

*River Corridor
Closure Project*

The ERDF Performance Assessment (PA) Update

*Hanford Advisory Board
River and Plateau Committee Meeting*

February 11, 2014



ERDF PA - Purpose

- Demonstrate that DOE low-level waste disposal facilities comply with long-term performance objectives provided in DOE Order 435.1, Radioactive Waste Management
 - All Pathway (Standard: 25 mrem/yr Total Effective Dose Equivalent)
 - Atmospheric Pathway (Standard: 10 mrem/yr)
 - Acute Inadvertent Intruder (Standard: 500 mrem/yr) – for Waste Acceptance
 - Chronic Inadvertent Intruder (Standard: 100 mrem/yr) – for Waste Acceptance
 - Radon Flux (Standard: 20 pCi/m²/s at surface of disposal facility)
- Establish Disposal Facility Waste Acceptance Criteria (WAC).

ERDF PA – Update

- The ERDF ROD Amendment authorizing super cells 9 & 10 (August 2009, Section VIII) requires the preparation of a PA prior to expansion of ERDF beyond cells 9 & 10
- New information (e.g., geology, hydrology, cap performance, waste characteristics) is available to update the facility performance to optimize the capability of ERDF
- Reaffirm that ERDF continues to meet long-term performance objectives provided in DOE Order 435.1, Radioactive Waste Management into the future
- Utilize DOE Order 435.1 annual maintenance requirements to address potential future waste streams
- The Hanford Advisory Board has recommended completion of a PA analysis to support ongoing ERDF disposal activities (HAB advice # 219)

ERDF PA – Project Team

- **Washington Closure Hanford (WCH)**
 - Project Management
 - Implement and Maintain the Approved PA
- **CH2M Hill Plateau Remediation Company (CHPRC)**
 - Preparation of the PA
- **URS Safety Management Solutions**
 - Technical Oversight

ERDF PA – History

1994

CERCLA Record Of Decision (ROD) Issued

1995

Preliminary PA Issued (BHI-00169)

1996

Completion of Crosswalk Between DOE Order 5820.2A and CERCLA Remedial Investigation/ Feasibility Study
First Disposal Authorization Issued
ERDF Opened

2000

Completion of Second Crosswalk Between DOE Order 435.1 and Order 5820.2A

2001

Disposal Authorization Issued under DOE Order 435.1, Radioactive Waste Management

