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Press Conference #5

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TRANSCRIPTION
PRESS CONFERENCE
GOVERNOR DICK THORNBURGH, LT. GOVERNOR WILLIAM SCRANTON, Jd
Dr. HAROLD DENTON, DIRECTOR OF NUCLEAR REACTOR REGULATION
March 30, 1979
10:00 p.m.

I have just met for an hour and a half with Harold Denton who is Director of Nuclear Reactor Regulation for the NRC as well as the President's personal representative to our office for the duration of this situation.

Mr. Denton, who is here with us tonight, has spent most of the day at the site personally, and he and his associates have provided me with what I believe to be the best information available on this matter.

Based on what he has told me I have made the following three decisions:

1. No evacuation order is necessary at this time.
2. My earlier recommendation that pregnant women and pre-school children stay out of the area within 5 miles of the plant site will remain in effect at least until sometime tomorrow, when we expect to provide you with further advice.
3. My earlier advice that people living within 10 miles of the plant site try to remain indoors will expire at midnight.

I would like to take a minute to thank two of my neighboring governors, Govs. DuPont of Delaware and Byrne of New Jersey, for their offers to provide whatever aid or assistance that we might require from them.

Most of all, I would like to thank the President for his personal attention to this problem in our state, and for his prompt response to my request for the best technical assistance that could be provided.

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REPORTER: Sir, has the situation improved at all?

DENTON: I can give you a quick summary of where things stand. This morning Chairman Hendrie called the President and described the situation. The President indicated he wanted someone up here to keep him informed. I've come up with a number of members of my staff. We've got senior technical experts here in the various areas, ECCS performance. I've got a total of 25 technical people here. We'll be working shifts at the site. Our compliance division has a number of people here. My first concern in coming here was the status of the reactor cooler, to be sure that it could be cooled in the event that anything happened to the primary cooling system, the way it is now being cooled. We've assured ourselves that there is no imminent danger to the public as a result of the way the cooler is being cooled. There are number of safety systems that could be activated if necessary. These include the high pressure injection system, the low pressure injection system. We are concerned, though about the status of the fuel in the core. There's extensive fuel damage. We've learned this from the primary coolant activity levels. And the temperature's in the reactor core. There's also a bubble in the reactor vessel that means that any change in the hydraulics of the core have to be carefully monitored. So we're looking very carefully at the way the -----intends to get the core to a cold shutdown condition. By that I mean to place the reactor in a condition so that the water in the core is in below the boiling point. We've also looked at the of releases such as occurred today. These occurred because of -----gasing of -----gasses from the water in the so-called let down system. About 10 gallons a minute is being pumped over to the auxiliary building and being degassed. These gases are being released now. We estimate perhaps a tenth of a ----of xenon 133 per second is being released. The ----is attempting to rig a system whereby these gases can be pumped back into the containment. The containment has about 2 million cubic feet of volume, adequate to contain the gases for a large period of time if this is successful. We'll know that in perhaps a matter of a half a day or so.

Maybe I've covered the principle points and will take questions.

REPORTER: Is there any possibility that that bubble will ever get enough to -----fuel elements?

DNETON: If the pressure of the cooler were just pressure in the primary cooling system were reduced, the bubble would grow. That means you have to be very careful about the methods used to bring the reactor to a cold shutdown condition.

REPORTER: Because you've already got all gas cut of -----out of the fuel elements, they're going to go on decaying. they're going to go on producing gas, is that going to greatly increase the size of the bubble in turn?

DENTON: The bubble is growing not because of gas from the fuel -----but because of hydraulsis of the water. It's generating hydrogen and oxygen that and slsc some steam in the bubble.

REPORTER: Any risk of explosion?

DENTON: Not in the reactor vessel.

REPORTER: Mr. Denton, will there be any other large leaks of radiation, controlled or otherwise and if they are going to be controlled can you tell us when they will be.

DENTON: The way the system is operating now, you have to recall that the releases of radioactivity that are occurring are the result of gases dissolved in water which is coming from the so-called letdown system which maintains proper water balance in the primary coolant system. These gases are now being released continuously from the letdown flow. So, they are not being stored and held up in a manner that might result in a big release at one time. There are releases going on continuously from that same source.

