

TRANSCRIPTION  
PRESS CONFERENCE  
LIEUTENANT GOVERNOR WILLIAM W. SCRANTON, 34  
INCIDENT AT THREE-MILE ISLAND  
MARCH 28, 1979  
10 p.m.

FOLLOWING IS LT. GOV. SCRANTON'S OPENING STATEMENT:

GOOD EVENING, WE HAVE JUST CONCLUDED A MEETING WITH THESE THREE GENTLEMEN WHO HAVE BEEN FOR THE MOST PART ON THE SITE SINCE APPROXIMATELY 10:00 THIS MORNING. AT THE CONCLUSION OF THE MEETING, AND I WON'T GIVE YOU ALL THE DETAILS BECAUSE I WILL ALLOW YOU AN OPPORTUNITY TO QUESTION THEM ON SOME OF THE MORE TECHNICAL ASPECTS OF IT. AT THE CONCLUSION OF THE MEETING I REPORTED TO THE GOVERNOR THE FOLLOWING: THAT THERE IS CURRENTLY NO RADIOACTIVE LEAKAGE FROM THE PRIMARY BUILDING OR THE REACTOR ITSELF, THAT THERE IS RADIOACTIVE MATERIAL CURRENTLY IN THE AUXILIARY BUILDING, THAT THAT IS BEING VENTILATED AND THAT DUE TO THAT VENTILATION THERE IS SOME DISPERSION INTO THE ATMOSPHERE. THERE HAVE NOT BEEN AND THEY HAVE TAKEN SAMPLES, ANY CRITICAL LEVEL FOUND OFFSITE. THERE ARE HIGH BUT NOT YET CRITICAL LEVELS FOUND ON SITE. I THINK THAT IS A PRETTY BRIEF INCAPSULATION OF THE CURRENT SITUATION.

THESE GENTLEMEN HAVE BEEN ON SITE PRACTICALLY ALL THE DAY AND I THINK THEY CAN ANSWER SOME OF THE QUESTIONS THAT YOU MAY HAVE POSED EARLIER TODAY THAT THE ANSWERS MAY HAVE BEEN A LITTLE BIT SKETCHY ON.

Answering questions with Lt. Governor Scranton are:

Bob Friess, Department of Energy, Emergency Response Team, Brook Haven, Long Island  
Charles Gallina, investigator from NRC, Region I, King of Prussia  
James Higgins, reactor inspector, Region I, King of Prussia

JENSEN: You say there is no radioactive leakage governor, but then you say there is?

LT. GOV: No radioactive leakage from the primary building where the actual reactor is from the auxiliary building there is.

JENSEN: What is that building?

LT. GOV: The auxiliary building is a part of the secondary system...why don't you come up and explain it to them.

HIGGINS: The auxiliary building is a part of the plant which houses many of the auxiliary systems of the plant

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DVORCHAK: What is the source of that radiation, is it the?

WIGGINS: OK, I can give you a brief scenario of where the source of the radiation came from. Initially, in when the incident first occurred this morning, there was a turbine trip and a reactor trip which caused some pressure transients in the primary system. As a result of these pressure transients a release valve lifted which relieved a fairly large amount of water and steam to the inside of the reactor containment building. That water was then automatically pumped out via automatic pumps to various other sumps in the auxiliary building area. This is the way the system is designed to work. There was apparently some additional activity in the water, other than you would normally find in there as a result of this incident and therefore the auxiliary building has now, earlier this morning it still has a large amount of fairly highly contaminated water which is releasing some gases and causing some radioactivity.

REPORTER: Are people who live in the area safe?

WIGGINS: As far as the locality around the plant. There are no excessive radiation levels beyond the site boundaries. The latest samples have been taken are continuing to be taken by Met Ed, the NRC and your group the DOE group and those are all showing fairly low levels, that is to present no major hazard to any people off site. There are some fairly high levels on site. These levels are being handled and the plant is continuing to address the situation.

REPORTER: Could you tell us what the levels are?

WIGGINS: Dr. Gallina could speak as far as the specific radiation levels and those types of things and I can answer some systems questions and those types of ...

