



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

WASHINGTON, D.C. 20555-0001

April 30, 1993

**MEMORANDUM FOR:** Dade W. Moeller, Chairman  
Advisory Committee on Nuclear Waste

**FROM:** James M. Taylor  
Executive Director for Operations

**SUBJECT:** RESPONSE TO ADVISORY COMMITTEE ON NUCLEAR WASTE VIEWS ON  
POSSIBLE IMPACTS OF THE ENERGY POLICY ACT OF 1992 ON THE  
STAFF'S HIGH-LEVEL WASTE REPOSITORY PROGRAM

I am responding to your March 3, 1993, letter to Chairman Selin on the Advisory Committee on Nuclear Waste (ACNW) views regarding impacts of the Energy Policy Act of 1992 (EnPA) on the staff's high-level waste repository program. The staff considers most of the ACNW views to be either similar to those held by the staff or useful supplements. In particular, it was important to the staff to know that we share similar views regarding the range of alternative National Academy of Sciences (NAS) recommendations concerning the Environmental Protection Agency (EPA) standard. However, the staff would like to clarify and provide its observations on the four differences between the ACNW's and staff's views discussed on page 4 of the ACNW's March 3, 1993, letter.

Natural Resource Characterization (Item 1 and first sentence of 2)

ACNW considers that the natural resource potential of the Yucca Mountain site needs to be characterized and that the staff has not presented a compelling argument to support its contention that Alternative 3 would require deletion or modification of the natural resource requirements of 10 CFR 60.21 and 60.122. The staff considers that some general amount of natural resource characterization would probably be useful to understand the specific type and significance of natural resources present at the site, the potential for human intrusion, and the contribution institutional controls might have to prevent specific types of human intrusion. However, the extent of detailed characterization and assessment presently required directly by 10 CFR 60.21 (c)(13) and 60.122 (c)(17), or indirectly, for compliance with the performance objectives (e.g., scenario analyses), does not appear needed, given the assumptions in Alternative 3 that institutional controls will prevent any human intrusion. Furthermore, as we discussed, in part, in our February 24, 1993, meeting with ACNW, apart from compliance with 10 CFR Part 60 the Department of Energy (DOE) may have to more fully characterize natural resources for its site suitability evaluation, under the siting guidelines in 10 CFR Part 960, as well as for assessments in its environmental impact statement. Therefore, DOE will characterize natural resources, but for purposes other than demonstrating compliance with 10 CFR Part 60.

050091

9305100121 930430  
PDR WASTE  
WM-1 PDR

409.55  
WM-1  
NHLK /10

Changes to Subsystem Requirements (second sentence of Item 2)

In its February 9, 1993, evaluation, the staff only observed that the subsystem performance objectives in 10 CFR 60.113 would have to be considered for consistency with the revised EPA standard. We have not taken the position that adoption of a risk-based standard would necessitate changes to subsystem requirements, as stated in the ACNW letter. Because EnPA calls for consideration of standards that protect individuals rather than populations, the staff would want to review the subsystem performance objectives, to make sure they increase confidence in achieving overall system performance for protection of individuals.

Critical Group Concept (Item 3)

The staff does not believe that technical uncertainty will be significantly reduced by adopting the "critical group" concept, when projecting doses. Whether regulations limit doses to the maximally-exposed individual or to an average individual within a critical group, it will still be necessary to predict where people will live and how they will live for thousands of years in the future. The staff considers that this remaining source of technical uncertainty is far more significant than the small reduction in uncertainty achieved by averaging within a critical group.

Long-term Monitoring (Item 4)

The staff does not consider that the post-closure oversight described in EnPA necessarily includes the type of active monitoring required by 10 CFR Part 60 Subpart F, for performance confirmation. Furthermore, 10 CFR 60.51 (a) requires DOE to submit an application to amend the license before permanent closure, that includes a description of the program for post-permanent closure monitoring and measures to be employed to regulate or prevent activities that could impair the long-term isolation of emplaced waste. Therefore, when NRC has the needed confidence in repository performance from the performance confirmation program, decisions regarding repository closure and license termination can be made. At the present time it is premature to determine potential amendments to 10 CFR Part 60, until NAS makes its findings and recommendations on post-closure oversight.

