THE PRESIDENT'S COMMISSION
ON THE ACCIDENT AT THREE MILE ISLAND

PRESS CONFERENCE

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QUESTION: What are the biggest areas of confusion (inaudible) coincide with ours?

CHAIRMAN KEMENY: Let's see. Of course, I tried summarizing yesterday what I thought we learned the first day of the hearings, meaning the first afternoon and the next morning, so Pat let me concentrate on yesterday afternoon and this morning. To me, of course, the major issue here is the NRC, and what it's role is, and what it's role ought to be. Let me remind you that this is one area in which President Carter's orders to our commission are very specific. We are to examine NRC all the way from licensing to regulation, through how they enforced their own operating rules, to how they reacted to the emergency. So, therefore, this is a very major area and that's why I said this is, of course, only the first conversation we had with them. And, to my mind, this fell into two different areas - I think with the Denton through Mattson we were really probing in the emergency reaction. Mr. Commissioners, this was our first attempt to try to understand how the commission really functions. I find it extremely enlightening from that point of view. You know, it's easy to look at an organization chart - we all have them in our briefing books, and we have studied that - but an organization chart doesn't tell you anything about what really happens. For example, I found fascinating the description of the division between staff and the commission and the statement that several of

the NRC commissioners made that, because of the press of other business and the traditions that they fell into that, as I understand them to say, they really did not have a great deal of time to spend on consideration of questions of safety, unless they were specifically called to their attention. I want to go home and think a great deal about whether that's right. Right in the sense that that's the way it ought to be.

QUESTION: Why inclination to think it is the way it should be?

CHAIRMAN KEMENY: My first inclination certainly is that that's not the way it ought to be, as a matter of fact, let me say I was naive enough to think that that would have been a major infrequent subject of conversation amongst them, but after having listened to them, it looked as if I have very distinguished and extremely able people. I keep forgetting, and I have enough experience with a small bureaucracy to know that they are dealing with an enormous bureaucracy, and enormous public pressures. I almost got the impression - and this is a personal impression - that they are swamped - there are so many other issues they have to deal with. I doubt very much this was a conscience decision on any of their parts, that this is the way they ought to spend their time, but there may be something wrong with the system that they have to deal with so many of what I would consider lower priority items, that they may not

the time on what I would consider higher priority items, and maybe this commission could help with some recommendations or at least structuring them. Look, I can tell you as President of the university, that's almost your number one battle, and you lose it as often as you win it. Your number one battle is not to let the hundreds of problems that people try to force on you swamp you to the point where you don't have time to sit down and think about the big issues. And there are certain times of the year that I lose that battle, but I try not to let it happen for over any extended period.

QUESTION: Certainly you missed a couple of big issues because you didn't give it priority. Can't you make this same assumption for the NRC or any other group? One thing they put down on the list is the one that's going to pop up later and embarrass them.

CHAIRMAN KEMENY: Yes, I'm certain that that is true. But it does seem to me that there was a really extended period over which they have not had the systematic discussion on the philosophy of safety issues. DeSota said that was settled in '75, as I heard it, and they only reviewed the individual issues that came up - that really surprises me greatly.

QUESTION: Can you explain for us the continued isolation provisions and the differences of the (inaudible)?

CHAIRMAN KEMENY: Yes, I would be happy to. We had

the advantage that the small group of us who knew least about engineering got a lecture from the staff on these issues, which I found most helpful. Mr. Lundin and his colleagues conducted it. And, this particular plant - first of all the containment buildings' major purpose is to contain any radiation. That does not mean that it is in a state normally where no radiation can come out of it, because the presumption is there's no radiation in there, or totally negligible amounts in there normally. So, therefore, the containment building is really like a safety device, like pulling up these seatbelts that you just have loosely around you, but under certain circumstances, when you need it, hopefully they catch you - the containment building is that kind of device. And, that under certain circumstances, I understand, every nuclear power plant has conditions under which the containment building is isolated and that may mean different things at different plants but, basically, that's the moment at which it really is containing radiation. On this particular plant, only one condition triggers automatic isolation. There's an operator could isolate, but there's only one condition that triggers it automatically, and that is, if the pressure in the building gets over four pounds per square inch - I think that's the number, isn't it? - it turns out that this did not occur in this particular building until more than four hours had expired. I think that's right. It's past the four hour point, by which time a good deal

