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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

PRESS CONFERENCE
ON
THREE MILE ISLAND

Middletown, Pennsylvania

April 5, 1979

4:20 p.m. to 4:46 p.m.

Pages 1 - 22

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MR. FOUCHARD: Sorry we're late. I don't know that we have that much to report to you today. In the event on coming days that we don't have anything significant to report, we won't schedule a briefing. We'll try and keep you advised down here as to what's going on. And so I'll just ask Harold Denton to bring you up to date on where we stand.

MR. DENTON: Today has been a very routine day in comparison with the past days we've had. We thought of bringing you down a basketball and choosing up sides between NRC and those of you who --

(Laughter.)

Conditions have changed very little from yesterday. Plant status remains the same; heat's still being removed the same way. Temperature in the core is unchanged. The recombiner is still running. There has been no new developments with regard to instrument failures. There's been no additional failures since yesterday.

We're about ready to turn on the system which will pump the gases coming from the letdown system back into the containment. The system has been installed, thoroughly checked out, procedures written, nitrogen tested, and perhaps even while we are here the system will start pumping back in.

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1 in the so-called makeup tank.

2 This will result in a significant reduction in
3 the amount of all gases leaving the plant; perhaps not all
4 because there may be other leaking points in the system.
5 This is not those tanks I've been talking about previously
6 called the waste gas decay tanks. These are the big tanks
7 which earlier samples showed had approximately 50 percent
8 hydrogen.

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10 Those tanks have not been touched. We're still
11 attempting to get another sample of them, but the tank I'm
12 talking about is the tank in which the water that is being
13 released from the reactor in order to maintain the volume
14 constant in reaction due to in-flow. In the process of
15 adding to these tanks from this afternoon on, that additional
16 volume coming into the auxiliary building waste gas tank
17 system will be routed back to the containment, thereby
18 reducing off-site doses.

19 So really nothing else to report that's newsworthy.
20 I have asked Bill Kreger to come down with me today. There
21 have been some questions about what it is like in the
22 control room; what do we do in the control room. Dr. Kreger
23 has been in the control room for the midnight shift for the
24 past six nights, since we arrived here. 14 116

25 And I thought if you wanted to get him to

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Other than that, I'll turn to questions.

QUESTION: Mr. Denton, in Washington today a Ralph Nader task force said that Met Edison rushed reactor number two into operation by December 31st '78 in order to beat the deadline for a \$40 million federal tax benefit despite evidence of a long series of operational and safety equipment failures.

And it claims it got the evidence from NRC files. Did you go on line too soon?

MR. DENTON: I can't really answer that. I've not looked back into the chronology leading up to unit two. I've tended to look forward from Friday, and that's news to me. I haven't heard that before.

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2 QUESTION: Do you believe the reactor was safe
3 when it went into operation?

4 MR. DENTON: We don't issue a license to operate
5 a plant until our Inspection and Enforcement people tell us,
6 and the preoperational testing has been completed and every-
7 thing is ready to go. But I'd have to review our own files
8 to look into that.

9 QUESTION: Dr. Denton, about the decision as to
10 whether or not to proceed with the B&W proposed procedure,
11 is that entirely a technological decision that would be made
12 here, or will the Commissioners in Washington be involved in
13 that?

14 What is the status of -- I mean, I know you said
15 yesterday you were having the Staff look at formulas and
16 calculations, but where are we on that, on the status of rea-
17 ing a decision on a preferred mode?

18 MR. DENTON: The question was when will we reach
19 a decision on a preferred mode to bring the reactor to sort
20 a benign condition so that it would be relatively immune to
21 greater equipment failures. 10 118

22 We're actually in the first phase of the B&W
23 proposal, and their proposal said the first thing to be done
24 was degas the system, and to operate in the continuing mode
25 for about five days. So in that sense the reactor is still

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2 being degassed.

3 We formed several technical safety committees in
4 reviewing the aspects associated with the B&W proposal, and
5 those meetings and reviews and calculations have been going on
6 all day. There is no rush to make a decision in that area.
7 And a lot of technical experts, experts that are in the
8 vicinity of Middletown, and they are the ones that are look-
9 ing at the proposal.

10 QUESTION: Sir, you said that the NRC said
11 yesterday, or the Staff did, that this whole thing started
12 with just some backup pumps to the cooling system that were not
13 hooked up properly, and that was contrary to law.

14 Has the company either complained about that
15 characterization or have they offered any explanation of it
16 to you in the last 24 to 48 hours?

17 MR. DENTON: I've not raised that issue with them.
18 I've tried to deal with them on the situation at hand rather
19 than the situation at the time. So I've not had any dis-
20 cussion with them about those particular aspects.

21 I'm aware of the findings of our Bethesda group
22 and the Commissioner's meeting today, the meeting with the
23 ACRS, is still going over the details of the cause of the
24 accident.

