

## PCBs in Schools: Region 9's Risk Based Approach to Schools



Southern California Clean, Green & Healthy Schools Partnership Meeting, March 25, 2014

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### **Summary of EPA Information**

- PCB Regulations
- Region 9's Risk Based Approach
- Best Practices for Reducing Exposures
- Air Testing
- Additional Resources



### **Regulation of PCBs**

Environmental Protection PCBs are regulated by the U.S. EPA under the Toxic Substances Control Act

- > A few key points:
  - Regulations prohibit the use of PCBs equal to or greater than 50 ppm in caulk and other non-liquid products, including continued use of products already in place
  - Intact PCB-containing light ballasts are an authorized use -BUT if they leak PCBs then the spill area must be cleaned and proper disposal of the ballast is required
  - Proper classification and disposal of renovation and demolition wastes containing PCBs is required under TSCA regulations
- ➤ Regulations regarding PCB use, clean-up, and disposal can be complicated consult your EPA Regional PCB Coordinator Carmen Santos 415-972-3360 or "Santos.Carmen@epa.gov"



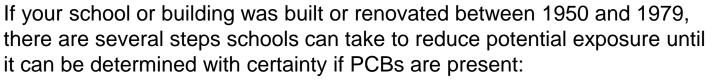
### Region 9's Risk Based Approach To PCBs in Schools

- PCBs were widely used in building materials from about 1950 until 1979.
- If your school was built or renovated during this timeframe you may want to consider:
  - Implementing PCB Best Management Practices
    - Replacement of PCB Ballasts
    - Thorough cleaning of school surfaces (initial and routine)
  - Testing of air for PCB concentrations
    - If air concentrations are above national health guidelines, evaluate and mitigate sources.

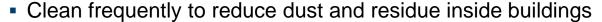


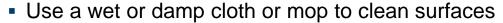
# **Current Best Practices for Minimizing PCB Exposures**

#### First Steps:









- Use vacuums with high-efficiency particulate air (HEPA) filters
- Do not sweep with dry brooms; minimize the use of dusters
- Wash children's hands with soap & water often, particularly before eating
- Wash children's toys often
- Wash hands with soap and water after cleaning







# **Current Best Practices for Minimizing PCB Exposures**





#### Fluorescent and High Intensity Light Ballasts:

- EPA recommends replacement of lights having PCB-containing ballasts
- Benefits include:
  - A reduction of PCBs in the air
  - Reduced disruption and cost in responding to smoking/leaking ballasts
  - Expected reduction in energy consumption
  - Long-term cost savings when replaced with more energy efficient lighting
  - Improved classroom lighting



# **Current Best Practices for Minimizing PCB Exposures**

#### **Caulk and Other PCB-Containing Materials:**

Consider air testing as a way to determine if PCBs are present above indoor air public health levels; if so:



- Conduct Testing to identify potential sources of PCBs.
- Encapsulation or barriers may be considered as short-term measures; in the long term encapsulants are not effective for caulk with levels above a few hundred ppm
- Remove PCB-containing caulk and other known primary source materials from the building to help lower air concentrations



- Removal must be performed by qualified contractors and steps taken to minimize the spread of dust and vapors
- Re-test the air to verify successful reduction in levels; if levels in air are not reduced below public health levels, remediation and follow-up testing may be needed

### United States Environmental Protection Agency

### **PCB Air Testing**

#### **PCBs** in Air

- There are no regulatory standards for PCB concentrations in indoor air
- EPA has developed recommended public health levels for different age groups that are anticipated to keep PCB exposures below the "reference dose" from the combined exposures at schools and from other sources
- For more information contact EPA Region 9's PCB Coordinator
  - Carmen Santos 415-972-3360 or "Santos.Carmen@EPA.gov"

Public Health Levels of PCBs in School Indoor Air (ng/m3)						
Age 1-<2 yr	Age 2-<3 yr	Age 3-<6 yr	Age 6-<12 yr Elementary School	Age 12-<15 yr Middle School	Age 15-<19 yr High School	Age 19+ yr Adult
70	70	100	300	450	600	450



