

# Justification for Critical Decision 1, SNL Weapons Evaluation Test Laboratory at Pantex, Amarillo, Texas

The U.S. Department of Energy (DOE) Strategic Plan identifies an objective to “maintain confidence in the safety, reliability, and performance of the nuclear weapons stockpile without nuclear testing.” This objective is realized through the efforts and accomplishments of the DOE Stockpile Stewardship and Management Program. Sandia National Laboratories (SNL) contributes to this program by maintaining a Stockpile Surveillance Program (SSP) that evaluates weapon system attributes, design, and production to ensure that SNL appropriately addresses the safety, reliability, performance, and quality of nuclear weapons in the enduring stockpile. The Weapons Evaluation Test Laboratory (WETL) located at Pantex in Amarillo, Texas, operated by SNL, is a major contributor to the SSP. WETL utilizes specialized systems test equipment (STE) to collect stockpile surveillance data that is used in the annual certification statement provided to the President and Congress.

Architectural Research Consultants, Incorporated (ARC) analyzed user needs and identified facility alternatives as part of initial planning to request money from Congress to resolve existing deficiencies and meet future requirements at WETL. WETL will require about 33,500 gross square feet in space. Alternatives range from renovation of the existing facility, renovation with an addition, to a complete new facility and will range in cost from \$22.6 to \$31 million.

Key concepts of WETL are to provide:

- Protection of the equipment and activities from natural hazards.
- Flexibility to all System Test Laboratories and work areas to allow the ability to adjust to required new tolerances.
- Organization of space to accommodate specific test activities and efficient flow of work.

**Client:** Sandia National Laboratories, Albuquerque, NM

**Completion:** 1998



Existing WETL facility (left) and example of type of equipment used in system test areas (below)



Conceptual relationship diagram (below)

