Preventing the Release of Pole Treatment Chemicals

Methods are being proposed to prevent leaching of pesticides from poles into the environment.

Wood poles are treated with chemicals to prevent their deterioration while in service. Pesticides commonly used include creosote, pentachlorophenol, and chromated copper arsenate. Over the course of the service life of a pole, a small quantity of treatment chemical may leach from the pole into the surrounding soil and groundwater. EPRI has demonstrated through field studies that such leaching is generally limited to the soil immediately surrounding the pole. None-the-less, methods to prevent leaching, such as paints, coatings, and wraps, have been proposed and developed and are being marketed to utility companies. If reliable, the may have value for some applications in some environmental settings.

Power companies replace many poles each year, and poles represent a huge investment by the companies. Reliable data on both the structural and the environmental performance of poles is critical to specifying poles to be purchased.

Demonstrate the mitigation and prevention of movement of pole treatment chemicals into the environment

PROJECT SUMMARY EPRI is planning a long-term field study to quantify the leaching of pole treatment chemicals into the surrounding soil and groundwater. A variety of woods and pole treatment chemicals are included in the study. Many pole samples, each with its own groundwater collection system, will be placed in the ground at an established pole testing facility, and long-term monitoring of each sample will be conducted. The study will provide data for each of the wood/chemical treatment combinations in the same setting and under the same meteorological conditions. This will allow reasonable comparison of the results.

In this project, EPRI proposes to expand the field study by including additional field samples and measurements. These would include pole samples painted, coated, or wrapped to prevent leaching. Prevention methods would be specifically matched to appropriate wood/treatment combinations to facilitate comparison of leaching from poles with and without prevention, in order to evaluate performance of the prevention method. In addition, questions about the impact of the coating or wrap on structural integrity, performance, and lifetime of the pole will be addressed by periodic visual inspection and coring of the poles.

DELIVERABLES Participants in this project will receive:

- Early and frequent access to and use of data generated in the project, and continued access throughout the course of the project
- Opportunity to work with EPRI and pole treaters to improve structural and environmental performance of poles
- EPRI Technical Updates and Reports presenting project results, for use in exploring options and specifying poles

BENEFITS OF PARTICIPATION Results from this project should help a company to minimize the environmental impacts of in-place poles, while maintaining their structural performance and lifetime. This would reduce risk to human health and the environment. Results could also be used to inform regulators and the public about the actual risk associated with poles, based on science. This could lead to improved communication with these important stakeholders and appropriate regulatory response.

Results from this project could also reduce financial risk to a company, for both replacement of poles and remediation of soil and groundwater contamination.

WHY SHOULD CUSTOMERS BUY THIS PROJECT? Many poles are removed from service and replaced each year, and companies want to minimize environmental and financial risk by choosing the optimal replacement poles. In addition, much controversy surrounds treated wood poles, with questions coming from the public, the news media, and regulators.

In addition to EPRI's work, some small studies have measured leaching from poles, but the measurements have been made over a wide variety of conditions and cannot easily be interpreted and compared. This project will develop data with a limited number of variables, and the data should be useful for decision-making.

DEMONSTRATED VALUE EPRI's field studies on leaching from creosote- and pentachlorophenol-treated wood poles supported discussions with regulators that continued the non-hazardous status of the wood when removed from service. This resulted in savings to the industry exceeding $1 billion.

COST OF PROJECT EPRI is committing membership funds in 2003 and succeeding years for the field study on leaching from treated wood poles. Additional funds are required to enhance the basic study to include prevention methods.

The cost for participation in this project is $60,000 per year. Companies that fund any Environment program can use Tailored Collaboration (TC) funds for up to half their contribution. For each TC participant, the minimum cost for participating in this project is $30,000, with $30,000 matched by EPRI, for a total of at least $60,000 per year. Companies that have not purchased any Environment program may co-fund this project for a minimum of $60,000 per year. Participation for two consecutive years is encouraged.

PROJECT STATUS AND SCHEDULE This project will begin in 2003 and will continue through 2010. Companies may join the project after 2003 and will become active partners in the collection and analysis of data.

WHO CAN PARTICIPATE Any company, public agency, or non profit organization can participate in this EPRI project.

CONTACT INFORMATION For more information, contact the EPRI Customer Assistance Center (EPRI CAC) at 800.313.3774 or askepri@epri.com

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Destinations 2004 This sheet relates to the *Preventing the Release of Pole Treatment Chemicals* (S51.002) Project Opportunity.

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