

## II.

# Utility Company Practices: A Survey and Sample Response

**W**ith government lagging behind in the protection of public health and the environment from the impact of hazardous pesticides like wood preservatives, it is often the private sector that steps in to take action that is protective at the community, state and national level. In the case of pentachlorophenol,

with 93 percent of all penta used on utility poles, utility companies are critical decision makers on this key public health and environmental issue. For example, some manufacturers in the food industry have chosen to eliminate the use of specific pesticides or practices in response to safety concerns that have not been adequately regulated by EPA.

To assess the role that utility companies can and do play in addressing the hazards of wood preservatives including pentachlorophenol, Beyond Pesticides/NCAMP developed and distributed a survey to over 3,000 utilities to analyze their knowledge of the problem and steps that they have taken or are planning to take to address the hazards of wood preservative-treated utility poles. This survey follows the release of Beyond Pesticides/NCAMP's ground breaking report *Poison Poles: A Report About Their Toxic Trail and the Safer Alternatives*, in 1997. *Poison Poles* introduced the hazards of the wood preserving chemicals and the extent of their use to an unaware public. Since that time, EPA has committed to conducting a review of the hazards of wood preservatives under its reregistration process and has recently released preliminary scientific analyses indicating serious hazards associated with the use of pentachlorophenol in utility poles. In addition, since 1997 EPA has calculated the excessive dioxin contamination associated with wood preservative-treated utility poles.

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The questions addressed in the survey include:

■ What are the environmental practices employed by utilities across the United States and Canada?

■ How many and what types of utility poles are in use in communities?

■ Are utility companies in the habit of retreating aging wood utility poles?

■ To what extent do utilities store on-site treated poles in the community?

■ What happens to treated poles after they are taken out of service? Are they disposed of as hazardous waste?

■ Do the utilities currently use or do they have plans to use alternatives to the poisonous treated wood utility poles?

The survey (See appendix B) was sent to over 3,000 utilities across the U.S. and Canada. The survey asks straightforward questions to which the public has a right to answers. None of this information should be considered secret, given the fact that utilities are handling and possibly exposing the public and the environment to hazardous materials.

The wood treatment industry apparently feels differently.

After Beyond Pesticides/NCAMP's survey was mailed to the utilities, the American Wood Preservers Institute (AWPI) immediately started a campaign against the survey, urging utility executives in a memo from AWPI's president, not to cooperate. (See Appendix C) This is troubling and telling, since AWPI has effectively influenced EPA decision making on this issue over the last two and a half decades behind closed doors. On one level, AWPI's response is surprising, given that the organization claims that penta and the other wood preservatives pose a minimal threat to human and environmental health.<sup>1</sup> What then does the AWPI have to hide from the public? Those utilities that chose to ignore the AWPI and responded are taking the initial steps toward engaging in a public discussion on this important topic.

Despite AWPI's efforts, the survey has generated a preliminary 39 responses from utilities that cover 24 states and Canada and control nearly one million poles in their service area. These utilities collectively serve an area of over 38,886 square miles or at least 57,000 road/pole miles. The respondents include smaller utilities across the U.S. and Canada and do not include any of the top 100 utility companies, which have apparently heeded AWPI's advice in not sharing basic information with the public.

### Survey Overview

Toxic, chemically treated wood poles are favored by the utilities; 98.5 percent of the poles in our survey are chemically treated wood poles. Penta stands out as the chemical treatment of choice among the utility respondents; at least 56 percent of the poles are treated with penta, 20 percent with creosote, and 14 percent with copper chromium arsenate (CCA). Only 1.5 percent of poles in our survey were made with alternative materials.

There are a number of possible explanations for the very small number of alternative material poles in use. First and foremost, the EPA has failed to adequately protect the public through its regulation of the wood preservatives. When the EPA considers alternatives during its risk analysis of a toxic chemical it does not include alternative technologies in that equation. Believe it or not, the EPA

only considers alternative *poisons*. The EPA chooses not to ask the simple and obvious question: Has this poisonous chemical been rendered obsolete and, therefore, unnecessary as a result of new, less hazardous, cost effective technologies on the market?

Secondly, there is a long established culture in the utility industry to use wood utility poles. Without regulatory action on the part of the EPA, utility companies have had no reason to change their practices. In addition, any change in industry practice does require an investment as workers are retrained. However, this industry investment is small in comparison to the savings in human and environmental health costs that could be realized with an increase in the use of alternative utility pole materials.

Third, the availability and economy of nonwood utility poles has changed radically in the recent past. Steel,

**Table II. Utilities From 24 States and Canada Responding to the Utility Pole Survey**

Arkansas	Missouri
Colorado	Montana
Connecticut	North Carolina
Georgia	Nebraska
Hawaii	New Hampshire
Iowa	New Mexico
Illinois	Ohio
Indiana	Oregon
Kansas	Tennessee
Louisiana	Texas
Massachusetts	Utah
Minnesota	Wisconsin

concrete and composite poles are readily available, last longer and do not require remediation expense. In addition, steel poles taken out of service are recyclable, so utility companies can actually realize a return when disposing of steel poles. Despite this, most utilities are neither using nor considering nonwood utility poles.

The major findings of the utility survey focus on the following questions.

- How prevalent is a particular practice among the utility industry?
- What are the problems associated with those practices?

■ How will moving away from wood utility poles solve those problems?

## Utility Pole Storage

The study finds that 87 percent of the utilities that responded stored chemically treated wood utility poles on site. One utility reports storing as many as 7,200 poles at given time at their facility. A typical utility pole of 12 inches in diameter and 45 feet in length contains 40 pounds of penta.<sup>2</sup> A utility yard storing 7,200 such poles represents 288,000 pounds (144 tons) of penta that could leach into the soil and ground water.

