



U.S. Department of Energy
Office of Civilian Radioactive Waste Management



Office of National Transportation Update

Presented to:
**Transportation External Coordination
Working Group**

Presented by:
**Gary Lanthrum, Director
Office of National Transportation**

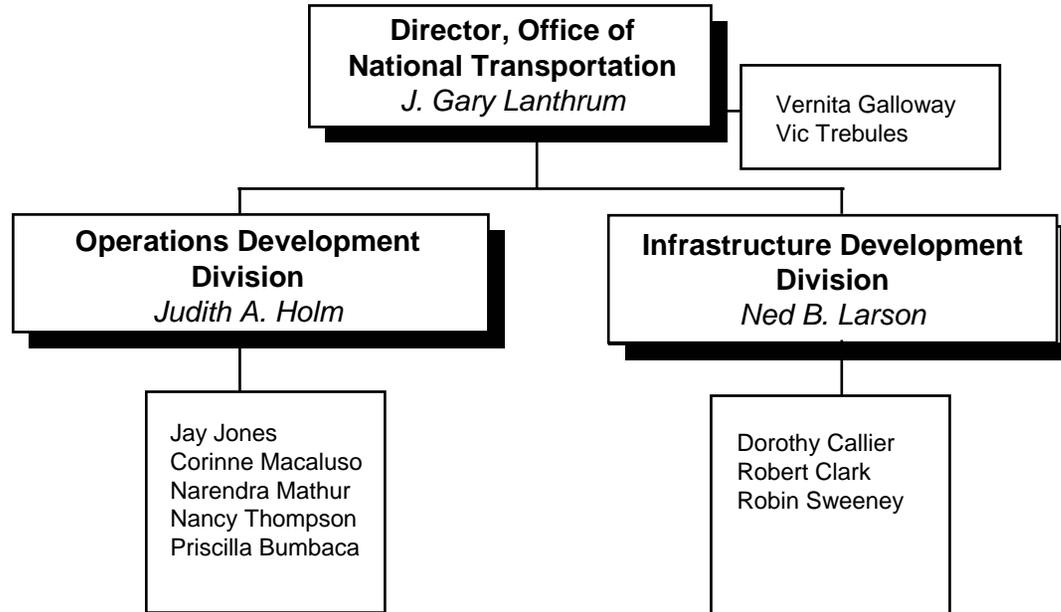
**April 4, 2005
Phoenix, AZ**

Introduction

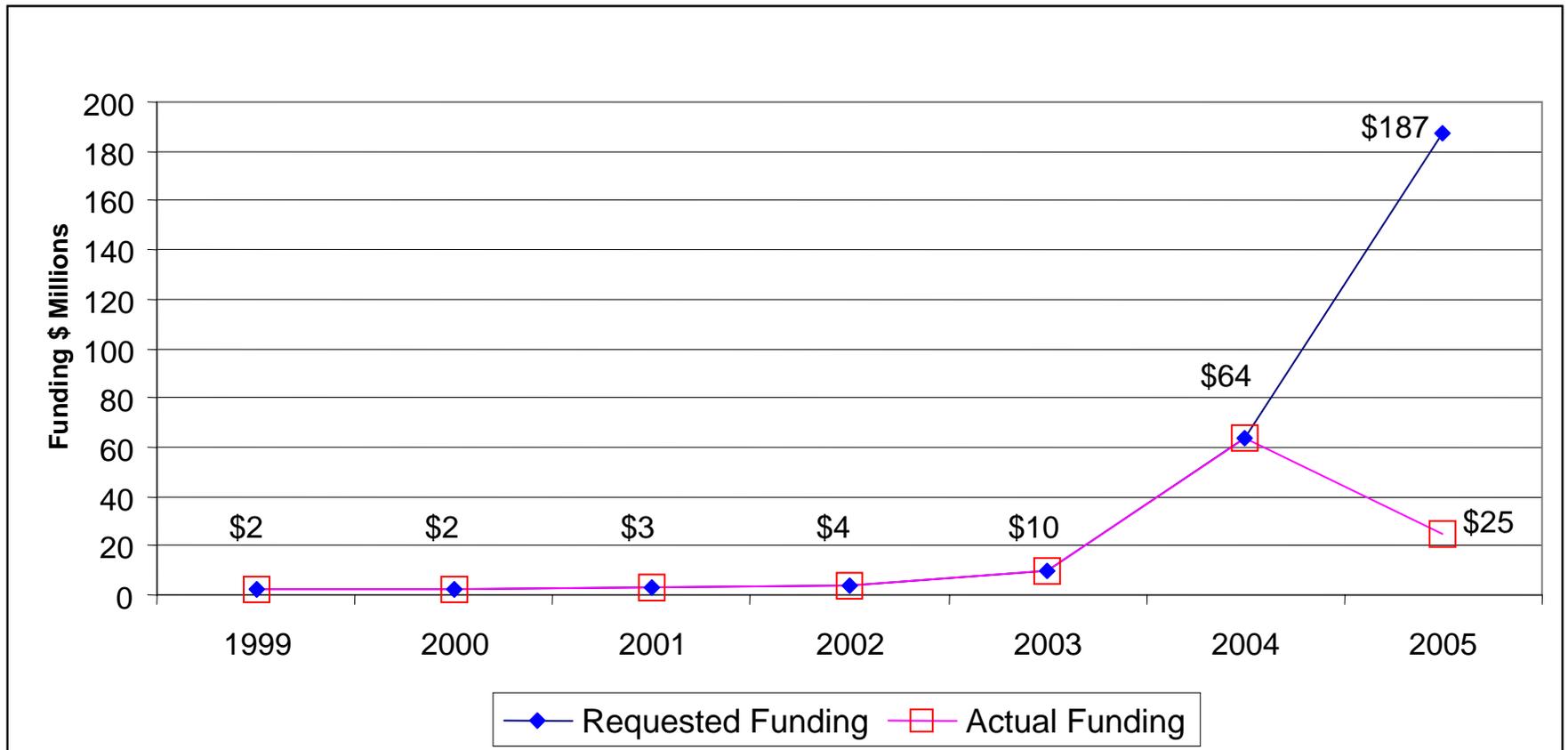
- **Since the September 2004 Transportation External Coordination Working Group (TEC) meeting, the Office of National Transportation (ONT) has made steady progress in developing the transportation infrastructure in its four project areas:**
