LANL Construction Corridor

Tom McKinney, Associate Director
Project Management & Site Services, LANL
June 16, 2010

LA-UR 10-04021
Construction Forum Objectives

- Share LANL planning process for construction projects along the Pajarito Corridor for the next ten years

- Share constraints which can change LANL’s planning
  - Federal budget process

- Share LANL’s approach to the management of the construction projects
Major Projects-Near Concurrent Activities

- Chemistry & Metallurgy Research Replacement (CMRR)
- Nuclear Materials Safeguards and Security Upgrade Project (NMSSUP) Phase II
- TA-55 Revitalization Project (TRP) Phase II & III
- Radioactive Liquid Waste Treatment Facility (RLWTF)
- TRU Waste Facility (TRU)
- Material Disposal Area-C Closure
- Material Disposal Area-G Closure
- Waste Disposition Project
- RLUOB Occupancy
Construction Project Layout
Chemistry & Metallurgy Research Replacement-Nuclear Facility

- Chemistry and Metallurgy Research laboratory replacement
- Nuclear “Hazard Category 2” facility
- 22,500 square feet of lab space

- Special Nuclear Material storage
- Special facility equipment
- Robust “Security Category 1”
Chemistry & Metallurgy Research Replacement Radiological Lab/Utility/Office Building

- Facility performance baseline ($164M TPC)
- 19,500 square feet of radiological lab space
- Centralized utilities, services for all CMRR facility elements
- Office space for 350 CMRR workers
- Consolidated training facility
- Facility incident command, emergency response capabilities
- RLUOB equipment and installation ($199M TPC)
Radiological Lab/Utility/Office Building (RLUOB)
Chemistry & Metallurgy Research Replacement Nuclear Facility Construction Strategy

- Significant effort (design and construction) performed by subcontractors
- LANL CMRR Team integrator/manager of all activities
- Design deliverables include all products necessary to construct
- 35 separate construction packages planned for award
- Superior performance to be acknowledged and incentivized through entire construction period
Construction Bulk Commodity Summary

The construction of the NF Facility will include the following major commodities, approximately:

- 122,000 cubic yards of structural concrete
- 127,000 cubic yards CLSM fill material for soils stabilization
- 98,000 cubic yards of high-pressure injected grout for soils stabilization
- 123,000 linear feet of piping > ½”
- 95,000 linear feet of process and instrument tubing < ½”
- 1,040,000 linear feet of conduit and raceway
- 2,610,000 linear feet of wire, cable and fiber
- 1,580,000 pounds of ductwork
- 975,000 pounds of duct support steel
Nuclear Materials Safeguards and Security Upgrade
Radioactive Liquid Waste Treatment Facility
TRU Waste Facility
TA-54 Material Disposal Areas
Cultural Resources

- LANL’s commitment to protect cultural resources
  - LANL has a commitment to protect and preserve cultural resources. The Laboratory has been extensively surveyed and areas of cultural significance have been identified

- Cultural resources identified to date in CMRR project area
  - Native American ancestral areas – identified sites in approved areas for project use to date will be avoided. The State Historic Preservation Officer (SHPO) has concurred with a “no effect through avoidance” determination
  - McDougall Homestead – early 1900s era structures and artifacts – mitigated with concurrence with the SHPO
Environmental Stewardship

- LANL takes its environmental stewardship seriously, and numerous programs are in place to protect the environment
- Environmental requirements included as part of subcontracting process
- Environmental Programs construction activities support closure of contaminated areas in compliance with the RCRA Consent Order with the State of New Mexico
- Existing construction programs have been recognized for their excellence in environmentally conscious design
  - 2010 NNSA Best-in Class: Sustainable Design/Green Buildings-RLUOB
  - 2010 DOE EStar: Sustainable Design/Green Buildings-RLUOB
- Nuclear Facility will be Leadership in Energy and Environmental Design (LEED) certified