Understanding TSCA for Sites with Polychlorinated Biphenyls (PCBs)

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AGENDA

- Introduction (Use, Chemistry, Trade Names, Etc.)
- Regulatory History & Provisions
- 2024 PCB Amendments
- TSCA Applicability
- When do you look for PCBs?
- PCB Remediation Overview
  - Self-Implementing cleanup and disposal
  - Performance-based cleanup and disposal
  - Risk-based cleanup and disposal
- PCB Bulk Product Waste
- Excluded PCB Products
- New Guidance

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Introduction

https://commons.wikimedia.org/wiki/File:Loose_Slides-302_(49696922128).jpg

- Manmade chemical; biphenyl rings with up to 10 chlorines
- 209 different congeners with more than 50 used in an Aroclor™ mix
- Monsanto was only US producer, 1.4 billion pounds.
- Various tradenames, with the most common being Aroclor™
- TSCA PCB prohibitions 1979

PCB Analysis: Which Method Is Needed?

- Different lists
- What are the regulatory screening criteria?
- What is the degree of weathering in samples?

NOTE: Aroclors 1262 and 1268 are not listed in SW-846 8082A but should be included in Aroclor analysis for TSCA and CAM.

PCB Aroclors: SW-846 Method 8082A

PCB Aroclor	CASN
Aroclor 1016	12674-11-2
Aroclor 1221	11104-28-2
Aroclor 1232	11141-16-5
Aroclor 1242	53469-21-9
Aroclor 1248	12672-29-6
Aroclor 1254	11097-69-1
Aroclor 1260	11096-82-5
Aroclor 1262[1]	37324-23-5
Aroclor 1268[1]	11100-14-4

PCB Homologs: EPA Method 680

CASRN	IUPAC Name	Type
27323-18-8	Monochlorobiphenyl	Homolog
25512-42-9	Dichlorobiphenyl	Homolog
25323-68-6	Trichlorobiphenyl	Homolog
26914-33-0	Tetrachlorobiphenyl	Homolog
25429-29-2	Pentachlorobiphenyl	Homolog
26601-64-9	Hexachlorobiphenyl	Homolog
28655-71-2	Heptachlorobiphenyl	Homolog
55722-26-4	Octachlorobiphenyl	Homolog
53742-07-7	Nonachlorobiphenyl	Homolog

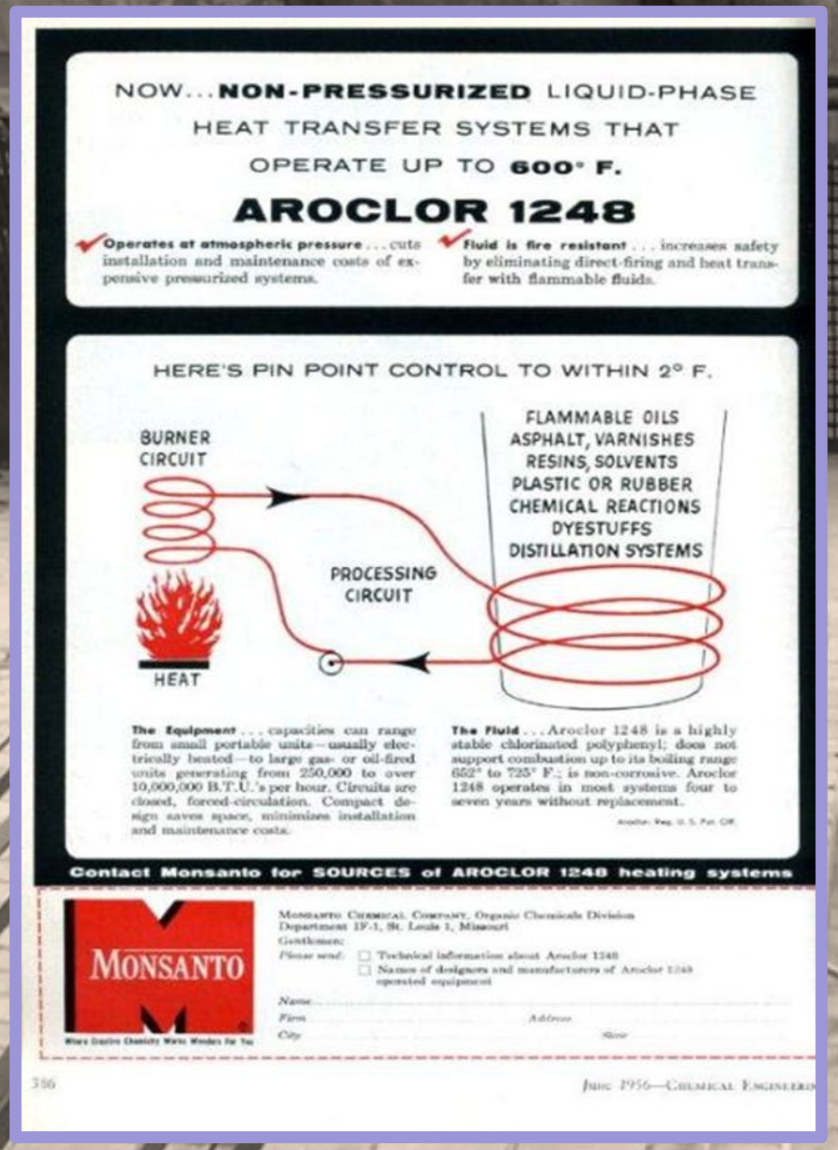
PCB Congeners: EPA Method 1668C (209 congeners: partial list shown)

