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PRESS CONFERENCE

ON

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P R O C E E D I N G S

MR. FOUCHARD: Well, if you're ready, we're ready.

We thought we would come down here this afternoon and bring you up to date on the situation with respect to the Three Mile Island matter. And I don't believe, as I said yesterday, that I need to introduce Mr. Denton, but here he is.

MR. DENTON: I think there's been a steady improvement in the status of the plant. We've made a lot of progress in planning for eventual recovery of this core. There's been a lot of technical attention given to this issue. I'm pleased to report that there's been a lot of participation by the major nuclear industry and by the power companies that utilize nuclear. They are contributing to this effort.

The core remains stable. There's very little to report in terms of change of the core. We haven't yet approve a plan to move it from this state. B&W has proposed a plan to GPU, and we're looking at this preferred plan.

The preferred plan involves establishing a mode of cooling which minimizes the need for equipment inside the containment to operate on a long term basis and which minimize the release of contaminated water outside. The plan is basically one that involves natural circulation within the

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reactor vessel and a solid secondary side, water in the steam generator to remove heat.

We've had one more piece of equipment fail due to radiation levels since yesterday, a pressurizer level. But there are two other redundant level indicators and other ways of establishing the level. We are continuing to develop contingency plans for that.

Yesterday there were some questions about offsite doses. The calculation up to about noontime yesterday indicat that the maximum offsite dose received by any individual from direct radiation was about 85 millirem for someone who was continuously present at the bridge on the north side. The maximum manrem -- this is the summation of all the doses received by people out to a long distance -- the maximum manre as of yesterday was about 1800 manrem, 1800 to 2000.

Other than that, I have very little to report except the progress that we are making, and going over procedures and developing contingency plans.

14 128 QUESTION: Mr. Denton, can you tell us at what point you are with Herman the Robot, and how Herman the Robot is actually going to perform his assigned task, and what that task would be; how you're going to get him in there without any radiation escaping?

MR. DENTON: We haven't yet used Herman the Robot

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He's a mechanically operated robot with two TV cameras mounte
He can perform simple mechanical functions, has an umbilical
cord of 3- or 400 feet. We hope to use him to take samples
in high radiation areas and avoid unnecessary exposures to
people.

We thought perhaps we would have a sample taken by him when there's another activity going on in the region of that plant, and we'll probably use him sometime later tonight.

QUESTION: Newsweek quotes your deputy Edson Case in describing what happened in the accident as saying:

"Somebody was screwing around with some of the equipment in the feedwater system."

Could you explain what he meant by that?

MR. DENTON: I guess I don't know what he meant, but I can tell you what I think he meant.

We have provided back at headquarters all the information we have on the chronology of the accident. And those look to us as though two very important systems were removed from service at critical times. The auxiliary feedwater pumps had been tested for routine surveillance and had been made inoperable as a result of that and were not in service at the time of the transient. 14 [illegible]

Then, when the relief valve operated during the

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transient, and the high pressure injection system, safety injection system, was turned off, that the plant lost its two ways of cooling during this event.

QUESTION: Could you be more specific about the exact options you have to cool down, and which ones are in the B&W plant, and also even a general time frame when you might start to coll down; one day, two days, three days?

MR. DENTON: The presently proposed plan we're looking at involves -- would require about ten days to cool down. It requires continually in the present stage to do as much degasification of the primary system as we can.

You should remember that there's still a lot of dissolved gases in the primary coolant system, somewhat like a bottle of champaign. And so it's establishing outgas in the primary coolant.

The option would be that -- to cintunue outgassing for a period of time, select the optimum temperature for establishing natural circulation in the primary system, which means you don't have to rely on recirculation pump operation, to turn off the primary pumps, go into the natural circulation and fill up the secondary side of the steam generator solid with water and remove heat that way. 14 140

By cooling the plant this way you minimize the need for instrumentation. The pumps are inside the

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containment, and you don't take contaminated water from inside the containment outside.

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QUESTION: May I follow up on that. If I could just follow up; is it the only thing that's standing between starting the process, including the B & W plan? In other words, would it be one day or two days? Is that the only --

MR. DENTON: Well, the first phase is just the reapplication, and that's what is going on now. So in a sense while we look at the plans for what might be implemented in a few days, we are doing -- well, maintaining the plant. That what we recommend over the next few days.

QUESTION: You might --

MR. DENTON: It's possible --

QUESTION: Can you explain the possible advantages of the B & W plan? Can you tell us what the possible risks o disadvantages of that plan would be?

