encl. in file
See Packet I for encl.

3109/MJB/83/08/15/0

AUG 15 1983

- 1 -

w/o encl. 1

Distribution: WM-83-518
WM file: 3109
WMHL r/f
NMSS r/f
REBrowning
MJBell & r/f
RRBoyle
HJMiller
JOBunting
PDR

109

Mr. Walter E. Shepherd
Office of the Inspector General
U. S. Department of Energy
IG 331-Room 5A193
1000 Independence Avenue, SW
Washington, DC 20585

Dear Mr. Shepherd:

I am writing in response to your note to Mr. Browning and me, dated July 27, 1983, concerning alternate strategies for disposal of commercial high-level radioactive waste.

The Waste Management staff of NRC is in general agreement with the arguments of Northrup et al. The thermal disturbance cited by Northrup is one of the principal concerns of the NRC which led it to require containment within the waste packages for a period of 300 to 1000 years. The Commission recognizes that this thermal pulse could be significantly reduced by removing Cesium-137 and Strontum-90, and has written its technical criteria in 10 CFR Part 60 to allow for such alternate strategy. This is discussed in the Federal Register notice for the final technical rule (48 FR 28196, third column, last paragraph).

On the question of whether crystalline ceramic waste forms are preferable to borosilicate glass for disposal of commercial high-level waste, we consider this to be very much an open issue. DOE, as the agency with the programmatic responsibility to develop the technology for permanent isolation of high-level waste, must do the research to determine which waste form can meet regulatory performance requirements at optimimum cost. This optimization should consider all aspects of the waste disposal system: solidification, transportation, packing, and emplacement. It is our understanding that alternatives that significantly reduce the number of packages to be shipped, packaged, and emplaced will reduce overall system costs. Of course, considerations of removal of radionuclides and of use of ceramic waste forms only apply in the event there is commercial reprocessing in the U. S.

OFC	WMHL					
NAME	MJBell:lmc					
DATE	8/ /83					

AUG 15 1983

3109/MJB/83/08/15/0

Due to the earlier interest you showed in a consistent definition of high-level waste among federal agencies, I am enclosing a copy of NRC's comments to EPA on this subject. I hope this information proves useful to you.

Sincerely,

Michael J. Bell, Chief
High-Level Waste Licensing
Management Branch
Division of Waste Management

Enclosures:
1. June 21, 1983
   Federal Register Notice
2. NRC comment letter dated
   May 10, 1983 on EPA Standard

OFC	WMHL RB					
NAME	MJBell:lmc					
DATE	8/15/83					

FROM	DATE OF DOCUMENT	DATE RECEIVED	NO
IAEA	Undated	8/1/83	MM-83518

LTR	MEMO	REPORT:	OTHER
		XX	

TO	ORIG.:	CC:	OTHER:
MJBell, MMIL	XX		

ACTION NECESSARY	CONCURRENCE	DATE ANSWERED
NO ACTION NECESSARY ☐	COMMENT ☐	BY: 8/15

CLASSIF. | POST OFFICE | REG. NO:

FILE CODE: 109

DESCRIPTION: (Must Be Unclassified)

Review of IAEA-SM-261/34, Alternate Strategy for Commercial HL Radioactive Waste Management

REFERRED TO	DATE	RECEIVED BY	DATE
MJBell	8/1		

ENCLOSURES:

closed 8/15/83 Dy
Ltr to WJ Shepherd
from MJ Bell

REMARKS