



Center for Health, Environment & Justice  
PCBs Factsheet

# Solutions To Remove School Lights Containing PCBs



*As PCB-containing light ballasts age, the chance that they will leak or catch fire increases.*

This fact sheet provides information on how your school can effectively remove the polychlorinated biphenyls (PCBs) light ballasts and replace them with energy efficiency lights that provide real cost savings. The U.S. Environmental Protection Agency (EPA) recommends that lighting ballasts installed before 1979 should be removed to prevent accidental exposure of students, teachers, and other school personnel to PCBs through fires or leaks. Removal of PCB-containing light fixtures is an investment that pays off with long-term benefits to students, school staff, the community, and the environment.

## Overview of the PCB Lights Problem

Many schools in the United States built before 1979 have light ballasts containing PCBs in the ballasts' capacitors

and potting material. Congress banned the manufacture of PCBs in the United States in 1977 because of their toxic effects. In 1979, EPA banned the processing or use of PCBs, except in totally enclosed equipment. However, a large number of fluorescent light ballasts that were installed prior to these bans may contain PCBs and may still be in use in U.S. schools and as they age, the ballasts degrade. Depending on the number of operating hours, the typical life expectancy of a magnetic fluorescent light ballast is between 10 and 15 years. **According to EPA, all of the pre-1979 ballasts in lighting fixtures that are still in use are now far beyond this life expectancy, increasing the risk of leaks or even fires, which would pose a health and environmental hazard.** A recent EPA pilot study of three schools in New York City found that many light ballasts in these schools contained

PCBs and were leaking, causing school children and school personnel to breathe in PCBs in the air. So far, EPA has also found leaking PCBs in light ballasts in schools in Oregon, North Dakota, and Massachusetts.

## 1) Step One – Assessment

### Do Lights in Your School Contain PCBs?

- Your school was built before 1979.
- Your school has not had a complete lighting retrofit since 1979.

If these statements apply to your school, then the answer is yes, your light ballasts probably contain PCBs and should be removed according to EPA.

Any building built before 1979 is likely to have PCB-containing ballasts if it has not undergone a complete lighting retrofit (all light fixtures were upgraded) after 1979. Also, some PCB-containing light ballasts that were manufactured before the 1979 ban were used in some fluorescent light fixtures installed after 1979. Thus, even some schools built after 1979 that have not undergone a complete lighting retrofit could have PCB-containing ballasts.

- Ballasts manufactured through 1979 may contain PCBs.
- Ballasts manufactured between 1979 and 1998 that do not contain PCBs should be labeled “No PCBs.” If a ballast is not labeled “No PCBs,” EPA recommends that it is best to assume it contains PCBs.

**To determine whether your school has PCB-containing ballasts, ask your school to have trained school personnel conduct a visual inspection of the ballasts in a representative number of light fixtures (not just the bulbs).**

Ask them to visit EPA’s website and view their *Guide for School Administrators and School Personnel* on how to determine if there are PCB-containing ballasts in your school at <http://www.epa.gov/wastes/hazard/tsd/pcbs/pubs/ballasts.htm>

Also, your school should contact the EPA staff who are experts in addressing PCB light problems. (See EPA PCB Regional Contacts at end of fact sheet)

If the inspection finds that the ballasts do not have the statement “No PCBs,” your school has two options:

- Assume that the ballasts contain PCBs, or
- Contact the manufacturer to determine whether the ballasts contain PCBs. If the manufacturer is not sure whether the ballasts contain PCBs, *EPA recommends that your school should assume that they do.*

## 2) Step Two – Removal

### Have Your School Develop a Plan to Remove PCB Lights

To eliminate the potential hazard posed by PCB-containing light ballasts in the most efficient manner, EPA recommends removing all PCB-containing ballasts (whether leaking or not). Your school can do this as part of a lighting retrofit which includes removing old fluorescent tubes and ballasts and replacing the entire lighting fixture with new, more energy efficient fixtures. A complete lighting retrofit not only eliminates the hazard, it also increases energy efficiency. It’s an investment that pays off with long-lasting returns to your students, your community, and the environment.

### ***Why is it Necessary to Remove PCB Lights in Your School?***

As PCB-containing light ballasts age, the chance that they will leak or catch fire increases. This risk is compounded by the fact that there is often no way to detect whether ballasts are leaking or about to catch fire by simply looking at a light fixture. For example, one school found this out the hard way when a light ballast leaked PCB-containing oil over books and desks. After EPA was notified, they examined other lights and found more leaking ballasts exposing students and staff to PCBs. EPA learned that the school district was remodeling and upgrading light fixtures. Unaware that the old fixtures contained PCBs, the school district had

been taking them to another school to be dismantled and they were then stored on the school's playground. Mishandling the PCB lights removal needlessly exposed students, staff, and maintenance workers to PCBs.

EPA recommends that although a fluorescent lighting fixture retrofit might seem like a low educational priority in schools when compared with other priorities, school administrators should take into account this one school's example and what they might unexpectedly have to address if a ballast leaks or catches fire.