MR. DENTON: Well, there are several other ways to remove heat. One would be to go to boiling inside the vessel, for example. This gives you higher flow rates than does natural circulation. Another way would be to go solid inside the -- have the reactor vessel full of water. We now have time to look at these types of systems and carefully analyze them and analyze the contingincies that is what we would do if we were in of these plans and the equipment failed.

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There's a very large industry effort going on now

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involving combustion engineering. B & W is examining the accident in great detail.

QUESTION: What are the risks of additional radioactive leakage from another B & W plan?

MR. DENTON: Risks from?

QUESTION: From a B & W plan, of additional radioactive leakage?

MR. DENTON: That plant is designed to minimize the risk of additional leakage. It does not require taking contaminated water outside the containment vessel. It would place the plant in a condition where the water inside the reactor vessel would be cooled by natural circulation through the existing steam generator which is now being used.

QUESTION: Doctor, I understand that the reactor chamber itself is constructed of four foot thick concrete reinforced steel. The auxiliary building that contains radioactive water, has that been so constructed similarly and will that withstand the impact of -- severe impact of an airplane accident as the reactor building?

MR. DENTON: No, it's not as well protected as the containment structure. It's not as vital in terms of protection from airplane crashes as the containment was.

QUESTION: Is that now filled with possibly radioactive water?

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MR. DENTON: No. Most of the water in the auxiliary building has been cleaned out, but the water that remains on the floor has slowly evolving iodine and it's a source of continuing evolution.

QUESTION: During the chronology that you gave us, when were these tests being done before the accident? What was the time lapse before operation --

MR. DENTON: I've not focused much attention on the exact chronology of the accident. I'm leaving that to our people in Bethesda. I've been more looking forward.

QUESTION: You had mentioned the emergency cooling pump a number of times; am I correct in believing that someone had -- during testing had not followed the standard procedure and that pump was then directing water into the condensor instead of the reactors as it should have been?

MR. DENTON: I think that the critical aspect of the auxiliary feedwater pump should have been in action and was not at the time of the transient. There would have been an entirely different outcome if it had been in operation as it should have been.

QUESTION: Is that --

QUESTION: Could you give us the present radiation levels in the containment? What were the radiation levels attained at the highest during the incident? And could you also give us your best estimate as when you might start to

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draw down the contaminated water in the containment?

MR. DENTON: The radiation level in the containment is not changing very rapidly. I think the monitor in the dome is still reading about 30,000 R an hour. And we have no time estimate for getting the contaminated water out of the containment.

It will be some time before any movement of that contaminated water is attained.

QUESTION: And the height of the radiation, the highest levels measured?

MR. DENTON: I don't know what they were. It's my understanding that they've been slowly rising throughout the last three or four days, so they probably were not that high during the first part of the incident.

They've been going up due to the dissolved material in the water that's been going on as a result of the release.

QUESTION: Are you concerned, doctor, that the other pressurizer level tanks have been maintained --

MR. DENTON: That's something we are looking at. There are other ways -- it reminds of a need for constant vigilance in this area, and we are planning on backup plans as we might lose various instruments.

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QUESTION: I'm still a little unclear. What are the major risks of the B&W plants?

MR. DENTON: My own view is that it looks very favorable. I don't want to comment on it in an authoritative manner until the Staff has had a chance to look it over and we've reached some position.

It was given to us last night. It's been looked at all day. It looks certainly like a reasonable approach. But we've not yet concurred on that point any.

QUESTION: What would be the psi in the primary loop; the pressure level, during the B&W plant?

MR. DENTON: I think at the end of the B&W plant the temperature would be between 150 and 200 degrees, and the pressure would be down and maintained at 100 psi or so.

QUESTION: Stayed down?

MR. DENTON: Yes.

QUESTION: You said that there is still radioacti iodine being emitted from the water in the auxiliary building How long will those emissions continue if they are going to the environment, and how long can we expect some protection of radioactive iodine in the area, and the water in this area

MR. DENTON: I hope we will continue until we are able to institute a clean up of the building. Plans are to decontaminate the auxiliary building. We installed special

filters.

Let me ask Frank Congel, who I brought today, who's the section chief in charge of assessments and offsite doses, to give you a quick rundown on what the offsite doses from releases of noble gases of radioiodides and releases to the water have been, and he can just summarize that whole area for you.

QUESTION: Would you repeat his name, please?

MR. FOUCHARD: C-o-n-g-e-l, first name, Frank.

