

# **PCBs**

## **The Stealth Pollutant**

# PCBs

## What are they?

- **Non-Curing Organic Resin**
- **Oily to Tarry Texture**
- **Big Highly Stable Molecule**
- **Not Water Soluble**
- **Soluble in Oil/Fat/Solvent**
- **Very Fire Retardant**
- **Does Not Oxidize**
- **Primarily Used as an Additive**

## Uses of PCBs

- **Transformer/Capacitor Oil – 75%**
- **Hydraulic and Lube Oil – 6%**
- **Plasiticizer (Paint, Caulk) - 8%**
- **Inks, Carbon Paper, Casting Wax, Wire Insulation, Other - 11%**

## **What's the Problem with PCBs?**

- **Very Persistent in Environment**
- **Adheres to Sediment**
- **Bio-Accumulates in Fish/Animal Tissue**
- **Works Way up Food Chain**
- **Human Health Threat via Consumption of Fish**

# What's Being Done?

- **Banned from Production 1978**
- **Regulations for Continued Use of PCB-Containing Equipment (TSCA)**
- **TMDL Adopted for S.F. Bay**
- **ID & Cut-Off Upland Sources to Bay**

# Finding PCB Sources

## Things to Consider

- **Primary Sources Old (Pre-1978)**
- **Extensively used in Electrical Equipment**
- **Additive in Oils, Paints, Caulks, Casting Waxes, etc.**
- **Paints/Caulks aging (30+ Yrs.) and now releasing PCBs**
- **Already Released to Environment**

# Types of Sites to Suspect

- **Heavy Scrap Metal Yards (Not Auto Wreckers)**
- **Copper Recyclers**
- **Demolition/Salvage Companies**
- **Concrete/Asphalt Recycling (Joint Materials and Impacted Concrete)**
- **Electrical Equipment Rebuilders**
- **Electrical Contractors**
- **Foundries, Forges, Rolling Mills (Impacted Feedstock, Casting Wax, Hydraulic Fluids)**



**Electrical Equip. 75% PCB Used**





**Primarily Post-1978 Equipment**



**How Old is This Transformer?**

## Suspect PCBs?

- **Pre-1978**
- **Note Mfg. Label**
- **Oil Filled**
- **Leaking**
- **Problem?**







**Note PCB Label on Side**



**CAUTION**

**THIS EQUIPMENT CONTAINS**

**PCBs**

**(POLYCHLORINATED BIPHENYLS)**

**Labels for Equipment Containing  
50 mg/kg or More PCBs**

# CAUTION

CONTAINS

# PCBs

(Polychlorinated Bipheyls)

A toxic environmental contaminant requiring special handling and disposal in accordance with U.S. Environmental Protection Agency Regulations 40 CFR 761 For Disposal Information contact the nearest U.S. EPA Office

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In case of accident or spill, call toll free the  
U.S. Coast Guard National Response Center  
800-424-8802