REPORTER: At what level did you say?

DENTON: Our estimate is approximately one-tenth of a ----- of xenons a second.

REPORTER: Inaudible.

DENTON: At the dose levels around the site at the moment appear to be on the order of 1-20 mr, this is on the site property, offsite they appear to be in the range of perhaps from one-tenth to a few mr per hour as a result of the type of releases that are occurring today.

REPORTER: Could you specifically list the problems and options in going through cold shutdown including what you are going to do with the bubble?

DENTON: The options that go to cold shutdown are many. ---- is looking at them. I understand they are getting help from other reactor suppliers. The ----- has no plans to modify the present mode of core-cooling until we've looked at it and everyone has assured themselves that this is the best way to go the contingencies are planned for and when a transition is made it will be made in the day time when the state and we can be fully on top of the transition

REPORTER: How many days have we got before that bubble will grow --- inaudible-----fuel rod

DENTON: You have start with the understanding that appears at the top of the fuel has already been exposed during the event. This is what caused the extensive fuel damage. It's hard to say at the moment whether the top of the fuel is exposed from the bubble or not I guess our estimate is likely that the bubble does not extend all the way down to the top of the fuel. But as a result of the fuel damage there is blockage in several fuel assemblies and these fuel assemblies much hotter than the remaining fuel assemblies.

REPORTER: -----suddenly a big heat up, you would presumably get an increase in pressure, could that cause a venting that would let all the pressure out and make that bubble suddenly get much bigger.

DENTON: Well an increase in pressure would collapse the bubble and that is one way of collapse.

-more-

REPORTER: Then you could blow the relief valve.

DENTON: Well actually, to get the bubble out through the relief valve and to the containment would be advantageous. That is where I would like to have the bubble.

REPORTER:
REPORTER: How long will it be before the bubble could hurt the primary pump.

DENTON: If it grows to the point that it begins to enter the reset lines it could affect the operation of the pump.

REPORTER: How long would that be?

DENTON: I don't know.

REPORTER: You gave us your assessment of the situation now as no eminent danger. Could you give your assessment of the essentials of the dangers in the operations now proceeding? What is the potential.

DENTON: Well, let's suppose the bubble grows to the point that it incapacitates the primary coolant system or either that the primary coolant pump stops working for a number of potential reasons the first course of action available is to turn on the high pressure injection system. These are three separate pumps. I think they put in a of about 500 gpm to repressurize the system. This would collapse the bubble and allow start-up of the second reset pump that is also in that same loop. If that loop fails to start the course of action following that would be to open the pressurizer relief valve, begin to blow the system down, the accumulators would come on at their set pressure and as the pressure dropped the low pressure injection system would come and begin injecting bore-rated water from the outside tank.

REPORTER: What is the risk of doing something like opening that would trigger -- that you couldn't predict what would happen?

DENTON: Well the systems I'm talking about coming on are designed to prevent core melt downs and we are fairly confident these systems will work as intended if called upon.

REPORTER: Has any person or persons saw enough radiation to have you concerned about their health?

DENTON: We have in the audience here the director of the local inspection enforcement office who is responsible for following these things. My understanding is that there have been three, four, five individuals exposed over three rem per quarter limit but not over the five rem annual limit and I think one of these people received an exposure over three rem and attempting to get a sample of the primary coolant.

REPORTER: How are you rating chances of a melt down?

DENTON: I think they are very remote.

REPORTER: Are there any other deaths ----- and has iodine been released at all?

DENTON: Well noble gases are commonly thought of to be both Z-9's and criptides and whether predominate isotopes is Z-9 133 and has five day half life.

REPORTER: What about iodine?

DENTON: Except for this one sample taken by the state early in the process there has been no iodine found in any of the sampling off-site and no fission products other than noble gases have been detected.

REPORTER: Why is it necessary to pump it back into the containment vessel?

DENTON: Because if you pump it back into the containment vessel you prevent it from getting out and exposing it to the public.

