

Title: 2023 Report on PCBs in Schools

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Committee: House or Senate Committees
on Natural Resources

Authorizing Law #: 2022 Act
166

Section #: codified at Sec. 8

Executive Summary

Polychlorinated biphenyls (PCBs) are human-made chemicals used in building materials and electrical equipment before 1980 when the U.S. Environmental Protection Agency (EPA) banned manufacturing and certain uses of PCBs. PCBs are categorized as known human carcinogens. Exposure to PCBs have been associated with neurological impairments, including autism and attention deficit and anxiety disorders as well as affects to the nervous, immune, reproductive and endocrine (hormone) systems. Children and adolescents are particularly vulnerable. PCB levels in the indoor air of schools should be kept as low as possible.

Schools renovated or built before 1980 are more likely to have PCBs present in their building materials. Caulk, paint, glues, plastics, fluorescent lighting ballasts, transformers and capacitors are examples of products that may contain PCBs.

In 2021, Vermont law [Act 74](#) required all schools built or renovated before 1980 to test their indoor air for PCBs. The Vermont Department of Environmental Conservation (DEC) has the authority to require schools to make fixes that will lower exposure to PCBs, if levels are found at or above the school action level. Under [Act 178](#), Section 3, funds have been set aside for funding the investigation, testing, assessment, remediation and removal of PCBs in schools.

The Department of Health (Health) and Sites Management Section (SMS) have developed an inventory and sampling program. School sampling began in summer 2022. Guidance for schools have been developed and distributed. [Results are publicly available online](#). To date, 35 of 324 known schools have been approved to implement sampling. Current sampling efforts have been completed for 19 schools and identified 5 schools where further assessment and mitigation activities are needed.

Key Takeaways

- The School Sampling Program has been created to include key stages to assess the building and identify if PCB containing building materials are present and causing a release of PCBs to indoor air.

If PCBs are present the program has created a pathway to address impacts to indoor air that allow a school to continue in person learning and move towards addressing the PCB sources.

- A schedule for testing of schools is available on DEC's [website](#). Inventory and sampling can occur when school is in session. Additional considerations are being included in the schedule for schools to ensure that sampling can occur within upcoming sampling and construction schedules. To date, the majority of sampling has occurred outside of operating hours.
- All schools are inventoried by an environmental consultant to determine building materials which could contain potentially contain PCBs. Spaces in the schools are put into groups with similar potentially PCB-containing materials, where 30% of the spaces in each group will have their indoor air sampled. Indoor air sampling plans are provided to DEC for approval. Protocols for indoor air sampling are prescribed [here](#)
- All indoor air samples are collected by the same sampling method (EPA Method TO-10A) and analyzed by the same analytical method (EPA Method 8082).
- To date 19 schools have been sampled.
 - 15 schools had results in indoor air below the School Action Level for their school.
 - 5 schools had results in indoor above the applicable School Action Level for their school.
- School response actions related to detections of PCBs in their school have been to reduce occupancy of identified rooms or spaces to hiring environmental consultants to identify the sources of the PCBs, mitigate sources of PCBs and work towards removal of PCB sources.
- Results for all schools sampled are available [here](#).
- Costs to conduct PCB Indoor Air sampling has ranged from \$7,741 to \$60,548. These costs may not reflect the full amount of work needed to characterize the school to determine the best remedial approach.
- Estimated costs based on other PCB projects indicate that assessment costs can vary widely depending on the extent of the contamination and ability to readily identify sources. Costs for assessment can range from \$10,000 to several hundred thousand dollars.
- Estimated costs for cleanup can also vary widely depending on the extent and level of contamination from tens of thousands to millions of dollars.
- A proposal directed towards a funding response when the presence of PCBs in a school are identified as well as proposed financial assistance from the State to schools to implement a required

response is provided in the report required by Sec. 3 of Act 178 (PCB Funding Plan) that was filed concurrently with this report.

Discussion

DEC is requesting a one-year extension to complete all of the indoor air sampling. This extension would allow the end date to be extended from July 2025 to July 2026. This request is supported by the following:

Estimated time for the work from start to completion (inventory to indoor air sampling results received) is not being achieved due to multiple issues that will persist. Most notably is that staffing shortages and changing staff are prevalent in the environmental consulting community; the labs are taking longer to provide the data and scheduling access to the schools to conduct the work (inventory and sampling) is taking more time than was considered. Original estimates assumed work could occur in 8 weeks, actual timeframes are closer to 12-16 weeks.

Adding the extension also allows for DEC, Health and AOE staff to provide needed technical resources to schools, consultants and the public to clearly communicate results and the next steps to ensure all stakeholders fully understand and can address the work that needs to be conducted when PCBs are detected. Through the first six months of the school PCB testing program, we have learned schools, particularly those with concentrations of PCBs that exceed the action level, require intensive technical, communications and logistical support. Increased time spent with each school increases DEC workload beyond what was anticipated. The recent COVID pandemic drastically changed a school's learning environment. Schools are concerned the sampling program will bring the same hardships. DEC recommends extending the sampling completion date to July 2026.

In July 2021 \$4.5M was allocated to DEC to implement the school sampling program and have it completed by 2024. While there is not an immediate issue with respect to sampling costs, DEC has used current real costs for schools to project forward the total potential cost to implement the sampling program and based on these costs it is likely that the \$4.5M will not be sufficient to complete the school sampling program.