Also contact \_\_\_\_\_

Tel. No. \_\_\_\_\_



**NO  
PCBs**

NON DETECTABLE FOR PCB





**1940s Manufacturing Building**



## PCBs Highly Suspected

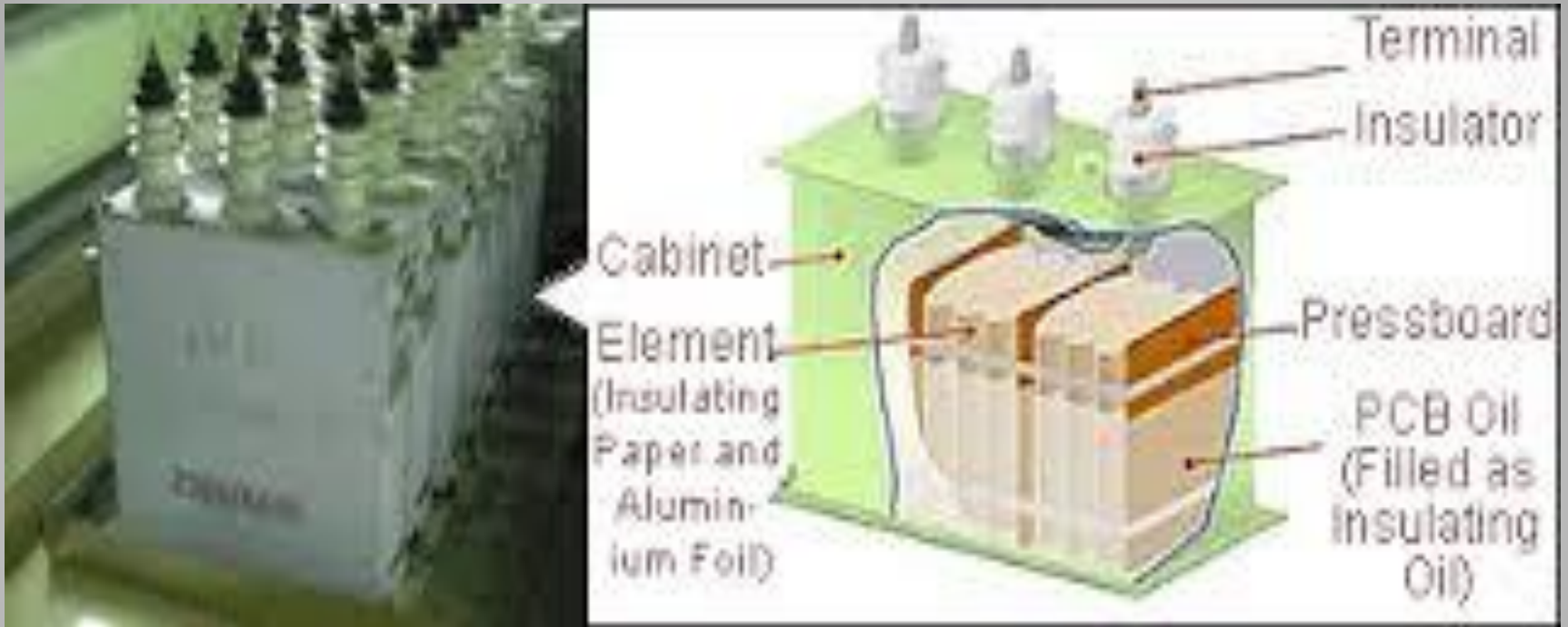
- **Pre-1978**
- **Oil Filled**
- **Copper Filled**
- **Disconnected**
- **Thief Ready**
- **TSCA Violation**
- **Note Drain Plug**