REPORTER: Do you consider the core stable enough to tinker with that public at this point?

DENTON: Well we are not going to tinker with it without firmly developed procedures that we get prove of.

REPORTER: How long will that take?

DENTON: It will be days if not longer.

REPORTER: Do you have time with the bubble growing?

DENTON: I think so. Well let me mention that I brought our senior specialist in all of these areas they have met they have gone through the plant I have received the briefing tonight before coming down to brief the governor we will be working around the shift we will have people there all the times at the various areas and tomorrow sometime we will have a much better handle on some of these things.

REPORTER: Does the bubble seem to be growing?

DENTON: I really, really don't know. You can always decrease the size of the bubble by raising the pressure.

REPORTER: What was the millirem readings at the plant this morning after the first burst, was it 1200 as the wire says?

DENTON: There has been some confusion in that area. I think the ----- reported something on the order 500 millirems right over the plant stack.

REPORTER: inaudible

DENTON: I guess you really can't speculate about that one. Tomorrow we will have had a chance to look into those data.

REPORTER: From the average persons point of view what is the worst possible thing that could happen?

DENTON: Well certainly the worst possible thing would be a core melt down.

REPORTER: And what would that entail?

DENTON: Well a melt down, you may recall the melt down were studied in the -----this was critiqued by the Lewis committee which found problems with the range of uncertainty of express and Professor Lewis thinks the range of uncertainty is a lot greater than Professor ----- Most likely melt down would not result in early fatalities it would result in exposure to the public that cause latent cancers and land contamination and probably resulting in economic losses of a billion dollars

REPORTER: How far?

DENTON: Most likely for the core melt down not very far. Then there are other scenarios analyzed in that document that...

REPORTER: What is not very far Dr. Denton? All the way to Washington-

DENTON: No. Only a few percent of the melt down analyzed in----- resulted in land contamination.

REPORTER: How long do you think it will be before you get the thing shut down and under control.

DENTON: I think it will be at least days before there is any change in any mode of cooling the core. I hope that there is a change in this continuing release of noble gases within another 24 hours. I might mention one other fact which is interesting. There are TLD's which are radiation monitors that have been out at 10 stations around the plant for the last three months. These were collected by our inspection people and analyzed. They were collected 2:00 yesterday so in addition two of them have been out for three months they also saw 24 hours of yesterdays events. The results that have come indicate five to seven millirem per month at these stations, which is the same exposure as background and these stations were seeing the same thing for example.

REPORTER: In a place like Middletown, now you said 500 right over the plant what was it like sitting on a stoop in Middletown today.

DENTON: I don't have that number. I think that Goldsboro is that the correct town - as a result of the type of release that is going on now is about 1 millirem per hour.

REPORTER: How many days----- three to five, five to seven?

DENTON: I think it will be several days before there is any consensus among people as to how to approach bringing the plant to a cold shut down. With the bubble there you have to be careful with the hydraulics so it's brought safely.

REPORTER: Does that mean they don't know how to cool it down yet?

DENTON: No. it is more of a case what is the proper option, you don't want to bring it down in a mode that gets more of the contaminated water outside of the containment. Our goal is to keep all of the radiation that is in the water in the containment as much as possible.

REPORTER: Are you dealing with a situation you have never dealt with before?

DENTON: This easily the most serious accident in the life of the reactive program.

REPORTER: Has a situation similar to this ever been dealt with before? Do you know what you are doing?

DENTON: Well I think we know what we are doing, yes, but we have never had such extensive fuel damage before in any life of a reactor.

REPORTER: Do you go along with that 25% figure?

DENTON: Depending on how that is calculated you can calculate I think anywhere from 50% of the fuel pins have been damaged down to 25 or less. Once the primary coolant samples are analyzed you can back calculate to a much closer value, but we don't have these result back yet.

REPORTER: What option are you going to take sir?

DENTON: No sooner than a couple of days.

REPORTER: Inaudible

DENTON: There are vents but they are manually operated and not accessible.

REPORTER: In technical terms why isn't this situation a melt down.

