

RELATED CORRESPONDENCE

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November 12, 1984

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
METROPOLITAN EDISON COMPANY)	Docket No. 50-289
)	(Restart Remand
(Three Mile Island Nuclear)	on Management)
Station, Unit No. 1))	

LICENSEE'S SUPPLEMENTAL RESPONSE TO
TMIA'S FIFTH SET OF INTERROGATORIES
TO GENERAL PUBLIC UTILITIES

On October 1, 1984, Intervenor Three Mile Island Alert (TMIA) filed its Fifth Set of Interrogatories to Licensee. On October 15, 1984, Licensee filed Licensee's Response to Intervenor Three Mile Island Alert's Fifth Set of Interrogatories to General Public Utilities. Licensee objected to a number of the interrogatories as irrelevant and oppressive.

Subsequently, Licensee and TMIA met to discuss these interrogatories. TMIA proposed that Licensee ask Messrs. K. McKee and J. McConnell to respond to Interrogatory No. 2; that Licensee ask Mr. G. Lehmann to respnd to Interrogatory No. 4; that in lieu of Interrogatory Nos. 5 and 7, Licensee ask

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Messrs. Wilson, Wallace, Keaten, Croneberger, Capodanno, Lehmann and Morrell to identify open or dedicated lines of communication between their corporate offices and TMI Unit 1, Unit 2, or the TMI Observation Center; and that Licensee respond to Interrogatory Nos. 10 and 14. In return, TMIA proposed withdrawing all other interrogatories, or parts thereof, to which Licensee had objected. Although Licensee believed (and continues to believe) that its objections were well-founded, Licensee agreed with TMIA's proposal in order to avoid further dispute or delay. Accordingly, Licensee provides the following supplemental response.

Supplemental Response to Interrogatory No. 2

Mr. J. F. McConnell provided the following response:

"For background, Mr. K. C. McKee and I were scheduled to meet with the Pennsylvania Governor's Energy Council in Harrisburg on March 28, 1979 for the purpose of a news conference--the subject the coal cleaning R&D program at Homer City. Mr. Dieckamp and the Lt. Governor (as head of the PaGEC) were to participate in the news conference. Mr. Dieckamp as I recall, was previously in Harrisburg, participating in Penelec's annual review with the PaPUC. Our plans were to first meet with the PaGEC staff and with Mr. Dieckamp in the Lt. Governor's office for the purpose of coordinating the planned news conference. Our plan was also to provide transportation by car back to Parsippany for Mr. Dieckamp after the news conference.

"I was in association with Messrs. Dieckamp, McKee and Verrochi on the Capitol steps when Messrs. Herbein, Miller and Kunder arrived by car at the Capitol. We were on our way by foot to Mr. Dieckamp's room in the downtown Holiday Inn. I do recall that Mr. Dieckamp was disturbed that too many of them (TMI staff) had left the site. I do recall him saying to them, 'Who's watching the store?' as he went down the stairs to meet them.

"I do not recall that I participated in Mr. Dieckamp's discussion with Herbein, Miller and Kunder and I have no recollection of anything that was said.

"I recall Mr. Dieckamp being on the phone for several conversations in the hotel room over an extended period of time probably with Mr. Arnold and Mr. Creitz and perhaps Mr. Kuhns who was in the hospital at the time but I have no certain recollection and I have no recollections at all of the conversations or times. I recall no other forms of communication.

"At some point in time, it was decided to leave Harrisburg. Mr. Verrochi left for Johnstown. Mr. Dieckamp, Mr. McKee and I in my company car left for Parsippany.

"The discussions in the car were about the situation at TMI-2 but I can recall nothing specific about those conversations. Considerable time was spent listening to various news accounts on the radio. We did elect to stop and eat dinner, in Trexlertown. I have a weak recollection that Mr. Dieckamp again called from the restaurant. I really cannot untangle

what I knew about the accident on March 28, 1979 from what I subsequently learned as events unfolded.

