



The Nelson A. Rockefeller Center
at Dartmouth College

*The Center for Public Policy
and the Social Sciences*

The Class of 1964 **Policy Research Shop**

PCB Testing in Vermont Public Schools

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This report was written by undergraduate students at Dartmouth College under the direction of professors in the Rockefeller Center. Policy Research Shop (PRS) students produce non-partisan policy analyses and present their findings in a non-advocacy manner. The PRS is fully endowed by the Dartmouth Class of 1964 through a class gift in celebration of its 50th Anniversary given to the Center. This endowment ensures that the Policy Research Shop will continue to produce high-quality, non-partisan policy research for policymakers in New Hampshire and Vermont.





Introduction

- PCBs: thickener, insulator, non-flammable
- Use in building materials
- 2021: ~350 Vermont schools required to test
- Science, testing and remediation, stakeholder perspectives
- New York City case study



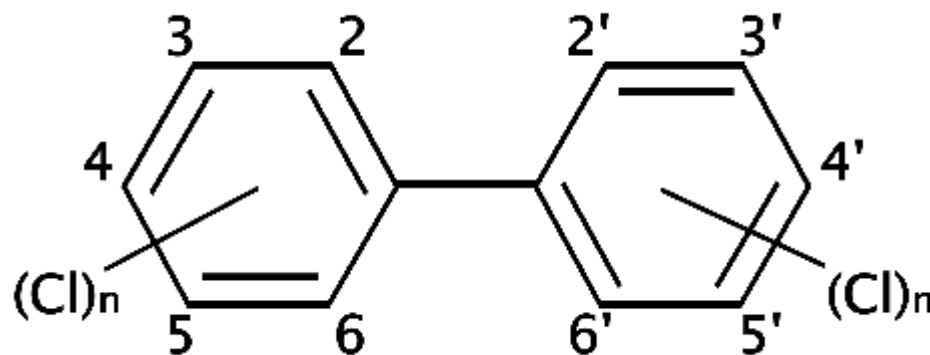
Purpose Statement

- **Scientific landscape:** emphasis on airborne PCBs
- **Testing and remediation:** abatement, mitigation
- **Stakeholder perspectives:** VT, U.S. sentiment
- **NYC:** challenges and successes of similar program



Scientific Landscape: Non-Indicated Effects

- 209 congeners: lower- and higher-chlorinated
- **Immune:** suppressed response
- **Reproductive:** infertility
- **Endocrine:** diabetes, obesity
- **Nervous:** cognitive, ADHD, ASD





Scientific Landscape: Indicated Effects

- **Body burden:** increased concentrations (LC congeners)
- **Carcinogenicity:** mixed findings, research needed
- **Neurological:** learning and behavioral changes
- **Endocrine:** hormone homeostasis effects
- **Prenatal exposure:** major malformations, cryptorchidism



Remediation: Testing & Options

- Indoor Air Quality Testing
- Abatement
- Mitigation
- HEPA filters
- Costs





Remediation: Analysis of U.S. School Action

- No EPA testing requirement, but must remediate
- Many schools discovering PCBs
- 12 schools analyzed
 - 6 temporarily closed
 - \$14,000 - \$195 million
 - Pursued litigation



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Stakeholder Perspectives

- BHS demolished and relocated to Macy's
- Parents angry at closure; district suing Monsanto
- Litigation at Sky Valley, WA: large awards
- NH sues Monsanto





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Stakeholder Perspectives: Vermont School Leaders

- Straightforward testing process
- Challenging to be first
- Concern over funding
- No Macy's available in small towns
- Impact on students





NYC Schools Case Study - Testing

- Pilot study with the EPA
- Gathered testing during variety of times, conditions, spaces
- Prioritized south-facing walls, heating elements, other risks
- Explored passive sampling





NYC Schools Case Study - Remediation

- Used pilot study results to create remediation guidance:
 - Best Management Practices (BMP) is most effective
 - Includes constant tracking, cleaning, ventilation
- Must combine remediation techniques





NYC Schools Case Study – Stakeholder Perspectives

- Attention and fear arose at beginning
- Lack of information and outrage at public response –
10 years -> 5 years
- NYC improved transparency
 - Letters home
 - Citizen Participation Plan





Recommendations

- Further scientific research needed
- Best Management Practices
- Combination of abatement and mitigation
- Increase reimbursable funding for mitigation
- Transparency: public input