



PCB testing at U-32 Middle High School

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**DEPARTMENT OF ENVIRONMENTAL CONSERVATION
AGENCY OF EDUCATION
DEPARTMENT OF HEALTH**



What are PCBs?

PCBs = polychlorinated biphenyls

- PCBs are manmade chemicals used in building materials

PCBs were banned by EPA in 1979

- PCBs do not break down quickly in the environment

Vermont law requires all schools built before 1980 to be tested for PCBs in indoor air

PCBs can affect our health in many ways



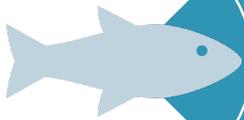
Cancer

- Breast
- Liver
- Melanoma

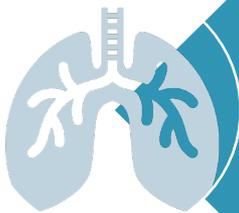
Noncancer

- Immune
- Reproductive
- Nervous
- Endocrine

Sources of Exposure



PCBs in our diet (Fish, Meat,
Dairy Products)



Indoor Air or dust that
contains PCBs



Skin Contact with Materials
that contain PCBs



School Action Levels

The Vermont School Action Levels (SALs) are:

- 30 nanograms per cubic meter (ng/m^3) for PreK
- 60 ng/m^3 for Kindergarten - 6th grade
- 100 ng/m^3 for 7th grade through adult

The Vermont Immediate Action Levels (IALs) are:

- 90 nanograms per cubic meter (ng/m^3) for PreK
- 180 ng/m^3 for Kindergarten - 6th grade
- 300 ng/m^3 for 7th grade through adult



Framework

- Environmental consultant conducts school inventory
- Include like spaces into groups
 - Spaces comprised of like potentially PCB containing materials grouped together
 - Spaces comprised of similar heating and cooling systems
 - Spaces of similar construction and renovations
- 30% of all rooms in a group will be tested
- Grouping rooms together based on similar building materials allows us to:
 - Extrapolate data from tested rooms to untested rooms
 - Provide schools with several occupancy options to balance keeping kids in schools with a healthy learning environment

Picture of Indoor Air Sampler for PCBs



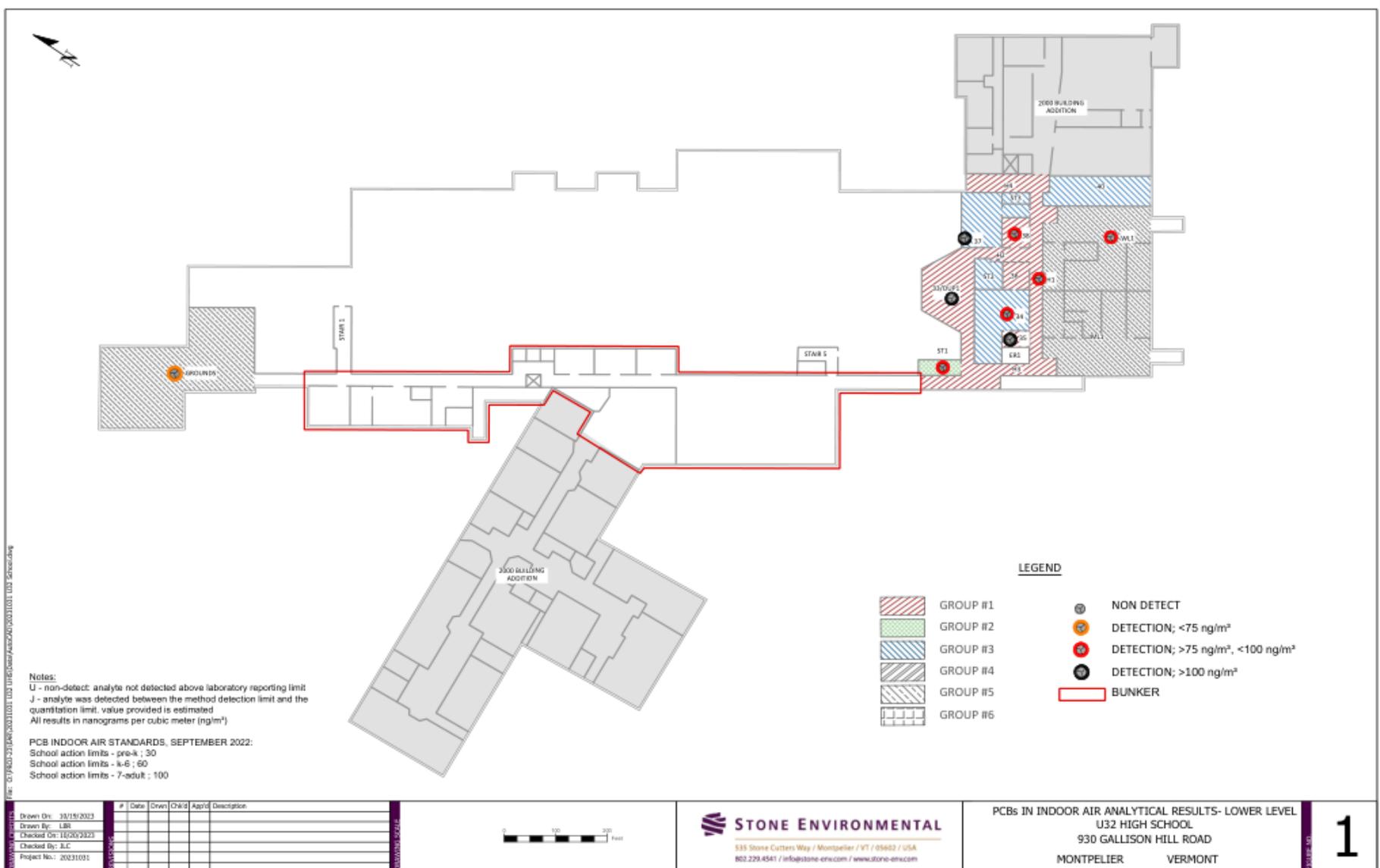


Results from Indoor Air Sampling

Detections of PCBs:

