Status of Waste Determinations and Tank Closures and Other Initiatives

Headquarters Perspective

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Complex-Wide Status

- **Savannah River Site (3116)**
  - Saltstone – WD Completed (Monitoring Phase)
  - F Tank Farm – PA Completed; WD Pending
    - NRC technical review completed
    - LFRG Review Completed
    - Next Steps:
      - Tier I/ II Closure Plans
      - WD
  - H Tank Farm – PA and WD Pending

Complex-Wide Status (continued)

- **Idaho (3116)**
  - INTEC – WD Completed (Monitoring Phase)
    - 11 of 14 tanks closed
- **West Valley (WVDA/435.1)**
  - WIR for disposal of melter under preparation
  - EIS/Decommissioning Plan issued for Public Comment
- **Hanford (TPA/435.1)**
  - Scoping initiated for C Area Tank Farm

Headquarters Activities

- **Complex-Wide Tank Closures Project Team**
  - Bi-weekly project reviews
  - Exchange of lessons learned
  - Scoping/PA Assistance

- **Coordination with NRC Staff**
  - Bi-weekly staff coordination calls
  - Monitoring and Consultation coordination

Key Messages

- **Scoping Process**
- **Lessons Learned**
- **Technology Transfer**
- **Continuous Improvement**

Other Initiatives

- **Update of 1996 "Complex-Wide Review"**
- **Update to DOE Order 435.1, Radioactive Waste Management**

MISSION NEED STATEMENT

- **To continue implementing AEA authority and responsibility effectively, Department should update DOE Order 435.1 and supporting documents to:**
  - institutionalize lessons learned from a decade of implementation and incorporate solutions from field experience;
  - institutionalize numerous informal guidance documents into the directives system (e.g., HLW Closure Manual; PA/CA monitoring);
  - address changes in relevant statutes, regulations and standards (e.g., NDAA Section 3116); and,
  - continue applying a consistent department-wide approach to managing HLW, TRU and LLW.

SIGNIFICANCE

- **DOE is responsible for managing radioactive waste (HLW, TRU, LLW) and providing radiological protection from operations pursuant to AEA authority**
  - 27 field sites in the DOE complex with waste to manage
  - Nearly 50% of the $5.655 billion EM budget request for FY 08
  - ~ 6 million m^3 radioactive waste to manage over next 40-50 years
- **Nearly a decade since last revision to 435.1**
  - Adopted into the DOE Directives System in 1999
  - Revised in 2001 to account for the creation of NNSA

CURRENT 435.1 COMPONENTS

- **DOE Order 435.1-1**
- **DOE Manual 435.1-1**
  - General Requirements
  - High Level Waste
  - Transuranic Waste
  - Low Level Waste
- **DOE Guides 435.1-1**
  - General Requirements
  - High Level Waste
  - Transuranic Waste
  - Low Level Waste
  - App. A – Technical Basis Documentation

- **Over 1,000 pages currently in directives system**

EXAMPLE REVISION NEEDS

- Editorial Inaccuracies
  - DOE Organizational Structure
  - Outdated References
- Informal Guidance
  - Low Level Waste Disposal Facility Federal Review Group (LFRG) Manual and LFRG Program Management Plan
  - Low Level Waste (LLW) Disposal Facility Closure Plan
  - PA/CA Format and Content Guide
  - PA/CA Maintenance Guide
  - High Level Waste (HLW) Disposal Facility Closure Manual
  - PA/CA Monitoring Guidance

EXAMPLE REVISION NEEDS (CONT)

- External Requirements
  - Section 3116 of the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005 (Section 3116)
- Unaddressed Departmental Needs
  - In Situ Decommissioning (ISD)
  - Waste Classification Process
  - Waste Incidental to Reprocessing (WIR) vs. Section 3116 Waste Determinations
  - Unreviewed Disposal Question Evaluation (UDQE)
  - Clarification of AEA Authority
  - Institutional Control Policy
  - Ecological Impact Assessments
  - NRC Monitoring Guidance
  - Probabilistic Modeling