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the control room March 28th when the scram occurred, and how many are required under NRC regulations to staff the control room?

MR. DENTON: Somebody else asked me that today:

I don't know for sure. Our regulations require the presence of two types of operators. One is called the reactor operator. These are people, typically high school grads, who have been trained for a year on simulators, and in plants operating before they are issued a license to operate the reactor.

We also require the presence of a senior operator. Senior operators are college graduates in the engineering field and must pass stricter tests.

I did take a brief look the day I left Washington at the test on the people who were in the control room, and as I remember they all had passed the test and had rather a good background in the nuclear field.

How many: There were actually four qualified operators on that shift. How many were in the control room at four o'clock Wednesday morning: I don't really know.

QUESTION: Mr. Denton, has there been anything to change your mind about your recommendation that pregnant women and preschool children be kept out of the five mile radius? If not, is there any projection on how long that

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evacuation will stay in effect?

MR. DENTON: We've got the report of more progress in that area. The pumpback system is operational and the iodine that's in the water in the auxiliary building has been immobilized. It's just taking longer to get those situations realized than I'd hoped for.

But I am pretty positive that today, perhaps even now, this pumpback system is being put into service which will reduce, I think, significantly, the offgas doses from noble gases.

QUESTION: At that point would you recommend to the Governor that he remove his advisory?

MR. DENTON: I really haven't formed an opinion on that yet. I'd like to go back and see how well this pumpback system is really working and defer judgment as long as I can on that.

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1 QUESTION: I have a two part question. Arising
2 out of staff briefing of the Commission yesterday, it was
3 reported, I believe, by Mr. Eisenhut -- if that name is
4 correct -- that from four minutes after the incident occurred
5 until 11 minutes, the ECCS was shut down. Have you now
6 determined what length of time during that interval it was
7 shut down? Was it the entire seven minutes or a portion?

8 Secondly, it was reported that on at least two
9 occasions the core was partially uncovered. Have you identified
10 what those two occasions were?

11 MR. DENTON: A lot of work has been done in that
12 area. I prefer to give you a thorough briefing on the
13 events of the accident at a separate time, perhaps tomorrow,
14 and develop a chronology and walk you through it.

15 QUESTION: Tomorrow?

16 MR. DENTON: If we must meet tomorrow, if there's
17 no other news, maybe we can do that.

18 QUESTION: Mr. Denton, what is the chance -- what
19 are the chances of the hydrogen bubble forming again?

20 MR. DENTON: There's a constant radiolysis going on
21 in the core, so we are producing small amounts of hydrogen
22 and oxygen. There's no chance of the bubble reforming as long
23 as the pressure is maintained at the present level, and the
24 intent is to continue to operate the core in this mode so that
25 the gases which are dissolved are removed so that the pressures

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1 can gradually be lowered without gases coming out of solution.

2 QUESTION: When you start to lower the pressure,
3 can you explain why it is that the bubble would not reform
4 at that point?

5 MR. DENTON: It depends on the partial pressure
6 of the gases dissolved in water, you see. At the present
7 as of about yesterday, the partial pressure of the gases in
8 the water was about 900 pounds, and the system pressure was
9 about 1050. So if the pressure in the system had been
10 lowered to the partial pressure of the gases, we would expect
11 gases to begin to come out of solution.

12 So the object is to maintain the system pressure
13 higher than the partial pressure of the dissolved gases.

14 QUESTION: So that we can put it in a perspective
15 how important is the sample that the robot is expected to take
16 in the plant, and so forth?

17 And what is the sample?

18 MR. DENTON: The sample is the sample of primary
19 coolant water from the coolant system.

20 QUESTION: I know. But what are you trying to
21 find out? 14-123

22 MR. DENTON: We're trying to find out what fission
23 products are in the water so that we get a better feel for
24 the condition of the core. And it's not the highest priority

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1 on our list, but we have proceeded to take the sample.
2 And it's not in the containment building; it's in the
3 auxiliary building.
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5 QUESTION: Mr. Denton, when you get your pump-back
6 system working, how long may we expect it will take until
7 levels that are still being emitted -- how long can you
8 expect those to continue?

9 MR. DENTON: It depends on whether this makeup
10 tank is the principal source or not. I think that it's easily
11 30 or 40 percent of the source of all the gases that are coming
12 out of the auxiliary building, maybe more.

13 And once we get it operational we can measure what
14 sort of changes have been in releases from the plant. The
15 other sources are from the amounts of water that are still on
16 the floor in the auxiliary building. And they may be continuing
17 to evolve small amounts.

18 But certainly this is a major step forward, that
19 the continuous source of additional gases to that aux building
20 will no longer be released. 17 104

21 QUESTION: Due to the system problems you've
22 found here, will the NRC close down other B & W plants?

23 MR. DENTON: The Commission is meeting on that
24 question at the present time. The staff has made a

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QUESTION: Can you tell us what it is?

