



Technical Memo

PCBs regulated under TSCA

Updated: February 6, 2018

What is TSCA?

- The Toxic Substances Control Act (TSCA) is Federal legislation that authorizes the EPA to screen for new and existing chemicals used in manufacturing and commerce to identify potentially dangerous products or uses that should be subject to federal control. Enforced by the EPA, the goal is to fulfill three main functions:
 - Information gathering on toxicity and exposure
 - Regulation of existing chemical risk
 - Proactive identification and prevention of future risks
- Under TSCA, manufacturing, processing, distribution, and disposal of TSCA inventoried chemicals is regulated.

PCBs

- TSCA (at 40 CFR 761) has extensive rules about PCBs, banning all manufacture, processing, and distribution since 1979.
 - Note: When PCBs are regulated by TSCA, they are no longer considered a RCRA waste.
- Most use is banned, except when PCBs are used in a “totally enclosed manner” (e.g. transformers).
- Strict rules are in place for disposal and storage.
- TSCA also has rules about analyzing PCBs:
 - For extraction of PCBs, TSCA requires use of either of the following methods, both of which IAL holds certification for:
 - SW-846 3540 (Soxhlet extraction) – not commonly used at IAL
 - **SW-846 3550 (Ultrasonic extraction) – used often at IAL**
 - Matrices typically sampled are:
 - Liquids (non-aqueous, e.g. transformer oil, paint, etc.)
 - Soils
 - Solids (e.g. concrete, caulk)
 - Sediment
 - Wipes
 - **Required analytical method is SW-846 8082A**
- To assure the correct methods are being used for TSCA compliance:
 - On the chain of custody (COC), write **“TSCA PCBs by 3550C/8082A”**
 - TCL PCBs will be reported (9 total Aroclors)

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How to determine if a site with PCBs falls under TSCA:

- Presence of PCB Remediation Waste (40 CFR 761.61)
 - Includes waste containing PCBs from a spill, release, or other unauthorized disposal. Typically, TSCA only applies to materials with as-found concentrations ≥ 1 ppm. Specifically, material with:
 - “As-found” PCB concentrations ≥ 50 ppm AND release prior to 4/18/1978
 - Any PCB concentrations ≥ 500 ppm AND release occurred between 4/18/1978 and 7/2/1979
 - Any detectible concentration, original source contamination ≥ 50 ppm AND released on or after 7/2/1979
 - Any detectible concentration if the PCBs are spilled or released from a source not authorized for use under 40 CFR 761
 - Examples:
 - Substrate (concrete, wood, flooring materials, etc.) contaminated with PCBs from a PCB Bulk Product Waste (caulk, paint, etc.), if the PCB bulk product waste has been removed and the substrate remains in place
 - Soil beneath caulked or grouted joints
 - Flooring impacted by a release of PCB-containing hydraulic, cutting, or transformer oils
 - Light fixtures impacted by a release of PCBs from PCB-containing ballast
- Presence of PCB Bulk Product Waste (40 CFR 761.62)
 - Waste derived from manufactured products containing non-liquid PCBs regardless of concentration
 - Defined as caulk, paint, mastic, adhesives, sealants, etc. and PCB contaminated substrate. Examples:
 - Concrete adjacent to caulked or grouted joints
 - Concrete, wood, or other substrate coated with a PCB-containing paint
 - Flooring materials, including tiles and carpets, coated with mastic, adhesives, sealants, etc.
 - Window materials in contact with gaskets and glazing
- Assumptions for use when PCB concentrations are not established (40 CFR 761.2)
 - Transformers with < 3lbs of fluid, circuit breakers, reclosers, oil-filled cable, and rectifiers contain < 50 ppm PCBs
 - Capacitors manufactured after 7/2/1979 are non-PCB
 - When manufacture date is before 7/2/1979:
 - Mineral oil-filled electrical equipment is PCB-Contaminated Electrical Equipment (contains ≥ 50 ppm but < 500 ppm PCBs)
 - Pole-top and pad-mounted distribution transformers must be assumed to be mineral-oil filled

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- Transformers contain >3lbs or more of fluid, other than mineral oil, is a PCB Transformer (contains ≥ 500 ppm). The same applies if manufacture date is unknown.
- Capacitors contain ≥ 500 ppm
- Initial Testing
 - Above assumptions may be used or equipment may be tested to establish true PCB concentration
 - Initial testing for PCBs, in any matrix, at a site is recommended to be done using TSCA rules.
 - COC for initial sampling jobs should read ***"TSCA PCBs by 3550C/8082A"***

Example hierarchy of state and federal PCB regulatory limits

- Regulatory limits change based on the sample matrix and the State in which the site resides. The hierarchy of limits is extensive. See examples below for New Jersey and New York:

State or TSCA	PCB Soil Cleanup Criteria	Level (ppm)	Cap	Deed Notice
NJDEP	Residential SRS / Unrestricted Use	< 0.2		
NJDEP	Evaluate IGW / Residential Use	> 0.2	X	X
NJDEP	Non-Residential Use	> 0.2 to 1		X
NYSDEC	Unrestricted Use	< 0.1		
NYSDEC	Restricted Use: Residential, Commercial, Ecological	< 1		X
NYSDEC	Restricted Use: Industrial	< 25		X
TSCA	Unrestricted Use for High Occupancy	≤ 1		
TSCA	Non-Residential Use	> 1	X	X
TSCA	Restricted Use for High Occupancy	>1 to ≤ 10	X	X
TSCA	Low Occupancy Use	≤ 25		X
TSCA	Low Occupancy Use with sign & fence securing property	> 25 to ≤ 50		X
TSCA	Restricted Use for Low Occupancy	> 25 to ≤ 100	X	X

Additional criteria to consider:

- ≥ 50 ppm – Waste is considered PCB Remediation Waste
- > 100 ppm – Waste Requires TSCA Risk-based Disposal Approval
- Wipes (for use on non-porous surfaces):
 - High Occupancy Areas: $\leq 10 \mu\text{g}/100 \text{ cm}^2$
 - Comparable to PCB concentrations ≥ 50 ppm to < 500ppm
 - Low Occupancy Areas: $\leq 100 \mu\text{g}/100 \text{ cm}^2$
 - Comparable to PCBs at concentrations ≥ 500 ppm

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This memo should be used as a reference only. End-users are urged to read 40 CFR 761 in full to ensure full compliance with all applicable rules and regulations.

Please contact your sales representative or the laboratory with any questions.

References:

- EPA TSCA Summary: <https://www.epa.gov/laws-regulations/summary-toxic-substances-control-act>
- EPA Full Cleanup Level Summary <https://www.epa.gov/sites/production/files/2015-08/documents/pcb-guid3-06.pdf>
- NJDEP: <http://www.nj.gov/dep/srp/guidance/pcbremediation/>
- NYSDEC (pp12-13): http://www.dec.ny.gov/docs/remediation_hudson_pdf/cpsoil.pdf
- 40 CFR 761: https://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr761_main_02.tpl
- NJIT TSCA PCB Brochures: <https://www.njit.edu/tab/pcb/>

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