on the drip pad regulated as hazardous waste. In this situation, no changes would be required under RCRA. Process equipment generally will require cleaning, and perhaps replacing, for compatibility with the alternative preservative, but no cleaning or replacement of the drip pad would be performed under this option. Any liquids removed from the drip pad

[6] EPA issued clean closure guidance on March 16, 1998. The guidance explained that non-residential exposure assumptions may be used at industrial properties at the discretion of the regulatory agency (RCRA Online number 14174)

[7] Hilary I. Inyang, Ph.D and Vernon Myers, Ph.D, Geotechnical Systems for Structures on Contaminated Sites, A Technical Guidance Document. USEPA, EPA530-R-93-002, August 1993

would be considered to be hazardous under the "mixture rule,"[8] because the drip pad would not have been decontaminated and the liquids would have been "mixed" with F035 [9] waste. Of course, when the plant ceases all operations, the closure requirements in 40 CFR 265.445, and the applicable requirements in subpart G of 40 CFR part 265 must still be followed.

OPTION 3 - Phased Closure

Closing drip pad units at wood treatment plants within a relatively short time period, where owners and operators otherwise wish to continue operations using a preservative that does not result in the generation of hazardous waste, could result in an economic disruption in this industry. This is particularly the case if the drip pad must be removed and/or contaminated soils have to be removed from underneath the drip pad to meet final closure standards. Under this option, an owner or operator of a wood treatment operation would convert to an alternative preservative that does not result in the generation of hazardous waste, perform certain closure activities, and postpone complete closure until some future date.

As in Option 2, the owner or operator would be required to clean, and perhaps replace, the treatment equipment. Under this option, however, the drip pad and the other containment system components would be cleaned sufficiently such that any liquids that come in contact with the pad would not be viewed as having been "mixed" with F035 waste. The level of cleaning would have to be determined by the appropriate federal or state regulatory authority. (Also, it should be noted that where drip pad liquids are conveyed to and collected in sumps, residual F035 waste in these sumps would need to be removed so that subsequent wastes managed in these units, after successful conversion to an alternative preservative, would not be "mixed with" F035 waste.) This option presumes that process equipment is also cleaned so that liquids reaching the drip pad do not contain F035 waste. Whereas in Option 2 liquids removed from the drip pad after the conversion was complete would be treated as RCRA hazardous waste, in this option the liquids would not be a RCRA hazardous waste under the "mixture rule."

Under this option, the drip pad would still be subject to certain subpart W regulations of 40 CFR part 265, such as those pertaining to inspections and the operation and maintenance of the drip pad, even though the drip pad would not be managing hazardous waste. The subpart W regulations would continue to apply to the drip pad because closure would not have been completed, and any contamination around and under the drip pad would presumably not have been removed. The goal of the continued applicability of the subpart W regulations is to prevent

---

[8] The regulatory provision governing mixtures of solid waste and listed hazardous waste is known as the "mixture rule" and is found at 40 CFR 261.3(a)(2(iv). It requires that a waste be managed as hazardous if it is a mixture of a solid waste and one or more listed hazardous wastes and has not been delisted.

[9] F035 waste is described in part in 40 CFR 261.31 as:
Wastewater (except those that have not come into contact with process contaminants), process residuals, preservative drippage, and spent formulations from wood preserving processes generated at plants that use inorganic preservatives containing arsenic or chromium.

exacerbation of any existing soil or groundwater contamination. The owners or operators should check with the appropriate state or federal regulatory authority to determine which of the subpart W regulations apply on a site-specific basis. When all wood treating operations end, the drip pad would then be closed in accordance with subpart W requirements, and the applicable requirements of subpart G of 40 CFR part 265.

Drip Pad Cleaning

The method of cleaning the pad will depend on whether it is either covered or sealed with a low permeability surface material or instead has an underlying liner. Possible cleaning methods include gritblasting, hydroblasting/water washing, solvent washing, and steam cleaning. Gritblasting uses an abrasive material to remove contaminated layers up to about 0.5 to 1.5 cm., and is applicable for concrete pads, but would remove any surface coatings. Hydroblasting/water washing can also be used on concrete, and can remove the top 0.5 to 1.0 cm of the surface. With solvent washing, an organic solvent is circulated across the surface of the pad to solubilize contaminants. This method could be used on both coated and un-coated pads. Steam cleaning is also applicable to both coated and un-coated pads. Note that any waste generated by the cleaning of drip pads that collect CCA treatment chemicals, i.e., rinse waters, drip pad residues, etc., must be handled as a hazardous waste.