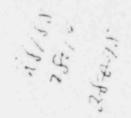


### UNITED STATES NUCLEAR REGULATORY COMMISSION V. 45H11.0161. D. C. 11115

FEE 0 9 1880



MEMORANDUM FOR: Victor Stallo, Jr., Director, Office of Inspection

and Enforcement

Harold R. Denton, Director, Office of Nuclear

Reactor Regulation

FROM:

Jesse L. Crews, Chief, Reactor Operations and

Nuclear Support Branch, Region V

SUBJECT:

REGULATORY PHILOSOPHY AND ORGANIZATION - TMI-2

Attached are a draft philosophy statement and alternate proposals for the NRC's TMI Site Office by J. E. Gagliardo, L. H. Barrett and myself per your request at our meeting on February 28, 1980.

We have also included our assessment of the cros and cons of each of the two alternative organizational proposals, and our recommendation is Alternative 1.

We have also examined and found a need for changes to the Director, NRR's order of February 11, 1930 and the Technical Specifications imposed by the order to effectively implement the NRC's review and approval of appropriate procedures for TMI-2. Specifically paragraph (3) of the order and the last sentence of Technical Specification 6.8.1 need to be revised to delete the requirement for NRC approval of all the procedures required by Technical Specification 6.8.1.

We have also included in Enclosure 3 proposed "envelope" criteria which would clarify the staff's authority to approve specific recovery operations consistent with the Commission's prohibitions against the purging or other treatment of the reactor building atmosphere, the discharge or other disposal of water decontaminated by the Epicor-II system and the treatment and discharge of the high-level radioactivity contaminated water now in the reactor building.

> Chief Reactor Operations and Nuclear Support Branch Region V

Enclosures: see next page \$009100 151

APPENDIX B to Enclosure 1

Enclosures:

- Safety Philosophy and Objective of the NRC's Regulatory Program at TMI-2
- Organizational Alternatives for the NRC/TMI Site
- 3. Safety and Environmental Impact Envelope for TMI Unit 2 NRC Staff Authority

### SAFETY PHILOSOPHY AND OBJECTIVE OF THE NRC'S REGULATORY PROGRAM AT TMI-2

The large radioactivity inventory, unique systems status and the recovery operations with which the TMI-2 reactor continues to be faced dictate the need for particular attention to assure that a conservative margin of safety at least equivalent to that of operating reactors licensed by the NRC is maintained.

Mai taining this margin of safety necessitates special focus on the adequacy of written procedures for the conduct of all activities which present even a small radiological risk to the public health and safety. Of equal importance is the assurance of strict conformance to the written procedures for such activities.

The criterion for assuring the adequacy of written procedures is that they include caution and/or stop points for the engoing activities which are established at a sufficiently low safety concern level and in terms of small deviation from exceeded trends such that the deviation is readily detected and the activity terminates with the activity remaining under control.

The criterion for assuring strict conformance to written procedures is that a discipline be established and enforced that does not permit departure from the procedures except in accordance with a predetermined process for proper review and approval.

It is the objective of the NRC's regulatory activities at TMI-2 to assure that the above criteria are met through the independent review and approval of selected written procedures prior to their use, and by frequent and direct observation of procedure implementation.

