UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

In the Matter of:

IE TMI INVESTIGATION INTERVIEW

of Mr. Brian A. Mehler
Shift Supervisor

Trailer #203
NRC Investigation Site
TMI Nuclear Power Plant
Middletown, Pennsylvania

May 17, 1979
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NRC PERSONNEL:

Mr. Dorwin Hunter
Mr. Owen C. Shackleton

SINCLAIR: The following interview is being conducted of Mr. Brian A. Mehler. Mr. Mehler is a shift supervisor at the Three Mile Island nuclear power facility. The present time is 11:43 p.m. eastern daylight time. Today's date is May 17, 1979. The place of the interview is trailer 203 which is located immediately outside the south gate to the Three Mile Island site. The individuals present for the interview will be Mr. Dorwin Hunter. Mr. Hunter is an Inspection Specialist, Performance Appraisal Branch, I&E Reactor Construction Inspection, U.S. Nuclear Regulatory Commission. Also present is Mr. Owen C. Shackleton. Mr. Shackleton is an investigator, Region V, U.S. Nuclear Regulatory Commission. My name is John R. Sinclair. I am an investigator, Office of Inspector and Auditor, U. S. Nuclear Regulatory Commission. Prior to the interview being recorded, Mr. Mehler was provided a copy of a document explaining his rights concerning information to be obtained regarding the incident at Three Mile Island. In addition, Mr. Mehler was apprised of the purpose of the investigation, its scope and the authority by which Congress authorized the Nuclear Regulatory Commission to conduct the investigation. On the second page of the advisement document, Mr. Mehler has answered three questions. The questions and Mr. Mehler's replies will now be recorded as part of the interview.

SINCLAIR: Mr. Mehler, do you understand the document?

MEHLER: Yes.

SINCLAIR: Okay, thank you. Second question. Do we have your permission to tape the interview?

MEHLER: Yes.

SINCLAIR: Thank you. Third question. Do you want a copy of the tape or transcript?

MEHLER: Yes.

SINCLAIR: Thank you. At this time Mr. Mehler, I will ask you to please provide us a brief summary or synopsis of your work experience and training as it's related to the nuclear industry.

MEHLER: I started in the nuclear industry in the training program conducted down at Three Mile Island, I believe it was the year of 1968 or '69. That consisted of a 42-week training program conducted by Met Ed, by Richard Zechman at the Island. It also consisted of two weeks at Penn State at their reactor. Also in that training program there was a two-week course given down at B&W. After that period of time and up until the licensing, I licensed on Unit 1 as a CRO. Then later on, I was a CRO at Unit 1, I'd say approximately five years. I don't know. Then I went to Unit 2 as a shift foreman, and then I licensed on Unit 2 as an SRO. And from then I licensed on Unit 1 as an SRO, and right now I currently carry an SRO license on both Unit 1 and Unit 2.

SINCLAIR: Okay, thank you very much. Mr. Hunter?

HUNTER: Thank you Brian. I have reviewed some other interviews that have been done and also have picked out some questions from other interviews that have been done with other people and I hope to discover some specific areas and maybe we can move right along. It's is my understanding that you arrived on site on 3/28 approximately 5:45 in the morning. Were you called in?

MEHLER: Yes, I was called at home, I'd say roughly at 5:00 in the morning.

HUNTER: Who called you in, Brian?

MEHLER: I don't remember the gentleman's name. It was some engineer.

HUNTER: Any particular reason they called you in?

MEHLER: Normal procedure is to get the second shift supervisor in case of any trip for recovery.

HUNTER: So you were the day shift supervisor who was coming in?

MEHLER: I would have been the day shift supervisor on Unit 1 that particular day but the previous day I was on Unit 2 so he called me.

HUNTER: Okay, thank you Brian. When you arrived at the plant you pointed out, again, I am going to try to go along and key on some of your comments previously, that you reviewed the control board and the status of Unit 2. Craig Faust, Frederick Scheimann, Zewe, I believe you said Mike Ross and...

MEHLER: Ken Bryan

HUNTER: ....and George...

MEHLER: I don't remember seeing George. Ken Bryan was there I know.

HUNTER: All right, and then Mr. Zewe, Scheimann, and Faust were at the pressurizer area.

MEHLER: At the area, it was Scheimann, Fredericks and Mike Ross. I think Bill and Faust were over basically in front of the feedwater area.

HUNTER: Fine, okay. Let's see. You indicated by looking at the pressure chart that the pressure was approximately 900 pounds.

MEHLER: Roughly 900 pounds. I just glanced at it and it looked in the area of 900 pounds and it was more or less stable.

HUNTER: The status of the reactor coolant pumps at the time....

