



# Evolving EPA Guidance on Non-Liquid PCBs and the Upcoming Proposal to Reassess the PCB Use Authorizations

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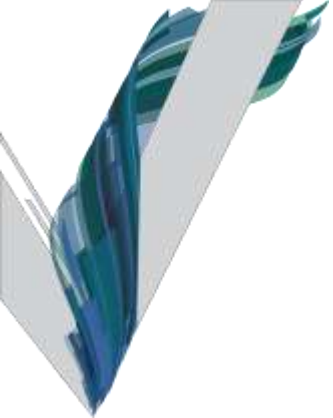
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# **PCBs in Building Materials**

EPA's Evolving Policy;  
Related Compliance and  
Enforcement Considerations



# PCBs in Building Materials – Background

- Non-liquid PCBs used in manufacture of certain building materials – *e.g.*:
  - Plastics/plastic insulation (wire, cable)
  - Paints, waxes, varnishes, other sealants
  - Caulk
  - Adhesives
  - Potting material of fluorescent light ballasts
- Can deteriorate/crumble/become detached
- Can penetrate substrate/underlying building material

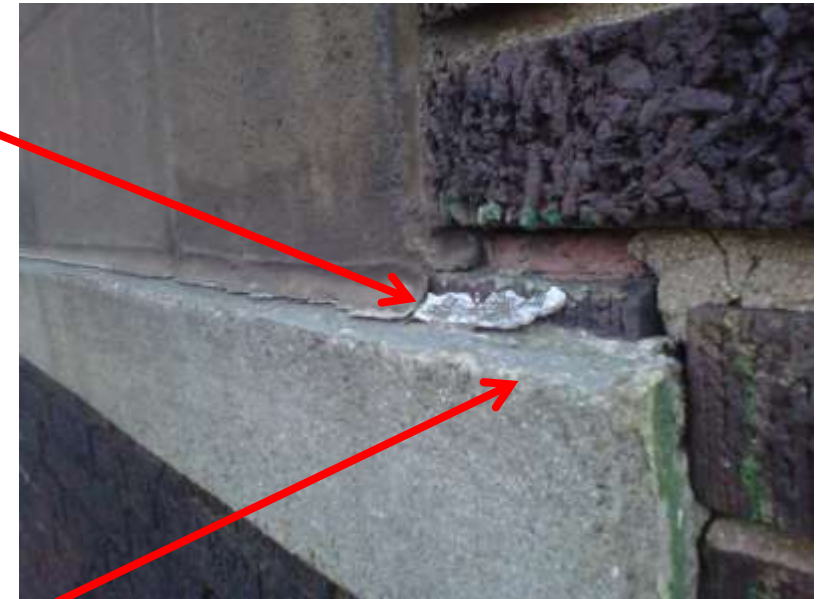


# Terminology

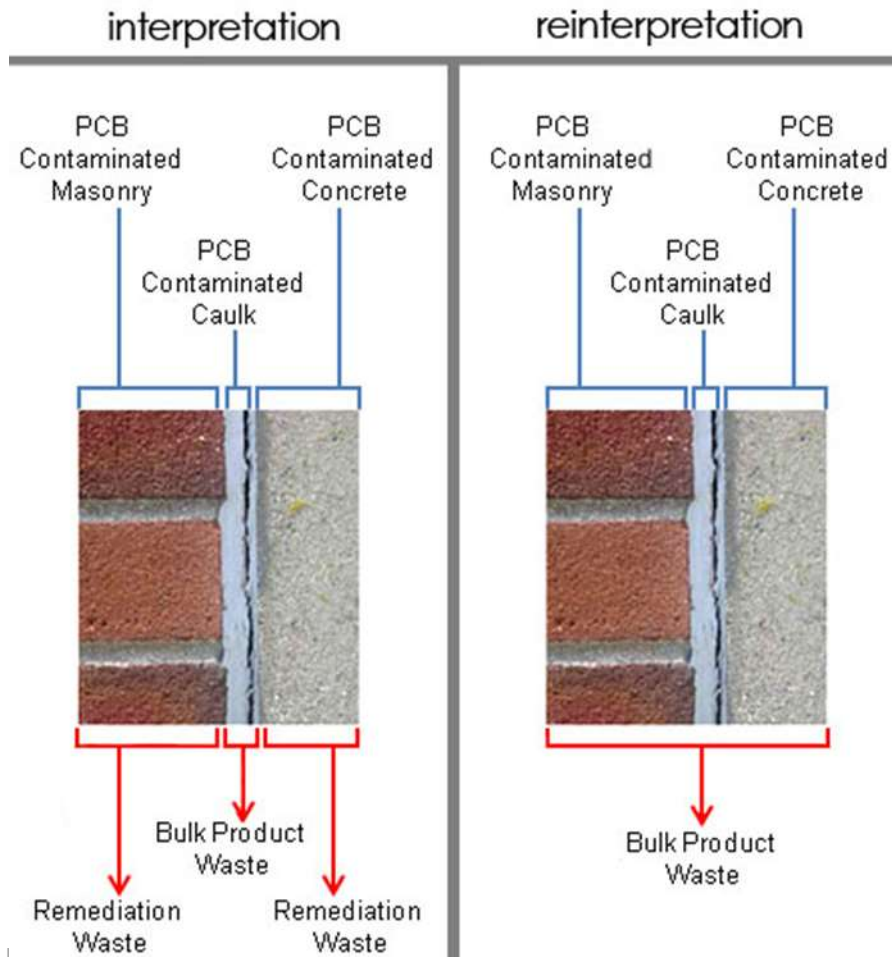
- **PCB-Contaminated:**  $\geq 50$  ppm and  $< 500$  ppm PCB
  - “**PCB Containing**”: not defined term; generally referring to PCBs at any regulated levels (i.e.,  $\geq 50$  ppm)
- **Excluded PCB Products**
  - Broad exclusion for materials containing  **$< 50$  ppm PCB**, if legally manufactured, processed and distributed in commerce prior to October 1, 1984
- **PCB Bulk Product Waste**
  - Waste derived from manufactured products containing PCBs in non-liquid state, where PCBs  $\geq 50$  ppm at time of disposal

# PCB Bulk Product Waste vs. PCB Remediation Waste

- **PCB Bulk Product Waste (§ 761.62)** – waste derived from a manufactured product containing PCBs in a **non-liquid** state where the concentration at disposal is  $\geq 50$  ppm
  - PCB-containing **liquid** products are **not** PCB bulk product wastes; dispose of per 40 C.F.R. §761.60(a)
- **PCB Remediation Waste (§ 761.61)** – waste containing PCBs as result of a spill, release, or other unauthorized disposal, from  $\geq 50$  ppm source or unauthorized use
  - Historically: Substrate impacted by the PCB bulk product waste would be PCB Remediation Waste



# PCB Bulk Product Waste – EPA's October 2012 Reinterpretation



- EPA's reinterpretation of definition of "PCB bulk product waste"