Descriptor*	CASRN	Congener Number	IUPAC Name	Type
	1336-36-3		Polychlorinated biphenyl (PCB)	Category
CP1_---_--_-	2051-60-7	1	2-Chlorobiphenyl	Congener
CPO_---_--_-	2051-61-8	2	3-Chlorobiphenyl	Congener
CPO_---_--_-	2051-62-9	3	4-Chlorobiphenyl	Congener
---_---_--_-	13029-08-8	4	2,2'-Dichlorobiphenyl	Congener
CP1_---_--_-	16605-91-7	5	2,3-Dichlorobiphenyl	Congener
CP1_---_--_-	25569-80-6	6	2,3'-Dichlorobiphenyl	Congener
CP1_---_--_-	33284-50-3	7	2,4-Dichlorobiphenyl	Congener
CP1_---_--_-	34883-43-7	8	2,4'-Dichlorobiphenyl	Congener
CP1_---_--_-	34883-39-1	9	2,5-Dichlorobiphenyl	Congener
---_---_--_-	33146-45-1	10	2,6-Dichlorobiphenyl	Congener
CPO_---_--_2M	2050-67-1	11	3,3'-Dichlorobiphenyl	Congener
CPO_---_--_-	2974-92-7	12	3,4-Dichlorobiphenyl	Congener
CPO_---_--_-	2974-90-5	13	3,4'-Dichlorobiphenyl	Congener
CPO_---_--_2M	34883-41-5	14	3,5-Dichlorobiphenyl	Congener
CPO_---_PP_-	2050-68-2	15	4,4'-Dichlorobiphenyl	Congener
---_---_--_-	38444-78-9	16	2,2',3-Trichlorobiphenyl	Congener
---_---_--_-	37680-66-3	17	2,2',4-Trichlorobiphenyl	Congener
---_---_--_-	37680-65-2	18	2,2',5-Trichlorobiphenyl	Congener
---_---_--_-	38444-73-4	19	2,2',6-Trichlorobiphenyl	Congener
CP1_---_--_2M	38444-84-7	20	2,3,3'-Trichlorobiphenyl	Congener
CP1_---_--_-	55702-46-0	21	2,3,4-Trichlorobiphenyl	Congener
CP1_---_--_-	38444-85-8	22	2,3,4'-Trichlorobiphenyl	Congener
CP1_---_--_2M	55720-44-0	23	2,3,5-Trichlorobiphenyl	Congener
---_---_--_-	55702-45-9	24	2,3,6-Trichlorobiphenyl	Congener
CP1_---_--_-	55712-37-3	25	2,3',4-Trichlorobiphenyl	Congener
CP1_---_--_2M	38444-81-4	26	2,3',5-Trichlorobiphenyl	Congener
---_---_--_-	38444-76-7	27	2,3',6-Trichlorobiphenyl	Congener
CP1_---_PP_-	7012-37-5	28	2,4,4'-Trichlorobiphenyl	Congener

Differences Between Analytical Methods

	PCB Aroclors (SW-846 8082A)	**PCB Homologues** (EPA 680)	**PCB Congeners (209)** (EPA 1668C)
Soil	16 µg/kg	0.4 µg/kg	0.002 – 0.010 µg/kg
Water	0.25 µg/L	0.00025 – 0.0005 µg/L	0.00002 – 0.0001 µg/L
Building Materials/Bulk	Paint: 50 µg/kg Caulk: 250-500 µg/kg	Not applicable	Not applicable
Wipes	0.5 µg/wipe	Not applicable	Not applicable
Cost	$	$$	$$$
Comments	• **Typical approach** • Widely available • Good for general characterization • Not the best approach for samples with weathered Aroclors • May not be best approach for air samples	• **Better approach for total PCB calculations for weathered samples or where the Aroclor pattern is absent** • Good for air analysis • Not offered by all labs	• **Good approach for weathered samples and/or where low regulatory criteria required** • Useful for ecological risk assessment • Useful for dioxin-like PCB quantification • Useful for source fingerprinting • Not offered by all labs

Non-detect PCB Aroclor results do not necessarily mean no PCBs are present in your sample!



Conceptual Site Model Considerations

- Transformers
- Capacitors
- Hydraulic fluids
- Oil-based paints
- Fluorescent light ballasts
- Lubricating & cutting oils
- Floor finishes
- Fire retardants
- Thermal insulation materials
- Caulk/sealants/waterproofing
- Coatings for wire/electrical gear
- Carbonless copy paper
- Inks and dyes
- Adhesives/mastics
- Auto shredding fluff
- Waste oil

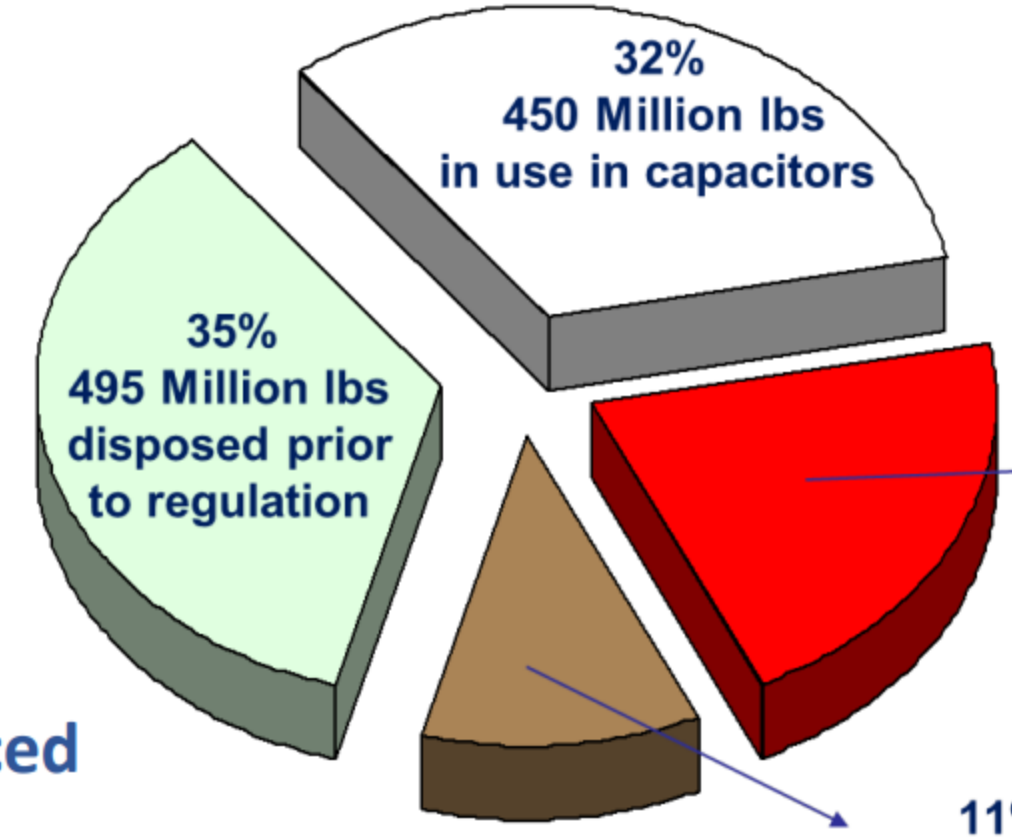
...and more...