MEHLER: Were secured.

HUNTER: Were off... okay. And you noted that the B steam generator was isolated?

MEHLER: Uh, Bill just told me that he just finished isolating B steam generator.

HUNTER: Okay, and that left the AC generator then available for removing decay heat?

MEHLER: Yes.

HUNTER: The high pressure injection system was secured at that time? But one pump was running, letdown was on and 16 valve was.....

MEHLER: I don't know the exact position of 16 at that time.

HUNTER: ...being used or available. Did you look at the makeup flow or at the high pressure injection flow?

MEHLER: No, I didn't.

HUNTER: Did you look at the letdown flow?

MEHLER: No, I didn't.

HUNTER: Okay, I just want to make sure I get all the information I can get. All right. Carl Guthrie, you indicated arrived somewhere right at that time?

MEHLER: It was a couple of minutes after I did.

HUNTER: All right. He went down and checked the pressurizer heater breakers.

MEHLER: Yes, he did.

HUNTER: You fellows have had trouble with those breakers before?

MEHLER: Yes, we've been having problems with the pressurizer heater breakers tripping.

HUNTER: Okay, that's an environmental heating area involved?

MEHLER: Due to the environment they're in, the thermals seem to tend to heat up and trip.

HUNTER: Did Mr. Guthrie get back to you and tell you what the status of the heater breakers were?

MEHLER: Yes, he did get back to me and he said the status of them, that all the breakers were closed.

HUNTER: Okay, so that meant that you had all the pressurizer heaters available to you at that time. Okay. Were there any other significant items that you looked at primary parameters or determined the status of the plant that you recall?

MEHLER: Well, the main things I looked at there is most of the people were directly in front of the pressurizer pressure and level. And I noticed the pressure was low and I noticed the pressurizer level was full. It was pegged high, you know. You know at that pressure you pop the bubbles in the hot legs.

HUNTER: You over again, that it indicated to you that ... the pressurizer being solid indicated to you that they had bubbles in the hot legs.

MEHLER: Yes.

HUNTER: ... of the plant. Had you seen this before?

MEHLER: No, not personally, I haven't.

HUNTER: Had you read any plant transients or had any training associated with that type of a problem?

MEHLER: No, I haven't but I do know it happened previously on another shift. That they did pop the bubbles in the hot-legs.

HUNTER: Can you recall what the conditions were when that happened? Was it during a plant trip?

MEHLER: No, it wasn't. I believe it was during a start up. Not a start up, a heatup.

HUNTER: A heatup?

MEHLER: I believe. I never got the specifics on it.

HUNTER: Okay. You say, you indicated that the B steam generator may have been dry. Was it dry or had they just bottled it up?

MEHLER: They told me they just bottled it up at the time.

HUNTER: Okay.

MEHLER: In fact, Bill looked at me and said "We just finished bottling up B steam generator because we had a tube rupture in it."

HUNTER: Did he indicate to you the reason he felt like he had a tube rupture?

MEHLER: Because of 748 in alarm.

HUNTER: A radiation monitor 748, is that the air ejector vent monitor?

MEHLER: Yes, that's the offgas.

HUNTER: He indicated that he had a.....

MEHLER: Indication of a number tube leak.

HUNTER: Okay. You indicated then that you went to the computer and called out some values, temperatures or pressures on the meter?

MEHLER: I punched out the thermocouple values for the code relief valves and the electromatic. Looking at the values I roughly see the two codes were identical - well not identical, they were within a couple degrees of each other and I believe the electromatic was roughly 26 degrees higher. In the neighborhood of that. It was higher and this indicated to me that it was weeping.

HUNTER: Had you noticed then in your review at the control board that the power operated relief valve indicated closed?

MEHLER: It indicated closed, yes.

HUNTER: Okay, and then you apparently indicated to Fred Scheimann that he should close the...

MEHLER: Block valve...

HUNTER: The block valve. And Fred in fact closed the block valve and the...

MEHLER: At that point pressure started to recover.

HUNTER: Did you notice reactor building pressure at that time?

MEHLER: No, I didn't. I did notice, though, that they already had the emergency river pumps running.

HUNTER: And they would have those on for what reason?

MEHLER: Trying to reduce the pressure in the building.

HUNTER: Extra cooling to the fan coolant...

MEHLER: Yes, a larger system.

HUNTER: Okay. Can you clarify for me in your own words how you feel about the block valve on the power operated relief valve? And have you experienced trouble with the block valve in your job on Unit 1 -- you've been on Unit 1 and Unit 2 -- and give us your feeling about the block valve. And I guess I am a little surprised that the guys didn't close it before then.

