Technical Session 6:
Environmental Considerations

Regulatory Overview and Wood Preserving

Robert Smith
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ABSTRACT

This presentation focuses on the history of regulations pertaining to the wood preserving industry. Topics covered are drip pad requirements, treated wood storage, wood preserving solution waste/reuse/reclamation, the Clean Air Act, the Federal Water Pollution Control Act, and waste disposal considerations.

Developing Environmental Benchmarks for New Chemistries: Opportunities for Collaboration

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ABSTRACT

As new, more sustainable, chemicals are developed it is important to assess their environmental risk. As a result, state and federal government agencies often develop environmental benchmarks that direct end users regarding how much of a substance can safely be released into the environment. These agencies are often limited in their access to data available for these substances, which presents an opportunity for collaboration between regulators and industry. We present a case study in which initial thresholds for release established by agencies were exceedingly low. After further refinement using data generated within our company, referencing the Great Lakes Guidance document, we conducted Tier II calculations to develop higher, more attainable, release thresholds, while still maintaining safe release levels.

EPA Regulatory Update on Wood Preservatives

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U.S. Environmental Protection Agency

ABSTRACT

The Environmental Protection Agency (EPA), Office of Pesticide Programs (OPP), Antimicrobials Division oversees the registration and labeling of wood preservative products. In addition to registration, OPP reviews each pesticide's registration every 15 years through the Registration Review Program. As part of Registration Review, label amendments can be proposed and finalized, as needed, to mitigate risks identified. The EPA recently released interim decisions with label mitigation for creosote and chromated arsenicals (including CCA) and a final decision on pentachlorophenol to terminate its use as a wood preservative. This presentation will describe how these Registration Review decisions were made, review the specific mitigations being implemented on labeling, and provide updates and timelines for reviews of various other pesticide wood preservative ingredients, including copper 8-quinolinolate, DCOIT, propiconazole, and tebuconazole.

Environmental Justice

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EHS Support

ABSTRACT

Within a week of taking the oath of office, President Biden issued a sweeping executive order with a number of environmental justice (EJ) initiatives, including the creation of a White House EJ Interagency Council consisting of the heads of each Cabinet-level and independent federal agency. Environmental justice is defined by United States Environmental Protection Agency (USEPA) as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. According to USEPA's website, the Office of Environmental Justice (OEJ) has been working for over 25 years on addressing adverse human health and environmental impacts in overburdened communities by integrating environmental justice considerations. OEJ established tools and resources to facilitate and support the incorporation of environmental justice considerations into agency actions including EJSCREEN, a publicly available mapping and screening tool.

USEPA compiles data nationally for air emissions and other releases to the environment from Toxic Release Inventory reports and other sources. This information is publicly available for journalists and organizations, such as ProPublica, to report. For example, recent news stories highlighted "hotspots" for higher risk of cancer among residents in various areas throughout the country, and identified contributors, wood preservation companies included. With little context or details as to the origin of the data provided

in these reports, companies must be prepared to face questions about their operations and data reported to USEPA and state agencies.

EHS Support will briefly review environmental justice, its history, and what it means to your operations. We will identify current trends, what to expect in the coming years, and how to understand and mitigate your risk to better position your business and its relationship with the community. As part of our review, we will highlight tools, such as the EJSCREEN mapping tool and USEPA's Risk-Screening Environmental Indicators (RSEI) dashboard, as well as risk management/risk communication strategies that can help eliminate surprises and support community interaction and involvement.

Assessment of Metal Migration from Treated Vineyard Trellising and Garden Boxes into Soil and Plant Biomass

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ABSTRACT

Preserved wood is used in various functions for commercial and residential food production. Questions remain in the public about whether preserved wood impacts food crop quality and we sought to investigate this issue with two multi-year monitoring projects. Here we describe an update on two longitudinal studies measuring the impact of treated wood on metal levels in soils and crop biomass in an experimental vineyard trellis and domestic garden boxes. A vineyard trellis constructed with posts treated with one of four different preservative treatments, with or without postsaver wraps, was sampled for grapevine biomass one year after installation. Copper, chromium, arsenic and zinc levels were measured using ICP-OES and no difference in metal levels was measured in the grapevine biomass taken from around treated or untreated posts. After one year the vines were too small to have any direct contact with the trellis so we could not yet differentiate vines in contact with posts versus vines not in contact with posts. A second study measuring the impact of pressure treated wood on domestic garden box soil and copper levels in various garden vegetables was sampled in its first year of production. Copper azole-treated Douglas-fir 2 x 12-inch lumber was used to construct two 4 x 10-foot raised beds alongside second set of two untreated Douglas-fir raised beds. A variety of common garden vegetables were planted in the beds in the 2021 season and their biomass was assessed for copper content using ICP-OES. Where applicable, crop biomass was separated into the edible and inedible portions of the plan to assess whether any accumulation was occurring in the whole plant. After growth season, no difference in copper levels was detected in produce harvested from CA-treated or untreated beds. In addition, fungal decay was detected in parts of the untreated beds, where it was not in CA-treated beds. This study will continue to be planted with different vegetables in each growing season.