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October 30, 1984

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Washington, D.C. 20036

In the Matter of
Metropolitan Edison Company
(Three Mile Island Nuclear Station, Unit 1)
Docket No. 50-289

Dear Lynne:

Following up on our discussions of October 16 regarding Licensee's Response to TMIA's Fourth Set of Interrogatories, Licensee has reviewed the responses to Interrogatory Nos. 5, 14, 15, and 16-19.

Concerning Interrogatory No. 5, Licensee has determined that of the group of persons listed, only Mr. Wallace and Mr. Keaten attended an afternoon meeting in Mr. Arnold's office on March 28, 1979. Mr. Arnold has no recollection as to why Mr. Wallace and Mr. Keaten were asked to attend the afternoon meeting. Neither Mr. Wallace nor Mr. Keaten has any recollection as to why they were called to the meeting although Mr. Keaten speculates that he may have been called because of his familiarity with reactor transients and Mr. Wallace speculates that that he may have been called because he had been involved with TMI-2 for some time and was familiar with the plant.

Concerning Interrogatory Nos. 14 and 15, even though under the Commission's Rules of Practice (10 CFR 2.740(c)(7)) studies or evaluations need not be conducted to respond to discovery requests, Licensee has had an evaluation performed in order to supplement its answers and avoid further dispute. Attached is Licensee's supplemental answer.

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Concerning Interrogatory Nos. 16-19, Licensee has reviewed the prior responses to these interrogatories and to TMIA's First Set of Interrogatories and is satisfied that its responses to Interrogatory Nos. 16-19 are complete to the best of Mr. Dieckamp's recollection. TMIA has had an opportunity to test Mr. Dieckamp's recollection on this issue extensively in its deposition of him on October 3, 1984. No complete survey of every GPU past and present employee or of all GPU files has been conducted, however, Licensee believes the reviews that have been conducted of documents and of individuals provide a good faith effort to respond to TMIA's questions regarding Mr. Dieckamp's activities during the first days following the accident and Licensee does not believe the existing answers need be supplemented.

Sincerely,

Ernest L. Blake, Jr. P.C. Counsel for Licensee

cc: Service List

Response to TMI-1 Alert's Fourth Set of Interrogatories Numbers 14 and 15

INTERROGATORY 14

Based on a review of the design documents, there appears to be no electrical (or mechanical) malfunction that would cause both containment pressure recorders, i.e.; BS-PR-1412 and BS-PR-4388, to indicate a pressure spike on the wide-range and narrow-range scales.

This conclusion is based only on a drawing review. No physical inspection or investigation was made to verify that the drawings represent the configuration of the plant at the time of the accident. This review does not exclude the possibility of physical arrangements not apparent from the drawings which could have lead to the conditions described in the interrogatory.

The design documents indicate that:

- (a) There are two (2) Reactor Building Pressure Recorders identified by tag numbers BS-PR-1412 and BS-PR-4388. Each recorder provides two measurement recordings, one for wide-range measurement (0 to 100 PSIG) and another for narrow-range measurement (-5 to 10 PSIG). Each measurement signal to the two recorders is originated by a different pressure sensing device (transmitter) than the other three measurements.
- (b) The power supplies for each recorder's associated transmitters are energized from independent power sources, i.e.;
 - BS-PR-1412 is powered from Power Panel MP2-31C which is fed from 480V Motor Control Center 2-31C while BS-PR-4388 is powered from Power Panel 2-12R which is fed from 480V substation ESF Bus 2-12E.
- (c) The instrument signal cables to each recorder, from transmitter to control room, are physically routed in different cable trays.
- (d) The wide-range and narrow range transmitter pairs, whose signals are recorded on the subject recorders, sense the containment pressure at physically separate locations, i.e.; BS-PR-1412 via penetration R-545A and BS-PR-4388 via penetration R-554C.

INTERROGATORY 15

Based upon a review of the design documents, there appears to be no electrical (or mechanical) malfunction which could lead to the simultaneous occurrence of the recording of a reactor building pressure spike and the initiation of containment spray.

This conclusion is based only on a drawing review. No physical inspection or investigation was made to verify that the drawings represent the configuration of the plant at the time of the accident. This review does not exclude the possibility of physical arrangements not apparent from the drawings which could have lead to the conditions described in the interrogatory.

The design documents indicate that:

- (a) There are redundant spray actuation channels which do not electrically interface with the instrument circuitry for that of the pressure recorders.
- (b) The instrument signal cables for the spray actuation are physically routed in different conduits than those cables associated with the pressure recorders.
- (c) The actuation of containment spray and the recording of reactor building pressure are implemented by diverse means, i.e.; pressure switches (see Table below) are used to actuate containment spray while pressure transmitters (see Table below) are used for recording. This represents different measurement techniques and manufacturing designs for each occurrence.

Pressure Switches

BS-PS-3253	Train A	Ch.	1	
BS-PS-3254	Train A			
BS-PS-3255	Train A	Ch.	3	
BS-PS-3256	Train B	Ch.	1	
BS-PS-3257	Train B	Ch.	2	
BS-PS-3258	Train B	Ch.	3	

Pressure Transmitters

BS-PT-1412-1	Recorder BS-PR-1412 Narrow Range	
BS-PT-1412-2	Recorder BS-PR-1412 Wide Range	
BS-PT-4388-1	Recorder BS-PR-4388 Narrow Range	
BS-PT-4388-2	Recorder BS-PR-4388 Wide Range	

(d) Each redundant containment spray actuation channel is comprised of three pressure measuring sensors in a two-out-of-three voting logic. Each sensor measures containment pressure at a physically different location from the remaining two. When at least two of the three sensors are above the actuation point, then containment spray will be actuated on that ESF channel. Two of the three aforementioned sensors measure reactor building pressure from a physically different location than that of either recorder measurement.