 - **Infrastructure Acquisition**
 - ◆ **Transportation casks**
 - ◆ **Rolling Stock**
 - **Nevada Rail**
 - **Operational Planning**
 - **Institutional**
- **ONT has refined the management infrastructure to integrate and oversee the four project areas.**
- **ONT has expanded its interactions with other Office of Civilian Radioactive Waste Management (OCRWM) program elements.**



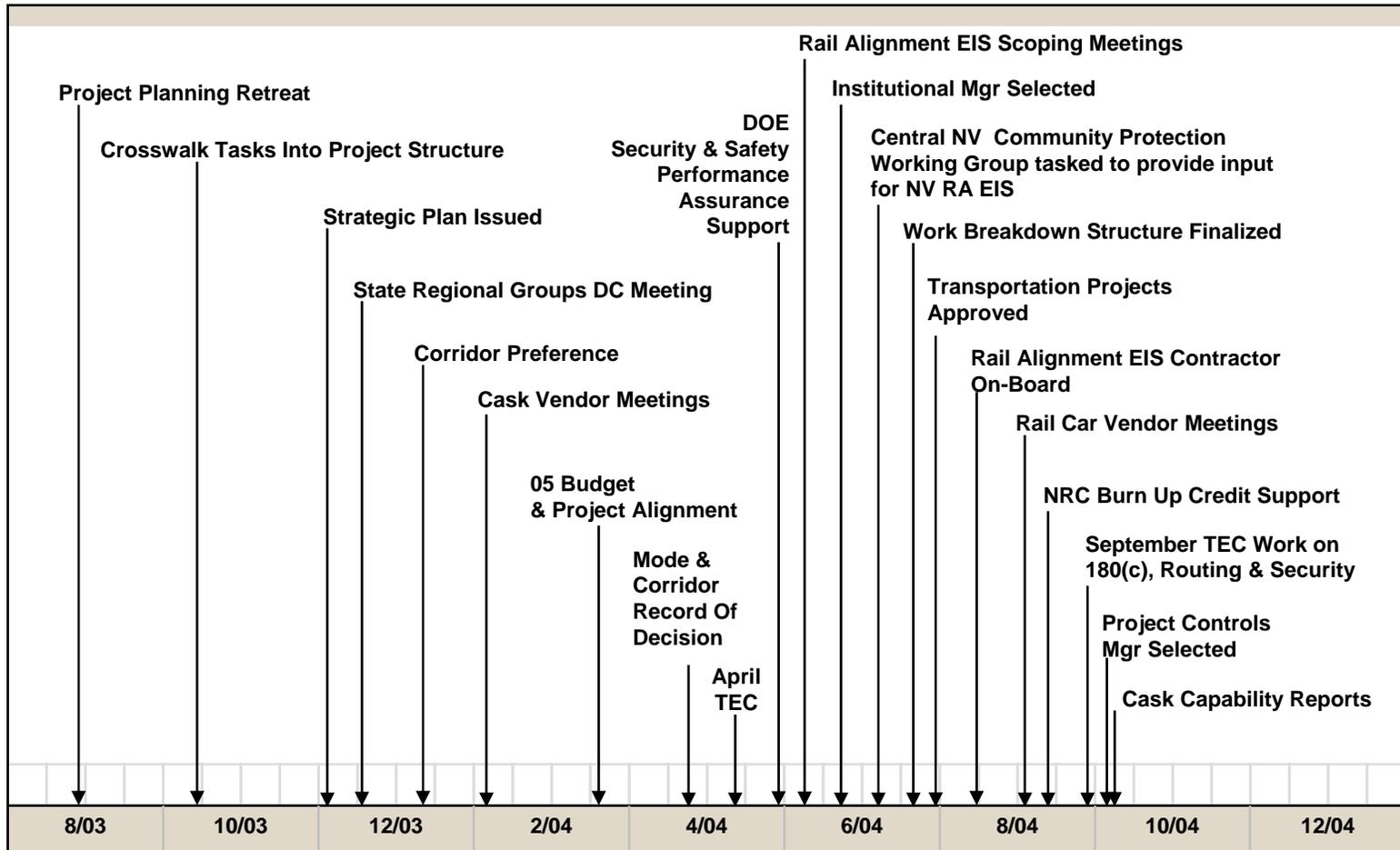
Office of National Transportation Organization



