

ATTACHMENT J

NEW BRIEFING TRANSCRIPT

MARCH 30, 1979

11:00 A.M.

AMERICAN LEGION HALL

by

METROPOLITAN EDISON COMPANY

JOHN G. HERBEIN, VICE PRESIDENT - GENERATION

Met-Ed Press Conference
March 29, 1979

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CREITZ

We have called this conference this morning to bring you up to date on the status of Three Mile Island No. 2. We particularly want to tell you what has occurred since the press conference many of you were at yesterday. We will tell you what we've accomplished, and tell you what we are attempting to identify, and changes that are presenting problems.

First of all, we were successful last evening engaging our main reactor cooling pumps in operation. It seems that we will be able to cool down the core at a more rapid rate. I can't tell you when the core will be cooled to the degree that we will be able to go into the reactor facility itself, I want to tell you that we've identified some of the sources of additional radiation that have been detected on the island and off the island. I also want to say that the level of additional radiation that we've detected off the island is at a very low level. In preparing for the future, we've put together different task forces to look over what has happened and very carefully analyze it so that we can make proper plans. Other task forces will be involved with working with more specific problems. With me this morning, I have Jack Herbein, Jack is vice president of generation for Metropolitan Edison Company. Jack has a few comments to make, and at that time we will respond to questions. Jack Herbein

Herbein

Yes, as Walt indicated, we do have our first reactor coolant pump running. At this point, we will continue the coolant for eventually 72 hours. Low pressure cooling system & decay heat system has pretty well cooled down. We have identified some additional sources of low-level radiation -- the ventilation system to site. Again, as Walter said discharges are quite minimal. At this time, we see no danger to the general health and safety of the public. We've also got the teams Mr. Creitz mentioned looking at particular details of the incident. There will be a full report made and, of course, will eventually be made public. At this time, it is difficult to state grid damage we've experienced with nuclear fuel that has become fuel failure. I can say though that the emergency cooling safety systems functioned as they were supposed to, and while we're not particularly pleased with the transient, or the accident, certainly it was not something that was exceptional or greatly out of the ordinary realm of what one could expect with a reactor like we have.

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CREITZ (One additional comment, we certainly do want to keep you people informed of what's happening, and we will continue to attempt doing that. However, major emphasis right now is placed on working at the plant and making these determinations. Between ourselves and the Nuclear Regulatory Commission, I'm sure that you people will be properly informed. If you are not at any time, let us know. At this time, Jack, I suggest we open it up for questions.

I believe we can comment on that, Jack.

HERBEIN // I wouldn't say that an operator did shut down one of the core cooling systems, or a particular component, and that in turn caused the fuel damage. I don't think we can say that at this point. It's a very complex set of circumstances that were involved, and we're really not prepared to say that there was any single event that caused the fuel element failure.

No, I'm not ruling out human error. That's certainly a possibility.

(I think we're coordinating information, but certainly we've got no obligation to check each other's statements.

(Are you saying they're - NRC - wrong?)

CREITZ No. No. I'm not saying they're wrong, but again that is proof that we respect them for making their own evaluations. We want to find out exactly what happened, whatever it was, and we're going to made every extended effort to accomplish that.

HEREIN (Yes, yesterday, yesterday morning about 4 o'clock, the plant tripped due to loss of feedwater on the secondary side. The feed water pump tripped because of valve closure. We're not certain at this point why the suction valve on the feed pump closed. When those feedwater pumps tripped, which brings high pressure to the reactor cooling system, the reactor shuts itself down at high pressure as it's supposed to, at that time our electromatic relief valve designed to open on high pressure, opened and discharged some of the reactor coolant into the receiving reactor coolant drain tank. That tank in turn pressurized and ruptured and thereby allowed reactor coolant to escape into the reactor building. That's really, at this point, nothing that's terribly

unique. The same occurrence did happen two or three times on our first reactor in 1974.

I said two or three times that we actually discharged pressurizer contents into the reactor coolant drain tank.

Two or three times.

