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 EPAs framework and levels

<table>
<thead>
<tr>
<th>Screening level: health based</th>
<th>Vermont</th>
<th>US EPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air level (ng/m^3)</td>
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<table>
<thead>
<tr>
<th>Action level: risk management</th>
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<tbody>
<tr>
<td>Air level (ng/m^3)</td>
<td>30 – 100 (regulatory)</td>
<td>100 – 600 (not regulatory)</td>
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<table>
<thead>
<tr>
<th>Immediate action level: needs immediate attention</th>
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<th>US EPA</th>
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<tr>
<td>Air level (ng/m^3)</td>
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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
Occupancy options depend on the results within the group and the level of risk the community is willing to accept.

- **Option 1: LOWEST RISK**
  - Do not use rooms over immediate action level
  - Restricted use of rooms in Option 1
    - Specific number of hours per week
    - Address PCB sources within 1 year

- **Option 2: LOWER RISK**
  - Do not use rooms over immediate action level
  - Restricted use of rooms in Option 2
    - Specific number of hours per week
    - Mitigation underway within 6 weeks

- **Option 3: HIGHER RISK**
  - Do not use rooms over immediate action level
  - Unrestricted use of rooms in Option 3
    - Continue current use of rooms
<table>
<thead>
<tr>
<th>Room</th>
<th>Group</th>
<th>Result (ng/m³)</th>
<th>Option 1 30 hours PreK</th>
<th>Option 1 37 hours K-6</th>
<th>Option 1 No limit 7-Adult</th>
<th>Option 2 30 hours PreK</th>
<th>Option 2 37 hours K-6</th>
<th>Option 2 No limit 7-Adult</th>
<th>Option 3 No limit PreK</th>
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PCBs are a problem across the country – but Vermont is the only state addressing it

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

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.diva-portal.org/smash/record.jsf?pid=diva2%3A1473516&dswid=7324
www.propublica.org/article/toxic-pcbs-festered-at-this-public-school-for-eight-years-as-students-and-teachers-grew-sicker

Vermont Department of Health
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?