### ***What Are the Risks and Costs of Not Replacing PCB Lights in Your School?***

A ballast leak or fire could happen at any time, without warning posing a significant health threat to school children and school personnel. Postponing a lighting retrofit and betting on the structural integrity of old ballasts may result in health and educational impacts for your school and serious cost impacts for your school's budget.

Leaking light ballasts can result in significant costs, including:

- Relocation of students and teachers into temporary quarters during cleanup;
- Hiring qualified cleanup personnel;
- Cleanup and decontamination of equipment and surfaces;
- Compliance with environmental regulations for disposal of contaminated equipment and cleanup materials;
- Retesting equipment and surfaces to ensure that they are free of PCBs; and
- Replacement of leaking or burned fixtures and other contaminated materials.

### ***How Can Your School Replace PCB Lights?***

Your school will need to research various energy efficiency lighting programs to determine costs and possible funding sources. Then, an experienced

contractor should be hired to perform the removal of PCB lights and replace them with energy efficient lights.

Replacement of PCB lights with new high efficiency lighting will result in energy cost savings that will repay the investment in new lighting. According to EPA, the costs can typically be recouped in less than seven years depending upon hours of operation and local energy costs. Detailed information on the cost savings



***An intact PCB Light Ballast (typical pre-1979 fluorescent light fixture).***

is available at EPA's Energy Star website at [http://www.energystar.gov/index.cfm?c=business.EPA\\_BUM\\_CH6\\_Lighting](http://www.energystar.gov/index.cfm?c=business.EPA_BUM_CH6_Lighting)

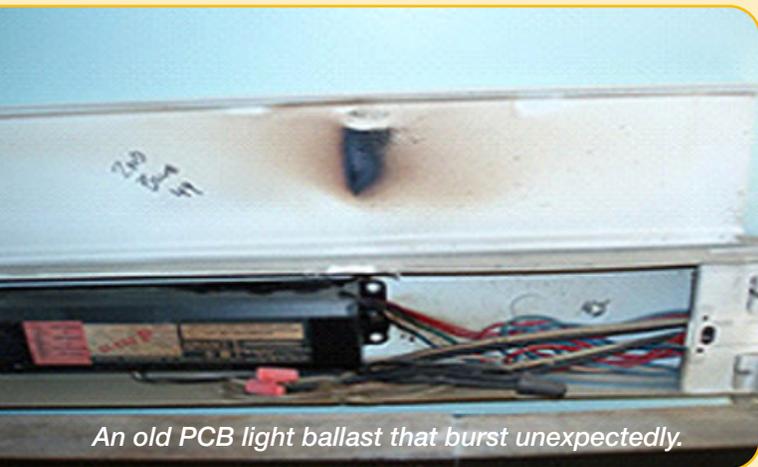
### ***What Funding is Available for Schools to Retrofit Lights?***

There are a variety of programs and resources available to schools for energy efficiency lighting retrofits. These include energy service companies, state and federal programs and local energy service providers. There various programs are described in more detail below.

#### ***Energy Service Companies***

An ESCO, or Energy Service Company, is a business that installs, and arranges financing for projects designed to improve energy efficiency for facilities over a seven to twenty year time period. ESCOs generally act as project developers for a wide range of tasks and assume the technical and performance risk associated with the project.

Typically, they offer the following services: develop, design, and arrange financing for energy efficiency projects; install and maintain the energy efficient equipment involved; measure, monitor, and verify the project's energy savings; and assume the risk that the project will save the amount of energy guaranteed. *These services are bundled into the project's cost and are repaid through the dollar savings generated.* What sets ESCOs apart from other firms that offer energy efficiency, like consulting firms and equipment contractors, is the concept of performance-based contracting. When an ESCO undertakes a project, the company's compensation, and often the project's financing, are directly linked to the amount of energy that is actually saved. Contact the National Association of Energy Service Companies website to find out about ESCO's in your state at <http://www.naesco.org/default.aspx> and look up your area under the "Find a Provider" section.



*An old PCB light ballast that burst unexpectedly.*

### **Federal Energy Star Program**

Energy Star is a joint program of the EPA and the Department of Energy that supports schools, businesses, and organizations in installing energy-efficient lighting technologies with workshops and information. Detailed information is available at EPA's Energy Star website at [http://www.energystar.gov/index.cfm?c=business.EPA\\_BUM\\_CH6\\_Lighting](http://www.energystar.gov/index.cfm?c=business.EPA_BUM_CH6_Lighting)

### **State Programs**

Many states provide incentives for lighting retrofits. You can access your state's individual programs at the Department of Energy's Database of State Incentives for Renewables and Efficiency (DSIRE) at <http://www.dsireusa.org/summarytables/finnee.cfm>. Your school can contact your state's energy commission or department for more information.

### **Local Energy Providers**

Public utilities and private energy companies may offer programs to support energy efficiency improvements such as lighting upgrades, technical assistance, rebates, or other funding assistance. Your school can contact its local energy provider for more information.