PCB Trade Names (Generic Name Askarel)

Trade Name	User
ALC	Uptegraff
Abestol	American
Capacitor 21	Monsanto
Chlorinol/Clorinol	Sprague Electric
Diaclor	Sangamo Electric
EEC-18	Niagra
Elemex	McGraw Edison
Hyvol	Aerovox
Inerteen	Westinghouse
MCS 1489	Monsanto
No-Flamol	Wagner
Pyranol	General Electric
Saf-T-Kuhl	Kuhlman Electric
Santovac 1 & 2	Monsanto

Trade Name	User
Aroclor	Monsanto
ASK	Queensboro
Chlorextol	Allis-Chalmers
Clophen	Bayer
Dykanol	Cornell Dubilier
EEC-18	Power Zone
Eucarel	Electrical Util. Corp.
Inclor	Caffaro
Magvar	General Electric
Non-Flammable Liquid	ITE
Pydraul	Monsanto
Pyroclor	Monsanto
Santotherm	Monsanto
Therminol	Monsanto

Use of PCBs Between 1930-1975



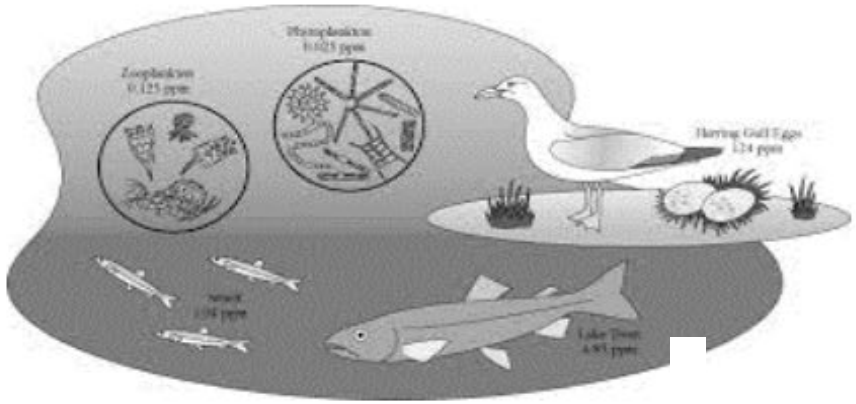
1930-1975
A Total of
1.4 Billion lbs was produced

Persistent Organic Pollutants (POPS)

Environmental Transport

PCBs are persistent, bioaccumulative, and can be transported long distances

PCBs have been found in animals, snow, and sea water in areas far away from where they were released into the environment.



U.S. Environmental Protection Agency

Persistent in the Body

PCBs are:

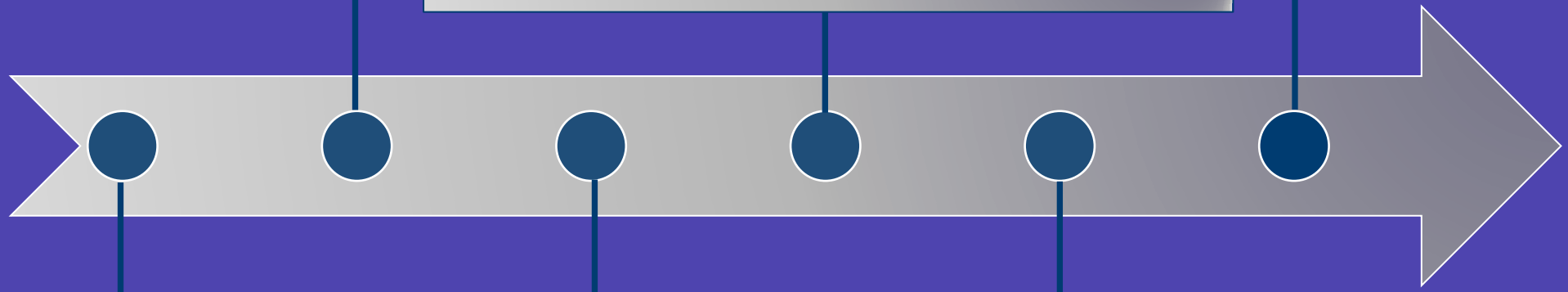
- **Easily absorbed**
- **Stored in fat**
- **Slowly excreted**
- **High “body burdens”**
- **Produce long-lasting effects**

Brief Regulatory History

1979 - PCBs banned except for "totally enclosed uses", such as transformers, capacitors, vacuum pumps and hydraulic fluids (a.k.a., authorized uses)

2024 – EPA RCRA Final Third Rule. Aligns TSCA PCB regulations with the e-Manifest program.