CRESNIZATIONAL ALTERNATIVES

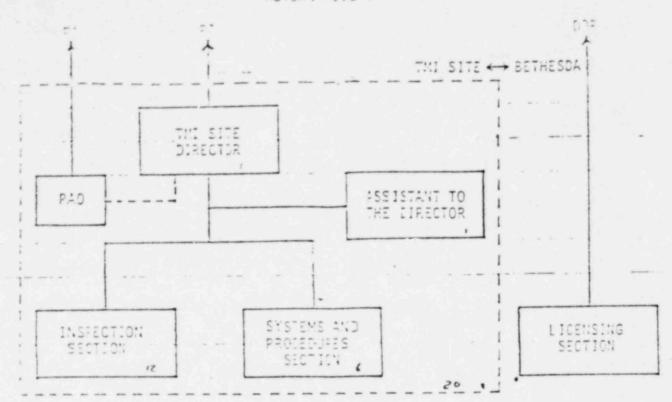
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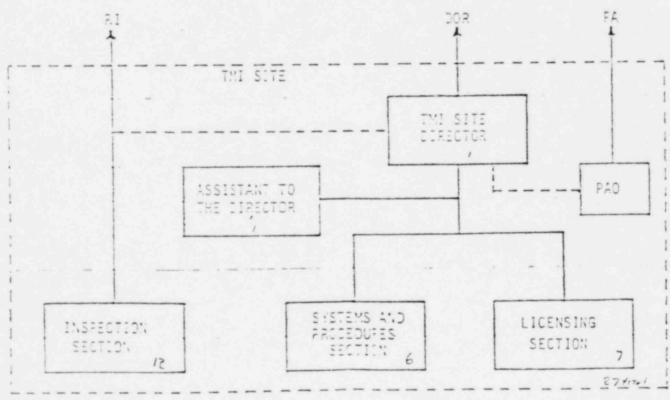
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February 29, 1980

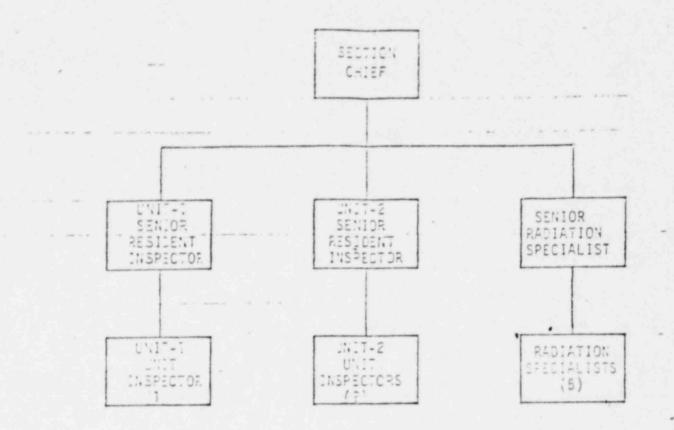
J. L. Crews L. H. Barrett J. E. Gagliardo



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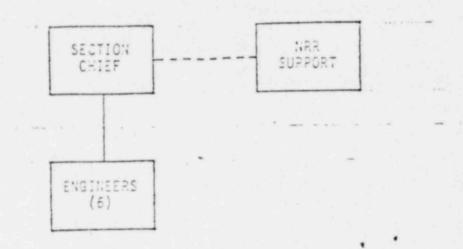


APPENDIX B to Enclosure 1



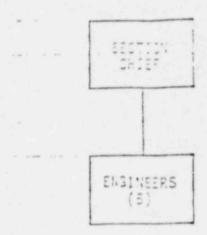
Europi'eros

- Establish an inspection program to provide assurance that licensee activities conform with license. TS, and procedural requirements.
- Implement arount-the-clock inspection accidities.
- Track and followup on inspection and licenses identified problems and licensee commitments.
- Presame inspection reports, correspondence and notifications of occurrences and generic issues.
- Provide technical support to the Systems and Procedures Section and to the Licensing Section.
- Provide feedback to the Lidensing Section.
- Communicate enforcement matters and significant issues to licenses management and to the CMI Site Director.



- Functions:
   Prepares safety evaluations and appropriate NEPA assessments for recovery ccarations.
- Modifies orders and maintains technical specification requirements.
- Provides technical support to the Inspection and Systems and Procedures Sections.
- Interfaces with NMSS, RES, DELD, EPA, DOE and state organizations.
- Performs routine DIR licensing activities that are applicable to TMI Unit 2.
- Interfaces with TMO Unit 1 restart group.

DYSTEMS AND PROJECTION CONTINUE



Furctions:

- and criteria for the reliew of licersee procedures.
- Review Tidensee procedures, and make recommendations regarding MRI approvaling
- Provide technical support to the Inspection Section.
- Provide feedback to the Libensing Section
- Communicate procedural problems and weaklesses to the licensee and side management.

