

From: [James McKenna](mailto:James.McKenna@epa.gov)
To: [Eric Blischke/R10/USEPA/US@EPA](mailto:Eric.Blischke@epa.gov)
Cc: [Kristine Koch/R10/USEPA/US@EPA](mailto:Kristine.Koch@epa.gov)
Subject: Re: Example of Historical source
Date: 10/21/2010 03:12 PM

Thanks Eric, and thank you Kristine for the quick turn-around! Jim.

----- Original Message -----

From: Blischke.Eric@epamail.epa.gov <Blischke.Eric@epamail.epa.gov>
To: James McKenna
Cc: Koch.Kristine@epamail.epa.gov <Koch.Kristine@epamail.epa.gov>
Sent: Thu Oct 21 17:10:41 2010
Subject: Fw: Example of Historical source

Jim, see below from Kristine. She did not have your new email address.

Eric

----- Forwarded by Eric Blischke/R10/USEPA/US on 10/21/2010 03:09 PM

From: Kristine Koch/R10/USEPA/US
To: Gene Revelas <grevelas@integral-corp.com>
Cc: Chip Humphrey/R10/USEPA/US@EPA, Eric Blischke/R10/USEPA/US@EPA, jim.mckenna@portofportland.com
Date: 10/21/2010 02:53 PM
Subject: Example of Historical source

All - As I discussed last Friday, here is an example of historical PCB sources:

Since the 1930's, PCBs have been used as coolants and insulating fluids ('transformer oil') for transformers and capacitors especially in components of early fluorescent light fittings, locomotive electrical transformers, 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 (such as Fabulon and other products of Halowax in the U.S.), paints, de-dusting agents, water-proofing compounds, casting agents, vacuum pump fluids, fixatives in microscopy, surgical implants, and in carbonless copy ("NCR") paper.

In 1973 the use of PCBs was banned in "open" or "dissipative" sources, such as: plasticisers in paints and cements; casting agents; fire retardant fabric treatments and heat stabilizing additives for PVC electrical insulation; adhesives; paints and water-proofing; and railway sleepers. However, they continued to be allowed in "totally enclosed uses" such as transformers, capacitors, vacuum pumps and hydraulic fluids, which, in certain failure modes or out-of-specification conditions, can leak, catch fire, or explode. Due to PCB's toxicity and classification as a persistent organic pollutant, PCB production was banned by the United States Congress in 1979, although some use continues in closed systems.

Historical operations that likely were a source of PCB contamination in the Willamette River sediments includes historical ship repair/refurbishing, scrap metal recycling, transformer refurbishing, leaking transformers and capacitors, road dust suppression. Many historical industrial facilities likely had transformers, hydraulic equipment, or pumps that contained PCB fluids that leaked onto the ground and were subsequently transported to the Willamette River via storm water runoff (either from sheet flow runoff or through conveyed systems). Many of the historical roads were not paved and were "oiled" in the summer dry season for dust suppression. Two known transformer refurbishers, Westinghouse and General Electric, have had releases of PCBs through storm water systems that have currently been controlled.

PGE and PP&L (PacifiCorp) are the main utilities that have managed transformers and substations that have had releases of PCB containing fluids throughout the years. While most of the transformers no longer contain PCB fluids, some do still exist. Current regulatory requirements and practices

minimize the release of PCBs from these potential sources.
Another way this could be split up is by industrial sectors.

Regards,

Kristine Koch
Remedial Project Manager
USEPA, Office of Environmental Cleanup

U. S. Environmental Protection Agency
Region 10
1200 Sixth Avenue, Suite 900, M/S ECL-115
Seattle, Washington 98101-3140

(206)553-6705
(206)553-0124 (fax)
1-800-424-4372 extension 6705 (M-F, 8-4 Pacific Time, only)