

WMS/106

WMP r/f

NMSS r/f

CF

REBrowning

MJBell

JBunting

JGreeves

PJustus

JLinehan

RBoyle

SCoplan

JKennedy

RJohnson

PHildenbrand

KStablein

RCook

PPrestholt

TVerma

JGiarratana

AGarcia (O)

~~PDR~~

DGalson &amp; r/f

J. Wolf

Robert H. Neill  
 Environmental Evaluation Group  
 320 E. Marcy Street  
 P.O. Box 968  
 Santa Fe, NM 87503

Dear Mr. Neill:

SUBJECT: 10 CFR PART 60 PERFORMANCE CONFIRMATION AND COMPLIANCE DEMONSTRATION REQUIREMENTS

I should like to respond to the questions raised in your letter to R. E. Browning of July 9, 1986 and in earlier conversations with R. R. Boyle of my staff concerning the Nuclear Regulatory Commission's (NRC's) performance confirmation and compliance demonstration requirements as these relate to the disposal of high-level radioactive wastes in geologic repositories (10 CFR Part 60). Your first question was concerned with whether the NRC would allow the Department of Energy (DOE) "...to receive and emplace high-level radioactive wastes at a geologic repository prior to completing the demonstration of performance confirmation defined in 10 CFR 60". As defined in 10 CFR Part 60, "Performance confirmation means the program of tests, experiments, and analyses [outlined in Subpart F] which is conducted to evaluate the accuracy and adequacy of the information used to determine with reasonable assurance that the performance objectives for the period after permanent closure will be met." (Section 60.2). Subpart F, after stating the general requirements of this program (Section 60.140(a)), is explicit as to program timing: "The program shall have been started during site characterization and it will continue until permanent closure [of the repository]." (Section 60.140(b)). It is therefore clear that the NRC will permit the DOE to receive and emplace high-level radioactive wastes at a geologic repository prior to completion of performance confirmation.

The regulations are also clear as to the need for the DOE to obtain a construction authorization prior to commencing "...construction of a geologic repository operations area..." (Section 60.3(b)) and a license prior to receiving or possessing "...source, special nuclear, or byproduct material at a geologic repository operations area..." (Section 60.3(a)). In deciding whether to grant a construction authorization, the Commission shall consider, among other items, whether "The site and design comply with the performance objectives and criteria contained in Subpart E of [Part 60]." (Section 60.31(a)(2)). This determination will be based mainly upon documented performance assessments and the data collected during site characterization. The subsequent granting of a license is contingent, in part, upon a further demonstration, through additional documented performance assessments and the additional data obtained in the performance confirmation program, that the performance objectives and site and design criteria contained in Subpart E will be satisfactorily met.

A second question that you raised was concerned with when the DOE would have to demonstrate compliance with the relevant standards issued by the Environmental Protection Agency (EPA). Among the performance objectives contained in Subpart E of Part 60 are those concerned with (1) the performance of the geologic repository operations area through permanent closure as regards protection against radiation exposures and releases of radioactive material (Section 60.111(a)), and (2) the overall system performance of the geologic repository after permanent closure as regards releases of radioactivity to the accessible environment (Section 60.112). When the NRC published its final rule in 1983 on technical criteria for use in the evaluation of license applications (48 FR 28194), these two objectives were expressed partly in terms of "...such generally applicable environmental standards for radioactivity as may have been established by the Environmental Protection Agency." A proposed rule published on June 19, 1986 (51 FR 22288) expresses these performance objectives in terms of the actual standards (40 CFR Part 191) promulgated in final form by the EPA on September 19, 1985 (50 FR 38066). Before the NRC will grant a construction authorization or a license, the DOE must demonstrate, through analyses of anticipated facility performance, that the dose and release limits of the EPA standards (as well as the standards for protection against radiation set out in 10 CFR Part 20) will not be exceeded.

To summarize, in the context of 10 CFR Part 60, performance confirmation will require in situ monitoring, testing, and experimentation beginning during site characterization and extending through repository construction and operation. In order for the NRC to issue a construction authorization and, after construction has been substantially completed, a license, performance assessments are required. These performance assessments, submitted with the application, and updated during construction, must include consideration of any performance confirmation data obtained, and must have provided reasonable assurance ("demonstrated") that the repository system and components will comply with the performance objectives and criteria of Subpart E, as amended to conform with the EPA standards.

If you have any further, related questions, please get in touch with either R. R. Boyle (301-427-4799) or D. A. Galson (301-427-4623) of my staff.

Sincerely,

~~Original Signed By:~~

John J. Linehan, Acting Chief  
 Repository Projects Branch  
 Division of Waste Management  
 Office of Nuclear Material Safety  
 and Safeguards

OFC	:WMRP:vg	:WMRP	:WMRP	<del>W</del> WM	:	:	:
NAME	:DGalson	:RJohnson RL	:J Linehan	:MJBell	:	:	:
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ENVIRONMENTAL EVALUATION GROUP

86 JUL 16 11:07 AM MARCY STREET  
P.O. BOX 968  
SANTA FE, NEW MEXICO 87503  
(505) 827-8280

July 9, 1986

WM Record File  
109.5

WM Project \_\_\_\_\_  
Docket No. \_\_\_\_\_  
PDR /  
LPDR \_\_\_\_\_

Robert E. Browning, Director  
Division of Waste Management  
Office of Nuclear Material Safety and Safety  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 88755

Distribution:  
REB MJB tan-ticket  
Boyle  
RETURN TO WM, 623-SS) st

Dear Bob,

Would the NRC permit DOE to receive and emplace high level radioactive wastes at a geologic repository prior to completing the demonstration of "performance confirmation" defined in 10 CFR 60? My question applies to the Commission's 10 CFR 60 regulations including the scheduled incorporation of applicable sections of 40 CFR 191.

Interestingly enough, the DOE WIPP Project Office has advised us at meetings that the WIPP research and development facility will not be called a repository during the 5 year period of waste emplacement scheduled to begin in October 1988 until a decision is made not to retrieve. Hence one need not demonstrate compliance with the appropriate regulations until October 1993.

Sincerely,

Robert H. Neill  
Director

RHN/dkw

FROM <b>Robert H. Neff State of New Mexico</b>		DATE OF DOCUMENT <b>7/9/86</b>	DATE RECEIVED <b>7/16/86</b>	NO <b>WMC6-623</b>
TO <b>Robert E. Browning</b>		LTR <b>XX</b>	MEMO	REPORT
CLASSIF		ORIG.	CC <b>XX</b>	OTHER <i>Due 7/31/86</i>
POST OFFICE		ACTION NECESSARY <input checked="" type="checkbox"/>	CONCURRENCE <input type="checkbox"/>	DATE ANSWERED <b>7/31/86</b>
REG. NO.		NO ACTION NECESSARY <input type="checkbox"/>	COMMENT <input type="checkbox"/>	BY
DESCRIPTION (Must Be Unclassified) <b>10 CFR 60 regs on HLW for a geologic repository</b>		FILE CODE: <b>109.5</b>	REFERRED TO <b>J Linehan, WMRP</b>	DATE <b>7/17</b>
ENCLOSURES <i>DWG C. Loyie</i>			<i>JOHNSON/GARSON</i>	
REMARKS <i>closed 10/8 letter to R. Neff</i>			<i>6/5</i>	
			<i>7/26</i>	
			<i>10/10</i>	