East Troy Contaminated Aquifer Site

Troy, Ohio

Miami County

July 15, 2010

Topics

- Background
- Past U.S. EPA Actions
- Next Steps

U.S. EPA Investigation Area, Troy, Ohio
4W
12W
Troy West Well Field
3W
18
16
14
18
4E
17
13
City of Troy East Well Field
E Water Street
E Main Street
E Franklin Street
E Canal Street
Crawford Street
Clay Street
New Street
Counts Street
Frank Street
Staunton Road
State Route 55
Fernwood Drive
Mystic Lane N
Mystic Lane S
Longwood Drive
Terry Drive
Union Street
Young Street
South Street
W Ross Street
E Ross Street
1 inch = 1,000 feet
N
Legend
ProductionWell
U.S. EPA Site Investigation Area

Ground Water ≠ Drinking Water

- GROUND WATER refers to untreated sub-surface waters, and NOT to the finished, treated DRINKING WATER supplied to the customers of the Troy Water Plant

- Troy's DRINKING WATER is SAFE.
  - There have been NO DETECTIONS of the volatile organic compounds PCE nor TCE above the EPA safe drinking water criteria in the Troy treated DRINKING WATER.

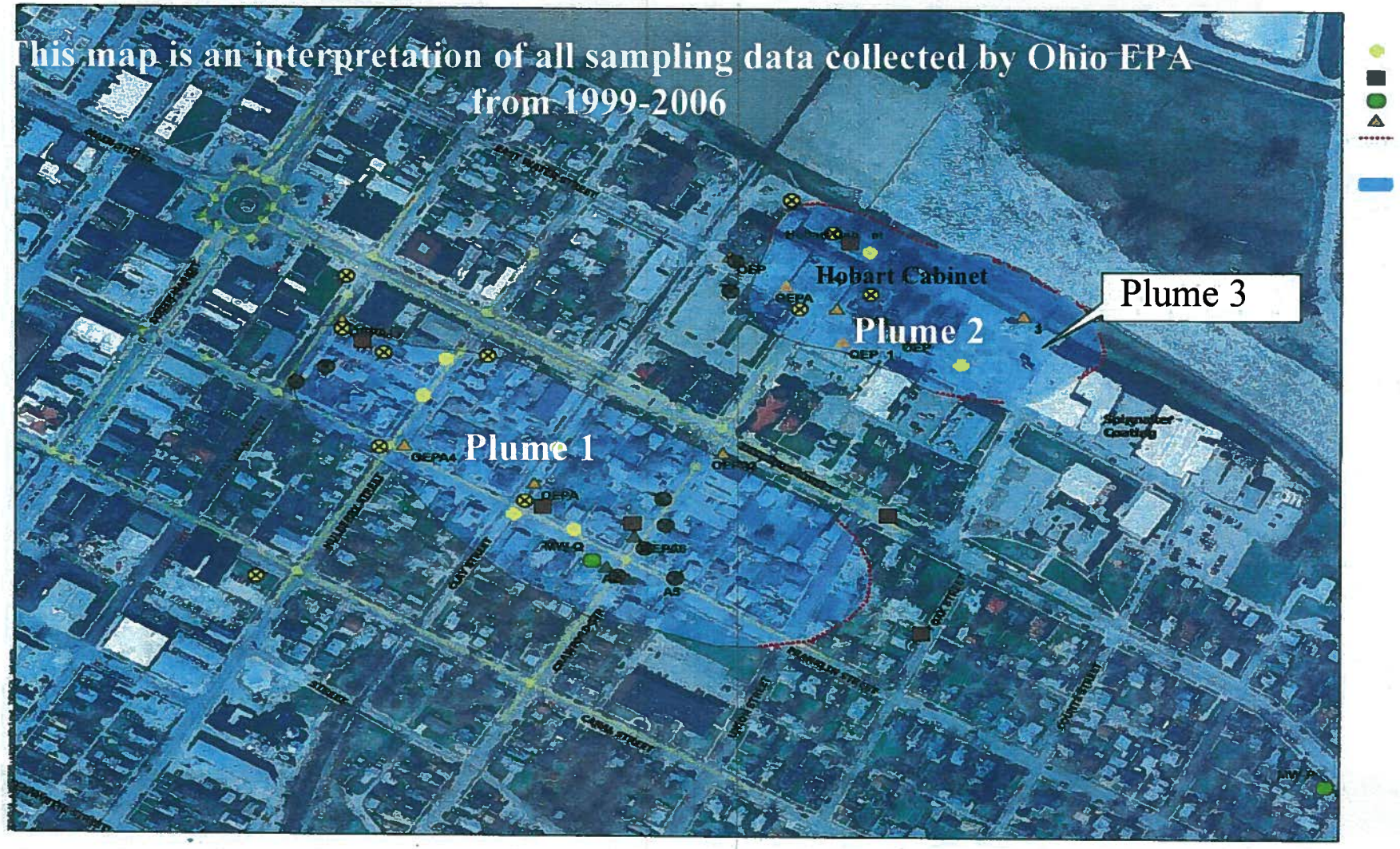
Background – EPA Investigation Area

- Site includes, but <u>is not</u> limited to, a 20-block area where volatile organic compounds (VOCs) are present in groundwater, soil, and indoor air of some buildings
- Primary contaminants in groundwater are PCE (used in dry cleaning and to a lesser degree TCE (used as a metal degreaser)

