

RISK-BASED DISPOSAL FOR POLYCHLORINATED BIPHENYL (PCB) REMEDIATION WASTE LESS THAN 50PPM

AMERICAN PUBLIC POWER ASSOCIATION WHITEPAPER

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INTRODUCTION

In September 2017, the American Public Power Association received approval for its regular members to dispose of non-liquid polychlorinated biphenyl (PCB) remediation waste with as-found concentrations of less than 50 parts per million (ppm) in non-TSCA landfills.¹ The approval was issued pursuant to Section 6(e)(1) of the Toxic Substances Control Act (TSCA), and the federal PCB regulations at 40 C.F.R. 761.61(c). The Association's approval is effective until **September 2022**.

BACKGROUND

Historically, waste contaminated by PCB spills has been regulated based on the PCB concentrations found in the original source of the spill, rather than the spill itself, even if the actual PCB concentration in the contaminated material was below the 50 ppm regulatory threshold for triggering the PCB disposal requirements (pursuant to the PCB anti-dilution rule at 40 C.F.R. § 761.1(b)(5)).

The 1998 PCB Mega Rule (63 Fed. Reg. 35383 (June 29, 1998)) included changes to eliminate some of the adverse consequences of strict application of the anti-dilution rule to PCB remediation waste. Specifically, the 1998 amendments established three new PCB cleanup options at 40 C.F.R. § 761.61, as well as a roadmap to the PCB cleanup provisions at 40 C.F.R. § 761.50. One purpose of the Mega Rule amendments was to allow for the disposal of PCB remediation waste based on the PCB concentration in the waste as-found, as opposed to the concentration of the source itself.² Further, 40 C.F.R. § 761.50(b)(3) provides that only wastes with as-found concentrations of greater than or equal to 50 ppm PCBs need be disposed of in a TSCA landfill. However, shortly after these rules were shared, EPA's PCB program office took the position that the as-found rule only applied to remediation waste generated through the "self-implementing cleanup" option (40 C.F.R. § 761.61(a)), or if authorized under a risk-based disposal approval (40 C.F.R. § 761.61(c)). In other words, remediation waste generated under the "performance-based cleanup" option (40 C.F.R. § 761.61(b)) or the PCB Spill Cleanup Policy (40 C.F.R. § 761, Subpart G) and from sources with greater than or equal to 50 ppm PCBs cannot be sent to non-TSCA landfills (such as municipal solid waste landfills, or MSWLF) even if it is found with concentrations of less than 50 ppm.

¹ American Public Power Association Bylaws Section 2.2. Regular members of the Association include United States public power systems (that own, operate or control electric generation, transmission or distribution facilities), as defined in section 1.2 of these bylaws, including joint action agencies owned or controlled by public power systems. Regional, state and local associations or groups in the United States that have purposes similar to those of the Association.

² 40 C.F.R. § 761.61 ("any person cleaning up and disposing of PCBs managed under this section shall do so based on the concentration at which the PCBs are found").

REQUIREMENTS FOR USE OF THE APPROVAL

The approval applies to non-liquid PCB remediation waste (as defined in EPA's PCB regulations) that is found with concentrations of less than 50 ppm PCB, if that waste was generated at a "secure utility asset" that is owned or operated by a regular member of the Association. A secure utility asset means "a facility that is fenced, locked, guarded/monitored, or otherwise not accessible to the general public where PCB response actions are conducted and performed by, or under the supervision of, municipal utility professionals and/or consultants with experience in responding to and remediating PCB releases. This includes, for example, service centers, substations, switch-yards, power generating stations, and network vaults that are properly fenced, locked, guarded/monitored, or otherwise not accessible to the general public." Regular utility members of the Association may utilize the approval if they meet the following conditions:

- Each member operating under the approval must comply with waste characterization and analysis (to confirm the waste contains less than 50 ppm PCBs), equipment handling, and recordkeeping requirements, and must maintain on its company webpage a notice of the approval.
- Each time a member operates under the approval it must notify the EPA, the appropriate EPA Region, and appropriate state, local and/or tribal authorities with details of the disposal (Appendix III to the approval includes a template notification form).
- Prior to shipping PCB remediation waste offsite for disposal under the approval, the regular utility member must notify the disposal facility in writing that it will ship PCB remediation waste with as-found concentrations of less than 50 ppm PCB to that facility.