Transportation Funding Profile



Transportation Program FY04 Accomplishments



- **Substantive accomplishments in FY 04**
- **Reprioritized FY 05 activities due to reduced funding**



Transportation Program FY 2005 Plans

- **The Transportation Program will focus on completing draft Nevada Rail Alignment Environmental Impact Statement (EIS).**
- **Begin conceptual design work for casks and rail cars.**
- **Announce decisions that will enable more detailed operational planning discussions.**
- **Initiate consultation with Native American tribes along potential transportation corridors.**
- **Continue working with State Regional Groups (SRG) and other stakeholders through the TEC regarding route selection criteria, 180(c) policy development, and security planning.**



Developing a Rail Line in Nevada

- **Work on the Nevada Rail Alignment EIS is moving forward.**
- **Public scoping meetings were completed in June 2004.**
 - Over 4,000 comments received.
- **Contracts were awarded to perform data collection for the EIS and develop conceptual design.**
 - Conducting field surveys.
 - Developing conceptual design.
- **Several alternative routes were suggested by the public.**
 - The EIS will be extended slightly to collect data on the alternative routes to evaluate their feasibility.



Field Surveys of Caliente Corridor

Data collection and analysis:

- Geotechnical
- Aerial Mapping
- Hydrology
- Sensitive Species
- Cultural Resources
- Route Optimization

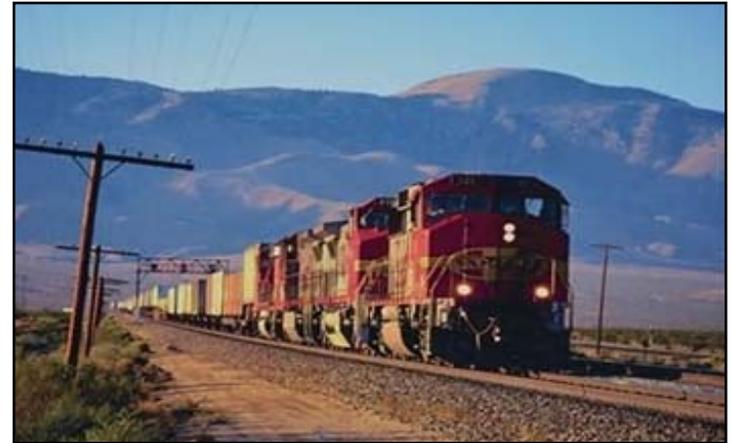
Will support:

- Preparation of the Rail Alignment EIS
- Investigation of potential sources of construction materials
- Assessment of potential mineral and energy resources
- Conceptual and final design of the rail line and structures
- Ongoing engineering efforts