MR. DENTON: That recommendation was that if various modifications were made to these plants we would not recommend that they be shut down.

Once again you're getting more back into what's going on in Washington that I'm not directly involved in and not directly informed of.

QUESTION: In addition to the one violation of regulations that you've already found, have you found any others that -- involving the operation of that plant?

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MR. DENTON: I can't really answer for sure. We have identified, I think, six contributing causes to the accident, one of which was the equipment problem, and that's the relief valve sticking open, about four and a half of which were related to the operation of the plant at the time of the accident, such as the fact that the auxiliary feedpumps were locked out and the safety injection system was turned off. Water was pumped from the reactor building to the auxiliary building.

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And the other half is perhaps related to the current design of the pressurizer level instrumentation in this type of plant.

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QUESTION: Any other violations, outright violations?

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MR. DENTON: I haven't looked into that aspect.

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QUESTION: Mr. Denton, would you consider at the time involved that there was no indication that the valves were closed at the time of the accident?

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MR. DENTON: Apparently the valves were last checked for status about two days before the accident. My understanding is they were open at that time. But it's that sort of detail that I'm not really up to speed on and I'd like to go into the entire sequence. I'd prefer to have someone get up to speed and brief you at a separate time.

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QUESTION: Do you have any idea of when Herman the Robot will be used?

MR. DENTON: Let me ask Bill.

Do you have any feel for when Herman will be used?

DR. KREGER: There was some likelihood that he would be used on the day shift today, but I think maybe they've postponed that again as a result of --

QUESTION: Would you use the microphone?

DR. KREGER: They haven't used Herman as of the time I came off the shift at 8:00 this morning. There was some thought that they would use him during the day shift today. But the procedures were still being worked on.

These procedures have to be approved by a number of groups before such a process goes forward.

QUESTION: Who's that gentleman?

MR. FOUCHARD: This is William Kreger.

DR. KREGER: Assistant Director for Site Analysis

QUESTION: Spell it?

DR. KREGER: K-r-e-g-e-r.

MR. FOUCHARD: Bill is the assistant director for Site Analysis in Mr. Denton's office of Nuclear Reactor Regulation.

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MR. DENTON: Bill is a health physics professor, and has been here around the clock helping. So if you have

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2 any questions in that area, I'll turn them over to Bill.

3 QUESTION: In addition to having him pour a shot
4 of coolant, what other work do you have in mind for Herman?

5 DR. KREGER: Herman is a robot with somewhat
6 limited capabilities. He has one arm and one hand and two
7 eyes, and can only travel on level ground or ramps. And so
8 his activities would be limited to those things which needed
9 a hand in a very hot area where we would not want to expose
10 an individual for any length of time.

11 QUESTION: Is there any change that the radiatic
12 levels in the containment building?

13 DR. KREGER: Yes. The temperatures of the
14 containment building have been changing constantly since the
15 event. Most of the changes have been lowering of the radia-
16 tion dose rates as a result of decay of the radioactive
17 products.

18 These levels are being monitored constantly by
19 the health physics staff of the Metropolitan Edison. And a
20 more and more complete picture is being developed as the
21 plant staff goes in and monitors areas.

22 QUESTION: One other question:

23 14 128 Isn't there some control, an indicator on the
24 control for those backup valves as to whether they were open
25 or closed?

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MR. DENTON: That's a good question; I don't know for sure.

QUESTION: For Mr. Kreger. Any of the control personnel that have been working at this approaching the maximum allowable exposure limit? How much have they been exposed to so far?

MR. KREGER: There's a complete record kept of the exposure of all personnel in the plant; each person is limited to 3 rem a quarter, provided they're on our form for recording of dose. And they're in a new quarter now. During the first quarter of the year, which ended March 30th, I believe there were only something like four individuals who exceeded their quarterly dose. And these were primarily not operating -- not the operating staff as much as they were maintenance, health physics, and those types who have to go out into the plant and do specific jobs as part of the recovery operation.

QUESTION: Are you saying then that you could have men exposed to 6 rems altogether because you got 3 rems on March 31st and 3 more on April 1st?

MR. KREGER: The allowable dose is 3 rem per quarter. There's another clause in the allowable dose requirements that $5 \times N - 18$ -- where N is the age of the person is the cumulative lifetime dose allowable. If an individual

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2 is under his cumulative lifetime dose, he can receive as much
3 as 3 rem each quarter of the year. That would be 12 rem per
4 year under our current regulations, as per 10 CFR part 20.

5 MR. FOUCHARD: Before we do any more questions, I
6 like to ask Mr. Kregger just to describe the situation in the
7 control room. A number of you have asked me about it, and
8 we brought Bill down here today just to tell you what's going
9 on there.

