

1.0 PURPOSE AND NEED FOR AGENCY ACTION

The purpose for action by the Department of Energy (DOE), National Nuclear Security Administration (NNSA), is to support a primary DOE mission of maintaining and demonstrating the safety, reliability, and performance of the nation's nuclear weapons systems. NNSA performs this mission through its Stockpile Stewardship and Management Program. At Sandia National Laboratories (SNL) this mission includes thermal and mechanical testing. These tests are necessary to simulate the normal and abnormal conditions that the test articles would experience. Existing test equipment lags significantly behind state-of-the-art capabilities and is inadequate to provide realistic testing environments for validating modeling and simulation requirements. Facilities have reached the end of their useful lives and do not meet modern health, safety, environmental, and energy conservation standards. There is a need to upgrade and replace existing test capabilities to support current and future mission requirements and the broad range of full scale testing capabilities that must be in place. Without revitalization of SNL's current test facilities, individual test capabilities will be lost during the next five years.

Inherent in DOE's purpose for action is a need to support non-DOE testing requests that are compatible with DOE's capabilities. The U.S. Nuclear Regulatory Commission (NRC) has requested that DOE construct and operate facilities necessary to perform drop, thermal, and inspection characterization tests on rail shipping casks designed to hold high-level radioactive waste as part of NRC's certification process. This is consistent with DOE's thermal and mechanical testing capabilities; however, it is independent of DOE's need to upgrade and replace existing nuclear weapons test capabilities at SNL/New Mexico (SNL/NM).