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April 9, 1981



Mr. John E. Minnich, Chairman  
Dauphin County Board of Commissioners  
P.O. Box 1295  
Harrisburg, Pennsylvania 17108

Dear Mr. Minnich:

I am writing in response to your letters of February 20 and February 23, 1981 in which you forward Advisory Panel recommendations on contaminated water and request the NRC to waive its preshipment solidification requirement for low-level EPICOR-II spent resin waste. The Commission greatly appreciates the Panel's extensive and timely efforts to provide its recommendations.

The NRC staff recently completed its review of the licensee's request for relief from this requirement and on March 18, 1981 recommended that the Commission approve deletion of this requirement. The staff also recommended that the licensee be authorized to dispose of 22 low-level resin liners (second and third stage liners) at a commercial shallow land burial site. The Commission unanimously approved these recommended actions on March 23, 1981.

The remaining EPICOR-II spent resin liners consist of 50 first stage liners, three of which are similar to the second and third stage liners in that their total curie content is within the normal range of reactor resin wastes. The other 47 first stage liners contain specific activities which are unique and unlike those routinely generated and disposed of by other nuclear power plants. DOE has a program underway to examine and characterize the condition of the resins and liners for one of these units at a DOE contractor's facility. The knowledge gained from the characterization work by DOE may provide an improved basis for the handling and disposal of all first stage wastes and since solidification of these wastes could foreclose options for further treatment, we believe that it is prudent to defer any decisions on disposal of first stage wastes until such information is obtained. Therefore, while we have authorized removal of the requirement for solidification of EPICOR-II wastes, we have not yet authorized a method for disposal of the first stage wastes.

The Commission agrees fully with the Panel's recommendations concerning contaminated water forwarded in your letter and has found the staff's Final Programmatic Environmental Impact Statement (PEIS) to be responsive to those recommendations. Specifically, I would make the following comments.

8104150591

OFFICE	P						
SURNAME							
DATE							

ADVISORY PANEL RECOMMENDATION #1: That the radioactive contaminated water located in the Reactor Building be decontaminated as rapidly as possible, using the licensee's proposed Submerged Demineralizer System (SDS) currently being constructed. This recommendation, specific to the SDS System, is contingent upon approval of that system by the Nuclear Regulatory Commission.

The Commission agrees that radioactively contaminated water located in the reactor building should be decontaminated as soon as possible. The licensee's SDS, proposed for processing water located in the basement of that building, is expected to be constructed and operable in May 1981. Assuming timely receipt of a satisfactory proposal from the licensee, the NRC staff's ongoing evaluation of the SDS is also expected to be completed during May 1981. NRC approval of the SDS, or other decontamination system option, will be consistent with the ALARA (as low as reasonably achievable) principle and appropriate technical specifications for release of radioactive effluents contained in the final PEIS.

ADVISORY PANEL RECOMMENDATION #2: That the approximately 1.6 million gallons of decontaminated water, expected as a result of TMI-2 decontamination activities, be stored initially in on-site tanks to permit accurate assessment of its residual radioactivity content prior to a final decision regarding ultimate disposal of the water.

The Commission agrees with this recommendation and supports the following conclusion in the staff's Final PEIS (Section 12.):

"A decision on the ultimate disposal of the processed water can be deferred until after the water has been processed. Then, the concentration of radionuclides remaining in the water will be low enough for the water to be stored safely onsite until the disposal decision is made. Processing the water to immobilize most of the radionuclides and storage of the processed water will not foreclose any reasonable options for disposition of the water or concentrated wastes."

ADVISORY PANEL RECOMMENDATION #3: That the appropriateness of the continued on-site storage of the decontaminated water be reviewed annually by this Advisory Panel.

The NRC staff will, at the request of the Panel, provide information to assist the Panel in making its annual review.

ADVISORY PANEL RECOMMENDATION #4: That to the extent practicable, Metropolitan Edison Company should minimize additional on-site water requirements, by maximizing the use of recycled decontaminated water.

The Commission agrees with this recommendation. In his January 12, 1981 letter to Herman Dieckamp, the Chairman Ahearne directed Metropolitan Edison to "minimize the volume of water used in cleanup activities, maximize reuse of processed water, and reduce cross-contamination of processed water to the maximum practicable extent."

OFFICE							
SURNAME							
DATE							

ADVISORY PANEL RECOMMENDATION #5: That the radioactive contaminants (excepting tritium) in the unprocessed water at TMI-2 should be reconcentrated and immobilized as expeditiously as possible, consistent with Regulatory requirements.

