

APR 27 1979

MEMORANDUM FOR: Chairman Hendrie
 Commissioner Gilinsky
 Commissioner Kennedy
 Commissioner Bradford
 Commissioner Ahearne

FROM: Lee V. Gossick
 Executive Director for Operations

SUBJECT: ACTIONS RELATING TO THREE MILE ISLAND (TMI)

Attached for your information is a listing of ongoing and planned staff actions relating to the Three Mile Island accident. The purposes served by this listing include the following:

- Provide interoffice communication so offices can see what others are doing and therefore better coordinate their efforts.
- Inform the Commission of TMI actions which the staff already has initiated or is considering.
- Establish an inventory of actions underway and planned for the information of Congress, the Presidential Commission, and others.
- Provide a framework for determining the accident's impact on both NRC's programs and its budget.
- Define the starting point for preparing an overall TMI action plan and tracking NRC's response.

Contact:

Larry Vandenberg, MPA
 49-27721

7905230310

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OFFICE ▶						
SURNAME ▶						
DATE ▶						

Activities in the listing are organized into the following categories (which depict the general objectives):

- I. Continuing Support of TMI Site (attachment 1)
- II. TMI Investigation Activities (attachment 2)
- III. Improving Future NRC Response Capability (attachment 3)
- IV. Improving Technical Base (attachment 4)
- V. Other Miscellaneous Tasks (attachment 5)

Also included, as attachment 6, is a list of other actions that have been suggested but have not yet been started. Please note that the listing includes primarily the activities of EDO staff offices; a complete listing of agency actions would have to include those activities being undertaken by Commission staff offices as well.

In addition to the above listing, the status of other related actions is as follows:

- We are working with the program offices to obtain more definition plus refined estimates of the schedule of planned activities.
- We are identifying NRC budget impacts to date. In addition, the BRG will review overall program and budget implications of the accident. Until more information is available we do not know how extensively pre-TMI commitments will be affected.
- As you know, Dr. Cornell is serving as a single point of contact for all investigation activities. He has forwarded to the White House a package of information to be used by the President's Commission in its early deliberations.

As these actions become more clearly defined, we will be able to provide you with greater detail. In the interim, to assure that the limited staff resources are focused and coordinated, I ask that Commission comment and input to TMI actions reflect a Commission view, forwarded to the EDO for action from the Office of the Secretary.

(Signed) Lee V. Gossick

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Lee V. Gossick
Executive Director for Operations

Attachments as stated

OFFICER	See page 3	MPA	MPA	MPA	MPA	EDO
SURNAME		Vandenberg	Conyer	Bassett	Haller	Gossick
DATE		4/27/79	4/27/79	4/27/79	4/27/79	4/ /79

The Commission

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cc w/attachments to: SECY
 OGC
 OPE
 OCA
 D/EDO
 NRR
 NMSS
 JE
 RES
 SD
 OPA
 OIA
 IP
 SP
 ADM
 CON
 ELD
 EEO

Distribution

Gossick
Central Files
EDO/RF
Haller/RF
Bassett/RF
Vandenberg/RF
Conver/RF
Fowler/RF

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OFFICE ▶						
SURNAME ▶						
DATE ▶						

Continuing Support of TMI Site

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
<u>A. Administrative</u>			
1. Policy questions relating to personnel matters (hazard pay for NRC employees, premium and overtime pay, travel, per diem, etc.)	4/27/79	To Be Determined	ADM (O&P)
2. Clerical Support (on site)	To Be Determined	TBD	ADM (O&P)
3. Letters to Met. Ed. on license fees (Bills for safety and safeguards inspection fees, additional specification changes, review and approval of contingency plan, etc.)	4/23/79	TBD	ADM
4. Review and listing of all procurement actions made as a result of TMI	TBD	TBD	ADM
5. Headquarters Support			
a. Special Docket File room			ADM (TIDC)
b. Graphics/duplications/public address systems	Continuing	TBD	ADM
6. Information Policy (FOIA and Privacy Act)			
a. Response to FOIA and Privacy Act requests	Continuing	TBD	ADM (DRR)
b. Provide legal assistance re FOIA and Privacy Act requests	Continuing	TBD	OELD

