

DEPARTMENT OF ENERGY ALARA IMPLEMENTATION GUIDE

6-12

RESPONSE TO THE HEALTH PHYSICS SOCIETY

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SUMMARY

In the August 1993 Health Physics Society (HPS) newsletter, the HPS Scientific and Public Issues Committee published a Position Statement entitled "Radiation Protection of the Public and the Environment." In this article, this HPS committee made the statement that they were deeply concerned by the trend for agencies to incorporate the ALARA concept as a regulatory requirement, without providing specific guidance as to what it means and how to implement it consistently. The HPS position paper was in response to the DOE notice on proposed rulemaking for Title 10 Code of Federal Regulations Part 834, "Radiation Protection of the Public and the Environment" (10 CFR 834). In the notice of proposed rulemaking for 10 CFR 834, the Department of Energy (DOE) defined ALARA as follows: "As used in this part, ALARA is not a dose limit, but rather a process which has the objective of attaining doses as far below the applicable limit of this part as is reasonably achievable" (10 CFR 834.2, p. 16283 of the Federal Register). The HPS position paper continues, "The section goes on to elaborate on what is meant by a process without providing sufficient guidance to assure uniform applicability of the process." Although this concern is directed towards the ALARA process as it relates to the environment, the Office of Health, which is responsible for occupational workers, shares the same definition for ALARA.

On March 14, 1991 the Office of Environmental Guidance (EH-23) issued a document to distribution within DOE "Guidance for Implementation of ALARA Requirements for Compliance with DOE 5400 series Orders: For Interim Use and Comment." This provided guidance to the field for the environmental aspects of ALARA contained in the environmental orders DOE Orders 5400.1 and 5400.5. It is expected that when 10 CFR 834 is published as a Final Rule, that an appropriate Implementation Guide will be issued.

On December 14, 1993 DOE's rulemaking on Occupational Radiation Protection was published as a Final Rule in Title 10 Code of Federal Regulations Part 835 (10 CFR 835), "Occupational Radiation Protection." This rule contains the same definition of ALARA as does the draft 10 CFR 834. When this Final Rule (10 CFR 835) was transmitted to the DOE sites, it was sent with 12 Implementation Guides (IGs) to provide guidance and discuss methods that are acceptable to the headquarters staff. Additional IGs will be sent as they are completed, to assist the contractors with compliance. One of the IGs provided was "Occupational ALARA Program", G-10 CFR 835/B2 - Rev. 0. This guidance document provides sufficient guidance to assure uniform applicability of the ALARA process.

This IG had originally been issued to the DOE complex for comment, in 1991, as draft ALARA IG "Occupational ALARA Program". 5XXX, Rev. 1. Over 200 comments were received evaluated and incorporated where applicable. This guide was restructured to the new IG format, the Secretary's policy statement added and other changes made to update it. As an example, the key references are now to 10 CFR 835 and how to implement it. DOE Order 5480.11, the predecessor to 10 CFR 835, is also referenced since it still applies to a few installations. The Radiation Control (RadCon) Manual requirements are also provided. Therefore, the requirements and guidance are integrated in this one document to make it easier for the ALARA personnel to understand and implement in a reasonably consistent manner.

This does not imply that all the programs are going to be the same, because the degree of risk and the potential levels of exposure are different at the many different sites. A large diverse site, such as Hanford or Los Alamos, with many different sources of radiation, would have a large ALARA program whereas a small laboratory using only small amounts of radioactive material would have a correspondingly small program. It would not be cost effective or ALARA to have an elaborate program at sites where there is currently very little exposure and there is little likelihood that it will increase.

Author Biography

John M. Connelly is a Health Physicist in the Office of Health Physics and Industrial Hygiene, Office of Health, U.S. Department of Energy (DOE). He is the Project Manager for the DOE ALARA Program which sponsors the Brookhaven National Laboratory DOE ALARA Center. Before joining DOE he operated JMC Associates, a private consulting company performing radiological engineering for the utility industry. For 15 years he was a consultant with NUS Corporation. He was the supervisor of their Health Physics Consulting section and performed consulting to US and foreign utilities and governments in Health Physics, ALARA, emergency planning and other areas. Prior to that he was the Chemistry and Health Physics Supervisor at Yankee Atomic Electric Company at the Yankee Rowe PWR. During that time he participated in 10 refuelings and numerous other outages. He also held a license to operate the Yankee reactor. He has a B. Sc. in Chemical Engineering from Tufts University in Medford, MA.

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