

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

1 In the Matter of:

2 IE TMI INVESTIGATION INTERVIEW

3 of Joseph J. Keily, Principal Engineer, Babcock & Wilcox, Inc.  
4  
5  
6  
7  
8

9 Trailer #203  
10 NRC Investigation Site  
11 TMI Nuclear Power Plant  
12 Middletown, Pennsylvania

13 May 9, 1979  
14 (Date of Interview)

15 June 29, 1979  
16 (Date Transcript Typed)

17 187  
18 (Tape Number(s))  
19  
20  
21

22 NRC PERSONNEL:  
23 James S. Creswell  
24 Owen C. Shackleton  
25

682 029

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1        SHACKLETON: This is an interview of Mr. Joseph, J. Kelly. Mr. Kelly is  
2        a principal engineer in the Plant Integration Division of Babcock and  
3        Wilcox Incorporated, their Nuclear Power Generation Division. This  
4        interview is taking place at 8:36 a.m., Eastern Daylight Time, May 9,  
5        1979. The place of the interview is in one of the offices of the  
6        Babcock and Wilcox facility for their Nuclear Power Generation Division  
7        in Lynchburg, Virginia. Present to conduct this interview from the U.  
8        S. Nuclear Regulatory Commission is Mr. James S. Creswell, the Mr.  
9        Creswell is a Reactor Inspector assigned to Region 3. My name is Owen  
10       C. Shackleton, I am an investigator assigned to Region 5. Just prior  
11       to starting this interview on tape, I presented to Mr. Kelly a two  
12       page document from the U. S. Nuclear Regulatory Commission which  
13       explains the purpose and scope of this investigation and the authority  
14       of the U. S. Nuclear Regulatory Commission to conduct this investigation.  
15       It also sets out Mr. Kelly's rights to refuse to be interviewed or to  
16       refuse to submit a signed statement. In addition, it identifies his  
17       right to have someone of his choice present during the course of the  
18       interview. Mr. Kelly has present Mr. Byron D. Nelson. Mr. Nelson is  
19       the assistant council for Babcock and Wilcox their Nuclear Power  
20       Generation Division at Lynchburg, Virginia. On the second page of this  
21       document are three questions all of which Mr. Kelly responded to in  
22       writing to the affirmative. At this time to make it a matter of  
23       record on this tape I'm going to ask Mr. Kelly these questions and  
24       have him respond orally. Mr. Kelly did you understand the text of the  
25       two page document I'm referring to?

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1 KELLY: Yes, I did.

2  
3 SHACKLETON: And do we, the U. S. Nuclear Regulatory Commission have  
4 your permission to tape this interview?

5  
6 KELLY: Yes, you do.

7  
8 SHACKLETON: And would you like a copy of the tape?

9  
10 KELLY: Yes, I would.

11  
12 SHACKLETON: Alright sir, that will be provided and we will send it to  
13 you, to your office through the mail. And now Mr. Kelly to assist  
14 those persons who will be listening to your tape as you provide infor-  
15 mation to help us establish the chronology of what transpired in the  
16 incident at Three Mile Island beginning on March 28th, would you  
17 please briefly give your education and background in the nuclear  
18 field?

19  
20 KELLY: I was graduated from the United States Naval Academy in June  
21 of 1965. I had six years of commissi. service in the United States  
22 Navy and nuclear submarines. . . two of which I served on board the  
23 USS Lewis and Clark and the last two I taught at the U. S. Naval  
24 Nuclear Power School in Mare Island, California. In June of 1971, I  
25 resigned my commission got out of the navy, and came to work for

1 Babcock and Wilcox starting in July of 1971. I joined their Nuclear  
2 Service Department, trained on the Babcock and Wilcox plant, I studied  
3 it for the first year and then went out to field service in Russell-  
4 ville, Arkansas and I spent almost two years in Russellville, Arkansas,  
5 on the startup on Arkansas Nuclear 1, Unit 1. In June of 1974, I was  
6 transferred to Crystal River, Florida and I spent the next three years  
7 in Crystal River, Florida, assisting in the startup of Crystal River  
8 Unit 3. And in 1977, in May of 1977 I was transferred back to the  
9 home office in Lynchburg, where I joined the Plant Integration Unit  
10 and I have been working in that unit ever since.