- Includes within definition **building materials** (i.e., substrate) "**coated or serviced**" with PCB bulk product waste (e.g., caulk, paint, sealants)
  - ***Provided** the PCB bulk product waste is **attached** to the substrate **at the time of designation for disposal***
- Prior to reinterpretation, would have had to dispose of PCB-contaminated building material as PCB remediation waste



# PCBs in Building and Lighting Materials: Regulatory Status

- No use authorization for PCBs in non-liquid uses, including building materials (*e.g.*, caulk, paint) or lighting materials
- PCB Mega-Rule:
  - EPA floated idea of use authorization in 1994
  - In Mega-Rule, declined to proceed
    - ... but stated that “owners and operators will not be required to remove fluorescent light ballasts prior to the end of their useful life”
- EPA has issued guidance over the years addressing PCBs in non-liquid uses and in lighting materials



# PCBs in Fluorescent Light Ballasts (FLBs)

- If PCBs in FLB only in an **intact and non-leaking** PCB Small Capacitor → may be disposed of in MSWLF
  - Storage, manifesting and notification requirements **do not apply**







# PCBs in Fluorescent Light Ballasts (cont'd)

- If PCBs in **potting material**  $\geq$  50 ppm PCB → **PCB bulk product waste** (§761.62)
  - ... or decontaminated per §761.79
- No regulatory requirement to test potting material prior to disposal
  - But, as always ... **have to be right**



# PCBs in Fluorescent Light Ballasts – Labeling

- FLBs manufactured between July 1, 1978 and July 1, 1998 must be labeled “**No PCBs**” if they do not contain PCBs
  - Of similar durability & readability as other electrical information marking
  - FLBs manufactured after 1998 not required to be labeled
- EPA: If not labeled and date of manufacture not known to be after 1979, assume to contain PCBs

# FLB Labeling



A typical pre-1979 PCB-containing fluorescent light ballast (FLB)



A typical Non-PCB containing fluorescent light ballast. The ballast has a "No PCBs" marking on the top of the ballast and the text "electronic ballast". Only magnetic fluorescent light ballasts contained PCBs.

