

SUBJECT: Office of Independent Oversight's Office of Environment, Safety and Health Activity Report for the Los Alamos Site Office Safety System Oversight Assessment – Technical Area-55 Fire Suppression System Upgrade to Safety Class, May 17-28 and August 2-5, 2010

The U.S. Department of Energy (DOE) Office of Independent Oversight, within the Office of Health, Safety and Security, in coordination with the Los Alamos Site Office (LASO), provided technical experts to support the ongoing LASO review of project actions by Los Alamos National Laboratory (LANL) to upgrade the Technical Area (TA)-55 fire safety system (FSS) from a safety-significant system to a safety-class system. The review is intended to provide DOE line managers with accurate, objective information on the adequacy of actions being taken to support upgrading and future management of the TA-55 wet-pipe sprinkler system as a safety-class system. This review also satisfies a number of Independent Oversight nuclear safety oversight priorities, including placing increased emphasis on: (1) significant modifications to nuclear facilities, (2) nuclear facility safety bases, (3) fire protection, and (4) follow-up on previous Independent Oversight inspection results, as described in the Office of Independent Oversight's *Program Plan for Enhancing Independent Oversight of Nuclear Safety*, dated August 2010.

The objective of the review was to verify that the appropriate activities are performed to support crediting and maintaining the TA-55 wet-pipe FSS as a safety-class system. The review team evaluated whether:

- System evaluations and calculations adequately predict required system performance.
- Configuration management is maintained such that system analyses and documentation are consistent with the installed configurations.
- System operating, surveillance, maintenance, and test procedures will maintain and verify performance consistent with safety basis and code requirements.

The review team reviewed documentation that supports the design and safety basis requirements for the FSS, conducted interviews with assigned system engineers and authorization basis personnel, performed limited facility walk downs of the system, and observed field performance of several surveillance testing and maintenance activities. The review identified a number of key actions that were deemed essential to support safety-class designation of the FSS, and the review team concluded that when several specific work activities and safety basis documentation revisions have been completed, the safety-class designation of the FSS could be considered acceptable. Detailed results of the review were formally documented in the LASO report, *LASO Safety System Oversight Assessment Report for the TA-55 Fire Suppression System (FSS) Upgrade to Safety Class, April-May 2010*.