11  
12 SHACKLETON: Thank you very much, and now I'll turn the interview over  
13 to Mr. Creswell. Go ahead Jim.

14  
15 CRESWELL: Mr. Kelly, you mentioned that you had a tour of duty in a  
16 nuclear submarine, what was your, you were an officer?

17  
18 KELLY: Yes, I was.

19  
20 CRESWELL: What were, what was your assignment, or what was your  
21 title, on the submarine?

22  
23 KELLY: Of course, during my tour there I was promoted in rank from  
24 Lieutenant junior grade to Lieutenant, but my specific duties I spent  
25 in the engineering department on board the submarine as auxilliary  
division officer and machinery division officer.

1 CRESWELL: Ok. You mentioned that you are presently employed in the  
2 Plant Integration Unit, could you briefly describe what the responsibil-  
3 ities are for that unit and what your responsibilities are in that  
4 unit?

5  
6 KELLY: We ... the unit serves to work throughout our division to make  
7 sure that the design of the nuclear system is ... our responsibility  
8 for that design is cross-checked between different departments. We  
9 make sure that the interfaces fit together. For instance, the control  
10 rod drives would be designed by one group, and the reactor vessel by  
11 another group. And we have to check to make sure that they interface  
12 together.

13  
14 CRESWELL: And then you particular duties in that group?

15  
16 KELLY: Well, I am working ... the group is subdivided into control  
17 and instrumentation integration, mechanical hardware integration and  
18 etc. And my part is overall plant design.

19  
20 CRESWELL: O.K. In the course of your employment in the Plant Integra-  
21 tion Unit, had you been involved with these activities on Three Mile  
22 Island, Unit 2?

23  
24 KELLY: Oh, yes, I have.  
25

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1 CRESWELL: O.K. I'd like to go back in time to the date of March 28,  
2 1979, and to that point in time, during that day when you first became  
3 aware that there had been an event at TMI 2. Could tell us about what  
4 time you found out about the event?

5  
6 KELLY: I came in to work normally at 8 o'clock that morning and I had  
7 heard Bob Winks come down and tell me that there had been an incident  
8 at Three Mile Island and that we were supposed to attend a briefing  
9 ... he and myself, and I'm sure there were other people involved. And  
10 that was about 9 o'clock. And we went to the briefing, I believe  
11 about 10. It was here in this building.

12  
13 CRESWELL: The briefing was held where?

14  
15 KELLY: Down in classroom A or B in our simulator area downstairs.

16  
17 CRESWELL: O.K. When Mr. Winks initially contacted you about the  
18 event around 8 o'clock, what was the discussion like? What was the  
19 nature of the discussion? Did he give an indication of what plant  
20 conditions were at that time?

21  
22 KELLY: He said that what ... what he told me was that he heard the  
23 plant had depressurized; that they had lost feedwater and depressurized;  
24 and there had been one report of a reading of radiation levels in the  
25 Reactor Building of 800 R. And that was about all, I guess that he  
said at the time.

1 CRESWELL: Did he indicate to you which particular monitor was reading  
2 800 in the containment?

3  
4 KELLY: No. Not that I remember. He just said there was a radiation  
5 monitor.

6  
7 CRESWELL: O.K. Between the time period of 8 o'clock and 10 o'clock,  
8 when you attended the briefing, what activities were you engaged in?

9  
10 KELLY: My immediate supervisor had called ... I said I belonged to  
11 this small NSS design group, and there are about six of us in that  
12 group. My supervisor had called a meeting to discuss what our little  
13 section would be doing for the next few months. And I was in that  
14 meeting when Bob Winks came up. And then we were still talking about  
15 that when I got called away to the briefing.

16  
17 CRESWELL: O.K. Who is your supervisor?

18  
19 KELLY: Eric Swanson.

20  
21 CRESWELL: O.K. So, if I understand it correctly, between 8 and 10  
22 o'clock, you were talking about other activities

23  
24 KELLY: Yes.  
25

1 CRESWELL: Rather than the time ... except for the time that Mr. Winks  
2 told you the information that you already given us. When you attended  
3 the briefing at 10 o'clock in this training room near the simulator,  
4 approximately how many people were in the meeting?

