

# TMC ON PCBs

## WHAT ARE PCBs?

PCBs are odorless, tasteless, clear to pale-yellow, viscous liquids (the more highly chlorinated mixtures are more viscous and deeper yellow). They are formed by electrophilic chlorination of biphenyl with chlorine gas. They have high dielectric constants, very high thermal conductivity, high flash points (from 170 to 380 °C. PCBs readily penetrate skin, PVC (polyvinyl chloride), and latex (natural rubber).

PCBs were used as coolants and insulating fluids (dielectric fluids) for electrical transformers and capacitors especially in components of early fluorescent light fittings, plasticizers in paints and cements, stabilizing additives in flexible PVC coatings of electrical wiring and electronic components, pesticide extenders, cutting oils, reactive flame retardants, lubricating oils, hydraulic fluids, sealants (for caulking in schools and commercial buildings), adhesives, wood floor finishes, paints, de-dusting agents, water-proofing compounds, casting agents, vacuum pump fluids, and in carbonless copy ("NCR") paper.

PCBs were widely used for many applications, especially as dielectric fluids in transformers and capacitors and coolants. Due to PCB's toxicity and classification as persistent organic pollutants, PCB production was banned by the United States Congress in 1976.

## WHERE ARE THEY FOUND?

PCBs can be found in many applications. They are most commonly found in:

- Electrical Transformers
- Electrical Light Ballasts
- Electrical Capacitors
- Paints
- Caulking/Sealants
- Oils/Hydraulic Fluids
- Coolants used with high temperature parts manufacturing
- Soil, Marine Sediments, Concrete, Wood/porous Surfaces (Due to spills and/or leaching from PCB contaminated items)



## TMC'S EXPERIENCE WITH PCBs

TMC has performed many PCB remediation projects, which included investigations through remediation of the applications in which they were widely used.

TMC performed its largest PCB remediation project for the Massachusetts Water Resource Authority (MWRA) at the Wachusett Dam in Clinton, MA. This project involved the removal and abatement of PCB contaminated caulking, concrete, effluence, and soil.

TMC has also performed many PCB remediation projects involving electrical transformers that contained PCBs that included soil removal due to releases to the subsurface. TMC performed investigation of PCBs encountered at a High School which resulted in remediation of a drywell and surrounding soils.

**TMC Services, Inc. has been actively engaged on PCB issues with a policy/strategy development process and a project/remediation management system that is above most industry standards, as well as its competitors. Contact us today for information or assistance on this issue.**

## WHAT DANGERS DO THEY POSSESS?

PCBs are a carcinogen and a toxic substance that can be transferred through the skin, leach into soil and sediments, and can be ingested by humans (PCB concentrations have been found in fish).

## HEALTH EFFECTS

PCBs have been demonstrated to cause cancer, as well as a variety of other adverse health effects on the immune system, reproductive system, nervous system, and endocrine system.

## TMC CONTACT

Matthew R. Iovanni  
Business Development Manager  
TMC Services, Inc.  
One William Way  
Bellingham, MA 02019  
Tel: (508) 966-3737  
Cell: (508) 958-3591  
miovanni@hazmatt.com