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Continuing Support of TMI Site

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
7. Special file searches, coordination of abnormal occurrence reports, coordination of responses for information from other offices	Continuing	TBD	MPA
8. Security Support Services for NRC Operations	TBD	TBD	ADM (FSSB)
9. Immediate Legal Ramifications of TMI			
a. Appeal Board hearing on airplane crashes	TBD	TBD	OELD
b. Assist NRR in preparation of legal documents relating to changes in license	TBD	TBD	OELD
B. <u>Technical</u>			
1. General Assistance at the TMI Site	Continuing	TBD	NRR/IE, and assistance from all appropriate office
2. Core Meltdown Analysis	Continuing	TBD	RES
3. Noise Analysis Diagnostic Coordination	Continuing	TBD	RES
4. Natural Circulation System Analysis	Continuing	TBD	RES
5. Containment Venting Conceptual Design	Complete	TBD	RES

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Continuing Support of TMI Site

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
6. Core Flow Blockage Predictions	Continuing	TBD	RES/NRR
7. Decay Heat Analysis	Complete	TBD	RES
8. Validate concentration/dose projections with field dose monitors (TLDs, ARMs, etc.)	Continuing	TBD	RES
9. Compare straight line projections with ADPIC terrain model	Continuing	TBD	RES
10. Attempt to project doses with new dispersion model (terrain dependent) and compare results	Continuing	TBD	RES
11. Hydrogen uptake and dissolution in Reactor Systems Test-Billings, Provo, Utah	Continuing	TBD	RES/NRR
12. TMI Mockup and Small Break Tests - Semiscale, INEL	Continuing	TBD	RES/NRR
13. Inputting TMI-2 fuel parameters into COBRA and calculate fuel damage due to 3/28/79 accident	Complete	TDB	RES/NRR
14. Provide interpretation and understanding of ΔP readout in TMI-2 Control Room during a stuck relief valve incident	Continuing	TBD	RES

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Continuing Support of TMI Site

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
15. Provide backup review of NRR and B&W natural circulation cooling calculation	Continuing	TBD	RES/NRR
16. Calculate compressibility of steam/noncondensable gas mixtures	Continuing	TBD	RES
17. Determine the status of TMI core using neutron noise measurements; ORNL	Continuing	TBD	RES/NRR
18. List of Relief Valve Testing Facilities	Continuing	TBD	RES
19. Determine temperature of control and poison systems	Complete	TBD	RES/NRR
20. Study probable condition of TMI core by independent group of experts	Continuing	TBD	RES/NRR
21. Assessment of Core Damage	Continuing	TBD	RES/NRR
22. Determination of coolant water availability by location during the accident	Continuing	TBD	RES
23. Disposal of radioactive waste from TMI - assessment of special problems and final disposition plans	Ongoing	TBD	NMSS

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Continuing Support of TMI Site

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
24. Transportation of Radio-active waste from TMI	Ongoing	TBD	NMSS/NRR
25. Modeling of vital safety systems in fuel cycle and material facilities	FY 80	TBD	NMSS
26. Assistance in sampling and analysis of primary coolant	Ongoing	TBD	RES/NRR
27. Provide air sampling instruments for aerial and ground measurements	Ongoing	TBD	RES/NRR
28. Contingency planning for long term cooling	Ongoing	TBD	RES/NRR
29. Study instrumentation which might be incorporated into reactors to provide a direct reading of reactor vessel water level	Ongoing	TBD	RES
30. Study potential ways of implementing gas bubble venting within plant configuration	Ongoing	TBD	RES
31. Review and assess hydrogen evolution from inpile fuel damage obtained in experiments in PBF	Ongoing	TBD	RES
32. Reassess hydrogen and oxygen production during TMI-2 accident	Ongoing	TBD	RES

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Continuing Support of TMI Site

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
33. Study methods which can be used to provide operators with direct readings on relief valve operation and closure	Ongoing	None (RES Internal Effort)	RES
34. Preliminary Requalification Requirements for TMI-2	Completed	TBD	RES

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TMI Investigation Activities

