

I. Introduction

We do not normally think of a utility or telephone pole as a hazardous material, but it is. It is so hazardous that EPA, in a preliminary science review, recently disclosed that a child exposed on an ongoing basis to the soil around a pole treated with pentachlorophenol (penta), one of several wood pre-

servatives used in this way, has a chance of getting cancer that is 220 times higher than normal. This exposure alone accounts for at least 17,000 cases of cancer among children. Two children born every day are destined to a fate of cancer from just this exposure to penta.¹ The EPA hazard and risk evaluation, released in this report for the first time, was obtained by Beyond Pesticides/National Coalition Against the Misuse of Pesticides (NCAMP) through a Freedom of Information Act (FOIA) request.

Beyond Pesticides/NCAMP produced this study (i) to disclose and critique EPA's current effort to reevaluate the hazards of wood preservatives, including pentachlorophenol, and (ii) evaluate utility companies practices with regard to the use, storage and disposal of utility poles treated with these chemicals. The findings are troubling and at points shocking. They call for action to better protect public health and the environment from pentachlorophenol.

EPA also found that workers applying the chemical to the poles will get cancer and may expose others to the risk of cancer as well. Study after study show that penta and other wood preservatives have made their way into the environment, contaminating the air, water and land.

Wood preservatives have been shown to migrate out of poles, contaminating soil and water.² 100 percent of children tested in one study were found to have penta in their urine.³ At least 314 superfund or chemical waste sites in the U.S. have been contaminated with penta.⁴ Concern for human health risks posed by wood preservatives lead twelve leading scientists to write the Administrator of EPA, Carol Browner, urging the agency to take action to stop this expo-

sure. (See Appendix A)

Survey Sent to Over 3,000 Utilities in the United States and Canada

In light of EPA's review and the known hazards of wood preservatives, including pentachlorophenol, a survey was conducted by Beyond Pesticides/NCAMP of utility com-

panies across the United States and Canada to determine company practices with regard to utility poles. (See Appendix B) Since 93 percent of all penta produced is used to preserve wood telephone poles,⁵ this is no small issue for utility companies. Beyond Pesticides/NCAMP also launched this study to bring real world or operational data to EPA's decision making process

on continued use of some of the most hazardous materials know to humankind, wood preservatives. We began this effort with a survey of 3,000 plus utilities, which include investor owned utilities (IOUs), municipal utilities (MUNIs), rural electrification associations (REAs) and public utility districts (PUDs). Only 39 utilities in 24 states and Canada responded. None of the largest 100 IOUs chose to respond.

Beyond Pesticides/NCAMP views the survey as a basic tool for public right to know about the environmental practices of utilities across the country so that producers of treated wood poles can be adequately regulated to protect public health and environmental safety. After the distribution of the survey, the trade association for the wood treaters, the American Wood Preservers Institute (AWPI), immediately started a campaign to squelch participation

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in this survey. AWPI wrote to the utilities urging them not to cooperate with the survey. AWPI has a long history of seeking to weaken EPA's regulatory position on wood preservative restrictions and was extremely successful to that end during EPA's last review of the chemicals in the 1980's. In a memo from the association's president, utilities were told,

It has recently come to the attention of the American Wood Preservers Institute that the National Coalition Against the Misuse of Pesticides (NCAMP) is surveying utilities around the country on their use of poles treated with creosote, penta and CCA—as well as their use of poles made of alternative materials such as concrete and steel. The survey includes a wide range of questions about usage and disposal practices.

Cooperating with this survey is not in the best interests of utilities. NCAMP is extremely biased against the use of preserved wood and will use the survey results to support their arguments against wood poles.⁶ (See Appendix C)

Thanks to those utilities that believe in disclosing basic business information as requested in the survey, the survey results provide a good sampling of what is going on across the country from utilities that inventory of over one million utility poles covering at least 38,886 square miles (or 57,000 miles of road/pole miles).⁷

The culture of using utility poles treated with perhaps the most hazardous chemicals known to humankind runs deep in the utility industry. Furthermore, the method of managing, storing and disposing of poles shows a trail of poisoning and contamination with resulting hazards that surpass anyone's definition of acceptable. The public and the environment are at serious risk because of wood preservatives, including penta, and their use on utility poles.