MEHLER: I can't be specific on the block valves saying that we actually had problems with the block valves. I do know of problems with the spray valves on either sticking open or not opening and I know in Unit 2 the indication on the spray valve has been less than desirable, sometimes the limit switches break. I'm trying to figure out if we ever had any problems with the block valves sticking shut.

HUNTER: Did it ever stick open or close on you?

MEHLER: What, the spray?

HUNTER: The block valve on the power operated leak valve?

MEHLER: Not on me specifically and I can't think of any incident. I'm trying to, and I can't remember any specific incident where it has, but that's not saying it hasn't.

HUNTER: Right, okay. In your review of the computer data, when you're punching out the computer data for the thermocouples on the discharge pipes, did you go back and look at any previous data, which had been pumped out, punched out or any previous temperatures?

MEHLER: No, but....

HUNTER: Did you discuss them with Ken Bryan or Mike Ross, or Bill Zewe or...

MEHLER: No, after I told them to close the block valve, they informed me that they already punched them up previously and didn't see no difference.

HUNTER: Okay. Would you find that unusual, that there wouldn't be any difference?

MEHLER: After thinking about it, what happened, I can understand why there wouldn't have been a difference. But I would have found it unusual in the beginning when it was first presented to me. But postulating that they all dump in a common line later on, it could

have fed back to all the thermocouples. And it would have indicated a relatively same temperature all along.

HUNTER: Okay. The time that you called out the readings was probably...

MEHLER: 2 hours into it.

HUNTER: I'm trying to remember the number, like 6:18 or something on the computer printout.

MEHLER: I think it was before that, I think it was roughly around 5 of 6.

HUNTER: Okay 5:50. The power operated relief valve had opened on the trip.

MEHLER: Oh yes.

HUNTER: Okay. Would it be normal that that temperature would remain relatively the same for a period of time? After the trip? Had you encountered that particular problem?

MEHLER: I'm trying to figure out what you're saying. That the temperature would hold up for a long period of time?

HUNTER: Right.

MEHLER: It will hang up for awhile but, you know, it will cool down. But I think they compared the codes compared to the electromatic and I think their codes thermocouples received the feedback off the electromatic and that's why there was no difference.

HUNTER: Okay. Were you aware that...

MEHLER: I only postulate that, I really don't know that as a fact.

HUNTER: You were aware that the codes and the power operated leak valves were weeping previous to the trip?

MEHLER: Previous to the trip we've had the codes indicating two up to five degrees hot temperature on the thermocouples, higher than the other ones. And it wasn't just B always. Sometimes it would be A and B. So we didn't know which one was weeping by.

HUNTER: All right. In your review of plant conditions, did you look at or discuss the reactor coolant drain tank.

MEHLER: No, I didn't. I did not know the rupture disc was blown until later in the day.

HUNTER: Okay, and as far as the reactor building sumps, you didn't.....

MEHLER: No, that panel is located back around behind the console. Even behind the console panels.

HUNTER: Okay. All right, and then approximately two hours into the event the reactor coolant pumps are off. We are on a, let me refresh your memory a little bit. You are in fact at six right in here. The pumps were and I've got the B and the A's off, okay and the pressure was decreasing, the power operated relief valve is still open and approximately 2.23 hours or two hours and twenty something minutes, the power operated relief valve was closed and then the pressure started to rise. Did you observe the pressure increase at this time?

MEHLER: Yes.

HUNTER: Was the pressure increase due to anything other than the power operated relief valve being closed and the normal makeup being fed into the system?

MEHLER: The heaters were already on, and the only thing that helped at that time to my knowledge that happened, is we closed the block valve to the power operated relief.

HUNTER: Okay, and then the pressure started the next hour.

MEHLER: Right, started to recover.

HUNTER: Okay. At this point the 2 V pump was bumped. And this was where all the radiation alarm started coming in and then the 2 V pump was bumped. This was when the site emergency and all occurred right in here.

MEHLER: Okay, that started it. A site emergency was declared about quarter of, or ten of seven.

HUNTER: Okay, and this is seven right here?

MEHLER: Okay.

HUNTER: So right in this frame is when the radiation alarm started coming in? Okay, was there any talk in this time frame, do you recall the core flood tank valves being closed?

MEHLER: No, they were open.

HUNTER: Okay. Was there any talk about putting core flood tanks on at this time or depressurizing and putting the core flood tanks on or going down to decay heat?

MEHLER: Not at this particular moment. That happened later in the day.

HUNTER: Okay, all right. I wanted to make sure.

SHACKLETON: Dorwin, could you identify the time you just related to?

HUNTER: Okay. We are looking at the wide range pressure curve on the plant from the morning of the 28th from the trip through the pressure decrease and securing of the reactor coolant pumps out, and we were discussing the pressure transient around 7:00 in the morning.

