MEMORANDUM FOR: Commissioner Curtiss JUL 8 1 1992 89001653 FROM: James H. Taylor Executive Director for Operations SUBJECT: RESPONSES TO QUESTIONS RAISED AT JULY 1, 1992, BRIEFING Enclosed are the responses to four questions you posed to the staff during its July 1, 1992, briefing to you on issues in the high-level waste repository program. Original Signed By: James M. Taylor James H. Taylor **Executive Director** for Operations Enclosure: As stated The Chairman CC: **Commissioner Rogers Commissioner Remick** Commissioner de Planque SECY OGC DISTRIBUTION **CNWRA** NMSS R/F HLPD R/F LSS LPDR ACNW PDR CENTRAL FILE BJYoungblood, HLWM JLinehan, HLWM RBallard, HLGE MFederline, HLHP JHolonich, HLPD STreby, OGC On-Site Reps MDelligatti,HLPD HThompson, EDO NMSS D/O r/f JTaylor, EDO EDO r/f *See previous concurrence HLPD M OFC .: 1A **HLGE* HLHP* HLPD*** OGC* NAME MDelligatti/dh RBallard MFederline JHolonich STreby DATE 07//5/92 07/ /92 07/ /92 07/ /92 07/ /92 OFC hung NMSS -NMSS HLWM! EDO NAME JLinehali BJYoungo GArlotto RBernero HThomoson hadi 07/2/92 DATE 07 I 92 07/ 192 07/2/92 07/2,/92 OFC ED0 C+>1151423 NAME JTay]qr DATE 07h1 /92 OFFICIAL RECORD COPY g:\memcurt

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Question 1.

Can the subsystem objectives be used as a trade-off against one another?

Answer.

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The history of the development of the subsystem performance objectives in 10 CFR Part 60 supports a position that these performance objectives were not generally intended to be used as a trade-off against one another. A premise of the multiple barrier approach is that barriers can be prescribed that act separately and thereby enhance the confidence that the wastes will be isolated. As noted in the statement of considerations accompanying the final rule (48 FR 28196, June 21, 1983), the regulatory strategy favored use of the multiple barrier approach in which each of the major elements of the geologic repository had a prescribed minimum performance standard; achieving these standards collectively would assist the Commission to determine that the EPA's high-level waste standard would be met. Given this regulatory strategy, the fact that a licensee proposes an enhanced waste package design, for example, does not of itself relieve it from the requirements to demonstrate compliance with the other subsystem performance requirements. However, the text of the rule is sufficiently flexible that DOE could propose, and the Commission could approve or specify, some other values for the subsystem performance requirements (by virtue of 10 CFR 60.113(b), which allows consideration of "particular sources of uncertainty in predicting the performance of the geologic repository.") See <u>id.</u>, "Single vs. Kultiple Performance Standards."

Question 2.

For the uncertainties identified by the Center for Nuclear Waste Regulatory Analyses (CNWRA) in CNWRA 90-003, which of those are related to site-specific issues and which are generic and related to what must be done to meet the rule?

Answer.

 Enclosed is a tabular listing from SECY-91-225, "Second Update of the Regulatory Strategy and Schedules for the High-Level Waste Repository Program" of the 49 regulatory uncertainties identified in CNWRA 90-003. Of these uncertainties, 47 are related to what must be done to meet the rule, while the remaining 2 deal with what organization will be responsible for implementing that portion of the regulation. None of these uncertainties are related to site-specific issues.

The reduction methods for reducing these uncertainties are as follows: 25 through regulatory guidance, 9 through major rulemaking, and 3 through minor rulemaking. The remaining 12 are still under analysis by the staff, and will be placed in one of the above three categories when an appropriate reduction method has been selected. Although the uncertainties identified are associated with actions that must be taken to meet the rule, the staff believes that it is appropriate to reduce the majority of them through regulatory guidance, given the difference in the amount of time and the level of resource allocation required to complete a rulemaking versus staff guidance. Consideration should also be given to the fact that staff guidance is routinely published for comment and there is an opportunity to proceed more formally, by rulemaking, if continued disagreement is evident.