The Commission agrees with this recommendation and supports the following conclusion in the staff's Final PEIS (Section 12.):

"Treatment of the contaminated accident water will transform the entrained radioactivity from its current mobile state to a more manageable form by concentrating and immobilizing the activity by an appropriate process. The cleanup activity will eliminate the risks associated with leaving the contaminated accident water radionuclide inventory in the mobile unprocessed state."

ADVISORY PANEL RECOMMENDATION #6: That the design and operation of decontamination systems for processing radioactively contaminated water should minimize, as far as practicable, the amounts of residual radioactivity in the resulting processed water. The Panel believes the following curie inventories for all processed water resulting from cleanup activities are achievable:

<u>Isotope</u>	<u>Curies</u>
Sr-89, 90	0.1
Cs-134	0.2
Cs-137	0.5

The Commission agrees that a decontamination system for processing radioactively contaminated water should be designed and operated so as to minimize, to the extent practicable, the amounts of residual radioactivity in the product water. In the Final PEIS the staff has proposed technical specifications for releases of radioactive effluents during the cleanup. Within these technical specifications, the staff has emphasized that all cleanup operations be conducted in accordance with an ALARA (as low as reasonably achievable) philosophy as described in 10 CFR Parts 20 and 50.

The staff has informed the Commission that the listed curie inventories for all processed water resulting from the cleanup are achievable.

The Commission expects to receive continuing advice from the TMI-2 Advisory Panel on major activities required to accomplish expeditious cleanup of the TMI-2 facility. This advice is expected to provide the Commission with important information throughout the cleanup process.

Again I would like to offer my thanks as well as those of my fellow Commissioners for a job well done.

C/R NOTE: This letter has been cleared with all Sincerely,  
Comrs.' offices. It was retyped in  
C/R to incorporate comments.

Orig. Off: (Ref. CR-81-054 -- SECY Tickets  
TMIP0-NRR #81-0248 & #81-0249)

Original Signed By  
Joseph M. Hendrie

Joseph M. Hendrie

OFFICE	SECY:C/R	<del>OCM</del>	<del>OCM</del>			
BURNAME	gschuetze	<del>R. Kraus</del>	JMHendrie			OCM DORIF
DATE	4/9/81	4/ /81	4/9/81			4/9/81

FROM: John E. Minnich, Chairman TMI Advisory Panel		ACTION CONTROL		DATES		CONTROL NO. 10196	
TO: Chairman Ahearne		COMPL DEADLINE		<del>3/10/81</del>		DATE OF DOCUMENT	
DESCRIPTION 2 <input checked="" type="checkbox"/> LETTERS <input type="checkbox"/> MEMO <input type="checkbox"/> REPORT <input type="checkbox"/> OTHER		ACKNOWLEDGMENT		3/25/81		2/20 & 2/23/81	
Forwards Panels recommendations on TMI cleanup activities and the disposal of radioactive wastes		INTERIM REPLY				PREPARE FOR SIGNATURE OF:	
CLASSIFIED DATA		FINAL REPLY		Chg OK'd		<input checked="" type="checkbox"/> CHAIRMAN	
DOCUMENT/COPY NO.		CLASSIFICATION		FILE LOCATION		<input type="checkbox"/> EXECUTIVE DIRECTOR	
NUMBER OF PAGES		CATEGORY		OR 3/6/81		OTHER: _____	
POSTAL REGISTRY NO.		<input type="checkbox"/> NSI <input type="checkbox"/> RD <input type="checkbox"/> FRD		SPECIAL INSTRUCTIONS OR REMARKS			
ASSIGNED TO: Denton, NRR		DATE: 3/2/81		PRIORITY			
Snyder		3/3/81		SECY-81-0248 & 0249			
INFORMATION ROUTING		LEGAL REVIEW		<input type="checkbox"/> FINAL <input type="checkbox"/> COPY			
Dircks Case		4. Ross HThompson		NO LEGAL OBJECTIONS NOTIFY:			
Cornell Denton		5. Nurley HBerkson		<input type="checkbox"/> EDO ADMIN & CORRES BR			
Rehm 1. PPAS		6. Vollmer		EXT. _____			
Shapar 2. Eisenhut				COMMENTS, NOTIFY:			
Stello 3. Hanauer				EXT. _____			
Davis				JCAE NOTIFICATION RECOMMENDED: <input type="checkbox"/> YES <input type="checkbox"/> NO			

NRC FORM 232  
(11-75)

EXECUTIVE DIRECTOR FOR OPERATIONS

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PRINCIPAL CORRESPONDENCE CONTROL

