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ACNW/DRAFT FCRG

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MEMORANDUM FOR: Raymond F. Fraley, Executive Director
Advisory Committee on Nuclear Waste

THRU: Abraham L. Eiss, ACNW Liaison
Special Issues Group
Office of Nuclear Material Safety
and Safeguards

FROM: Robert E. Browning, Director
Division of High-Level Waste Management
Office of Nuclear Material Safety
and Safeguards

SUBJECT: TRANSMITTAL OF THE DRAFT REGULATORY GUIDE "FORMAT AND
CONTENT FOR THE LICENSE APPLICATION FOR THE HIGH-LEVEL WASTE
REPOSITORY" TO THE ADVISORY COMMITTEE ON NUCLEAR WASTE (ACNW)

The purpose of this memorandum is to provide the ACNW with a copy of the subject draft Format and Content Regulatory Guide (FCRG) for its review and comment. This is consistent with the latest draft Memorandum of Understanding between the Executive Director for Operations and the ACNW. The staff will be prepared to brief the ACNW on this subject in September 1990 rather than after the receipt and consideration of public comments, as originally planned. After receipt and consideration of any ACNW comments, the staff will notice the availability of the draft FCRG in the Federal Register.

In reviewing the draft FCRG, the ACNW should be aware that it is currently at a very broad level of detail. It is being issued by HLWM at this stage of development in order to obtain public comments on its format and general content, and to assist the staff in determining the information required for the U.S. Department of Energy's (DOE's) License Application (LA) to be submitted under 10 CFR Part 60. However, as indicated in SECY-90-207, "First Update of the Regulatory Strategy and Schedules for the High-Level Waste Program," the HLWM staff expects the development of this guide to continue over the next four years, reflecting the additional experience and knowledge gained in the development of its sister document, the License Application Review Plan (LARP), as well as through the staff's on-going, systems-based review of its regulations. In this manner, both the LARP and FCRG can be completed about the same time which, as indicated in SECY-90-207, is fiscal year 1994.

In addition, the HLWM staff wishes to bring to the Committee's attention a few points on the organization and content of the document itself.

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First, the ACNW should be aware that the structure of the FCRG employs a repository systems-based or systems engineering approach. (The details of this approach and the attendant format for the FCRG are described below.) The systems-based approach helps to ensure that a technically integrated program is implemented, and is consistent with the current thrust of DOE's repository program, which relies upon this type of approach. The need for DOE to develop an integrated program was identified by the staff in its comments on the Site Characterization Plan (SCP). In its comments, the staff stated that the SCP failed to demonstrate how a number of DOE's site characterization programs were coordinated, integrated, and logically sequenced.

The systems-based format allows information to be logically organized with the minimum need for repetition or inclusion of extraneous information. The repository is described in terms of the systems that comprise it, namely the "natural systems," the "geologic repository operations area (GROA)," and the "engineered barrier systems" (Chapters 3 through 5 of the FCRG). The overall system performance assessment of the previously described repository system can be found in Chapter 6, and the remaining generic or non-system specific repository information is located in Chapters 7 through 11. All of the applicable 10 CFR Part 60 regulatory requirements for a particular system or subsystem to be considered are included within that part of the guide. By doing this, all of the necessary considerations are presented in one area. For example, in each of the individual subsystems comprising the GROA, all of the necessary design requirements would be contained in that section of the LA. This would include steps taken to consider the radiation protection aspects of the design as well as other design requirements. An example of how this approach allows the sharing of information can be found in Section 3.3 and Chapter 6. Section 3.3 of this Regulatory Guide calls for an analysis of the natural systems of the geologic setting which includes analyses to determine the degree to which each of the favorable and potentially adverse conditions, if present, has been characterized and the extent to which it contributes to or detracts from isolation. In order to demonstrate this, the analyses to be conducted would be the same as those conducted as part of the total system performance assessment described in Chapter 6. While it is necessary to demonstrate compliance with the applicable requirements of 10 CFR Part 60 in Chapter 3, the analyses carried out as part of the performance assessment need not be repeated. Rather, the actual analyses would only be presented in Chapter 6 and referenced in Chapter 3. Finally, Appendix A of the FCRG depicts the relationship of the requirements of 10 CFR Part 60 to the sections of the guide.

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If you have any questions or require additional information about the FCRG, please contact the FCRG Project Manager, Mark S. Delligatti, at extension 20430.

ORIGINAL SIGNED BY

Robert E. Browning, Director
Division of High-Level Waste Management
Office of Nuclear Material Safety
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Enclosure: As stated
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