Following that, depressurization, we saw that the pressure in the primary system was getting close to the point that the reactor coolant pump could no longer function. So we didn't want to damage the pump by running it at lower suction pressure than we should. So the reactor coolant pumps were shut down and we relied then on the Emergency Core Cooling System to remove heat from the core. At this point, we had experienced some fuel failure, and in turn, of course, fission products did escape into the reactor coolant. That reactor coolant, as I indicated, transferred into the reactor coolant drain tank. That tank overflowed into the reactor building basement. The basement is normally pumped to a nearby building when there is water level in the sump and that is what occurred. Some of that water got into the auxiliary building which was radioactive from the fuel failure that we've experienced. In turn, radiation in the coolant in the auxiliary building was picked up by the plant exhaust fan, that's a mobile ventilation fan that moves air from the building, so there were some trace amounts of radioactivity, a noble gas, discharged through the plant vent. Additionally, when we saw the indications in the reactor building that there were radiation levels, we sent monitoring teams out to the plant perimeter to check for radiation levels and, of course, we found nothing at that point. We then continued to watch indications in the reactor building of radiation levels and, based on very conservative calculations, thought there may be some relation to causes. We asked for a helicopter. The state police provided one promptly and we dispatched an operator to the West shore to take a radiation level reading. It was at that point that we found nothing. This was, must have been, about 8 o'clock. By that time, because of this reading in the reactor building, we had declared a general emergency. We decided that was the prudent thing to do, based on this indication that we had, even though of the three indications that we had, this was the highest.

And it was to become a _____. Then, I think around 11 o'clock yesterday we began to pick up the first traces of radioactivity off the site. Of course, there was evidence at the time of a small amount of radioactive iodine in the environment, and we took samples and had them analyzed by the Department of Environmental Resources, Bureau of Radiological Protection in Harrisburg and they got very much lower indications of iodine being released to the environment than we think. _____ and in fact, not too much above background.

There was no delay. We were carrying out normal plant procedures, as I indicated, up until close to 7 o'clock when we began to see radiation levels increasing in the auxiliary building and the reactor building. And then, according to plan and procedure, we went ahead and instituted our site emergency. And at that point, made notifications and began calculations to determine that potential exposure to the surrounding public.

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No, not really. For that valve to open and to relieve high pressure content as a relief valve does in any good system, is not that uncommon an occurrence and went into the reactor coolant drain tank.

Well, I think the thing that may be abnormal, if you will, is that that valve didn't close at the point that it should have. It continued to leak reactor coolant into the drain tank.

People will eventually be able to walk in. We do have a large volume of water in the reactor building that is radioactive because there has been some fuel failure and it will have to be disposed of. We're not exactly sure at this point how we're going to do that. One of the things we do want to do, of course, is to minimize the radiation exposure and it will probably take a few days for some of that radiation to decay off that's in that water.

CREITZ
May I make a comment on that. When a general emergency is declared, an emergency in fact does not exist. It's an indication that there should be concern and when we got to that level, that's a part of our emergency specification of having a certain radiation level in the containment building, we did take steps to notify all the appropriate people. And sir, if we did not get to you as timely as we should have, we're sorry about it and that's all I can say.

HERBEIN Eleven o'clock was the first indication that we had off-site indications. One of the things that we did, Mayor, was to work very closely with the civil defense and Environmental Resources for protective action. At that, pre-agreed, pre-approved plans, that our full communication will be with those people. Civil Defense will then be responsible for any executive action that might be required as part of this plan.

CREITZ We understand, sir. Technically, we had the people available and trained to handle the emergency. I think it's obvious from the number of people that are in this room handling many of your concerns, many _____ things that are presented to us, was extremely difficult. We are not obviously geared up to handle a press crowd of this size and we do also apologize for the fact that some of you were not able to get some of the information as quickly as possible.

HERBEIN We have discovered yet this morning, some additional that radiation was being released into the ventilation system in our auxiliary building. Hopefully, some of those paths will be terminated before the day is over. (HOW?) By taking technical action with pumps and fuel water systems. With regard to this, to the degree of radiation exposure or the off-site level, that does bear it when certain evolutions are carried out in plants, the ventilation system picks up the radiation and then discharges it through the plant vents and so we have varying levels. Sometimes the levels on-site have been up to 20 or 30 milliremkins (millirems) per hour. We've received some readings off-site that have been on the order of 5 to 7 millirems per hour. Again, these are relatively small exposure rates. However, we are concerned about any amount.

I think we've seen 5 to 7 millirems approximately 2 or 3 miles from the site. Again, the radiation levels do not stay for any period of time.

This morning, when I checked about 2 hours ago, we had some small amounts of radiation on-site. However, the site boundary values and the monitoring points off-site did not indicate at that time of any releases that weren't processed in the program.

We're not actually certain at this point, that radiation did come off in the decay heat. We assumed that that's when it passed in. Because of that assumption, that's why we stopped venting steam.