FROM: John E. Minnich, Chairman TMI Advisory Panel		ACTION CONTROL		DATES		CONTROL NO. 10196	
TO: Chairman Ahearne		COMPL DEADLINE		<del>3/10/81</del>		DATE OF DOCUMENT	
DESCRIPTION 2 <input checked="" type="checkbox"/> LETTERS <input type="checkbox"/> MEMO <input type="checkbox"/> REPORT <input type="checkbox"/> OTHER		ACKNOWLEDGMENT		3/25/81		2/20 & 2/23/81	
Forwards Panels recommendations on TMI cleanup activities and the disposal of radioactive wastes		INTERIM REPLY				PREPARE FOR SIGNATURE OF:	
CLASSIFIED DATA		FINAL REPLY		Chg OK'd		<input checked="" type="checkbox"/> CHAIRMAN	
DOCUMENT/COPY NO.		CLASSIFICATION		FILE LOCATION		<input type="checkbox"/> EXECUTIVE DIRECTOR	
NUMBER OF PAGES		CATEGORY		OR 3/6/81		OTHER: _____	
POSTAL REGISTRY NO.		<input type="checkbox"/> NSI <input type="checkbox"/> RD <input type="checkbox"/> FRD		SPECIAL INSTRUCTIONS OR REMARKS			
ASSIGNED TO: Denton, NRR		DATE: 3/2/81		PRIORITY			
Snyder		3/3/81		SECY-81-0248 & 0249			
INFORMATION ROUTING		LEGAL REVIEW		<input type="checkbox"/> FINAL <input type="checkbox"/> COPY			
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Cornell Denton		5. Nurley HBerkson		<input type="checkbox"/> EDO ADMIN & CORRES BR			
Rehm 1. PPAS		6. Vollmer		EXT. _____			
Shapar 2. Eisenhut				COMMENTS, NOTIFY:			
Stello 3. Hanauer				EXT. _____			
Davis				JCAE NOTIFICATION RECOMMENDED: <input type="checkbox"/> YES <input type="checkbox"/> NO			

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(11-75)

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PRINCIPAL CORRESPONDENCE CONTROL

81-0248

No. ~~80-2448~~ Logging Date 2/27/81

NRC SECRETARIAT

TO:  Commissioner \_\_\_\_\_ Date \_\_\_\_\_

Exec. Dir./Oper. \_\_\_\_\_  Gen. Counsel \_\_\_\_\_

Cong. Liaison \_\_\_\_\_  Solicitor \_\_\_\_\_

Public Affairs \_\_\_\_\_  Secretary \_\_\_\_\_

\_\_\_\_\_  Inspector & Auditor \_\_\_\_\_

\_\_\_\_\_  Policy Evaluation \_\_\_\_\_

Incoming: John Minnich, Chairman

From: TMI Decommissioning Advisory Panel

To: Chairman Ahearne Date 2/20/81

Subject: Forwards Advisory Panel's recommendations

Commission review &

Prepare reply for signature of:

Chairman Date due Commission: March 11

- Commissioner \_\_\_\_\_
- EDO, GC, CL, SOL, PA, SECY, IA, PE
- Signature block omitted
- \_\_\_\_\_

Return original of incoming with response

- For direct reply\*
- For appropriate action
- For information

Rec'd OM. EDO  
 Date..... 3/2/81  
 Time..... 11:30

Remarks: Cpys to: Chm, Cmrs, PE, OGC, OCA, OPA,  
ACRS, SECY ~~Repixed to EDO~~

For the Commission: COMBS

\*Send three (3) copies of reply to Secy Correspondence and Records Branch

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P. O. BOX 1295  
HARRISBURG, PA 17108  
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OFFICE OF

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DAUPHIN COUNTY  
HARRISBURG, PENNSYLVANIA

SOLICITOR  
HERBERT A. SCHAFFNER  
ASSISTANT SOLICITOR  
ROBERT L. KNAPP  
SPECIAL COUNSEL  
LEONARD TINTNER  
MEETING DAY  
THURSDAY  
10:00 A.M.

February 20, 1981

Commissioner John F. Ahearne, Chairman  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Commissioner Ahearne:

I am pleased to transmit to you the first report of the Advisory Panel for the Decontamination of Three Mile Island, Unit Two. As you know, the Advisory Panel was established by the Nuclear Regulatory Commission on October 28, 1980, to consult with and provide advice to the Commission on clean-up activities on Three Mile Island. The Commission requested that the Advisory Panel provide advice on the Draft Programmatic Environmental Impact Statement (PEIS, NUREG-0683). In your letter of November 7, 1980, you requested that we address specifically the question of disposition of processed water. During a later telephone conversation, you set the deadline on the water question as of February 28, 1981.

