



Overview of Army Challenges at Complex Active IRP Sites

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Our mission is to Lead and execute Army cleanup and environmental quality programs, providing technical expertise to enable Soldier readiness and sustainable Military communities.

ENABLING MISSION READINESS

By

Acknowledging the past **E**ngaging the present **C**harting the future



DoD Cleanup Goals for Installation Restoration Program (IRP)

- **Achieve Remedy in Place (RIP) at 100 percent of IRP sites by the end of FY 2014**
- **Remedy in Place Definition:** Remedy has been constructed, is functional, and operating as planned in the Remedial Design, and, in the future, will meet the remedial action objectives (RAOs) specified in the Decision Document (DD).
- **Achieve the Response Complete (RC) milestone at:**
 - 90 percent of all IRP sites by the end of FY 2018
 - 95 percent of all sites by the end of FY 2021
- **Response Complete Definition:** RAOs specified in DD have been met.



Active Army IRP Cleanup Progress

- **As of Sep 2012, the Active IRP inventory was 12,249 sites;**
- **10,218 active IRP sites have achieved RIP or RC**
- **FY13+ liability at the remaining sites is ~ \$1.9B**
- **A subset of remaining sites are considered “complex”:**
 - Complex hydrogeology – e.g. karst, fractured rock, heterogeneous environments
 - Recalcitrant chemicals – e.g. TCE
 - At these complex sites, there is general agreement among practicing remediation professionals, that due to inherent geologic complexities, restoration within the next 50-100 years is likely not achievable (NRC, 2013)



USAEC Goals for Complex Sites

- **Preferred Goal**
 - Cleanup to unlimited use and unrestricted exposure
 - Eliminate all risk
- **At Complex Sites**
 - Set realistic RAOs in decision documents - specific, measurable, functional
 - Transition from active remediation to passive remediation and long term management as quickly as possible and when reasonable
 - Optimize life cycle costs
 - Reduce out year liabilities
 - Reduce long term management obligations where possible
- **At all sites, manage risk (e.g. using LUCs, alternate water supplies, etc.)**



USAEC Challenges at Complex Sites

- **Decision Documents**
 - RAOs that are not achievable (e.g. restoration of aquifer to drinking water standards)
 - Lack of specific, measureable, functional remedy performance metrics
 - Upfront technical impracticability waivers
 - Transition assessment language in decision documents
- **Even if RIP is achieved, decisions will continue to be reevaluated because progress towards the RAO is:**
 - Uncertain
 - Difficult to measure
 - Difficult to predict



END OF PRESENTATION

INSTALLATION MANAGEMENT COMMAND



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