5  
6 KELLY: The attendance built up as the meeting went along. And I  
7 guess there must have been 20 people by the end.

8  
9 CRESWELL: Who, in your opinion, was in charge of the meeting while  
10 you were there?

11  
12 KELLY: Don Hollerman started out in front of the classroom asking ...  
13 telling us what had happened. And Bill Spangler was also up there  
14 with him. But Hollerman was doing most of the ... asking most of the  
15 questions ... doing most of the talking.

16  
17 CRESWELL: O.K. What was the nature of the information that you were  
18 given at that time?

19  
20 KELLY: He told us what he knew about it, and I guess he had gotten  
21 it, I don't know, maybe from Bill Spangler, but he said that they had  
22 turned the reactor coolant pumps off, and they had lost the feedwater.  
23 He just basically repeated what Bob Winks had told me. The new piece  
24 of information that I heard at that time was that the reactor coolant  
25 pumps were off.



1 CRESWELL: O.K. Were you given any instructions during the meeting?

2  
3 KELLY: Specifically, they said that Bob Winks and Bob Twilly and  
4 myself were setup to leave on a chartered plane as soon as we could  
5 get our bags packed and go, to go up to the site to assist Lee Rogers,  
6 in finding out what the sequence of events were, and what happened and  
7 try to determine the plant's status.

8  
9 CRESWELL: O.K. So, what did you do after the meeting? About what  
10 time did you leave the meeting?

11  
12 KELLY: It was not ... maybe about 10:30, I guess, because I didn't  
13 stay at the meeting very long, once I got my specific directions. I  
14 knew the charter was supposed to leave at noon, and I had to go draw  
15 money and try to take care of the paraphernalia you have to do for  
16 things like that. And then run home and pack my bag. And that's the  
17 kind of things I did. Got to the airport about noon and took off on  
18 the flight.

19  
20 CRESWELL: O.K. That was the local municipal airport here?

21  
22 KELLY: Yes, in Lynchburg. In Lynchburg, it was a charter flight.

23  
24 CRESWELL: And then you landed in Harrisburg?  
25

1 KE' Yes, in Harrisburg International Airport.

2  
3 CRESWELL: About what time would you estimate?

4  
5 KELLY: About an hour an a half later. It was 1:30.

6  
7 CRESWELL: O.K. Upon arrival at Harrisburg Airport, what did you do?

8  
9 KELLY: We rented two cars and drove to the motel, where we had reser-  
10 vations, which was the Simmons Motel in Hershey, Pennsylvania. Checked  
11 into the motel. At that point there was a message waiting for us,  
12 that Greg Shidell had called the motel and we were to return his call,  
13 which we did. We went and got our rooms from there and called Greg  
14 back.

15  
16 CRESWELL: O.K. At that point in time, did Greg have any more infor-  
17 mation about what was going on at the plant?

18  
19 KELLY: He said that he had been in contact with Lee Rogers and that  
20 we were supposed to go to Greg's house. That's where they were going  
21 to set up communications that Greg was talking to Lynchburg from his  
22 home phone. And he gave us directions on how to get there ... to his  
23 house.  
24  
25

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1 CRESWELL: About what time did you arrive?

2  
3 KELLY: He said ... he said the time on that phone ... that phone  
4 conversation that they were in gas masks ... wearing gas masks in the  
5 Control Room at that time. That's the only thing that strikes me as a  
6 big difference than anything on the radio. I don't know, maybe it  
7 took us an half an hour to get there. The times at that point become  
8 obscure. It's not far away. I could find it again in a half an hour.

9  
10 CRESWELL: So approximately, two o'clock.

11  
12 KELLY: Two o'clock or 2:15, something like that. It took some time  
13 to check into the motel and call Greg. Drive to Hershey. That time  
14 was involved, too. Getting from the airport to Hershey.

15  
16 CRESWELL: Upon arrival at Greg's home could you relate what the  
17 discussions were about the plant?