Image taken from EPA's online guidance compendium:

<http://www.epa.gov/wastes/hazard/tsd/pcbs/pu/ballasts.htm>



# Storage of FLBs

- FLBs with  $\geq 50$  ppm PCB in potting material (BPW) subject to storage for disposal requirements of §761.65
  - *i.e.*, storage up to one year in storage unit meeting §761.65 requirements (or up to 30 days in temporary storage facility)
- But note: FLBs may be stored **at the point of generation** for up to **180 days** in units not meeting §761.65 standards
  - Comply with conditions at §761.65(c)(9)
- Commercial storage: Facilities storing FLBs with regulated levels of PCBs from **non-related entities** subject to “commercial storer” regulation



# EPA Guidance – Coal Tar Wrap

EPA letter to KeySpan (now National Grid) re: regulatory status of coal tar wrap (June 22, 2006):

- “The use of PCBs in coal tar wrap to prevent corrosion on the exterior of the piping has never been authorized by [EPA] ...
- “Because its use is unauthorized and there is a potential for exposure, PCB-containing coal tar wrap **must be removed and replaced upon discovery**.
- “Disposal of this material is covered by the current PCB regulations as **PCB bulk product waste** ...”



# EPA Compendium of Guidance: PCBs in Caulk and Building Materials

EPA Guidance on Caulk and Other Building Materials

→ [www.epa.gov/pcbsincaulk](http://www.epa.gov/pcbsincaulk)

- Much of this information developed in response to discovery of PCBs in caulk, FLBs in school buildings
- Geared towards school administrators and contractors
  - ... But most information/guidance is of broad applicability



# EPA's "PCB in Building Materials Diagram"

Actions for Reducing Exposures to PCBs  
in Indoor Building Environments



**1950 to 1979**

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.



**Recommended Actions**

- Remove all PCB-containing Fluorescent Light Ballasts and any PCB-stained fixtures
- Implement best management practices: proper ventilation, cleaning, and hygiene.



**Renovation and Repair**

Remove other PCB sources (e.g., PCB-containing caulk) during planned renovation and repairs.





# EPA Q&A re: PCBs in Building Materials (July 2015)

- Agency acknowledges compliance predicament presented by PCBs in building materials
  - Emphasis on reducing PCB exposures
- “Although the presence of PCBs in schools and other buildings may be a concern, the presence of PCBs alone **is not necessarily a cause for immediate alarm**”
- “If PCBs are present or suspected of being present, **EPA recommends** the actions outlined in this document be taken by ... building owners and building managers to **reduce PCB exposures**”



# EPA Q&A re: PCBs in Building Materials (cont'd)

- Agency acknowledges that TSCA prohibits the use of  $\geq 50$  ppm PCBs in caulk/other building materials ...
- EPA “does have enforcement tools” to be used “where the PCB concentration in the caulk or other materials is above the regulatory limit,” but ...
  - *“EPA is most interested in ensuring that school districts and other building owners **undertake the recommended actions to limit exposures to PCBs...***
  - *“EPA believes that **enforcement may not be the most effective tool to reduce health risks** when schools and other building owners follow these recommendations.”*



# Limitations of EPA Guidance

- Guidance only; does not change regulations; **not a use authorization**
- EPA re July 2015 guidance: intended as “informal reference” and “not a summary of applicable PCB requirements”
  - Q&A “does not replace nor supplant the requirements of the [TSCA] PCB regulations”
  - EPA “will not hesitate to act in situations where ... significant risks to public health” not being addressed
  - Refers users to 40 C.F.R. Part 761



# **EPA's Rulemaking to Reassess the PCB Use Authorizations**

Recent Developments



# Regulatory Developments: Timeline

- **April 2010:** Advance Notice of Proposed Rulemaking (ANPRM)
- **April – Aug. 2010:**
  - Public comment period
  - Multiple public hearings on ANPRM
- **July 2013:** Announcement of SBAR Panel
- **Dec. 2013:** SBAR Pre-Panel Kick-Off Meeting
- **Feb. 2014:** Convention of SBAR Panel
- **April 2014:** SBAR Panel Report Submitted to EPA
- **~March 2016 – July 2016:** Current target date for proposal
  - Public comment period
  - EPA will consider and respond to comments prior to issuing final rule