SHACKLETON: Thank you. And the name of the document you are using?

HUNTER: That's the plant wide range, reactor coolant wide range pressure.

SHACKLETON: Okay. Thank you.

HUNTER: All right. Uh...

MEHLER: Can I say something?

HUNTER: Yes. Go right ahead.

MEHLER: You've got to realize that I only arrived on site approximately fifteen minutes before that pressure started to increase. Now if there was talk with the other people previous to that, I wouldn't be knowledgeable....

HUNTER: Yes, I understand that. There was some discussion about venting the hot legs.

MEHLER: Yes.

HUNTER: And could you elaborate on that and explain to me what the discussion entailed and what your intention was? What was being discussed.

MEHLER: What happened is, when I arrived you could see that the bubbles were in hot legs, the pressurizer was filled and that for some means we could not recover pressure, it was basically holding. There was two reasons: either you had a valve open or the pressurizer heaters weren't working. So after we started to recover pressure by closing the block valve on electromatic, the next thing and since at this particular time there was no radiation alarms in, we were going to go in and possibly vent the hot legs to get the steam bubble back in the pressurizer. And we weren't going to make preparations to go in and, well, about quarter of seven all the alarms came in so it was impossible to enter the reactor building.

HUNTER: Venting the hot legs at the top of the J legs?

MEHLER: Uh-huh.

HUNTER: How do you ... do you have vent valves installed there to vent? Right at the top of the vent legs, manual valves?

MEHLER: Yeah, manual valves. That would have required a reactor building entry.

HUNTER: All right. Do you know -- was this discussed between yourself? Who all was in that discussion?

MEHLER: I think it was ... basically it was Mike, myself and Bill and Bubba Marshall. Cause I believe I asked Bubba to go make out an RWP so him and I could go in and do it.

HUNTER: Okay. So the intent was that if everything went all right you and Marshall would go in?

MEHLER: Well someone had to.

HUNTER: Right, no, I just said that it would have been you two to go in. Okay. Okay, then you got into the site emergency at seven and the number of people increased in the control drastically at that

time. Would you give us a feel for the number of people and the noise level?

MEHLER: The number of people -- I would say roughly the control room had initially, probably when we declared the site emergency, we must have had in neighborhood of 30 to 40 people and it progressively increased during the day. At some point, I believe, there was as high as 70 people in the control room.

HUNTER: Did that give the fellows problems at the control panel?

MEHLER: The noise level was high and it would have gave the people problems at the control panel. Once we went into the site emergency, I more or less got away from the control panel.

HUNTER: Okay. Do you know who declared the site emergency?

MEHLER: Either it was Bill Zewe or Jim Seelinger.

HUNTER: Okay, and do you know what they based that on?

MEHLER: I believe it was based, and it's only an assumption, I think they based it on the radiation alarms in two separate buildings from the same event. And also I believe at the same time we had the high alarm on the stack vent, which would have been another indication that we were into the site emergency.

HUNTER: All right. During your stay on the control panel in that area, did you review the source or intermediate range channels and the change in the flux levels?

MEHLER: No, I didn't

HUNTER: Okay. Did you discuss or get involved in discussion with the other fellows concerning emergency borate, change of boron concentration in the primary system?

MEHLER: No, at that particular time all the makeup -- we already had ES's.
A couple of them, I believe.

HUNTER: ES is a uh...

MEHLER: Engineering safeguards.

HUNTER: Engineered safeguards actuation. Okay.

MEHLER: We already had one of those so the boron would have been coming out of the BWST and we would have been fairly highly borated at that time.

HUNTER: On the normal transient that occurred in looking at the time sequence of events, this is just good to talk up if you can follow us. After the plant trips, approximately two minutes into the event, the operators had taken the action of starting the second makeup pump, opening the five valve, closing the letdown, and then pressure continued to drop and then after two minutes it had initiation of the safeguards system. And then the operators -- the pressurizer level then recovered and actually went full. The operators then throttled back on the high pressure block and then throttled back on 16 valves and actually throttled back to letdown and a minimum makeup flow and reactor coolant pump seal water injection and maximum letdown to try to maintain pressurizer level. When you came in, that particular event was over and apparently the makeup pumps, they were down to a minimum makeup and sitting. Is it normal for the operators to try to throttle the high pressurize and safety injection to maintain pressurizer level at this plant?

MEHLER: They were never in this position before.

HUNTER: On a normal reactor trip the pressurizer level would go down?

MEHLER: Definitely it would go down.

HUNTER: In some cases you would get an engineered safeguards initiation?

MEHLER: It has happened and it would recover and you would never go solid.