DVORCHAK: I was just going to follow that up -- the radiation is from the water itself...  
That is correct.

DVORCHAK: Is it being ventilated purposely or...

WIGGINS: I would like to let Dr. Gallina talk about the radiation levels.

GALLINA: The water that is currently now in the auxiliary building backed up through some of the floor drains. These buildings have to be ventilated because people have to work in there to perform various operations so the building is being ventilated through special filters. The filters are taking care of most of the radioactivity but some radioactivity is being detected at the outlet of the auxiliary building. Again, this activity is remaining more or less, at this point, on site. They are monitoring it. We see burps occasionally coming out, of pockets of air as it is being filtered out. But on site is where most of it is staying at this point. Off site doses now are uniformly less than 1 mR per hour.

WIGGINS: Could you explain to us about the building being ventilated -- is the water being drained out? What exactly is happening?

GALLINA: They have supply air to these buildings to ventilate them. If block it out not only does it get rather stagnant and stale but the activity levels coming off from the water that is there evaporating become quite high. So they have to keep ventilating the building through a filter so that it brings the activity within the building lower. Most of the activity is filtered and some small amount of activity is then released to the atmosphere outside the building.

WIGGINS: The water is being evaporated?

GALLINA: At present the activity is coming from the water that is now evaporating. They are now...

REPORTER: Ventilation lowers the activity in the building?

GALLINA: In the building.

LIVINGOOD: How long would it take for that activity to subside or disappear?

GALLINA: That is a variable question. Met Ed at this time, is performing various operations to get this water pumped to solid storage tanks and then the evaporation problem of course, goes away.

REPORTER: Is there any permanent damage to the facility?

GALLINA: I don't think you could say there is any permanent damage would you Jim?

HIGGINS: There were some equipment failures and there was some damage of a minor sort because of all the transient that occurred today. As far as permanent damage, nothing that can't be repaired with normal maintenance.

FERRICK: Can you tell us how this happened to the best of your knowledge or what Met Ed people have told you, how this occurred?

HIGGINS: The initial, initiating sequence.

FERRICK: Yes.

HIGGINS: They were having some problems initially this morning in their condensate polishers which are filters which take the water which is pumped from the condenser through the condensate pumps back into the steam generators. This is on the secondary or the clean side of the plant that is the non-radioactive side. There were some problems, because of these problems they resulted in condensate pumps trips, condensate booster pump trips, and main feed pump trips. These are three pumps that pump in series to take the water from the condenser back to their steam generators to be again heated, and produce steam for the turbine. When these pumps tripped that resulted in the turbine trip which, cause the turbine can no longer be run without feed water supplied to the steam generators. As a result of that, that resulted with the reactor still at full power and the turbine tripped. You are taking the load off the plant, the reactor is designed to be automatic power is what we call runback that ran back a certain amount and then with this happening, because you are no longer taking steam off, the pressure the pressure tends to go up. As a result of the pressure increase, it appears that there was a reactor trip. Then, the pressure started to decrease and we had a release valve open and then the pressure started to decrease, and apparently a lot of this right now is supposition and there will be a full investigation of it dome where charts and logs and this type of thing will be thoroughly reviewed. During the day today, we were primarily following the status of the ongoing efforts to get the situation to a stable condition.

FERRICK: What is the status right now within the reactor, the container?

HIGGINS: The reactor containment itself, which is the dome that you see, is now at a slightly negative pressure -.02 psig when we left the site.

FERRICK: What does that mean to a normal person?

HIGGINS: That means that it is less than atmosphere. The pressure inside the reactor is less than atmosphere so that any leakage will be into the reactor, not going out of it.

WARNER: You were about to describe a problem with the release valve.

HIGGINS: It appears that the release valve which did lift at the initiation of this entire sequence then stuck open which allowed the primary pressure to decrease considerably.

LIVINGOOD: Where is that release valve?

HIGGINS: Inside the reactor container.

LIVINGOOD: That released to what?