# EPA's PCB Rulemaking

- EPA now looking to **reassess** the existing use authorizations
- In forthcoming proposal, EPA likely to attempt to show that:
  - The risk from PCBs in electrical equipment is greater today than in 1979 because either
    - ... the **toxicity** of PCBs is greater than previously believed, and/or
    - ... there is greater **exposure** to PCBs
  - The costs associated with mandatory phase-out are less today than they would have been in 1979.



# PCB Rulemaking – Advanced Notice of Proposed Rulemaking

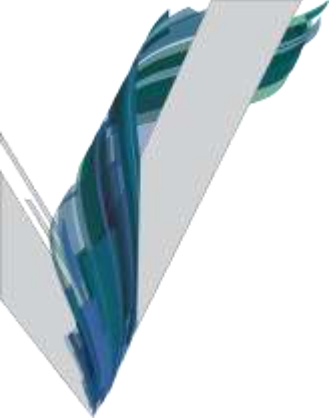
- ANPRM – broad in scope
  - *Not a proposal.* EPA solicited feedback on various issues.
  - Posed hundreds of questions regarding use, inventory, storage disposal of PCB-containing equipment
  - Framed in terms of **mandated phase-out dates** for PCB-containing equipment
  - Suggested various **interim use conditions** prior to phase-out deadlines
- Generally, did not distinguish between “known” vs. “unknown” PCB-contaminated/PCB equipment





# 2010 ANPRM (cont'd)

- EPA solicited information to help the Agency:
    - Reassess the efficacy and protectiveness of the 30-year-old use authorizations
    - Consider costs related to management and disposal of PCBs under current use authorizations
    - Weigh benefits and costs of phase-out
- *Bottom line: ANPRM signaled EPA's attempt to develop administrative record to **support reversal** of its original "no unreasonable risk" determination for PCBs*



# PCB ANPRM (cont'd)

- Specific issues raised in ANPRM included:
  - Reclassification/servicing procedures
  - Marking all  $\geq 50$  ppm PCB equipment
  - Increased inspection frequency
  - 761.30(p)
  - Potential broadening of PCB Article to include all equipment with  $>0.05$  liters ( $\sim 1.7$  oz) of  $\geq 50$  ppm PCB dielectric fluid
  - Potential registration requirement for Large PCB Capacitors

→ *Implicit requirement of measures contemplated in ANPRM:  
**system-wide sampling of equipment***