What we know:

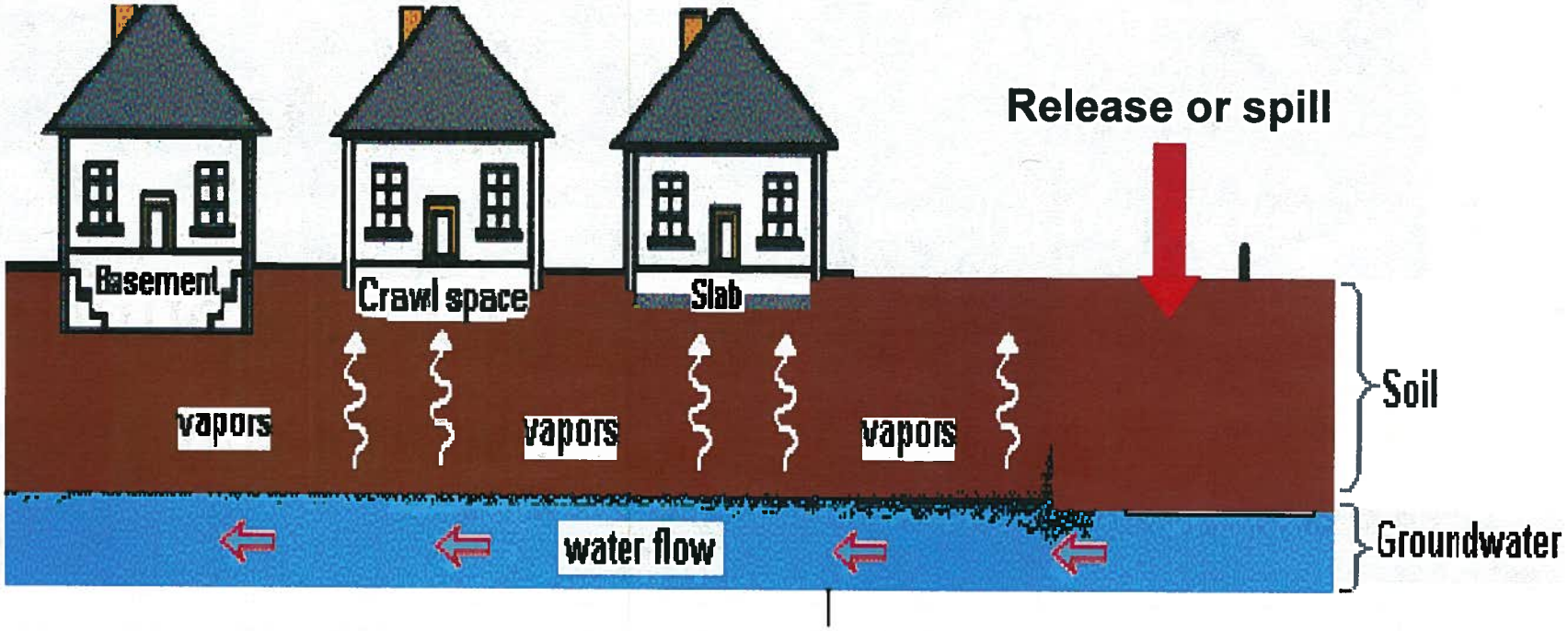
- Three areas where groundwater (not drinking water) is contaminated primarily with PCE and to a lesser extent TCE. These areas are called "groundwater plumes"
  - Plume #1- in residential area between Main and Canal Streets, and Walnut and Union Streets; highest PCE concentration at intersection of Franklin, on Clay and Crawford Streets
  - Plume #2 – along Water street; highest PCE concentration Water and Crawford streets by Hobart Cabinet, St. Patrick's school
  - Plume #3 – on Spinnaker property (primarily TCE, cis-1,2-DCE)

What we know:
Groundwater Plumes



What we know:

