

During the hearing on August 28, DOE officials made the claim that the word “public” in phrases like “adequate protection of public health and safety” (as used in the Atomic Energy Act of 1954, as amended) does not include workers at DOE sites. As a result, DOE was essentially claiming that the Defense Nuclear Facilities Safety Board did not have the authority to provide oversight of matters related to worker health and safety at DOE sites.

This DOE interpretation of the Atomic Energy Act appears to be fairly new (see also [1]). DOE’s interpretation contradicts a longstanding and general understanding that ‘public health’, as used in the Atomic Energy Act, includes onsite workers.

- DOE itself uses language like “adequate protection of workers, the public, and the environment” in its regulations and policies [2-3]. In 2011, DOE issued a report that explains, among other things, how DOE derived this phrase [4]. That report excerpts passages from the Atomic Energy Act, the Energy Reorganization Act, and the Department of Energy Organization Act. None of the passages that use the phrase ‘adequate protection’ explicitly mention the worker. In fact, DOE wrote that their “adequate protection” phrase is “consistent with the term utilized in the Atomic Energy Act for the duty of the Defense Nuclear Facilities Board.” Thus, as recently as 2011, DOE appeared to accept that “adequate protection of public health and safety” included workers.

Phrases like “adequate protection to the health and safety of the public” have been in the Atomic Energy Act since 1954 (for example, Section 182), well before Congress created the DNFSB. Below are some quotations and examples showing that ‘health and safety of the public’ in the Atomic Energy Act was historically, and is currently, understood to include workers. These may not be the most compelling examples, but are the ones most readily available to the author. Bold added by the author for emphasis.

- The Atomic Energy Commission (AEC) was a predecessor to both the Department of Energy and the Nuclear Regulatory Commission (NRC). In 1967, intervenors challenged an initial decision to issue provisional construction permits for new nuclear power plants in south Florida. Subsequently, the AEC issued a memorandum [5] that briefly discussed how the AEC interpreted the phrase “health and safety of the public” from the Atomic Energy Act. The AEC wrote “We have considered the public health and safety standard to refer to the overall qualifications of the applicant and the design of the facility to **protect plant employees** and the public against accidents and their consequences”. The AEC said this was based upon their “understanding of the intent of Congress...”.
- The same matter eventually reached federal court. While the case didn’t specifically revolve around whether the word ‘public’ included the worker, the 1968 decision of the United States Court of Appeals, District of Columbia district [6] discussed the Congressional intent behind the language “public health and safety”. The decision said, “In the case of the latter standard of ‘the public health and safety’, the Congressional preoccupation was with **industrial accidents and the dangers they presented to employees** and the neighboring public.” The decision also quoted the AEC’s memo: “The public health and safety standard, in like fashion, was said to be addressed ‘to the overall qualifications of the applicant and the design of the facility **to protect plant employees** and the public against accidents and their consequences.’”
- In 1956, the AEC wrote a letter to Congress’s Joint Committee on Atomic Energy. The enclosure to the AEC letter explicitly shows that they considered “the public” to include the worker. The enclosure stated, “A major objective of the Commission’s regulatory program is the protection of the health, safety and property of **the public, both those who are operating the facility** and

those who live in the environs, against the potential hazard resulting from the escape of radioactive materials from a nuclear energy facility.” The letter and enclosure were included in a report by the Joint Committee’s staff [7].

- The Joint Committee regularly held hearings regarding the development, growth, and state of the atomic industry. During the 1956 hearing [8], the general manager of the AEC provided a report on “health and safety” for the record. When discussing the assurance of “public health and safety”, the AEC report discussed methods of “assuring **health and safety inside and outside** the atomic energy plants.” The report discussed standards for radiation protection, both “in the plant and outside it”.
- Through its backfit rule (10 CFR 50.109), the NRC sometimes explicitly shows what it considers to involve “adequate protection to the health and safety of the public”. When the NRC seeks to impose a backfit on a power plant through a regulatory action, it will include a backfit analysis that shows that the costs of the backfit are justified. There are exceptions where such an analysis is not needed, such as when ‘adequate protection’ of the ‘health and safety of the public’ is involved. In this manner, the NRC has shown that occupational radiation protection aspects of 10 CFR 20 are needed for adequate protection of the public (see for example, [9]).

Specifically regarding the DNFSB, the legislative history shows an intent for that agency to provide oversight relating to workers at DOE sites.