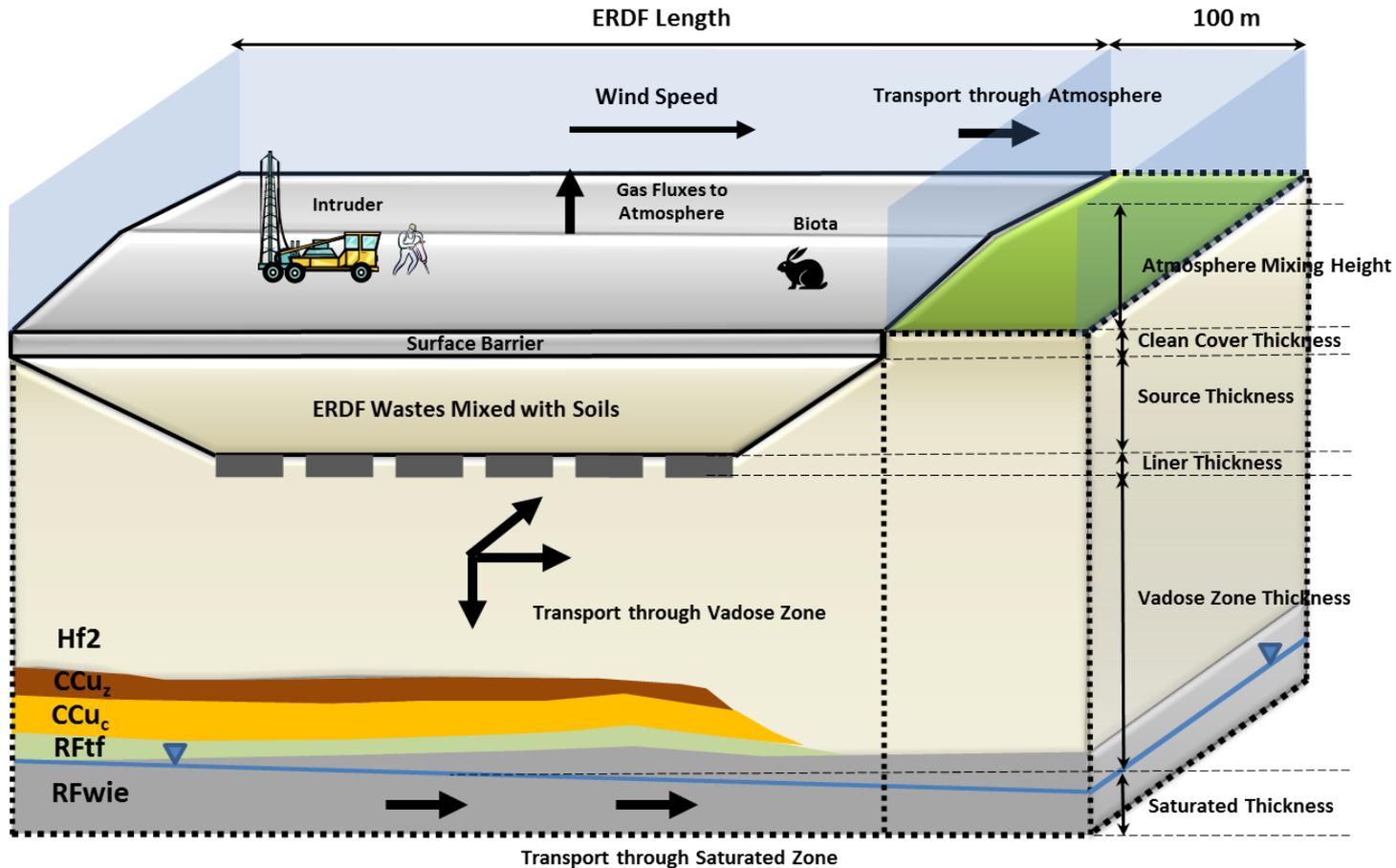
2010 - 2013

Jul 2010: Started ERDF PA
Nov 2013: EPA/USGS Review
Jun 2013: DOE LFRG Review
Aug 2013: ERDF PA Finalized
Nov 2013: New Disposal Authorization Statement (DAS) issued

