NUCLEAR WASTE TECHNICAL REVIEW BOARD
SG&G PANEL MEETING:
SCENARIO A AND ESF DESIGN/CONSTRUCTION

SUBJECT: ESF UPDATE

PRESENTER: DR. WILLIAM SIMECKA

PRESENTER'S TITLE AND ORGANIZATION: ASSISTANT MANAGER ENGINEERING AND FIELD OPERATIONS

PRESENTER'S TELEPHONE NUMBER: (702) 794-7933

JUNE 13-14, 1994
LAS VEGAS, NEVADA
Agenda

- Construction Management Status
- ESF Design / Review Schedule
- Schedule for North Ramp Construction
- ESF Strategy Within the PPA ("Scenario A")
Agenda

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Construction Management Changes

The Construction Management Organization (CMO) has recently been modified to allow more effective Owner-CMO-Constructor interactions.

- The roles of the primary participants have been more clearly defined
- The CMO has been empowered to operate more in the manner of the classic Construction Manager
Roles of Primary Parties

DOE - As the Owner has the following functions

- Defines requirements
- Sets milestones and goals
- Allocates funding
- Oversees the Construction Management Organization (CMO)
- Accepts constructed configuration items and approves Job Packages and planning and scheduling activities
Roles of Primary Parties
(CONTINUED)

CMO - As the Construction Manager, CMO:

- Provides Construction Management (CM) for the ESF, Surface Based Testing (SBT), and General Site Facilities (GSF)
- Provides technical direction to the Constructor
- Provides “Notices to Proceed”
- Provides design interpretation for REECo
- May direct REECo to “Stop Work” under certain conditions
- Reviews and maintains status of REECo Costs & Schedules
- Reconciles cost estimates of A/E and constructor
Roles of Primary Parties
(CONTINUED)

REECo supported by Kiewit/PB - As Constructor:

- Develops the facility in accordance with design, budget and schedule
- Provides the personnel for maintenance and operation
- Provides design constructability input and review
- Provides materials and equipment
- Provides for first line QC and safety program
Current CMO Status/Near Term Schedule

- M&O has assumed full responsibility for construction oversight effective April 15, 1994
- Additional CMO personnel hiring began April 30, 1994
- Construction Management Plan revised/approved by June 27, 1994
- CMO administrative areas (scheduling, cost tracking, etc.) will phase in April 30 - July 1 as personnel come on board
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ESF Design Schedule
(FY 1994-1995)

Package 1D - North Portal Surface Facilities
• 90% Review - June 20, 1994

Package 2C - North Ramp (to station 28+00 meters)
• 90% Review - May 2, 1994
• Release for Construction expected August 1, 1994
ESF Design Schedule  
(FY 1994-1995)  
(CONTINUED)

Package 8A - Main Topopah Spring Level (TSL) Drift
- 50% Review - September 26, 1994
- 90% Review - February 1, 1995

Package 8B - North Ramp Extension
- 50% Review - February 1, 1995
- 90% Review - July 1, 1995
ESF Design Schedule
(FY 1994-1995)
(CONTINUED)

* Package 3A - South Portal Pad & Access Road
  • 50% Review - February 1, 1995
  • 90% Review - June 1, 1995

* Package 4 - South Ramp, Surface to TSL
  • 50% Review - March 15, 1995
  • 90% Review - July 1, 1995

* Subject to Funding
Other Near-Term ESF Design Activities

• Integrated Data Control System (IDCS)
  - 50% Review - June 7, 1994

• Alcove design - (North Ramp test alcoves, Ghost Dance Drifts, Heater Test Drifts)
  - 50% Review - 8/1/95

• Mechanical Excavation Methods Study
  - Recommendation by end of FY1994

• Calico Hills Access Alternatives Study
  - Early FY1995 Start
Agenda

- Construction Management Status
- ESF Design / Review Schedule
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North Ramp Construction Schedule

- TBM operations are expected to begin August 8, 1994
- Initial operations can be characterized as a “Startup Testing Phase followed by a Shakedown Phase”
- Advance rate will be low during this period due to:
  - Training of operational personnel
  - Startup testing of the TBM systems
  - Encounter with Bow Ridge Fault at approximately 1+90 meters
  - Negotiation of “Rainier Mesa” material from Bow Ridge to approximately Station 2+70
  - Rail haulage of muck until conveyor installation in early to mid-1995
  - Completion of North Ramp (to 28+00) - Early FY1996
POSSIBLE FAULTS FROM SURFACE MAP OF FRACTURE, GEOMATRIX CORROSION, ETC. DATA, GAINS.

SMALL FAULTS IN TRENCH NRT-1 MAPPED BY GEOMATRIX CONSULTANTS INC.
A NUMBER OF OTHER SMALL SMOKE-N-TRENCHES INDICATE SMALL-TO-MEDIUM SIZE FAULTS IN NRT-1 BUT DO NOT APPEAR TO BE THROUGH GOING.

EL 3900'

EL 3800'

EL 3700'

EL 3600'

EL 3500'

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EL 1200 m

EL 1150 m

EL 1100 m

EL 1050 m

North Ramp Stations
Agenda

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Exploratory Studies Facility
Topopah Spring Level

Start North Ramp Extension w/2nd TBM Early FY 1996
Complete North Ramp Excavation Early FY 1996

Begin TBM Testing and Shakedown - North Ramp August 1994

COMPONENTS OF LOOP SCHEDULE

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>DURATION (DAYS)</th>
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<tbody>
<tr>
<td>TBM Operation</td>
<td>508</td>
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<tr>
<td>Turnouts (2)</td>
<td>36</td>
</tr>
<tr>
<td>Switchgear Niches (14)</td>
<td>140</td>
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<tr>
<td>Test Alcoves (6)</td>
<td>47</td>
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<tr>
<td>Conveyor Install.</td>
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<tr>
<td>Sumps, Refuge, etc.</td>
<td>20</td>
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<tr>
<td>Program Delays</td>
<td>85</td>
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<tr>
<td>TOTAL</td>
<td>862</td>
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Excavation Sequence

- Complete North Ramp with 7.62 meter TBM (TBM #1) Alcoves 1 (existing), 2, 3, 4 and 5 concurrent with TBM ops.

- Acquire second TBM (lease or buy, new or used) (TBM #2) during FY 95

- Begin excavation of North Ramp Extension (NRE) with TBM #2 early FY1996

- TBM #1 proceeds with TSL Main Drift excavation in parallel with NRE excavation
Excavation Sequence
(CONTINUED)

- When TBM #1 clears Ghost Dance Fault (GDF) Drift locations, excavate GDF drifts (approximately 150-200 meters each) (Alcoves 6 & 7)

- TBM #1 resumes TSL Main Drift and proceeds toward daylight at South Portal

- TBM #2 completes NRE, goes to Calico Hills excavation (if needed)

- Heater Test drifting is done off the north side of the NRE when drift sites are cleared by TBM #2