DENTON: A melt down in my sense involves molten fuel and a complete loss of coolant there may be melted pellets in this core but all indications are it is more a case of planting failures and swelling. But until we get the reactor cooled down the head off to make a physical inspection we won't know the exact status of the fuel.

REPORTER: Could this be a melt down?

DENTON: Some of the fuel could be melted, but based on the fact that it is mainly noble gases I expect it is more planning failures.

REPORTER: How long can you run the reactor in this condition without any danger

DENTON: I think you can run it for a long time but you are continuing to bring out this let-down flow that continually de-gases and results in a continuing source of exposures on the ----- if that can be corrected the reactor could be cooled in this mode for quite awhile.

PLEASE TURN TO SECOND HALF OF TRANSCRIPT

REPORTER: Are you dealing with a situation that you have ever dealt with before?

DENTON: This is easily the most serious accident in the -----reactor program.

REPORTER: Do you know what you are doing?

DENTON: I think we know what we are doing, but we have never had such extensive fuel damage before in any -----reactor.

REPORTER: Are you going with that 25% figure?

DENTON: Depending on how it is calculated, you can calculate I think anywhere from 50% of the fuel pins have been damaged down to 25 or perhaps less. Once primary coolant samples are analyzed, you can calculate much closer value, but we don't have these results back yet.

REPORTER: -----inaudible-----

DENTON: Probably a couple of, no sooner than a couple of days.

REPORTER: Could this situation have been avoided if you had had a vent in the top of the reactor?

DENTON: Yes, and there are vents but they are manually operated and not accessible.

REPORTER: In technical terms, why isn't this situation a meltdown?

DENTON: A meltdown in my sense involves molten fuel and complete loss of coolant, there may be melted pellets in this core but all indications are it is a case of cladding failures and swelling but it will take, until we get the reactor cooled down, the head off, and make a physical inspection we won't know the exact status of the fuel.

REPORTER: Could this be a meltdown?

DENTON: It, some of the fuel could be melted, but based on the fact that it is mainly noble gases, I expect it is more cladding failures.

REPORTER: How long can you run the reactor in this condition without any danger of the core melting or other serious problems?

DENTON: I think if you run it for a long time but you are continuing to bring -----inaudible-----flow, that continually degases and results in a continuing source of exposures on the level I have described. If that can be corrected, the reactor could be cooled in this mode for quite a while provided all the systems that are...

REPORTER: In the next few days, when you make the decision, whatever decision you take, would you in advance of any action want to evacuate certain areas, and if so, which areas, and how complete will it be?

DENTON: We will have to cross that bridge when we get there. I think when we do change the mode of cooling as I said, it has got to be at a time that we in the state are agreed upon, well prepared to take whatever actions seem appropriate.

REPORTER: -----inaudible-----

DENTON: I would hope we in the state would make that one jointly.

REPORTER: How long will it take the reactor core to cool?
In your current situation? Weeks, Months?

DENTON: It will take a very long time for the reactor to cool
in the present state.

REPORTER: Months?
How long can you run it?

DENTON: It won't stay in its present state for months. I am sure
we will attempt to get it in a more normal mode to get
down to...

REPORTER: It is not feasible to let it cool this way?

DENTON: Well, it can stay this way for quite awhile. The coolant
the average elements in the core now are running at about
280°, -----which appear to have overheated most
severely and have the most flow blockage are indicating
temperatures of 600°.

REPORTER: That is full power temperature?

DENTON: Yes.

REPORTER: -----inaudible----- and you still have to make
critical decisions and that is the-----inaudible-----

DENTON: Well, it is fair to say that the core has been cooled this
way for the last day or so and we don't, would not encourage
any change in it until the licensees develop detailed
procedures and we have reviewed them.

REPORTER: Inaudible.

DENTON: I think the bubble might grow slowly. We think the
procedure is in hand for activating all the emergency
core cooling systems will do the job but they might
cause more fuel damage due to the type of transient we
impose upon them.

REPORTER: Has the temperature in the fuel been going up because
Met Ed said today the high temperature was 500° F on
five -----, you are saying 600°...