The Advisory Panel has reviewed the Draft PEIS. It has held several meetings and heard testimony by representatives of Metropolitan Edison Company/General Public Utilities, the Department of Energy, the Advisory Committee on Reactor Safety and Safeguards, and members of the public.

Before I detail the recommendations of the Panel concerning the processing of the contaminated water at TMI, I have been asked to express a very real concern of the panel members in general. That concern is the inability to dispose of the low/high level radioactive waste generated as a result of processing the contaminated water. The Panel's deep concern is that TMI is being converted into a storage area for this waste, as a result of a lack of, or the inability of, the Regulatory agencies to allow disposal of the waste promptly and efficiently. We, the Panel, feel that disposal of the waste is a package item in the clean up of the water. It makes little sense to process the water if the resulting radioactive waste is to be removed from the Containment Building to other areas on the Island for indefinite storage. I cannot emphasize enough the concern of the Panel on this matter. I would close this paragraph by advising you that recommendations on disposal of the radioactive wastes will be forthcoming from the Panel.

*Done*  
8103250111

Following are the recommendations of the panel concerning the contaminated water:

RECOMMENDATION #1. That the radioactive contaminated water located in the Reactor Building be decontaminated as rapidly as possible, using the licensee's proposed Submerged Demineralizer System (SDS) currently being constructed. This recommendation, specific to the SDS System, is contingent upon approval of that system by the Nuclear Regulatory Commission.

RECOMMENDATION #2. That the approximately 1.6 million gallons of decontaminated water expected as a result of TMI-2 decontamination activities, be stored initially in on-site tanks, to permit accurate assessment of its residual radioactivity content prior to a final decision regarding ultimate disposal of the water.

RECOMMENDATION #3. That the appropriateness of the continued on-site storage of the decontaminated water be reviewed annually by this Advisory Panel.

RECOMMENDATION #4. That to the extent practicable, Metropolitan Edison Company should minimize additional on-site water requirements, by maximizing the use of recycled decontaminated water.

RECOMMENDATION #5. That the radioactive contaminants (excepting tritium) in the unprocessed water at TMI-2 should be reconcentrated and immobilized as expeditiously as possible, consistent with Regulatory requirements.

RECOMMENDATION #6. That the design and operation of decontamination systems for processing radioactively contaminated water should minimize, as far as practicable, the amounts of residual radioactivity in the resulting processed water. The Panel believes the following curie inventories for all processed water resulting from clean-up activities are achievable:

<u>Isotope</u>	<u>Curies</u>
Sr-89,90	0.1
Cs-134	0.2
Cs-137	0.5

Should you have any questions concerning the above recommendations, particularly background information, I would be more than happy to provide the information to you. At this time, I do not feel it appropriate to go into background discussions, since such information is already available in the transcripts provided from each meeting of the Advisory Panel.

Looking forward to your response, I am

Sincerely yours,

*John E. Minnich*  
John E. Minnich, Chairman  
Advisory Panel for the Decontamination of  
Three Mile Island, Unit Two

81-0249

~~80-1111~~

Logging Date 2/27/81

NRC SECRETARIAT

TO:  Commissioner \_\_\_\_\_ Date \_\_\_\_\_  
 Exec. Dir./Oper. \_\_\_\_\_  Gen. Counsel \_\_\_\_\_  
 Cong. Liaison \_\_\_\_\_  Solicitor \_\_\_\_\_  
 Public Affairs \_\_\_\_\_  Secretary \_\_\_\_\_  
 \_\_\_\_\_  Inspector & Auditor \_\_\_\_\_  
 \_\_\_\_\_  Policy Evaluation \_\_\_\_\_

Incoming: John Minnich, Chairman, XM  
 From: TMI Decommissioning Advisory Panel

To: Chairman Ahearne Date 2/23/81

Subject: Inform of Panel's recommendation that TMI-2  
 wastes be shipped to a commercial burial site as  
 soon as possible

Commission review

Prepare reply for signature of:

Chairman Date due Comm: March 11

Commissioner \_\_\_\_\_  
 EDO, GC, CL, SOL, PA, SECY, IA, PE  
 Signature block omitted  
 \_\_\_\_\_