- Basement
 - Range (46 - 130 ng/m³)
 - Number of spaces sampled (9)
- Ground Floor
 - Range (27 - 210 ng/m³)
 - Number of spaces sampled (37)
- Upper Floor
 - Range (17 - 170 ng/m³)
 - Number of spaces sampled (22)

U32 Grouping



U32 Grouping



Notes:
 U - non-detect: analyte not detected above laboratory reporting limit
 J - analyte was detected between the method detection limit and the quantitation limit, value provided is estimated
 All results in nanograms per cubic meter (ng/m³)

PCB INDOOR AIR STANDARDS, SEPTEMBER 2022:
 School action limits - pre-k ; 30
 School action limits - k-6 ; 60
 School action limits - 7-adult ; 100

LEGEND

	GROUP #1		NON DETECT
	GROUP #2		DETECTION; <75 ng/m ³
	GROUP #3		DETECTION; >75 ng/m ³ , <100 ng/m ³
	GROUP #4		DETECTION; >100 ng/m ³
	GROUP #5		
	GROUP #6		

#	Date	Drawn	Checked	App'd	Description
1	10/15/2022	LIB			
2	10/20/2022	LIB			
3					
4					
5					



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PCBs IN INDOOR AIR ANALYTICAL RESULTS - UPPER LEVEL
 U32 HIGH SCHOOL
 930 GALLISON HILL ROAD
 MONTPELIER VERMONT

Next Steps

Hire an Environmental Consultant

The SU has hired Stone Environmental consulting services to identify sources of PCBs in the school and address those sources to lower the levels of PCBs in indoor air.

Purchase Air Filtration Units

The SU has initiated the purchase of carbon air filters for each impacted space to use in the short term while our consultants work with us to identify and remediate the PCB sources.

Adopt Occupancy Strategy

With the steps taken above, the SU has chosen an occupancy strategy which does not require a change in use of the impacted spaces for the duration of this project, unless future data dictates otherwise. **This decision is supported by the Health Department, Department of Environmental Conservation, and Agency of Education.**

Next Steps

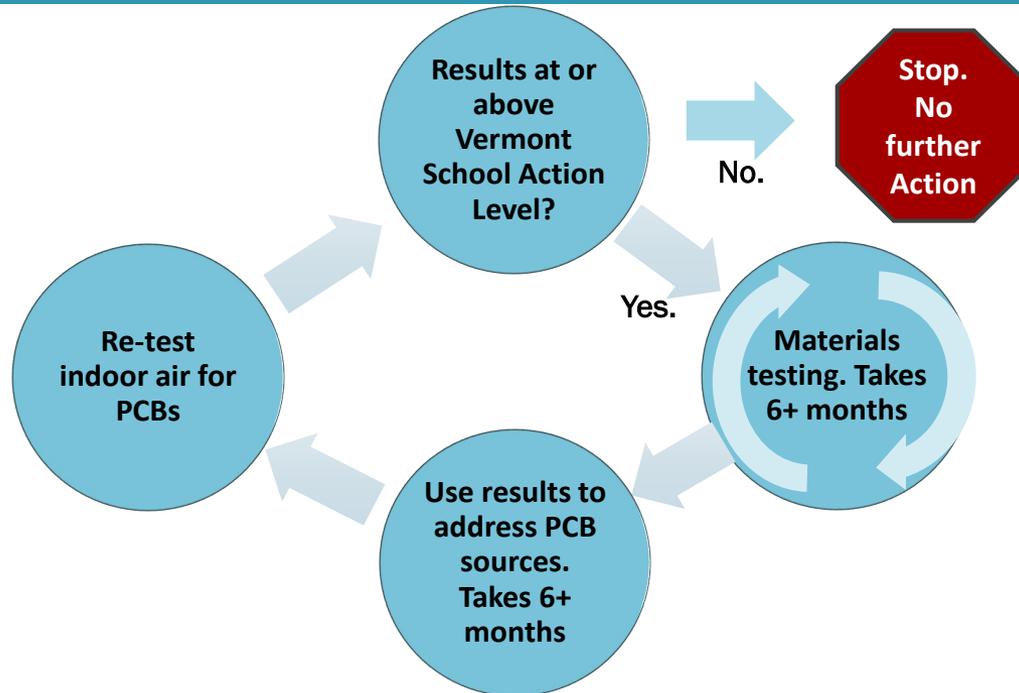
Develop Investigation and Remediation Plans

Working with the state agencies and Stone Environmental the SU will develop a plan to address impacted rooms. Once a final plan is completed, it will be shared with the school community.

Additional Indoor Air Testing

Further indoor air testing strategies will be developed to evaluate the effectiveness of the filters, rooms with results near the SAL and / or rooms not tested.

Timeline of Material Sampling



Materials testing is collecting building materials to be tested for PCBs. This can be an iterative process.

Work can occur on school breaks, weekends and other times when school is not in session.

Your hired consultant will conduct work under state direction and approval.



Questions?

- Find **more information about PCBs**, including the complete test results, at dec.vermont.gov/pcb-schools.
- For **testing and test results questions**, email SOV.PCBSampling@vermont.gov.
- For **health-related questions**, email AHS.VDHPCBSchoolSampling@vermont.gov.