REGULATORY AND INSTITUTIONAL UNCERTAINTY RESISTION STATUS. June 1771

	SUCCERTAINTY TIPE	RULE CITATION	SHORT UNCERTAINTY STATEMENT	AMALTZED	REPUCTION NETHOD	REDUCED
	Pepulatary	(7210.19(5)	Information beving significant implications	Analyzed(3/11)	Suidance	 ▲
	Regulatory	CT210.23	Environmental Report vs. EIS	Molyzed(3/73)	Roose Buto	
1113	Regulatory.	CT310.21	Detailed content of opplication out in 17810.21	Analyzed(3/71)	Settance	-
	Beyelatory	(7710.21(2)	Criteria most to accept the license application	Analyzed(3/71)	Sujfance(25,1487)	Roduced Bratt(11/79)
	Regulatory	CFR10.22(4)	Responsibility for Public Document Ruma	matyre(3/71) Matyre(3/71)	Riner Bute	
	Regulatory	C7144.31	Consideration of performance continuation during construction authorization	Analyze6(3/71)	Finer Bulle	
111	Regulatory	(1210_31(+)(5)	Inpublished Subpart I in '10 CTR Part '40	Malyzed(3/11)	Rojar Rote -	
	Regulatory	(1210.44(+)(1)	Clarify "substantially increasing extrinvel difficulty"	Analyzed(3/11)	Suidance .	
	Regulatory	C7868.31(=)(2)(ii)	Coopliance deconstruction/deteroination regarding busin introders and excerd archiving	Analyzed(3/91)	Boifate	
	Begulatory	(7860.72(5)(4)	Construction problems" needs clarification	Analyzed(3/71)	Sustance	•
	Regulatory	(7840.72(5)(7)	Anonatous condition" nords clarification	Analyzed(3/71)	Sujdance	•
m12	Begalatary	CT210.73	Substantia) eafsty lazard	Analyzed(3/71)	Beifanco	-
8013	Regulatory	(7819.73(5)	Significant deviation	Autyred(3/71)	Suldance.	
	Regulatory	(7818.111(+)	Reference clarification	Analyzed(3/71)	Suidance	· · · ·
W15	Regulatory	(7210.111(+)	Besign radiation dosa critoria	Mietyzet(3/71)	Rajor Auto	•••
1975	Regulatory	(7210.111(2)(1)	Facilitate versus not prevent easte retrieval	Analyzet(3/71)	Buidance	
W17	Repetatory	CFR10.112	Anticipated and manticipated processes and evenus	Analysed(3/71)	Rajor Role	
	Regulatory	CT240.117	Annalasests to 10 CTR 60.312 to contara to EPA Standard	Analy200[3/71]	. Rajor Bulo	
1011T	Regulatory .	CTR60.213(+)(1){i)(A)	Substantially complete containment	Analyzed(3/71)	Forther Analysis	
18629	Regulatory	CFR40.135(C)(1)	Solid anste fora	Analyzed(3/71)	Sujdance	
UN(2)	Regulatory	(7210.113(1))	Anticipated processes and events	Analyzed(3/73)	Rajor Bulo	
UN22	Regulatory	CFR40.313[c]	Deantscopeted processes and events	Analyzet(3/11)	Rajor Pule	
(m23	Argulatory	CF840.121(+)(1)	Releases for land ouvership and control	Analyzet(3/91)	Sejénce	
1024	feelitery	(FRM.122(b)(1)	Clarification of "Scologic Setting"	Malyzed(3/71)	Further Analysis	