- Alternative is Licensing in Bethasda, IE total site restrictionity for instation and procesure Review functions.
- Pros: 1) Licensing manpower is more available in Setheria.
  - 2) No dual IE and NRR responsibility at the site.
  - 3) Licensing functions fore efficiently performed in Bethesda with better intergration and communications with other NRR and NRC groups and activities.
  - 4) Closer to management.
  - 5) Follows traditional NRC organizational structure.
- Cors: 1) Not as close to the day-to-day operations.
  - 2) Technical information is more difficult to obtain. .
  - Less technical expertise is available onsite in case of an emergency.
- Alternative 2: Licensing and Procedure Paview NRP responsibility at the site with Inspection responsibility to Region I.
- Pros: 1) NRA reviewers oliser to information sturce.
  - 2) NRR better informed of site operations.
  - 3) Setter communications between MRR and IE onsite.
- Cons: 1) Enfficult to obtain sermanent NRR staff at the site.
  - 2) Ab single organization (reither NRR nor IE) is totally responsible for the site.
  - 3) Coordination between site licensing and Bethesda licensing personnel is more difficult, e.g., routine licensee amendments, L<sup>2</sup> inclementation.

## LACE TO BY BROWNING THE INFACT ENGELOPS FUR TO A

The NAC staff has the responsibility to assure that TMI Unit 2 remains in a safe condition with facility environmental impacts being controlled and assessed in accordance with environmental regulations. For the NAC staff to perform this function it must have authority to permit licensee actions to continue recovery operations. It is proposed that the staff be authorized to permit licensee operations within the following safety and environmental envelope:

- 1) Compliance with all Commission rules, regulations, and policy including the prohibitions against purging or other treatment of the reactor building atmosphere, the discharge or other disposal of water decontaminated by the EPICOR II system and the treatment and discharge or other disposal of the high-level radioactivity contaminated water now in the reactor building without further Commission approval.
- 2) Authorization of licensee recovery operations which may result in timor releases of the reactor building atmosphere provided that:
  - a) Releases are necessary to support recovery operations.
  - Releases are controlled to as low as reasonably achievable levels.
  - c) Technical Specifications are not exceeded.
  - C) The environmental impact does not exceed that specified in the TMI Unit 2 Final Environmental Impact Statement until the TMI Programmatic Environmental Impact Statement is issued. (The impact stated in the Final Programmatic Impact Statement will replace the existing TMI Unit 2 FEIS values upon issuance.)

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MAR 2 4 1980 LRC/THI-U0-044

RJConte Site Operations File

MEHORANDULI FOR:

Jesse L. Crews, Reactor Operations and Nuclear Support

Branch, kegion V

FROIT:

John T. Collins, Deputy Director.

IRC/Till Technical Support Staff

SUBJECT:

TECHNICAL SPECIFICATION (TS), AND ORDER, FEBRUARY 11, 1980,

THI-2, ADDRESSING MRC REVIEW AND APPROVAL OF APPROPRIATE

PROCEDURES FOR THI-2

REFERENCE:

From Jesse L. Crews; (Subject: Regulatory Philosophy

and Organization - Tri1-2)

The referenced memo addresses your concern about the implementation of the TMI-2 Order and Technical Specification with respect to NRC's review and approval of appropriate procedures. This is clarified as stated in the attached memorandum, from U. S. Brinkman, March 13, 1900, subject: Intent of TMI-2 Technical Specification 6.8.1/6.8.2. In essence, the licensee is required to submit those procedures required by TS 6.8.1b and 6.8.1g to the NRC prior to implementation for approval and/or receipt acknowledged.

If you have any further questions on this matter please do not hesitate to contact me or my staff.

Sincerely.

