BROWN COMPANY RESEARCH & DEVELOPMENT BUILDINGS SITE:

A NHDES BROWNFIELDS PCB CASE STUDY

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Brown Company Research & Development Buildings Site, Berlin
R&D Building Layout

West Wing Building
built ~1919
2 stories
with basement

East Wing Building
built ~ 1913
2 stories
slab on grade

Office Building
Built 1930s/Razed 2007
1 story
slab on grade
- 1.2 acre site
- Paper industry research and development facility until ≈1985
- Generally vacant since 1985 with some use for office and meeting space until early 1990s
Now

Environmental Characterization Completed to Date

- Multiple phases of site investigation between 2000 and 2011.
- Initial assessment was based on wholesale demolition then refocused on renovation and reuse of east and west wings.
- 550 Samples analyzed for PCBs and metals (includes various building materials and soil)
Multi-depth soil sampling was completed on a 5 ft. grid prior to and following soil removal.

Pre-excavation site characterization was complete once a “two grid node” boundary was established with PCB concentrations ≤ 1 mg/kg.
Environmental Concerns Identified

- ACMs
- Universal wastes
- Copious amounts of LBP containing PCBs < 1 mg/kg to 13 mg/kg
- Mercury contaminated building materials
- Two interior areas of PCB liquid release
- PCB tracking from release points
- Three areas of exterior PCB liquid release to surface soils
- Liquid PCB release to subsurface soils
■ PCBs in concrete up to 34,000 mg/kg
■ Limited to upper 0.5 to 2.0 inches

Remediation Goals
East Wing and Surface Soils

■ High Occupancy use of East Wing Building with no Notice of Activity and Use Restriction
■ Achieve post cleanup PCB concentration < 1 mg/kg
■ Achieve surface/shallow soil PCB concentration <1 mg/kg
■ Complete removal of LBP/PCB Paint, Universal Wastes, Hg impacted materials, and ACM
Remedial Actions Completed
West Wing Remediation

- Replace Roof
- Cover Street Side Windows with Murals

East Wing Remediation

- Painted surfaces cleaned: >23,000 SF
- PCB-impacted flooring: 6,400 SF
- PCB- and metal-impacted soils: 320 tons
- TSCA/RCRA hazardous flooring: 30 tons
- Non-hazardous flooring: >22 tons

May 2010
September 2010
Costs

- NHDES Assessment/Cleanup Planning: $400,103
- NH Cleanup Assistance: $458,494
- BFCRLF Sub-Grant: $200,000
- EPA Cleanup Grant: $200,000
- Total funding leveraged: $1,258,597

Lessons Learned

- If you sample for it you will likely find it.
- Characterization is more expensive than one would think.
- Remediation could be complex.
- Don’t underestimate the importance of a good consultant with significant PCB experience.
- Investing in thorough cleanup/bid specifications and well prepared contract is a wise decision.
- Do not skimp on characterization
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