18  
19 KELLY: We got there, Greg was on the phone. He was talking, so you  
20 know, we were talking to his wife, Marie. When Greg got off the  
21 phone, he said that they had stopped the reactor coolant pumps. I  
22 asked him why. And he said he didn't know, but he would ... said that  
23 he didn't know at that time, so ... he would try to find out the next  
24 time he got hold of Lee. And Lee Rogers was periodically calling into  
25 Greg's house. And Greg would relay the information to Lynchburg.

1 There were a series of these phone calls, and I guess I can't straighten  
2 out what I learned from any one of the phone calls. But during that  
3 afternoon, we got information that they were getting ... they had  
4 taken a RTD bridge reading of hot legs and got temperatures of about  
5 700 degrees.

6  
7 CRESWELL: What did that mean to you?

8  
9 KELLY: Well, at that time I don't remember the number, but I ... they  
10 also told me what the reactor coolant system pressure was, and I  
11 didn't have a steam table with me. But I knew that that temperature  
12 was much above any conceivable pressure. That it could, in other  
13 words, that that had to be, to me it either had to be a steam bubble  
14 in the hot leg or the reading was wrong.

15  
16 CRESWELL: O.K.

17  
18 KELLY: I mean it wasn't conceivable at that point that for the existing  
19 pressure that that could be in a liquid phase up there.

20  
21 CRESWELL: O.K. So you said there was two possibilities. Which one  
22 did you believe it was?

23  
24 KELLY: At the time, I thought that the reading must be wrong. Cause  
25 I didn't know enough about what had happened. Then, to be able to ...  
all I was getting was what Greg was telling us.

1 CRESWELL: That would assume that there was a solid system. That the  
2 reading was wrong.

3  
4 KELLY: Yes. If the reading was wrong they should have ... there  
5 would not have been a steam bubble there.

6  
7 CRESWELL: Now at this point you were aware that the reactor coolant  
8 pumps were turned off?

9  
10 KELLY: Yes.

11  
12 CRESWELL: What would have been the condition of the reactor regarding  
13 natural circulation, at that point in time? Did you infer that there  
14 was natural circulation or that there was not?

15  
16 KELLY: If they had a steam bubble in the hot legs that I knew that  
17 there couldn't ... there wouldn't have been natural circulation. I  
18 didn't know how they were cooling the core. One of those phone conver-  
19 sations, Greg was relaying to Lynchburg to try to get permission to  
20 start our reactor coolant pump again. And they ... when ... was  
21 saying that they were trying to decide at the site, that they wanted  
22 to start the reactor coolant pump again.

23  
24 CRESWELL: Did he receive that permission?  
25

1 KELLY: I don't know. There was one other thing that happened in the  
2 middle there. About five or six o'clock, we decided by this time,  
3 besides Bob Winks and Bob Twilly and myself, Dale Yule and Eric Gilheim  
4 had showed up at Greg's house. So we all went out to eat. By the  
5 time we got back, maybe 7:30 or 8, Greg said their reactor coolant  
6 pump was running already. And that everything looked alright. The  
7 pump was running.

8  
9 CRESWELL: O.K. Do you remember that any recommendations that were  
10 given to Lee Rogers from Mr. Shidell?

11  
12 KELLY: No, I don't remember any. Most of the time I can remember  
13 Greg doing on the phone was writing. He was listening. He wasn't  
14 talking. Then we'd wait for him to get off the phone and he would  
15 tell us what Lee had said.

16  
17 CRESWELL: Was there at any time during that afternoon any discussion  
18 about the incore thermocouples?

19  
20 KELLY: Not that I remember.

21  
22 CRESWELL: O.K. We've mentioned the reactor coolant pumps, was there  
23 any mention of the attempted start of the reactor coolant pumps currents  
24 drawn, and that sort of thing?  
25

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1 KELLY: During the ... that's right, later in the afternoon, when I  
2 had asked Greg earlier why they turned the pump off, he asked Lee that  
3 during one of the times he was in conversation with Lee Rogers. And  
4 the report we got was that the flow indication had become erratic on  
5 the reactor coolant pumps, so they turned the things off. Then Greg  
6 said they attempted to restart the reactor coolant pump, but the  
7 amperidge was so low that it was indicating that it wasn't pumping any  
8 water. I have forgotten the number, but it was something ... 100 amps  
9 or something like that. I don't remember.

