

Defense Nuclear Facilities Safety Board

Washington, D.C. 20004

Policy Statement

PS-3

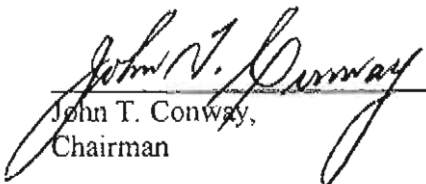
Date: August 19, 1996

Subject

Policy Statement on Board oversight of Department of Energy decommissioning activities at defense nuclear facilities.

Summary

This policy statement describes the decommissioning phase of a DOE defense nuclear facility and identifies the Board's safety oversight responsibilities for decommissioning activities.


John T. Conway,
Chairman

Congress directed the Defense Nuclear Facilities Safety Board (Board) to oversee Department of Energy (DOE) practices at defense nuclear facilities that could adversely affect public health and safety during any stage in the life cycle of those facilities, from design, construction, and operation through decommissioning. The Board's objective during decommissioning is identical to its objective during any other phase of a facility's life cycle: to ensure that DOE provides adequate protection of worker and public health and safety at defense nuclear facilities. Congress specifically tasked the Board with reviewing and evaluating:

the content and implementation of the standards relating to the design, construction, operation, and decommissioning of defense nuclear facilities of the Department of Energy (including all applicable Department of Energy orders, regulations, and requirements) at each Department of Energy defense nuclear facility. The Board shall recommend to the Secretary of Energy those specific measures that should be adopted to ensure that public health and safety are adequately protected. 42 U.S.C. § 2286a(a)(1) (emphasis added).

Thus, the Board's principal oversight function during the decommissioning phase of a facility is to ensure that appropriate nuclear safety rules, orders, and procedures are developed by DOE and then put in practice while the facility is being taken out of service.

An unambiguous definition of "decommissioning" is essential to understanding the Board's responsibilities for safety oversight during this phase, and to establishing effective cooperation and/or processes for transition to external regulation by federal and state agencies having statutory responsibilities for final cleanup and site restoration activities that the term decommissioning also encompasses. As used in the Board's enabling statute, decommissioning is a broad term that encompasses activities leading up to environmental restoration, including deactivation, decontamination, final process runs, removal of special nuclear material, residues, and wastes, and other activities necessary to ensure adequate protection of public health and safety. Under the Atomic Energy Act (AEA), decommissioning begins when operation ceases, and ends when source material, byproduct material, and special nuclear material ("AEA materials"), as well as radioactive materials related to the defense mission, such as tritium, have been adequately removed from a facility. When completed properly, these actions taken to remove radioactive materials obviate the need for continued Board oversight to ensure adequate protection of worker or public health and safety from radiological hazards.

This definition of decommissioning is broader than that currently used administratively by DOE. DOE segments the period following operation into a deactivation phase and a decommissioning phase. The DOE Office of Environmental Management separates the deactivation phase from other functions commonly associated with operations, and defines it as:

The process of placing a facility in a safe and stable condition to minimize the long-term cost of a surveillance and maintenance program that is protective of workers, the public, and the environment until decommissioning is complete. Actions include the removal of fuel, draining and/or de-energizing of nonessential systems, removal of stored radioactive and hazardous materials and related actions. As the bridge between

operations and decommissioning, based upon facility-specific considerations and final disposition plans, deactivation can accomplish operations-like activities such as final process runs, and also decontamination activities aimed at placing the facility in a safe and stable condition. *Decommissioning Resource Manual*, DOE/EM-0246, § 3.3.

DOE distinguishes deactivation from decommissioning activities for administrative purposes including budget determinations and delineation of various responsibilities within DOE. The Board believes that DOE's functional description of what takes place during deactivation is useful, but also recognizes that deactivation is a continuation and completion of the operations which are necessary to accomplish decommissioning. The Board's inclusion of deactivation as a part of decommissioning is consistent with Nuclear Regulatory Commission and International Atomic Energy Agency policies on decommissioning.

DOE defines decommissioning more narrowly as only those activities which take place:

After deactivation and includes surveillance and maintenance, decontamination and/or dismantlement. These actions are taken at the end of life of the facility to retire it from service with adequate regard for the health and safety of workers and the public and protection of the environment. The ultimate goal of decommissioning is unrestricted release or restricted use of the site.

* * * *

Surveillance and Maintenance is a program established during deactivation and continuing until phased out during decommissioning to provide in a cost effective manner for satisfactory containment of contamination; physical safety and security controls; and maintenance of the facility in a manner that is protective of workers, the public, and the environment. *Id.* § 3.3.

