

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD ^{DOCKETED}
NRC

In the Matter of)
)
METROPOLITAN EDISON COMPANY) Docket No. 50-289
) (Steam Generator Repair)
(Three Mile Island Nuclear)
Station, Unit 1))

TMIA RESPONSE TO LICENSEE MOTION TO DISMISS TMIA
CONTENTIONS 1a, 1b, 1c, and 2b1
and
SUPPLEMENTAL INTERROGATORY RESPONSES TO LICENSEE

In response to Licensee's Motion to Dismiss Contentions and Motion to Compel Discovery, both dated January 9, 1984, TMIA hereby submits this consolidated response. The interrogatory responses are attached. Due to the lateness of the hour, TMIA was unable to attach an affidavit affirming the truthfulness of these interrogatory responses. Thus, it does so without an accompanying affidavit.

In a sharp accusation, Licensee claims that TMIA has been "unable to provide any basis" for contention 1a, 1b, 1c, and 2b1," and thus moves for an order dismissing these contentions. To the extent that this is based upon a complaint that documentary references were not previously supplied to Licensee for TMIA's contentions, which are based in substantial part upon the failure of both the Licensee and the NRC Staff to provide sufficient data to demonstrate that operation with the as-repaired TMI-1 steam generators would be consistent with safety, the attached supplemental interrogatory responses should satisfy Licensee's concerns.

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To the extent that Licensee's position is based upon its disagreement with TMIA's position that both the Licensee and the NRC Staff have failed to provide sufficient data to demonstrate that operation with the as-repaired TMI-1 steam generators would be consistent with safety, TMIA simply states that it is Licensee's burden to prove the statutory and regulatory requirements for safety regarding this license amendment have been met. That they have not yet met this burden in light of the public information available is a view shared not merely by the Intervenor in this case. It is a view which has been expressed by members of Congress, such as Congressman William Goodling (R-PA) who explicitly asked that hearings be held on this license amendment.

In addition, an NRC Commissioner recently expressed concern over some of the substantive issues in this case. In his recent opinion regarding the Staff's "no significant hazard" recommendation, Commissioner Asselstine noted his own lack of information regarding the safety of these repairs, asking for an explanation as to why certain substantive issues were not considered "significant new or unreviewed safety issues." See, VIEWS OF COMMISSIONER JAMES K. ASSELSTINE ON THE NRC STAFF'S NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION ON THE THREE MILE ISLAND UNIT 1 (TMI-1) LICENSE AMENDMENT APPLICATION FOR STEAM GENERATOR REPAIRS, Page 15-16, (January 10, 1984).

Commissioner Asselstine asked for "a convincing explanation, including a documented supporting analysis." As does Commissioner Asselstine, TMIA believes that such has not yet been provided.

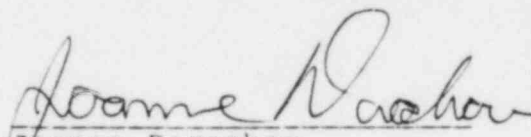
Moreover, TMIA believes it has a responsibility to all those who have expressed concern with the efficacy of these repairs, and the course being proposed by the Licensee and the NRC Staff regarding these nearly destroyed TMI-1 steam generators, to assist in resolving these concerns.

With regard to Contentions 1b and 1c (as revised), the Board has appropriately dealt with Licensee's attempts to have these contentions dismissed once before. TMIA stands by the Board's analysis. Contention 1c has now been supplemented with additional documentation.

With regard to Contention 2b1, additional documentation has also been provided. In addition, Licensee would have this Contention dismissed on the basis of its assurances that its own testing proves that the very serious questions raised by Mr. Dillon are no longer relevant. There is no more reason to do that than there is to avoid hearings altogether simply by accepting Licensee's assurances that the entire repair process ensures safe plant operation. Licensee's position is obviously untenable.

Respectfully submitted,

By:


Joanne Doroshov
Louise Bradford
TMI Alert

January 20, 1984

Supplemental Response to Licensee Interrogatories

1.a-4: The areas where TMIA believes the data is inadequate to demonstrate reasonable assurance that the ruptures can be detected in time and prevented, can presently be found in the following documents:

TDR 008, Rev. 3, PP. 11-33: Regarding the failure analysis, the Corrosion Test Program, and evaluation of crack arrest, verification of the corrosion scenario, and effectiveness of the cleaning program.

TDR 008, Rev. 3, PP. 37-43. Qualification Program.

