Office of Repository Development
Project Update

Presented by:
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Deputy Director, Office of Repository Development
U.S. Department of Energy

September 20, 2004
Las Vegas, Nevada
Office of Repository Development

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Mark E. Van Der Puy, Safety Conscious Work Environment
Robert Lupton, Inter-Governmental Relations

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Office of License Application and Strategy
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Office of Performance Management and Improvement
Richard E. Spence

Office of Project Management & Engineering
Richard L. Craun, Acting
Office of Repository Development and its Technical Participants

OCRWM
OFFICE OF REPOSITORY DEVELOPMENT

Booz Allen Hamilton
Management & Technical Support Contractor

Navarro Quality Services
Office of Quality Assurance Support Contractor

National Laboratories
U.S. Geological Survey
U.S. Bureau of Reclamation

Bechtel SAIC LLC (BSC)
Management and Operating Contractor
## Progress Toward License Application

<table>
<thead>
<tr>
<th>Component</th>
<th>% Complete (Jun ‘03)</th>
<th>% Complete (Jul ‘04)</th>
</tr>
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<tbody>
<tr>
<td>KTI Agreements Addressed</td>
<td>27%</td>
<td>* 94%</td>
</tr>
<tr>
<td>LA Document</td>
<td>5%</td>
<td>76%</td>
</tr>
<tr>
<td>Preclosure Safety Assessment</td>
<td>14%</td>
<td>89%</td>
</tr>
<tr>
<td>TSPA-LA</td>
<td>35%</td>
<td>81%**</td>
</tr>
<tr>
<td>Design</td>
<td>25%</td>
<td>90%</td>
</tr>
<tr>
<td>Total Weighted % Complete</td>
<td>25%</td>
<td>85%</td>
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</table>

* Status reflected as % of 293 agreements with DOE submittals to NRC as of July; 100% complete was achieved August 31, 2004

** This value will be held at the current value through September pending completion of the Analysis Model Report/Regulatory Integration Team (AMR/RIT) effort and the Total System Performance Assessment-License Application (TSPA-LA) document
DOE Key Technical Issue Progress Thermometer

As of August 31st, DOE had transmitted/addressed 100% of all KTI

Legend

Note: Additional Information on IA-2.11 & PRE-7.4 to be provided in License Application
License Application Content and Supporting Documents

- General Information (GI), 400 pages
  1. General Description
  2. Proposed Schedules for Construction, Receipt and Emplacement of Waste
  3. Physical Protection Plan
  4. Material Control and Accounting Program
  5. Site Characterization

- Safety Analysis Report (SAR), 4,800 pages
  1. Repository Safety Before Permanent Closure
  2. Repository Safety After Permanent Closure
  3. Research and Development Program to Resolve Safety Questions
  4. Performance Confirmation Program
  5. Administrative and Programmatic Requirements
Licensee Transition Team

- Tasked with developing a transition plan that defines the goals, actions, milestones, and responsibilities for a successful transition to an NRC-regulated environment.
- Reports to the ORD Associate Deputy Director, chaired by Richard Spence.
- LTT is responsible for:
  - Defining key attributes of a successful NRC Applicant/Licensee.
  - Defining best practices, processes and systems for each project phase.
  - Identifying current state and perform gap analysis.
  - Defining action plans and time frame to implement transition.
  - Performing inspection readiness.
# Key Attributes of a Successful Licensee

<table>
<thead>
<tr>
<th>Key Attribute</th>
<th>Demonstrated By</th>
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| Leadership                                 | • Vision is apparent  
• Conservative and fully-informed decision making is used  
• Defensible management systems are used  
• Executable strategies are in place  
• Team work and individual accountability are evident  
• Sound planning and rigorous execution is evident |
| Commitment to Quality and a Strong Nuclear Safety Culture | • Cost/Schedule pressure does not compromise quality or safety  
• Actions are traceable and defendable  
• Rigorous, industry standard processes are used  
• Nuclear operating experience (i.e., lessons learned) is used  
• Incorporate defense-in-depth and risk management  
• Strong employee concerns program is in place  
• The Safety Conscious Work Environment includes evidence of a strong nuclear safety culture |
| Clear Organizational Goals                 | • Goals and progress toward goals are effectively communicated throughout the organization  
• Clear expectations for performance are communicated  
• Metrics are established to measure performance against goals and are visibly displayed |
Testing Categories and Criteria

1. Natural & Engineered Systems Test & Evaluation
   1a. Elective DOE Testing in Response To NRC Questions = Resulting from NRC review of LA and requests for additional information
   1b. DOE Elective Testing = Selected to evaluate uncertainty & conservatism; Data for potential TSPA modifications or to strengthen technical arguments

2. Design Construction & Ops Testing
   2a. Prototype Evaluation = Testing first-of-kind items to confirm fabrication & non-destructive examination methods
   2b. Design, Construction & Startup = Geotechnical & construction materials testing; Testing of components, sub-systems, & systems to confirm functional & operational performance
   2c. Operations & Maintenance = Planned ops & maintenance testing to confirm maintenance requirements & operating performance

3. Performance Confirmation
   3a. Performance Confirmation Tests = Testing & Monitoring in Performance Confirmation Plan per 10 CFR 63
   4a. NRC-Requested R&D Safety Tests = to resolve safety issues identified by NRC-mandated conditions of license
   4b. NRC 10 CFR 63.74(a) Tests = Performance of tests specified by NRC under 63.74(a) - “Tests”

4. Regulatory Directed R&D Programs
   5a. ES&H Compliance Monitoring = To confirm public & worker health & safety & to demonstrate compliance with permits
   5b. ES&H Safeguards & Emergency Tests = Testing to confirm functional performance of systems
   6a. Security Safeguards & Emergency Tests = Monitoring to comply with NRC specifications to ensure safety bases are met

5. Health, Safety & Effluents


7. Licensing Specifications

8. Science & Technology Program
   8a. Natural System S&T for Long-Term Barrier Performance = R&D tests to develop long-term barrier performance enhancements
   8b. Engineered System S&T for Long-Term Ops Performance = R&D tests to develop long-term facility operational & TSPA performance improvements
Joint Leadership Council SCWE Improvement Goals

- **Management Support**: 85% (up from 77%)
  - Worker Confidence and Trust

- **Effective Normal Problem Resolution Processes**: 70% (up from 58%)
  - Corrective Action Program & Differing Professional Opinions

- **Effective Alternate Problem Resolution Processes**: 85% (up from 76%)
  - OCRWM Concerns Program & BSC Employee Concerns Program

- **Effective Methods to Detect and Prevent Retaliation**: 90% (up from 86%*)
  - FOCUS / SCWE Review Team
  * Pulse Survey
August 2004 MOR Annunciator Panel

Note: Reflects data as of July 2004