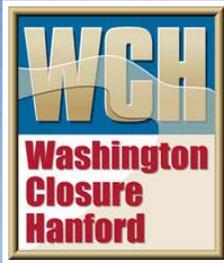


DOE's Largest Environmental Cleanup Closure Project



*River Corridor
Closure Project*



U.S. Department of Energy
Richland Operations Office

324 Building Update

River and Plateau Committee

Chris Smith, DOE-RL

May 11, 2011

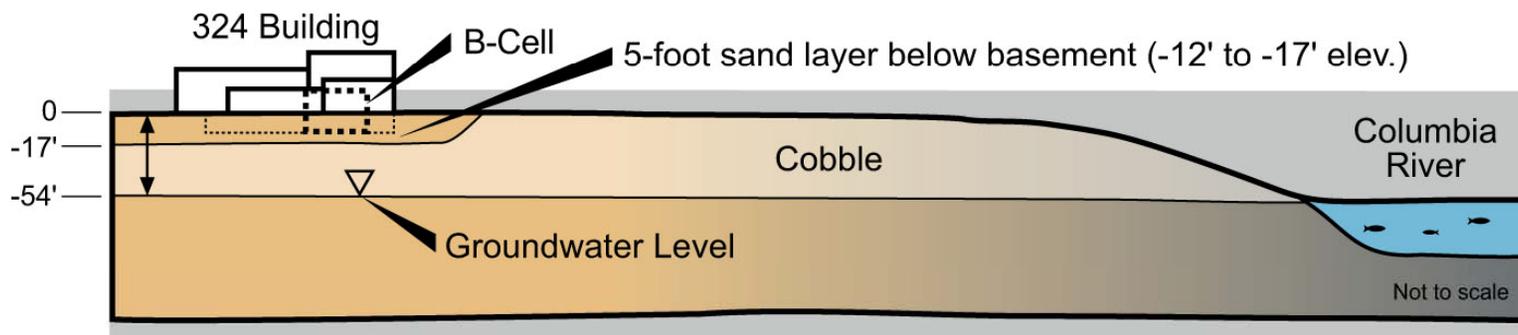
Protecting the Columbia River



Review of Project Objectives

- Suspended demolition plans for the 324 Building
- Maintain controls to avoid creating exposure pathway
- Evaluate extent of contamination
 - Evaluate soil and groundwater characteristics (modeling)
 - Determine technology for sample collection
 - Implement characterization technologies
- Evaluate immediate schedule and cost impacts
- Provide timely updates on findings and plans
- Initiate evaluation of potential cleanup options