**What Do You Think?**





**Capacitor  
(Suspect Oil Filled Older Equip.)**



# Flourescent Light Ballasts (Most Commonly Found)



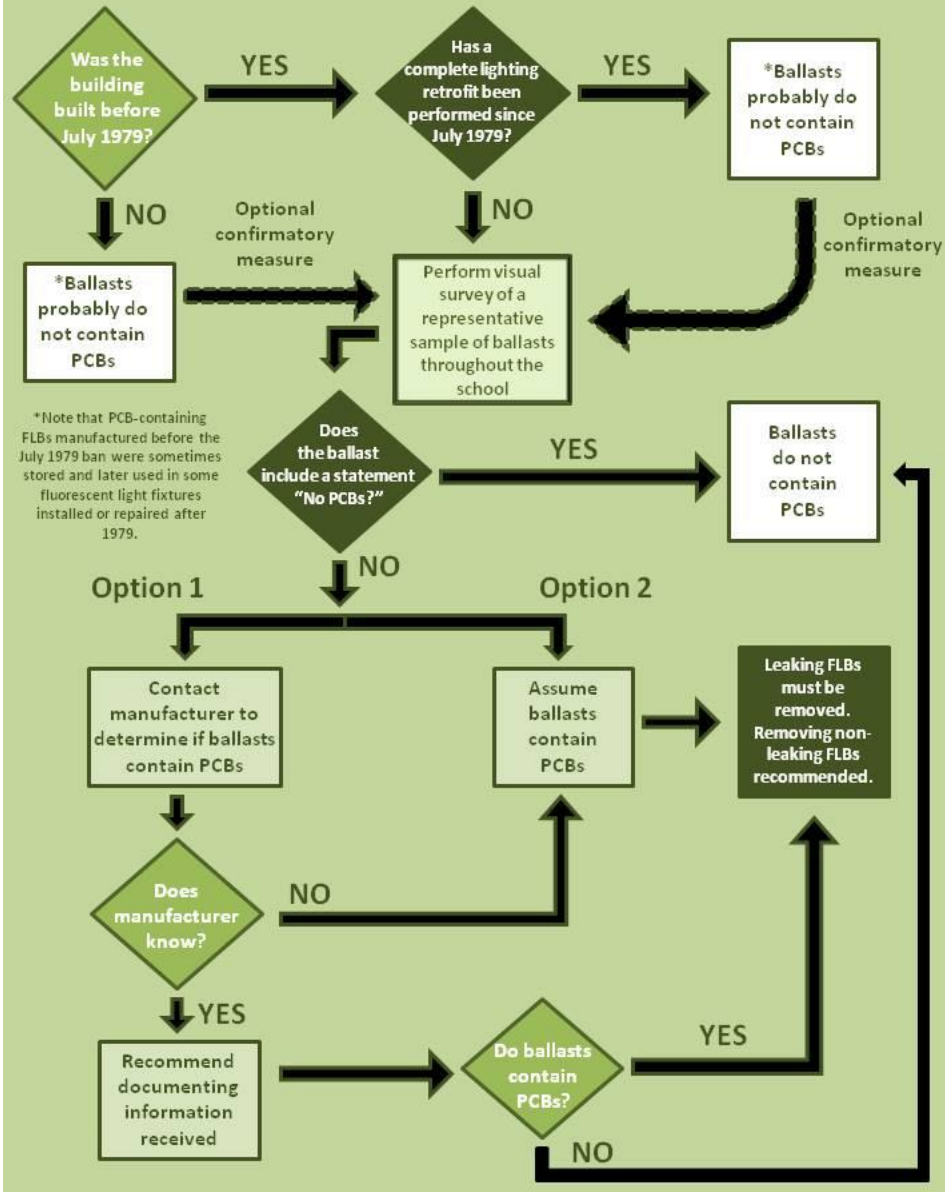


A typical pre-1979 PCB-containing fluorescent light ballast (FLB)



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.

Figure 1: How to Identify PCB-containing Ballasts





**WE TAKE THE WRAPS OFF YOUR POSTWAR ROOF**



We unwrap Galbestos here, graphically, because it is all but impossible for you ever to unwrap it. Lock at Galbestos stripped to the facts. Asbestos is lined by a malleable alloy to sheet steel—millions and millions of rock-horn fingers gripping, imbedded in the very base metal of Galbestos. This is the Galbestos Grip—a bond never before equaled for protected metal. The secret of the Grip is a prewar development of the same Robertson engineers who produced world famous R. F. M. Now Galbestos has been war-tested with honors. Whenever you're looking for a roof—or siding—to go through grueling heat, through gnawing fumes or savage weather and not lose its grip—that's Galbestos.

Try the Galbestos Grip yourself. Lock your fingers and pull. You can get some idea of the interlocked protection of asbestos fibres as they are metal-fused in Galbestos. The asbestos is impregnated with asphalt and waterproofed. But so inseparable is the Galbestos Grip that this protected metal can be crimped, rolled, sheared, bent and riveted on ordinary sheet metal shop equipment. To all practical purposes Galbestos can be worked like unprotected metal, and put to work under conditions where even the best of protected metal has never before been able to take it. Our representatives will be glad to furnish complete data. H. H. Robertson Co., Pittsburgh, Pa.