To avoid confusion, the Board refers to surveillance and maintenance which occurs during decommissioning as "decommissioning surveillance and maintenance" to distinguish between the routine surveillance and maintenance activities that occur during normal operations. Nuclear safety organizations generally consider operations to be ended and decommissioning initiated once reactor fuel has been removed from a nuclear reactor; for nonreactor facilities, decommissioning begins with the removal of radioactive process materials.

The Board's interest in decommissioning activities follows the risk to worker or public health and safety from exposure to radioactive materials at or near defense nuclear facilities. DOE's separation of activities into such categories as decontamination, surveillance and maintenance, and demolition may be descriptive and useful to DOE. However, labels or designation applied to the different activities within the decommissioning phase of a facility do not determine the scope of the Board's duties. The Board retains oversight responsibility and interest so long as residual quantities and states of radioactive materials are sufficient to require continued Board oversight in the interests of public and worker safety. Given this condition, the Board will continue to exercise its oversight jurisdiction to ensure that standards applicable to the DOE activity, including DOE safety orders, rules, and other

requirements, are sufficient to provide adequate protection to the worker or public health and safety, and are implemented by DOE and its contractors in accordance with a safety management plan that does, in fact, provide such adequate protection.

The Board's concern for safety at a facility diminishes as radioactive materials are withdrawn and the facility is removed from service. The Board is ready to work with the federal and state regulatory agencies also involved in these decommissioning activities to effect a coordinated, integrated decommissioning effort. Together with this policy statement, the Board is endorsing and issuing Board technical report, DNFSB/TECH-12, prepared by senior staff entitled, "Regulation and Oversight of Decommissioning Activities at Department of Energy Defense Nuclear Facilities." That document elaborates upon the issues discussed in this policy statement and fully describes the type of cooperative arrangement the Board envisions with federal and state regulators.

The Board's oversight responsibility for decommissioning activities focuses primarily on the health and safety aspects of the facility and materials within the facility. To a lesser extent, the Board involves itself with protection of the environment surrounding the facility which is subject to substantial regulation by other agencies. Specifically, the Board is concerned if the immediate environment contains or can be contaminated with radioactive materials from a facility under the Board's jurisdiction, and can possess a sufficient concentration of radionuclides to pose a potential threat to worker and public health and safety. Similarly, the Board is concerned if the environment poses a nonradiological hazard which can cause an undue risk to worker and public health and safety as a result of its proximity to a defense nuclear facility. The Board's environmental interest is greatest if the materials originated with DOE defense nuclear facility activities and exposure to the materials could result in undue harm to workers or the public. The Board's interest is shared with agencies that have regulatory responsibilities where the contaminants result (1) from a release, bringing Comprehensive Emergency Response, Compensation, and Liability Act (CERCLA) or Resource Conservation and Recovery Act (RCRA) requirements into play, along with United States Environmental Protection Agency (EPA) or state regulation of removal and remediation activities, or (2) from activities under a RCRA permit. In such cases, the Board is prepared to work in an advisory or assist role with federal or state agencies having statutory responsibility for forcing corrective or remedial measures.

The Board shares oversight responsibility with regulatory agencies for other facilities containing or contaminated with radioactive materials mixed with RCRA hazardous waste. RCRA mixed waste has two components: a RCRA hazardous waste (which excludes AEA materials) and a radioactive waste. Such facilities are subject to regulation by EPA and state agencies with environmental responsibilities. Treatment, storage, and disposal of the hazardous waste component must meet RCRA requirements and is regulated by the EPA, or the state when authorized by EPA. Treatment, storage, and disposal of the radioactive component must meet AEA requirements and is regulated by DOE subject to Board oversight. Thus, the Board has a primary interest in the radioactive component, but must share its responsibility for oversight of the mixed waste with the regulator of the hazardous component. If the mixed waste is scheduled for treatment and disposal without separating the two components, the treatment and disposal facilities must meet both the hazardous waste laws and those pertaining to radioactive waste.

Board oversight of public health and safety practices at a defense nuclear facility does not end until decommissioning has been completed. However, it does diminish as the inventory of radioactive materials is reduced. This policy statement is designed to provide guidance pertaining to the Board's interpretation of its statutory role in decommissioning activities. The Board will be structuring future Board reviews and oversight of the decommissioning process at defense nuclear facilities accordingly. The policy statement recognizes that the Board shares responsibility for public health, safety, and environmental issues with state agencies and EPA during decommissioning at defense nuclear facilities. In the delineation of the Board's responsibilities and interest, the Board's objective is to facilitate a smooth transition of Board oversight to state and federal regulation as a defense nuclear facility passes through operational and decommissioning phases to state and EPA-regulated final cleanup, demolition, and environmental restoration activities.