- The report by the Senate Committee on Governmental Affairs [10] shows a clear intent for the DNFSB’s responsibilities to include the safety of the worker. In the section explaining the purpose of the bill to establish “an independent Nuclear Safety Board”, the report states “The Board would recommend do the Department of Energy changes in operating procedures or health and safety standards to improve the safety of its facilities or **reduce the radiation exposure of workers** or the public...”. In explaining the need for legislation, the report states that the “operation of nuclear reactors and other nuclear facilities entails great potential risks to the **health and safety of workers** and the general public.”
- The bill to create the DNFSB was subsequently amended by the Senate Armed Services Committee, to include the “adequate protection” language. During the hearings before a subcommittee [11], and in questions and answers submitted for the record, several people argued that there should be a threshold like the ‘adequate protection’ threshold for DNFSB recommendations. Without such a threshold, a DOE official stated that the Board’s recommendations would lead to expensive backfitting of DOE facilities even when the operations “pose no undue risk to workers or the public.” The DOE official stated that the bill, in its form at the time, “doesn’t distinguish between accidents and risks which pose little or no damage to public and worker health and safety.” These exchanges show that DOE understood that worker safety would be part of the new Board’s mission; they simply desired a threshold for the Board’s recommendations. DOE did not argue that this threshold should exclude worker safety.
- Other discussions involving the Senate Armed Services Committee [11] also show an expectation that the Board’s scope would include worker safety. A GAO official stated that “we believe it would not be desirable to limit the Board’s scope and accordingly all facilities should be covered. However, we believe that the facility reviews should be prioritized to ensure that those facilities with higher potential to endanger the health and safety of workers or the general public should be reviewed first.”

The author believes that DOE's logic, provided during the hearing, is flawed. DOE simply stated that some other documents use 'public' in a way that excludes the worker. That is true. Some documents use 'public' as short-hand for 'general public', to exclude workers who are onsite. However, this does not mean that all documents use 'public' in this way. Some documents even use the term both ways. Context is important. The context of the Atomic Energy Act shows that it, in the adequate protection phrases, uses 'public' to refer to all people. A review of the term 'public health' will show that it can be used to include occupational health.

The author believes that DOE's actions in trying to limit the DNFSB's authority are misguided. DOE should retract its new Order 140.1. If there is a need for an improved interface between the two agencies, logic dictates that there should be a bilateral discussion, not a unilateral one.

The author further believes that DOE's actions call into question its commitment to provide adequate protection for the workers on DOE sites. DOE should re-affirm that the 'public health', as used in the Atomic Energy Act, includes the worker. DOE should re-affirm its commitment to provide adequate protection to the workers on its sites.

References

- [1] Defense Nuclear Facilities Safety Board, Proposed Rule: "Procedures for Safety Investigations", 79 FR 46720, 2014. See Comment 14 from DOE.
- [2] Department of Energy, "Nuclear Safety Management", 10 CFR 830.
- [3] Department of Energy, "Department of Energy Nuclear Safety Policy", DOE Policy 420.1, 2011.
- [4] Department of Energy, "Technical Basis for U.S. Department of Energy Nuclear Safety Policy, DOE Policy 420.1", DOE/HS-0006, 2011.
- [5] Atomic Energy Commission, Memorandum and Order "In the Matter of Florida Power & Light Company (Turkey Point Nuclear Generating Units No. 3 and No. 4)", available in "Opinions and Decisions of the Atomic Energy Commission with Selected Orders", Volume 4, 1973.
- [6] Siegel vs Atomic Energy Commission, 400 F.2d 778, United States Court of Appeals, District of Columbia Circuit, 1968.
- [7] Joint Committee on Atomic Energy, staff report, "A Study on AEC Procedures and Organization in the Licensing of Reactor Facilities", 1957.
- [8] Joint Committee on Atomic Energy, Hearings, "Development, Growth, and the State of the Atomic Energy Industry", Part 1, 1956.
- [9] Nuclear Regulatory Commission, Final Rule, "Revision of the Skin Dose Limit", 67 FR 16298, 2002.
- [10] Committee on Governmental Affairs, United States Senate, Report on Nuclear Protections and Safety Act of 1987, Report 100-173, 1987.
- [11] Subcommittee on Strategic Forces and Nuclear Deterrence of the Committee on Armed Services, United States Senate, Hearings on Safety Oversight for Department of Energy Nuclear Facilities, Senate Hearing 100-560, 1987.