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**Galbestos-**

PREWAR TESTED FOR POSTWAR ROOFS



# Galbestos Roofing/Siding (Note: Consider Age of Roofing)







## Paints and Caulks



# Salvage/Scrap and Bone Yards (Major Source of PCBs)







**PCB Equipment Ends Up Here**





**Understand Scrap Processing**





**PCBs on Rail Sidings?**



**PCBs here?**



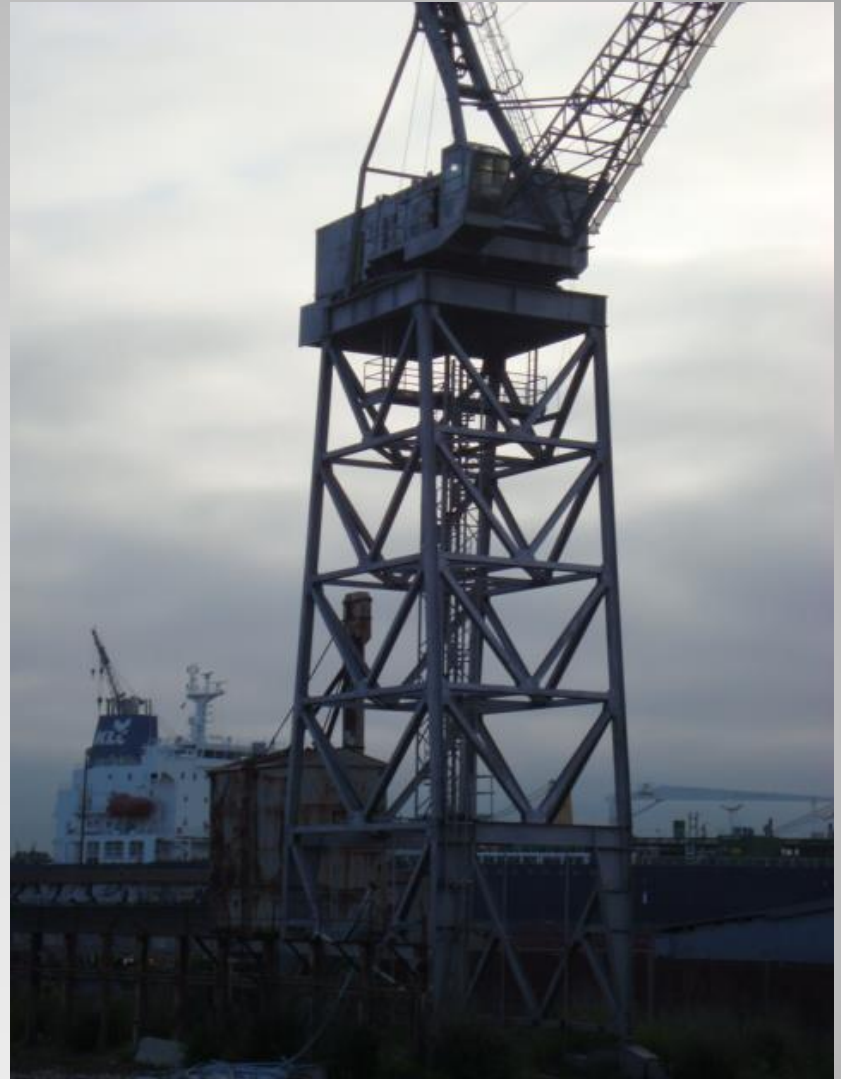


**Old Heavy Industrial Facilities**



## What to Look for:

- **Elec. Equip.**
- **Hydraulic Oil**
- **Paint**
- **Caulk**
- **Sand Blast Waste**
- **Scrap Areas**
- **Bone Yards**



# Questions