I suspect that we will have some minor releases continuing through the day and that possibly by tomorrow there won't be any further need for that.

First of all, the drain doesn't dump directly into the Susquehanna River. With regards to notifying the Civil Defense Troops, we've been in contact with Dauphin County Civil Defense who are responsible for the immediate environment around Three Mile Island. With regard to Lancaster and York, not we're not in communication with them directly, however, I feel that Civil Defense network has a communication set up between them. Any need for communication would take place through those grounds.

The reactor doesn't drain directly to the river. It's a very complex processing system that all liquids go through before they are released to the river.

Fuel failure means, simply, that long slender rods that house the uranium on the outside pellet -- may have been breached. The rods are made of an alloy of plutonium. The pellets overheat and then in turn, _____
But, sufficient products contained within uranium outside pellet are released into the water that flows over them.

You say they melted down. Perhaps 1/2 percent or 1 percent of the rods in the core may have experienced some melting of the rods, that's true. That's a think that we worried about, certainly. But I would point out that the emergency injection system did function and we suffered some fuel failure and yes, we had some minor releases of low level radiation, but there was nothing that was catastrophic or unplanned for.

There is no concern at this point, I don't feel, about food being contaminated. That's something we are going to watch. just as in the bomb fallout two years ago. But at this point we don't see that the levels are significant enough to cause concern. However, Tom Gerusky is the one who is the one who is closely monitoring that and he'll be here.

Well, I don't think it certainly is possible to pass iodine through the cow's milk pathway that rapidly.

In laymen's terms, the average person in the U.S. gets on the order of 200 millirems of radiation in a year, that comes from the sun, that comes from the beer you drink, from the television you watch, these kinds of activities. We probably, if there has been any exposure at all, haven't given anyone more than an additional millirem an hour. If we have exposed anyone, and I'm not sure that we have, off-site. Certainly, some of our workers have received exposure. I don't think we've exposed people off-site. (You have been monitoring?) Yes, we have.

As I said, 200 is what you get in a year, I would be willing to say that no member of the public to date has gotten more than 10.

Understand, that certainly will be considered in our reports.

I don't know how we're going to get rid of it in the primary building area, but that's not the source of leaking radiation at the present time. The source of leaking radiation is coming from our auxiliary building in water that has accumulated on the floor. We are presently pumping that out. That will be contained in tanks. Once that is accomplished, then the radiation level leak should stop.

No, radiation is not escaping its primary containment walls. The levels that we've seen are really three-fold, one reading under 1 rem per hour, another reading about 10 rems per hour, and finally there is an indication that we feel is an error reading at 80 rems per hour. We think that is up in the dome of the reactor. That's exposed to moisture and we don't think that's that accurate at the present time. The depth of the level is not escaping the reactor building. We are able to take readings and we don't see any increase of radiation level significant outside that reactor building.

No, we don't have to vent steam anymore. We were venting off steam from 11 o'clock till (reporter interrupted).

Well, there wouldn't have been any fuel design - object that would - pressure system _____ you are talking about. Because it just wouldn't make sense to do that. There was, yesterday, probably failure of our B steam generator. Some of the reactor coolant got over into the secondary system, so there is a slight possibility that some small amount of radioactive feedwater was fed into the boiler we were using at the time to vent off steam.

Yes, to the best of my knowledge, we were.

Yes, we were, but the pressure temperature limit has to do with the heat up and cool down of the reactor and we don't really have that much of an influence on the level of power operation. It has to do with the rate which we heat up and cool down.

I would say singularly, the fact that the electromatic leak valve remained open past its reclose test point and depressurized the reactor coolant system into the drain tank was probably an abnormal event. I feel that it was.

No, it's not a planned event, but it certainly is within the capability of the system designed to handle it. It's not something that we do normally, however; the possibility of that exists in the course of operation. It did occur and we reacted as we would have and of course our system functioned as designed.

I can't really speak to that.

Because normally the steam venting takes place in the condenser, and there wouldn't be any need to prevent radioactive (interrupted).

Well, the radiation is not at a harmful level and as soon as we found that there was the slightest chance that we were venting radioactive steam, we stopped the venting of steam, so we didn't absolutely need to do that. There were other means available to remove steam before and we did it that way.

No, there is no continued nuclear reaction going on inside the nuclear reactor. Of course, there is decay heat that exists in the pellets and that of course is the reason we keep water on top of the fuel.