Overview of Analysis of Performance

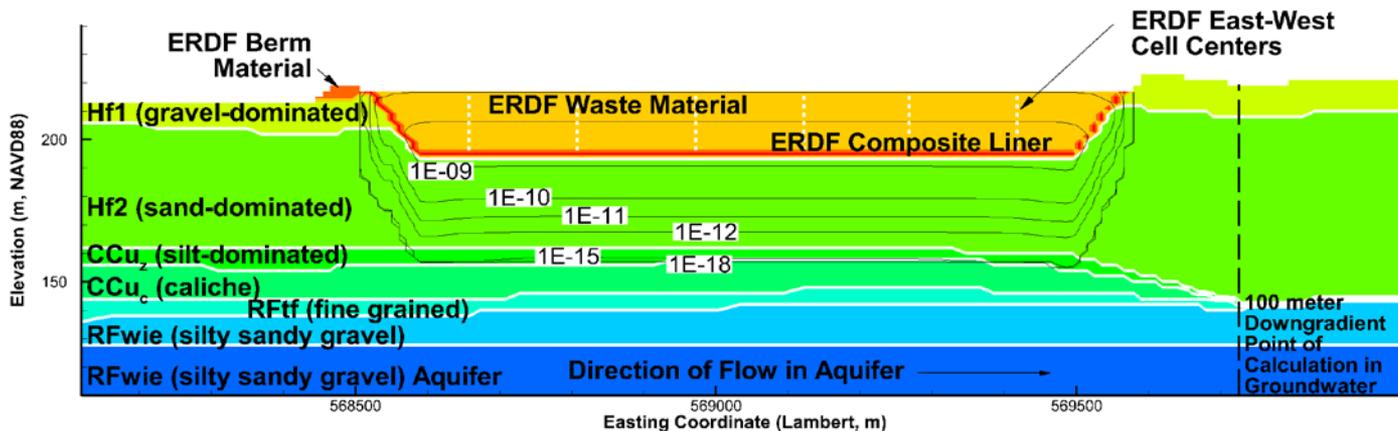
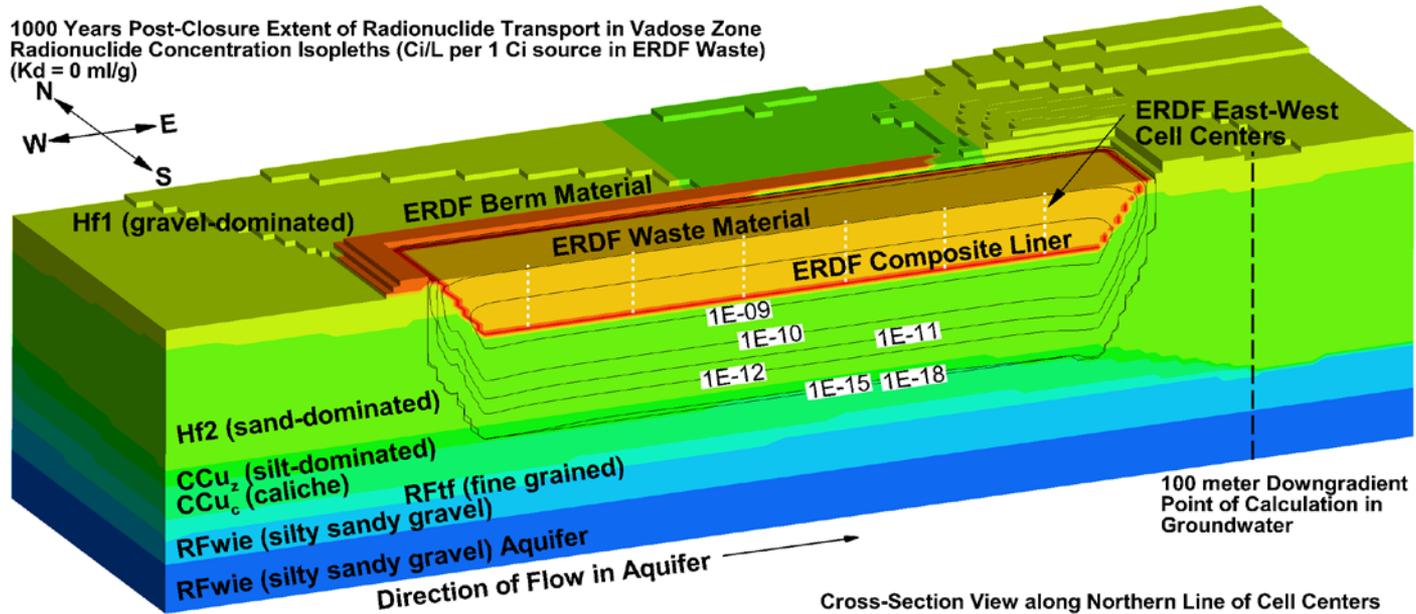