Original signed by
John T. Collins

John T. Collins

Deputy Director

NRC/THI Technical Support Staff

Attachment:

Hemo for John T. Collins, March 18, 1980

cc: R. Vollmer

V. Stello

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### APPENDIX C to Enclosure 1

OFFICE		JMI	JMI:DD	
SURNAME .	R. Zonte/1mp	A. Fasano	J. Gellins	
DATE -	3/21/80	3/ 1/80	V <sub>3/2 I/80</sub>	

. U. S. GOVERNMENT PRINTING OFFICE. 1818-11



# NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

March 18, 1980

HEMORANDUM FOR:

John T. Collins, Deputy Director, NRC/TMI Technical Support Staff

FROIT:

D. S. Brinkman, NRC/TMI Technical Support Staff

SUBJECT:

INTENT OF TMI-2 TECHNICAL SPECIFICATION 6.8.1/6.8.2

In preparing the revised TMI-2 Technical Specifications which were imposed by the Order of February 11, 1980, it was my intent that the only licensee procedures, and changes thereto, which required submittal to the NRC prior to implementation, were those procedures required by provide the NRC the option to "Receipt Acknowledge" procedures in these two categories rather than being required to approve all procedures in these two categories. I believe this option is provided for by Technical Specification 6.8.2 which requires that procedures required by Technical Specifications 6.8.1b and 6.8.1g be submitted to the NRC prior to implementation rather than requiring that these procedures be approved this option on procedures of minor safety significance. It was also my Specification 6.8.1 would not require submittal to the NRC prior to implementation.

ily intent of the last sentence of Technical Specification 6.8.1 was that the licensee be required to follow previously approved (by licensee) and 6.8.1g if these procedures were still applicable rather than to Technical Specification 6.8.1.

R. J. Conte, who participated in the preparation of these revised TMI-2 Technical Specifications, concurs in these positions.

as Catsa

D. S. Brinkman NRC/TMI Technical Support Staff

cc: R. Vollmer

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APPENDIX C to Enclosure 1

### ENCLOSURE 2

## NRC MONITORING AND FEEDBACK OF TMI-2 RADIATION PROTECTION PROGRAM INCLUDING ASSOCIATED QUARTERLY REPORTS

Reference: Reference (1), Second, Third and Fourth Paragraphs, and Enclosure Question No. 1

in this area.

The licensee submitted the following documents for NRC review/approval

- -- Radiation Protection Program/Plan dated December 7, 1979, and revised January 14, 1980;
- -- Radiation Safety Program Report (first quarterly status report) dated February 8, 1980;
- -- Three Mile Island Unit 2 Recovery Quarterly Progress Report for the Period Ending March 31, 1980 (which included the second quarterly status report on the Radiation Protection Program) dated April 15, 1980; and,
- -- Quarterly Progress Report for Period Ending June 30, 1980, (as described above - third quarterly report) dated July 15, 1980.

NRC preliminary comments on the draft version of the Radiation Protection Plan were provided to the licensee and formalized on January 28, 1980, based on the final version of the plan. A meeting on site occurred on March 25, 1980, to resolve comments. On July 25, 1980, the licensee submitted Revision 2 for final approval by the NRC staff. Staff review should be completed by August 15, 1980.

A consolidated approach to the NRC review of the quarterly status reports is being utilized. In addition to the onsite review, each report is sent to the following offsite NRC organizations for review:

- -- Radiological Assessment Branch, Division of Systems Integration, NRR
- -- Division of Fuel Facility and Materials Safety Inspection, IE
- -- Region I, IE

For the first status report, dated February 8, 1980, the NRC reviewers were in general agreement that the licensee was responsive to the findings of NUREG 0640, and that if the action items were completed and properly implemented, the program should provide adequate radiological control to support recovery operations. In addition, the licensee exhibited initiative by consolidating the NRC and consultant findings into one action list.

For the second report, dated April 15, 1980, the NRC reviewers again were in general agreement that little progress was made since the February 8, 1980, report.

The latest report, dated July 15, 1980, is currently under review, however, preliminary indications are that substantial progress was made in the completion of outstanding items since January 1980.

The proposed meeting on the first status report between J. Collins and H. Denton never materialized due to NRC overview on preparations for containment entry and reactor building purge.

The onsite staff did not provide formal feedback to the licensee on the quarterly status reports. Basically the format and content, as provided by the licensee, was considered acceptable for reporting status of the recovery operations.

