

Indoor Air Testing for Polychlorinated Biphenyls (PCBs) in Vermont



1



Discussion Points

2012-2013 Vermont School Pilot Study

Burlington High School

Legislation

101 on how to build a new, innovative, only one in the nation program

School Program

Non-School Program

Questions

2



2012-2013 Vermont School Pilot Test

- § Aware of potential for PCBs to be present in schools in VT
- § Collaborate with VDH and Education to identify schools to test, identify a sampling protocol and health-based screening values for indoor air
- § VDH provided a screening value of 15 ng/m³ (total Aroclors)
- § Sampled four schools across VT for PCBs in indoor air that were built or renovated before 1980
- § Indoor air samples were collected via TO 10A



3

2013 Vermont School Pilot Test Results

Barre Town Elementary

- 23 indoor air samples collected;
- 3 samples had detections; all others were ND;
- Detected concentrations were 33 ng/m³, 56 ng/m³ and 130 ng/m³; and
- VDH determined that these levels were not a significant health threat because the average indoor air concentration was below 15 ng/m³.

Champlain Elementary School, Burlington

- 20 indoor air samples collected;
- 4 samples had detections; all others were ND;
- Detected concentrations were 27 ng/m³, 32 ng/m³, 36 ng/m³ and 65 ng/m³
- VDH determined that these levels were not a significant health threat because the average indoor air concentration was below 15 ng/m³.



4

2013 Vermont School Pilot Test (cont)

- Holland Elementary
 - 10 indoor air samples collected
 - All samples were ND
- Mt Anthony, Bennington
 - 24 indoor air samples collected
 - All samples were ND



Burlington High School



Burlington High School

- August 17, 2020, Spill Team notified of a release of PAHs and PCBs (>50PPM) in soil above standards. PCBs attributed to building materials.
- August 19, 2020, Agencies request IA sampling....working through who has regulatory authority - EPA? VDH? DEC?
- September 1, 2020, approve workplan for IA sampling.
- September 9, 2020, preliminary data received.
- Indoor Air concentrations Range from ND-6,300ng/m3.
- September 10, 2020, all classes go remote.

* Remember this was after all classes were remote from March 2019 to June 2020

Burlington High Scrambles After Air Tests Detect Cancer-Causing Chemicals



7

A Little BHS History

- Eight Buildings (A, B, C, D, E, F, G) and a Wood Chip Plant, 32 acres
- A-E Constructed 1963-1964, Building F in 1965, Building G in 1988, Wood Chip Plant 2002
- BHS was planning a renovation of the school and sampling was conducted to inform disposal costs.
- BHS team conducted TSCA compliant soil sampling plan.
- Collected 1,033 Building Material Samples
 - 803 bulk (ND-275,000PPM)
 - 230 substrate (ND-820PPM)
- Moved Classes to vacant Macy's Building (next to a former Dry Cleaner).
- Prepared a pilot study for remediation....BHS decides to demolish school and rebuild.

New Burlington high school could cost more than \$200M



8

H.439 -2021 Legislative Session

Sec. E.709.1 ENVIRONMENTAL CONTINGENCY FUND;

POLYCHLORINATED BIPHENYLS (PCBs) TESTING IN SCHOOLS

(a) Notwithstanding 10 V.S.A. § 1283, of the funds transferred in Sec. D.101(a) of this act to the Environmental Contingency Fund, the Department of Environmental Conservation, in consultation with the Department of Health and the Agency of Education, shall use up to \$4,500,000 to complete air indoor quality testing for Polychlorinated Biphenyls (PCBs) in public schools and approved and recognized independent schools that were constructed or renovated before 1980. All schools subject to this subsection shall test for PCBs on or before July 1, 2024. It is the intent of the General Assembly to develop additional guidance during the 2022 legislative session.