TDR 008, Rev. 3, PP. 43-47. Repair Testing.

TDR 008, Rev. 3, PP. 47-48. Post repair testing.

TDR 008, Rev. 3, PP. 49-55, Effects of the Expansion Repair.

TDR 008, Rev. 3, PP. 60-61. Verification of Plug Integrity.

TDR 008, Rev. 3, PP. 62-73. Testing of proposed 1500 plugged tubes.

TDR 008, Rev. 3, PP. 74-89. Evaluation of tubes left in service.

TDR 008, Rev. 3 PP. 100-103. Environmental Impact Predictions.

TDR 008, Rev. 3, Appendix A.

TDR 417, Rev. 2. This entire document we believe is relevant to our contention. At this point in time, we find the following areas seem particularly important to an evaluation of safety: P. 5: heat-up/cooldown cycles; P. 7-8 and 24: tube/shell differential; use of the MSLB as the limiting condition for evaluation of highest tube loads; P. 19: effects of various tube loads; PP. 19-21; evaluation of ECT unevaluated cracks; PP. 21-24; leak predictions from thruwall cracks; PP. 24-26; leak predictions during cooldowns; p. 26, Par. 3; conservative assumptions regarding crack size.

The following References have not been supplied to TMIA: Documents in Reference 2, 4, 6, 8, 9, 10, 12, 14, 16, and one could reasonably conclude that these documents contain highly material evidence regarding Licensee's assurances.

In addition, the following references in TDR 388, Rev. 3, refer to documents which have not been supplied to TMIA: Reference 1a, 1b, 2, 3, 5a, 6, 11, 14, 15, so that at this point in time, this document can not be independently evaluated to determine its credibility. The same problem exists regarding BAW 007, References: 3, 10, 14, 17, 18, 19, 24, 25, 30, 31, 32, 33, 34, 51. In addition, this document has been provided to TMIA with the following material pages missing in their entirety, so that it is impossible to even know what the document's conclusions are based upon: 2-28, 29, 36-39, 49- 52, 54, 57-61, 63-69, 73-77, 79-80, 82-89, 93-96, 98, 100, 129-130; 3-1, 2. In addition, the following pages contain proprietary information which has been omitted: 2-31; 2-56; 6-2. Within the SER, the entire document is merely a summary of conclusions and findings based on Licensee testing and analysis as reported in documents which we have already described above as being insufficient, no independent verification having been done. We find the following findings and conclusions particularly unsupported: P. 3, regarding testing to demonstrate leak tightness and load carrying capabilities of the 6" transition zone; P. 14, regarding the fracture mechanics analysis of circumferential cracks; P. 16, regarding thermal and pressure cycle loading tests; P. 17 regarding mechanical tests to qualify the repair process; P. 18, regarding the axial load test; P. 19, regarding residual stresses in the transition zone; P. 19, regarding effects of expansion on tubes; P. 22, regarding the effect of expansion on existing plugs; P. 24, regarding the plugging method; P. 27, regarding the clean up of the contaminant; P. 26, regarding tests to verify plug integrity; P. 27, regarding stress corrosion tests; P. 28, regarding tests to demonstrate peroxide treatment; P. 36, regarding the transient and accident analysis. Also, Attachment

1 to the SER, which the Staff relies heavily upon for a number of its findings and conclusions, has not been provided to TMIA, making it further impossible to verify the Staff's conclusions. Also, the following statements in the Third Party Reports form the basis for our contention: (for clarity sake, TMIA refers to these statements by identifying them with particular interrogatories served on Licensee) See Interrogatories T-8, 9, 11, 12, 14, 15, 16, 17, 19, 20, 22, 23, 24, 25, 27, 30, 34, 36, 39, 43, 44, 46, 50, 51.

In addition, the following references in TDR 010, refer to documents which have not been supplied to TMIA: References 1-4. Also, since the pages are not numbered, it is virtually impossible to determine if entire pages are also missing from this document. In addition, no data has been provided in support of the document's Appendix A, which explains the test program.

1.a-8. License conditions are listed at P. 46 of the SER. TMIA is most concerned about Conditions 3 and 4, because of the failure of the documents listed in the response to Interrogatory 1.a-4, to provide sufficient data to assess the adequacy of the license conditions proposed. Of particular note is problems with the ability of ECT to detect certain cracks (008, Rev. 3, at P. 44; 417, Rev. 2, at P. 19-21); and 417 in its entirety regarding cracking predictability through leakage detection, the basis for license condition 4. For particulars, see above response.

