


Vermont

Department of Environmental Conservation

Case Studies

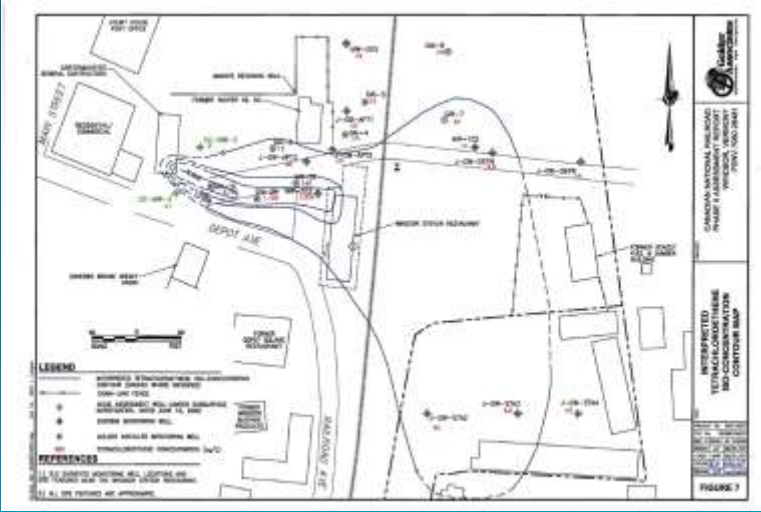
Vermont Vapor Intrusion Workshop
May 13, 2014

Waste Management Prevention Division



NEWMOA Vapor Intrusion Workshop

Downtown Windsor, VT



Downtown Windsor, VT



Figure 7: Site Map With Shallow Soil Gas Tetrachloroethene (ug/m³)
Windsor, Vermont

Downtown Windsor, VT



Figure 8: Site Map With Deep Soil Gas Tetrachloroethene (ug/m³)
Windsor, Vermont

Downtown Windsor, VT

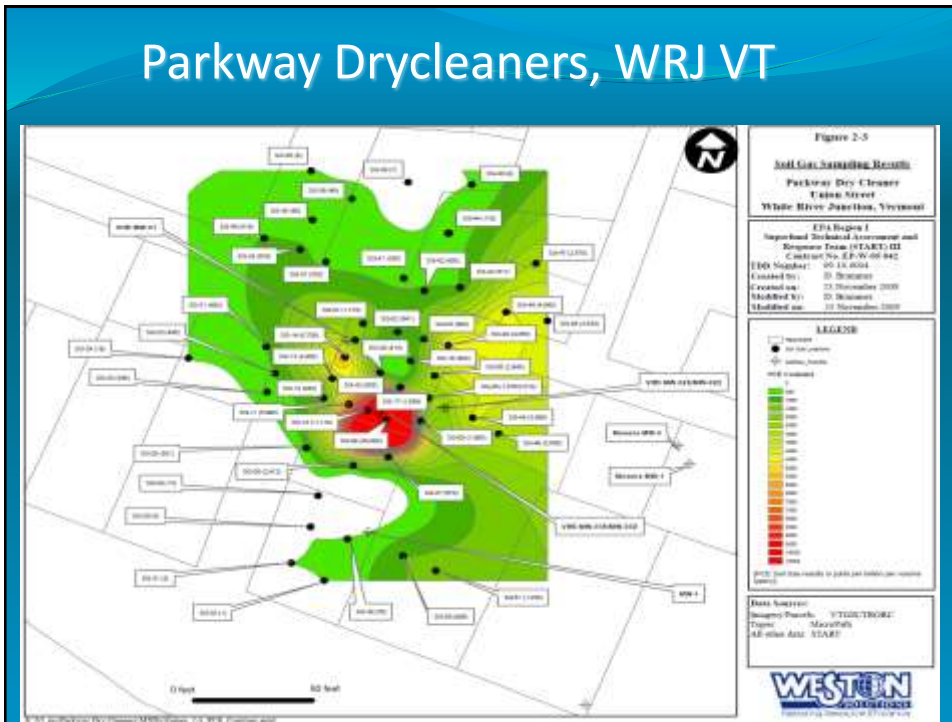


Figure 2: Site Map With Indoor Air Quality Results for tetrachloroethene (aggr)
 Windsor, Vermont