The temperature that we have on the primary plant right now is about 280° and the pressure valve is about 700 lbs.

If we had a major fuel failure, probably the radiation levels that we're seeing would be perhaps a factor of 5 or maybe a factor of 10 higher.

There is some direct radiation of kinds coming from the reactor building, there is no escape of particulate or iodine or xenon from the reactor building at this point. The reactor building did seep (interrupted).

Yes, but the only exposure there was to the workmen and our people on site. Again, the reading that we had adjacent to the reactor building yesterday was on the order of possibly 15 mr's per hour.

First of all, it's not a complete computer operation. The shutdown is by analog system. When pressure reaches a certain point, rods fall into the core and that stops sufficient chain reaction process. After that, the valves operate off of electrical signals. The point the pressure reached at 2350 lbs., the electromechanical valve opened and it remained open past its reclose point, about 2300 lbs., continued to blow reactor coolant down into the drain tank and as was foreseen in its design, when the pressure in that drain tank reaches 40 lbs. the rupture just burst and the water then went out through the drain tank into the reactor building basement.

No, I don't think that this generator is a lemon. And as far as the 22 major safety problems, I really couldn't speak to that directly. We were evaluated in 1976, along with a number of other reactors and came out with a "B" rating, right in the middle. We had some inspection discrepancies and infractions just as other plants did. We've also had incident reports where equipment has malfunctioned and we've made our prompt reports just like other reactors.

It might be 3 or 4. No, I wouldn't say that they were for safety problems. We have some difficulty with our governor valve on the turbine, that's in the _____. At one point, we dropped the control rods and had some condenser leak; again, nothing that is out of the ordinary.

Radiation is allowed to be released from the reactor stand in the course of normal operation. That's done on a daily basis at low level gas release or low level liquid release in to the Susquehanna. After careful monitoring analysis. Also, our ventilation system discharges trace amounts of radiation into the environment on a daily basis. At this point, because of failed fuel, we discharged more than the trace amounts that we typically do.

At this point, if there are any, we really haven't identified them in depth. Now there will be very careful study made of all the events leading up to the difficulties we've experienced over the past fuel days. That report then in turn, will be reviewed extensively by a peer group.

Not to the best of my knowledge. (Creitz added.. May I also partly respond to that. If there would be any safety defects, ask the NRC. I am sure that they would take action to see that these features are immediately corrected or the plant would be shut down.)

HERBEIN

Nothing we can identify. There may be some safety problems, but to the best of our knowledge there has been none identified with our kind of reactor today. We have not been able to identify that there were any problems as of today.

As I said, the electromatic relief valve went open, depressurized the reactor coolant system 1600 lbs., DPCS(?) then injected through 4 pts. through the make-up pump otherwise known as high pressure injection. That was automatic.

I think no more levels than we've seen over the past 48 hours which is in my opinion very insignificant as we've related to the gentleman in here.

// I think at this point, that's speculation that there is operator error involved specifically in shutting off the injection system concerned.

Is there operator error involved elsewhere? It may be that after we've done our specific study and analyzed very carefully the sequence of events, that there are some things that the operators could have done differently and hence, you could term it an operator error.

CREITZ We certainly won't assume anything. We're going to check every possibility that could exist.

HERBEIN Again, the fuel primarily failed because of the lack of depressurization and the need to shut down our reactor coolant pump so that we wouldn't damage them and would have them available for subsequent circulation and decay heat. Now, in the process of that depressurization it's possible that there was some steaming in the upper region core and then that lead to the failure.

There is a possibility that that occurred, yes.

We don't know the maximum temperature as measured.

We're not certain of the length of time that the core was uncovered. Possibly long enough to fail the fuel. We don't know that.

I think yes, it was and I think that physicists of nuclear energy have been telling us for years that this type of accident certainly is possible. It is possible to have fuel failure but not possible is the hypothetical accident that you hear about when the entire core melts and diffuses molten radioactivity into the air for miles around and kills several thousand people. That's what we've been telling you is not possible. What we've seen here is a fuel failure, something that is possible with an operating reactor today. Nobody has ever said that this couldn't happen. Safety systems were designed to take care of this kind of an accident as our safety system did.

I say that we don't have any China Syndrome possibility with the events that occurred at Three Mile Island over the past few days.

I think that we've already clarified that it is not so much radiation that's getting out. I think I've been over that-that it's a low level radiation that is being released.