HUNTER: Would the pressure recover and the level recover?

MEHLER: Yes it would.

HUNTER: Now, there was something different in this event?

MEHLER: Yes.

HUNTER: The pressure did not recover but the level did recover?

MEHLER: That's correct.

HUNTER: Okay. Did you discuss with Mike Ross, he really was the operations lead that morning, I guess, when he was in and Bill Zewe?

MEHLER: And I believe also that George Kunder was there.

HUNTER: Did you discuss the low pressure situation with those fellows?

MEHLER: I did not discuss the low -- I noticed the low pressure and I knew we had to recover the pressure and they also knew it.

HUNTER: Okay. What was your feeling as far as having to recover that pressure?

MEHLER: Well, my true feelings at that particular time when I seen the low pressure was either the heaters were not on or we had a leak somewhere. So I took corrective actions and checked both of them out.

HUNTER: Okay. And it turned out that isolation of the power operated relief valve was then the first answer. You indicated that you had problem with the auxiliary boilers. You ended up steaming to atmosphere due to ... you finally got vacuum or working on the vacuum and that we went through that sequence. You indicated that the State called to cease the...

MEHLER: Release to the atmosphere.

HUNTER: Can you clarify who called?

MEHLER: I don't know who from the State. I was just informed.

HUNTER: Who informed you?

MEHLER: Oh my God, there were so many people there at that time. It was -- It had to be someone above me, who I wouldn't know. I know that there were a lot people there.

HUNTER: And you were told to stop steaming to atmosphere?

MEHLER: That's correct. Steaming the atmosphere off of A loop. I believe this happened at the time when someone put a plane over the flume or something and they got a high reading and all of a sudden they said we were releasing it from A steam generator.

SINCLAIR: Let's break here. The time is 12:12 a.m., May 18, 1979. We are going to break at this point to change the tape. The time is 12:13 a.m., May 18, 1979. We are continuing the interview with Mr. Mehler.

HUNTER: Okay, Brian. We were discussing the ceasing of the atmospheric dumping of steam to the atmosphere from the A steam generator due to possible release of radioactivity through that path. And you indicated that the State had called and you indicated that you don't know who told you in the control room to stop releasing. The question that I want to ask is, at that time when the decision was made to go from the atmospheric dumps to the condenser -- the turbine bypass valves that dump to the condenser -- did that put you in a bind?

MEHLER: Not really. It wasn't a big bind, it was just timewise. Prior to that we had to reestablish the seals on the turbine and draw vacuum and that was time.

HUNTER: And did you wait to seal your vacuum and it was sealed before you changed it over?

MEHLER: Yes we did. What we did is, as soon as we had steam available we put the seals back on the turbine. Once it was back on the turbine we started two of the vacuum pumps and started the hauling operation, and I believe it was somewhere in the neighborhood of 12 to 15 inches of vacuum. We started going the bypass valves back to the condenser.

HUNTER: Timewise on that, Brian, did it take you .....

MEHLER: I would say it took us an hour to an hour and a half to do.

HUNTER: And during that time you continued to dump to the atmosphere?

MEHLER: We had no other choice.

HUNTER: If you weren't dumping to the atmosphere, where would you remove decay heat?

MEHLER: We couldn't have.

HUNTER: Thank you Brian. Okay. You talked in a previous interview concerning the fact that the bubbles in the hot leg could be very large. And I am not a B&W guy, I am now getting to be a B&W specialist, but you related that to pressurizer level. Do you recall that particular...?

MEHLER: Yeah, I believe you're talking about the interview with O'Conners, and I told them there about the amount. Normally on a natural cooldown when you depressurize, when the hot legs would go into the pressurizer; you know, when you depressurize because they are at a higher elevation. And normally you're at 100 inches in the pressurizer at this time and when you depressurize the hot legs going to the pressurizer you will raise from 100 inches roughly up to 350 inches. So you're increasing 250 inches in the pressurizer.

HUNTER: Okay. Thank you, I didn't have the depressurization part so I was making sure that I understood that.

MEHLER: Yeah, I was relating back to the normal cooling off.

HUNTER: Okay, good. All right, you indicated that the discussions on core flood tank if they occurred, occurred before you were there?

MEHLER: No.

HUNTER: Early in the morning. And then later on it would be later in the afternoon that the discussions were held. I want to make sure that I got that correct. We were talking about the starting of a reactor coolant pump previous to this and the fact that when you bumped the 2 V pump at approximately 6:54, somewhere in that time frame, that you had to jumper the K-3 relays. Could you elaborate on the discussion? Who jumpered them or how you would perform that?