HIGGINS: It released to a reactor ——— drain tank, as it is called at three-mile-island and because of, and this is again a supposition, but it appears that the valve did stick open and blew down an excessive amount of steam to the reactor coolant drain tank which then has a rupture disk on it, which is designed to rupture if the reactor coolant drain tank has more steam than it can hold. So it did rupture and that is where all the activity and all the water in the reactor originated which was then pumped out of the reactor building into the auxiliary building.

LENTZ: Right now you are venting the auxiliary building. When did that start?

HIGGINS: That has essentially been going on all day, am I correct?

GALLINA: Right, more or less.

LENTZ: We were told at 10 of 7 this morning that ——— some radiation in the atmosphere...

HIGGINS: Let me make a comment on that, there was earlier this morning some venting being done from the steam generators as a result of this incident it turns out that there appears to be some contamination on the secondary side of the plant. That is in the steam generator.

REPORTER: How did that occur?

HIGGINS: I will get to that. There appear to be some primary to secondary leakage although that is not confirmed at the present time. There appears to be some leakage which would be in the tubes of the steam generators on the secondary side. That was primarily in the B steam generator which was isolated very early in the incident and is still isolated.

LENTZ: We were told that there was leakage this morning and we were told that the leakage started again at 11 a.m. and stopped at 1 p.m. You are saying that all today there has been...

HIGGINS: There are various types of leakages and depending on what terms you give it it could be confusing. Sometimes you talk about ventilating, venting, and various different things. The steam generators themselves have what we call an atmospheric dump to it which allows you to reduce the pressure in the steam generator and get rid of energy from the steam generator and since those are connected to the primary thereby get rid of energy in the primary and cool the plant down, and take it to a safer situation. Initially, this morning, that is the course of action that Mr Ed was taking. That is they were lifting these atmospheric dumps or venting the steam generators and thereby because there was some activity in the secondary as a result of these leaks, that activity wasn't released or vented off to the site where the atmospheric dumps do release to and that could be blown hither and yon by the wind.

LENTZ: That was what was going on between 11 a.m. and 1:30 p.m.?

HIGGINS: That was happening in the morning time frame. I don't have the exact hours.

GALLINA: It appears that the main source of the radiation at this time is the auxiliary building. Now some activity may have gotten out when they were venting the steam generator, but it appears at this time that the main source of the radioactivity that we are seeing now on site, and some off site, did come from the ventilation of the auxiliary building.

LENTZ: That ventilation has been going on since...

GALLINA: Well, it has been intermittent. They had it off for some time today but then the activity levels inside the plant started to get rather high.

LENTZ: ———difference between ventilation and venting?

GALLINA: The venting is a deliberate venting of steam out through the plant vents.



(GALLINA CONTINUED) ventilating is just supplying the normal amount of air to the building.

LENTZ: Like opening up the doors?

GALLINA: Well, it is a good analogy, but you are supplying air to the building. The air that you are removing from the building passes through filters and then out to the atmosphere.

LENTZ: So it has a lesser amount of radioactivity in it?

GALLINA: Right, that is the purpose of the filter -- is to keep the radioactivity down.

LENTZ: Now, the radioactivity that is coming out of the auxiliary building has been coming out intermittently through the day, has that been kicked up by the wind -----inaudible-----

FRIESS: We have had a team here since early this afternoon. We had two teams out in the field using vehicles. We also have a helicopter that was flown up from Andrews Airforce Base with sophisticated monitoring equipment. It made a run at 4:00 and an additional run at 7:00 and at those times there was a plume and they did see small levels of radioactivity following out to about 16 miles from the plant and right now the aircraft is up again making another run to see whether we are seeing decreased levels.

LENTZ: Now, when you say small levels, we were told that it was like 7 mrs at the plant gate. When you say small levels, what are you talking about?

FRIESS: These are very conservative numbers, but the numbers that we are seeing is at about 7 miles out at about mr per hour, and about 16 miles out, about a tenth or two-tenths of a mr per hour. Those numbers are probably high by about maybe 50%.

FERRICK: How about on site. Do you have any idea what the mr per hour are averaging -----peak period in the day?

GALLINA: The highest spot we have seen on site was at the north gate. This varied almost from minute to minute from however you wanted to go out there. It was as high as 70 mr per hour as low as less than 1 mr per hour.

