



PCB testing in schools

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Commissioner

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PCBs can affect our health in many ways



Cancer

- Breast
- Liver
- Melanoma

Noncancer

- Immune
- Reproductive
- Nervous
- Endocrine

PCBs increase our risk of getting cancer

PCBs cause malignant melanoma, and are associated with non-Hodgkin lymphoma, breast and liver cancer.

- Environmental Protection Agency:
probable human carcinogens
- International Agency for Research on Carcinogens:
carcinogenic to humans
- National Toxicology Program:
reasonably anticipated to be human carcinogens
- National Institute for Occupational Safety and Health:
potential occupational carcinogens

PCBs have negative effects on the immune system

- Studies have revealed serious effects on the immune system after exposure to PCBs:
 - Significant decrease in the size of the thymus gland, which is critical to immune systems of infants
 - Reductions in the response of the immune system
 - Decreased resistance to Epstein-Barr virus and other infections
- PCBs suppress the immune system, which is thought to be a reason why PCBs also cause cancer.

PCBs have long-lasting effects on the reproductive system

- Studies have shown potentially serious effects on the reproductive system:
 - Reduced birth weight
 - Reduced conception rate
 - Reduced live birth rates
 - Reduced sperm counts
- High exposure to PCBs in certain populations showed:
 - Decreased birth weight
 - Significant decrease in gestational age

PCBs have negative effects on nervous system development

- Proper development of the nervous system is critical for early learning and can impact the health of individuals throughout their lives.
- Studies have shown PCBs affect nervous system development:
 - Significant and persistent deficits in neurological development, including visual recognition, short-term memory and learning
 - Learning deficits and changes in activity after exposure to PCBs

PCBs can impact the level of thyroid hormone

- Thyroid hormone levels are critical for normal growth and development.
- Studies have shown that PCBs:
 - Decrease thyroid hormone levels, which results in developmental deficits, including decreased hearing
 - Are associated with changes in thyroid hormone levels in infants

PCBs in school air is a significant contributor to PCB exposure

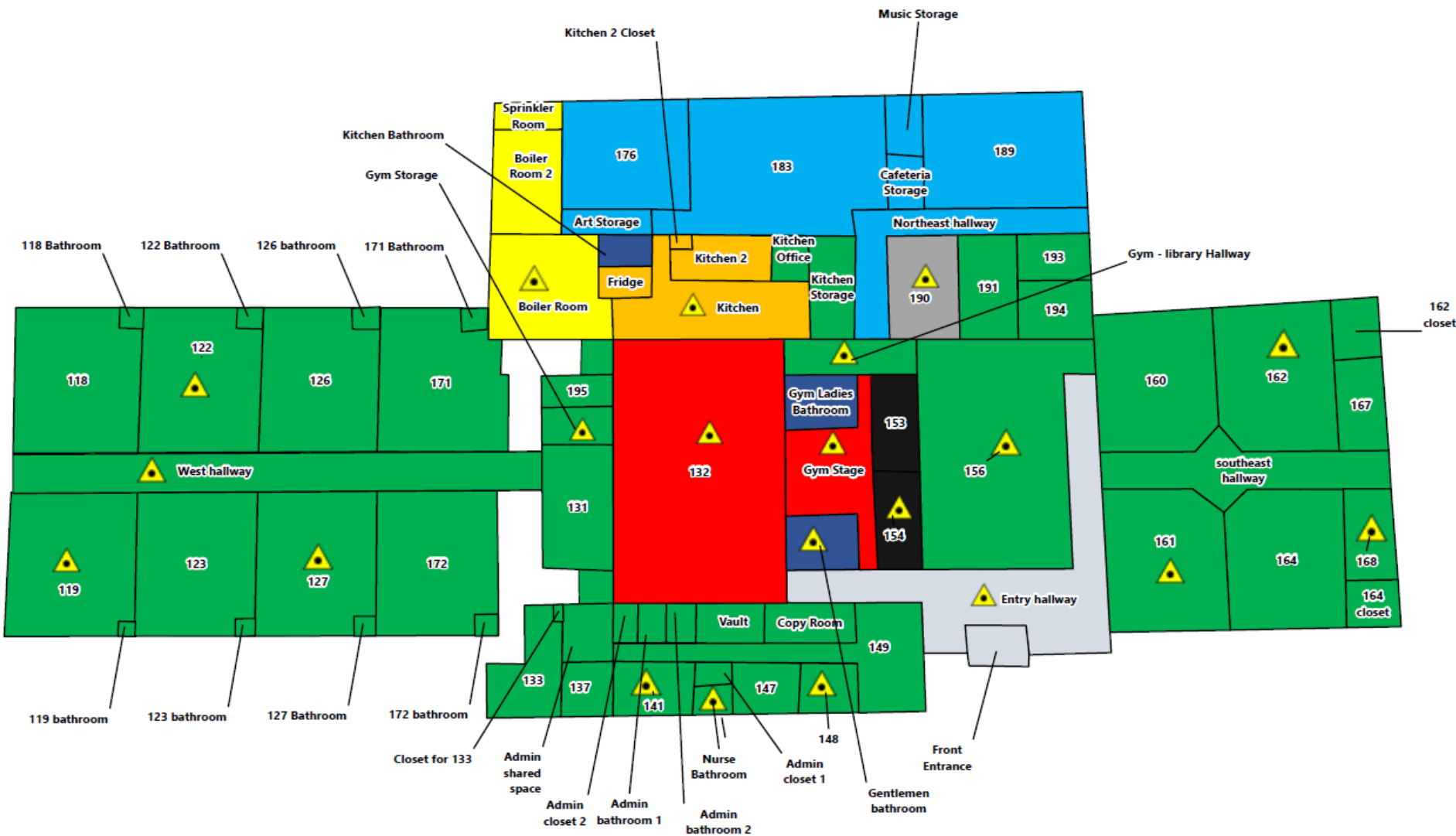
High levels of PCBs in school indoor air represent the biggest source of exposure for students and staff.