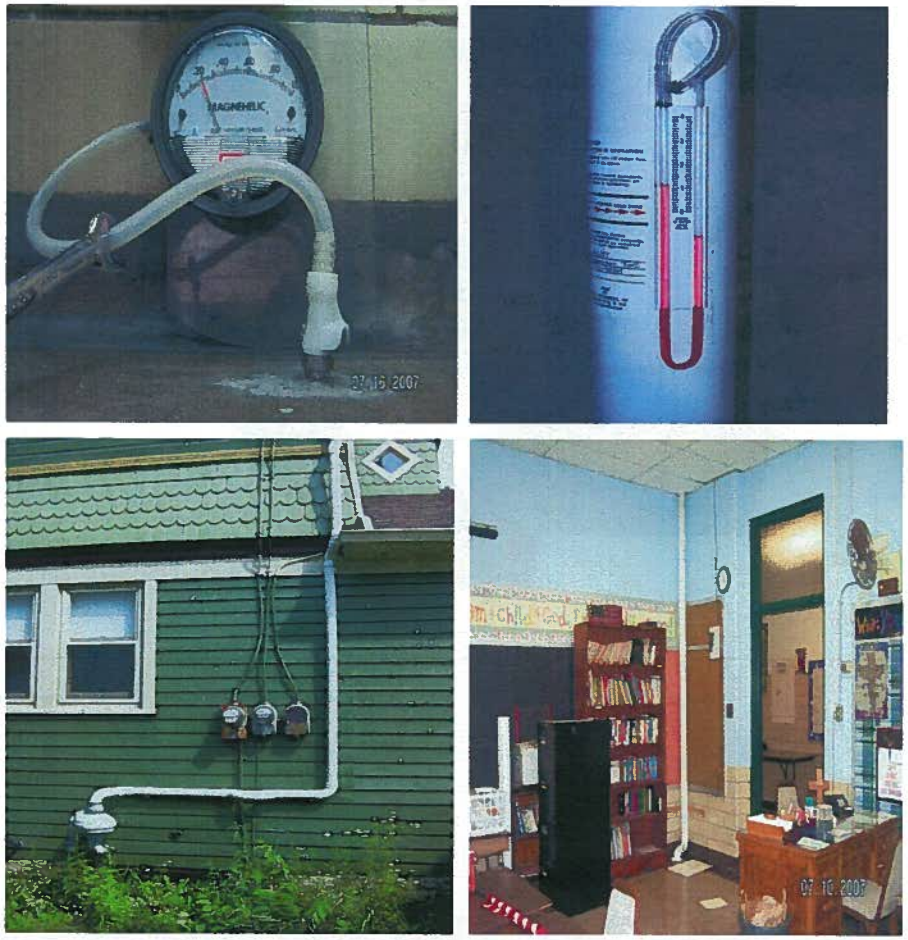
- Vapor intrusion potential
  - In June 2006, Ohio EPA asked U.S. EPA to assess the extent of vapor intrusion



Past EPA Removal Actions

- EPA sampled 85 homes, schools, and businesses for potential vapor intrusion (July 2006 to April 2007)

- Sampling confirmed VOCs in indoor air above health standards in some buildings



Past EPA Removal Actions

- EPA installed vapor abatement system at 16 homes and one school (June 2007–April 2008)
- Vapor abatement is a short-term solution (band aid)

Why More Sampling?

- Because there is a potential threat posed by groundwater contamination we need more data to determine the extent of contamination so we can determine the best methods to clean up the groundwater contamination

- EPA is conducting a comprehensive investigation of groundwater contamination through a process called an "Remedial Investigation/ Feasibility Study (RI/FS)"

- Overall goal of RI/FS is to 1) restore groundwater to beneficial use, 2) eliminate the potential for vapor intrusion, and 3) eliminate other risks to human health and wildlife (if found)

Next Steps:
Remedial Investigation & Feasibility Study (RI/FS)

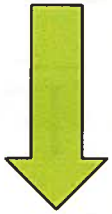
- Remedial Investigation
  - Identify source areas contributing to groundwater contamination
  - Define nature and extent of contamination (source areas & groundwater) by:
    - Sampling groundwater, soil, surface water, sediment sampling
    - Sampling in neighborhoods to assess potential for vapor intrusion by collecting sub-slab vapor samples and indoor air samples. If indoor air samples exceed an action level, install vapor abatement system
  - Determine whether contamination presents a risk to human health & environment (risk assessment)

- Feasibility Study
  - Evaluate cleanup options to address contamination

Next Steps: Superfund Process

Remedial Investigation/Feasibility Study Report
(Summarizes sampling results, evaluates risk to human health and wildlife, and recommends cleanup options)

Proposed Plan
(EPA's proposed cleanup plan for public comment & hearing)



Record of Decision
(Final cleanup plan)

Typically takes 2 to 4 years to complete from start of RI/FS sampling to ROD

Next Steps: Sampling Timeline

- Phase I Sampling – Summer/Fall 2010
  - Sample groundwater, soil, surface water, sediment
  - Evaluate data and identify data gaps

- Phase II Sampling – Fall/Winter 2010/2011
  - Collect sub-slab vapor samples under homes
  - Evaluate data and determine whether indoor air samples are needed
  - Sample indoor air and recollect sub-slab vapor samples
  - Other sampling to address data gaps, if needed

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U.S. EPA (lead agency)

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