of radiation had gotten out of there. Now, actually, in a way we were lucky that the radiation releases were not enormous here. But, I mean, consider, suppose the same sort of circumstances had happened, there had been huge radiation releases, but for some reason the pressure hadn't come up to four pounds, then huge amounts would have gotten out. I mean, that's where I was questioning the commissioners, several of us independently sort of said, we had just assumed that whenever you detect more than some normal amount of radiation, that the building would be isolated automatically. And I understand that all buildings that have that feature isn't that true?

MR. LUNDIN: I was just talking to Dr. Kemeny. Perhaps I should add that going through the walls of the containment building are, of course, many pipes carrying fluids essential to the normal operation of the plant and, when we use the word to initiate isolation, what actually happens on some signal, blocking valves on both sides of containment are automatically shut to prevent the flow of fluids. That's the meaning of isolation.

CHAIRMAN KEMENY: That's the meaning of isolation. I mean, normally, there's a lot of stuff going back and forth between the containment building and, say, the auxiliary building from which radiation escaped in this case, but in isolation, everything non-essential would be turned off.

QUESTION: So, to continue then, this reactor differed

from the newer design because it only had one way to isolate?

CHAIRMAN KEMENY: Yes. As I understood, under the new regulation there are three conditions and every plant must trigger under at least two of those - that's what I heard. And it so happens the one under which this triggers did not occur here for four hours. Either of the other two conditions would have triggered much much earlier. One of them is, when the emergency water system came on, which came on within minutes, if not seconds, within the first minute, actually, so, if that had been the condition that building would have been isolated within a minute.

QUESTION: The auxiliary injector, not the emergency core.

CHAIRMAN KEMENY: The emergency core - I understood him to say the emergency core coolant system was one of the three conditions. He said you must pick two out of three. I think he's used high-pressure injection, that's the same. And, therefore, that came on within a minute, so that would have triggered isolation if that condition had been accepted. Or, of course, they did have various radiation alarms go off much earlier than four hours, right? Certainly, it must have been radiation alarms?

MR. LUNDIN: I think at least twenty minutes.

CHAIRMAN KEMENY: Yes. So, even in the first hour, so even if it had been on the radiation level, it would have triggered well within the first hour rather than more than

four hours later.

QUESTION: (Inaudible) regulation would have prevented the ultimate venting of the radioactivity?

CHAIRMAN KEMENY: That's a harder question to ask - answer - I don't want to speculate on that til we can do a great deal more analysis. I think it would have caught some of the early ones. But, remember in this plant enough different things went wrong, remember major venting occurred on Friday, OK, and the point there is that they have to get rid of some stuff, apparently, and, at least that's what argued, and presumably, in that case, if that was the right decision, they would have had to violate isolation there. So, I do not mean to say that that would have solved all the problems.

QUESTION: One of them (inaudible) the auxiliary building?

CHAIRMAN KEMENY: It was, let's say it was in the make-up pump, that is, it was in a system that is part of the primary coolant system, the tank itself is in the auxiliary building, but it is part of the primary main cooling system that was accummulating these gases.

QUESTION: (Inaudible) the auxiliary building?

CHAIRMAN KEMENY: No, but the, under isolation, all but the most essential flows would have been cut off from the auxiliary building, so the kind of thing that that prevented was, there was water flowing from the floor or

from tanks in the main building onto tanks and eventually the floor of the auxiliary building. It would have helped that kind of thing. I'm saying it would not have helped the problem you're probing.

QUESTION: Well, would it have prevented the water going into the tank in the auxiliary building?

CHAIRMAN KEMENY: That's my understanding on the containment, isn't it?