Are utilities using utility poles that put the health of people and the environment at unacceptable risk? Yes. Could utilities decide not to use wood preservative-treated poles and utilize alternative approaches that do not

present the same environmental and public health threat? Yes. Are they taking or planning to take this responsible step? No, generally they are not. These are the findings of Beyond Pesticides/NCAMP's survey of utility companies in the United States and Canada.

One of the most shocking findings in this report, in addition to the extraordinarily high risk factors associated with children and worker exposure, is the fact that the majority of utilities surveyed give away or sell to the public poles taken out of service. This practice exposes the public to serious hazards associated with handling, sawing and using the contaminated wood. Despite this widespread practice, EPA does not currently consider this exposure in its risk calculation. Apparently, the agency assumes that the activity does not go on.

One utility, Western Resources in Topeka, Kansas actually received an award in 1999 from the Kansas Department of Health and Environment for donating and converting discarded treated wood poles into such things as bird boxes and outdoor classrooms. Only one utility that we could identify distributed these poles with a Material Safety Data Sheet, which warns people that penta treated wood can cause irritation of the eyes and respiratory system. The MSDS says, "Pentachlorophenol has been found to have toxic effects in laboratory animals. . . Exposure to treated wood should be kept to a minimum. . . Exposure to penta during pregnancy should be avoided. . . Penta contains trace amounts of Hexa, Hepta, and Octochlorodibenzo-p-dioxins, Hexa, Hepta, and Octachlorodibenzofurans, and Hexachlorobenzene. The State of California has listed Hexachlorodibenzo-p-dioxin and Hexachlorobenzene as chemicals known to the state to cause cancer." (See Appendix D)

EPA's Preliminary Science Review of Penta

EPA's preliminary science review of penta finds extraordinarily high risks to children, workers and the environment (including unacceptable risk from food and water) which are discussed in this report in Chapter III. It should be noted that EPA's draft science chapter does not address perhaps the most toxic components of penta, the contaminants listed in the MSDS above, which include dioxins, furans and hexachlorobenzene. Each one of these toxic components alone account for high risk fac-

tors in addition to those calculated for penta itself. In fact, the scientific peer review of EPA's *Inventory of Sources of Dioxin in the United States* (1998) noted that, "dioxin on treated wood appears to be the largest flow of dioxins that were quantified, thus making treated wood a large reservoir of dioxin in the environment."⁸

In addition, penta and its contaminants have been determined to be endocrine disruptors, which act like hormones in the body during critical times in fetal development, when organs are forming, adversely affecting development, reproductive capacity, sexual development and causing diseases like cancer later in life. What makes these effects different from others is that they defy classical toxicology models which embrace the notion that the "dose makes the poison." In fact, with endocrine disruptors, like these wood preservatives, it is not just dose, but it is *timing* of exposure to minuscule doses at the parts per billion and even trillion level that make these chemicals so destructive.

Regulatory Issues

Can we expect the current regulatory review of wood preservatives, including penta, to take restrictive action that would stop the use of these chemicals and the resulting poisoning and contamination? The history of EPA's pesticide program would say no. The program engages in risk equations that ignore important pieces of information, such as the pole give-away programs cited in this report and basic toxicology data that is missing but would only add to the mountain of hazards already established. Equally important is the failure of the agency to consider less risky approaches than wood preservative-treated utility poles, that are economically viable but not currently embraced by the utility industry. To determine a regulatory outcome by asking an industry that has used wood preservative-treated utility poles since its inception whether it could use alternative pole materials like recycled steel, concrete or composite is to seal the fate of the decision in the hands of the status quo. That is, no change. EPA did just that in its last review of penta and other wood preservatives in 1981 (completed in 1987) when it said, "Due to the non-substitutability of the wood preservative compounds and the lack of acceptable non-wood or other chemical alternatives for many use situations, the economic impact which would result from an

across-the-board cancellation would be immense." (EPA, Wood Preservative Position Document 2/3, Executive Summary, p.3, 1981.) Not true today. Our survey results show that the cost differential between treated wood and recycled steel poles is negligible in the short-term and benefits steel in the long-term.

