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Subject EPA's Draft Potential Mitigation Measures for the Three
Heavy Duty Wood Preservatives

History:



This message has been forwarded.

The attached document presents EPA's draft potential mitigation measures for addressing risks of concern associated with continued use of chromated arsenicals, pentachlorophenol, and/or creosote to preserve wood products that present benefit to society. This document is for discussion purposes only and contains measures that are not necessarily inclusive and may not reflect EPA's final position. EPA's final position for each chemical case will be presented in the reregistration eligibility decision. This document, along with minutes from any meeting at which this document is discussed, will be added to the respective public dockets at <http://www.regulations.gov>. Please pass this document along to the groups that you are representing.

Please note that measures pertain to each of the three HDWPs unless otherwise noted. There are several that are specific to a particular preservative(s). They are included together to simplify the Agency's communications and transparency.

The Agency is aware that comments have been provided on the risk assessments, mitigation and benefit by various parties. The Agency is continuing to review and consider these comments and the results of this review may affect the final mitigation decision.

Please feel free to contact Lance Wormell (chromated arsenicals, 703-603-0523), Sherrie Kinard (pentachlorophenol, 303-312-7011), or Jacquie Campbell-McFarlane (creosote, 703-308-6416) with any questions.

Thanks.

Mark



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Table 1. Draft Potential Occupational Risk Mitigation Measures - Engineering Controls and Work Practice Mitigation

Potential Requirement	Possible Label Language	Rationale/Comments
Updated labeling reflecting mitigation measures must be received by the Agency within eight months of receipt of the RED.		
Hydraulic arm on automatic doors – automatic opening/closing devices and automatic locking rings.	As of <insert date>, automatic opening, closing and locking/unlocking devices must be used to accomplish opening, closing, locking, and unlocking of cylinder doors.	Will reduce inhalation exposure from vapors and aerosols that escape the cylinder during door opening, etc. operations. Will reduce dermal exposure from contacting contaminated surfaces while working in the door pit area. These devices must be in place on cylinders within three years from receipt of the RED.
Minimum distance from cylinder opening	No personnel may be located within 15 feet of the cylinder opening during door opening or closing including locking/unlocking, pulling, charging, locking, or bridge rail placement operations. EXCEPTION: In the event of tram derailment, equipment malfunction, or to retrieve and hook charging cables, persons wearing appropriate personal protective equipment are permitted within 15 feet of the cylinder opening.	Will reduce inhalation exposure from vapors and aerosols that escape the cylinder during door opening, etc. operations. Will reduce dermal exposure from contacting contaminated surfaces while working in the door pit area.
Negative pressure at door opening ("Crack and Vent")	After breaking the seal on the cylinder door, a negative pressure must be maintained on the cylinder for a period of ten minutes before any material may be removed from the cylinder and the negative pressure must be maintained until the cylinder door is closed again. Alternative Language: The cylinder must be ventilated for two air changes prior to removing the charge by opening the cylinder door 1 to 4 inches and immediately activating the vacuum pump. After the two air changes have been completed, the door can be completely opened and the charge can be removed. The vacuum pump must remain in operation during the removal of the charge.	To prevent mists and vapors from being released to the work area by drawing them back into the cylinder. <i>Note- This could also be accomplished by a canopy hood if it has sufficient airflow to capture the plume as it rises from the cylinder. The amount of airflow depends upon the size of the cylinder, the distance from the top of the door opening to the face of the hood and the temperature of the plume. For a hood located 3 feet or less above the door opening of an eight foot cylinder where the plume temperature is 200 degrees, the required airflow would be approximately 2000 cfm.</i>
Pole and hook to retrieve tram cable	During retrieval and rehook operations, personnel must not contact the charge cable or other equipment that has contacted the preservative.	Avoids the operator having to handle the preservative soaked charge cable by hand.

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Automatic bridge rails	As of <insert date>, automatic devices must be used to accomplish bridge rail placement/removal. Devices used to place or remove bridge rails must be remotely operated.	Will reduce inhalation exposure from vapors and aerosols that escape the cylinder during door opening. Will reduce dermal exposure from contacting contaminated surfaces while working in the door pit area. These devices must be in place on cylinders within three years from receipt of the RED.
Grate with sump	Cylinder openings and door pits must be kept clean and free of any preservative solution through the use of grating, sumps, dams or other devices which prevent or remove any spillage of treating solution and prevent any exposure of any personnel to any preservative solution.	Will reduce dermal exposure from contacting contaminated surfaces while working in the door pit area.
Final vacuum	The final stage of the treating cycle shall include a vacuum of at least 22 inches of mercury for a total period of at least 30 minutes.	To pull as much free liquid out of the charge as possible, reducing dermal exposure to workers and the environmental contamination.
Extend vacuum pump exhaust stacks to 20 feet above roof line	The vacuum pump exhaust pipe must extend above the roofline in accordance with ASHRAE guidelines.	Reduce re-entrainment of contaminants from the vacuum pump exhausts into the work area.

