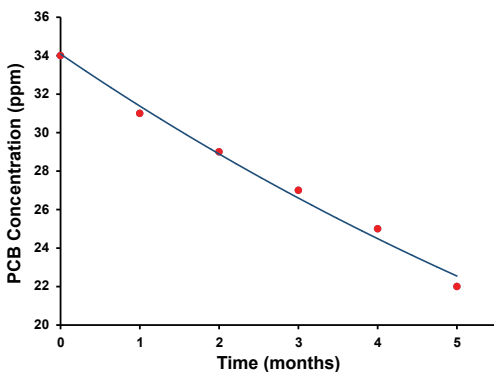




Online PCB Decontamination Unit Successfully Deployed at BC Hydro Substation

Powertech's technology for online extraction of polychlorinated biphenyls (PCBs) from transformer oil was successfully installed and operated at BC Hydro's Cloverdale Substation in Surrey. The mobile, self-contained unit was installed in the fall of 2015 on a working 50-year-old transformer, and was outfitted with PCB removal and oil purification cartridges. **In a limited 5-month trial, the unit lowered the PCB level from 34 parts per million (ppm) to 22 ppm, and improved the quality of the oil by removing impurities, acids, and moisture.**



Development and field testing of the PCB purification unit was supported as a joint project between Powertech, BC Hydro's Office of the Chief Technology Officer (OCTO) and BC Hydro T&D.

"This project was a good platform for moving this technology from R&D to implementation," says Elisa Figueroa, specialist engineer in BC Hydro's Asset Management & Strategy, T&D Group. "It is showing great potential to significantly reduce PCB levels in our transformer fleet in a cost effective way with the added benefit of improving aged oil quality."

PCBs

PCBs are chemical compounds that were widely used as insulating fluids in electric equipment until the 1970s, when their use was prohibited due to environmental concerns. However, PCBs remain in many legacy electric components (usually in very low levels as contamination), and managing PCB compounds in power transformers and other electrical equipment remains a constant challenge for utilities. Canadian utilities face an urgency due to federal regulations specifying an end-of-use date of 2025 for equipment contaminated with over 50 ppm PCBs.

Online PCB Decontamination

Powertech's PCB decontamination unit is innovative and the only one of its kind on the market for the online extraction of PCB compounds from transformer oil. The unit uses extraction cartridges with proprietary absorbent technology to selectively remove PCBs from the oil of an operating power transformer without taking the transformer out of service and without dealing with thousands of liters of oil contaminated with PCBs. Decontaminating transformer oil is more cost effective than purchasing new, and the process allows for reuse of the existing transformer oil, avoiding costly disposal of contaminated transformer carcasses and lowering environmental impact.

ABOUT POWERTECH LABS:

Powertech Labs Inc. is one of the largest testing and research laboratories in North America, situated in beautiful British Columbia, Canada. Our 11-acre facility offers 15 different testing labs for a one-stop-shop approach to managing utility generation, transmission and distribution power systems.

Outside of the utilities industry, Powertech provides routine testing capabilities, product development, research and consulting services to support an array of industrial-type operations, electrical equipment manufacturers and automotive original equipment manufacturers.

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