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RINGER	INCERTAINTY TYPE	MILE CITATION	SIGHT DICERTATIVITY STATEMENT	INAL YZED	RESULTION RETICO	RENCED
UICS	Begu]atory	CFR40.127(e)(2)(i)	"Taking into account the degree of penalution"	Inely276(3/71)	Further Analysis	
1174	Beaulatory	(7840.122(+)(2)(1)1)	"Not to affect significantly"	Malyzed(3/71)	Further Analysis	
	Breelstery *	CFR10,172(a)(7)(1)	Need for criteria for "adequately evolveted"	Aulyzed(3/71)	Further Analysis	
117	Breelstory	CFR49.122(+)(7)(1)	Reasing at "set likely to underestimate offect"	Analyzed(3/71)	further Analysis	
1077	Restatory	CFB10.122(+)(2)(1)	Herd far criteria far "adequately investigated"	malysed(3/71)	Further Analysis	
	Boulistary	(7219.177(3)(1)	Periotitas et "geologic setting"	Analyme(3/71)	Further Analysis	
	Regulatory	(7810,21(c)(1)(ii)(C) (7810,172	Treatment of combinations of potentially adverse conditions	Analysed(3/71)	Beifuncy .	
	Regulatory	(TRI0.177(c) 3)	Bearing of "regional grandwater flow system"	Analyzed(3/71)	Further Analysis	
	Regulatory	(FRI0.172(c)(1)	Rearing of "rogional groundwater flow system"	Analyred(3/71)	Further Analysis	
1074	Brailatary	(FR10.172(c)(T)	Surptise of refiseurations	Analyzed(3/71)	Further Analysis	
	Realistary	CFR10.122(c)(15)	Clarification of "Estrone Ernstin"	Analyzed(3/71)	Selfance	
	Breatstary	CFR40,177(c)(74)	"Air-filled" pers speces	Analyzed (3/11)	Seifance	
	Samt story	(7244-131(5)(3)	Design all utility testing for assuntial function	Analyzed(3/71)	Gestance	
	Beenlatery	CLEV0-121(D)(P)	"Jusiya to permit periodic inspection"	Analyzed(3/71)	Sujfance .	
	fastitations]	(FRID. 1311)(T)	Secondary effects/nea-radiological accidents	Analyzed(3/71)	Eustance .	
		CFR10.131(3)(10)	Insetticient quidance in design criterin	Analyzed(3/71)	Suifance	
	Registern y		Hill MC resulate non-radiological safety?	Analyzed(3/91)	Suidance	
		C-baset I	Sebart 1	Analyzed(3/71)	· Rajor Rule	•
	arystatory		17 Analizability of siting criteria to performance objectives	Analyzed(3/71)	feidance (SP)	Roducod-Fisal(8/90)
	Regeletary	CFRI4.133, CFRI4.111 CFRI4.112, CFRI4.113	Applicability of thermal load requirement to performance abjectives	Analy2+6(3/?1)	failmer (9)	Inducud-Fisal(I/H)
P 101	traniatory) Hasta package containeest time frame	fmalyzef(3/71)	Guifance (SP)	Refected-Fiss1(8/96)
turit.	Receitatory	(FR10.113(a)(11)(9)	Engineered Barrier system release rate lasit	fnalyzef(3/91)	Further Analysis	
· · · · · · ·	ingulatory	craw.jjjpjijj	Between to applicable size safety requirements these can be reduced through major	matyrod(3/11) rulemaking.	further Analysis However, the	table will not be updated

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REFOLATORY AND INSTITUTIONAL INCERTAINTY REDUCTION STATUS

HEL	INCERTAINTY TYPE	RLE CITATIM	SHORT UNCENTAINTY STATEMENT	• .	ANNE TZEB	` .	RESULTION NETHER	RENCES	•
ME	Segulatory	18 CFR Part 2.1043	Topical Beldelines for Liconsing Support System	. •	Malyzed(3/71)	· .	Suidance (15)		
	Bentatory	CFRLD.113(a)(1)(1)(A)	Criteria for containeent of Breater-Than-Class-C	•	Jaalyzed(3/71)		Further Analysis		

Question 3. Provide a copy of the work plan that was used to guide the staff in its identification of reduction methods for the CNWRA 90-003 uncertainties.

Answer.

o A copy of the work plan has been provided separately.

Question 4.

Why does the rulemaking codifying the staff position on the timeframe for substantially complete containment (SCC) have to wait for the staff to complete its work on the reduction of the SCC uncertainty?

Answer.

o The staff believes that action on rulemaking should be deferred pending completion of the uncertainty reduction effort for SCC because the results of the ongoing effort may include a recommendation that would affect the current rule. For example, the current study, which is evaluating various deterministic and probabilistic models applicable to waste package failure, may identify a rule structure which would further reduce the regulatory uncertainty. In view of the potential for introducing instability into the regulatory process by codifying the current staff position prior to resolving uncertainties, and the limited availability of resources to support a partial change to a rule that may require more substantial change, the staff has chosen to defer any rulemaking action pending the completion of the uncertainty reduction effort.