Conceptual Model



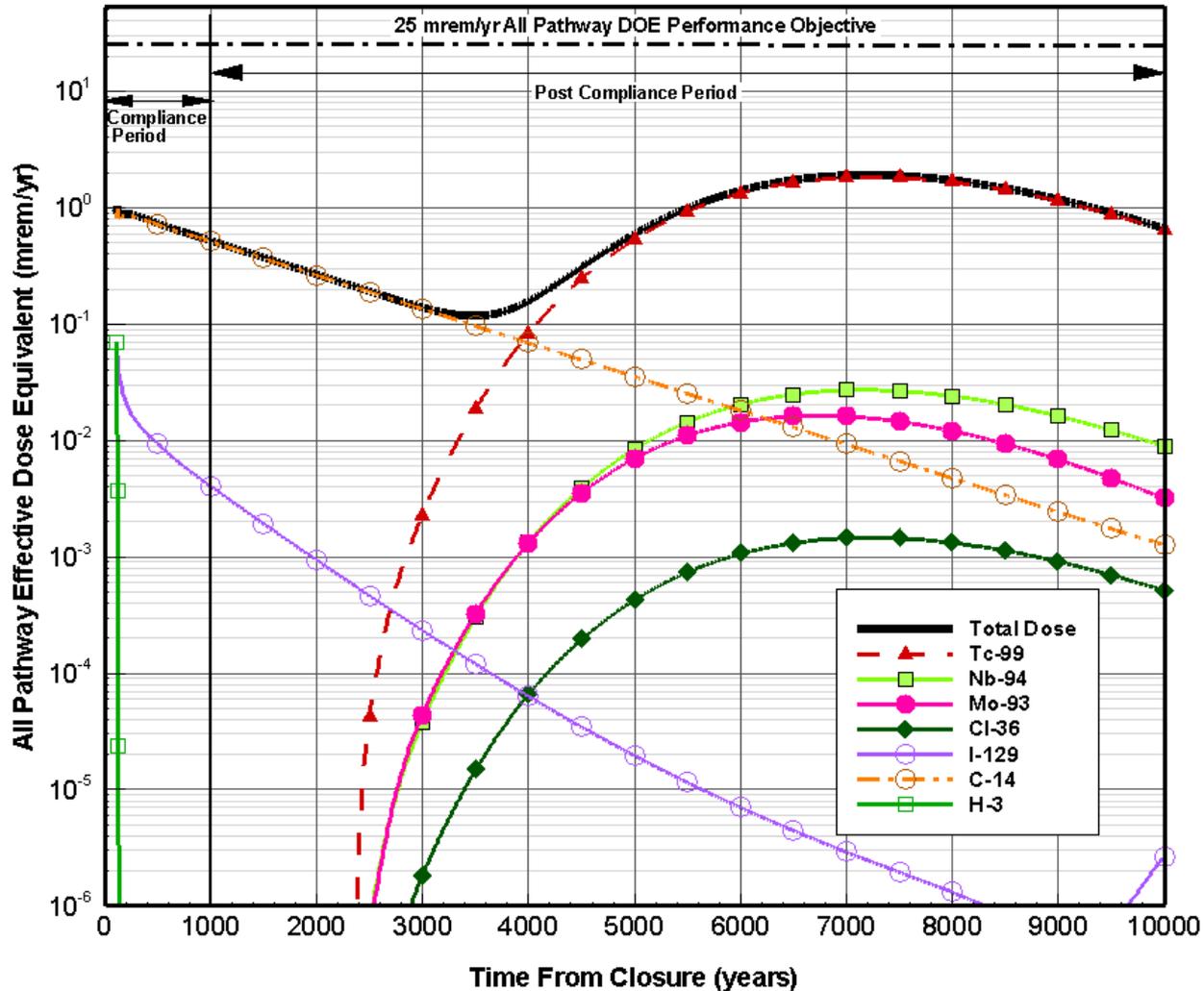
One Team for Safe, Visible Cleanup of the River Corridor

Results: Compliance Case Extent of Transport ($K_d = 0$ ml/g)



One Team for Safe, Visible Cleanup of the River Corridor

All Pathway Effective Dose Equivalent



One Team for Safe, Visible Cleanup of the River Corridor