2012 - Revisions to Manifesting Regulations



1998 - PCB Disposal Amendments (a.k.a., the Mega Rule)

1976 - Due to PCB Toxicity and Environmental Persistence Concerns, Congress enacted Section 6(e) of the Toxic Substances Control Act (TSCA)

2024 - Amendments to PCB Regulations 40 CFR Part 761

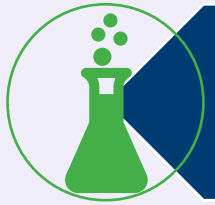
General Regulatory Provisions

- **Prohibitions -** The TSCA PCB regulations (40 CFR Part 761) placed prohibitions on, and requirements for, the use, manufacture, processing, and distribution in commerce, storage, marking, and disposal requirements for PCBs and PCB items.
- **Remedial/Disposal Frameworks -** Governs owners, operators, and/or persons who manufacture, process, distribute in commerce, use, or dispose of PCBs and PCB Items.
- **Not Delegated -** TSCA authority is not delegated to the states; therefore, both TSCA and state regulations will apply.

https://commons.wikimedia.org/wiki/File:Spring_2008,_Targeted_cleanup_near_Aerovox_shoreline_(5242413878).jpg

2024 Amendments

Substantive Changes



Methods: Expanded the list of extraction and determinative methods in the PCB regulations (40 CFR part 761) to include more options that use less solvent and reduce waste.

Performance-based: Performance-based disposal option for PCB remediation waste amended under §761.61(b) to add explicit cleanup provisions, including the requirement to notify EPA and follow specific sampling protocols.

Roadbed provision: Removed the provision allowing PCB bulk product waste to be disposed of as roadbed material to improve protectiveness of human health and the environment.

Emergency flexibility: Added flexibility for cleaning up spills that occur during emergency situations (e.g., hurricane, flood) to allow the Agency to work collaboratively with responsible parties expedite response actions.

2024 Amendments

Substantive Changes (continued)

Containers: Amended § 761.65(c)(9) to allow the use of non-leaking, covered containers to be used at the site of generation for up to 180 days.

Annual Report Form: Mandatory Form for Annual Reports required under § 761.180(b)(3). Removed manifest tracking numbers from annual reports for disposal/storage facilities but maintained annual log requirement.

Harmonized: Harmonized the general disposal requirements for PCB remediation waste, made several revisions to improve regulatory implementation; clarified ambiguities; and corrected technical errors and outdated information.

Applicability of TSCA

- **Is TSCA applicable at Brownfield sites?**
- **Is TSCA applicable at RCRA Corrective Action Sites?**
- **Is TSCA applicable at Superfund Sites?**
- **Is TSCA applicable at State-lead cleanup sites?**

Yes, if you have PCB remediation waste where cleanup is required.

PCB remediation waste is defined at 40 CFR 761.3

Climbing into Compliance

- **When to look for PCBs?**
  - Depends on the Conceptual Site Model (CSM).
  - Potential PCB sources may be...
    - ***Obvious*** (e.g., transformer release)
    - ***Less Obvious*** (e.g., uncontrolled filling/dumping site, contaminant tracking, buildings/structures built or renovated between 1950 to 1970)
- **If detected, is cleanup and disposal of PCBs regulated under TSCA?**
  - Not necessarily. More on this to follow.
- **If TSCA, what are the regulatory options?**
  - There are three primary regulatory options:
    a) Self-implementing cleanup and disposal
    b) Performance-based disposal
    c) Risk-based disposal

Key Distinctions

- **PCB Remediation Waste**
- **PCB Bulk Product Waste**
- **Excluded PCB Product**
- **Each defined in Subpart A (40 CFR § 761.3)**

Site Contamination Context

- ***PCB Remediation Waste is the primary category driving remedial action for non-building scenarios*.**
- **As noted, may also be applicable to unauthorized uses of Non-liquid PCBs.**

Do the TSCA Regulations Apply to the Situation?

Do I have a PCB Remediation Waste?

As Found Concentration

- ≥ 50 PPM Total PCBs
- Pre-April 18, 1978 Disposal

Unauthorized Source

- Any PCB concentration 'As Found'

Source Concentration

- ≥ 500 PPM Total PCB Source
- Beginning April 18, 1978
- Any PCB concentration As Found

- ≥ 50 PPM Total PCBs
- Beginning July 2, 1979
- Any PCB concentration As Found

Be careful of data dilution...

Q: Under the Applicability provisions, doesn't 40 CFR 761.50(b)(3)(i)(A) afford some relief?

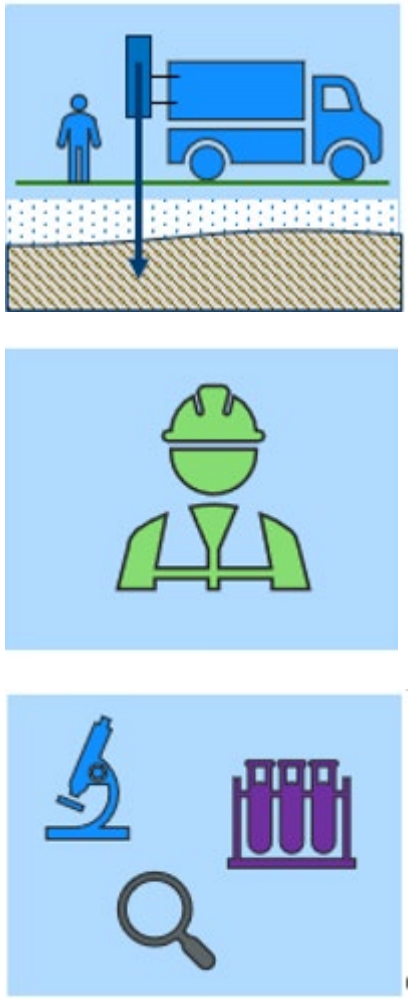
Info: ***Sites containing these wastes are presumed not to present an unreasonable risk of injury to health or the environment from exposure to PCBs at the site.***

A: Possibly, but EPA could determine/conclude that a risk is posed (e.g., exceed state cleanup criteria)

PCB Remediation Waste

"As-found concentration" definition at §761.3

- The concentration measured in samples collected in-situ (i.e., prior to being moved or disturbed for cleanup and/or disposal) from environmental media or material, unless otherwise specifically provided.
- For example, media must not be disturbed, nor may they be diluted (e.g., excavated, placed on a pile, and sampled after such placement), before characterization sampling is conducted.
- Sampling media in piles and existing accumulations would be considered ‘‘as-found’’ if the media were already in piles when the site was first visited by the responsible party, such as during the redevelopment of abandoned properties with historic PCB contamination.
- The as-found concentration is distinct from the source concentration, which is the concentration of the PCBs in the material that was originally spilled, released, or otherwise disposed of at the site.



