

Current Challenges in Site Characterization, Future Needs, and Emerging Technology Areas

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FRTR General Meeting
USGS HQ - Reston, VA
25 June 2014

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Major Challenges for the DON ER

- Complex groundwater plumes
- Long-term site management
- Vapor intrusion
- Emerging contaminants

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DERP Goals and Metrics

- Achieve RIP or RC at:
 - 100 percent of sites by end of FY2014
- Achieve RC Milestone at:
 - 90 percent of sites by end of FY2018
 - 95 percent of sites by end of FY2021

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DERP Definitions

- Remedy-in-Place (RIP)** – Designation that a final remedial action has been constructed, is **functional**, and is **operating** as planned in the Remedial Design and would be **expected** to meet the remedial action objectives detailed in the Decision Document.
 - Air sparging system installed and operating as designed
 - MNA program implemented (start of MNA monitoring)

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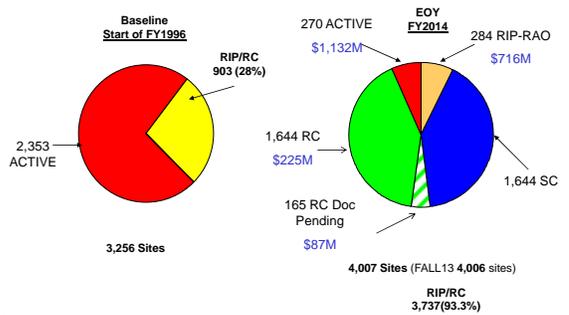
DERP Definitions (Cont.)

- Response Complete (RC)** – Milestone signifying that DOD **has met** remedial action objectives and sought regulatory approval.
 - RA-O achieved remedial action objectives
 - Where there is no RA-O, RA-C achieved remedial action objectives
 - For groundwater sites, RC typically requires achieving MCLs throughout plume
 - LTM may occur after RC is achieved (e.g. landfills)

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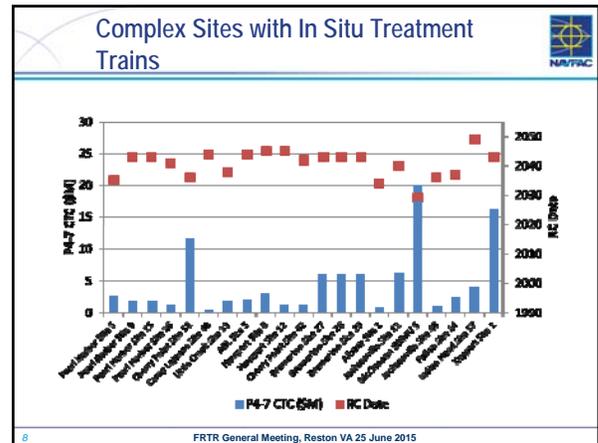
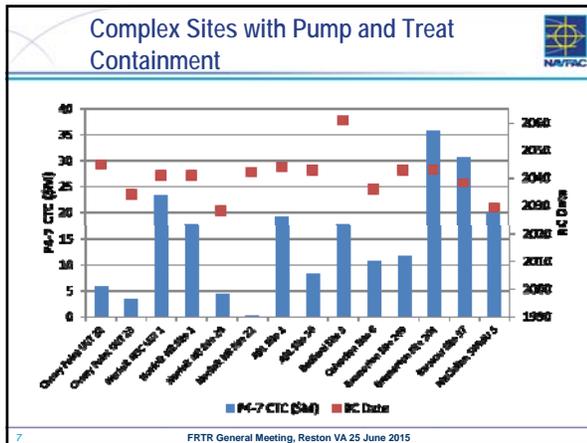


Snapshot of the ER,N IR Program



Projects Only

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Need for Improved Site Characterization Tools

Critical in the areas of:

- Plume and source area management
- Better understanding of MNA
- Extent, magnitude of risk, and mitigation of vapor intrusion
- Extent and magnitude of risk from emerging contaminants

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Need for Improved Site Characterization Tools (Cont'd)

- Plume and Source Area Management and MNA:
 - Impacts of back diffusion on plume persistence
 - Degradation processes that can control migration of large dilute plumes (e.g. abiotic, aerobic cometabolism)
 - Estimating assimilative capacity of plumes
 - Transitions from active remediation to passive management
 - Understand the source areas architecture and dominant processes that affect it
 - Understand and predict better capabilities for natural attenuation processes (biotic and abiotic)

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Need for Improved Site Characterization Tools (Cont'd)

- Vapor Intrusion
 - Extent
 - Magnitude of risk
 - Mitigation
 - Long-term requirements
- Emerging Contaminants
 - Extent
 - Magnitude of risk
 - Mitigation

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