Vermont levels for PCBs in indoor air are based on EPA's framework and levels

	Vermont	US EPA
	Air level (ng/m ³)	
Screening level: <i>health based</i>	15	<u>5</u>
Action level: <i>risk management</i>	30 – 100 (regulatory)	<u>100 – 600</u> (not regulatory)
Immediate action level: <i>needs immediate attention</i>	90 – 300	<u>490</u>

Vermont framework starts with building materials inventory and grouping process

- The State is paying for the first round of testing for PCBs in schools.
- 30% of all rooms in a school can 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



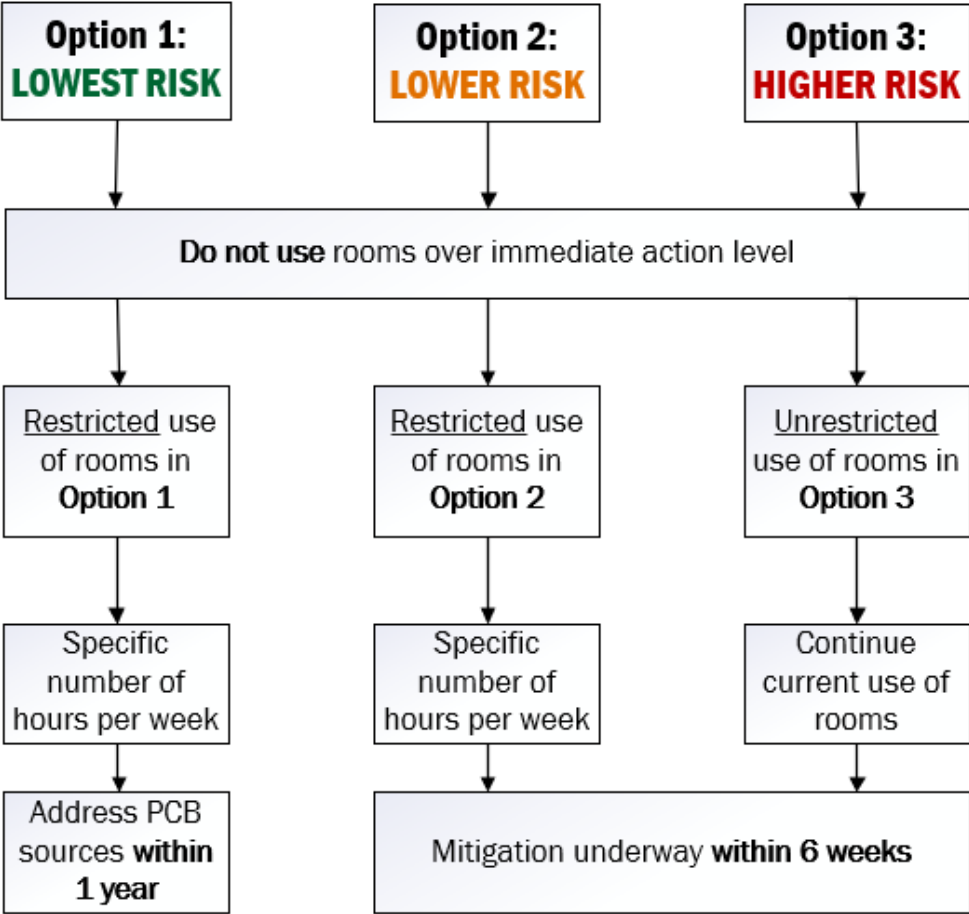
▲ Proposed Indoor Air Sample

- 1
- 2
- 3

- 4
- 5
- 6

- 7
- 8
- 9

Occupancy options depend on the results within the group and the level of risk the community is willing to accept



Room	Group	Result (ng/m ³)	Option 1 30 hours PreK	Option 1 37 hours K-6	Option 1 No limit 7-Adult	Option 2 30 hours PreK	Option 2 37 hours K-6	Option 2 No limit 7-Adult	Option 3 No limit PreK	Option 3 No limit K-6	Option 3 No limit 7-Adult
Room 200	10	Not Tested	Use	Use	Use	Use	Use	Use	Use	Use	Use
Room 201	10	Not detected	Use	Use	Use	Use	Use	Use	Use	Use	Use
Room 203	10	120	Not use	Not use	Not use	Use	Use	Use	Use	Use	Use
Room 206A	10	Not Tested	Use	Use	Use	Use	Use	Use	Use	Use	Use
Room 205	10	Not Tested	Use	Use	Use	Use	Use	Use	Use	Use	Use
Room 102	11	Not Tested	Use	Use	Use	Use	Use	Use	Use	Use	Use
Room 103	11	Not detected	Use	Use	Use	Use	Use	Use	Use	Use	Use
Gym	12	Not detected	Use	Use	Use	Use	Use	Use	Use	Use	Use
Stage	12	Not Tested	Use	Use	Use	Use	Use	Use	Use	Use	Use