Navigating Compliance – A Quick Comparison Overview

Program/Comment	Flexibility	Timing	Cost[2]
Self-Implementing (SIP) **(761.61(a))** ***Highly prescriptive, limited media***	**Moderate[1]**	**Moderate**	**Planning** – **$** **Implementation** – **$** to **$$** **Disposal** – $ to **$$$**
Performance-based cleanup **(761.61(b)(1))** ***Limited situational/media applicability***	**Limited/Low**	**Advantageous**	**Planning** – **$** Implementation – **$$ to $$$**[3] Disposal – **$$$ to $$$$** [4]
Performance-based disposal **(761.61(b)(2))** ***Can be used for disposal only situations.***	**Limited/Low**	**Advantageous**	**Planning** – **$** Implementation – **$** Disposal – **$$$ to $$$$**[4]
Risk-based cleanup & disposal **(761.61(c))**[5] ***Broad media applicability***	**Advantageous**	**Long**	**Planning** – **$$** to **$$$$** **Implementation** – **$$$** to **$$$$** **Disposal** – **$** to **$$$**

1 – Departures from SIP, if allowed, lead to blended approval. 30-day approval not applicable in this case
2 – Highly project/site specific
3 – Post completion report may delay project closure/completion for redevelopment/reuse of site
4 – Limited/expensive disposal options
5 – Not including blended approval discretion exercised for SIP modifications/departures

Which is best? That depends!

PCB Remediation Waste – Cleanup and Disposal Options

1. Self-Implementing

- **Self-Implementing cleanup and disposal (a.k.a., 761.61(a))**

  Highly prescriptive with a stipulated review period and established clean-up standards (based on occupancy, e.g., site use) for bulk materials (e.g., soil), non-porous, and porous surfaces (e.g., concrete, asphalt, brick).

  Recent amendments added new extraction/analytical methods to provisions.

Also known as “SIP” for Self-Implementing Plan.

Cleanup/Disposal Overview

Self-Implementing Cleanup and Disposal (a.k.a., 761.61(a))

- **Remedial Options Matrix for Soil**

Scenario	PCB Concentration in Soil (parts per million)	Unrestricted Site Use	Deed Restriction*	Cap**	Fence***
High Occupancy Area (> 6.7 hours/week)	≤ 1	Yes	No	No	No
	> 1 but ≤ 10	No	Yes	Yes	No
Low Occupancy Area (< 6.7 hours/week)	≤ 25	No	Yes	No	No
	> 25 but ≤ 50	No	Yes	No	Yes
	> 25 but ≤ 100	No	Yes	Yes	No

Notes

* When cleanup includes a cap or fence, a deed restriction is required.

** A cap shall consist of any of the following: concrete or asphalt with a minimum thickness of 6-inches, or soil with a minimum thickness of 10-inches and:

- Permeability ≤ 1.0 x 10(-7) cm/sec
- 30 percent passing No. 200 Sieve
- Liquid Limit > 30
- Plasticity Index > 15

*** Fence will be marked with the PCB ML symbol

Disposal of PCB Remediation Waste

- Liquids (see 761.60(a) and 761.79)
- ≥ 50 ppm (dewatered waste)
  - Existing TSCA facilities
  - RCRA hazardous waste landfill
- < 50 PPM (dewatered waste)
  - Existing TSCA facilities
  - RCRA hazardous waste landfill
  - State approved solid waste landfill

Cleanup/Disposal Overview

Self-Implementing Cleanup and Disposal (a.k.a., 761.61(a))

- Verification Sampling (detailed and prescriptive per 761.61(a)(6))

Important Elements of Clean-up Verification		
Number of samples	Subpart O spacing (5 x 5)	Composite sampling - 9 sample maximum - Point source approach - Non-point source approach
Depths and locations - Soil: 7.5 cm (~ 3 in) - Porous: R1 SOP	Extraction and analysis	

Cleanup continues until cleanup levels are reached at each location

- Exposure point calculations not considered

Composite sampling can be complex

- Consultation with Regional PCB Coordinator can be helpful here.

PCB Remediation Waste – Cleanup and Disposal Options

2. Risk-Based Option

- **Risk-based cleanup and disposal (a.k.a., 761.61(c))**

  Site-specific approach applicable to all impacted media.

  Generally best used for large, complex sites or where other cleanup options excluded.

  Requires written EPA approval, which has no definitive timeline.

  Utilize EPA streamlining tool (PCB FAST) any time when employing 761.61(c).

EPA designed ***PCB FAST*** to help Responsible Parties (RPs) and regulators, whenever possible, reduce delays, improve communication, and increase efficiency in the cleanup and disposal of PCBs at a site.