MR. CONGEL: I'm section leader of the radiological assessment branch.

We've had an opportunity to look at some of the data that has been collected from the duration of the accident, and based on the monitored results, we have indicated there have been about an upper limit estimate of one millirem per day to the thyroid of a child who could have been in the area for the duration of the accident up until about yesterday at noon. We would estimate a dose of less than five millirem to one of the more sensitive individuals.

I emphasize that this is probably an upper limit dose because the people weren't there for the whole period of time, as we have assumed in the calculation.

Mr. Denton also mentioned earlier that our estimate of the offsite dose from primarily noble gases has

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been on the order of 85 millirem. This would be at a locatio
near the north ridge on the east side of Route 441.

Once again, this assumes full-time occupancy and no shielding that would be afforded by structures such as a residence.

We've also examined the doses that were possible from consuming water that has gone from the Susquehanna River intakes downstream from the Three Mile Island facility, and the dose that one could -- the maximum dose that one could hypothesize from this situation based on the data that we were furnished is less than one-tenth of a millirem. We estimate something like .05.

So at this stage of the accident the doses are still in most cases very trivial, and even in the case of the 85 millirem, very small.

QUESTION: I'd like to ask Dr. Denton:

In your language, what word or words are you usin to describe the condition at the island; dangerous, emergency what word?

MR. DENTON: I think I would describe the conditi as improving, very stable, and rapidly approaching those of - with the exception of all the contamination, contaminated water that has to be dealt with, approaching the situation in which normal methods for cooling -- not quite normal --

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QUESTION: In comparison to normal, which would be the core would be functioning and generating power. Now what is this called when you have a breakdown like this? Emergency?

MR. DENTON: Well, I don't see any serious offsit problems associated with the present mode of operation. I think the reason we're taking a while to look at these and bring them on down is to minimize the release of radioactivit

QUESTION: Do your regulations require the auxili feedwater systems to be operational when the reactor is opera tional?

MR. DENTON: Yes, sir.

QUESTION: Do you have air locks for putting the robot in the building?

MR. DENTON: The robot is not in the containment. It's being used in the auxiliary building.

QUESTION: What I mean is he asked how you were going to get the robot in without letting the radiation out.

MR. DENTON: The robot is not going into the containment building, which still has a negative pressure. He's being used in the auxiliary building and just samples things.

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QUESTION: The switch that was turned off on the auxiliary feedwater pumps at the time of the accident, is th

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operated manually, and is it your understanding it was turned off during testing a couple of days before the accident?

MR. DENTON: My understanding is the system was tested and these valves that are required to make the system functional were left in a closed position.

QUESTION: Are they operated manually?

MR. DENTON: They're probably remote manually. I don't know just how.

QUESTION: Mr. Denton, what offsite dangers might there be by the amount of contaminated water in the containme: building?

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MR. DENTON: I think it would represent a potential for contamination if not carefully controlled, but I don't think there is any danger of that water getting out in the near future. That's one of the plans that has to be developed for decontamination and treatment of that water.

QUESTION: Mr. Denton, you said that the proposed procedure, proposed by B & W, would take about 10 days to bring it to cold shutdown.

What would be the number of days required to reach the status you want to initiate the procedures? In other words, I'm talking about --

MR. DENTON: About five days. That is also needed to develop the procedure, make some equipment modifications, so that the mode of cooling from using the recirculation pumps and the natural circulation can all be in place.

QUESTION: I don't want to push you into this, but are you close to the decision on the selection of a mode or procedure?

MR. DENTON: Not to date.

QUESTION: Sorry, we couldn't hear the question.

MR. FOUCHARD: Not to date.

QUESTION: No, we couldn't hear the question.

MR. DENTON: The question was, how close are we to changing the mode of operation if we were to adopt the [illegible] proposal. And the answer is: five days away from now

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would be the kind of time that we could put in place the procedures and equipment changes to allow adoption of the proposal.

I'm including that five in the --

QUESTION: Are you saying you don't know when you will start decontamination? How long will decontamination take and where will you put the material you take out?

MR. DENTON: We are looking -- that's obviously much further out in time than the immediate problems we've been discussing about core cooling. It's probably months away.

QUESTION: What kinds of wastes have been removed or are scheduled to be removed from the plant in the next few days, and where are they?

