



Recent Groundwater Results & Next Steps at Dewey & Olympia Ave Neighborhood

Joseph F. LeMay, PE
Project Manager, U.S. EPA
January 26, 2011



Presentation Topics

- Overview of Wells G & H Superfund Site
- Recent Groundwater Results
- Vapor Intrusion Pathway
 - What is it?
 - How are samples collected?
- Next Steps
- Questions

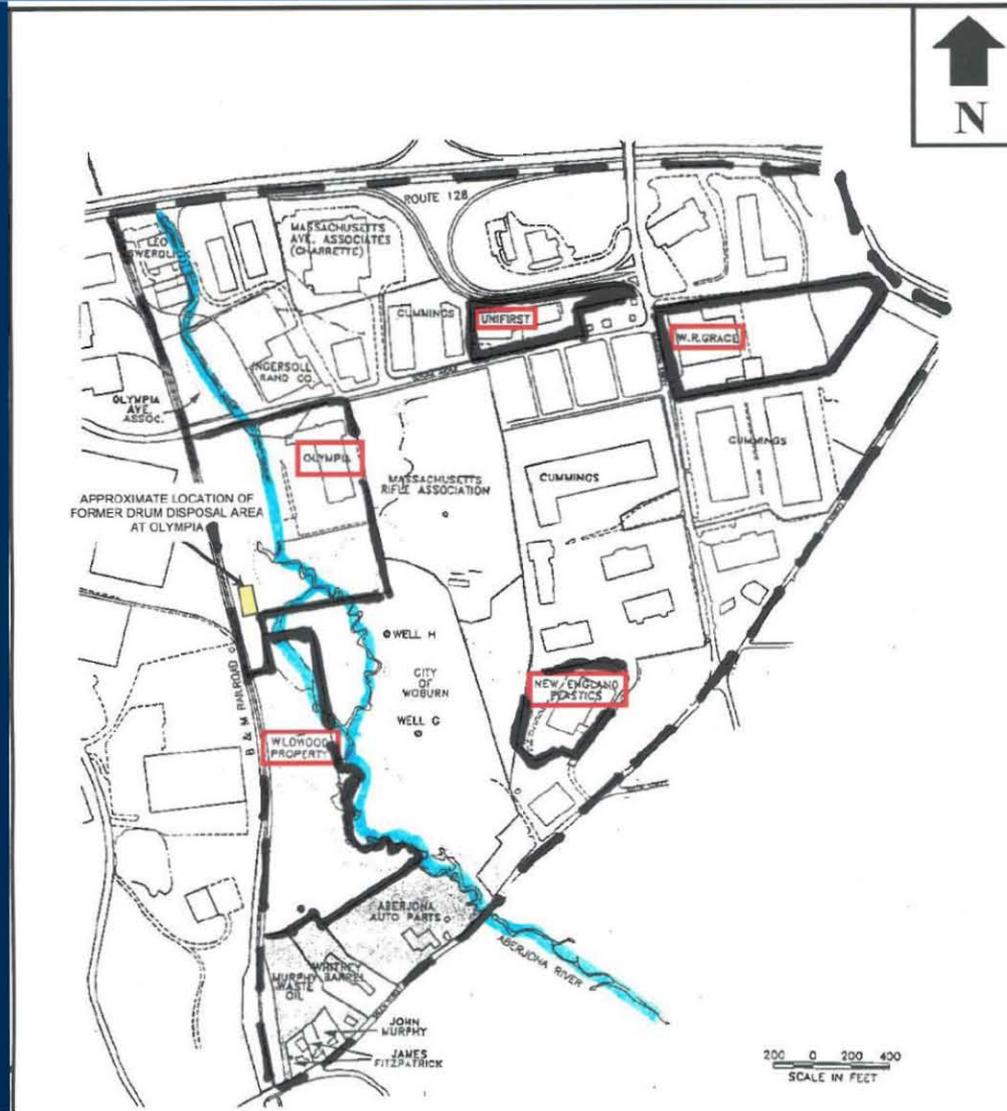


Overview of Wells G&H Superfund Site

- Brief History
 - 5 Source Areas within Site
 - Volatile Organic Compounds in Groundwater and Soil
 - Concentrations have declined as a result of actions of UniFirst, Grace, NEP, Wildwood, Olympia
 - EPA evaluates protectiveness of superfund site cleanups at least every 5 years in “Five Year Review” Reports



