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PCBs in building materials Education & Planning are key

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Polychlorinated biphenyls (PCBs) were widely used in construction materials and the electrical industry due to certain physical characteristics such as fire resistance, flexibility, and cooling properties. Most building owners/facility managers are aware of the presence of PCBs in transformers, capacitors and light ballasts. However, PCBs have recently been documented in common building materials including caulking, paints, sealants, hydraulic fluid, electric cable coatings, plasticizers, HVAC systems, and sometimes even the kitchen sink!. The presence of PCBs does not necessarily indicate a problem. However, there are considerations for older buildings that are occupied, or planned for renovations or demolition.

The Environmental Protection Agency (EPA) considers the presence of PCBs at concentrations greater than 50 mg/kg an "unauthorized use" and regulated by the Toxic Substance Control Act (TSCA). Concentrations in common building materials such as caulking and paint have been documented up to 40,000 mg/kg. Importantly, these materials can contaminate adjacent materials such as concrete, brick, and wood. For occupants, there may also be health and safety concerns due to PCBs in indoor air and dust.

Building owners, facility managers, and real estate professionals need to carefully consider their portfolio of properties to evaluate the potential presence of PCBs. The EPA has documented that buildings constructed in the 1950's through the 1970s may contain PCBs. However, PCBs have been used in commercial products in the U.S. as early as 1929. Buildings constructed after 1978 are presumed by EPA to not contain PCBs.

There is currently no EPA requirement to test for PCBs in building materials. However, during renovation or demolition, if the owner does not test they run the risk of improper disposal of PCB-impacted building materials. The owner also runs the risk of a costly change order if PCBs are detected during the project. If TSCA is triggered, an assessment of the adjacent materials and possible removal or encapsulation of those materials might also be required, which can add significant cost to a project.

Taking preemptive steps to understand the age, history of renovations, and potential presence of PCB-containing materials in your property portfolio will help in the evaluation of remedial options during renovation or demolition and reduce the chance of additional construction costs. To learn more about PCB contamination, consider registering for the Environmental Business Council's program "Managing PCB Contaminated Caulking in Older Buildings" on March 2. Visit the EBC website, www.ebcne.org, for more information.

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