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Audit Report

Sandia National Laboratories
Nuclear Weapons Safety Program
(U)

DOE/IG-0799

July 2008

The following is an unclassified summary of the classified Audit Report on "Sandia National Laboratories Nuclear Weapons Safety Program (DOE/IG-0799, July 31, 2008)

BACKGROUND

Nuclear weapons safety is of paramount importance to U.S. security. The Department of Energy's National Nuclear Security Administration (NNSA) requires that design features minimizing the possibility of accidental or inadvertent nuclear detonation be incorporated in all nuclear weapons.

Although ultimate responsibilities for nuclear weapons safety rests with Federal managers, NNSA's Sandia National Laboratories, a contractor-operated entity, produces independent safety assessments to identify nuclear weapons safety issues. Sandia's Nuclear Safety Assessment organization performs the independent assessments and reports identified safety issues to Sandia's Weapons Management organization, Systems Engineering. Systems Engineering designs non-nuclear components of nuclear weapons systems, and determines what safety issues will be reported to NNSA.

Because of the importance of nuclear weapons safety to national security, we performed an audit to determine whether nuclear weapons safety issues identified by Sandia's Safety Assessment organization were being addressed in a timely manner.

RESULTS OF AUDIT

Sandia had not resolved disagreements between Sandia's Safety Assessments and Systems Engineering about the need to address identified safety issues. Although Safety Assessment identified safety issues and characterized them as adversely impacting assured safety, Systems Engineering senior management generally considered those issues to be only postulated weaknesses. Sandia asserted that disagreements between Systems Engineering and Safety Assessment were documented for the Laboratories' Director to consider in deciding whether weapons are safe or other actions required. However, Sandia could not provide any formal documentation explaining the risks posed by safety issues and the basis for accepting those risks, and/or plans showing how the risks would be mitigated.

We were concerned that NNSA had not provided effective oversight of outstanding safety issues. Specifically, NNSA weapons managers had not obtained Safety Assessment safety reports from Sandia. As early as 1994, Sandia managers and other have raised concerns that safety issues were not being fully reported to the Department of Energy (Department). We noted that NNSA had not specified through guidance or requirements what safety information it needed from Sandia regarding safety concerns or how it planned to resolve them.

Although Sandia concluded that nuclear weapons systems are safe, it is important that decision makers at the most senior levels of the Department and NNSA have all of the information regarding nuclear weapons safety concerns in order to make and prioritize funding and design decisions. Accordingly, we made recommendations to address disagreements within Sandia regarding safety issues and to improve the transparency of such issues to decision makers.