Overview of Wells G&H Superfund Site





Overview of Wells G&H Superfund Site

- Cleanup Actions
 - Ongoing Groundwater Pump & Treatment
 - UniFirst > 350 Million Gallons (since 1992)
 - W.R. Grace > 60 MG (since 1992)
 - Wildwood > 100 MG (since 1998)
 - Soil Treatment or Removal
 - New England Plastics (1998-1999)
 - Wildwood (1994)
 - Olympia (2004, ongoing)



Overview of Wells G&H Superfund Site

- Historical Indoor Air Sampling in Neighborhood
 - 1989 – 3 Residences
 - 1991 – Day Care Facility
 - Conclusion – No Public Health Concern
- Groundwater Concentrations Reduced since 1989/1991 Sampling

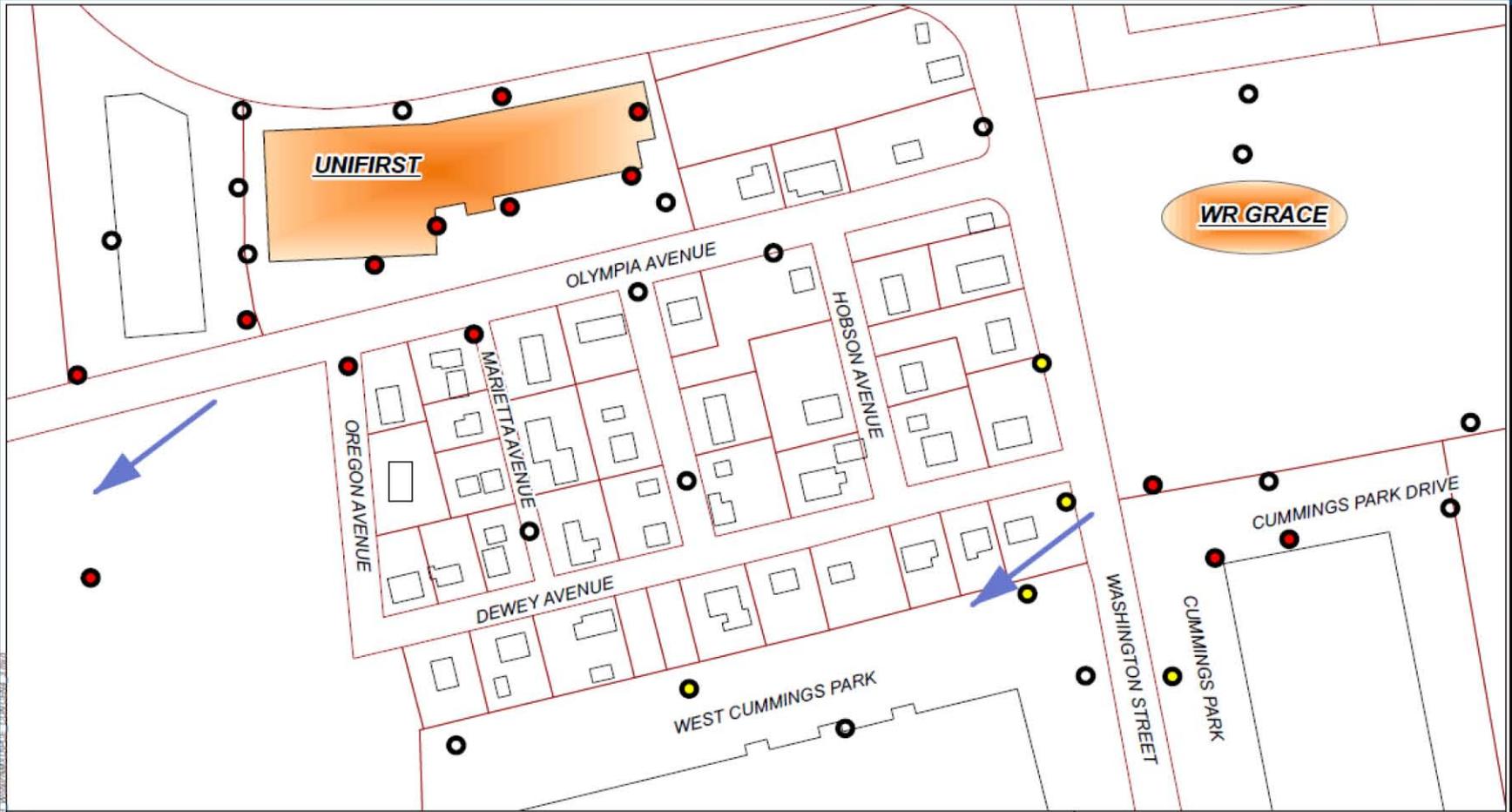


Five Year Review (FYR) Report September 2009

- <http://www.epa.gov/region1superfund/sites/wellsggh/457903.pdf>
- **Some Potential Issues with SA Properties:**
 - Persistent Remaining Contamination
 - Limited Current Groundwater Data beyond OU1 SA Properties
 - Optimize treatment systems to comprehensively achieve cleanup objectives