"We proceeded on to New Jersey, where I dropped off Mr. McKee. I don't recall exactly where, and then I drove Mr. Dieckamp to his home in Mountain Lakes--sometime in the evening."

Mr. K. C. McKee provided the following response:

"This is my response to Interrogatory #2 concerning the period of time between 2 p.m. and 8 p.m. on March 28, 1979 and my knowledge of Mr. Dieckamp's actions or activities during that time on that date.

"My recollection is that Mr. Dieckamp and Messrs. Herbein, Miller and another gentleman from Met-Ed's Generation Division met about 2 p.m. in the afternoon on the steps of the State Capitol Building in Harrisburg. After conferring with them briefly, Mr. Dieckamp joined myself, Jim McConnell from the GPUSC Corporate Planning Department and Bill Verrochi, then president of the Pennsylvania Electric Company, as we walked from the Capitol Building to the Holiday Inn Town.

"We arrived at the hotel sometime between 2:15 and 2:30 where - except for Mr. Verrochi - we went to Mr. Dieckamp's room.

"Given the length of time since that date, it is difficult to recall the details of the actual conversations that took place that afternoon but they were largely based on the news

accounts of the TMI-2 accident that were being aired on local radio.

"Mr. Verrochi was asked in the mid-afternoon to join Mr. Dieckamp in his room along with Mr. McConnell and myself. During that time, Mr. Dieckamp, I believe, contacted Mr. Kuhns in his New York City hospital room where he was recuperating from eye surgery. While there may have been other phone conversations between Mr. Dieckamp and others, I can not say for certain. Late that afternoon between 4:00 and 4:30 Mr. McConnell, Mr. Dieckamp and I left the hotel and began to travel back to New Jersey. It was at this time I heard a local radio broadcast during which Lt. Governor Scranton made the statement that the State had apparently been misled by Met-Ed and that the situation at TMI appeared to be worse than he was originally led to believe. Mr. Dieckamp's reaction was one of chagrin and dismay.

"It must have been around 6:00 p.m. that the three of us stopped for dinner in Trexlertown. Following dinner, we travelled directly to New Jersey where Mr. McConnell left me off at my car in Chester, New Jersey and he and Mr. Dieckamp proceeded from that point."

Supplemental Response to Interrogatory No. 4

Mr. G. Lehmann has no recollection of any communication with Mr. R. C. Arnold on March 28, 1979.

Supplemental Response to Interrogatory Nos. 5 and 7

Messrs. Wilson, Wallace, Keaten, Croneberger, Capodanno, Lehmann and Morrell have no recollection of a dedicated or open telephone line between Parsippany, New Jersey, and TMI-1, TMI-2, or the Observation Center on March 28, 1979.

Supplemental Response to Interrogatory No. 10

Repressurization Strategy

At about 1400 hours G. P. Miller, G. A. Kunder and J. G. Herbein left the TMI-2 site to travel to Harrisburg to meet with the Lt. Governor. (NUREG-0600 p. I-4-43). Between 1400 hrs and 1430 hrs on March 28, 1979, R. C. Arnold conversed on the telephone with L. Rogers and J. Logan. (R. C. Arnold 9/24/79 SIG Deposition - pp. 13 & 16). At the time of Arnold's telephone conversation the TMI-2 plant staff was depressurizing the reactor coolant system, had reduced system pressure to the pressure of the core flood tanks, and were expecting to cool down and further reduce pressure by natural circulation cocldown to the point of being able to go on the decay heat removal system. (General Public Utilities - TDR 044-Sequence of Events; see also SIG-Vol. II Part II-Color Plate III; Vol.II Part III, pages 832-833).^{1/} Arnold questioned whether they

^{1/} Actions taken by the plant staff which indicated a depressurization mode at this time are: the electromatic relief block valve was opened at 1401 hrs. and remained opened until 1512 hrs. The open block valve tended to further reduce the pressure in the reactor coolant system.