Risk-Based Cleanup and Disposal Approval (a.k.a., 761.61(c))

- **Planning and Closure**

Planning

- Cover letter
- Site background/history
- Nature of contamination
- SOP Summary
- Site map x-referenced to sample IDs
- Copies of analytical
- Proposed technology & approach with contingency plan
- Evaluation of cleanup alternatives
- Human health and ecological risk assessments
- Certification

Planning (continued)

- QA/QC Plan
- Potential for 30-day public notice/comment
- If cap, provide design, x-sections, and deed restriction
- EPA Streamlining Toolbox (FAST)
- Nationwide approvals issued by EPA HQ (e.g., USWAG)

Closure - EPA

- Completion Report and FAM
- Long-Term O&M Plan, if required by EPA
- As-builts of caps and deed restriction, as applicable

Integrable with State Programs

USWAG Members: As-found PCBs <50 ppm → MSW landfills (LFs), non-municipal/non-haz LFs, haz waste LFs, chemical waste LFs

Performance Based Option 761.61(b) Flow Chart

761.61(b)(1) Performance-based Cleanup

761.61(b)(2) Performance-based Disposal

Is the Site:

- A surface or groundwater
- Sediments in Marine and freshwater ecosystem
- Sewer or sewage treatment system
- Private or public drinking water sources or distribution system
- Adjacent to or contains or proposed to be redeveloped to contain the following: residential dwellings, hospitals, schools, nursing homes, playgrounds, parks, day car centers, endangered species habitats, estuaries, wetlands, national parks, national wildlife refuges, commercial fisheries, sports fisheries, or surface waters
- Located in a 100-year floodplain

No

Cleanup and Disposal 761.61(b)(1)

Notification to EPA not required before cleanup

- Remove PCB **remediation waste** and **porous surfaces** to </= 1 ppm PCBs
- **Liquids** to be cleaned up to concentrations specified in 761.79(b)(1) and (b)(2)
- **Non-porous surfaces** to the levels specified under 761.79(b)(3)
- **Verification sampling** required in accord with Subparts O, P and 761.269
- Disposal at TSCA permitted or RCRA C permitted disposal facility
- Records must be kept per 761.125((c)(5)
- **Submit Completion Notification to EPA within 30 days of sending the final shipment of waste offsite for disposal.**

Completion Report

- Site ID, address, and site contact info
- Disposal facility and waste info
- All applicable record components per 761.125)(c)(5)
- 761.3 cert language

No timeframe for EPA review/response on work completed

Yes

Cleanup/ Disposal under 761.61(a) and/or (c), as applicable.

May be used in combo with (b)(2) disposal

No

Disposal 761.61(b)(2)

Dispose of PCBs in TSCA permitted or RCRA C permitted disposal facility; or decontaminate.

< 50 ppm PCB sediment, other allowances, etc.

Does 761.30(u), Use of Decontaminated Materials, apply if all PCB concentrations are subsequently found to be < 1 ppm?

Cleanup/Disposal Overview

Performance-Based Cleanup and Disposal (a.k.a., 761.61(b))

- **Limited applicability per 761.61(b)(1)(i)**

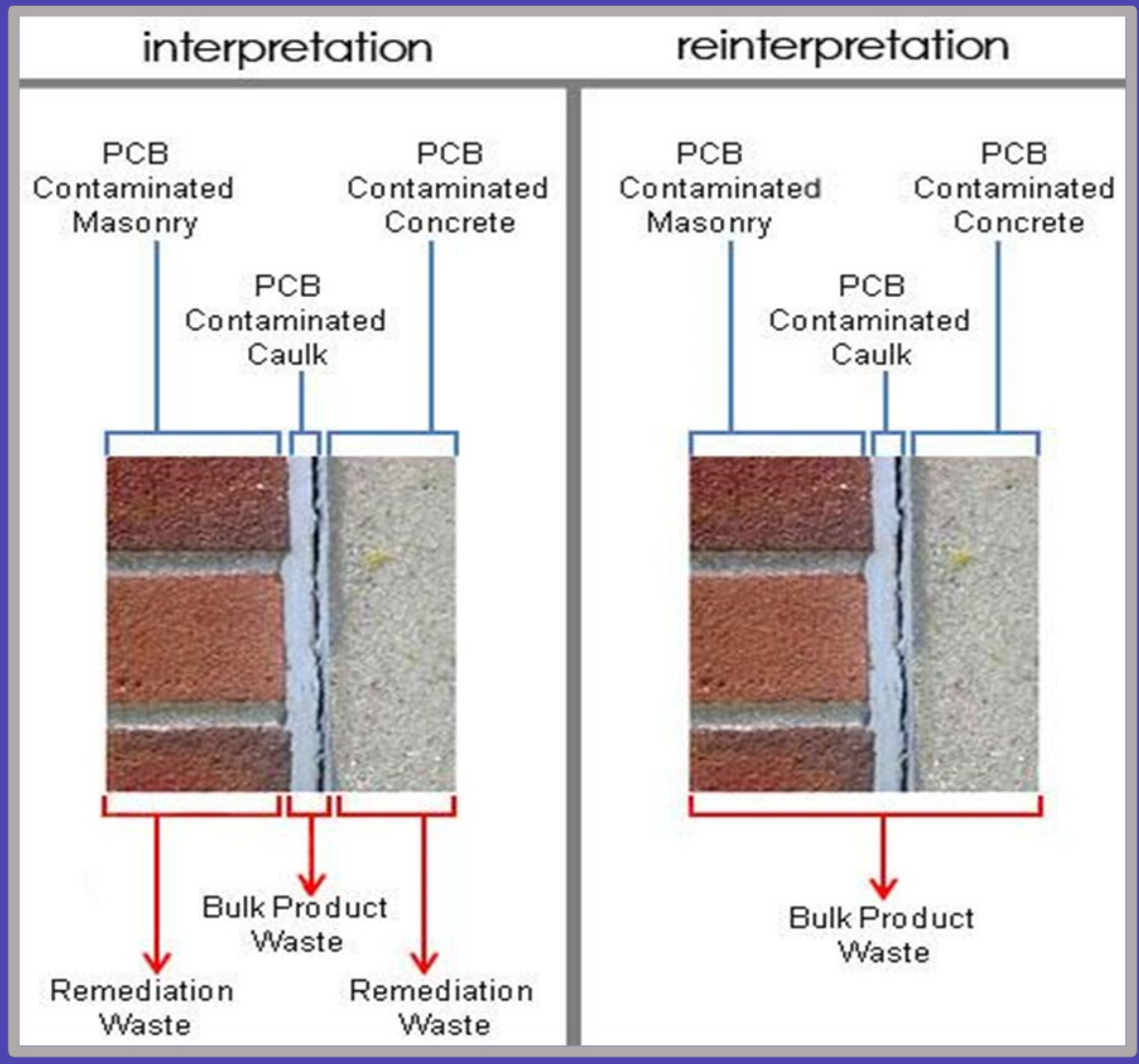
May not be used for 61(b):	Alternatives to 61(b)
Surface or ground waters *	**761.61(c)** – Risk-based Disposal Approval
Sediments in marine and freshwater ecosystems *	**761.61(c)** – Risk-based Disposal Approval **761.61(b)(2)(iii)** – If associated with permitted Army Corps dredging/excavation
Sewers or sewer treatment systems *	**761.61(c)** – Risk-based Disposal Approval
Any private or public drinking water sources or distribution systems *	**761.61(c)** – Risk-based Disposal Approval
Grazing or agricultural lands *	**761.61(c)** – Risk-based Disposal Approval
Vegetable gardens *	**761.61(c)** – Risk-based Disposal Approval
Sites adjacent to, contains, or is proposed to contain residential dwellings, hospitals, schools, nursing homes, playgrounds, parks, day care centers, endangered species habitats, estuaries, wetlands, national parks, national wildlife refuges, commercial fisheries, sport fisheries, or surface waters.	**761.61(a)** - Self-Implementing Cleanup and Disposal [*Stricter standards can be required, such as 61(c)*]
Sites within the 100-year floodplain	Motivated by resiliency. **761.61(a)** - Self-Implementing Cleanup and Disposal [*Stricter standards can be required, such as 61(c)*]