## **Current Best Practices for Minimizing PCB Exposures**



becoming representations of the series

#### **Get Professional Advice and Information:**

- Remediating PCBs in buildings can be challenging
- Contact your EPA PCB Coordinator Carmen Santos
- Read EPA information and guidance see "Additional Resources" at the end of this presentation
- Work with certified contractors experienced in PCB assessment and remediation in buildings



#### **Additional Resources**

U.S. EPA. Find your EPA Regional PCB Coordinator <a href="http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/coordin.htm">http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/coordin.htm</a>

U.S. EPA. PCBs in Caulk in Older Buildings http://www.epa.gov/pcbsincaulk/

U.S. EPA. PCBs in Caulk – Frequently Asked Questions <a href="http://www.epa.gov/pcbsincaulk/pdf/caulk-faqs.pdf">http://www.epa.gov/pcbsincaulk/pdf/caulk-faqs.pdf</a>

U.S. EPA. PCB-Containing Fluorescent Light Ballasts (FLBs) in School Buildings; A Guide for School Administrators and Maintenance Personnel <a href="http://www.epa.gov/osw/hazard/tsd/pcbs/pubs/ballasts.htm">http://www.epa.gov/osw/hazard/tsd/pcbs/pubs/ballasts.htm</a>

U.S. EPA. Public Health Levels for PCBs in Indoor School Air <a href="http://epa.gov/pcbsincaulk/maxconcentrations.htm">http://epa.gov/pcbsincaulk/maxconcentrations.htm</a>

U.S. EPA. Current Best Practices for PCBs in Caulk Fact Sheet – Interim Measures for Assessing Risk and Taking Action to Reduce Exposures <a href="http://www.epa.gov/pcbsincaulk/caulkinterim.htm">http://www.epa.gov/pcbsincaulk/caulkinterim.htm</a>

U.S. EPA. Current Best Practices for PCBs in Caulk Fact Sheet – Removal and Clean-Up of PCBs in Caulk and PCB-Contaminated Soil and Building Materials <a href="http://www.epa.gov/pcbsincaulk/caulkremoval.htm">http://www.epa.gov/pcbsincaulk/caulkremoval.htm</a>



#### **Additional Resources**

- U.S. EPA. Current Best Practices for PCBs in Caulk Fact Sheet Testing in Buildings <a href="http://www.epa.gov/pcbsincaulk/caulktesting.htm">http://www.epa.gov/pcbsincaulk/caulktesting.htm</a>
- U.S. EPA. How to Test for PCBs and Characterize Suspect Materials <a href="http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/guide/guide-sect3.htm">http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/guide/guide-sect3.htm</a>
- U.S. EPA. Steps to Safe Renovation and Abatement of Buildings that Have PCB-Containing Caulk

http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/guide/index.htm

- U.S. EPA. Contractors: Handling PCBs in Caulk During Renovation <a href="http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/caulkcontractors.htm">http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/caulkcontractors.htm</a>
- U.S. EPA. Management, Cleanup, and Disposal of PCB Wastes <a href="http://www.epa.gov/epawaste/hazard/tsd/pcbs/index.htm">http://www.epa.gov/epawaste/hazard/tsd/pcbs/index.htm</a>
- U.S. EPA. Fact Sheets for Schools and Teachers About PCB-Contaminated Caulk <a href="http://www.epa.gov/pcbsincaulk/caulkschoolkit.htm">http://www.epa.gov/pcbsincaulk/caulkschoolkit.htm</a>
- U.S. EPA. PCBs in Schools Research <a href="http://www.epa.gov/pcbsincaulk/caulkresearch.htm">http://www.epa.gov/pcbsincaulk/caulkresearch.htm</a>
- CDC-ATSDR. Toxicological Profile for Polychlorinated Biphenyls (PCBs). <a href="http://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=142&tid=26">http://www.atsdr.cdc.gov/toxprofiles/tp.asp?id=142&tid=26</a>