DENTON: I haven't looked at the detailed temperatures in the last
ten hours or so, many of these high fuel ----- were
coming slowly but there was one that didn't seem to be
changing at all.

REPORTER: Is Met Ed telling the truth about what is going on in that
reactor and what has happened?

DENTON: I guess I would have to defer to someone who...

REPORTER: You have already contradicted them once today. Somebody
from Met Ed said that the readings outside that plant were
350 mrs right after that...

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DENTON: There has been a severe communications problem getting infor-
mation back to Washington. I was there in the incident
center for the past couple of days - what we now have on
site are a couple of trailers, we have got some dedicated
lines back to Washington and the White House. I think
we will have much better communication from now on.

REPORTER: Who is taking the readings elsewhere? Is that all Met Ed
readings you are giving when you...

DENTON: Our compliance division, I think, has over 25 health physicists out in the environment taking measurements right now.

REPORTER: ---- Met Ed readings, they're yours?

DENTON: Yes sir.

REPORTER: -----whether there was any human error or not involved in this?

DENTON: We haven't attempted yet to go back and look at that aspect. We will make, prepare a full report on the topic at the moment our number one focus is to understand the status of the core, the amount of damage, this bubble, and what the implications are, and how to get it ----

REPORTER: Are you going to let Met Ed make the decision about those options or are you going to help them out?

DENTON: No sir.

REPORTER: Who will make the final decision?

DENTON: I think we have the authority to license and suspend and I have no doubt we could impose our views on ultimate...

REPORTER: -----inaudible-----one way or the other?
Which option you will take?

DENTON: Well, I would hope there would be a consensus of experts before we make a decision.

REPORTER: Who decides finally at the very end?

DENTON: I think the NRC would make the final decision.

REPORTER: Is any option a gamble?

DENTON: Well, they all have pros and cons and different experts advocate different ways and...

REPORTER: What kind of chances are we taking?

DENTON: I don't think you are taking gambles with any of the options that have been analyzed but before any of them are done we want to run them all through, simulate them, and be sure we understand it.

REPORTER: You saw fission going on in there ...

DENTON: No the control rods entered the core back when the event began so it is decay heat.

REPORTER: How much more damage can this thing sustain in putting in the emergency cooling procedures if the bubble grows?

DENTON: Well, if the, you can uncover quite a bit of core and still cool it from the steam coming up from below the core but if the bubble were to grow the cladding, if it is already brittle from high temperatures which began to crack and fail more.

REPORTER: What would that mean?

DENTON: It probably wouldn't mean a lot more release of radioactivity because once the cladding fails, all the activity that is in the gas is released anyway, it would just further complicate cooling of those -----

DENTON: Let me ask when you would like to terminate or change topics or...

REPORTERS: -----deciding on an option?

DENTON: We don't have an outside, we have one more the other way, but I don't expect any decision until several days have gone by.

REPORTERS: In people talk for the people in that immediate area, eyeball to eyeball, what would you say to those people tonight, as far as this situation is concerned?

DENTON: Well, as I said, at the start, I don't think there is any imminent danger from the core the way it is sitting, I think the radiation levels that are existing of one-tenth to one mr from the type of release is small and we expect to terminate that in the near future.

REPORTER: Is the situation getting better there, is it stable, is it getting worse? What is your assessment of that?

DENTON: I would like to think that having brought in the number of people that we are that will be on shift around the clock, with the operators, there will be less chance of surprises in the future. But I...

REPORTER: Is it getting better?

DENTON: Well, you know----- performances can't always be expected, so I think we can do more about planning and anticipating what might happen rather than having to react...

REPORTER: Is the situation there much safer than it was three days ago?

DENTON: -----inaudible-----

Next Question and Answer inaudible

REPORTER: Has Met Ed handled the situation competitively from the beginning?

DENTON: I will need more time here to look into what has gone on

REPORTER: Can lessons you have learned here affect the operations of other power stations?

DENTON: Surveillance is the name of our game. We operate much like the federal aviation agency and when you learn problems on one reactor, you take steps to make sure the other reactors, fix that problem,----- so once we determine what the cause of the problem is here, whether it is a mechanical failure, or a procedural deficiency or operator error, we will take steps to assure that it won't happen in the other -----

REPORTER: inaudible

DENTON: No it hasn't.

