## **Annual Performance Results and Targets**

|   | FY 2000 Results   | FY 2001 Results   | FY 2002 Results | FY 2003 Results   |
|---|---|---|-----------------|---|
| Condu<br>experi<br>addition<br>Test S<br>nuclea | Conduct further subsets of the subcritical Meet FY 2001 milestones in the science experiment begun in FY 1999 (Oboe) and one campaigns to achieve scientific understate additional subcritical experiment at the Nevada of the nuclear package of weapon systements. Site to provide data on the behavior of sustain our ability to annually certify the nuclear materials during the implosion phase of nuclear weapon stockpile without underganuclear weapon. (MET GOAL) | Conduct further subsets of the subcritical experiment begun in FY 1999 (Oboe) and one campaigns to achieve scientific understanding additional subcritical experiment at the Nevada of the nuclear package of weapon systems to sustain our ability to annually certify the nuclear materials during the implosion phase of nuclear weapon stockpile without underground a nuclear weapon. (MET GOAL)  Meet the FY 2002 milestones in the science campaign to achieve scientific understanding of the nuclear campaign to achieve scientific understanding of the nuclear campaign to achieve scientific understanding of the nuclear package of weapon systems to sustain our ability to annually certify the nuclear weapon stockpile without underground nuclear testing. (MET GOAL) |                 | Meet the critical FY 2003 Campaign performance targets contained in the N Future-Year Nuclear Security Program (FYNSP). (MIXED RESULTS) |

Ensure that the capability to resume underground nuclear testing is maintained in accordance with the Presidential Decision Directive through a combined experimental and test readiness program. (MET GOAL) There were no related targets.

NNSA

Implement the recommendations requested by the Nuclear Posture Review to refine test scenarios and evaluate the cost/benefit tradeoffs to sustain optimum test readiness that best supports the New Triad. (MET GOAL)

There were no related targets.

## **Annual Performance Results and Targets**

| Developments and improvements in the accuracy of predictive models and methodologies used to assess nuclear performance  | Performance Indicators     |
|--|----------------------------|
| Completed the first Joint Actinide Shock Physics Experimental Research (JASPER) Plutonium (Pu) shot demonstrating an ability to improve Pu equation of state (EOS) data.   | FY 2003                    |
| bleted the Complete development of development of Quantitative CS (Quantitative Margins and Uncertainties (QMU) logic for the W76, incorporate logic in advanced simulation, and conduct peer ion of state review. | FY 2004                    |
| Complete development of QMU logic for the W88 and conduct peer review.   | FY 2005                    |
| Deliver, to advanced simulations, experimental data in new pressure and temperature regimes from dynamic and static high-pressure experiments to guide the development on an improved Pu equation of state (EOS).  | FY 2006                    |
| Deliver a preliminary multiphase plutonium EOS with quantified uncertainties for incorporation in primary assessment models.   | FY 2007                    |
| Review the state of the plutonium EOS database to determine further requirements for plutonium experiments and deliver experimental data in specific regimes of interest.  | FY 2008                    |
| -Complete 100% of QMIU work on the W76Complete 80% of the QMIU work on the W88.  | FY 2009                    |
| Ongoing  | Endpoint<br>Target<br>Date |

Weapons Activities/ Science Campaign