(Continued next page)

were confident the core was covered. He was aware that the temperatures in the hot legs indicated that there were steam bubbles in the reactor coolant system loops. Rogers and Logan were confident that they had collapsed the bubble in one of the loops and would shortly collapse the other bubble. Further, Rogers and Logan were confident that the core was not uncovered at the time of the telephone call with Arnold. (R. C. Arnold 9/24/79 SIG Deposition, p. 17). They were confident that the

(Continued)

At 1405 hrs pressurizer spray flow was initiated to further assist in lowering reactor coolant system pressure. This flow was maintained until 1606 hrs. (TDR 044-Sequence of Events). For the period 1315 hrs to 1720 hrs., 37,000 gallons of Borated Water Storage Tank water were injected into the reactor coolant system. This equates to an average of 150 gallons per minute. Reactor coolant makeup pump activity during this period shows that makeup pump "B" was operating for the entire period and had operated continuously since 0822 hrs. (to provide seal water for the reactor coolant pumps in addition to makeup). Makeup pump "C" operated for only 17 minutes. (Makeup pump "A" was not operated during this period). (GPU-TDR-044, Sequence of Events; NUREG 0600 pp. I-4-18 to 24). This period is contrasted to the period 1723 hrs. to 1841 hrs. (when the reactor coolant system was re-pressurized) when 37,000 gallons of water was injected into the reactor coolant system but the average rate was about 470 gallons per minute. Subsequent analysis of the TMI-2 accident has not been conclusive as to how much coolant was ejected from the reactor coolant system through cycling the block valve during the 1315 hrs. to 1720 hrs. period. However a study by Sandia for the Special Inquiry Group indicates that the reactor coolant system inventory for this period remained significantly low (indicative of little or no net additional coolant injected into the reactor coolant system) to such an extent that at approximately 1630 hrs. it is postulated that the core may have been briefly uncovered. (Special Inquiry Group, Volume II, Part II, page 799; see also NSAC Appendix TH at p. 85).

mode they were in was appropriate and Arnold and his staff did not have a reason to conclude that floating on the core flood tanks was not a viable way to proceed with cooldown. (R. C. Arnold 9/24/79 SIG Deposition, p. 19). However, Arnold speculated in his Special Inquiry Group Deposition that a recommendation may have been made that the plant staff consider repressurizing the reactor coolant system using the makeup pumps to return to normal operating pressure. (R. C. Arnold 9/24/79 SIG Deposition, p. 18).

Within the next two or three hours, after possibly receiving additional information that indicated that the other loop bubble had not, in fact, been collapsed as well as possibly receiving information indicating that the hot leg temperature in the leg which did presumably have the bubble collapsed had not come down in temperature, Arnold decided to make a recommendation to Herbein to repressurize the reactor coolant system so as to permit operation of a reactor coolant pump. (R. C. Arnold 9/24/79 SIG Deposition, p. 20).

Shortly after J. G. Herbein's return from the Lt. Governor's office on or about 1630 hrs, Herbein and Arnold conversed on the telephone. Both Arnold and Herbein were concerned with not having forced circulation in the reactor coolant system. They were not confident that without having the plant in a forced circulation mode, that is a reactor coolant pump running, they could be sure of having a full reactor coolant system. (R. C. Arnold 9/5/80 NRC Interview, pp. 29-30; Arnold

9/24/79 SIG Deposition, pp. 20-23; Herbein 9/5/80 NRC Interview, pp. 57-61). Arnold's recollection is that he and Herbein "were not sure as to what the plant cooling mode was, or the capability of cooling the plant until we were sure that we were full, and that we had forced circulation." (R. C. Arnold 9/5/80 NRC Interview, p. 32). "The decision to repressurize was part and parcel of the decision to want to restart the reactor coolant pump and get into a mode of plant operation that we were all a lot more familiar with." (Arnold 9/5/80 NRC Interview, p. 30).