REPORTERS: 70?

GALLINA: 70 right on site. This was on site. It depended on the plume and where you were, you could walk maybe 100 yards away from the north gate and get down to practically less than 1 mr per hour.

LENTZ: What is it normally on the plant site?

GALLINA: It should be normally less than one mr per hour.

WARNER: When was the 70 mr recorded and was the company aware of it?

GALLINA: I am sure they were aware of it. I am not sure of the exact time. It was some time during the afternoon, maybe roughly around 2:00. That is just a guess though. It was some time in the afternoon. They went back like five minutes later and it was back down to 50, they went back five minutes later, and it was down to 20 and then it went almost down to -----levels, and then it was up again. It depends on the air conditions at the time.

LIVINGOOD: When the company vented that steam generator today, were they aware, were the officials of the company at that time that they were releasing radioactive steam?

GALLINA: Some of these actions are automatic. When you have a turbine trip you have got a lot of steam you have to get rid of and the atmospheric steam dumps open automatically. Normally, the secondary side is clean so there is no problem. The minor leakage that they had appears to be minimal and not a major contribution to the off site activity. I would

(GALLINA CONTINUED) say that they were aware of it after the fact in analyzing the secondary water and finding traces of contamination in the water you could say at that time they knew that when they did vent steam they did vent some minor amounts of radioactivity.

DVORCHAK: Was any of this caused by human error?

GALLINA: No. At this point in time, we have been investigating it most of the day, of course, we haven't gotten into a detailed investigation because we are still getting the plant into a stable condition, but there has been absolutely indication of human error at this point.

STAROBIN: -----reports that the radiation is emanating from the reactor itself, that in the primary building there is a lethal dosage of radiation.

GALLINA: Well, in the containment building which is now bottled up and secure we can get high radiation readings at the building itself, this is normal. Quite a bit of primary coolant was dumped into the containment building. To categorize it as lethal I think would be a severe oversight. It would be lethal if you stayed there long enough. But again this is all inside containment and as Jim pointed out, at negative pressure, so any leakage is in not out.

STAROBIN: How -----the reactor itself?

HIGGINS: There are no plans right now for personnel to enter the reactor building in the near future.

REPORTERS: Several days or...

HIGGINS: That is correct.

STAROBIN: Do you have any indication that there is any abrasion of the reactor itself, that there was a break, that had been suggested at an earlier briefing, that part of the cladding was injured?

LIVINGOOD: Fuel element rupture.

GALLINA: Well no, we have some indications on the basis of water chemistry, that there was some damage to the fuel, but it is only an indication at this time and it doesn't appear to be severe. As you may know, reactors can operate quite normally with a certain percentage of what we call failed fuel. It doesn't appear that we have exceeded any of these levels, except we do know that there is more "failed fuel" at this point than there was before the trip. But nothing definitive at this point until we do some further analysis of water chemistry.

STAROBIN: What we are trying to ascertain is that there is no danger coming from a very radioactive load in the reactor itself?

GALLINA: No, the reactor is stable. There is no problem with that. They are now bringing it down to a cold shutdown condition which is what we are monitoring at this time. The reactor itself is in no danger of going critical or any problems. It is in a safe condition. It is mechanical y sound. As was mentioned earlier, we have five us actually seven of us were on the site by 10:00 this morning. There will be 24 hour round-the-clock coverage in both control rooms by the NRC. We have reactor inspectors, health physicists and another investigator on the site right now so we are monitoring every step of the operation not only here, but we have a 24 hour open line to our Philadelphia office and concurrently an open line to Washington DC, where we have our reactor people there on the phone with us constantly. So everything is being monitored by the NRC and to this point we found no mechanical damage at all. The reactor is stable. There is no problem with containment. Again, we are just looking at now, the contamination hazard in the auxiliary building and on site.

DVORCHAK: Was the core damaged?

GALLINA: No, as I just said there appears to be no significant core damage.

LIVINGOOD: Did Mr Ed have to activate the emergency core cooling system?