QUESTION: What would have prevented the opening and problem of (inaudible)?

MR. LUNDIN: We can't say for sure at this time. To answer your question requires further study, but, as the accident progressed and as the plant continued to suffer greater damage two or three days after the initial event it may have been necessary to put some of the waste water back into the auxiliary building. I don't know for sure.

CHAIRMAN KEMENY: Yes, that's what...(interrupted)

MR. LUNDIN: The initial radiation the first day or two that isolation would have...(interrupted)

CHAIRMAN KEMENY: Yes, that was what I was trying to say...(interrupted)

MR. LUNDIN: It's highly speculative what might have been later on.

CHAIRMAN KEMENY: Yes, this is what I was trying to say, that it could have helped with the Wednesday problem, but not necessarily with the Friday problem.

QUESTION: Dr. Kemeny, is it your impression that the containment pressure reached the point of automatic initiation of isolation? I guess that's because it was my impression from all the (inaudible) who reading the scenarios and the sequence of the accident, that isolation was operator-initiated, and I think that it was operator-initiated after the operator was advised that there was water in the basement of the auxiliary building.

MR. LUNDIN: No. It was automatically initiated when the pressure in the containment vessel reached this four PSI pounds per square inch gate. It was then...(interrupted)

QUESTION: (Inaudible) initiated when the pressure was about two point eight.

MR. LUNDIN: No. When the pressure reached two point eight level or so, the plant was not isolated, because it does not isolate automatically until four PSI G is reached. Subsequent to that point, and I don't remember the exact time, isolation was lifted by operator action in order to control the fluids in plant - to try to get the plant in a stable condition.

CHAIRMAN KEMENY: The best chronology we have been able to put together - I did check it - was something like four and a half hours after the accident that isolation came on.

QUESTION: Dr. Kemeny, I believe you were commenting this morning that the failure to oppose on the TMI (inaudible) 1975 regulations because an operating permit had been granted

earlier, was, in effect, made it hopeless to ever get plants up to the optimum level of safety unless - it's sort of like fighting tomorrow's war with yesterday's generals - that sort of thing. I wonder if you would elaborate on that?

CHAIRMAN KEMENY: Yes. I was - it's the basic philosophy that bothered me here, that in 1975 there came up this new improved regulations. I don't know their details, but the only detail that was mentioned looks to me like a significant improvement in the safety of the system, and the remark was made that, of course, all previously plans had been grandfathered on that, even those that were then under construction. And, remembering that one of these plans has something like a forty-year lifetime, I was somewhat surprised, well, shocked, I think, is a better word for it, that, if they discover for presumably good reasons that there ought to be stricter standards of safety, that they apply them only to future plants and grandfather, older plants. Of course, I'm not suggesting that it should have been applied within twenty-four hours to all existing plants, but I would have imagined that some system of, on a reasonable time table, applying it to all existing plants would have been initiated.

QUESTION: You are apparently a fairly sane human being. Can you believe that the reasons for not having done that, that economics must not have been a fairly major part of the NRC decision not to require that sort of, I think, back-sitting as one of them.

CHAIRMAN KEMENY: It's hard for me to believe that economics would have played no part in it.

QUESTION: How large a part might you think?

CHAIRMAN KEMENY: I would need more evidence on that, but certainly, my problem is, let me tell you why I'm giving a hesitant answer, which is not like me. I don't really understand at the moment how NRC works and, you see, it's not clear to me, remember in my questioning of the commissioners as to whether they were even aware of this. I really would love to know at what level that decision was made, before I answer that question. You see what I'm after?

QUESTION: Can I follow up, sir? Do you then, are you sort of registering a belief that there is insufficient attention to problems of safety on the part of the five men who got this statuatory responsibility?

CHAIRMAN KEMENY: I'm at least saying that they seem to have delegated a huge portion of that to staff below them, and I'm conjecturing that they are swamped with things that I would consider being of lower priority.