IMPORTANCE TO INDUSTRY

Disposal of PCB remediation waste with as-found concentrations of less than 50 ppm in TSCA landfills results in significantly greater costs than disposal in MSWLFs and is not justified from a risk perspective when otherwise identical waste generated under the self-implementing cleanup option (40 C.F.R. § 761.61(a)) or a risk-based disposal approval (per 40 C.F.R. § 761.61(c)) can go to a MSWLF.

CASE STUDY: LINCOLN ELECTRIC SYSTEM

In February 2018, Lincoln Electric System in Nebraska was presented with an opportunity to use the risk-based disposal approval when it retired a distribution vault and found levels of approximately 30 ppm PCBs in the concrete floor. The approximately 120 square foot vault was in the basement of a customer-owned building, and the customer had scheduled to demolish the entire building within weeks of the discovery of the PCB contamination.

This project qualified for the risk-based disposal approval because the contamination was less than 50 ppm and the vault met the definition of a “secure utility asset.” Due to the compressed timeline, the only other option would have been for LES to dispose of the waste at a landfill permitted to receive greater than 50 ppm PCB waste (i.e. a TSCA landfill).

The difference in disposal and transportation costs was significant:

- Local disposal of waste using the Association’s risk-based disposal approval: \$2,000
- Disposal of waste at a greater than 50 ppm PCB facility: \$20,000

In addition to the cost savings, using the risk-based disposal approval provided a quick and simple method to dispose of the waste locally. The greater than 50 ppm disposal option would have required coordination with additional contractors to transport two large dumpsters of regulated waste out of state.

Considering all these factors, LES decided to use the approval. To meet the notification requirements, no less than two working days before the first shipment of PCB remediation waste left the control of LES, the utility:

- Posted a prominent public notice of the approval on its webpage; and
- Notified the appropriate EPA staff by email.

After completing the proper notification protocol, LES quickly began the work. The remediation was completed in three days, and the waste was sent to the local MSWLF. Local regulations also required that LES complete an inventory of the waste and be granted a special waste permit by Lincoln-Lancaster County Health Department. To complete the project, LES took post-cleanup samples to confirm that the PCB contamination had been removed before turning the vault back over to the customer. It received confirmation from a lab that the samples from the vault were PCB-free the day before demolition of the building was scheduled to begin.



The vault entrance was located 14’ below-grade with access from the basement walkout where the HVAC heat exchange units were located. All the equipment that used was lowered into the area with the excavator.



The vault was 10’x12’, so it was tight quarters, even for a mini-excavator.



The excavator bucket was used to transfer the waste from the basement walkout up to the dump truck in the parking lot.



The vault after remediation was completed.

RESOURCES

Association webinars on PCB clean up and disposal, part 1 and part 2 (Members Only)

- www.publicpower.org/system/files/documents/environment-pcb_webinar_on_cleanup.pdf
- www.publicpower.org/system/files/documents/environment-pcb_webinar_on_cleanup_2.pdf

EPA's website on "Nationwide Risk-Based Polychlorinated Biphenyls (PCBs) Remediation Waste Disposal Approvals"

- www.epa.gov/pcbs/nationwide-risk-based-pcb-remediation-waste-disposal-approvals

EPA's PCB Q&A Manual (2014)

- www.epa.gov/sites/production/files/2015-08/documents/qacombined.pdf

The Association's Risk-Based Disposal Approval

- www.publicpower.org/system/files/documents/environment-approval_for_pcb_disposal.pdf

PCB Risk-Based Disposal Approval Questions and Answers document

- www.publicpower.org/system/files/documents/111517_questions_and_answers_document_0.pdf

Memo on Clarifying Notification and Sampling Requirements Under the Approval

- www.publicpower.org/system/files/documents/EPA_PCB_Notification_and_Sampling_Letter_4-5-16.pdf



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