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
A. EDO Investigation			
1. IE Investigation	8/1/79	To be determined	IE
a. Provide legal assistance	Continuing	TBD	ELD
b. Categorization of event-related materials in IRC	Completed	None	MPA
c. Prepare chronology of NRC response to accident	Completed	None	MPA
d. Summary of Operations Center tape, 3/30	Completed	None	MPA/IE
e. Transcription of audio tapes	TBD	\$200,000	MPA/ADM
2. 4/13/79 memo from EDO requesting individual records of actions during accident	TBD	TBD	OIA
3. NRR Technical Inquiries	TBD	TBD	NRR
- Valving out Safety Systems			
- Reliability of Pressurizer Level Indication			
- Failed Open Relief Valves			
- Containment Interlocks			
- RCP Status			
- Reevaluation of FW Transients in B&W			
- Reliance on Industry Self-Policing and QA			
- Post Accident Plant Analyses			

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TMI Investigation Activities

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
4. Develop repository for TMI documentation	5/1/79	TBD	ADM/MPA
5. Complete preliminary report on accident dose assessment	5/7/79	TBD	SD
<u>B. NRC Commissioners' Investigation</u>			
1. Establish and staff office of special inquiry	TBD	TBD	ACI

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Improving Future NRC Response Capability

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
1. Operations Center Modifications	7/1/79	To Be Determined	IE
a. Expanded Communications w/States	7/1/79	TBD	IE/SP
b. Emergency Communications	To Be Determined	TBD	ADM/IE
c. 24-hr. Duty Officer	4/20/79	TBD	IE/ADM
2. Accelerated/Expanded Resident Program	6/15/79	TBD	IE
a. Communications	TBD	TBD	ADM/IE
3. Examine IE Hq. Organization	7/1/79	TBD	IE
4. Emergency Planning			
a. Prepare a SP action plan dealing with emergency planning and preparedness activities with other federal agencies, States and local governments	Ongoing	TBD	SP
b. Work with 8 States where reactors are under construction to encourage early development of emergency plans	10/81	TBD	SP

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Improving Future NRC Response Capability

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
4. <u>Emergency Planning, cont'd.</u>			
c. Complete action on NUREG-0553 (Funding Study for State and Local Plans) and submit staff recommendations to Commission	7/79	TBD	SP
d. Complete action on NUREG-0396 (NRC/EPA Task Force Report) recommendations and submit staff recommendations to Commission	7/79	TBD	SP/NRR
e. Determine how Atmospheric Release Advisory Capability (ARAC), developed by Lawrence Livermore Laboratory, can be effectively used and integrated into Federal, State, local and licensee emergency response efforts, including use by NRC Operations Center and staff	TBD	TBD	NRR/SP/RES/IE/NMSS
f. Update NRC emergency planning guidance for State and local governments (NUREG-75/111)	12/79	None	SP

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Improving Future NRC Response Capability

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
5. Application of Price-Anderson	Continuing	To Be Determined	ELD/NRR
6. Calculation of Reactor Accident Consequences (CRAC). Assess risk to public from Class 9 (severe core damage) accidents and sensitivity of protective measures.	TBD	TBD	RES
7. Other Adjudicatory Proceedings	Continuing	TBD	ELD
8. Purchase of field equipment	FY 80	TBD	SP
9. Fund to Pa. Dept. Health	TBD	TBD	SD
10. Provide nationwide security support for NRC activities (e.g. NRC Comm. meeting on site)	9/30/79	TBD	ADM
11. Letters to Governors on Radiological Emergency Response Planning	4/27/79	N/A	SP

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Improving Technical Base

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
1. Evaluation of Responses to IE Bulletins	5/15/79	To Be Determined	NRR/IE
2. ACRS Reviews	4/79	N/A	NRR
3. Rough estimates on the probability of the TMI event computed on the basis of the methods used in the Reactor Safety Study	Ongoing	TBD	RES
4. Studying possibility of accelerating LOFT small break tests	Plans: 4/79 Tests: 10/79	TBD	RES
5. Imputing TMI-2 characteristics into TRAC at LASL and calculate the 3/28/79 transient	5/31/79	TBD	RES
6. Determine backfit and future requirements for issuing OL's and CP's. Special study on Siting Policy	TBD	TBD	NRR
7. Reordering of Standards priorities	5/15/79	TBD	SD
8. Plan for and review procedures and criteria for issuance of operator licenses, including a review of existing training programs	Ongoing	TBD	NRR