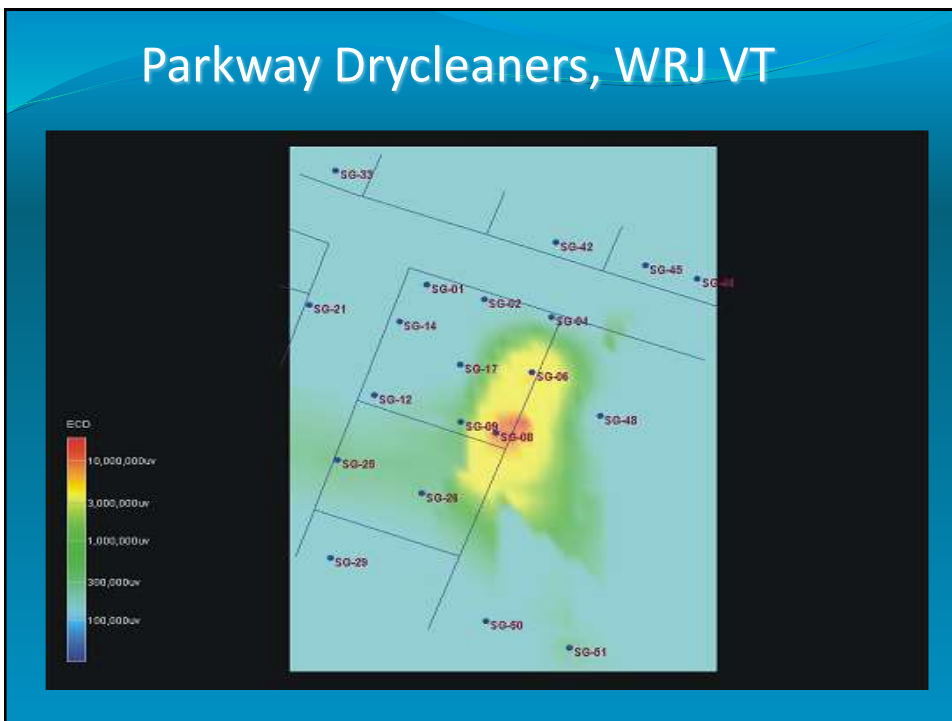
Parkway Drycleaners, WRJ VT



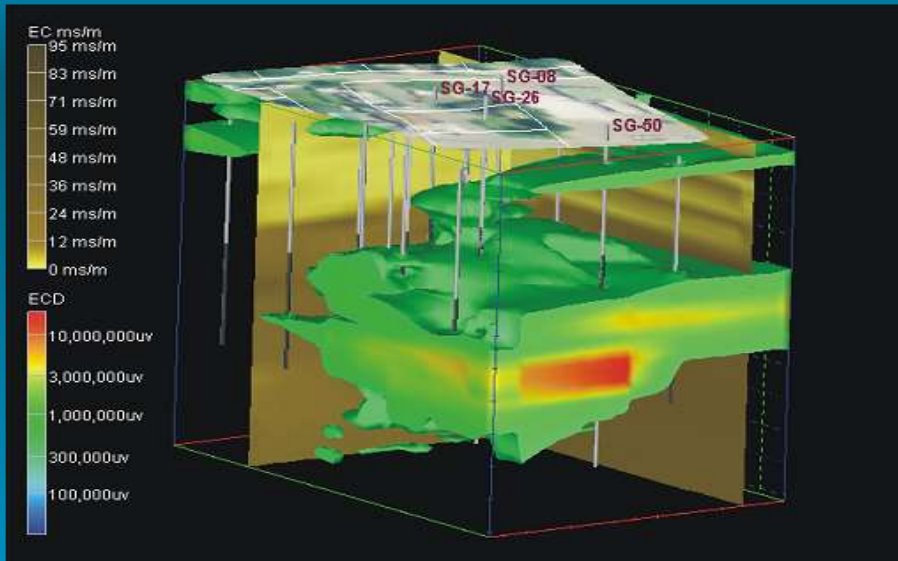
Parkway Drycleaners, WRJ VT



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Not all vapor issues at sites contaminated with volatile compounds are caused by vapor intrusion alone.

If the facility used large amounts of volatile compounds, VI issues may be compounded when the building materials are saturated with the compound

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Case Study: Staco, Poultney, VT.

Thermometer manufacturer:

- Mercury in two building and soils outside of the building
- Mercury in town sewer system, workers septic systems, workers homes
- Consent decree required remediation of soils, groundwater, sewer lines, septic systems, workers homes, and buildings.
- Owners wanted to be able sell the property so they needed to have functional buildings.



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Both buildings had elevated levels of Mercury in the indoor air.

- All interior walls and fixtures were removed, what was left was cleaned: Hg exceeds standards.
- They gave up on one building.
- All interior sheathing and insulation was removed: Hg exceeds standards.
- The top +/- inch of the concrete floor was removed: Hg exceeds standards.
- Coated the floor with a thick layer of epoxy:
 - Mercury vapors met standards.

(First Brownfields Site completed in VT).



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Case Study: Maska, US,
Bradford, VT



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Case Study: Maska, US, Bradford, VT

Two clothing manufacturing companies occupied this site from the 1970's through late 1990's.

- Channel Mills: "High Fashion" Velour and Double-knit clothing:
 - They didn't have the best PCE handling procedures including reportedly mopping the floors with PCE (floor drains to on-site septic).
- Maska US: NHL Hockey uniforms:
 - They didn't have the best PCE handling procedures, including discharging Solvent Recovery still waste water to floor drains, washing still bottoms in the sinks, etc....



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Consent Decree required groundwater, soil and vapor remediation.

- Remediation included: SVE, Air Sparging, Low-Tech Thermal, Excavation:
- Significant effect on groundwater. Long term monitoring is occurring.
- Vapors remain an issue in the building both from VI and from building materials.
- Building is sitting unoccupied as no one wants to move in, and it is too expensive to dismantle.



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Questions?

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