MEHLER: Okay. The electrical department jumpered the K-3 relays. Basically the K-3 relay is just a permissive relay which has a lot of interlocks associated with it. It's like a nuc service closed established to it, intermediate closed, oh boy, seal injection, etc. When all these are satisfied the K-3 relay would pick up giving you a permissive signal to start the reactor coolant pump.

HUNTER: Brian, were you having trouble getting that pump started? The pump started due to some item not allowing the permissive to be energized?

MEHLER: Yes, one of the interlocks were not picking up; which specific one I couldn't tell you.

HUNTER: After the K-3 relay was jumpered the pump started without...

MEHLER: We bumped the pump, yes.

HUNTER: Okay. Let's move on a little further in the day.

MEHLER: I didn't realize it was that early in the morning we bumped it.

HUNTER: Yeah, it may be ... it's a little suprising. I have two sheets and the two sheets take us from the four o'clock trip out to where we're going out to 16 hour ... the point where you get the pump back on and then we consider in our investigation or in our program as being from then on its recovery...that you're stable. I just use that as a key.

MEHLER: Okay.

HUNTER: Okay. There was a discussion about -- in the afternoon approximately 1:50 or so -- there was a spike in the containment to a high pressure.

MEHLER: The spike in the containment occurred about 10 of 2. Somewhere around 10 of 2 or 2:00.

HUNTER: Were you in the area when that occurred?

MEHLER: When that occurred I was in the shift supervisor's office. What alerted me to it is I noticed the CROs moving over towards the makeup pumps and starting to secure them, and that indicated that we had probably another ES. And there's two conditions that could have caused it. Either low pressure, which we were already at, or a high reactor building pressure of four pounds.

HUNTER: Okay, Brian, did you notice that the containment spray pumps were on at that time?

MEHLER: Yes I did, I walked out and I went to the left side of the console where the building spray pumps are. Previous to that I glanced over the RP pressure indication and it was reading roughly in the neighborhood of one to two pounds. At that particular point I looked at the spray pump and they were running and I didn't know why, because they should start at 30 pounds. So we secured the spray pumps because there was no need to put the sodium hydroxide into the containment all over the equipment.

HUNTER: Okay, Brian. Did you have the wide range pressure trench recorder available to you for reactor pressure?

MEHLER: Oh yes.

HUNTER: Did you look at that?

MEHLER: Yes, after we secured the spray pumps I went back and checked the recorders. And definitely there was a spike aligned straight up. It went up to approximately 32 to 33 pounds and it came down in the same line.

HUNTER: What did this mean to you? Did it mean anything at that time?

MEHLER: First thought in my mind that someone was screwing with the transmitter.

HUNTER: Do you know what activity the shift was involved in at the time that today ignition or explosion occurred?

MEHLER: I didn't know at that particular moment what activities were involved. Later on I found out.

HUNTER: Okay. And what did you find out later?

MEHLER: Well, later the only activity that could have caused the explosion was some kind of spark because they opened the block valve --

no, no it was not the block valve. It was the vent valve from the pressurizer to relieve some water. And that was the only thing that could have given us detonation of the hydrogen.

HUNTER: Were they using the vent valve and the block valve on the pressurizer? At different times?

MEHLER: At different times, yes.

HUNTER: What's the difference between using a vent valve and a block valve for that activity? Is is a smaller line?

MEHLER: Maybe I screwed up.

HUNTER: Is it a smaller line?

MEHLER: The vent valve is 137 and that is smaller. I could be wrong in that, it might have been the block. But I know it was one or the other that they did open at that specific moment when...

HUNTER: Does the vent valve or block valve are those -- is that a limitorque type motor on it? Is that electrical motor drive, that type of a motor?

MEHLER: Yes. An electromatic has a pilot valve on top of it, which causes that to open. The pilot valve actuates first.

HUNTER: Okay. There was some discussion that the ventilation reactor building, refueling building and auxiliary building ventilation was restarted at nine o'clock. Do you recall any discussion about that?

MEHLER: I don't know when it was restarted. I do know it was running later in the day. I do remember seeing the control switches taped to the "on" position.

HUNTER: Okay. You don't know when it was turned off or when it was started?

MEHLER: It would have automatically tripped on the high radiation levels.

HUNTER: Okay. Which high radiation levels automatically trip it?

MEHLER: Both the reactor buildings. I am sorry, not the reactor building. Fuel handling buildings, aux building, and probably it would have also tripped on the stack monitor, probably.

HUNTER: To restart that do you have to reset the actual radiation monitor?

MEHLER: Yes, but

HUNTER: Or can you bypass it and then restart it?

MEHLER: I don't know right now.

HUNTER: You made a comment that being in respirators in the control room and trying to perform work wasn't a very good situation.

MEHLER: Well, it was hard.