Bell Canada, in 1988, conducted a study to determine whether soil and groundwater in its storage yards were contaminated by penta and/or another wood preservative, CCA. In Quebec, where the company uses mostly penta-treated poles, the clean-up criteria, or levels determined acceptable, were exceeded by factors as high as 100 at 10 out of 14 sites.<sup>3</sup> Another Canadian study measured the amount of penta leaching out of a pile of 15 Douglas Fir poles under natural rainfall conditions in British Columbia. The level of penta released from these poles was relatively constant throughout the study period of four months, ranging from 1.57-2.85 ng/L rainfall.<sup>4</sup>

It is clear that penta and its contaminants do leach from utility poles, both from the poles stored in pole yard and those in service. A study conducted by the Electric Power Research Institute (EPRI) measured soil adjacent to utility poles in service. EPRI found levels of penta in the soil around the poles as high as 100 mg/kg or 100 parts per million (ppm).<sup>5</sup> EPRI also evaluated the leaching of penta into lower depths of soil around 168 in-service wood utility poles and found that penta residues were relatively constant to 48 inches;<sup>6</sup> maximum levels were above 500 mg/kg. It has also been shown that dioxins are leaching out of penta treated wood utility poles. Significant levels of dioxin were measured in soil samples taken from around penta-treated poles, with detectable levels of dioxin found 20 centimeters from the poles.<sup>7</sup>

## Retreatment of Poles In Service

The survey found that 34 percent of utilities retreat wood poles in an effort to increase their life span. Groundline remediation of poles not only introduces a fresh dose of toxic chemicals to the environment around the pole, it also increases the cost of using treated wood poles. These are two additional reasons for a shift from the use of wood poles to the use of alternatives.

According to EPA's calculations, the single highest risk of cancer from exposure to penta belongs to those people hired to apply liquid penta formulation for groundline remediation. EPA has determined that these unfortunate men and women have a 3.4 chance in 1 to suffer from cancer due to penta.<sup>8</sup> 3.4 out of 1? How is that possible? Beyond Pesticides/NCAMP has

been able to make sense out of that particular datum in only one way: people that apply liquid penta to in-service poles have an 100% chance of getting cancer and become contaminated to the point that they then expose their colleagues, friends and family to penta, leading to an additional 2.4 cases of cancer. This is an extraordinary risk.

Neither utility lines made from alternative materials nor buried utility lines require remediation treatment. Our research indicates a range of \$30 to \$50 per pole for remedial treatment. Any cost/benefit analysis conducted by the utility industry must include an assessment of the human health cost, the environmental cost and the economic cost of retreatment of wood poles.

## Disposal of Treated Poles

One of the most disturbing findings of the survey is what appears to be the standard utility industry practice of giving away or selling used chemically treated wood utility poles to the public. Over 68 percent of the utilities dispose of poles in this way. Why is this disturbing? Because the public has not been informed of the risks to their health associated from contact with that poisonous wood.

When discarded poles are cut into pieces, the saw dust

can end up on the skin and in the lungs of the handy-person and his or her family. That newly created lumber becomes fence posts, garden retainers, or a jungle gym for children.

A utility in Topeka, Kansas, Western Resources, actually won an award from the Kansas Department of Health and Environment for providing toxic lumber for public projects (See Appendix E). Instead of disposing of their poles in an appropriate landfill, the toxic lumber was converted into an environmental classroom shelter, a bird viewing blind, and bird boxes, to name just a few.

Only one of the utilities that replied to the survey provided a Material Safety Data Sheet (MSDS) along with the used poles to consumers. (See Appendix D). The MSDS states that penta "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." It is interesting to note that this same utility requires that consumers of the used poles sign an agreement freeing the utility from liability for any harm caused by the poles.

23 percent of utilities disposed of their discarded wood poles in landfills but only 5 percent treat the poles as hazardous waste. In regular landfills the chemicals inside the poles are free to leach out into the environment, contaminating our soil, groundwater and eventually our bodies (See research cited above under storage). Despite limited legal requirements in this area, Beyond Pesticides believes that the only appropriate way to dispose of chemically treated wood poles is in certified hazardous waste landfills.

### **Use of Alternative Pole Materials**

Survey responses indicate that less than two percent of utilities are using alternative pole materials, including steel, concrete and composite. Furthermore, all the respondents indicate that they have no plans to consider switching in the future to poles constructed out of alternative materials.

### **Cost Analysis of Alternative Methods/Poles**

Alternative methods of carrying utility lines carry far less risk to human health and the environment. Where burying utility lines may not be feasible, alternative materials such as steel, concrete, and composite are cost effective materials for utility poles.

An important cost that is eliminated with the use of alternative material poles is the environmental and economic cost of retreatment. As outlined above, groundline remediation introduces a fresh dose of chemical wood preservatives into the environment where it can contaminate our soil, water and air. This route of environmental contamination also costs the utility companies money. Not only do alternative pole materials not need retreatment but their useful life span is longer than for wood.

Research shows that concrete poles can last from 80 to 100 years in service.<sup>9</sup> According to sources at International Utility Structures, Inc, manufacturers of steel poles, steel poles have useful life spans of 80 years. Fiberglass poles, according to one manufacturer, Shakespeare®, have in-service life spans of up to 80 years. Penta-treated wood poles, on the other hand, have life expectancies of 35 years.<sup>10</sup>

An additional benefit of steel is its ability to be recycled. Utility companies can actually realize a return when they sell their old steel poles for scrap to be recycled.

Under the current regulatory regime utility companies are free to externalize the costs to human health. With appropriate regulation of penta, and the other wood preservatives, utility companies will be forced to realize these costs.