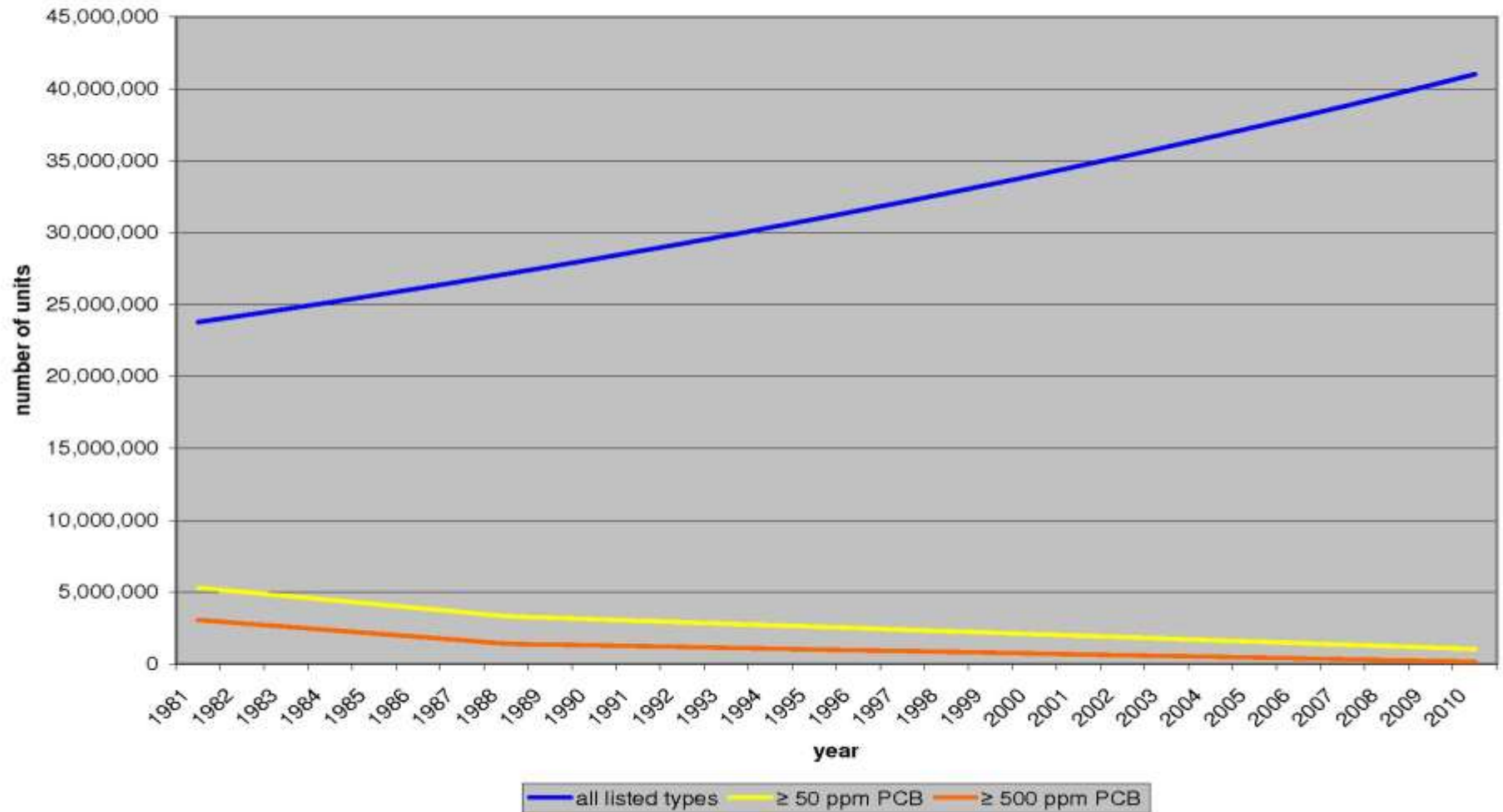


# Industry Response to ANPRM

- USWAG compiled member company information on current inventories, equipment management practices, and costs associated with accelerated disposal/ultimate phase-out of PCB-containing equipment
  - Estimated cost of sampling associated with phase-out: **\$21 billion**
  - PCB Large Capacitors down from estimated **2.8 million** (1982) to **120,000** (2010)
    - Represents a 98% reduction
  - All PCB-containing transformers projected to be removed from service by **2030**

# ENVIRON, Inc. Estimate: PCB Phase-Down Progress Since 1981

FIGURE 1: CHANGES IN EQUIPMENT INVENTORIES SINCE 1981





# Small Business Advocacy Review (SBAR) Panel

- Convened pursuant to the Small Business Regulatory Flexibility Act (SBREFA)
  - Goal: Consider impact of proposed regulatory measures on “small entities,” including electric cooperatives
- Panel comprised of representatives from:
  - EPA (Small Business Office, OPPT)
  - Office of Management & Budget (OMB)
  - Small Business Administration (SBA)
- “Small Entity Representatives” (SERs) invited to listen, provide feedback and written comments to Panel



# PCB Rulemaking: (Expected) Scope, Post-SBAR Panel

- Scope of rulemaking appears to be **significantly narrower** than in 2010
- Four key areas:
  - (1) PCBs in electrical equipment
  - (2) PCBs in fluorescent light ballasts
  - (3) Continued use of PCB-contaminated porous surfaces
  - (4) PCBs in natural gas pipelines
- *Note – While this is subject to change, EPA appears to have moved away from at least some of the troubling suggestions in the ANPRM*



# Anticipated Rulemaking – PCB-Containing Electrical Equipment

- Possible phase-out of **PCB Transformers** and **PCB-Contaminated transformers**
  - Initially, would have applied to all transformers falling within either category
  - Wouldn't have been limited to "known"
  - So, like measures in ANPRM, would require massive **sampling** effort to ensure compliance
  - EPA **responded to comments** received following SBAR kick-off meeting ...

