DERP Forum

Strengthening Relationships with our Regulatory Partners

St. Louis, Missouri
May 8-9, 2019
Challenging IRP Sites
Redstone Arsenal Groundwater Sites
RSA-117 and RSA-146
A Path Forward

U.S. Army Environmental Command
MISSION: Deliver cost-effective environmental services globally to enable Army readiness.
VISION: Provide premier environmental solutions for our Army and our nation.

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https://www.aec.army.mil/
Operations / Background

Meeting the Nation’s Needs Over Time

$12.9B Total Annual Economic Impact
Equivalent to 6.9% of State GDP
- $3.4B in Direct Salaries & Wages
- $5.9B in Direct Procurement & Services

106,000 Total Jobs Across Tennessee Valley
- 39K Direct Jobs on RSA
- 66.5K Indirect & Induced Jobs Across Region

$467M Total State & Local Tax Revenues
- Personal Income, Sales & Property Taxes
- Corporate Taxes

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RSA-117 Overview

85 Acres
DDT, VOCs, SVOCs, and PCBs
DNAPL - chlorobenzene
RSA-146 Overview

6,613 Acres (10.3 mi²)
22 Comingled Plumes
~2,000 acre TCE/Perchlorate plume
33 active surface sites
Path Forward

• In 2017, the Army and ADEM collaborated on a path forward:
  – Update Conceptual Site Model
  – Develop Scope of Work
    • Corrective Measures Studies
    • Interim Corrective Measures (ICM)
      – Each site will be broken into ICMs
      – ICMs will be prioritized

USEPA:
Potential corrective measures should be screened against:
• Protection of human health and the environment
• Attainment of media (groundwater) clean up objectives, and
• Controlling the sources

Alternatives that do not meet these threshold criteria do not warrant further consideration
Identifying/Prioritizing Potential ICMs

1. Analyze and prioritize ICMs to address those areas that pose the highest risks to human health or the environment **OR:**
2. ...that are causing the greatest level of environmental degradation/impairment.

### Prioritization Process (idealized)

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<th>Max. Conc.</th>
<th>Impacted Zones</th>
<th>Areal Extent of Impacts</th>
<th>Number of Apparent Sources</th>
<th>Contribution to Off-Post Impacts</th>
<th>Plume Score (Higher Score Means Higher Priority)</th>
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### Timeline

- **Investigation Phase**
  - 20 Plus Years of Investigation Work
  - Investigations Ongoing
  - Corrective Measures Study
  - Collaborate with Stakeholders to Proceed with Interim Corrective Measures
  - Interim Corrective Measures and Prioritization
  - RCRA Corrective Action Process Resumes at RFI Phase

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Challenges

- Karst Geology
  - Unmappable pathways between source and discharge
- Extensive Time Line to Complete RFIs
  - Delays Cleanup Actions (source area investigations ongoing)
- Cost to Complete > $71M (RSA-117) and $58M (RSA-146)
  - A Single Cleanup Response Would Be Prohibitively Expensive