HIGGINS: A lot of the systems on site are dual usage. That is they are used for emergency core cooling and for normal plant operation. Some of the pumps are used for normal makeup and injection concurrently, they can be used if you have an accident, for emergency core cooling. The situation that classically presents the need for emergency core cooling is a pipe rupture where the system is depressurized and you have to inject water with these emergency pumps into the plant. That situation did not occur. The pumps, the same pumps were being used in a normal mode, to inject water and to bleed water off from the plant system and that has been done throughout the day. They are

LIVINGOOD: Is that a captive system?

HIGGINS: Yes, by captive, I assume you mean closed?

LIVINGOOD: Yes.

REPORTER: I assume that coolant is radioactive?

HIGGINS: Yes, primary coolant is radioactive.

REPORTER: How would you dissipate this when the time comes?

HIGGINS: The primary coolant is normally recycled and it is maintained radioactive but it is periodically cleaned up with filters and resins and then reused.

WARNER: Did I understand you to suggest a couple of minutes ago that when the company had vented radioactive steam during the day it is unlikely that they realized that it was radioactive.

GALLINA: That is not really what I said. I said some of the operations are automatic. Atmospheric steam dump; those valves that we call them, function automatically, normally there is no radioactivity or minimal radioactivity in secondary coolants. That steam is basically cold steam. I am going back and analyzing the secondary coolant at this time — they found minor traces of radioactivity which means there is some minor leakage in the secondary side. In effect, looking back and realizing that they had vented to atmosphere some minor activity did become released when they used their atmospheric steam dumps. Again I have to say it is minor activity.

LENTZ: How long do you expect to need to ventilate the auxiliary building?

GALLINA: At this point, it would depend on the operations being conducted to get this water into some kind of confined tanks. We have found that the activity is dropped significantly since it was first identified this morning and to take a guess, it would just be a guess and I would rather not...

LENTZ: Are you talking about weeks, hours,

GALLINA: No, within a day they should have the water...

LENTZ: How much water is there?

GALLINA: We have no estimate at this time. It is a substantial amount of water but I couldn't give you a gallon figure.

REPORTER: ———any of the people working there injured that you know of?

GALLINA: There were no injuries no.

FERRICK: How about contamination?

GALLINA: There was some minor contamination that we would expect and protect against, in other words, people going in to cover up the water or



(GALLINA CONTINUED) to assess the situation, took proper precautions, anti-contamination clothing and things like that and when they came out their outer clothing was contaminated, but that is what we protect against.

REPORTER: Could you give us an agenda of what is happening now, what will happen in the next 24 hours, few days, week, whatever?

GALLINA: Well, at present, as best as I can tell you at this point — Mr. Ed and NRC, of course, watching every step of it, will be bringing the reactor down to cold shutdown. Concurrently with this, they will be getting this water out of the auxiliary building as expeditiously as possible. That may take about a day. The reactor should be in cold shutdown within a day also.

LENTZ: How long do you expect it to be down?

GALLINA: That would be hard to say. That would depend on contamination levels, etc., that we find after the...

REPORTER: What else has to be done, as part of the agenda?

GALLINA: Well, as far as operating the plant goes, I really can't speak in detail. I can say that the NRC will make a detailed investigation and until that investigation is complete, the plant probably will not be able to come back to power again.

REPORTER: A week, two weeks, three weeks?

GALLINA: That depends, you have got a lot of computer printouts to look at, we have a lot of interviews to do with operating personnel, a lot of charts to analyze, the investigation itself will be done as expeditiously as possible but it would be hard to say how long it would take.

LENTZ: Will it effect — inaudible —

GALLINA: It should not.

LT. GOV: Let me interrupt here for a second. These, some of these gentlemen haven't had anything to eat all day and we are expected at the Governor's home for a briefing there. I want to say that from the standpoint of what we are doing civil defense wise and otherwise, we do not expect there to be any kind of necessity for evacuation, but we are keeping all of the counties locally on alert until such time as we are satisfied that there is no more danger of radioactivity leaking and that there is a cold shutdown at the reactor. The Governor has cancelled his trip to western Pennsylvania to be on hand to stand by in case anything should arise. But, I think you all see that there has been considerable attention given and it will continue to be so — monitoring of radiation levels and we will continue to supply you periodically with updates.