Like other major EPA decisions that require a change in an industry's culture, very similar to moving farmers away from DDT and more modern pesticide-intensive operations, the public must get involved. The public will want to know: what the risk from contaminated soil around the pole, in front of their homes, or in the school yard means to their children's health; what are the impacts of reusing treated poles for outdoor classrooms; or, what does the storage and disposal of treated wood in their community mean for the health of people and the environment.

Rachel Carson wrote in *Silent Spring*, "Since the chlorinated hydrocarbons are persistent and long lasting, each application is merely added to the quantity remaining from the previous one."⁹ The persistence of pentachlorophenol and its contaminants dioxin, furans and hexachlorobenzene have been established. The fact that they are contained in body tissues and fluids is established. The harm that they cause is established. It is time for their uses to stop. Alternatives are available and can be successfully and economically employed.

FINDINGS

Preliminary Science Findings by EPA

- Residues of penta "in drinking water (when considered along with exposure from food and residential uses) pose an unacceptable chronic risk to children."
- Children exposed to penta in the soil around treated poles face a 2.2 in 10,000 (or 220 times higher than acceptable) risk of cancer. Just this exposure accounts for at least 17,000 cases of cancer among children. Two children born every day are destined to a fate of cancer from just this exposure to penta.
- 13 of 14 occupations considered by EPA have unacceptable cancer risk, including risks as high as 3.4×10^0 .

■ Over four people out of 10 who apply penta to wood in joinery mills and two people in a thousand who mix and load penta at pressure treatment plants are expected to get cancer from their exposure.

■ Applicators of grease formulations of penta, used for retreatment of poles, face certain cancer.

Utility Survey Findings

■ 98.5 percent of utility poles in service are chemically-treated wood poles, 1.5 percent are alternative materials

■ 56 percent of the poles in the survey are treated with pentachlorophenol.

■ 34 percent of the utilities retreat their utility poles with fresh poisons during the poles' service life.

■ 85 percent of the utilities store chemically treated wood poles on site.

■ 69 percent of utilities responding to the survey give away or sell to the public wood preservative-treated poles taken out of service.

■ One utility donated to the community treated wood poles that had been converted into bird boxes and outdoor classrooms.

■ 18 percent dispose of the treated poles in local municipal landfills.

■ Only five percent of respondents consider wood preservative-treated wood poles taken out of service as hazardous waste and dispose of them accordingly.

■ Only one survey respondent distributes a Material Safety Data Sheet on the hazards of penta with the treated wood poles being sold or given away to the public.

■ 27 percent of respondents indicated that they were considering alternative pole materials.

■ The cost differential of treated wood and recycled steel poles is inconsequential in the short-term and benefits

steel in the long-term.

RECOMMENDATIONS

The EPA and other scientific findings taken together with utility company practices raise serious concern about public and environmental health and call for the following recommendations:

EPA should:

■ Immediately cancel all uses of penta and other wood preservatives with similar effects.

■ Recall all existing stocks of penta.

■ Begin phase-out the use of penta-treated replacement poles in 12 to 24 months.

■ Prohibit the use of any remaining stocks of penta and other wood preservatives with similar effects.

■ Require that all storage sites of treated poles are covered from the elements of weather.

■ Define penta treated wood poles as hazardous waste and require their disposal as hazardous waste.

■ Prohibit the giving away or sale of penta-treated poles taken out of service.

■ Require utility companies to alert the public to the dangers associated with penta-treated poles.

Utilities should:

■ Stop the purchase of treated utility poles, and begin purchase of poles constructed out of alternative materials.

■ Develop policies to protect workers, the public and environment from exposure to penta and other similarly dangerous wood preservatives.

■ Stop the sale or give-away of discarded treated wood poles for public use.

■ Dispose of discarded treated wood poles at licensed hazardous waste sites.

■ Increase the use of alternative types of utility poles, working towards elimination of the use of chemically treated wood utility poles.

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