10  
11 CRESWELL: You say the current readings were so low that ... to indicate  
12 they weren't pumping any water was that the context in which it was  
13 discussed?

14  
15 KELLY: Yes.

16  
17 CRESWELL: Were there any others?

18  
19 KELLY: That's what he had said. He said that they started the reactor  
20 coolant pump and monitored the starting current. And when it didn't  
21 come up to normal value, it was so low, that they assumed it was  
22 pumping steam, or not pumping water.

23  
24 CRESWELL: O.K.  
25

1 KELLY: The pump was cavitating.

2  
3 CRESWELL: O.K. What would that sort of information indicate to you?

4  
5 KELLY: That reading ... the 700 degree reading was probably true.  
6 That they were having a steam binding in those loops.

7  
8 CRESWELL: O.K. And what would that mean as far as core conditions  
9 were concerned?

10  
11 KELLY: That you wouldn't have any circulation through the core at  
12 all. I mean through the loops.

13  
14 CRESWELL: O.K. How would the heat that the core is being generated  
15 ... that the core is generating at that time be removed?

16  
17 KELLY: It would be removed through boiling water that's still in the  
18 core.

19  
20 CRESWELL: O.K. And how would the steam be removed from the system?  
21 Or would it be removed from the system?

22  
23 KELLY: The only way you could remove it, is trying to collapse the  
24 steam with pressure and get into a natural circulation mode again.  
25



1 CRESWELL: Was that discussed, to do that? That is to increase the  
2 pressure?

3  
4 KELLY: I don't remember. I don't personally remember discussing it  
5 because at the time again, I said I thought the pressure readings were  
6 high, and Greg ... I'm getting confused now.

7  
8 CRESWELL: Was there any discussion of high pressure injection flow  
9 during that afternoon?

10  
11 KELLY: Again, I can't remember.

12  
13 CRESWELL: What's the next significant thing that you remember that  
14 happened that day?

15  
16 KELLY: When we got back from dinner, Greg had said they had gotten  
17 the reactor coolant pump started. They cleared the steam bubbles out  
18 of the loops. And, I think conditions had reached a steady state.  
19 And he told us that Lee had told him there would no chance that we  
20 could get on the site that night. We should go back to the motel and  
21 go back to Greg's house the following morning.

22  
23 CRESWELL: O.K. About what time was that you came back from there?  
24  
25

1 KELLY: It was, I thought it was about 8 or 8:30, because we waited  
2 around and watched the evening news to see what the local news was  
3 going to be and we had to wait for that to come on. Then after the  
4 news was over, we left his house and went back to the motel.

5  
6 CRESWELL: O.K. So all all three of you left and went back to the  
7 motel?

8  
9 KELLY: No, there were five of us.

10  
11 CRESWELL: Oh, there were five at that time. Yeah. About what time  
12 ... let's see, we originally established that Mr. Winks, yourself and  
13 Mr. Twilly took a flight down and arrived about one o'clock.

14  
15 KELLY: One-thirty - something like that.

16  
17 CRESWELL: O.K., one-thirty. You arrived at Mr. Seidell's residence.

18  
19 KELLY: No, it was at the airport. And then we had to go to the  
20 motel, call Greg, and then get there. O.K.

21  
22 CRESWELL: Roughly, about that time. What time did the other two  
23 individuals arrive?  
24  
25

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1 KELLY: We had been at Greg's for a couple of hours, so it must have  
2 been about 5 o'clock when they got there.

3  
4 CRESWELL: And those two individuals ... their names were?

5  
6 KELLY: Eric Yoheim and Dale Yule.

7  
8 CRESWELL: O.K. When they got there, were they ... were you ... were  
9 they brought up to speed about what was going on?

10  
11 KELLY: We told them what we knew about it. Yeah.

12  
13 CRESWELL: What was their involvement as you recollect it, from that  
14 point on into the evening?

15  
16 KELLY: They're both ... well, Eric is a radio-chemist and I believe  
17 that Dale is also a radio-chemist. So they didn't have any direct  
18 involvement in what we were doing.

19  
20 CRESWELL: O.K.

