

# BECO Annual Conference

## PCBs in Demolition Projects

PCB's - Landfill Testing

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## PCBs in Demolition Projects - Landfill testing

- PCBs (polychlorinated biphenyls) are a group of manmade chemicals that were used in a wide range of industrial applications starting around WWII and ending in 1979.
- PCBs were often added to a wide variety of products to enhance certain properties, such as heat resistance, plasticity, stability (resistance to weathering), and because they were thermal insulating and non-flammable.
- Even though PCB production was banned in 1979, equipment and other materials containing PCBs can still be found today.

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## PCBs in Demolition Projects - Landfill Testing

The EPA believes that there was potentially widespread use of PCB-containing building materials in schools and other buildings built or renovated between about 1950 and 1979 before the manufacture of PCBs was banned by the Toxic Substance Control Act.

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## PCBs in Demolition Projects - Landfill Testing

Examples of building products manufactured with PCB's prior to 1979 are:

- Caulking, grout and window glazing;
- Applied Oil-based paint and sealants;
- Mastic and adhesives used under flooring (tiles and carpets);
- Gaskets around windows and doors and in heating, ventilation, and air conditioning systems and ducting;
- Metal composite siding or roofing material (trade name "Galbestos" - Aroclor 1268);
- Mineral-oil filled electrical equipment such as motors or pumps
- Fluorescent light ballasts

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## PCBs in Demolition Projects - Landfill Testing

Building products manufactured with PCBs, generated as a waste, and found to contain  $\geq 50$  ppm PCBs are classified as **PCB Bulk Product Waste** under the Toxics Substance Control Act (TSCA) regulations found in 40 CFR 761.

PCB bulk product waste includes, but is not limited to:

Non-liquid bulk wastes or debris from the demolition of buildings and other man-made structures manufactured, coated, or serviced with PCBs.

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## PCBs in Demolition Projects - Landfill Testing

- There is no regulatory requirement to test products in use to determine their PCB concentration. However, when removed, and **PCB bulk product waste** is generated, it is regulated for disposal regardless of whether its PCB concentration has been measured.
- In general, there are three scenarios that could prompt consideration for PCB sampling and testing of building products:
  - ✓ Demolition
  - ✓ Renovation
  - ✓ Concern regarding the potential health risk due to the presence of PCB-containing building materials

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## PCBs in Demolition Projects - Landfill testing

- Before you begin any demolition or remodeling activities, you should survey, identify and label all PCB-containing equipment or material that is found and will be disturbed.
- If PCBs are found, it is important to consider the health risks from exposure, when it is necessary to notify the EPA, how to properly store the material, and how to properly dispose of the material.
- The EPA Regional office, Region V, can assist if PCB materials, equipment or other impacted media are found on site.

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## PCBs in Demolition Projects - Landfill Testing

The disposal and cleanup requirements for PCB contaminated Building materials and other media depend on how the material is classified. PCBs are generally classified as either PCB bulk product waste or PCB remediation waste.

- **PCB Bulk Product Waste** - waste from manufactured products including building materials
- **PCB Remediation Waste** - spill clean-ups due to a release of PCBs



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## PCBs in Demolition Projects - Landfill Testing

- **PCB remediation waste** must be cleaned up down to a concentration of 1 parts per million (ppm) for an unrestricted use of the property; Anything  $\geq 50$  must be disposed of in a TSCA approved/permitted facility.
- **PCB bulk product waste**, even at concentrations of PCBs  $\geq 50$  ppm, can be disposed in a non-hazardous solid waste facility, as long as this disposal is permitted by the state's solid waste regulations and the landfill's permit.

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## PCBs in Demolition Projects - Landfill Testing

PCB bulk product waste does not include debris from the demolition of buildings or other man-made structures that are contaminated from spills of regulated PCBs (PCB Remediation Waste)

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## PCBs in Demolition Projects - Landfill Testing

Demolition and Renovation waste that contains **PCB bulk product waste** must be disposed in accordance with TSCA. To evaluate the building materials and determine the appropriate disposal options, it is suggested to :

- perform a thorough survey of the building to identify suspect **PCB bulk product waste**
- document the locations of each type of **PCB bulk product waste** that will be removed or disturbed.
- For proper characterization, sample the suspect **PCB bulk product waste** by collecting a representative sample of each different type of material to be disturbed.

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## PCBs in Demolition Projects - Landfill Testing

### Evaluate the results of chemical testing:

- Bulk product sample results  $\geq 50$  ppm PCBs indicate that the material is **PCB bulk product waste** and must be removed.
- Unlike **PCB Remediation Waste**, removal and off-site disposal of **PCB bulk product waste** does not require EPA approval.

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## PCBs in Demolition Projects - Landfill Testing

### Bottom Line:

Identifying, removing and properly disposing of any **PCB bulk product waste** that will be disturbed is regulated under TSCA and should be done when renovating or demolishing a building.