MR. DENTON: We have authorized the applicant to resume release of the industrial waste water that was suspend last night. It was suspended when it was thought it was being released in excess of the license requirements. As I say, we suspended that. We've now had a chance to go back and reanalyze the concentration of the radioiodides in that water and recalculate. And I would assume that the release of that water has now begun again. It's concentration is about a third of that to be permitted under normal operations

14 1:2 QUESTION: Mr. Denton, I believe you said earlier

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that the 30,000 rem per hour of radiation per hour in the containment is not causing an immediate problem. I believe you said that it doesn't pose any problem at this time. When would it pose a problem? And when you're talking about decontamination being months away?

MR. DENTON: Well, if released it would pose a problem. But the containment is still under the negative pressure. Leakage is inside the containment. And there are no plans to have any release of that to the outside. In fact that's one of the major considerations for B & W's developmen of a cooling scheme which doesn't require bringing any of the material inside the containment to the outside auxiliary building.

QUESTION: As long as there's a negative pressure in the containment building there will be no problem?

MR. DENTON: As long as there's a negative pressur there's only the -- but I wouldn't be bothered by small pressures in containment because, after all, it's designed to be essentially leak-tight under very high pressure.

QUESTION: It could take months?

MR. DENTON: Yes, sir.

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QUESTION: Besides the failure of the auxiliary feedwater system at the time of the accident, what other violations of NRC regulations do you see?

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MR. DENTON: I really haven't gone back and tried to do a point by point check of that. I do know that the failure to maintain the auxiliary feedwater pump operation was in violation of the license.

QUESTION: I don't know if Dr. Denton answered this, and I'm just asking out of curiosity; if unit one had been in operation, would the accident have affected unit one?

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MR. DENTON: The -- this is speculation -- there would have been no reason for it to have been affected by what was happening in Unit 1. But because of the leak, in view of some of the effluent treatment systems that it passes through in Unit 1, I'm just as pleased that it's not operational and that we are able to use Unit 1 facilities for some of the wast clean-up in Unit 2.

QUESTION: You said there was very little radioactivity released. The Governor's said he's relied on your estimates to determine (inaudible).

Since your tests show that very little radioactiv has been released, why is that voluntary (inaudible) necessar Is it still a threat?

QUESTION: Would you repeat the question?

MR. FOUCHARD: I couldn't possibly repeat the question.

MR. DENTON: I think the question is, why is the Governor's ban still in effect.

As I've said before, that's a decision for the Governor. But it seems to be a prudent one until we get the pumpback system working that we hope will pump back into the containment those gases that are now being occasionally and intermittently released.

QUESTION: Do you have an estimate for the total

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amount of transuranics that are in the cooling water?

MR. DENTON: Let me ask Frank.

No, I don't have that data.

QUESTION: Mr. Denton, you said that if those two systems, the auxiliary feedwater, had been unoperational, an accident of this magnitude wouldn't have reached. And then you explained that the failure was not of systems, mechanical failure, but one of procedures, and the fact that two valves were closed.

Does that mean that the accident raises less seri questions about reactor safety systems than it might have bee thought earlier on?

MR. DENTON: I guess I don't really want to get into that area yet. There were two independent systems provi ed to deal with feedwater transients, and these systems were- each system had redundant components. And in this situation, both the auxiliary feedwater systems, the two systems, were not operational and both the safety injection systems, which did come on, were turned off.

MR. FOUCHARD: One more, right there.

QUESTION: I'm a little confused about the detail of the Babcock and Wilcox plant. Could you explain that some more?

MR. FOUCHARD: The details of the Babcock and

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Wilcox plant?

QUESTION: The details of the B&W plant, sort of a schematic of the procedure. Could you do it more systematically?

MR. DENTON: Maybe next time we do a briefing, we could bring down a model and do that.

MR. FOUCHARD: I think there must be some literature around that describes the B&W plant.

QUESTION: In your answer when you were asked about the governor's advisory, how soon would the conditions change that he might be able to change his advisory?

MR. DENTON: Well, I was hoping we'd be able to report that we had this pumpback system every day for some day. And we continue to have problems getting it fully operational.

There is hydrogen in the waste gas tank that we had hoped to pump back into the containment. So we were waiting originally to get the recombiners running -- and, incidentally, they are running well, their performance is exceptional. The hydrogen is coming down in the containment.

14 107 We took a second sample of the waste gas tank and it showed some oxygen in the tank which we think was really -- indicates the sample was contaminated by air. So we're now waiting for another sample of the tank to show whether or not there is any oxygen in the tank before we change its status.

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MR. FOUCHARD: Thank you very much.

(Whereupon, at 4:10 p.m., the press conferen
was adjourned.)