Following Herbein's conversation with Arnold, Herbein called G. P. Miller and directed that Miller repressurize the reactor coolant system and start a reactor coolant pump. (Herbein 9/5/80 NRC Interview, p. 61 and 62). The reactor coolant system repressurization began at 1720 hrs. A reactor coolant pump began continuous operation at 1950 hrs. (SIG Vol. II, Part II p. 689 and 692 Sequence of Events).

Supplemental Response to Interrogatory No. 14

Licensee's Response to TMIA's First Set of Interrogatories No. 16, and Licensee's Supplemental Response to TMIA's First Set of Interrogatories, No. 16 identify all persons, to the best of Mr. Dieckamp's recollection, who may have briefed Mr. Dieckamp on March 28, 1979 through March 29, 1979 on TMI-2 conditions and on the sequence of events.

Licensee's Response to TMIA's First Set of Interrogatories, No. 16 states that Mr. Dieckamp only made some brief introductory remarks to the congressional visitors at TMI on March 29, 1979. Mr. Dieckamp recalls no information, data or materials prepared and/or provided to him in preparation for introductory remarks.

Mr. Dieckamp was not informed of the following in preparation for his briefing of the congressional delegation on March 29, 1979:

- (a) in-core temperatures in excess of 2200 degrees recorded at TMI-2 on March 28, 1979;
- (b) a pressure spike at approximately 1:50 p.m. on March 28, 1979;
- (c) containment spray actuation at approximately 1:50 p.m. on March 28, 1979;
- (d) an explosion, hydrogen generation, hydrogen burn or hydrogen explosion on March 28, 1979.

With respect to Mr. Herbein's recollection, Mr. J. G. Herbein provided the following response:

"I don't specifically recall today, five years later, who briefed me on the accident sequence of events prior to the Congressional delegation briefings on March 29, 1979.

"I primarily discussed plant conditions with Gary Miller on March 28 and March 29, 1979. I probably became aware of the points related to the accident sequence of events through my

discussions with G. Miller. I may have talked to TMI Supervisors M. Ross, L. Rogers (B&W), J. Seelinger, Joe Logan and Shift Supervisors who were in TMI-2 on March 28 or March 29, 1979 although I have no recollection of any specific discussions.

"Additionally, I may have received offsite dose related information and worker exposure information from Richard DuBiel.

"To the best of my recollection during my briefing of the Congressional delegation, I utilized a B&W scale model of the nuclear steam supply system.

"I was not informed of the following in preparation for my briefing of the Congressional delegation on March 29, 1979:

"(a) In core temperatures in excess of 2,200 degrees.

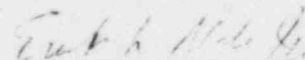
"(b) A pressure spike at 1:50 p.m. on March 28, 1979.

"(c) Containment spray actuation at approximately 1:50 p.m. on March 28, 1979.

"(d) An explosion, hydrogen generation, hydrogen burn or hydrogen explosion that occurred or was suspected to have occurred on March 28, 1979."

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE



Ernest L. Blake, Jr., P.C.
David R. Lewis

Counsel for Licensee

Dated: November 12, 1984



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November 12, 1984

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NUCLEAR REGULATORY COMMISSION

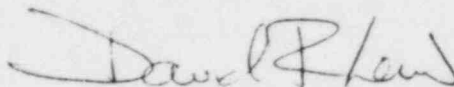
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BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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)	(Restart-Management Remand)
(Three Mile Island Nuclear)	
Station, Unit No. 1))	

CERTIFICATE OF SERVICE

I hereby certify that copies of "Licensee's Supplemental Response to TMIA's Fifth Set of Interrogatories to General Public Utilities" were served this 12th day of November, 1984, by hand delivery to the parties identified with an asterisk and by deposit in the U.S. mail, first class, postage prepaid, to the other parties on the attached Service List.



David R. Lewis

DATED: November 12, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter)
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METROPOLITAN EDISON COMPANY) Docket No. 50-289 SP
) (Restart Remand on Management)
(Three Mile Island Nuclear)
Station, Unit No. 1))

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