21  
22 KELLY: They were waiting to get on site to find out what the radio-  
23 logical situation was.  
24  
25

1 CRESWELL: O.K. So, I believe that you stated that ... that after  
2 dinner you'd gone back to Mr. Seidell's residence. And then the five  
3 of you left the residence, about what time?

4  
5 KELLY: Like I said, we watched the news, so it must have been 10:30  
6 or eleven. But, it was probably closer to 11 by the time we got out.

7  
8 CRESWELL: The five of you went back to your motel. I believe it was  
9 in Hershey?

10  
11 KELLY: Yeah.

12  
13 CRESWELL: And what happens next?

14  
15 KELLY: The next morning, I got up and I went to Bob Twilly's room.  
16 He said that during the night, that Bob Winks had gotten a call from  
17 Greg Shidell. And Bob Winks had already left to go on site. We went  
18 over picked up ... gee, I'm not sure whether we picked up Eric Yaleheim  
19 at that time or not. At least Twilly and I went over to Seidell's  
20 house and Eric Yaleheim and Dale Yule, I believed followed us in their  
21 car. We got over there and talked to Marie, who was Greg's wife. She  
22 said that Greg had left to go into the site about 3 o'clock in the  
23 morning. And that's where Bob Winks was. So we went ... we had left  
24 his house and went over to the Three Mile Island Visitors Center. And  
25 just spent almost all day there trying to get in touch, and in communi-  
cation with someone on site, either Greg or Lee Rogers.

1 CRESWELL: Were you successful?

2  
3 KELLY: About four in the afternoon, John Flint came out. John Flint  
4 works for B&W and he was on site. I found out at that time that he  
5 had been on the site at the time. And he said that yes, Winks was on  
6 there, delogging the reactimeter data, and plotting it, which is what  
7 we were there to find out, the sequence of events. And that we should  
8 go ahead home and come back to relieve Winks that night at 8 o'clock.  
9 And that Bob Twilly and I would take the night shift and work from 8  
10 at night to 8 in the morning. And that's what happened. We went  
11 through the badging process and to get on site, I got in there and  
12 relieved Bob Winks. Now this is Thursday night about 8 o'clock.

13  
14 CRESWELL: What did you do after you said you've been badged, received  
15 a TLD, I assume.

16  
17 KELLY: Uh, uh. A dosimeter.

18  
19 CRESWELL: Did you go to the Control Room then, or where did you go in  
20 the plant?

21  
22 KELLY: No. We went to a ... it a processing center. We went in  
23 through the north gate and went to the Processing Center, and there  
24 was one little room that was allocated to B&W there, where I ran into  
25 Winks again, and was delogging the reactimeter data and he had showed  
us at that time what he concluded looking at the plots.

1 CRESWELL: What were those conclusions?

2  
3 KELLY: He said that looking at the plots, that they did not have  
4 auxiliary feedwater flow for the first eight minutes after the reactor  
5 trip. That they had in fact lost feedwater when the reactor went into  
6 pressure, went into an excursion, they got the reactor trip, etc. And  
7 he said that they had blown ... that the reactor coolant system ...  
8 you could just look at the plots and see that the reactor coolant  
9 system pressure had come down, continued to go down, past what we  
10 would normally expect it to. Concluded from that that the electromatic  
11 relief valve had not shut again.

12  
13 CRESWELL: You said again?

14  
15 KELLY: Again.

16  
17 CRESWELL: It hadn't shut "again"?

18  
19 KELLY: Oh. Bob Winks and I had been involved in an incident at  
20 Toledo Edison in the fall of 1977. I've forgotten the exact date.  
21 But at that time they lost feedwater and had a pressure excursion and  
22 their electromatic relief valve had not shut. That's what I meant  
23 when I said, "again".  
24  
25

1 CRESWELL: O.K.

2  
3 KELLY: And then he showed me a plot of the quench tank ... maybe it's  
4 called the reactor drain tank at Three Mile Island.

5  
6 CRESWELL: Reactor coolant drain tank, I think is

7  
8 KELLY: He showed me the drain tank pressure plot and you could see  
9 where the ruptured disc had blown out.

10  
11 CRESWELL: Is that plot of the reactor coolant drain tank pressure?

12  
13 KELLY: Pressure.