It is understood that this report is followup to the Licensee Event Report on the March 28 accident; and, therefore, in keeping with the NRC's policy in this area, no receipt acknowledgement is issued for these reports. Any adverse trends noted as a result of NRC review of these reports will be formally identified in the IE periodic inspection reports.

### ENCLOSURE 3

### CURRENT STATUS OF RADIATION PROTECTION PROGRAM CORRECTIVE ACTIONS COMPLETED AND PLANNED AND THE EFFECTIVENESS OF THESE MEASURES

Reference:

- -- Reference (1), Enclosure Question Nos. 3 and 4
- -- Appendix A to Enclosure 3, Table-1, Management Plan Progress

The appendix to this enclosure is an excerpt from the latest quarterly status report. This indicates the quantity and quality of each of the outstanding items completed and planned. It should be noted that actual manhours for each item are not equal and some are more extensive than others.

Equally extensive is the workload to followup on the completion of those items by the onsite TMI/PO staff. This responsibility is assumed by the onsite staff who must also follow the day-to-day activities of the licensee. In light of this and onsite staff's involvment with containment entry and reactor building purge evolutions, an audit was not performed to verify completed action. Further, it was deemed premature to start a piecemeal approach to this audit effort in light of certain major action items not scheduled for completion until later this year.

The staff is planning a complete review of this area which is scheduled for completion one month (January 31, 1981) after completion of the latest scheduled licensee corrective action. Subsequent to this final inspection a report will be issued (approximately one month thereafter). The monthly inspection reports, until that time, will document status of review in this area. The actual audit effort is scheduled to start September 1, 1980.

As a part of this planning effort, the staff is aware of approximately 50 outstanding inspection items from post accident inspection reports and 12 items from the civil penalty on the March 28 accident. The majority of these items resulted in the Special Panel Review of the TMI-2 Radiation Protection Program and, therefore, review of these items along with the Special Panel Findings is imperative.

The staff classifies all outstanding issues into the following area.

- -- Organization/Staffing
- -- Quality Assurance
- -- Dosimetry (Internal and External)
- -- Radiation Protection Instruments
- -- Radiological Material Control/Packaging/Shipment
- -- Area Control (Radiation/Contamination)

-- Respiratory Protection (an area not identified in the Special Panel Review)

The inspection will address these major areas to assure all outstanding issues are resolved or corrective action is sufficient to prevent recurrence of previously identified problems.

The effectiveness of completed licensee action items can not be judged until the above audit is performed. A review of licensee proposed actions along with verified implementation of the Radiation Protection Program should result in the correction of past problems.

A review of the quality of the implementing procedures and the adequacy of implementation provide the basis for judgement in terms of overall radiation protection effectiveness. Further, a high quality of licensee training on effective implementing procedures will complement the licensee's program.

	Finding		Corrective Action	Due Date	Status
1.	Management commitment in support of Radiation Safety Program. (morale/attitude problem, operations influence).	a -	The senior vice president, Met-Ed, held policy statement session with all TMI managerial, supervisory and radiological control personnel.	NA	Action completed
		ь.	Restructure the Radiological Control Department under a manager reporting directly to the senior vice president.	NA	Action completed
		c.	Create an independent Radiological Assessment Group to monitor the Radio- logical Control Program.	NA	Action completed
		d.	Implement a Radiation Protection Plan which outlines the philosophy, basic objectives, and policies relating to the Radiological Control Program.	2 weeks after NRC action	Submitted to NRC in January 1980. Resolution of comments in progress.
APPENDIX A t		е.	Assign technician foremen exclusively to on-the-job supervisory duties to provide additional support and direction to technicians.	NA .	Action complete

TABLE - 1 MANAGEMENT PLAN PROGRESS

	Finding		Corrective Action	Due Date	Status
1.	(Cont.)	ſ.	Establish supervisory and management development training programs.	12/80	Action not initiated at this time.
2.	Organizational Structure (Responsibility, function, assignment, and line of authority uncertainties.)	a.	Radiological Control Department re-organization.	NA	Action complete.
		b.	Prepare a procedure defining the Radiological Control Department organization, and responsibilities.	02/80	Action complete issued.
		c.	Utilize only Radiological Control technicians and foremen trained in accordance with the revised training program to provide Radiological Control coverage for work at TMI Unit II.	07/31/80	Action complete all technicians and foremen employed at TMI-II at the time of publication have been trained in accordance with the revised training program.