ALTERNATIVES CONSIDERED

- **Alternative 1**: No Action
- **Alternative 2**: Editorial Changes through DOE Directives System
  - *(5-6 Months Total $: $400,000-$500,000 Annual $: $400,000-$500,000)*
- **Alternative 3**: Incorporation of Existing Documentation through DOE Directives System
  - *(14-18 Months Total $: $1.4 - $2 Million Annual $: $1.0 - $1.7 Million)*
- **Alternative 4**: Full Order Update through DOE Directives System
  - *(28-32 Months Total $: $3 - $4.2 Million Annual $: $1.1 - $1.8 Million)*
- **Alternative 5**: Full Order Update through DOE Directives System with Public Comment
  - *(36-40 Months Total $: $3.6 - $4.9 Million Annual $: $1.1 - $1.6 Million)*
- **Alternative 6**: Proposed Rule through the Administrative Procedures Act
  - *(80+ Months Total $: $10 - $12 Million Annual $: $1.5 - $1.8+ Million)*

SCOPE OF ALTERNATIVES

Actions	Alternative Number					
	1	2	3	4	5	6
Update Org Name in Order and Support Docs		●	●	●	●	●
Update References in Order and Support Docs		●	●	●	●	●
Finalize Existing Ad Hoc Guides			●	●	●	●
Incorporate Existing Ad Hoc Guides into Directives System			●	●	●	●
Provide Senior Review Panel Oversight				●	●	●
Address Section 3116 Waste Determinations				●	●	●
Clarify Waste Classification				●	●	●
Address In-Situ Decommissioning				●	●	●
Clarify WIR and 3116 Process				●	●	●
Address Unreviewed Disposal Question Process				●	●	●
Clarify Atomic Energy Act Authority				●	●	●
Address Institutional Controls Policy				●	●	●
Address Ecological Impact Assessment				●	●	●
Develop NRC Monitoring Guide				●	●	●
Address Probabilistic Modeling				●	●	●
Solicit Public Review and Comment					●	●
Undertake Full Rulemaking through APA						●

ALTERNATIVES EVALUATION

Evaluation Criteria	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
	Scoring					
Accuracy	◐	●	●	●	●	●
Accessibility	◐	◐	◑	◑	●	●
Consistency	◐	◐	◑	●	●	●
Transparency	◐	◐	◐	◑	●	●
Acceptability/Enforceability	◐	◐	◐	◑	◑	●
Reduction of Uncertainty	◐	◐	◐	◑	●	●
Degree of Mission Need Achieved	◐	◐	◐	●	●	◑
Flexibility to Modify Practices	●	●	◑	◑	◑	◐
Cost	●	●	◑	◑	◑	◐
Schedule	●	●	◑	◑	◑	◐

◐= Least benefit realized ◑= Moderate benefit realized ● = Most benefit realized

PREFERRED ALTERNATIVE #5

- **Full Order Update through DOE Directives System with Public Comment**
  - Full range of technical updates to satisfy the mission need
  - Benefit of accessibility and acceptability through public review and comment process
  - Consistent with administrative approach from 1999
  - Less expensive, less politically sensitive and has fewer risks associated in execution than formal rule-making

NEXT STEPS

- **Initiate detailed planning**
  - Address key risks early
  - Refine expectations for timing and human resource requirements
  - Refine cost and schedule assumptions and estimates
  - Begin scheduling and coordinating workshops
- **Coordinate a Complex-Wide Review**
  - Surveys and conference calls rather than field visits
  - Assess progress since last review (1996)
  - Capture lessons learned and additional update needs as a baseline for 435.1 revisions

Purpose of Complex-Wide Review

- **Describe and evaluate progress since issuance of the WM PEIS and CWR of DOE's Low-Level Waste ES&H Vulnerabilities (1996)**
- **Identify radioactive waste management issues, vulnerabilities and best practices**
  - crosscutting across waste types, regulatory regimes, and/or programs
- **Support revision of DOE M 435.1-1**