The normal yearly dosage that you get is 200 millirems.

I'd say that's possible.

We think there is a leaking tube in the "B" steam generator and as soon as we saw that, we isolated that.

We don't think it is extensive. I wouldn't guess, but maybe two or three tubes.

CREITZ If it is, you must remember that Mr. Herbein indicated that there might be one or two of the controls used which might be damaged. There is 15,000 in the main steam generator.

HERBEIN Again, a depressurization of the reactor coolant system when an electromatic relief valve didn't recede at the appropriate pressure. When that occurred, the emergency injection system that came into play, we had to shut down our reactor coolant pump. We did at that point get some basic levels in the hot leg. That may have contributed to some of the core problems we are experiencing.

There was, we think, a minor leak on the B steam generator and as soon as we suspected that -- the "B" steam generator was isolated.

No, the first indications we had -- was that there were leaks in the "B" steam generator -- this did occur following the transient scheduling.

I'm not aware of that; but by the authority by which you speak, I guess that's a possibility -- I was aware that there was leakage through the "B" steam generator.

A very minimal amount of radiation has gotten into the atomsphere -- I'm satisfied with that.

We did not put it in operation in 1974 but, now, we would not have expected that this is as a routine occurrence if we failed fuel in the sense that we believe we have, however, all our plans and emergency activities are based on being able to appropriately deal with this kind of an event -- and we did.

Question on failed fuel -- Again, that is difficult to estimate, I think 1%.

No, certainly it wasn't rushed into service -- we went through a very extensive and costly sequence of start-up and checks by the regulatory agency -- we did our best to do all the checks and tests according to a pre-scheduled time frame because we wanted to get it in-service -- but no, the unit was not placed in-service for getting particular tax breaks.

I think it's happened once and certainly it's conceivable it can happen again. Again, all our plans and procedures are based on being able to cope with this kind of event.

That is a possibility and I think that through our back-up systems, and we are certainly able of handling something far more serious.

O.K., I don't have an estimate of the cost and as far as the time it will be down certainly it will be down for a few weeks. Yes, we will have to be decontaminated, the auxiliary building, we'll have to decon the reactor building. The problem to dispose the water in the reactor building -- I'm not certain; there are a couple methods available for this operation and this concentration -- would be to solidify it as it is and ship it off-site. There are areas that are being looked at by a team now on ways to dispose of this.

I don't know that we're prepared to say that -- I know that we've got insurance coverage on these types of repairs and decontamination.

As I've indicated, we've got reactor coolant pump running -- we're presently getting ready to shift to the decay heat system and possibly later today we can do that -- once we're on decay heat, the low pressure system is used to bring the plant to a final cooldown point.

I think we're going to have the plant in cold shutdown sometime late tonight or tomorrow morning.

The steam which is associated with the steam generator may have been fed with water, previously contaminated, as a result of a leak in the generator. The "B" generator, perhaps, if it's leaking contaminated, the steam system which perhaps vented radioactive steam. We've only found that out and terminated that same pump.

With a bigger breakdown, it's possible that higher levels of radiation could have been released.

I think the "B" steam generator was probably isolated before 10:00.

Possibly, the contaminated feed water being fed to the other generator which was then feeding in water with trace amounts of radioactivity and that in turn, turned to steam, again, I'm not certain that happened.

The other pathways are the ventilation system in the auxiliary building -- picking up some of the radioactive gasses and particulates being emitted from the 3 to 4 inches of water in the basement of the building.

We've closed the ventilation system and that has raised it to a very high degree of internal exposure rates in the building which the generators will be involved in - in their activity.

No, I don't think they should go see a doctor -- I don't think we've had anything near that cause of concern and really that's in the place of the Bureau of Radiological Protection to make any recommendations.

I can tell you that we didn't injure anybody in this accident, we didn't over-expose anybody and we certainly didn't kill a single soul and as I've indicated the levels of radiation we've had off-site have been absolutely miniscule.

I guess that there are points where there are no guarantees -- there is no guarantee that you won't be struck by a meteorite tonight.

You've asked a question, this is possible somehow, it is conceivable both kinds of ...(interrupted)

The highest of levels of radiation recorded, I think was 80 rems per hour. I believe that maybe 10 or 15 people have to be decontaminated. The numbers that were in the reactor at the time of the releases, I would estimate a number on the order of 100 to 150.

The decontamination is simply to take a shower and wash the radioactivity off your body.

Walter Creitz thanks people

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