TABLE - 1 MANAGEMENT PLAN PROGRESS

	Finding		Corrective Action	Due Date	Status
3.	Technical depth of Radiation Safety Program	8+	Initiate & recruitin; program to reinforce the technical/super- visory expertise within the Radiological Control Department.	08/80	Continuing task, current status indicated on TABLE - 3 Radiological Controls organization chart.
4.	Training (Training for Radiation Safety & Operations Personnel was inadequate)	a.	Establish training program for all current technicians and foremen.	07/31/80	Training status presented in 2-c, page 2.
		b.	Establish a Radiological training program for all workers at TMI-II.	05/01/80	Program implemented and in progress. Procedure defining program is currently in the approval cycle. Action complete.
		c •	Establish Criteria for special training on "high risk tasks".	07/01/80	Action not started.

TABLE - 1 MANAGEMENT PLAN PROGRESS

Finding		Corrective Action	Due Date	Status
5. Resolution of audit findings.	a.	Establish an audit response procedure:	03/15/80	Action complete.
	b.	Assign responsibility for stating and completing corrective actions on previous NRC and the latest QA audit findings.	02/15/80	Action complete.
	c.	Re-evaluate all previous audit findings for applica- bility. Re-issue applicable open items.	03/01/80	Action complete.
	d.	Establish an in-house defi- ciency reporting program.	04/15/80	Action complete.

TABLE - 1 MANAGEMENT FLAN PROGRESS

	Finding		Corrective Action	Due Date	Status
6.	Preparation and implementation of procedures.	a •	Revise all Radiological Procedures compatible with verbatim compliance objectives.		
			<ol> <li>Five (5) initial procedure revisions applicable to current activities.</li> </ol>	04/01/80	One (1) of the initial procedures was issued (Investigative Report Procedure); the remaining procedures have been developed and are currently in the approval cycle.
			<ol> <li>Complete a Radiological Control Procedure Manual.</li> </ol>	12/01/80	Continuing effort based on priority list issued 01/22/80.
		b.	Criteria for action sign off steps in work procedures.	08/01/80	Action not started.
		с.	Change tech specs to expedite review.	open	Awaiting NRC resolution.
7. A	External Dosimetry	а.	Evaluate dosimetry for R. B. re-entry.	02/15/80	Action complete.
APPENDIX A		b.	Evaluate TLD system and implement modifications.	12/01/80	Evaluation initiated, action not complete.
to Enclosure					
are 3					

Finding		Corrective Action	Due Date	Status
7. (Cont.)	c.	Coordinate and direct contracted technical expertise in assessment of external exposures.	02/80	The technical expertise for assessment of external exposures is currently being coordinated and directed by the Manager of Radiological Technical Support. The organization and responsibility procedure defining the current organization was issued in May 1980. The committed action for this finding is considered complete.
	d.	QA program for TLD system	04/30/80	Procedure defining program has been developed and is currently in the review cycle.
	е.	Computerized exposure tracking by work group and major task.	04/01/80	Action complete. (system capability)
Appropri	f.	Computerized exposure tracking by specific tasks.	12/31/80	Action in progress to meet committed date.

TABLE - 1 MANAGEMENT PLAN PROGRESS

	Finding		Corrective Action	Due Date	Status
8.	Internal Dosimetry Program	а.	Coordinate available technical expertise in evaluation of internal exposures.	NA	Action complete.
		b.	Revise the Bioassay Program.	04/01/80	Procedure defining program has been developed and is currently in the approval cycle.
9.	Instrument Program	a.	R.B. re-entry instrument evaluation.	03/01/80	Action complete.
		b.	Coordinate instrument selection, calibration, and maintenance activities.	NA	Action complete.
		с.	Develop a QA program for Instru- ment calibration.	07/01/80	Action in progress.
		d.	Upgrade the TMI Instrument calibration facility.	12/31/80	Action complete.
APPENDIX		е.	Make recommendations for Health Physics counting Lab Improvements.	02/15/80	Submitted and being evaluated action complete.
IX A t		f.	Implement improvements to counting lab.	06/01/80	Action not complete.