1.a-11. See response to 1.a-4.

1.a-20. See response to 1.a-4.

1.b-4. See response to 1.a-4.

1.c-5. See response to 1.a-4. Of particular note is TDR 008, p. 16, first full paragraph; TDR 007, 2-14. These sections concern tube damage after expansion repair.

1.d-2. See references to the SER and TDR in 1.a-4.

1.d-5. There is nothing TMIA can add here. The answers already supplied to Licensee describe the inconsistencies TMIA has so far been able to identify.

1.d-24, 1.d-25, 1.d-29. In September of 1983, TMIA representatives spoke to Dr. George Sih, Director, Institute of Fracture and Solid Mechanics, Lehigh University. Dr. Sih stated that under thermal

stress, small cracks are more likely to propagate than large cracks because small cracks store more energy proportionate to their size than large cracks. In none of the sections listed in 1.a-4 regarding TDR 008, or in the sections listed in 1.a-4 regarding the SER, was this criteria mentioned, or was any perceivable analysis done which takes crack size into account.

2.a-7. TDR 008, Rev. 3, PP. 11-33. SER, PP. 4-8; and Attachment 3 at P. 12, and Attachment 4 at PP. 18-24; Attachment 6, P. 9. Also, 008, Rev. 3, PP. 74-89.

2.a-14. See above response. In addition, SER Attachment 3 at 12-14; TDR 007, at 2-14. With regard to the adequacy of Licensee's stress analysis regarding when cracking could reoccur, all data and analyses which TMIA has already identified in 1.a-4 as being inadequate to provide reasonable assurance that testing is adequate, are necessarily relevant. Regarding the lithium addition, TDR 008, P30, (C)(1), in particular. Also, SER Attachment 6, P. 4, Comment (C)(1); P.5, Comment (C)(4).

2.a-19. See response to 2.a-7.

2.a-24. TMIA can do no more at this time, other than to identify questions raised by Licensee and Staff consultants regarding the possibility of other contaminants, in particular, Attachment 4 to the SER at PP. 18-24, and Attachment 6 at P. 9.; 12-14 (D), Finding 2.

2.b.1-8. The documents which TMIA detects no consideration of Mr. Dillon's concerns, can be found in response to 1.a-4, in particular, TDR 008, PP., 47-55; 60-89; all references to TDR 417 in response to 1.a-4; the SER at PP. 27-36; and Attachment 6, P. 6, par. 2.

2.b.1-14. See above response, as relates to the general clean up.

2.b.2-11. See response to 2.b.1-8, as relates to the risk of reinitiation, and 2.a-24. Also, Attachment 6, P. 11 (Comment 4).

2.b.2-15. SER, P. 32, 3.6-1 (e), and Response to 2.a-24.

2.c-9. See references to to the SER and the TPR in response 2.a-24, in addition to those already identified in 2.a-6.

2.c-15. TMIA now objects to this Interrogatory on grounds of relevancy, in that the Board, by Order dated January 9, 1984, has revised Contention 2.c to eliminate the "axial symmetric stress analysis" issue from this contention.

2.c-21. See response to above Interrogatory.

2.c-31. TMIA now objects to this Interrogatory on the grounds of relevancy, in that the Board, by Order dated January 9, 1984, has revised Contention 2.c to eliminate the "toughness v. hardness" issue from this contention.

2.c-40. See response to 2.d-24-29.

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METROPOLITAN EDISON COMPANY)
(Three Mile Island Nuclear)
Station, Unit No. 1))

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Docket No. 50-289
OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

CERTIFICATE OF SERVICE

I hereby certify that copies of the attached TMIA RESPONSE
TO LICENSEE MOTION TO DISMISS TMIA CONTENTIONS 1a, 1b, 1c,
and 2b1, AND SUPPLEMENTAL INTRROGATORY RESPONSES TO
LICENSEE dated January 20, 1984, were served this 20th day
of January, 1984, by deposit in the U.S. Mail, first class,
postage prepaid, or, BY AGREEMENT WITH LICENSEE'S COUNSEL,
hand delivered on January 23, 1984, to those on the attached
service list.


JOANNE DOROSHOW

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	
METROPOLITAN EDISON COMPANY, <u>ET AL.</u>)	Docket No. 50-289-OLA
)	ASLBP 83-491-04-OLA
(Three Mile Island Nuclear)	(Steam Generator Repair)
Station, Unit No. 1))	

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