HUNTER: What's difficult about it?

MEHLER: Communications, talking on the phone, answering the page.

HUNTER: Okay. And you indicated that after the site emergency was declared you ended up moving back into the shift supervisor's area?

MEHLER: I basically moved back as soon as we declared the site. Bubba Marshall and myself started to set up the tables, yeah. Isopleths and establishing communication with emergency control station and stationing AOs to answer the phone, etc. And then by that time Seelinger of them came in and they moved in; all the engineers showed up and they started to do the X/Q's and getting offsite dose reading and that, and the notification was started immediately upon declaring the site emergency.

HUNTER: Did you then work in that area the rest of the day?

MEHLER: No, I kind of traveled between that area and getting vacuum back on the secondary side and getting the K-3 contacts jumpered off. I more or less was floating wherever I was needed.

HUNTER: Okay. During the day there were some more key events that occurred. At approximately five hours into the event, between nine and ten. The plant pressure was increased and maintained at approximately 2000 pounds cycling around the block valve. Where you involved in that decision to repressurize or discussion?

MEHLER: I don't recall, but I may have.

HUNTER: All right. The 2-B pump we discussed was bumped and then they will note that also another pump was bumped. There was a second pump bumped.

MEHLER: I didn't think we completed two.

HUNTER: Shortly thereafter. Okay. Did you in fact ... Yes, just for 10 seconds the 2-A pump. Do you recall that occurring and did you have to jumper any K relays at that time? Or did you jumper all the K relays the first time?

MEHLER: I know all the K-3 relays till the end of the whole episode were all jumpered on. At what specific incident when we jumpered each indiviudal one, I don't recall. And I do not recall bumping the second reactor coolant pump.

HUNTER: Okay, fine. Be surprised when we find out that it really wasn't bumped, right?

MEHLER: I don't think it was.

SHACKLETON: Brian? Could you just briefly for those people who don't understand what the word "bump" means?

MEHLER: When the reactor coolant pump, which is a 6,000 horsepower motor-driven ... 9,000?

HUNTER: 9,000.

MEHLER: 9,000 horsepower motor-driven pump. The operations group would start the pump for 10 seconds and then turn it right off just to move some water and then in -- prior to possibly putting the pump on for a long period of time.

SHACKLETON: Thank you.

MEHLER: It's a short run.

SHACKLETON: Okay.

HUNTER: After controlling the reactor system pressure 2,000 pounds for a period of time using the block valves, then the system was in fact depressurized to go down on the core flood tank and apparently on to decay heat. Is that a fact?

MEHLER: That's what they were headed for.

HUNTER: That was the intent.

MEHLER: The intent was to ensure the core was covered by dropping the core flood tanks on and then depressurizing down and going into decay heat removal.

HUNTER: Were you involved or did you get into discussions at the time that you went in on the core flood tanks?

MEHLER: I was told they were going to do that.

HUNTER: Okay. During this period of time sitting at the core flood tank pressure of about 500 pounds, there is a substantial period of hours where the pressure was maintained at approximately at that 5, 6,

700 pound level. During this time there was some evolution going on trying to get hot leg temperatures back on scale by varying the makeup or the high pressure injection flow paths by injecting through two loop paths and then altering between two other loop paths and changing the injection flow paths. Where you aware of any of that?

MEHLER: No, I was not.

HUNTER: Okay. And then later on after Gary Miller had been offsite and came back onsite, then the plant was repressurized and [illegible] started the...

MEHLER: We went solid

HUNTER: ...started the reactor coolant pump that evening twice and then they left it on the second time. That was around -- oh, I'll give you the time. 1900 and then started it, and then bumped the pump and then started it and then pressure stabilized and then basically ended up with a bubble in the pressurizer 10:00 that night. Things generally should have stabilized out at the time.

[Unidentified Speaker] Go ahead.

MEHLER: I always had doubts back at the beginning when you told me we bumped the 2B pump back earlier in the stage, and I really don't

remember bumping it back in there. I do not remember bumping that pump. I know we were starting oil pumps.

HUNTER: Right. They ran the pump here for 19 minutes, for summary...of that. And then there was just a short - apparently now without being absolutely positive about anything...

MEHLER: If that graph is correct I was there when that pump was running and I do not remember that pump being run.

HUNTER: Okay. Yeah, okay, that's...

MEHLER: That's where I have my problem. Because I don't remember them pumps being on until later in the evolution. That was one of the big things, getting the pump on.

HUNTER: Right. And when these pumps run, by the way, they did not in fact run. They ran at 100 amps. They did not in fact pump any water at all.

MEHLER: I think your time frame is wrong.