→ ... In Feb. 2014 presentation, contemplated measures ***limited to known PCB Transformers/PCB-Contaminated transformers***





# Anticipated Rulemaking – PCB-Containing Electrical Equipment

- PCB Transformers – Possible date for **termination of use authorization**:
  - 2020, 2025, 2030 (i.e., 5, 10, 15 years after rule)
  - EPA also sought input regarding length of “grace period” to dispose of (previously unknown) PCB Transformers following discovery
- Options for amending **Storage for Reuse** authorization for PCB Transformers:
  - Revoke after 1 year (i.e., 2016)
  - Revoke after 2 years (i.e., 2017)
  - Revoke after 5 years (i.e., 2020)
  - Revoke after 10 years (i.e., 2025)



# Anticipated Rulemaking – PCB-Containing Electrical Equipment

- PCB-Contaminated transformers – Possible date for **termination of use authorization**:
  - 2020, 2025, 2030 (i.e., 5, 10, 15 years after rule)
  - EPA's cost projections based on assumptions: **dispose of 95%** of PCB-contaminated transformers, **reclassify 5%** to <50 ppm
- Only option presented for **servicing** of PCB-contaminated transformers:
  - Prohibition of all servicing except to reclassify to <50 ppm
- Options for amending **Storage for Reuse** authorization for PCB Transformers – mirrored those presented for PCB Transformers



# Anticipated Rulemaking – PCB-Containing Electrical Equipment

- Possible phase-out of other types of PCB-containing equipment
  - Unfortunately, other measures considered by EPA **not limited to “known”**
  - ... In other words, sampling would still be (implicit) requirement of phase-out requirements for voltage regulators, capacitors, cable, etc.
- EPA still appears to believe that “little if any of this equipment exists or contains PCBs”
- Only option presented:
  - Revoke use authorization within **1 year** (i.e., 2016) of final rule



# Anticipated Rulemaking – Fluorescent Light Ballasts

- Fluorescent Light Ballasts:
  - Potentially regulated universe:
    - Daycare centers and primary/secondary schools;
    - Daycare centers, primary/secondary schools, hospitals and public housing; or
    - All public and commercial buildings
  - Regulatory options under consideration:
    - Revoke use authorization for PCBs in small capacitors in FLBs in **1, 3, or 5 years**; or
    - Revise use authorization for PCB small capacitors to require identification of leaking PCB FLBs

→ *Driven by developments in New York City schools*



# Anticipated Rulemaking – Continued Use of Porous Surfaces

- Options presented for §761.30(p):
  - **Option 1:** No modification
  - **Option 2:** Require notification
    - 2a) retroactive notification (i.e., including past uses of the authorization)
    - 2b) prospective only
  - **Option 3:** Require deed restriction
  - **Option 4:** Restrict to “low occupancy” areas
    - Note: EPA suggested that industry requested this change.
    - Industry has focused on types of locations where this is used, i.e., accessibility to public



# Anticipated Rulemaking – Natural Gas Pipelines

- EPA concerned about instances where PCBs reached residential meter “and beyond”
- October 2011 – Data submission request to natural gas pipeline owners
  - Received 21 responses
  - 150 reported instances of discovery of PCBs  $\geq 50$  ppm
- Regulatory options under consideration:
  - Require reporting to EPA regions and/or affected customers where PCBs  $\geq 50$  ppm released to customer meters
  - Require reporting to EPA regions of all discoveries PCBs  $\geq 50$  ppm
  - Considering “prove out” option for “dry” systems (until any PCB hit)



# A note about the EPRI Predictive PCB Database

- Intended as tool to guide proactive/voluntary ID and removal efforts
  - Provides additional information to better inform decision-making regarding equipment that is difficult to sample (due to, *e.g.*, accessibility, cost, safety considerations)
- Does not change regulatory status of equipment
  - **Does not relieve anyone of any regulatory obligation** (e.g., use conditions/disposal requirements)
  - Existence of database **does not change use assumptions** or render equipment PCB-Contaminated / PCB Transformer
  - *Significance in “known” vs. unknown context?*





# PCB Rulemaking – Next Steps

- OPPT completes drafting
- Proposal goes to OMB
- Publication in Federal Register
  - EPA's Online Rulemaking Portal: March 2016
  - More likely: June-July 2016
- Following proposal:
  - Public comment period; may be extended
  - May be additional public hearings
  - EPA will review, respond to comments before issuing final rule