* Sites are also specifically excluded under 761.61(a) - Self-Implementing Cleanup and Disposal

A Moment on Building Materials

Disposal of PCB Bulk Product Waste (761.62)

- Manufactured products containing PCBs have been found in many buildings and structures. Concentrations can be in the percent (%) levels.
- PCBs in non-liquid manufactured building products at >/= 50 ppm are prohibited under TSCA.
- Unauthorized product must be removed/disposed.
  - Performance-based disposal.
  - Disposal in Solid Waste Landfill for specific products (requires notification to landfill).
  - Risk-based Disposal Approval.
- **Other considerations:**
  - ❑ The PCBs from the manufactured source can migrate to surrounding materials (air, soil, masonry).
  - ❑ States may or may not regulate PCBs in buildings.



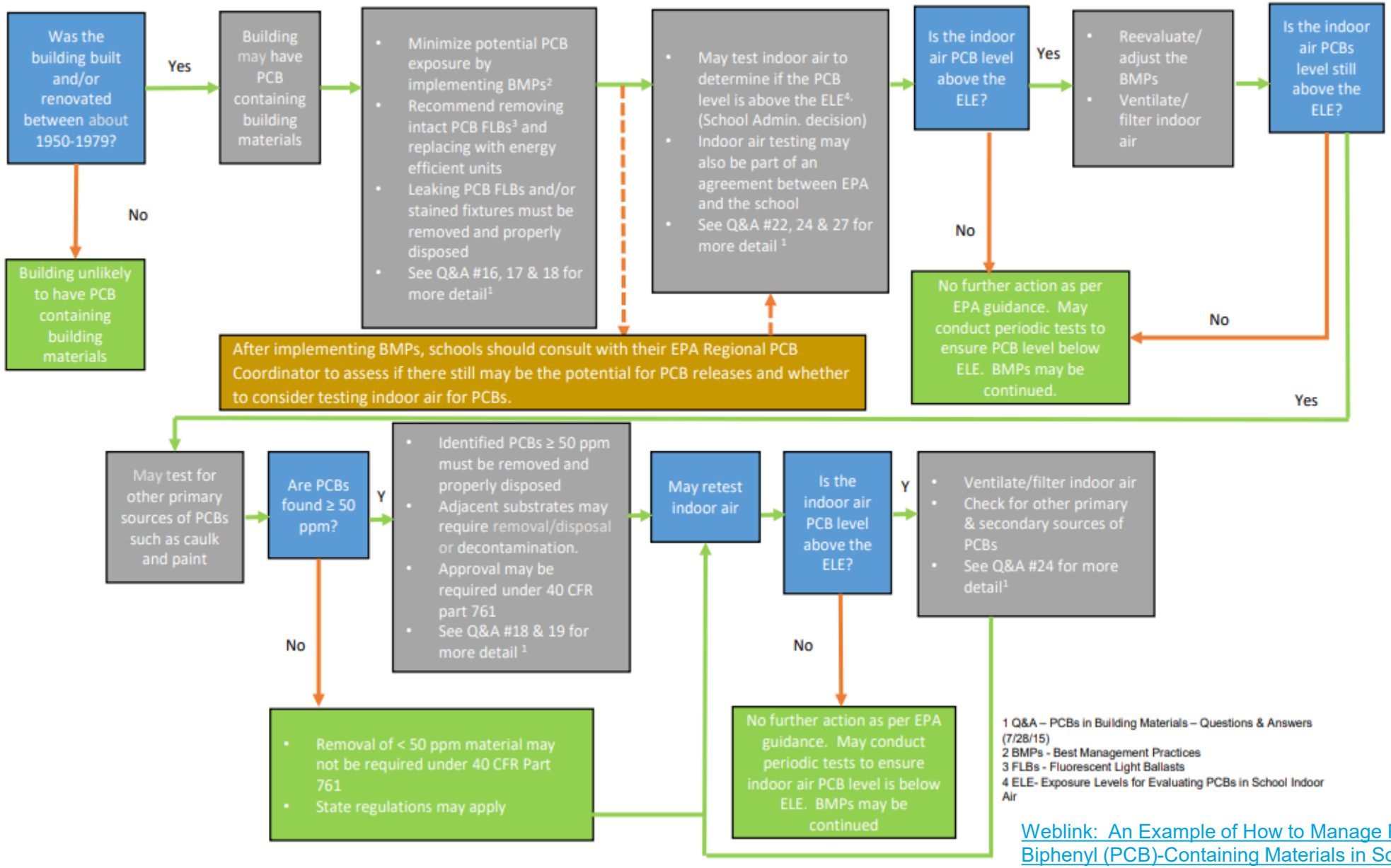
https://www.epa.gov/pcbs/polychlorinated-biphenyl-pcb-guidance-reinterpretation