FYR leads to 2010 Groundwater Well Installation in Neighborhood



1 inch = 110 feet
0 50 100 150 Feet

Natural Groundwater Flow Direction
Building Footprints

Parcel Lines
Existing and new wells (2010)
PCE Concentrations above 5 parts per billion
Dry Wells

Base map: Parcels; MASSGIS; Borings and Wells
adpated from GEO Trans INC (November 2010)

**DEWEY & OLYMPIA AVE
NEIGHBORHOODS SHALLOW
GROUNDWATER INVESTIGATIONS**

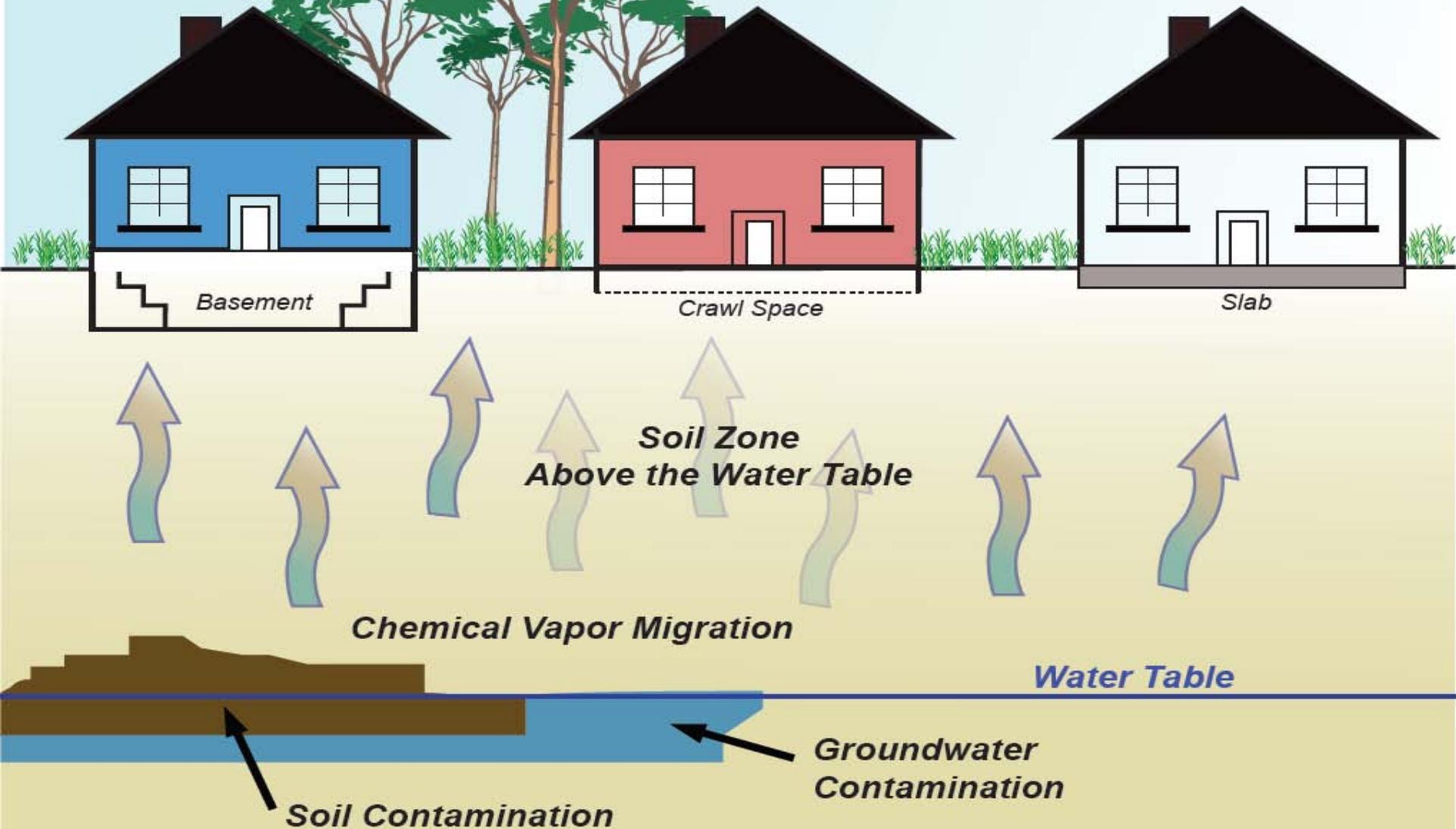


2010 Groundwater Data

- Some wells Exceed Drinking Water Standard for Tetrachloroethylene (PCE) of 5 ug/L
