Connecticut Department of
Energy and Environmental Protection

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ENERGY &
ENVIRONMENTAL
PROTECTION

Connecticut PCB Case Study

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NEWMOA- Dayville, CT

Site Background

- Manufacturing facility
- Building dates from 1930's
- Numerous additions over time
- 23 Acres + ~150,000 s.f. building
- Rural setting, no public water

Environmental Conditions

- Regional topography slopes to south
- Site underlain by stratified drift and till
- Groundwater 5 to 45 feet below ground
- Bedrock - 0 to 60 feet below grade
- Groundwater - class GA

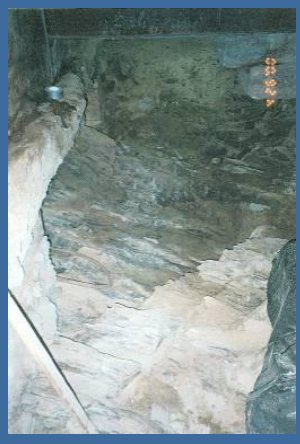
PCB Area 1 Release History

- PCB heat transfer oil used 1968 to 1972
- PCB Oil leaked from pump seals in basement onto and through concrete floor
- Discovered during routine PCB compliance inspection by CT DEP in 1993
- PCBs concentrations in soil below basement up to 38,000 mg/kg
- Impacted unconsolidated materials and shallow bedrock
- DEP and EPA enforcement actions

Heat Transfer Pumps

PCB Area 1 Soil Remediation

- Self implementing option – 40 CFR 761.61(a) - excavation option selected
- Structurally reinforced building
- Removed impacted concrete, soil and weathered rock
- Dewatering necessary below groundwater
- Backfilled and restored basement floor



Temporary Structural Reinforcement

Area 1 Excavation

Area 1 Excavation (cont.)

Bedrock Removal with Pneumatic Hammer

Area 1 Soil Remediation Summary

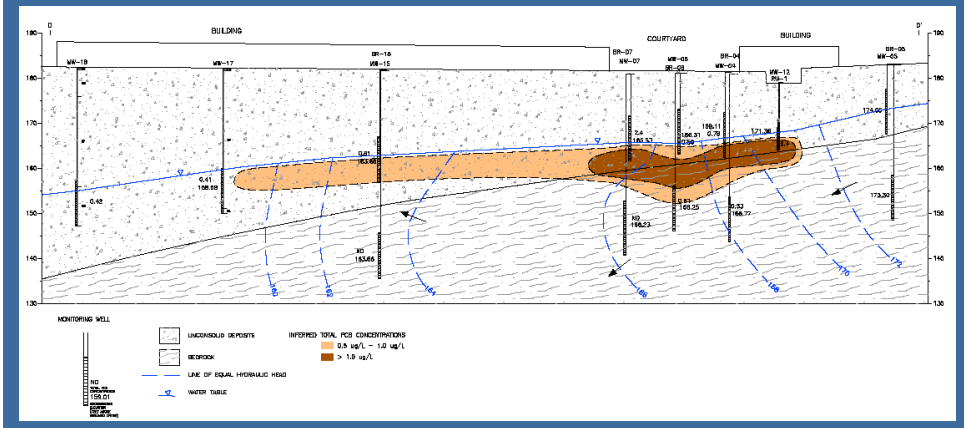
- ~ 1,000 Tons of PCB soil and concrete removed
- Soil meets RSR I/C DEC of 10 mg/kg – ELUR required
- PCBs remain locally in bedrock near foundation (10 to 260 mg/Kg)

Groundwater Conditions

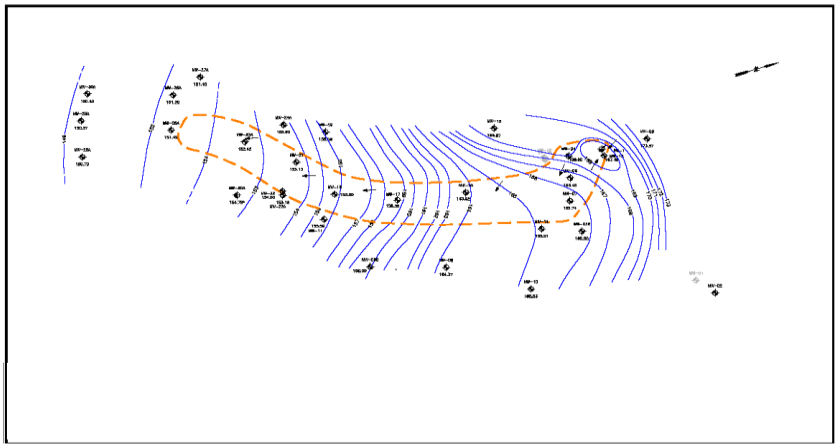
- Extensive MW network (>50 wells)
- PCBs documented in unconsolidated deposits and shallow weathered bedrock
- Upward head from deep bedrock
- No PCBs detected in on-site high capacity Bedrock production well.
  - Located approximately 160 feet from source
  - Continued sampling on an annual basis

Groundwater Monitoring Well Installation

Hydrogeologic Cross Section



PCB Groundwater plume



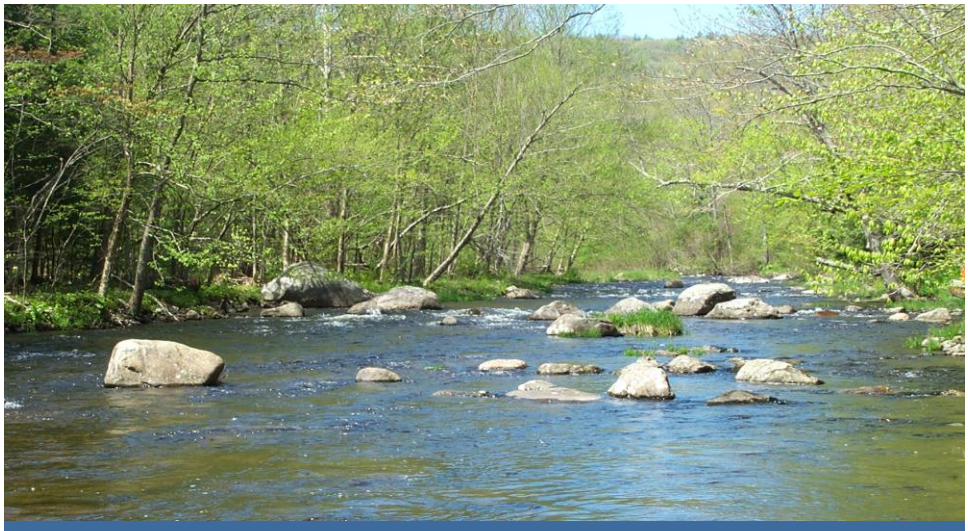
Groundwater Conditions (cont)

- Potable wells in area have been sampled on regular basis
  - No PCBs have been detected.
  - Two locations continue to be sampled on a annual basis
- Long, narrow plume
- Leading edge of plume approximately 800 feet downgradient from source

Continued Remedial Action

- Continuing groundwater monitoring program
- Implementation of Groundwater Remedial Action Plan - Pump & treat is the selected remedial approach
  - Two recovery wells, carbon treatment
  - System start up - January 2011

Groundwater P&T System



Thanks to Fuss & O'Neill for technical information and photos

Questions?

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