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For bulk product waste disposal, there are two ways to determine regulatory status of items or materials suspected of containing PCBs:

- assume “worst case” ( $\geq 50$  ppm) and remove and dispose the suspect item(s) as PCB Bulk Product Waste.
- Analyze samples of the items for PCB concentration.
  - ✓ Where testing confirms the presence of PCBs at regulated levels ( $\geq 50$  ppm), dispose in accordance with the PCB regulations at 40 CFR part 761 as PCB Bulk Product Waste

The PCB rules do not require you to test, although EPA recommends it.

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## PCBs in Demolition Projects - Landfill Testing

PCB bulk product waste must be disposed of in accordance with 40 CFR 761.62. Options include:

- An EPA-approved incinerator
- An EPA-approved chemical waste landfill
- An EPA or State-permitted RCRA landfill
- A solid waste landfill that is permitted, licensed, or registered by a State as a municipal or non-municipal non-hazardous waste landfill.
  - ✓ Review 40 CFR 761 for specific requirements and
  - ✓ Be sure to contact the landfill to make sure their permit allows for the acceptance of PCB Bulk Product Waste (there is a 15 day notification requirement that has to be met if the permit allows acceptance)

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October 24, 2012

- Any building material (i.e., substrate) “coated or serviced” with PCB bulk product waste (e.g., caulk, paint, mastics, sealants) at the time of disposal can be managed as a PCB bulk product waste, even if the PCBs have migrated from the overlying bulk product waste into the substrate.
- PCBs can leach from PCB manufactured products into attached porous building materials such as concrete, wood and brick.
  - Prior to October 24, 2012, this was considered PCB remediation waste
- The benefit of this reinterpretation is an acceleration in the cleanup of buildings, including many schools, that may be contaminated with PCBs.



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## PCBs in Demolition Projects - Landfill Testing

### PCB Remediation Waste

Waste containing PCBs from a spill, release or other unauthorized disposal of PCBs.

Disposal will depend on the concentration of the source of PCBs, the date of release, and the current PCB concentration in the materials.

Examples of PCB remediation waste include:

- Concrete, soil, sediment, gravel, sewage, sludge, rags or debris generated during PCB spill cleanup
- Sampling and analysis is necessary to determine the proper disposal

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### Managing PCB remediation waste

A Clean-up Plan must be prepared and submitted to the EPA for review (Performance based, risk based, self-implementing).

- Clean-up and Disposal options in 40 CFR 761 offer different approaches and clean-up standards.
- Cleanup levels are based on the kind of material and the potential exposure to PCBs left after cleanup is completed.
- EPA approval may be required and is specified in the clean-up approach chosen.

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- PCB remediation waste  $> 1$  ppm may be regulated (Date of release, source concentration and the “as is” concentration).
- PCB remediation waste  $\geq 50$  ppm PCBs must be disposed of in a TSCA permitted facility.
- PCB remediation waste  $< 50$  ppm PCBs and **non-TSCA regulated** can be disposed of in a State licensed municipal solid waste facility.

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### PCB Remediation Waste does not include:

- Products that were manufactured with PCBs (Bulk Product Wastes), such as PCB containing paints and other coatings, caulking, galbestos, etc.
- Media that contain less than 1 mg/kg total PCBs.
- Media that contains PCBs from a source <50 mg/kg.
- Materials disposed of prior to April 18, 1978, at concentrations <50 ppm PCBs.

All of which can be disposed in a solid waste landfill. The landfill will want analysis showing PCB results <50 ppm

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### Nonhazardous, solid waste Landfill Disposal for PCB containing waste

For consideration into a Nonhazardous solid waste landfill:

- Complete a Generator's waste Profile
- Properly classify the PCB containing waste material
  - PCB Bulk Product Waste
  - PCB remediation Waste
- Supporting Documentation may be requested

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### PCB remediation Waste:

- The Generator should be prepared to provide a copy of the notification or clean-up plan submitted to the USEPA and their approval to the disposal facility.
- Both the Generator and Landfill need to pay attention to the conditions of approval, which may specify unique, job-specific disposal options.
- The generator should provide the analytical data representing the subject waste to demonstrate it contains total PCBs less than 50 mg/kg and is non TSCA and nonhazardous under RCRA.

### PCB Bulk Product Waste:

- The generator is required to give a 15 day notification to the landfill prior to the first shipment regarding quantity and highest concentration of PCBs.

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For More information:

- Toxic Substances Control Act (TSCA) PCB regulations can be found at 40 CFR part 761
- Contact the EPA Regional PCB Coordinator:  
**PCB Coordinator, Region V: Peter Ramanauskas, (312) 886-7890, [ramanauskas.peter@epa.gov](mailto:ramanauskas.peter@epa.gov)**
- <https://www.epa.gov/hw>