QUESTION: I was wondering if you heard anything today that suggested to you that anything less than the accident that occurred could have brought this to be a (inaudible) of the NRC, much less the public. Commissioner Kemeny mentioned some library on the site, but how would the ordinary person know that there were unsafe conditions

since they hadn't been allowed to see the plant, since the licensing procedure, I gather, was carried out, unless there was inconvention in total secrecy, so that there had to be an accident for anybody to know that there was anything wrong.

CHAIRMAN KEMENY: Yes. I suspect that you're absolutely right, that some significant accident had to occur to bring a great many of these issues out into the open.

QUESTION: Could I follow up, Doctor, I noticed that all of the commissioners, or at least three of them, in their discussion on emergencies, kept referring to this emergency as though there had been others. Has your commission unearthed any information about others as such and, if so, what kind would they have been?

CHAIRMAN KEMENY: No. That's not primarily part of our charge, though we have heard witness after witness say that this certainly has been by far the most significant accident by an order of magnitude. You certainly are aware, for example, some of the references to a famous that kept being asked about was a study made after an incident, which did not turn out to be terribly serious, but which signaled to one researcher the possibility of a certain kind of accident coming. So, we certainly are aware of that.

QUESTION: Dr. Kemeny, on the - returning to the applicability of these new higher standards that now seem to have developed - you got testimony today that they did have a group to review all the plants to find out what

should be done to bring them up to the newer standards, but their working for a year and nothing specific had been recommended beyond eleven plants were being studied. What would you consider a fair time frame to allow for those kinds of studies?

CHAIRMAN KEMENY: I don't know, because this information is still so new in my mind, I really would like to have a chance to think about it and answer it. Certainly, forty years does not seem to me a reasonable time span.

(Laughter)

QUESTION: Is there anything in your mind or in the panel's mind about who knew how seriously damaged the core was at what point? It seems that the company people said they didn't know for days or weeks - it was the NRC people seemed to say they thought it was serious right away, but never bothered to tell anybody. Is that one of the areas of confusion you have?

CHAIRMAN KEMENY: Let's see. We are trying very hard to establish over this crucial first few day period, as you noticed, particularly Professors Taylor and Pigford are digging very hard on the question of who knew what when to try to correlate the actions that were taken. Because, the reactions were reasonable or unreasonable, including, for example, what was made public or what - remember our charge was investigating the public's right to know - whether what the public was told or not was reasonable or unreasonable

depends on what people knew - who knew what at what time.

QUESTION: Does it strike you like it strikes me that some of the answers were slippery or evasive?

CHAIRMAN KEMENY: What is hard for me to judge is how much of that is due to two factors, one, that some two months have passed since that time and, secondly, that they have been asked a question so many times that, I know this has happened to me, I forget now what an incident - there's a story I've told a great many times, which I fully believe to be absolutely true, and I managed to find the original document in which it was based several years later and it turned out I had a major mistake in it but, then, after you've told a story enough times, you've heard you say it so many times, that you really believe it. I bet you, with the degree of confusion, it is hard for any one of the individuals to be quite sure as to when they became aware of something.

QUESTION: Doctor, the other day - in light of the statements that were given here about what the four members who were here in Washington knew and were thinking Sunday morning, do you think that there was reason for them to have recommended that President Carter not visit the site that day?

CHAIRMAN KEMENY: Well, that's what we were trying to probe. There's at least a question in my mind on that subject, and the exact time table is a little hard to

reconstruct there because while that was going on in Washington, we heard testimony that they were discovering on site that somebody had goofed in the calculations, and I think that's what the testimony amounted to. So it really depends in my mind as to just who knew what when there and that may come down to a matter of minutes or hours almost as to whether it was or was not reasonable. It sounds awful close to me, may I say that.

QUESTION: Didn't they testify here that they weren't sure that the flammability problem and (inaudible) problem was ruled out on Sunday?

CHAIRMAN KEMENY: Yes, they certainly did that. The question is, and I don't know - I'll have to ask an expert on that, as to whether that's a problem that's likely to arise in minutes or something on which you would have several hours warning. You see, it could make a great difference (inaudible).