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Other Miscellaneous Actions

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
1. Assessment of overall NRC resource impacts	4/26, off. input to CON 5/79, to BRG	N/A	BRG
2. Interface w/Dept. of State and DOE re international policy	Continuing	N/A	IP
3. Testify - State Legislative Committees	2/80	N/A	SP
4. Show Cause, Shutdown petitions, Congressional Testimony, etc.	Various	N/A	NRR/ELD/OCA
5. Negotiation w/NTEU re special inquiry panel	4/27/79	N/A	ADM
6. EDO Action Plan	TBD	N/A	MPA

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Other Actions Which Could Be Undertaken

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
I. <u>Continuing Support of TMI Site</u>			
1. Clean-up and/or decommissioning of TMI	To Be Determined	To Be Determined	NRR/SD
II. <u>TMI Investigation Activities</u>			
No additional effort at this time.			
III. <u>Improving Future NRC Response Capability</u>			
1. Agreements with other agencies for access to resources during crisis	TBD	TBD	NRR/NMSS/IE/SP
2. Reexamine current emergency planning and response capability for fuel cycle facilities	TBD	TBD	NMSS/IE
3. Develop radiological safety contingency plans for fuel cycle and material licensee facilities	Ongoing	TBD	NMSS
4. Examine extent of vendor responsibility during crisis	TBD	TBD	IE/NMSS

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Other Actions Which Could Be Undertaken

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
III. <u>Improving Future NRC Response Capability</u>			
5. Emergency Planning			
a. Review and push toward concurrence emergency plans of 18 States which have operating reactors but lack concurred-in plans; evaluate plan testing exercises	10/80*	TBD	SP
b. Evaluate exercises of the 12 States having NRC concurrence, and push States to update emergency plans	10/80*	TBD	SP
c. Provide off-site emergency instrumentation guidance for State and local governments	FY 80-81	\$285,000	SP
d. Purchase specialized field equipment:			
(1) Radioiodine monitors for State and local governments	12/80	\$200,000	SP
(2) Mobile field testing station to generate scenarios for testing emergency plans, and to serve as an NRC on-site Command Center in the event of a nuclear emergency	12/80	\$250,000	SP

* Contingent upon staff augmentation for SP, as outlined in 4/10/79 memorandum of Director, SP, to EDO.

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Other Actions Which Could Be Undertaken

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
<u>III. Improving Future NRC Response Capability</u>			
5. Emergency Planning(cont.)			
e. Provide for initial grant funds for State and local governments for emergency planning	10/80	\$500,000 in FY 80	SP
6. Regional Advisory Committee Assistance:	10/1/79	TBD	SP
a. Immediate detail of 6 people to NRC Regional Offices I, II, III, & IV, and 5 to SP at Hqs.	Thru 9/31/79	N/A	SP
b. FY-80 increase in SP staffing of 3 at Hqs. and 1 at each NRC Regional Office, for total of 8	Effec. FY 80	TBD	SP
<u>IV. Improving Technical Base</u>			
1. Make best use of operational data for safety concerns	6/15/79	TBD	EDO Task Force
2. Modify and Extend Ongoing Socioeconomic Study at TMI and 12 Other Nuclear Power Plants	5/15/79	\$ 355K	NRR/RES
3. FY 80 Budget Amendment for Safety Research	TBD	TBD	RES

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Other Actions Which Could Be Undertaken

<u>Task/Accomplishment</u>	<u>Schedule</u>	<u>Budget Impact</u>	<u>Responsible Office</u>
V. <u>Other Miscellaneous Tasks</u>			
1. Follow-up to public inquiries: prepare and forward synopsis of events	TBD	TBD	NRR/IE
2. Identify impact of TMI accident on currently scheduled NRC programs	TBD	TBD	MPA

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