- EPA recommends sub-slab and indoor air sampling in some buildings near PCE
- UniFirst & WR Grace agree to perform sampling and laboratory analysis with EPA oversight
- Sampling is precautionary but necessary to evaluate vapor intrusion pathway



Vapor Intrusion Illustration



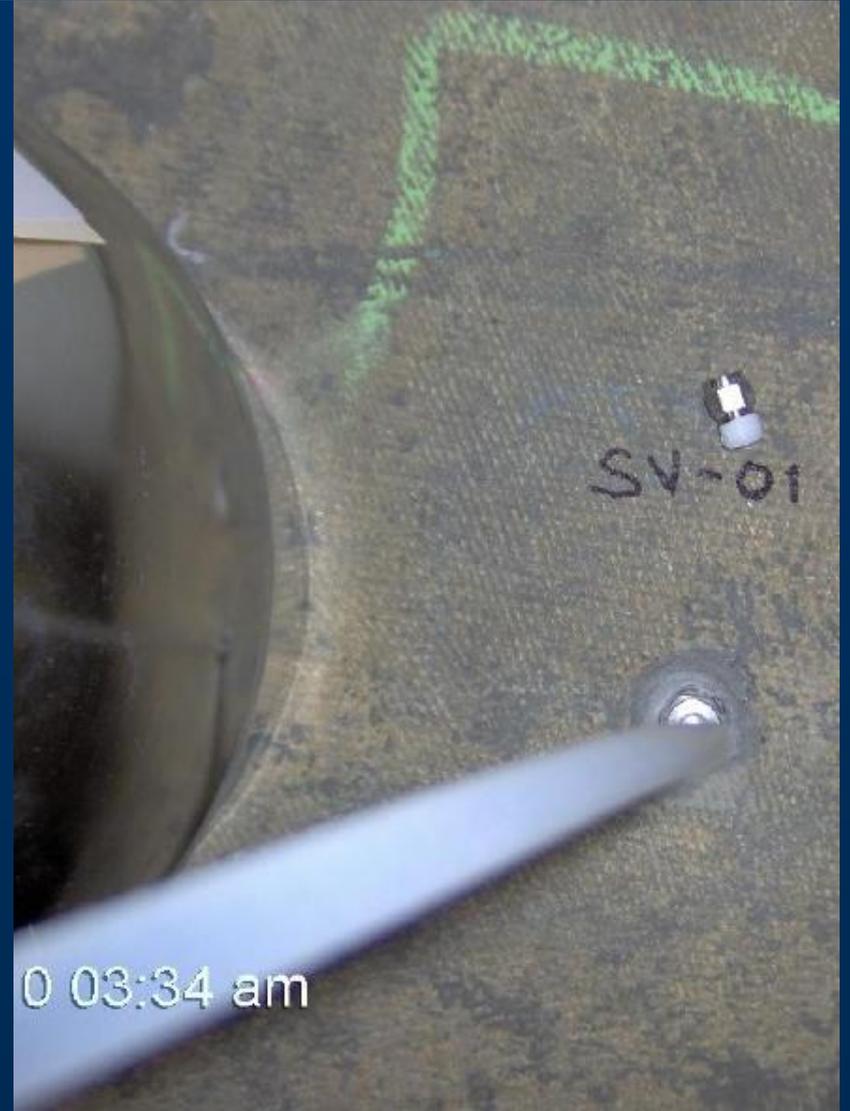


Vapor Intrusion Pathway Considerations

- Groundwater, Sub-Slab and Indoor Air Concentrations
- Outside Air Concentrations
- Household Products (dry cleaning, cleaners, paints, gasoline, etc)
- Consumer Activities (hobbies involving chemicals, etc)
- Building Materials
- Laboratory Contaminants