QUESTION: On Wednesday, I believe, you commented on the obsolescence of the instrumentation in the control room and Dr. Denton and many other people have talked about the communications difficulty. My question to you is, at this stage in the hearing, do you believe that if the communications had been adequate or accurate between the NRC and the situation at the plant that an evacuation might have been ordered, perhaps even on Wednesday?

CHAIRMAN KEMENY: No. On the contrary, all the evidence is now in the direction that an evacuation should not have been ordered at any point. I mean, that it was based on mistakes. But, I mean, that's something that we are going continue to probe. If I may come back to the instrumentation issue, on the other hand, I'm becoming increasingly convinced on the base of just these two days' testimony, that if there had been decent instrumentation in that room, that the very same operators there, and the very same sequence of events, none of us would be here today, because there would not have been a serious accident.

QUESTION: That, in other words, the make or break variable there was the layout and condition of the instruments?

CHAIRMAN KEMENY: I'm saying that was a major contributor to it, I'm not saying - look, there are many other ways that it could have been avoided. I mean, if there had been some of the really extremely knowledgeable there early who had recognized some symptoms, though they were hard to find on their board...(interrupted)

QUESTION: What I was just trying to pin this down, if I could. That you're saying that, given the same set of circumstances, and the same operators on duty, and different and more efficient instrumentation, then you wouldn't be having this here.

CHAIRMAN KEMENY: Yes. Let me give you just two examples, so it's not just an idle statement. The two early and terribly important events that happened is, one is, that the emergency feed water can't come on because two valves are closed. If instrumentation would have a warning light when something is an unnormal condition, presumably that would have been found. Take the much more important one about that valve, OK? If there had been a clear indication as to whether the valve did or did not close, then the worst thing that happened - all that loss of water - would not have occurred. Or, even if that hadn't been there, if there had been clear instrumentation that would have shown them that they had entered into steam into the range of steam as we discussed yesterday, rather than the range of water which would have been easy to arrange, or indications on what was happening in that drain tank which was around the corner, had been somewhere where somebody would have seen it easily - any of those things - they could have recognized the symptoms much earlier and did their training at the point, I feel quite certain they would have to had (inaudible) lots of water, don't you think so?

MR. LUNDIN: Oh, yes, it's generally agreed that if the block valve downstream of the release valve would have been closed anytime say within an hour after the initial event, that it would have stabilized the plant.

QUESTION: With regard to that control room, has anybody ever sorted out how many inputs there are on that board. Now, when we were in the control room, they told us there were 1200 enunciator panels, and that's just a small fraction...(interrupted)

CHAIRMAN KEMENY: That's probably the largest - the enunciator panels are the largest number - I forgot to ask the number, but I was truly amazed by them. There's a very simple answer to how many there were. Remember, I think it was Mr. Frederick, one of the operators, who, when I suggested a quite crucial alarm that was missing about steam, he had an excellent answer to that - "sir, at that moment one more alarm was the last thing we needed." So the best way to describe how many there are - there are much too many of them for an emergency situation.

QUESTION: Your (inaudible) of the instrumentation meaning that you have ruled out fixing blame on officials of the company or the Government, other than why they didn't have adequate instrumentation?

CHAIRMAN KEMENY: No, absolutely, I do not mean that at all. But, I was asked a very specific question, whether I felt that with decent instrumentation this accident could have, would have been avoided. I'm answering their narrow question. Look, this is an extremely important case history because so many different things were wrong. I got the very narrow question, do you believe that with good

instrumentation, the accident could have been avoided. I'm saying with good instrumentation I believe firmly this accident would not have happened, or would have been a terribly unimportant one you'd have never heard of. I did not mean to mean that there weren't many other things wrong there that contributed to the accident.

QUESTION: You think the blame will be pretty all-conclusive, then, where it will fit everybody?

CHAIRMAN KEMENY: I'd mentioned one there, I'm sure, there are others, and the commission will have to do a great deal more probing before we reach conclusions.