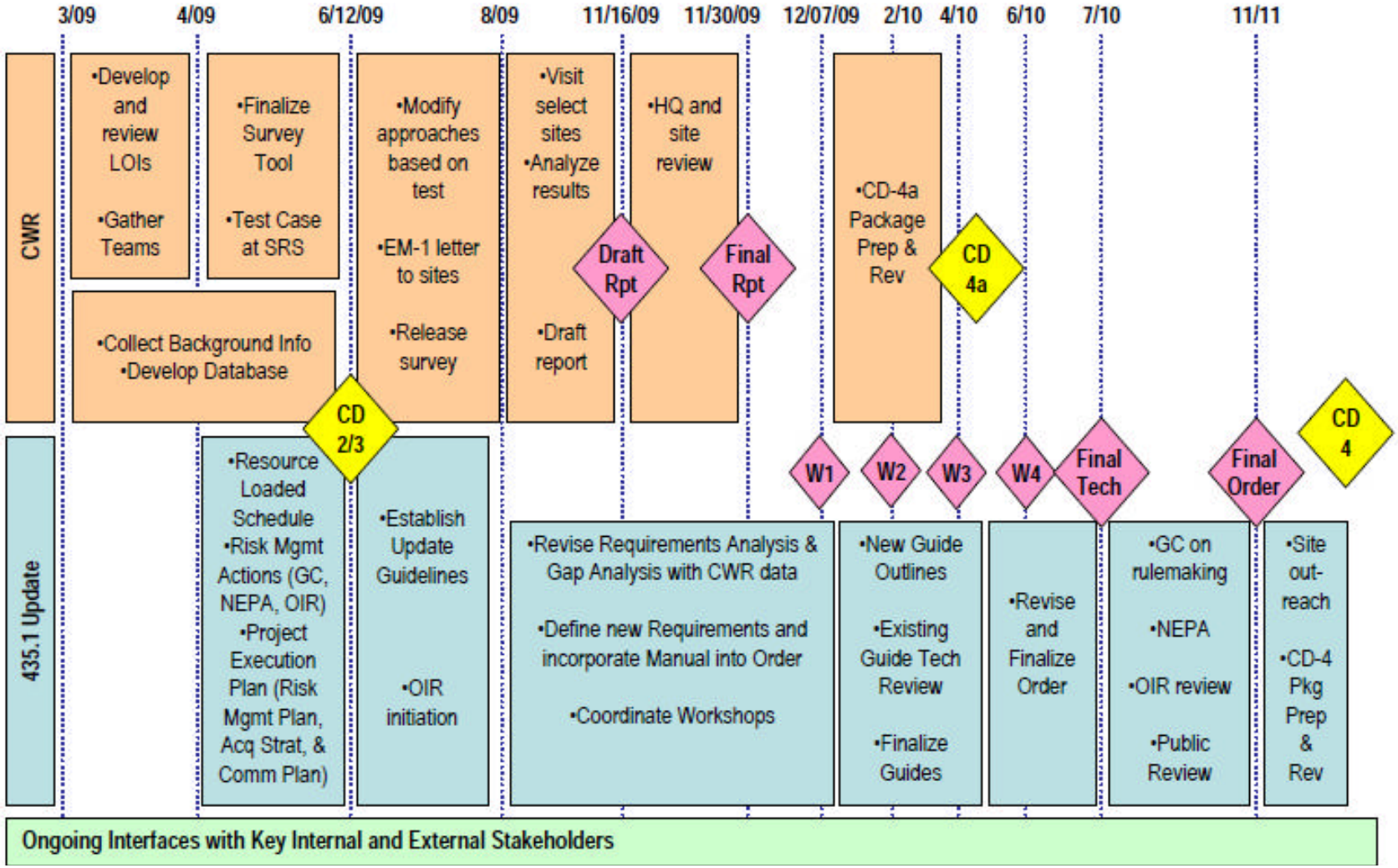
Scope of Complex-Wide Review

- **All the DOE sites and programs that manage radioactive waste**
  - NNSA, NE, SC
- **ES&H related to generation, treatment, storage, and disposal of: HLW, LLW/MLLW, and TRU**
- **Programs (D&D, S&GW) that generate waste will be evaluated for crosscutting issues:**
  - Regulatory integration
  - Operations vs. closure of facilities

Process

- **Letter will be sent from EM-1 to Site and Program Managers**
- **Establish teams to provide input on key elements of CWR**
- **Integrated Project Team**
  - Core teams of technical experts will be established for each of the waste type
- **Teams will develop a written survey instrument**
  - Lines of inquiry for each area & waste type
  - Prototype delivery at SRS

CWR / 435.1 Integrated Schedule



Considerations

- Minimize impact on Sites
- Optimize survey to balance prompt response with gathering the necessary information
- Emphasize that the Complex-Wide Review is not a compliance exercise
- Utilize Corporate Boards, EFCOG, and LFRG
- Couple the review closely with the 435.1 revision effort for efficiency and timeliness
- Prepare implementation schedule consistent with the 435.1 revision schedule
- Utilize the 1996 CWR approach to assessing risk associated with the review