I trust that this responds to the ACNW's concerns. **Original signed by James M. Taylor**

cc:  
The Chairman  
Commissioner Rogers  
Commissioner Curtiss  
Commissioner de Planque  
SECY

James M. Taylor  
Executive Director  
for Operations

3/26/93 Tech. Editor has reviewed.  
\*See previous concurrence

OFC	HLPD*	<del>HAPD*</del>	HLWM*	HLWM*	OGC*
NAME	RJohnson/dh	JHolonich	JLinehan	JYoungblood	STreby
DATE	03/26/93	03/26/93	03/26/93	03/26/93	04/05/93
OFC	NMSS*	NMSS*	NMSS	NMSS	
NAME	GArlotto	RBernero	HTompson	JTaylor	
DATE	03/39/93	03/39/93	04/29/93	04/29/93	

DISTRIBUTION FOR MEMORANDUM FOR: DADE W. MOELLER, CHAIRMAN, ADVISORY COMMITTEE ON NUCLEAR WASTE DATED: \_\_\_\_\_.  
SUBJECT: RESPONSE TO ADVISORY COMMITTEE ON NUCLEAR WASTE VIEWS ON POSSIBLE IMPACTS OF THE ENERGY POLICY ACT OF 1992 ON THE STAFF'S HIGH-LEVEL WASTE REPOSITORY PROGRAM.

DISTRIBUTION EDO 0008647

CNWRA  
LPDR  
BYoungblood, HLWM  
JHolonich, HLPD  
JSniezek, EDO  
JKnubel, EDO  
JScinto, OGC  
BLynn, HLWM

NMSS R/F  
ACNW  
JLinehan, HLWM  
On-Site Reps  
HThompson, EDO  
EBeckjord, RES  
Dir Off r/f  
CPoland, NMSS  
HLPD R/F  
PDR  
RBallard, HLGE  
JWolf, OGC  
JBlaaha, EDO  
TMurley, NRR  
DMorris, EDO

LSS  
CENTRAL FILE  
MFederline, HLHP  
JTaylor, EDO  
MTaylor, EDO  
EJordan, AEOD  
EDO r/f

Changes to Subsystem Requirements (Item 2)

In its February 9, 1993, evaluation, the staff only observed that the subsystem performance objectives in 10 CFR 60.113 would have to be considered for consistency with the revised EPA standard. We have not taken the position that adoption of a risk-based standard would necessitate changes to subsystem requirements, as stated in the ACNW letter. Because EnPA calls for consideration of standards that protect individuals rather than populations, the staff would want to review the subsystem performance objectives, to make sure they increase confidence in achieving overall system performance.

Critical Group Concept (Item 3)

The staff does not believe that technical uncertainty will be significantly reduced by adopting the "critical group" concept, when projecting doses. Whether regulations limit doses to the maximally exposed individual or to an average individual within a critical group, it will still be necessary to predict where people will live and how they will live for thousands of years in the future. The staff considers that this remaining source of technical uncertainty is far more significant than the small reduction in uncertainty achieved by averaging within a critical group.

Long-term Monitoring (Item 4)

The staff does not consider that the post-closure oversight described in EnPA necessarily includes the type of active monitoring required by 10 CFR Part 60 Subpart F, for performance confirmation. Furthermore, 10 CFR 60.51 (a) requires DOE to submit an application to amend the license before permanent closure, that includes a description of the program for post-permanent closure monitoring and measures to be employed to regulate or prevent activities that could impair the long-term isolation of emplaced waste. At this time it is premature to determine impacts on 10 CFR Part 60, until NAS makes its findings and recommendations on post-closure oversight.

I trust that this responds to the ACNW's concerns.

cc:  
The Chairman  
Commissioner Rogers  
Commissioner Curtiss  
Commissioner Remick  
Commissioner de Planque  
SECY

James M. Taylor  
Executive Director  
for Operations

CJP  
3/24/93  
#5

3/26/93 Tech. Editor has reviewed.

OFC	HLPD	E	HLPD	HLM	N	HLM	OGC	E
NAME	RJohnson	RU	JKolonich	JLnehan		JYoungblood	STreby	
DATE	03/26/93		03/18/93	03/26/93		03/18/93	03/05/93	
OFC	NMSS		NMSS	NMSS		NMSS		
NAME	Charlton		RBernero	HThompson		JTaylor		
DATE	03/19/93		03/14/93	03/17/93		03/17/93		

C = COVER E = COVER & ENCLOSURE N = NO COPY  
g:\ACNW.RLJ OFFICIAL RECORD COPY