REPORTER: Would you clarify something? You said that ----- to a few mrs per hour as a result of these gaseous ----- how much, is that added to other radiation that is going on?

DENTON: This was my estimate based on the type of release that is occurring today or a few hours ago.

REPORTER: Is that the total radiation that the people are getting?

DENTON: Well we have made some estimate of what the total population exposure might be from the entire incident and it has got some guesswork in it, but it might be on the order of 1000 manrem total exposure as a result of it -- if you go to the relationships between exposure and health effects, in the famous ---- report, they indicate that you might expect 1 to 2 cancers per 10,000 manrem of exposure to in the public. So based on 1000, you might extrapolate and say there has been, this event might result in a tenth to two-tenths of a latent health effect in the population.

REPORTER: What is the radius on that -----3 miles?

DENTON: That is integrating all the way out-----

REPORTER: You mean ----- has been exposed to a thousand?

DENTON: No, the entire, if you take each person's exposure and multiply it by the people that got that exposure, it is a crude estimate and we might revise it. We now have a capability to take the weather at the various times of release and once we get accurate release data, we can both project what exposures will be tomorrow, and we can back calculate what exposures were yesterday.

REPORTER: That thousand is over the three days, for the duration?

DENTON: That is correct.

REPORTER: Now you are giving them 1 mr per hour.

DENTON: The thousand is manrem, that is not millirem.

REPORTER: What does that translate into a millirem per person within 20 miles of this plant. Can we do that?

DENTON: Let me correct this one about the 1000 manrem -- that would be a million millirem.

REPORTER: What does that translate into in millirem per person?

DENTON: Our best estimate at the moment of the exposure occurring from noontime, at 4:00 was on the order of a tenth of a millirem to a few millirem per hour at locations fairly close in and with Goldsboro being about 1 mr.

REPORTER: -----into millirem exposure per person?

DENTON: You calculate it the other way. You determine the exposure of the individuals at various distances and you integrate it out.

REPORTER: --- --total millirem exposure per person ...20 miles?

DENTON: That is the number I am quoting...
If you integrate out the exposure people get, rather people who get that exposure -----inaudible-----

REPORTER: -----dose of the American adult in a year?
Relate what people are getting here to the normal millirem dose of an average American in a year?

DENTON: Well, the background in this area as measured by the TLD's is probably close, if the actual background is five to seven mr a month that is 6 to 84 millirem a year, background exposure.

REPORTER: Inaudible

DENTON: We have done a crude look at that. It doesn't look to me as if any individual has gotten over 100 millirems, for the closer person.

REPORTER: Not over what?

DENTON: Over 100. But these are estimates and we will have to refine them with back calculations using the actual weather and so forth.

REPORTER: Can we ask the Governor some questions?

DENTON: Let me clarify this 1000 manrem.

People receive millirem doses -- that is 1/1000th of a rem. So you add up all, you multiply the people who received millirem doses by the number of people who get that and you look way out in long distances and you get a number of millirem per persons doses -- and what I have done is gone to manrem rather than manmillirem and that is the difference.

REPORTER: -----long range now. You have got a problem here that is probably going to take you what three months, six months, nine months, to clear up, what is your preliminary estimate on how long it is going to take to get this whole -----cleaned up?

DENTON: I wish I knew. I guess my immediate task is to get the core in a cold shutdown condition and terminate the routine releases that are occurring. After you reach that state the half life of xenon being five days, the radiation levels inside will decay down with that rate and the -----can they go in and investigate the condition of the core and make whatever repairs are necessary.

REPORTER: What is the number of the people who have been exposed?

DENTON: I think we integrated out to 10 or twenty miles in other words, at some point in this calculation it becomes meaningless when you are talking about millionths of...

REPORTER: -----two-tenths of one percent of a latent health effect what number are we talking about?

DENTON: That number comes if you expose 10,000 people to one rem each, which is 1000 millirem, out of that sample population, you would expect one or two excess cancers showing up later in their life.

