

VALUE-IMPACT ASSESSMENT ON TRAINING IN RADIATION
PROTECTION FOR PERSONNEL AT NUCLEAR POWER PLANTS

I. The Proposed Action

A. Description

Nuclear power plant (NPP) personnel, in accordance with 10 CFR Part 19, must receive training in radiation protection to ensure that they are aware of and prepared to cope with radiological hazards. The training must be commensurate with the individual's duties and responsibilities. Paragraph 20.1(c) of 10 CFR Part 20 states that occupational radiation exposure should be kept "as low as is reasonably achievable" (ALARA). Appropriate training is an essential aspect of an ALARA program. At the present time there is no specific guidance on the extent of training in radiation protection. The proposed action will furnish such guidance.

B. Need for the Proposed Action

Available information indicates that radiation protection training programs exist at all NPP's and that there are wide variations

between plants. In some instances programs include requirements that are needlessly expensive and time-consuming. The programs cannot be evaluated fairly until the NRC staff establishes its position regarding acceptable training programs.

In the action plan prepared by the NRC Task Group on Occupational ALARA, which has been approved by the NRR Office Director (SECY-77-54), training is a major factor in controlling exposure. In their recommendations, which were transmitted to the Commission, guidance on training was given top priority. The proposed action would meet the relevant recommendation of the task group.

C. Value-Impact of Proposed Action

1. NRC

The proposed guidance will provide a basis for staff review of applicants' commitments to radiation protection training and licensees' radiation protection training programs and provide a basis for NRC inspection of the programs to ensure that they are conducted as approved.

Once useful guidance has been established, the time and manpower requirements for evaluating the training programs

should be acceptably small. Without guidance, program evaluation is either ineffective or highly time-consuming.

The principal value to the staff of providing the proposed guidance is that it seems the most cost-effective way of ensuring adequate training programs.

2. Workers

The proposed guidance would provide improved worker protection by ensuring that the individual worker had enough training to enable him to work safely, utilize available protective measures, and obtain appropriate guidance.

3. Applicants

It will be necessary for applicants (or their contractors) to spend additional time describing their programs in their SAR's if they choose alternatives other than those provided in the proposed guidance. In some instances improvements in the programs may be necessary. However, since program descriptions are necessary for internal purposes and since training programs need to be revised periodically, the added cost from this proposed action is expected to be slight.

The proposed action is expected to benefit applicants by reducing occupational radiation exposures. Experience shows that exposure reduction is truly cost reduction. Secondary benefits expected include improved labor relations and, possibly, improved relations with the public.

4. Public

The general public should benefit to some extent from the potential slight reduction in occupation exposure and heightened awareness of radiological hazards. No impact on the public is foreseen.

D. Regulatory Authority

Section 19.12, 10 CFR Part 19, requires that personnel be given instruction in radiation protection that is commensurate with the potential radiological health protection problems encountered by those personnel.

E. Need for NEPA Assessment

As the proposed action is not a major action, i.e., it explains and elaborates an existing requirement (Section 19.12, 10 CFR

Part 19), and since there will be no effect on the environment, there is no need for a NEPA assessment.

F. Decision on Proposed Action

Comparison of the values and impacts of the proposed action will vary widely from plant to plant. In some cases, impacts may outweigh values; in others, the reverse will be true. In general, however, it was the expert judgment of the ALARA task group that the value will be greater, in general, than the impact. The proposed action should be accomplished.

II. Alternative Methods of Accomplishing Action

A. Alternatives

Several methods of promulgating the proposed guidance have been considered, including an NRC regulation, an ANSI standard endorsed by a regulatory guide, a NUREG report, a branch position; and a regulatory guide. These are discussed separately below.

B. Value-Impact of Alternatives

An NRC regulation requires a complex and time-consuming legal procedure that is more amenable to general requirements than

specific guidance. Regulations do not generally contain the detail envisioned in the proposed action. The difficulty of revising the guidance would be greater for this alternative than for the others. An advantage would be that the regulation would legally require conformance, whereas the other alternatives would not. In general, however, the relatively narrow subject matter probably does not warrant use of this alternative.

No ANSI standard on the subject is known to be under preparation. This procedure could be logically undertaken by the Health Physics Society as an addition to the ongoing ANSI N13 Committee activities. However, past history of these working groups indicates that standards so developed cover a much broader base and usually require more than two years to develop. Issuance of an endorsing regulatory guide would take an additional year or more. As with the regulation alternative, it is believed that the narrow subject matter and time involved militates against this alternative.

NUREG reports can be prepared and published more rapidly. By NRC practice, however, a NUREG report cannot contain regulatory positions. As positions are an integral part of the proposed guidance, use of a NUREG report is not suitable.

NRR has not yet prepared a branch position on this subject and has indicated a regulatory guide on the subject would be appropriate. Branch positions have limited circulation and are considered to be a temporary measure, to be used only until a more permanent mode of guidance can be issued.

A regulatory guide can be prepared, published, and effective in about one year. Also, the development of a regulatory guide provides for comments by interested persons. This appears to be the most viable alternative.

C. Decision on Method

A regulatory guide based on discussion with and comments from the various interested parties should be prepared.

III. Relationship to Other Existing or Proposed Regulations or Policies

When Regulatory Guide 1.70 ("Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants") is next revised, consideration should be given to inclusion of at least those portions of the guide which deal with inclusion of information in the PSAR.

This guide will be consistent with and will cross-reference Guides 8.8 ("Information Relevant to Ensuring that Occupational Exposures at Nuclear Power Stations Will Be As Low As Is Reasonably Achievable")

and 8.10 ("Operating Philosophy for Maintaining Occupational Radiation Exposures As Low As Is Reasonably Achievable"). When these two guides are revised, consideration should be given to referencing this guide.

IV. Conclusion

A regulatory guide on radiation protection training should be prepared.