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APR 23 1979

MEMORANDUM FOR: Donald J. Skovholt, Assistant Director for Quality Assurance & Operations, Division of Project Management

FROM: Walter P. Haass, Chief, Quality Assurance Branch, Division of Project Management

SUBJECT: SUPPLEMENTARY REVIEW CONSIDERATIONS AND ASSOCIATED BUDGETARY ESTIMATES

As requested, the QAB has developed a listing of suggested supplementary review considerations within the QAB areas of review for plants nearing their OL decision dates and other plants based upon our present understanding of the recent events at TMI-2. Enclosed Table 1 presents this listing. Initially, it should be noted that we cannot identify, at the present time, any supplementary review considerations that are directly related to specific events that occurred at TMI-2, with the exception of items B.4 and C.1. Rather, the items identified may be characterized more precisely as those which address the broader implications of the TMI-2 events and whose implementation would substantially increase our confidence that regulatory requirements are being properly translated into procedures and other actions by the applicant. Implementation of these items would also provide valuable feedback information to the QAB to assist in assessing the validity and practicality of our acceptance criteria and review process. Table 1 also includes a listing of review items - not directly related to QAB activities - resulting from our consideration of the TMI-2 events that we believe should be factored into other areas of the NRC review process. Some of these items do affect QAB indirectly since they would be considered in our review of test programs. This effect is accounted for under item B.4.

It is expected that the supplementary review considerations given in Table 1 will require modification in the future as more complete information becomes available from the TMI-2 event and further analysis is performed.

Budgetary manpower estimates to accomplish these supplementary reviews and to establish and document staff positions are given in Table 2 for

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each QAB area of review and by fiscal years. Note that only the manpower estimates associated with Conduct of Operations and certain Test Program reviews (Items B.4 & C.1 in Table 1) are considered to be directly related to the upcoming OL decisions.

Original signed by  
Walter P. Haass

Walter P. Haass, Chief  
Quality Assurance Branch  
Division of Project Management

Enclosures:

1. Table 1 - Supplementary  
Review Considerations
2. Table 2 - Budgetary Manpower  
Estimates for Supplementary  
Reviews

cc w/enclosures:

J. Gilray  
R. McDermott  
H. Berkow

Distribution:

Central File  
QAB Projects  
QAB Chron. File  
NRR Reading File  
WHaass, QAB

DPM:QAB  
WHaass:gt  
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TABLE 1

SUPPLEMENTARY REVIEW CONSIDERATIONS

Item	Plants Nearing OL Decision			Long Range Changes to SRP
	Prior to OL Issuance	Short term Implementation	Long term Implementation	
A. QUALITY ASSURANCE				
1. Increase coordination of QA program review with I&E at OL stage:				
a. Periodic meetings/discussions/ visits during review to assure understanding and provide feedback.				X
b. Participate in inspection of QA Manual (i.e., review of policies and procedures to assure proper translation of the QAP description).				X
2. Review of LERs and inspection reports for a 2-year period (minimum) prior to operation to assess trends and potential generic problems. Also at CP stage.				X
3. Summary meeting with applicant to discuss results of 1.b and 2. at CP and OL stages.				X
B. INITIAL PLANT TESTING				
1. Plant visits by reviewers during review and testing to assure better test implementation and provide feedback.				X

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Item	Plants Nearing OL Decision			Long Range Changes to SRP
	Prior to OL Issuance	Short term Implementation	Long term Implementation	
2. More detailed review of LERs and inspection reports during the review and test program period to identify and assess problems.				X
3. Review of startup test report submitted by applicant in coordination with I&E.				X
4. Additional reviews engendered by items listed in Part D below.		X	X	X
C. CONDUCT OF OPERATIONS				
1. Expand review of applicant's management resources (i.e., capabilities and experience) and/or access to personnel in various fields of expertise that may be needed during unusual events. The latter may include pre-arranged contractual support and/or formalized arrangements with other nuclear plant owners.		X		X
D. QAB NOT DIRECTLY INVOLVED				
1. Qualification of components to withstand radiation environment including level of radiation and identification of components.			X	X

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Item	Plants Nearing OL Decision			Long Range Changes to SRP
	Prior to OL Issuance	Short term Implementation	Long term Implementation	
2.* Assign specific responsibility and expand reviews for Chapter 15 events to assure clear definition of system/component capabilities.			X	X
3. Expand criteria for control board design to improve human engineering.				X
4.* Expand review of design to ensure that surveillance testing of operational plants can be conducted without defeating safety functions.				X
5. Consideration of design changes to preclude operator intervention at inappropriate times during auto-initiation of ESF.		X		X
6.* More emphasis on analysis of mechanistic failures rather than random failures (i.e., insufficient identification of cause of failure).			X	X
7. Instrument readings should provide operator with parameter of interest (e.g., flow rather than pump on).		X		X
8.* More emphasis on realistic transient analyses (i.e., consideration of actual design features rather than excessive conservatism).			X	X
9. Improved interfacing of maintenance and operation functions in operating plants to assure proper coordination.		X		X

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Item	Plants Nearing OL Decision			Long Range Changes to SRP
	Prior to OL Issuance	Short term Implementation	Long term Implementation	
10. * Utilize Project Review Team concept to improve mutual understanding of systems by reviewers.				X
11. * More detailed analysis and evaluation of all LERs by a separate group specifically assigned to this task.				X
* These items are expected to impact in some way the review of Test Programs by QAB.				

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TABLE 2  
BUDGETARY MANPOWER ESTIMATES FOR SUPPLEMENTARY REVIEWS

	Construction Permit				Operating License			
	Conduct of Operations	Testing Programs	Quality Assurance	Totals	Conduct of Operations	Testing Programs	Quality Assurance	Total
A. FY 81 and beyond (per case):								
Pre-acceptance (R11)	-	-	-	-	-	-	-	-
Acceptance (R12, R22)	-	-	-	-	-	-	-	-
Evaluation & Q <sub>1</sub> (R13, R23)	(1)**	-	1	1+(1)	(1)	(2)	2	2+(3)
Evaluation & Q <sub>2</sub> (R14, R24)	(1)	-	1	1+(1)	(1)	1+(2)	2	3+(3)
Evaluation & SER (R15, R25)	(1)	-	1	1+(1)	(1)	5+(2)	2	7+(3)
Post-ACRS (R16, R26)	-	-	2	2	-	10+(2)	7	17+(2)
Hearing (R17, R27)	-	-	-	-	-	-	-	-
TOTALS (man-days)	(3)	-	5	5+(3)	(3)	16+(8)	13	29+(11)
B. FY 79/80* (total manpower):								
CP's (man-days)	(9)	-	11	11+(9)	-	-	-	-
OL's (man-days)	-	-	-	-	(57)	183+(92)	136	319+(14)
Development of staff positions and incorporation into SRP and Standard Format:								
(1) Item C.1			5 man-months					
(2) Item B.4			3 man-months					

\*Approximately 1/3 of the man-days would be expended in FY 79 and 2/3 in FY 80.

\*\* Manpower estimates in parentheses are those associated with review items directly related to the TMI-2 events (Items B.4 and C.1).

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