Table 2. Draft Potential Occupational Risk Mitigation Measures- Personal Protective Equipment Recommendations

Potential Requirement	Possible Label Language	Rationale/Comments
Respiratory protection (chromated arsenicals)	In the event of tram derailment, equipment malfunction, or to retrieve and rehook charging cables, all personnel within 15 feet of the open cylinder door must wear a half mask elastomeric respirator NIOSH-approved for inorganic arsenic and hexavalent chromium. All personnel entering the cylinder must wear respiratory protection in accordance with the OSHA confined space standard.	Respiratory protection is not needed during routine operations provided the other label requirements are adopted and followed. Half mask respirators must be worn when employees enter the pit area and the cylinder door is open. Higher level respirators, such as SCBA, may be required for cylinder entry and shall be selected in accordance with OSHA confined space standard.

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Respiratory protection (creosote and pentachlorophenol)	In the event of tram derailment, equipment malfunction, or to retrieve and rehook charging cables, all personnel within 15 feet of the open cylinder door must wear a half mask elastomeric respirator with appropriate cartridges and/or filters. All personnel entering the cylinder must wear respiratory protection in accordance with the OSHA confined space standard.	Respiratory protection is not needed during routine operations provided the other label requirements are adopted and followed. Half mask respirators must be worn when employees enter the pit area and the cylinder door is open. Higher level respirators, such as SCBA, may be required for cylinder entry and shall be selected in accordance with OSHA confined space standard.
Dermal personal protective equipment (PPE)	While handling wood treating equipment or treated wood, all personnel must wear chemical resistant gloves, washable or disposable coveralls and chemical resistant footwear. Chemical resistant aprons must be worn during cleaning of cylinder. Use of leather gloves is prohibited.	Chemical resistant gloves, coveralls and chemical resistant footwear are required to prevent skin contact with residues on process equipment and treated wood during routine wood treatment operations. Additional PPE, such as chemical resistant coveralls and/or aprons must be worn during high exposure operations such as cylinder entry and cleaning.
Work clothing	A change area must be provided. All work clothing and boots must be left at the treatment plant and kept separate from street clothing at all times.	
Food and drink	No food or drink may be carried, stored or consumed in any area where any preservatives are or may be used or where any treated wood is or may be stored.	

Table 3. Draft Potential Ecological Risk Mitigation Measures

Potential Requirement	Possible Label Language	Rationale/Comments
Minimum/maximum retentions.	Treating retentions must adhere to the minimum and maximum levels specified on the label for the specific commodity being treated and in no case may exceed 16 pounds of preservative per cubic foot for terrestrial uses and 24 pounds of preservative per cubic foot for aquatic uses.	Maximum retentions -- additional preservative has been demonstrated to add no additional efficacy. Minimum retentions – required to minimize potential for wood from failed treatments to be diverted to residential markets (e.g., landscape timbers).
Initial air in the treating cycle (creosote and pentachlorophenol)	Initial air pressure shall not exceed 40 pounds per cubic foot.	High initial air directly affects the amount of post-treatment bleeding.
Insolubles	Insolubles must be maintained within AWPA standards and in no case may exceed 1.5%.	High insolubles result in greater surface contamination "slime" and surfaces with high physical residues.

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Water content (creosote and pentachlorophenol)	Water content in oil-borne solutions must be maintained within AWP standards and in no case may exceed 3%.	High water content results in greater surface contamination and bleeding.
Double vacuum for wood used in aquatic environments (creosote)	For any wood that could be used in an aquatic environment, a double vacuum must be used.	Will reduce leaching into aquatic environments.
Fixation for wood intended for use in aquatic environments (chromated arsenicals)	To minimize leaching potential, all treated wood that could be used in aquatic environments must remain at the treatment facility for two months prior to installation or, for facilities utilizing AWP approved accelerated fixation equipment, must undergo an accelerated fixation process.	Will reduce leaching into aquatic environments.
Wash wood intended for use in aquatic environments (chromated arsenicals)	After fixation and prior to leaving the treatment facility, wood treated with chromated arsenicals that could be used in aquatic environments must be washed to remove metals. Metals in wash solution must be recaptured and recycled.	Will reduce leaching into aquatic environments.