FERRICK: Whatever happened allegedly happened at around 4 a.m. Number two, the state civil defense officials were not informed until about 7 a.m. I have two questions, what happened at 4 a.m. and number two when was the NRC informed of what happened?

HIGGINS: The initial event occurred at 4 a.m. where I described the difficulties with the condensate polishing unit, the trip of the pumps the reactor tripped, the turbine trip. That all occurred around 4 a.m. initially.

FERRICK: When you say around, I don't want to be too precise, but was it before 4 or...

HIGGINS: 4 a.m. is a good time. The NRC to my knowledge, we were...

GALLINA: At approximately 7:15 we received the first call. 7:15, 7:30 in that area.

FERRICK: They said earlier today that there was no information flowing to offsite officials until 6:50 or 7:00 because the people onsite didn't realize apparently that there was radioactive leakage. Has that been verified yet?



HIGGINS: No that has not been verified.

FERRICK: Do you have any answers as to why there was a nearly three hour delay between the time the event happened and the time outside officials were informed of it.

GALLINA: No, but we will be getting those answers believe me.

FERRICK: Is that normal?

HIGGINS:  
GALLINA: It depends on the magnitude. Some problems did. Typically plants have in their technical specifications, requirements to notify the NRC for various types of incidents. Typically, the more serious ones, we require 24 hour notification, the other ones, 30 day notification. Most plants provide with continuing, and very prompt information, three-mile-island included, whenever a continuing problem exists. They may only be required by federal regulations to notify us within 24 hours. But typically, they notify us as soon as they have a feel themselves for what is happening and then they will call us.

FERRICK: Was what happened today serious. When it happened around 4 was that a serious problem in the world of nuclear reactors.

HIGGINS: I find it difficult to put qualifiers like that on...

REPORTER: How close to a catastrophe was it?

HIGGINS: It was not close to a catastrophe.

LIVINGOOD: With the information you have at this point do you feel that Met Ed officials acted responsible throughout the day.

GALLINA: Yes. At this point in time we are interested in the reactor, the system, and the safety of the people. We have not gone in and investigated how they behaved and whether they did everything properly, why we had this delay in notification. However, I can say now, based on what I have observed during the day, Met Ed did act very responsibly, very coolly, and showed the benefit of the experience they had. There was no panic, no excitement, they did their jobs, and from what we can see today they did it well.

REPORTER: Were there any surprised for you?

GALLINA: I wouldn't say there were any surprised no.

REPORTER: Did the ~~work~~ work?

GALLINA: Yes, it did

REPORTER: What happens if the ~~doesn't~~ doesn't cool off or theoretically if it wouldn't cool off and how do you go about cooling?

GALLINA: There are many systems on that. We supply emergency cooling to the reactor and we are using some of those today as I described in various modes ... many backups and some of those backups weren't even used today.

REPORTER: What would happen if the core did not cool off.

GALLINA: That is not the situation we have here and I prefer not to hypothesize for what we don't really have.

REPORTER: Do you know of any prior problem in this unit that existed before today that might have anticipated the events that happened?

GALLINA: No.

CZARNIAK: The spokesman from NRC, King of Prussia told me that the leak in the steam generator had existed before today and allowed some contamination in the secondary system. Is that true?

GALLINA: That is possible yes. There is always some minor leakage, but we haven't looked into that yet.

CZARNIAK: Would that have aggravated that situation?

GALLINA: It could have yes.

DWORCHER: If this is not a catastrophe, what is the magnitude of this?

REPORTER: Compared to other accidents?

GALLINA: To qualify if that way it depends on how you want to look at it. We have a serious contamination problem onsite. We do have containment bottled up with several gallons of primary water in it. We do have primary water in the auxiliary building. You might say from the breadth of the accident it is one of the more serious, not from the depth. In other words nothing critical failed, but it is going to be a dirty problem and something that will need some time to clean up. The extent of the problem I would say makes it serious, not the depth of the problem.

CRITCHLOW: Thank you very much, my office will be open to the last deadline if there are any last minute problems we will let you know.

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