*Source: EPA Proper Maintenance, Removal, and Disposal of PCB-Containing Fluorescent Light Ballasts, A Guide for School Administrators and Maintenance Personnel* <http://www.epa.gov/wastes/hazard/tsd/pcbs/pubs/ballasts.htm>

### **EPA Resources**

- EPA's webpage on PCBs in Caulk in Older Buildings is a resource for parents, students, and staff to learn more about PCBs in caulk and how to deal with problem. <http://www.epa.gov/epawaste/hazard/tsd/pcbs/pubs/caulk/index.htm>
- EPA's guide on Proper Maintenance, Removal, and Disposal of PCB-Containing Fluorescent Light Ballasts: A Guide for School Administrators and Maintenance Personnel is a resource for parents, students, and staff to learn more about PCBs in light fixtures and how to deal with problem. <http://www.epa.gov/osw/hazard/tsd/pcbs/pubs/ballasts.htm>
- EPA Region 2's PowerPoint presentation: PCBs in Lighting Fixtures in NYC Schools gives an overview of the problem of PCBs in NYC public schools, the health effects of PCBs, and how schools can utilize lighting energy efficiency

programs to address the situation. State. The power point presentation can be used to educate others about potential problems in your school. <http://chej.org/campaigns/childproofing/resources/conference-calls/nejac-pcb-presentation-5-10-11/>

In addition, EPA Region 2 has a power point presentation specific for New York State that provides more details on health effects of PCBs, and how schools can address the problem. [http://www.cleanairinfo.com/energyefficiencytraining/ny\\_info.html](http://www.cleanairinfo.com/energyefficiencytraining/ny_info.html)

- EPA's fact sheet on PCBs in Schools is a tool that school officials can use to educate staff and children about PCBs. There is a checklist and also a coloring exercise to teach kids how to identify where PCBs maybe located. <http://www.epa.gov/epawaste/hazard/tsd/pubs/pubs/caulk/caulkschoolkit.pdf>

## EPA PCB Regional Contacts

The Environmental Protection Agency (EPA) has ten geographical Regions in the country. EPA has designated Regional PCB Coordinators to oversee the development of PCB light removal efforts in schools within each the Region. The contact information for these offices are listed below.

Region 1 - Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont

Kim Tisa (Regional PCB Coordinator) - 617-918-1527

Marianne Milete (Enforcement) - 617-918-1854

Region 2 - New Jersey, New York, Puerto Rico, US Virgin Islands

Jim Haklar (Regional PCB Coordinator / PCB Disposal) - 732-906-6817

Dan Kraft (PCB Use) - 732-321-6669

Ann Finnegan (Enforcement) - 732-906-6177

Vivian Chin - 732-906-6179

John Brogard (Permits) - 212-637-4162, FAX: 212-637-4437

Region 3 - Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia

Kelly Bunker (Regional PCB Coordinator) - 215-814-2177

Scott Rice (Enforcement) - 304-231-0501

Craig Yussen (Enforcement) - 215-814-2151

Annie Skidmore (Enforcement) 410-305-2640

Kyle Chelius (Cleanups) 215-814-3178

Region 4 - Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee

Ken Feely (Regional PCB Coordination/Permits/Approvals) - 404-562-8512

Russ McLean (Cleanup) - (404) 562-8504

Raj Aiyar (Enforcement) - 404-562-8993

Region 5 - Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin

Peter Ramanauskas (Regional PCB Coordinator / PCB Remediation) - 312-886-7890

David Star (Enforcement) - 312-886-6009

Mary Setnicar (Permitting) - 312-886-0976

Bradley Grams (PCB Use) - 312-886-7747

Region 6 - Arkansas, Louisiana, New Mexico, Oklahoma, Texas

Jim Sales (Regional PCB Coordinator) - 214-665-6796; fax: 214-665-6762

Lou Roberts (Enforcement) - 214-665-7579

Region 7 - Iowa, Kansas, Missouri, Nebraska

Mazzie Talley (Regional PCB Coordinator) - 913-551-7518

Kent Johnson - 913-551-7284

Marc Matthews (Enforcement) - 913-551-7517

Region 8 - Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming

Dan Bench (Regional PCB Coordinator) - 303-312-6027

Francis Tran - 303-312-6036

Kim Le (Enforcement) - 303-312-6973

Region 9 - Arizona, California, Hawaii, Nevada, American Samoa, Guam

Carmen Santos (Regional PCB Coordinator/Cleanup) - 415-972-3360

Max Weintraub (PCB Use) - 415-947-4163

Christopher Rollins (PCB Inspection and Enforcement) - 415-947-4166

Region 10 - Alaska, Idaho, Oregon, Washington

Dan Duncan (Regional PCB Coordinator) - 206-553-6693

Tristen Gardner - 206-553-6050

Linda Meyer (Permits) - 206-553-6636

Dave Bartus (Permits/Hanford/INL) - 206-553-2804

***CHEJ works with communities on environmental health and justice issues across the country. If you are dealing with a PCB contamination issue in your area or need assistance with approaching local officials, contact CHEJ at 703-237-2249 or [chej@chej.org](mailto:chej@chej.org).***