Return original of incoming with response

- For direct reply\*
- For appropriate action
- For information

Rec'd Off. EDO  
 Date..... 3/2/81  
 Time..... 11:30

Remarks: Cpys to : Chm, Coms, PE, GC, PA, OCA, ACRS,  
SECY. ~~Referred to EDO~~

For transmission: Combs

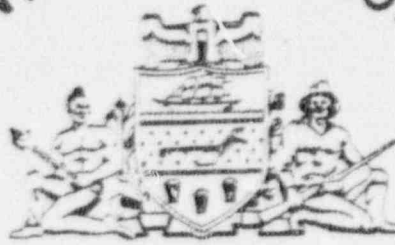
(3) copies of reply to Secy Correspondence and Records Branch



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HARRISBURG, PENNSYLVANIA

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ASSISTANT SOLICITOR  
ROBERT L. KNAPP  
SPECIAL COUNSEL  
LEONARD TINTNER  
MEETING DAY  
THURSDAY  
10:00 A.M.

February 23, 1981

Commissioner John F. Ahearne  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Commissioner Ahearne:

During the Advisory Panel for Decontamination of Three Mile Island, Unit 2 meeting of February 11, the disposal of the existing low-level waste was discussed. The discussion centered around the resins containing low-level radioactivity, as a result of utilization of the Epicor-2 System.

At the above referenced meeting, the Panel agreed and in fact authorized me to correspond with you concerning this matter. We feel that the N.R.C. should waive the requirement for solidification of the subject waste when Metropolitan Edison has met all requirements insofar as avoidance of leakage, safe transportation, shielding and other precautions for shipping the wastes in present containers. We believe the waste should be shipped to a commercial burial site as soon as possible, provided there are no dangers to the public during the transportation. Metropolitan Edison has submitted a request for such a waiver and we urge immediate consideration of Met Ed's request.

It is our feeling that Three Mile Island has served as a storage site for an unconscionable amount of time, and urge the safe removal of the resins in the present state as soon as safety requirements have been met.

Should you have any questions on the contents of this letter, please do not hesitate to contact me.

Sincerely yours,

*John E. Minnich*

John E. Minnich, Chairman  
Citizens Advisory Panel for the  
Decontamination of Three Mile Island, Unit 2

JEM:kds

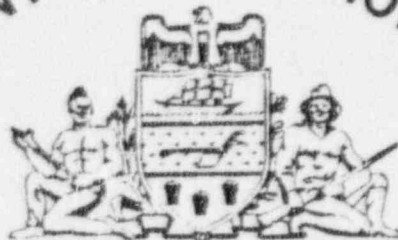
cc: All Panel Members  
Governor Thornburgh

*Dupe*  
*810 8103250116*

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ASSISTANT SOLICITOR  
ROBERT L. KNAPP  
SPECIAL COUNSEL  
LEONARD TINTNER  
MEETING DAY  
THURSDAY  
10:00 A.M.

February 23, 1981

The Honorable James B. Edwards  
Secretary of Energy  
Department of Energy  
Washington, D.C. 20585

Dear Sir:

I am the Chairman of the Citizens Advisory Panel for the Decontamination of Three Mile Island, Unit 2. As such, I have been directed by the Panel members to correspond with you concerning the high-level radioactive waste at the Three Mile Island site. The high-level waste is currently contained in resins used in the processing of contaminated water, and stored on site. It is our understanding that there are approximately 50 containers of this highly radioactive waste.

The Panel urges you to take immediate action to arrange for the prompt and safe removal of this radioactive waste, for interim storage off site pending an ultimate decision on its disposal. We are extremely concerned that Three Mile Island has become a storage site for waste. We are all aware that Three Mile Island was never intended for such purposes. Further, it is our feeling that the removal of the waste would grant some relief to the anguish of many citizens of the area.

We emphasize and request that consideration be given to this removal as one of unique circumstance, and not as a precedent setter of policy. It is extremely important that the public perception of the clean up be enhanced by the immediate removal of the subject waste. It is now almost two years since the accident and much remains to be done with the clean up. I cannot emphasize strongly enough the Panel's concern about the high-level radioactive waste and the urgency of removal of that waste from Three Mile Island.

Additionally, you will be contacted by Mr. Bill Travers of the N.R.C. on behalf of myself. The Panel is seeking a meeting with you and appropriate staff to discuss our concerns about Three Mile Island and the extreme slowness of the clean-up process. I would appreciate very much if you would give this request for a meeting prompt consideration.

Should you have any questions on this matter, please do not hesitate to contact me. My telephone number is Area Code 717-255-2740. Awaiting your response. I am

Sincerely yours,

*John E. Minnich*

John E. Minnich, Chairman  
Citizens Advisory Panel for the  
Decontamination of Three Mile Island

JEM:kds

cc: ✓ John F. Ahearne  
All Panel Members