Components of Railroad Construction

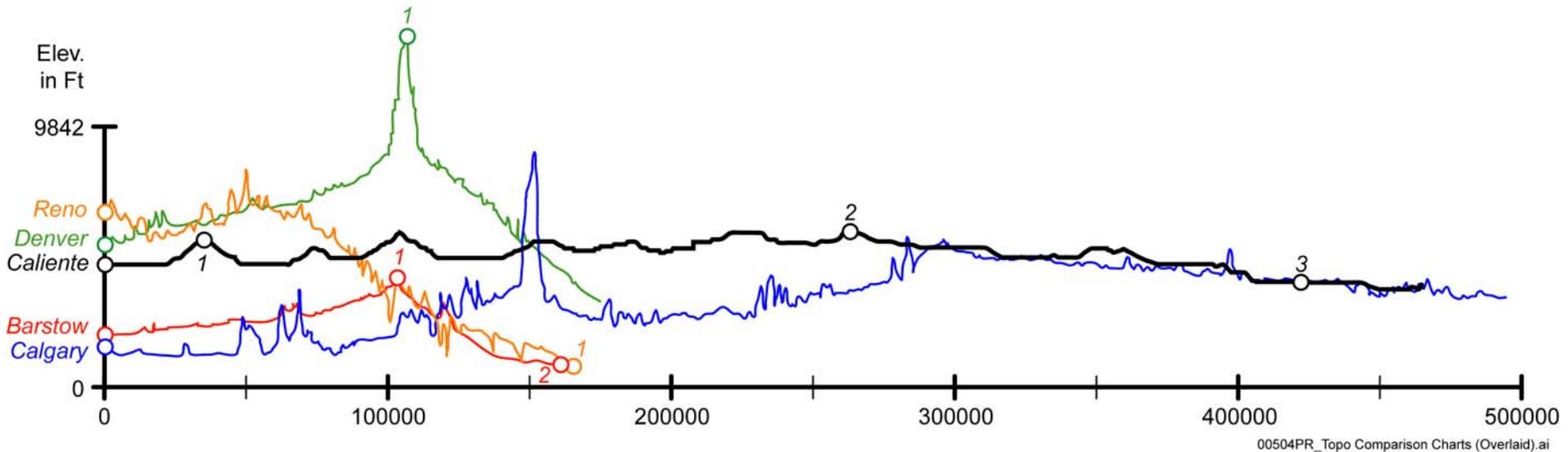
- Complete Alignment EIS
- Aerial and ground surveys
- Design
- Obtaining permits
- Earthwork
- Building structures



- Bridges and culverts
- Ballast
- Track laying
- Signaling system
- Passing tracks
- Crossings
- Testing



Caliente Corridor Composite Comparison



NOTE:
All Profiles start at the Eastern most point.

Downline Distance (meters)

00504PR_Topo Comparison Charts (Overlaid).ai

LEGEND

- Caliente Rail Topographic Profile (*Max Grade 2%*)
 - 1 Bennett Pass
 - 2 Warm Springs Pass
 - 3 Beatty Wash
- CP - Rogers Pass Topographic Profile (*Max Grade 2.2%*)
- UP - Denver West Topographic Profile (*Max Grade 2.1%*)
 - 1 Granby
- Cajon Pass Topographic Profile (*Max Grade 2.2%*)
 - 1 Cajon Pass
 - 2 San Bernadino
- Donner Pass Topographic Profile (*Max Grade 2.2%*)
 - 1 Sacramento Area



Upcoming Milestones for Nevada Rail Alignment

- **Complete technical data collection along the corridor.**
- **Issue draft Rail Alignment EIS.**
 - **Hold public hearings to obtain comments on Draft Rail Alignment EIS.**
- **Issue Final Rail Alignment EIS in FY06.**
- **Issue Record of Decision (ROD) for rail alignment.**
- **Begin final design/construction.**



Cask System Requirements

- **ONT is focused on maximizing the use of available cask designs and Nuclear Regulatory Commission (NRC) Certificates of Compliance (CoC) for transport casks.**
- **ONT has a preference for cask systems that provide the maximum flexibility in terms of facility and fuel compatibility.**
- **Coordination efforts are underway to ensure transportation casks are compatible with the Yucca Mountain Surface Facilities.**
 - **Size and weight parameters have been bounded for facility design work;**
 - **Cask handling considerations are being integrated with facility design efforts.**