Overview

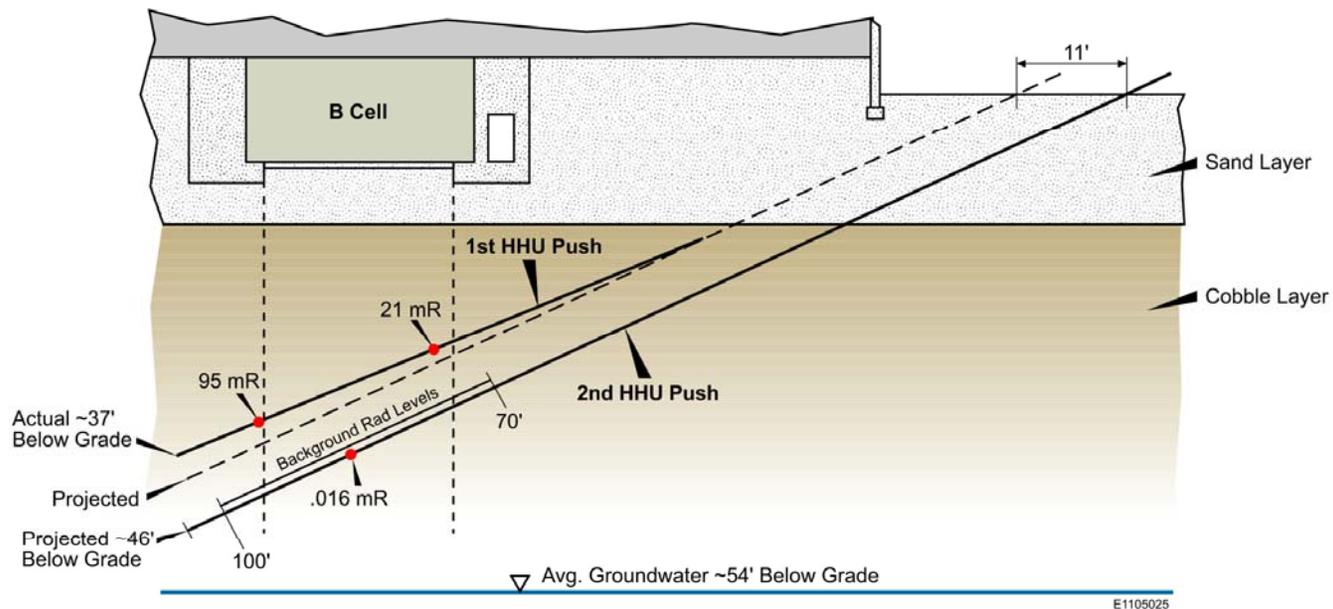


Protecting the Columbia River

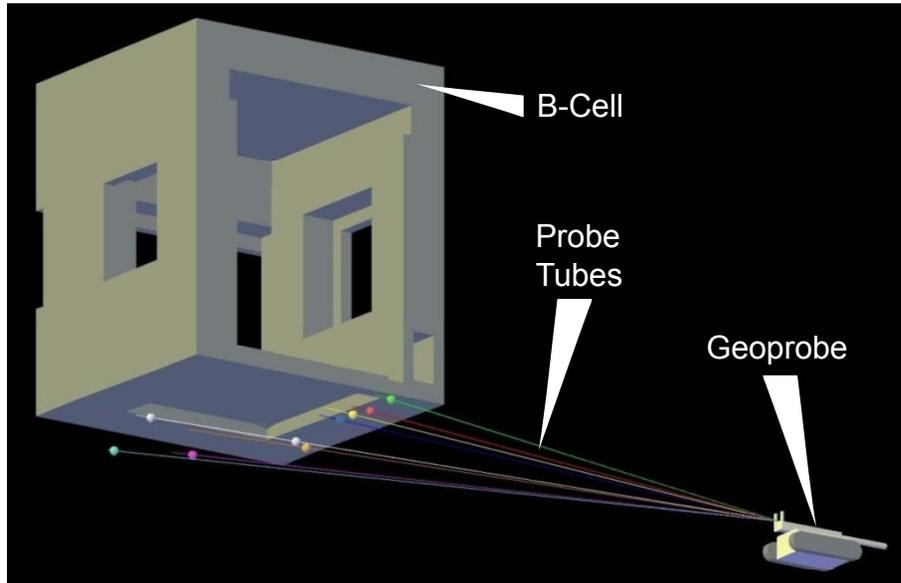
Nonintrusive Sampling Update

Key Findings:

- Two closed-ended tubes inserted at a 25-degree angle – First tube ending at ~37' below grade. Second tube at ~46' below grade.
- Radiological instrumentation shows gamma radiation levels of <math><100\text{ mR/hr}</math> in upper tube. Lower tube shows all levels at background.
- Groundwater monitoring continues to show no contamination has reached groundwater (average GW level ~54' below grade).



Characterization



Closed-end tubes were pushed approximately 80 feet under 324. Radiological instruments discovered the presence of contaminated material below B-Cell. Readings peaked at 8,900 R/hour directly below concrete joints in the slab floor of B-Cell.



Two new tubes were inserted in April/May to determine the depth of contamination (above). Non-intrusive data indicates radiation readings taper to background levels before reaching the 100-year high level mark for groundwater.

Current Status and Schedule of Key Events

- In April and May, two closed-end tubes were inserted below 324 for nonintrusive characterization to verify depth of the contamination
- A Sampling and Analysis Plan (SAP) has been issued for collection of physical samples directly beneath B-cell
- Physical sampling is targeted for June
- Results of the physical samples are anticipated in the Fall of 2011
- Selection of remediation methodology anticipated by next winter