Vapor Sampling



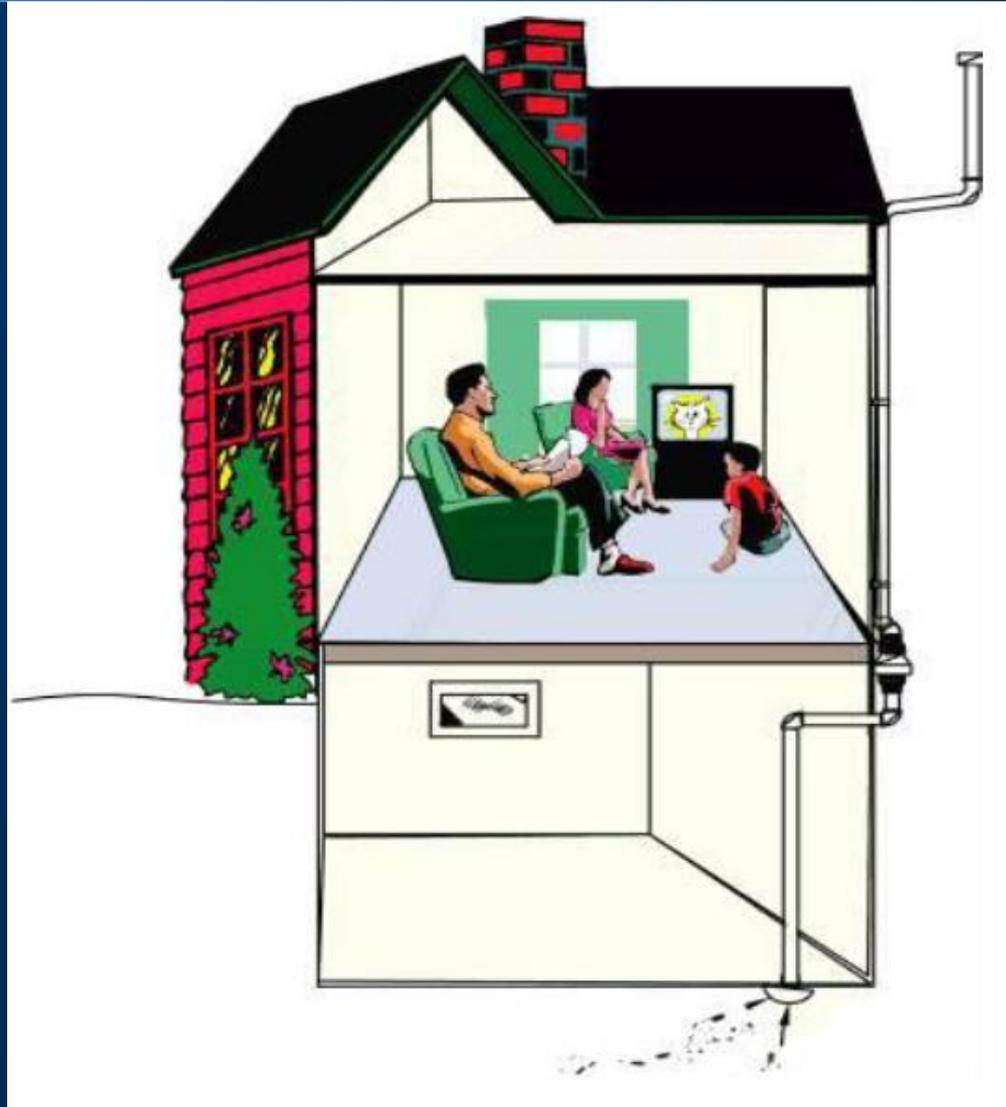


Next Steps

- Obtain permission for sampling from property owners
- Collect Sub-Slab and Indoor Air Samples
 - 2 rounds: heating season (Feb 2011); and non-heating season (Spring/Summer 2011)
- Evaluate Data
- Communicate Results (2 - 3 months)
- EPA Wells G&H Site Web Page
<http://www.epa.gov/region1/superfund/sites/wellsgh>



Example - Vapor Intrusion solutions similar to radon systems





EPA & MassDEP Contacts

Joseph F. LeMay, P.E.
Remedial Project Manager
U.S. EPA Region 1 – New England
Five Post Office Square
Suite 100 (mail code: OSRR07-4)
Boston, MA 02109-3912
Telephone # 617.918.1323
Email: lemay.joe@epa.gov

Doug Gutro
Public Affairs Coordinator
U.S. EPA Region 1 – New England
Five Post Office Square
Suite 100 (mail code: ORA01-1)
Boston, MA 02109-3912
Telephone # 617.918.1021
Email: gutro.doug@epa.gov

Joseph Coyne
Project Manager
1 Winter Street
Boston, MA 02109
Telephone # 617.348.4066
Email: joseph.coyne@state.ma.us