Cask Capability Assessment Reports

- **Purchase orders to perform cask capability assessments were placed with vendors possessing NRC Certificates.**
- **Vendors are now familiar with DOE's spent nuclear fuel (SNF) and high-level radioactive waste (HLW) data.**
- **Meetings held in late August and early September of 2004 provided an opportunity for vendors to discuss the data and their ability to meet ONT's needs.**
- **Preliminary summaries of vendor data indicate that about 30 percent of the fuel eligible for shipment could be accommodated by existing casks, Certificates, and current utility infrastructure.**
- **Casks exist today that are technically capable of transporting DOE waste material.**
 - **Generally, the thermal, structural, and shielding requirements for commercial SNF bound those of the DOE material.**



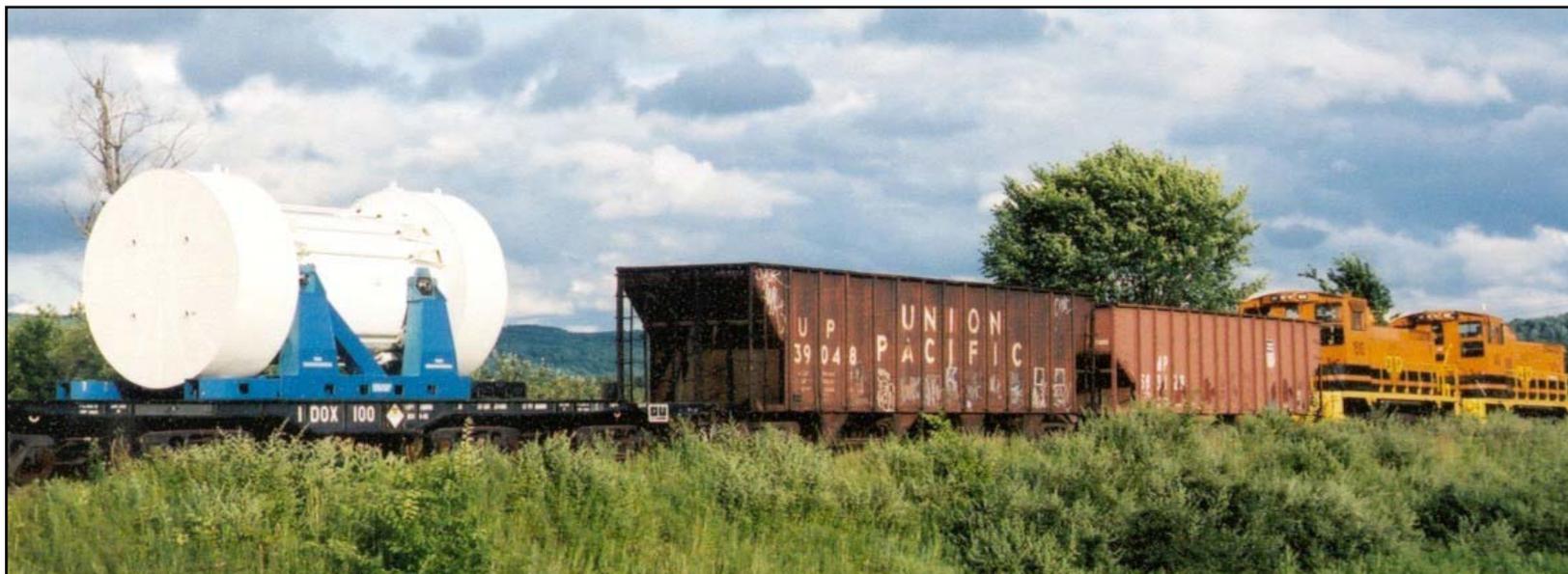
Next Steps in Cask Procurement

- **Issue draft Request for Proposals (RFP) to solicit input from cask vendors on approaches to increasing capabilities of casks to accommodate a broader range of the eligible SNF inventory located at facilities with infrastructure limitations.**
- **Issue cask RFP.**
- **Award conceptual design tasks for required new or modified casks.**
- **Approve cask conceptual designs and approve beginning of final design/certification of casks offering innovative solutions.**
- **Place orders for fabrication of casks.**



Rolling Stock Acquisition Status

- We are developing our policy on implementation of the Association of American Railroads (AAR) standard for rail cars shipping.
- ONT plans to procure ~120 cask cars, 60 buffer cars, and 30 escort cars.
- Locomotives may be procured later.