10 MR. KREGER: I've been in the control room since
11 Friday afternoon about 2:00 o'clock on the night shift running
12 from 8:00 o'clock at night until 8:00 o'clock in the morning.

13 We've been operating out of the control room, even
14 the group that reviewing the health physics practices and
15 overseeing the health physics operation.

16 That activity forces us to stay, so to speak, behind
17 the scenes in the control room. We've observed from the
18 very beginning a very calm, very professional attitude on the
19 part of the staff which consists of the shift supervisor,
20 the senior operators, the auxiliary operators, and for the
21 first several days the health physics staff was operating out
22 of the control room. 14 130

23 These people -- in viewing that scene, there's
24 no evidence that there's anything but a very orderly, very
25 professional operation going on. The people are monitoring

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2 the gauges, monitoring the status of various plant equipment,
3 some of which -- almost all of which reads out in the
4 control room, either on strip charts or dials or status
5 boards.

6 And this operation has been very, very well
7 carried out. There's no direct evidence of any panic
8 situation, any nervousness on the part of the staff. They're
9 a fine group of professionals, from our view, for the last
10 six nights.

11 QUESTION: There was a local broadcast report
12 last evening that persons living in the vicinity of Three
13 Mile Island will be monitored for years to come. How will that
14 monitoring be accomplished and over how long a period of time?

15 MR. DENTON: I think the state health department
16 does plan to take urine samples relative to -- just as a check
17 on the uptake of radioactive materials. Exposure from noble
18 gas clouds such as have been predominant by far the route of
19 exposure, we're not doing that.

20 QUESTION: I'd like to ask Mr. Kregger if he could
21 tell us a little bit about the feelings during those first
22 few hours when admittedly you didn't have much information
23 to go on and didn't quite know exactly what was going on in
24 the containment. 14 131

25 Did you folks fear that perhaps the worst might

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2 be going on there or were you confident at all times that you
3 could control the situation?

4 MR. KREGER: Recognize that I was here from Friday
5 noon on; we were getting word in Bethesda about the various
6 things that were happening. The communication difficulties
7 that occur, even locally, make it very difficult to say from
8 afar, from Bethesda, for example, as to what the feeling was
9 how to characterize the situation.

10 My reaction from seeing the activity from Friday
11 afternoon on was that the situation must have been well under
12 control, even during the early hours, as far as activities
13 of the staff.

14 QUESTION: It appears from the outside that
15 Met Ed remained in charge of the operation for the first three
16 days and it is a fact that they helped -- were they in fact
17 in charge and why are they no longer apparently permitted to
18 give information to us?

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2 MR. DENTON: Well, the applicant was still in
3 charge of proposing changes and actually directing the Staff
4 to make some changes, although there is the monitor. All of
5 their operations would have a potential impact on health
6 and safety.

7 And as I mentioned earlier, we have a critical
8 understanding. We will approve any change in the mode of
9 the core, the offgas treatment systems, any other system that
10 has a potential significant effect before it's implemented.

11 QUESTION: Why are we not getting information?
12 mean, why is it all coming from you?

13 MR. DENTON: I might mention that their staff has
14 now been considerably augmented by representatives of other
15 power companies, the Duke Power Company, the Commonwealth
16 Edison Company, a number of the reactor industry companies,
17 ten to fifteen senior management executives from these other
18 companies that are now integrated into the line management
19 of GPU. And I was told this morning that there were approx-
20 imately 250 people now there working in this new recovery
21 team that were not here several weeks ago.

22 MR. FOUCHARD: One more, right here.

23 QUESTION: I just wanted to clarify something
24 about the timing of the B&W plant. 14 103

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2 if you decide to do this, that by Monday you would be ready
3 to actually start cooling, and five days from that would
4 accomplish shutdown?

5 MR. DENTON: The plan that we discussed with the
6 company and B&W, I think it was yesterday, had a projected
7 time table of ten days, with the first five days being
8 continued operation in the mode that we're in now, and then
9 about a day per step for the five steps required to bring it
10 to the cold shutdown.

11 As we grow in our bureaucracy and look at
12 procedures more carefully and bring the people in and form
13 more advisory safety committees, I get more doubtful that
14 we'll meet that schedule.

15 QUESTION: Have you checked the logs of the
16 pump surveillance to determine whether the company backstopped
17 or company inspectors backstopped their own people who worked
18 on those valves? And would you make those logs available to
19 the public?

20 MR. DENTON: I think they will be made available.
21 14 104 We have a separate unit that's called Inspection
22 and Enforcement. We have investigators. The operators who w
23 on shift at the time of the incident have been interviewed.
24 And that's the area that I've not devoted a lot of attention
25 to. But it is an important area.

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by individuals other than those involved in the direct recovery operation.

MR. FOUCHARD: Thank you very much.

(Whereupon, at 4:46 p.m., the press conference was concluded.)

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