REPORTER: Will you tell the public when you're deciding on how you are going to deal with that bubble?

DENTON: I hope to keep you informed on a daily basis as to what is going on.

REPORTER: May we question the Governor please.

REPORTER: Governor, the people of central Pennsylvania have been put under tremendous stress in the past 72 hours and especially today, would you care to comment on how they reacted, how you feel about the way the situation developed, and specifically, how the media handled the situation locally.

GOVERNOR: I will beg off on the last one. I think that the cautious steps that we recommended today were received appropriately by the people of central Pennsylvania. There appeared to be no panic. We received no reports of any concern over the propriety of the recommendations that we made. I hope to have a chance with the Lt. Gov. and with and with their wives and families to visit some of those folks tomorrow, who have been temporarily dislocated.

REPORTER: Are you getting better information now?

GOVERNOR: Yes, considerably, we our request to the President for Mr. Denton and his associates was designed to improve the flow of information, the signal course provided us with a much greater capability for the ready transmittal of information as it is developed and the time lags that have plagued us and the differing sources for information have been improved considerably.

REPORTER: Can you explain your three points. Why no evacuation? Why the expiring at midnight? Why the pregnant women, children, etc., remain...

GOVERNOR: They are all based on the advice from those people who reported to me on the condition at the site.

REPORTER: Inaudible

GOVERNOR: Yes, I anticipate reevaluating them constantly.

REPORTER: Is it possible that you might order an evacuation after you find out what procedure they are going to use, if you decide that procedure is hazardous?

GOVERNOR: I will make a continuing reevaluation of our recommendations in the particulars I have discussed tonight and other particulars.

REPORTER: You have not ruled out an evacuation?

GOVERNOR: The first thing that I did when I heard of this incident early Wednesday morning was to ask Colonel Henderson if we had the capability to carry out an orderly and effective evacuation if it became necessary. He assured me that we did have that capability and I continue in that assurance as of this moment.

REPORTER: Governor, do you have any idea how many people aren't in their homes in central Pennsylvania tonight as a result of the news about the plant, and how many of those people are in the evacuation center that you set up?

GOVERNOR: I don't. Colonel Henderson would. But, I don't know if he is here.

REPORTER: How many evacuation centers have been set up, do you know?

GOVERNOR: I don't know. I have no details on that.

REPORTER: Have you determined how long you will permit the release of these cassettes to go on before you would order an evacuation?

GOVERNOR: Based on the assessment given to me by the team at the site, we would make a determination as to a possible evacuation.

REPORTER: -----may go on for several days...

GOVERNOR: We will make a determination on each of those days as to what our proper course of conduct will be.

REPORTER: One area of exposure is to this steady doseage.

GOVERNOR: Excuse me.

REPORTER: What is the area of exposure to this steady doseage now? How wide an area?

DENTON: We have the capability to take the meteorology that is existing at the site and the national weather maps, --- in the release from the plant, and calculate how far away various people would receive doseage, we can have those maps prepared tomorrow. But, as I said, the dose falls off at about a factor of 2 between the plant site and the first person across the water so the doseage dropping off, the square root of distance as you know.

CRITCHLOW: Just a few more questions please.

REPORTERS: On this kind of accident, with all the planning and research that they have done over the years -- did you percieve that this kind of accident was possible with this bubble. If so, what kind of measures did you take...

DENTON: We certainly foresaw that loss of feed water flow was anticipated. Plants are designed assuming there will be at least one of these transients a year in every plant. These types of transients occur in cold fired plants. What is unusual about this transient is the fact that it resulted in the extensive fuel damage, that much of the contaminated water got over in the auxiliary building in the early parts of the transient and that this bubble did form in the reactor vessel. So those things we did not anticipate.

REPORTERS: Should we expect more releases of gas and liquids that are greater than what we have had already?

DENTON: There is a lot of very highly radioactive water and there might be other events that lead, some of this water to get outside and so you might expect some occasional water to find itself outside. I would hope we wouldn't find the kinds of releases that have occurred up to now.

CRITCHLOW: Thank you very much.