14  
15 CRESWELL: Pressure. Did it look ... look like everything. The  
16 relief valve had actuated as it should have. The quench tank and the  
17 disc had blown and then it was all reasonable.

18  
19 KELLY: It looked very logical. You could pick it up off of the plot  
20 of pressure.

21  
22 CRESWELL: O.K.

23  
24 KELLY: And he had, I don't remember exactly, but Bob had de-raged  
25 like the first 30 minutes of the transient and plotted the first 30

1 minutes. And we spent the night working on the first 8 hours about of  
2 the transient, reducing down.

3  
4 CRESWELL: O.K. Were there any other things that you noted of interest  
5 in going over those plots?

6  
7 KELLY: It's hard for me to remember now, how much I found out that  
8 first night I was there. Because I had been up all day and working  
9 all night. I did that for the next 10 days. I worked like 16 on and  
10 8 off.

11  
12 CRESWELL: Long hours.

13  
14 KELLY: I don't know what I'm telling you any more past that point of  
15 time of... of what I had subsequently learned, studying it or how much  
16 I learned during that initial period of time. If you have a specific  
17 question, I might be able to - to

18  
19 CRESWELL: Nothing really jumped out at you ... any other malfunctions  
20 or problems?

21  
22 KELLY: No, you could see reactor coolant system pressure come down to  
23 saturation pressure on the plots. We were at pressurizer level went  
24 ... up and it pegs out at 400 degrees ... at 400 inches rather, and  
25 just ran across a straight line from the data that Bob had showed us.  
It had gone solid.



1 CRESWELL: What did you derive from that?

2  
3 KELLY: That they had drawn a steam bubble some place else. Because of  
4 the silent condition of the pressurizer. When you come down and can  
5 see the pressure on the plot, go down to saturation pressure in the  
6 reactor coolant system temperature, you have to be making steam.

7  
8 CRESWELL: O.K. I'd like to go back to earlier in the morning of the  
9 28th, before you left.

10  
11 KELLY: O.K.

12  
13 CRESWELL: What sort of instructions were you given and by whom about  
14 what your mission would be at the site?

15  
16 KELLY: Don Hollerman said that they had chartered a plane, and that  
17 Winks and Twilly and I would go to the airport at noon, and when we  
18 got up to the site, to report in to Greg Shidell and Lee Rogers. In  
19 the meantime, other than the general instructions that we were to go  
20 up there to support them, and determine the sequence of events in the  
21 system recovery. In the meantime, they would be in communication with  
22 Greg, to tell him what we were to do. When we got to the site and got  
23 to talking to Greg, it was obvious at that time, that we could not get  
24 on to Three Mile Island to do anything. So we were caught in this  
25 information vacuum, listening to half the telephone conversations, for  
the rest of the day.

1 CRESWELL: I don't recollect whether you said who was giving you the  
2 instructions.

3  
4 KELLY: Don Hollerman told us.

5  
6 CRESWELL: What is Mr. Hollerman's position in the company?

7  
8 KELLY: He's a manager in the Nuclear Service Department.

9  
10 CRESWELL: O.K.

11  
12 KELLY: There were many, many people at that meeting. Higher ranking  
13 managers than Hollerman's. It was just that he was the one in front  
14 of the room kind of leading the ...

15  
16 CRESWELL: Did any other higher managers or executives give you any  
17 instructions?

18  
19 KELLY: No, not that I can remember, specifically. They were agreeing  
20 at the time it seemed to me that, rather than sit around and try and  
21 think of what specific things I should be looking for, they could do  
22 that while I was on the airplane and tell me when I got up there. The  
23 gist of what I was getting from Hollerman.  
24  
25

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1 CRESWELL: Did they discuss with you any sort of posture regarding  
2 giving the licensee recommendations?

3  
4 KELLY: No. Not at that time.

5  
6 CRESWELL: O.K. Owen, at this point I'd like to turn it back to you.  
7 And you may want to discuss the conditions under the interest of the  
8 plant and so forth.

9  
10 SHACKLETON: Mr. Kelly, for the benefit of those people who will be  
11 listening to the tape, if I recall correctly, prior to going on tape,  
12 you mentioned that you had worked on Babcock and Wilcox involvement in  
13 the construction of the reactor for Unit 2. Is that correct? Were  
14 you involved with Three Mile Island anytime prior to this incident?