Room 103A	13	Not Tested	Not Use	Not Use	Not Use	Use	Use	Use	Use	Use	Use
Room 103B	13	Not Tested	Not Use	Not Use	Not Use	Use	Use	Use	Use	Use	Use
Room 112	13	110	Not use	Not use	Not use	Use	Use	Use	Use	Use	Use
Room 112A	14	Not detected	Use	Use	Use	Use	Use	Use	Use	Use	Use

PCBs are a problem across the country – but Vermont is the only state addressing it

HEALTH & FITNESS

Parents outraged after Malibu district asks for extension to remove PCB from 2 schools



Saturday, December 15, 2018



OCTOBER 05, 2016

NEW REPORT FROM SENATOR MARKEY DETAILS WIDESPREAD PRESENCE OF TOXIC CHEMICALS IN NATION'S SCHOOLS

Toxic PCBs Festered at This Public School for Eight Years as Students and Teachers Grew Sicker

The EPA and others warned about potential contamination as far back as 2014. But Washington state law does not require schools or health departments to act on those findings.

abc7.com/malibu-high-school-santa-monica-unified-district-pcb-ruling/4902476/

www.markey.senate.gov/news/press-releases/new-report-from-senator-markey-details-widespread-presence-of-toxic-chemicals-in-nations-schools

www.diva-portal.org/smash/record.jsf?pid=diva2%3A1473516&dsid=7324

www.propublica.org/article/toxic-pcbs-festered-at-this-public-school-for-eight-years-as-students-and-teachers-grew-sicker

Testing schools for PCBs needs to continue

- Pausing creates inequality in the system – some schools have tested and have to remediate.
- We have set up a comprehensive testing program – setting it up again could waste time and resources.
- **Pausing testing does not stop exposure to harmful chemicals that have known serious health effects.**



Questions?