

Approved: 2-08-2011

SUBJECT: DEPARTMENT OF ENERGY NUCLEAR SAFETY POLICY

PURPOSE: To document the Department of Energy's (DOE) nuclear safety policy.

SCOPE: The provisions of this policy apply to all Departmental elements with responsibility for a nuclear facility, except the Naval Nuclear Propulsion Program, which is separately covered under Executive Order 12344, Title 50 United States Code, sections 2406 and 2511. This Policy cancels Secretary of Energy Notice 35-91, *Nuclear Safety Policy*, dated 9-9-91.

POLICY: It is the policy of the Department of Energy to design, construct, operate, and decommission its nuclear facilities in a manner that ensures adequate protection of workers, the public, and the environment.

Towards this end, DOE is committed to:

1. Establishing and implementing nuclear safety requirements that utilize national consensus (or other government) standards or applicable external agency regulations¹ in accordance with DOE's processes for developing and implementing rules, directives, and technical standards. Key nuclear safety elements to be addressed include hazard identification, assessment and control; facility design; quality assurance; and safety management programs to ensure a high level of formality of operations, such as procedures, maintenance, personnel training, conduct of operations, criticality safety, emergency preparedness, fire protection, radioactive waste management, and radiation protection.
2. Implementing the Department's Safety Management System Policy including supporting processes for its core functions and guiding principles, and related activities for performing effective line management, establishing and maintaining strong safety culture, and performing independent oversight.
3. Using a safety management approach that minimizes the use of hazardous materials, establishes appropriate hazard controls based upon a primarily qualitative hazard analysis, and implements a defense-in-depth approach to hazard control.
4. Ensuring that quantitative and probabilistic risk assessments, when employed, are used in a manner that:
 - a. Supplements qualitative/deterministic processes for hazard assessments, hazard control development, and safety management programs development,
 - b. Is consistent with DOE directives, and

¹ DOE and the Nuclear Regulatory Commission (NRC) nuclear safety policies, goals and expectations are, in general, consistent and DOE acknowledges that activities licensed by the NRC meet the commitments of this policy through compliance with the NRC license.

- c. Is supported by industry practices and availability of risk data.
5. Having as its Safety Goal to conduct its operations such that (a) Individual members of the public be provided a level of protection from the consequences of DOE operations such that individuals bear no significant additional risk to life and health to which members of the general population are normally exposed,² and (b) DOE workers' health and safety are protected to levels consistency with or better than that achieved for workers in similar industries.

The following two quantitative safety objectives for public protection are established as "aiming points" (not requirements) in support of the Safety Goal that guides the development of DOE's nuclear safety requirements and standards:

- The risk to an average individual in the vicinity of a DOE nuclear facility for prompt fatalities that might result from accidents should not exceed one-tenth of one percent (0.1%) of the sum of prompt fatality risks resulting from other accidents to which members of the population are generally exposed. For evaluation purposes, individuals are assumed to be located within one mile of the site boundary.
- The risk to the population in the area of a DOE nuclear facility for cancer fatalities that might result from operations should not exceed one-tenth of one percent (0.1%) of the sum of all cancer fatality risks resulting from all other causes. For evaluation purposes, individuals are assumed to be located within 10 miles of the site boundary.

BY ORDER OF THE SECRETARY OF ENERGY:



DANIEL B. PONEMAN
Deputy Secretary

² This goal and associated objectives are adapted from the U.S. Nuclear Regulatory Commission's Safety Goal for operation of commercial nuclear power plants (51 Federal Register 30028; August 21, 1986).