



Test Capabilities Revitalization (TCR) Phase 2

The Test Capabilities Revitalization (TCR) project set out in 2001 to renovate 40 to 50 year-old large-scale environmental test capabilities and the Aero Sciences facility. Phase 2, which kicked off in 2004, will complete the project with additional improvements to facilities and infrastructure. These critical components support the B61 project and other significant activities. The test infrastructure simulates extreme thermal and mechanical environments to improve the safety, security, and confidence of the nation's nuclear stockpile. Tests conducted at the complex provide information about thermal resistance, acceleration impact, vibration, and radiant heat.

Five subprojects make up Phase 2:

- 10,000-foot rocket sled track complex
- Centrifuge
- Mechanical Shock
- Vibration and Acoustics
- Aero Sciences

Major improvements, some accomplished and some still-to-come, include modifications to several facilities. TCR Phase 2 will provide equipment, upgrades, and renovations at various facilities that comprise the project.

Mechanical Shock

- 20-inch actuator
- New liquid nitrogen-based high-pressure gas system
- New HSGG systems (gas gun)
- New 2000 sf test arena and 1000 sf gas gun enclosure
- Minor renovation
- New grading, paving, and drainage
- New and modified N-S overhead monorails
- New fire protection service

Centrifuge

- New mechanical/electrical system
- Upgraded hydraulic supply system
- New fire protection service and system
- Second means of egress from centrifuge pit
- New office and equipment staging and storage area

Vibration and Acoustics

- New power amplifier and rebuilt shaker tables
- Extend vault-type room spaces, update control room
- Repair and restore cranes to their original capacity
- New staging and storage capability
- Renovated facilities





Storage Bunker



Sled Track Watch Tower



Crane Assembly

Sled Track

- Refurbish Buildings 6726, 6741, 6742, 6743, and 6747 to meet current safety standards
- Remove substandard structures
- Replace track-side cabling to upgrade test and site infrastructure including instrumentation, data acquisition capabilities, and power and communications
- Various site improvements such as drainage, grading, paving, and track repairs

Aero Sciences

- Replace 5200 cubic feet of compressed air (CA) tanks and improve CA piping
- Improve entry and restroom facilities
- Replace hypersonic wind tunnel heater power and control systems
- Renovate support facilities within the labs

For more information about the TCR Phase 2 project, please call or send an email message to one of the following representatives:

Project Manager
Paul Schlavin, PE, PMP
Telephone (505) 845-9674
Email: phschla@sandia.gov

Construction Manager
Marc Ghattas
Telephone (505) 844-9764
Email: mghatta@sandia.gov



**Sandia
National
Laboratories**

Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000. SAND20XX-XXXX X