Sec. E.709.2 10 V.S.A. § 1283(g)(3) and § 6602(17) are amended to read:

(3) "Release" means any intentional or unintentional action or omission resulting in the spilling, leaking, pumping, pouring, emitting, emptying, dumping, or disposing of hazardous materials into the surface or groundwaters, or onto the lands in the State, or into waters outside the jurisdiction of the State when damage may result to the public health, lands, waters, or natural resources within the jurisdiction of the State. "Release" also means the intentional or unintentional action or omission resulting in the spilling, leaking, emission, or disposal of polychlorinated biphenyls (PCBs) from building materials in a building or structure.



9

What's the Plan? 101 on Building a Regulatory PCB program



10

Outcomes of Legislation (July 2021.... March 2022)

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|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| 1) Create Interagency TEAM and define roles and responsibilities | 1) DEC, VDH, AOE, EPA |
| 2) Money to conduct sampling –Contract with Env. Consultants | 2) Six Consultants ready to go |
| 3) Changes Definition of Release – Regulate more than just schools.... | 3) This impacts VTDEC BRELLA sites.....create guidance. Find \$\$ to help implement sampling. |
| 4) Requires a standard for PCBs in Indoor Air (Schools and Non-Schools) | 4) Derive School Action Levels (SAL), Immediate Action Level (IAL) and Remediation Action Level (RAL) |
| 5) Requires guidance documents (Schools and Non-Schools) | 5) Technical Documents and FAQs prepared! |
| 6) Requires an understanding of how many schools will need to be sampled | 6) Surveys to schools (320 and counting) |
| 7) Management and data presentation needs | 7) New PCB database ready to collect all school data and present to the public |
| 8) Assistance for schools | 8) Contract with University of Iowa |
| 9) Interim Standards require adoption into RULE within 2 years | 9) Start prep for IRULE revisions for finalization by February 2024 |



School Sampling Program

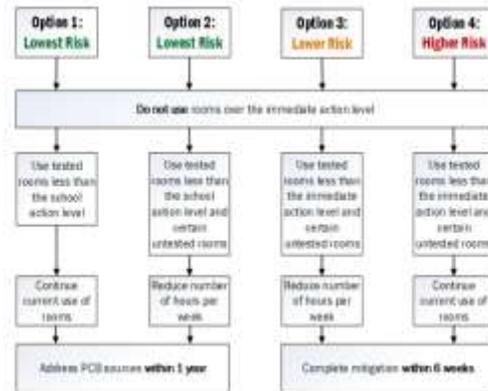
- § Prioritization of Schools for sampling
- § All schools need to have a pre-sampling inventory
https://dec.vermont.gov/sites/dec/files/wmp/Sites/Pre_Sampling_Building_Inventory.xlsx
- § Inventory informs grouping of spaces for sampling
https://dec.vermont.gov/sites/dec/files/wmp/Sites/02.2.22_pcb_s_technical_overview.pdf
- § School Action Levels derived for age groups
<https://www.healthvermont.gov/sites/default/files/documents/pdf/ENV-PCB-school-action-level-development.pdf>

Table 1. PCB School Indoor Air Action Levels ng/m³

	Pre-Kindergarten	Kindergarten to Grade 5	Grade 7 to Adult
School Action Level	30	60	300

School Sampling Program Occupancy Options

• <https://www.healthvermont.gov/sites/default/files/documents/pdf/ENV-PCB-short-term-occupancy-options-development.pdf>



13



Non-School Sampling Program

- § All buildings need to have a pre-sampling inventory
- § https://dec.vermont.gov/sites/dec/files/wmp/Sites/Pre_Sampling_Building_Inventory.xlsx
- § Inventory informs grouping of spaces for sampling
- § Regulatory Action Level derives resident and non-resident interim environmental media standard (22.5 ng/m³)
- § Background study of buildings constructed after 1985
- § Guidance document for BRELLA sites including Phase I



14

The TEAM

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DO YOU WANT TO JOIN THE TEAM?

DEC IS HIRING A PCB COORDINATOR!!!!

<https://bit.ly/3gfws1>