Excluded PCB Products

- Must meet all criteria under §761.3
  - Concentration (must be < 50 ppm PCBs)
  - Sold/distributed in commerce prior to 1984.
  - No dilution
- May be left in place without further EPA restrictions/requirements.
- State requirements may require removal.

An Example of How to Manage Polychlorinated Biphenyl (PCB)-Containing Materials in School Buildings

November 15 2018



1 Q&A – PCBs in Building Materials – Questions & Answers (7/28/15)
2 BMPs - Best Management Practices
3 FLBs - Fluorescent Light Ballasts
4 ELE- Exposure Levels for Evaluating PCBs in School Indoor Air

[Weblink: An Example of How to Manage Polychlorinated Biphenyl (PCB)-Containing Materials in School Buildings]

Determining If PCBs Are Present in Manufactured Products

Disposal of PCB Bulk Product Waste (761.62)

- Sampling requirements not specified in the federal PCB regulations.
- Available EPA Guidance

May 2021: Fact Sheet on PCBs in Building Materials

https://www.epa.gov/sites/default/files/2021-05/documents/final_pcb_buildings_fact_sheet_05-10-2021_to_upload.pdf

September 2023: Statistically-based sampling approach to potentially determine PCB presence in a building or structure.

https://www.epa.gov/pcbs/technical-guidance-determining-presence-manufactured-pcb-products-buildings-and-other

EXAMPLE 1 - Historically Filled Site (Soil Impacts Only)

Key Elements

- Activity pre-1978 fill activity over several decades
- Also developed pre-1978 without additional modification
- Large Areas (>30 acres)
- Other soil contaminants present (site is also in state program)
- Broad grid sampling program (50 foot) with vertical delineation
- Not associated with unauthorized use or other later spills
- One in-situ location ≥ 50 ppm PCBs in soil

Approach

- Self-Implementing Plan, including plan for advanced in-situ Subpart-O sampling
- Spot-removal integrated with state-level planning/remediation
- Blended 61(a)/61(c) approval
- Closure reporting integrated with state-level reporting

EXAMPLE 2 - Energy Facility with Complex Infrastructure

Key Elements

- Performance-based removal excavated soil to limits of safety
- Residual soil concentrations over 1 ppm Total PCBs

Approach

- Wrap-up remediation under Self-Implementing or Risk-Based Disposal Approval (a.k.a., 761.61(a) or 761.61(c))
- Supplemental delineation and cap installation

EXAMPLE 3 - Impacted Wetland Sediments

Key Elements

- Wetland impacted by runoff/migration from PCB-impacted fill site
- Residual soil and sediment concentrations over 1 ppm Total PCBs

Approach

- Risk-Based Disposal Approval (a.k.a., 761.61(c))
- Harmonized EPA/state ecological risk assessment approach with site-specific toxicological testing to develop site specific clean up targets for wetland soil and sediment
- Hot spot removal and sub-aqueous capping for sediment contaminated over site-specific clean-up target

Note

- Upland managed per separate Risk-Based Disposal Approval (a.k.a., 761.61(c)) to integrate building and exposure barrier construction

Emergency Situations

Emergency Situations 761.66 & PCB Spill Cleanup Policy Subpart G

Emergency situation means adverse conditions caused by manmade or natural incidents that threaten lives, property, or public health and safety; require prompt responsive action from the local, State, Tribal, territorial, or Federal government; and result in or are reasonably expected to result in:

(1) A declaration by either the President of the United States or Governor of the affected State of a natural disaster or emergency; or,

(2) an incident funded under FEMA via a Stafford Act disaster declaration or emergency declaration.

Examples of emergency situations may include civil emergencies or adverse natural conditions, such as hurricanes, earthquakes, or tornados.

What is Emergency Situation? Definition added to 761.3 and 761.123

New provisions per 761.66 for PCBs spill clean-up in emergency situations:

- Can request a waiver from the specific requirements of 761.60, 761.61, 761.62, and 761.65.
- Waiver Request must include:
  - Information on spill.
  - Description of regulatory requirements to be waived/modified and an explanation of why compliance would be impracticable.
  - Plan for how the waste would be managed if relief described was granted and how the proposed management does not pose an unreasonable risk.
  - Proximity to sensitive ecosystems or populations and how those areas and potential impacts will be addressed.
- Also includes provisions in the Spill Cleanup Policy under Subpart G that would be available for an emergency situation that:
  - Allows waste to be cleaned up/managed based on PCB concentrations “as-found” when not able to determine source concentration.
  - Added timeframe for completing notification/reporting to 48 hrs after adverse conditions preventing notification have ended.

Based on EPA’s Experience from Past Emergency Situations

Reflection on the Regulations

- If you had a chance to change the regulations, what would be your top wishes, and why?

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Reflection on the Regulations

- Are there regulatory or policy changes coming that we should prepare for (i.e., what's coming down the road)?

Thank you!

Our Goal: *Understanding our client's goals and embracing them as our own!*

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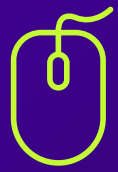

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