



U.S. DEPARTMENT OF  
**ENERGY**

# *EM Site-Specific Advisory Board Chairs Meeting*

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Office of Environmental Management  
Stewardship Roundtable  
Double Tree Hotel, Oak Ridge, TN  
Thursday April 29, 2010*



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[www.em.doe.gov](http://www.em.doe.gov)

# Overview

- **Principal Drivers for Ensuring LTSM at EM Sites**
- **Ensuring LTSM Requirements for EM Cleanups**
- **Decision Process with Regulators and Stakeholders**
- **CERCLA 9 Criteria for Remedy Evaluation and Selection**
- **EM properties ensuring LTSM**



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# ***Principal Drivers for Ensuring LTSM at EM Sites***

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- **DOE is responsible for protecting human health and the environment pursuant to CERCLA, RCRA, other environmental statutes, and the Atomic Energy Act**
- **Implementing Requirements**
  - **Consent Decrees**
  - **Federal Facility Agreements (FFAs) with regulators**
  - **Records of Decision (RODs) and other decision documents**
  - **Licenses, Permits**
  - **Executive Orders (e.g., environmental justice)**
  - **Applicable Treaty obligations with Tribal governments**



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# ***Ensuring LTSM Requirements for EM Cleanups***

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- **Cleanup Decision Documents**
- **CERCLA Five-Year Remedy Reviews**
- **RCRA Post-Closure Care**
- **Low-Level Radioactive Waste - DOE Orders under the Atomic Energy Act (DOE O 5400.5 and DOE O 435.1)**
- **Natural and Cultural Resources**
- **American Indian Tribal Government Policy (DOE O 1230.2)**
- **Federal Indian Trust Responsibilities**
- **Facility and Land Use Planning (DOE O 430 Series)**



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# Decision Process with Regulators and Stakeholders

- Evaluation of site conditions (contaminant concentrations, risk assessment, future use)
- Multiple short-term and long-term actions at sites
- Remediation evaluations consistent with CERCLA 9 Criteria
- Cleanup levels
  - Technical feasibility
  - Worker health and safety
  - Collateral ecological damage
  - Cost
- Proposed plans
- Records of Decision
- Long-term surveillance and maintenance



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# ***CERCLA 9 Criteria for Remedy Evaluation and Selection***

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## **➤ Threshold Criteria**

- **Overall Protection of Human Health and the Environment**
- **Compliance with Applicable and Relevant and Appropriate Requirements (ARARs)**

## **➤ Balancing Criteria**

- **Long-term effectiveness and permanence**
- **Short-term effectiveness**
- **Reduction of toxicity, mobility and volume of contamination**
- **Implementability**
- **Cost-effectiveness**

## **➤ Modifying Criteria**

- **State Acceptance**
- **Community Acceptance**



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# Ensuring LTSM at Hanford 1100 Area

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- Hanford's 1100 Area for 50 years hub to support services
- Deleted from the NPL in 1996, the 768 acre area with 26 facilities and 16 miles of railroad transferred to Richland's Port of Benton in 1998.
- DOE is responsible for ensuring LTSM per decision documents and the *Site-Wide Institutional Controls Plan for Hanford CERCLA Response Actions*
- CERCLA 5-Year remedy performance review



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# Ensuring LTSM at Test Area North (TAN), Idaho National Laboratory

- TAN Complex occupies 12 square miles (7,680 acres)
- Current use manufacturing DOD components (tank armor) and groundwater remediation
- Response Actions
  - Soil Remedial Action Completed
  - Groundwater Remedial Action - Ongoing, Completion TBD
  - Deactivation and Demolition 46 buildings and structures Completed
- DOE LTSM Responsibilities:
  - Institutional controls 47 acres contaminated soil sites until 2095
  - Institutional controls 320 acres groundwater plume until 2095
  - Second CERCLA 5-Year remedy performance review under development



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# Ensuring LTSM at T Area Savannah River, SC

- T Area testing facility for fuel and target manufacturing chemical processes and the Defense Waste Processing Facility (DWPF)
- Remediation of seepage basins, discharge structures, sewer lines and three buildings
- Contaminated soil excavation, 10 acre geosynthetic cap
- Groundwater remediation via solar powered soil vapor extraction.
- Annual LTSM for groundwater monitoring and reporting, 10-acre cap inspections and maintenance, 5 Yr reviews



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