15  
16 KELLY: No.

17  
18 SHACKLETON: Alright. Fine, thank you.

19  
20 KELLY: Excuse me. You were saying the construction ...

21  
22 SHACKLETON: I'm possibly not using the right terminology. Were you  
23 involved in anyway with the design work or anything for the reactor  
24 unit for Unit 2?

25  
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1 KELLY: At Three Mile Island?

2  
3 SHACKLETON: Yes.

4  
5 KELLY: No.

6  
7 SHACKLETON: No. Alright, the answer was no.

8  
9 KELLY: When you were asking, I thought you meant the morning of the  
10 incident. Was I involved with Three Mile Island, Unit 2.

11  
12 SHACKLETON: Yes, I maybe misintepretated something that you said  
13 earlier. In your role as an engineer in the Plant Integration Unit?

14  
15 KELLY: O.K. When I came back to Lynchburg in 1977, and got into the  
16 Plant Integration Unit, and I said I'm a member of the plant design  
17 group, at that time in May 1977, the plant design emphasis was on the  
18 Babcock and Wilcox 205 unit. The 177 units had already been designed,  
19 and Three Mile Island 2 was operational. So we had ... my little  
20 group had nothin' to do with the design by the time I got involved  
21 with it.

22  
23 SHACKLETON: O.K.  
24  
25

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1 KELLY: Now I see what

2  
3 SHACKLETON: You must realize that this is very difficult to try and  
4 reconstruct a very difficult period. When you were working long hours  
5 and tired and so on, I appreciate your attempts to try and recall  
6 facts the best you can. What Jim spoke about is one thing that we're  
7 interested in as regarding the security that you found when you went  
8 on to the island. Now, when you and Mr. Twilly went on to relieve the  
9 other gentlemen from Babcock and Wilcox, 8 o'clock shift, was that the  
10 night of the 29th?

11  
12 KELLY: Yes.

13  
14 SHACKLETON: Were you given a dosimeter and a TLD before you went on  
15 board the island? Do you recall?

16  
17 KELLY: Yes, I had a dosimeter and a TLD before I went on the island.

18  
19 SHACKLETON: When you mentioned that you went on to the island through  
20 the north gate, which be across the north bridge, were there any  
21 security officers at that point? Was there any check point?

22  
23 KELLY: Yes. There was. There were guards at the entrance to the  
24 north gate. Not on the island side of the bridge, on the other side.  
25 Before you went across the bridge.

1 SHACKLETON: Just off the highway then?

2  
3 KELLY: Yes, just off the highway.

4  
5 SHACKLETON: Parallel to the Susquehanna River?

6  
7 KELLY: Yes.

8  
9 SHACKLETON: Did you see any security officers after you got on to the  
10 island?

11  
12 KELLY: No. There were none that I saw.

13  
14 SHACKLETON: And you went ... when you got on to the island, where did  
15 you go?

16  
17 KELLY: They called it the Processing Center.

18  
19 SHACKLETON: And that's where your headquarters were maintained for  
20 ... at that time?

21  
22 KELLY: Yes.

23  
24 SHACKLETON: I have no further questions, Jim.  
25

1 CRESWELL: I'd like to go back again, early in the morning of the  
2 March 28, 1979. Do you recall seeing Mr. Floyd of the Metropolitan  
3 Edison staff anytime that morning?

4  
5 KELLY: Of which date?

6  
7 CRESWELL: March 28th. The day of the event.

8  
9 KELLY: That morning I was in Lynchburg.

10  
11 CRESWELL: Yes.

12  
13 KELLY: Mr. Floyd?

14  
15 CRESWELL: Mr. Floyd.

16  
17 KELLY: No, I didn't. I don't recall seeing him.

18  
19 CRESWELL: O.K. That's all I have Owen.

20  
21 SHACKELTON: Mr. Kelly, is there anything that you would like to say  
22 before we close this interview?

23  
24 KELLY: No, I have nothing else to say.  
25

1     SHACKLETON: We thank you very much for helping us this morning.  
2     We'll close this interview. The time is now 9:16 a.m., EDT, May 9,  
3     1979.

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