POLICY ISSUE
NOTATION VOTE

April 7, 2004 SECY-04-0055

FOR: The Commissioners

FROM: William D. Travers
Executive Director for Operations

SUBJECT: PLAN FOR EVALUATING SCIENTIFIC INFORMATION AND RADIATION PROTECTION RECOMMENDATIONS

PURPOSE:

To obtain Commission approval of the staff's plan for evaluating scientific information and recommendations of national and international radiation protection organizations for possible incorporation into regulatory activities, policies, and regulations of the Nuclear Regulatory Commission (NRC).

BACKGROUND:

In a staff requirements memorandum on SECY-02-0196, dated November 17, 2003, the Commission directed the staff to provide the Commission with a comprehensive plan for evaluating the latest scientific information and the recommendations of the international/national radiation protection organizations for possible incorporation into our regulatory activities, policies, and regulations. The Commission requested that the plan include an evaluation of all major efforts scheduled to be completed in the next several years, and lead to staff recommendations on the need to revise NRC's regulatory program.

The NRC has generally followed the basic radiation protection recommendations of the International Commission on Radiological Protection (ICRP) and its U.S. counterpart, the National Council on Radiation Protection and Measurements (NCRP), in formulating its basic radiation protection standards. The Standards for Protection Against Radiation, 10 CFR Part 20, were last revised with respect to the overall approach to radiation protection in 1991 (56 FR 23360, May 21,1991), and are based in part on the ICRP recommendations published in ICRP Publication 26 (1977) and ICRP Publication 30 (1978).

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The scientific information that forms the basis for these recommendations comes from a variety of sources. In particular, data on the Hiroshima and Nagasaki atomic bomb survivors has been used to develop radiation risk estimates under the auspices of the Radiation Effects Research Foundation. The United Nations Scientific Committee on the Effects of Atomic Radiation assesses the effects of radiation exposure by evaluating epidemiological studies (cancer and non-cancer illnesses), examining the mechanisms and consequences of radiation exposure in tissues, and the impact of radionuclides on the environment. In the United States, the Committee on Biological Effects of Ionizing Radiation of the National Academies periodically assesses radiation risks and publishes reports of its findings.

In addition, the Environmental Protection Agency (EPA) has the responsibility to develop Federal Guidance for use by Federal and State agencies responsible for protecting the public from the harmful effects of radiation. EPA last published guidance for the public in draft form in 1984.

DISCUSSION:

The staff has prepared a preliminary plan for evaluating the implications of scientific information and recommendations from national and international radiation protection organizations on NRC's radiation protection regulatory framework (attachment). This plan includes activities in health effects and risk analysis, participation in the development of international recommendations, coordination of Federal Guidance for Occupational Exposure and Exposure of the General Public, and analyses of the potential impacts of various proposals on NRC licensees. The staff will use this plan as a tool for evaluating certain policy, scientific, and regulatory framework issues. Most of these activities are also described in the "Radiation Protection and Health Effects Research Program Plan," which was forwarded to the Commission in SECY-04-0030. The staff will provide the Commission with an annual status report of the research activities. This report will also include a summary of progress on activities included in this evaluation plan.

A detailed plan for actions to revise current NRC regulations and guidance will be prepared by the Office of Nuclear Materials Safety and Safeguards (NMSS), in cooperation with the Offices of Nuclear Reactor Regulation (NRR) and Nuclear Regulatory Research (RES), when the implications of the activities described in the evaluation plan are better understood. This ultimately will provide the technical basis to recommend actions to revise current regulations and guidance. The NRC's Steering Committee on Radiation Protection, which includes members from NMSS, NRR, RES, and the Office of State and Tribal Programs, will coordinate the staff's activities in order to ensure a systematic approach.

The effort to further understand and evaluate health effects and risk assessments requires the staff to keep up with scientific progress in these areas. The staff will actively participate in the process of revising ICRP recommendations. At the suggestion of the ICRP Secretariat, RES staff tentatively plan to host a workshop at NRC headquarters in July 2004 that will provide an opportunity for the public to discuss the proposed general recommendations with ICRP members. Review and evaluation of the final recommendations will commence following publication by ICRP, which is expected in the latter part of 2005. Revision of the Radiation Protection Guidance to Federal Agencies for members of the public is a current ongoing activity. Revision of the 1987 Radiation Protection Guidance to Federal Agencies for

Occupational Exposure could begin following publication of the ICRP recommendations in 2005, and the staff expects that these efforts will proceed in parallel with NRC in consideration of the need for and magnitude of possible changes in NRC's regulations and guidance. Finally, certain analyses of potential impacts on NRC licensees can be initiated in the near term, based on the staff's current understanding of proposed recommendations, so that preliminary information is available to support technical and policy decisions following publication of the ICRP recommendations.

RECOMMENDATION:

The staff recommends that the Commission approve the staff's plan for evaluating scientific information and radiation protection recommendations.

RESOURCES:

RES will use 0.5 FTE in both FY 2005 and 2006 for in-house evaluations of the scientific information and recommendations of national and international radiation protection organizations. Following the completion of these evaluations, RES will use 0.2 FTE and $100 K to assess the economic impact of new radiation protection standards on NRC licensees. These resources were previously identified in SECY-04-0030. NMSS resources applicable to these recommended actions include 0.5 FTE in FY 2005 and anticipate 3.0 FTE in FY 2006, which will be part of the FY 2006 budget submittal.

COORDINATION:

This paper has been coordinated with the Office of the General Counsel, which has no legal objection. The Office of the Chief Financial Officer has reviewed this Commission Paper for resource implications.

/RA/

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Attachment: Plan for Evaluating Scientific Information and Radiation Protection Recommendations

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