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# DOE Order 435.1 Update Project

## *Mission Need and Project Execution Plan*

*Originally prepared July 2008*

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**EM** Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

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

# OBJECTIVE

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- **Obtain Management Decisions**
  - CD-0, Approve Mission Need
  - CD-1, Approve Alternative Selection and Cost Range
- **Obtain Management Support and Funding**
  - Detailed planning towards *CD-2/3*,
  - *Approve Performance Baseline*,
  - *Approve Start of Project* in **September 2008**
  - Project implementation beginning in **October 2008** (FY09)



# ***MISSION NEED STATEMENT***

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- **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***

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- **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<sup>3</sup> 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***

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- **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**



# ACTIONS TO DATE

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- DOE Order 435.1 Update Project being planned following tailored Critical Decision framework consistent with DOE Order 413.3A
- Integrated Project Team has met several times since **January 2008**
  - This effort builds upon actions conducted since 1999 to identify revision needs for DOE Order 435.1
- Input was solicited from LFRG in March and LLW Corporate Board in **June 2008** including discussion of Complex Wide Review
- Mission Need Statement and Project Execution Plan have been prepared in support of CD-0 and CD-1



# ***EXAMPLE REVISION NEEDS***

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- **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)

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- **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

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- **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

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

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



# ***PREFERRED ALTERNATIVE #5***

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- **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



# ***RISK MANAGEMENT ACTIONS***

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- Confirm NEPA Categorical Exclusion Assumption
- Confirm scope and administrative path with General Counsel
- Contact Office of Information Resources to initiate the DOE Order 251.1 Directives System process
  - Confirm that the directives process has not changed due to current DOE Order 251.1 revision efforts
- Identify and coordinate with other order revision efforts (e.g., DOE Order 5400.5)
- Initiate external regulatory interfaces via Interagency Steering Committee On Radiation Standards
- Identify subject matter experts for the Senior Review Panel and Order Revision Teams



# ***NEXT STEPS***

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- **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***

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- **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***

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- **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



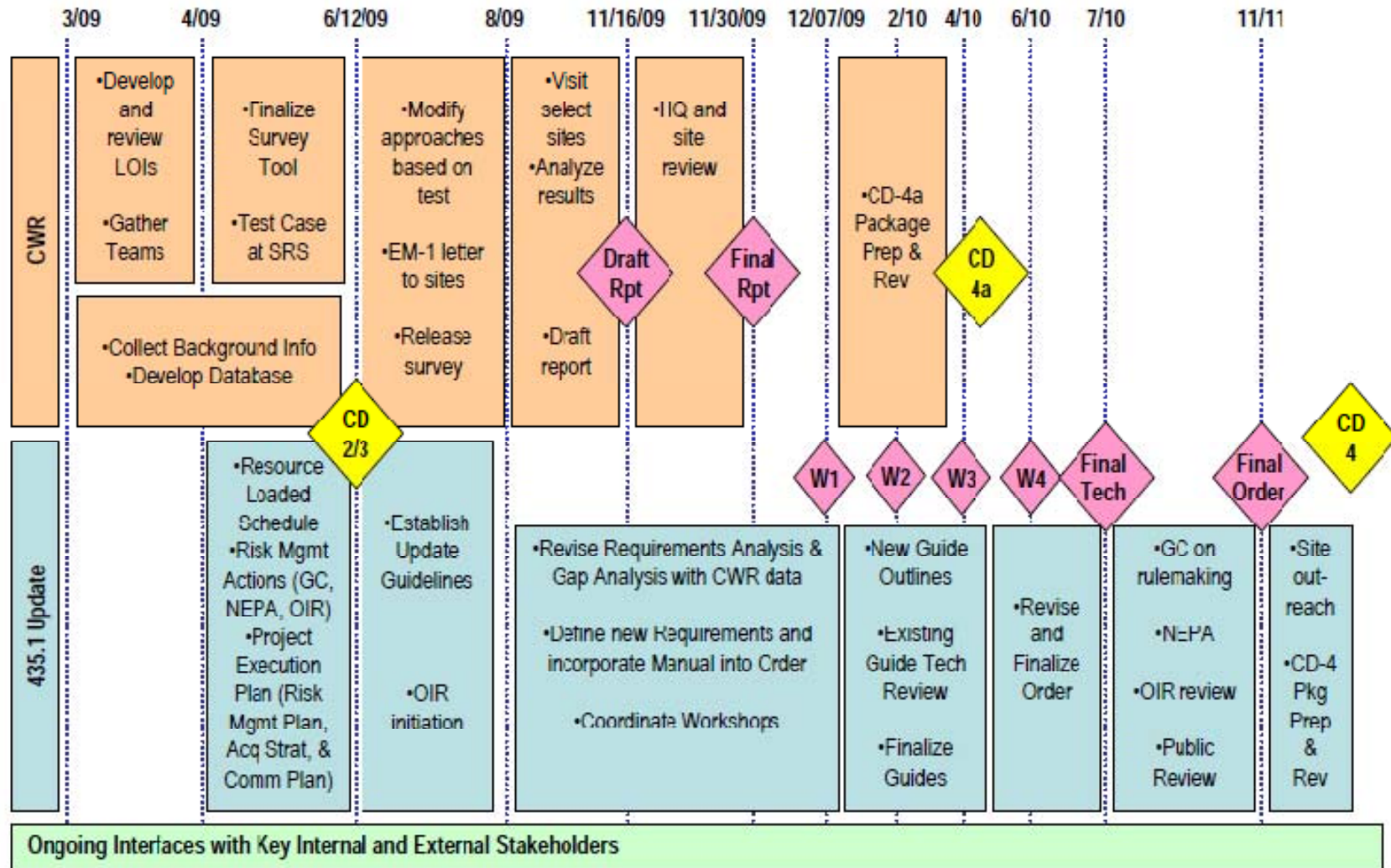
# Process

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- **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

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- 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