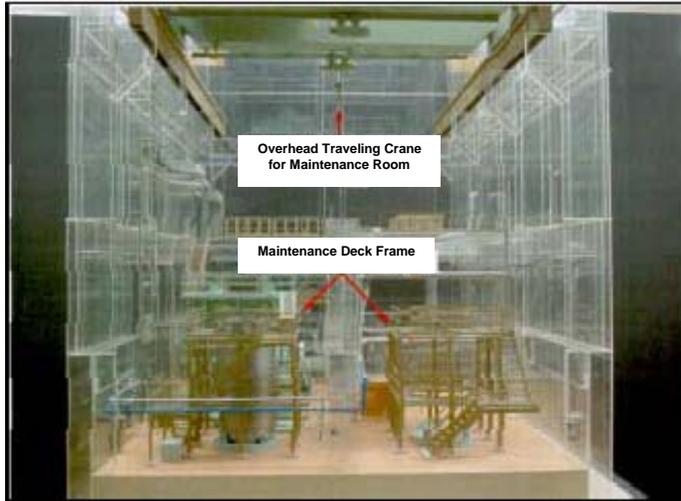


Fleet Management and Support Facilities

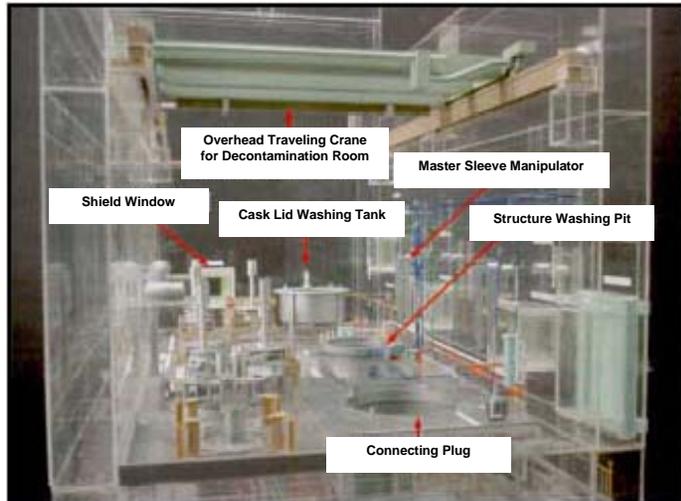
- **Support facilities include:**
 - **Fleet Management Facility (FMF) to maintain transportation equipment;**
 - **Fleet operations center;**
 - **Rail line maintenance facility; and**
 - **Rail sidings and end-of-line facility.**
- **Locations of the FMF and other support facilities are being evaluated in the Nevada Rail Alignment EIS.**
 - **Preliminary work to provide input into the EIS has been performed.**



FMF Status



- FMF design work was deferred because of FY 2005 budget constraints.
- If necessary, initial cask and rolling stock maintenance will be procured as services pending completion of a dedicated facility.



Operational Planning Update

- **Operations planning activities include:**
 - **Continuing Burn-Up Credit data collection and analysis.**
 - **Progress on developing optimization model for transportation planning.**
 - **Supporting modeling tools, especially RADTRAN and TRAGIS.**
 - **Examining federal agency regulations and policies to ensure “best practices” inform the path forward for operations.**



Operational Planning Update

(Continued)

- **Security activities include engaging the DOE Office of Security and Safety Performance Assurance on risk management options for transportation security.**
 - **Launching Transportation Classification Guide interagency working group and review;**
 - **Continuing collaboration with our international partners on transportation sabotage studies;**
 - **Examining threat analyses to identify appropriate countermeasures to build at the front end of ONT system;**
 - **Initiating analysis for personnel, physical and information security, including requirements and special training needs.**



Institutional Project Update

- **Work with the four SRGs continues on:**
 - Development of routing criteria and route selection methodology,
 - Recommendations for implementing Section 180 (c) of the Nuclear Waste Policy Act, and
 - Special project support
- **TEC Topic Groups are active:**
 - Additional participants have been added to the Security Topic Group.
 - Tribal Topic Group is being expanded to include all tribes potentially along transportation routes.
 - Routing Topic Group held training on RADTRAN, TRAGIS, and Decision Model.
 - Work on updates to the DOE Transportation Protocols and development of detailed operational plans will follow key policy decisions.



Summary

- **ONT continues to make progress despite a myriad of challenges.**
 - **Activities has been reprioritized to allow continued development of critical infrastructure despite a funding shortfall in FY 05.**
- **Infrastructure acquisition plans are moving forward in phases, emphasizing flexibility.**
- **By focusing on completion of the Nevada Rail Alignment EIS and development of conceptual designs for cask and rail cars, progress on final design/construction and fabrication can begin quickly when funding increases.**

