MAY 17 1990

MEMORANDUM FOR: Joseph O. Bunting, Chief
Engineering Branch, HLWM

FROM: Ronald L. Ballard, Chief
Geosciences & Systems Performance Branch
Division of High-Level Waste Management, HLWM

SUBJECT: REVIEW OF DRAFT TECHNICAL POSITION ON THE COORDINATION OF ESF DESIGN WITH GROA DESIGN

As requested, the draft position on coordination of ESF design with the GROA design has been reviewed (attached). A number of comments are provided concerning the scope and basis for this TP.

If you or your staff have any questions concerning the attached comments, please contact me or Dave Brooks. We would appreciate the opportunity to comment on the next draft.

Ronald L. Ballard, Chief
Geosciences & Systems Performance Branch, HLWM

Attachment:
As stated

cc: R. Browning, HLWM
J. Youngblood, HLWM
J. Linehan, HLPD
D. Brooks, HLGP
M. Lee, HLPD
D. Gupta, HLEN

DISTRIBUTION

Central Files	HLGP r/f	NMSS r/f
RBrowning, HLWM	BJYoungblood, HLWM	JBunting, HLEN
RBallard, HLGP	JLinehan, HLPD	DBrooks, HLGP

OFC :	HLGP	: HLGP	: HLGP	:	:	:
NAME:	DBrooks/cj	:RLBallard	:	:	:	:
Date:	5/18/90	: 5/18/90	: / /90	: / /90	: / /90	: / /90

108
NHXV

COMMENTS ON THE DRAFT POSITION ON "COORDINATING THE ESF DESIGN WITH THE DESIGN OF THE GROA

GENERAL COMMENTS

The draft TP appears to be is overly broad in its attempt to address a very narrow technical issue (i.e. the coordination of ESF and GROA designs). Further, the draft does not clearly discuss staff concerns and thus does not provide a substantive basis for addressing this subject. Also, there are aspects of the position that do not appear to be sustainable. For example, the TP states (Page 7) that it is essential that the design of the GROA be developed first, so that the exploratory shafts can be located where shafts or unexcavated pillars for the GROA are already planned (10CFR60.15(d)(3). Problems with the preceding statement include (1) the rule is silent concerning the sequence of planning, (2) the rule [10CFR60.15(d)(4)] appears to require coordination to be an ongoing requirement which applies to activities before and during construction, and (3) it would seem to make just as much sense to plan the ES first and then plan the GROA so that the shaft could be located within a pillar. Finally, on its face, the fact that the ES is going to be used as a ventilation shaft indicates that coordination between the ESF and GROA designs has, is, and will be taking place.

If in the final analysis, it is determined that a TP is needed, I think that the current draft can be more correctly focused by imposing a program architecture approach to developing and writing the next draft. For example, as general guidance, the TP should not be used to rewrite the rule. Further, the "Regulatory Background" section should provide the regulatory basis for the position(s) taken. Also, other sections of the rule (unless they are directly related the question of coordination) should not be used as the regulatory basis because they tend to confuse the issue. In addition, the "Discussion" section should provide the technical basis for the position(s) taken. Finally, each section should be written with the program architecture information requirements in mind so that the information is easily transferable to the program architecture and their appropriate data field.

DETAILED COMMENTS

- The "Introduction" section does not clearly discuss the technical uncertainty being addressed, or the need for the guidance. In general it appears that the TP is attempting to provide guidance with respect to what is meant by coordination in the context of 10CFR60.15(d)(4) "... coordinated with the geologic repository operations area design." In the discussion presented in the introduction, "coordinated" appears to have taken on at least the following meanings: (1) "coordinated" means that the ESF needs to be integrated with the GROA design, (2) ESF designs need to meet GROA 10CFR60 design requirements, (3) the ESF will not interfere with waste isolation, and (4) "coordinated" means that the ESF will appropriately interface with site characterization activities. Based on a quick review of NUREG 0804 it does not appear that 10CFR60 intended that compliance be anything more than that each design be developed with knowledge of the

other. If, in fact, integration of the two designs are required (i.e. formed into a whole) then support for this meaning should be appropriately developed in the "Regulatory Background" section of the TP. As it stands it appears that this TP is rewriting the rule (replacing words with ones that are not currently in the rule, or cannot be supported by 10CFR60 background information) with regard to 10CFR60.15(d)(4) requirements for compliance.

- The "Introduction " section does not appear to focus on coordination of ESF/GROA (which is the topic of the TP). For example, it is stated that the "...scope of the technical position provides an approach acceptable to the NRC staff for implementation of relevant 10CFR60 requirements related to the ESF." This appears to be beyond the scope of the topic identified by the title (coordinating the design of the ESF and GROA).

- The "Regulatory Background" section of the draft TP does not provide any information concerning what was intended by the writers of 10CFR60 when the coordination requirement was written. If, in fact, "integration" of the designs was intended (as suggested in the introduction section) then it (and/or other meanings) should be documented in the background section.

- The cited parts of 10CFR60 , except for 10CFR60.15, in the background section, are not related to what "coordinate" means, and thus these references obscure and confuse the focus of the TP. Further, it is not clear that requirements for these other parts of 10CFR60 can be imposed on the "... coordination..." requirement [10CFR60.15(d)(4)] without supporting background discussions.

- The "Technical Position" section needs to be revisited. Most of the positions do not appear to focus on what is needed for DOE to show that the ESF and GROA designs have been coordinated (compliance with 10CFR60.15(d)(4)). Some of the "positions" do not appear to have any regulatory basis. For example, position 2 prescribes that a conceptual design of the repository should be developed before any work is performed on the design of the ESF. The rule does not appear to address which should be done first. Without any regulatory or technical basis, the imposition of this requirement on coordination of ESF and GROA designs would appear to require a rule change.

- The "Discussion" section, in general, appears merely to extend the position section and does not provide any technical rationale for any of the positions. Further, like the other sections, this section contains a significant amount of material that appears to be irrelevant to what is needed to demonstrate compliance with the requirement to "... coordinate.." For example, subsection 6 says that "...the ESF design should ensure that the data collected will be representative of the range of conditions and processes throughout the site." It is not clear that 10CFR60 requires this, and how this is associated with the requirement to "...coordinate..."

is not established.

- Table-1 is misleading in that most of the citations apply to the GROA and only by inference to the ESF. The table would be more useful if it contained one column that listed those parts of 10CFR60 that apply to the GROA design, and another column that listed those parts of 10CFR60 that apply to the ESF design. Organized this way, the table might then be used to show key areas in need of coordination.