HUNTER: Pardon? Yeah. Okay, let me go back and make a couple of points clear and then I think that will wrap it up. When you came in in the morning, right away, you -- it became -- you became aware right

away that there was steam bubbles in the legs it was obvious to you that they were there. Was it obvious to the other fellows that were there? Did you discuss it with them at the time?

MEHLER: Yeah, it was obvious to Mike. I know Mike knew they were there because we discussed about venting them at that particular time. I didn't really talk to Bill too much.

HUNTER: Okay. During your discussion with Mike or Bill or Ken Bryan, anybody, did you discuss putting on high pressure injection and taking the system solid at that time?

MEHLER: No we didn't.

HUNTER: Can you give me a feeling or give us a feeling of why you wouldn't have considered taking it solid at that time?

MEHLER: At that particular time there was no radiation alarms at that time. I, my own opinion (and I did not realize how much water they dumped out the system) was that we just pumped bubbles in the hot legs. We were fairly stable. We finally had pressure recovery and it was just a matter of venting off the hot legs.

HUNTER: Okay. And once you had established the fact that you had all your pressurizer heaters, did you feel like the pressurizer then would

be available to you and there would be any more problems with the pressurizer?

MEHLER: I didn't anticipate any more problems with the pressurizer once we, in my own mind, we established pressurizer heaters and we were recovering pressure. To me it was just a matter of being able to get in the containment and venting the pressure off the hot legs and thereby reestablishing the bubble in the pressurizer.

HUNTER: Okay. One more question Brian. There was some discussion about the radiation levels in the auxiliary building and there was a discussion concerning leakage paths from vent valves or vent systems, cracked diaphragms on diaphragm valves, I assumed that you didn't speak of a Sanders type diaphragm or some type diaphragm valves. And you indicated that in the makeup tank room, that the activity levels had been higher than in other rooms.

MEHLER: This was into the accident, farther in the days that we determined this, everyone was saying "where is it coming from?" And we did take a sample, I don't know how far, it might have been a week into it. We took a sample out of the makeup tank room while right after release occurred and the levels were high there. So this indicates that the release was emanating somewhere within that system, that general area.

HUNTER: What about any problems in that area prior to the incident?

MEHLER: None. Other than we had problems getting the hydrogen over-pressure on the tank through the normal system.

HUNTER: Okay. That was a valve problem, a leak problem?

MEHLER: No that was a piping problem.

HUNTER: Okay. Can you...

MEHLER: It had nothing to do with any of this.

HUNTER: Okay. Was it a design problem? Or a...

MEHLER: I would say it was a design --

HUNTER: A small pipe problem or something?

MEHLER: I would say it was a design problem.

HUNTER: Okay. Like a sizing problem or a...

MEHLER: If I'm not mistaken I believe the line got water in it and froze.

HUNTER: Okay. Then you were having to add hydrogen manually or some other method?

MEHLER: Yeah, we had to put bottles local and run another specific line in there and you had to feed it locally.

HUNTER: Okay. All right, go ahead.

MEHLER: That had nothing to do with it.

HUNTER: No I understand that, I just wanted to make sure. We get comments about these areas and...

MEHLER: Back to the diaphragm, the specific valve that we were referring to is probably the vent valve off the makeup tank which is a diaphragm operated valve. And it's ... I wouldn't say it's identical but it's almost like the diaphragm valve that we have on miscellaneous evap from Unit 1 which we experienced a lot of problems with on the diaphragms cracking and rupturing, etc. Causing releases.

HUNTER: Okay and that would then be a source of a gas release, if the diaphragm was broken.

MEHLER: Right.

HUNTER: Okay. Do you have any comments or any questions? Any other area that you would like to talk about or...

MEHLER: Well, the only -- maybe one thing I do have to say. I do think one of the major problems, I thought was the numerous number of phone calls we got during the event which tied people up on the telephone trying to answer questions to different departments and individuals, you know, when they could have been doing their job.

HUNTER: Okay. That meant that you fellows had to be answering phone calls rather than possibly...

MEHLER: That's correct. The people that should have been watching what was going on, the people with the information had to go back and pass it on to other people on the telephone rather than really concentrating on what they should have been doing.

HUNTER: Okay? That's it?

MEHLER: Uh-huh.

SINCLAIR: All right. Mr. Mehler I want to thank you for coming in. I realize it's late. It is now 12:38 a.m. We are going to conclude this interview at this point.

or may have aggravated the incident that occurred at Unit 2 on the 28th?

TELENKO: No, I don't.

YUHAS: If no one has any other questions at this time, I would like to thank Mr. Telenko for his cooperation and I don't have anything else.

FOSTER: Ok. Thank you, Frank. This interview is concluded at 4:40 p.m.