PPENDIX A to Enclosure 3

TABLE - 1 MANAGEMENT PLAN PROGRESS

	Finding		Corrective Action	Due Date	Status
9.	(Cont.)	g.	Improve air sampling capabilities.	NA	Action complete
		h.	Improve air sampling practices.	NA	Action complete.
		i.	Improve Radio-Iodine sampling capabilities.	NA	Action complete.
		1.	Implement an improved survey frequency schedule in procedural format.	02/01/80	Procedure developed, currently in approval cycle.
10.	Radioactive Material shipping and labeling	а.	Revise all procedures addressing the packaging, handling, shipping, and receipt of Radioactive material.	NA	Action complete.
		ь.	Develop guidelines for curie estimations.	04/01/80	PCR to existing procedure submitted and approved. Action complete.
APPENDIX	Improve decontamination procedures for equipment and tools.	а.	Improve decontamination practices from pre-accident conditions.	NA	Action complete.

A to Enclosure 3

### TABLE - 1 MANAGEMENT PLAN PROGRESS

	Finding		Corrective Action	Oue Date	Status
12.	Implement a program which emphasizes the reduction of personnel exposures to ALARA.	pla com con	lement a Radiation protection n which stresses TMI-II's mitment to a strong radiological trol program within the Concept ALARA.	NA	Program in effect, Radiation Protection Plan awaiting NRC resolution.
			lement a program for exposure	09/01/80	Action not started
		to	supervision as an aid in acking exposure for their per-	NA	Continuing effort upon implementation of exposure tracking program identified above.
13.	able for the actions they take. Establish an under- standing of responsi-	ing pe	legate responsibility for resolv- g audit findings to supervisory rsonnel responsible for the area which the finding occurs.	- NA	Continuing action, initiated i February 1980.
APP	bilities and expectations associated with achieving a sound Radiological Control Program.	op en	sert action sign off steps in erational work procedures to sure proper attention is given radiological considerations.	08/01/80	Action not started.
APPENDIX A		ta	epare guidelines for conductince of critiques for unusual diological occurrences.	12/01/80	Action (guidelines) not started.

### ENCLOSURE 4

### NRC ROLE IN CONTAINMENT ENTRY - SPECIAL EFFORT VERSUS REAL RE-ENTRY

Reference: Reference (1) Enclosure Questions Nos. 5 and 6

The NRC's role in association with the containment entry can best be described by what has been accomplished in the past.

On March 21, 1980, the licensee requested the onsite NRC staff to approve the entry into the reactor building without building atmosphere purging. The staff's review of the submitted plans for this entry indicated that further study by the NRC was warranted to assess the hazard associated with such an entry. Therefore, a task force composed of various experts from NRR and IE was formed. The results of this review was that adequate radiological protection (including the use of instruments) was to be utilized and the more significant hazard was to be nonradiological (relatively low oxygen content).

On that basis, the procedure governing the entry was reviewed and approved by the onsite staff prior to the May 20 attempt to enter the building. Selected licensee training sessions for the licensee's entry and support teams were observed. Problems identified during this review were adequately resolved.

During the entry attempt on May 20, 1980, a majority of the onsite staff was onsite or available to insure proper implementation of the entry procedure. Implementation problems did occur and were the subject of 's subsequent enforcement action.

In summary, for the containment entry and any other special evolution at TMI, the NRC's role onsite is that of monitoring in the interest of public health and safety, not one of participation. No plans are made as yet for sending NRC personnel into the reactor building.

As far as the NRC staff is concerned, each entry into the reactor building will be a special entry until extensive decontamination in the reactor building is accomplished. With respect to special instrumentation and other protective equipment it appears that the "state of the art" is adequate to protect individuals making these entries.