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Official Transcript of Proceedings

NUCLEAR REGULATORY COMMISSION

ORIGINAL

Title:

Telephone Conversations at
NRC Headquarters during
the Millstone Alert Declaration
on April 17, 2005

Event Number: 41607

Location: (telephone conference)

Tape: COMMISSION ASSISTANT, 13:05-13:27

Work Order No.: NRC-372 Pages 1-19

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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HEADQUARTERS OPERATIONS CENTER

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TELEPHONE CONVERSATION(S)

RE MILLSTONE ALERT DECLARATION

OF APRIL 17, 2005

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EVENT NO. 41607

Commission Assistant Bridge 9, 13:05-13:27

P-R-O-C-E-E-D-I-N-G-S

13:05

MR. HEADQUARTERS OPERATIONS OFFICER: This is Headquarters Operations Officer. I believe we have everyone up on the Commissioner Assistant's Briefing Bridge, and that bridge is cross tide now with the ET Bridge.

Mr. Lanning, at Region I, are you on the bridge, sir?

MR. LANNING: Yes.

MR. HEADQUARTERS OPERATIONS OFFICER: Mr. Dyer, can you hear me in the ET room, sir?

MR. DYER: Yes. I can.

MR. HEADQUARTERS OPERATIONS OFFICER: All right. With your permission, Mr. Lanning, I understand you're going to conduct the brief. I'll execute a roster playback so we can find out who's on the bridge.

MR. LANNING: Okay.

ELECTRONIC VOICE: There are currently 18 participants in your conference. The following people are in the conference.

MR. COE: Douglas Coe, Office of Commissioner Lyous.

MR. RAMSEY: Jack Ramsey, International

Programs.

MR. BRENNER: Eliot Brenner, Headquarters Public Affairs.

MR. LEE: Sam Lee, Office of the EDO.

MR. ANDREWS: Tom Andrews, Region 4.

MR. JONES: Andrew Jones, Region 4.

MR. CROTEAU: Rick Croteau, Chairman's office.

MR. MARSH: Tad Marsh, NRR.

MS. VIETTI-COOK: Annette Vietti-Cook, Office of the Secretary.

MR. REIS: Jerry Reis, Commissioner Jaczko's office.

MR. GIITTER: Joe Giitter, NMSS.

MR. NERSES: This is Vic Nerses, NRR, Project Manager, Millstone 2, backup Millstone 3.

MS. HAYDEN: Beth Hayden, Public Affairs.

MR. WEBER: All right. This is Mike Weber, NSIR.

ELECTRONIC VOICE: Roster playback is complete.

MR. BLOUGH: Okay. And in the Region, this is Randy Blough and Wayne Lanning's here and Wayne's a IRC manager, I'm the assistant. Also with us are Diane Screnci, John White, Jim Trapp, Paula

(inaudible), Jim Wiggins. We have a few others that are not participating in the call.

MR. HEADQUARTERS OPERATIONS OFFICER: Okay, Headquarters Operations Officer. I believe there are a number of people on the bridge that were not called out on the roster playback. If they could identify themselves?

MS. HARRINGTON: Holly Harrington, Public Affairs.

MR. JONES: Brad Jones, Commissioner McGaffigan's office.

MR. LANNING: Okay. And we also have Max Schneider who's at the site and cannot be part of the briefing.

We've been following an incident, ahh an interesting transient, at Millstone that has put the plant in an alert and put the region in the monitoring phase.

We've got a full regional audience of response center staff here, including a Government liaison manager, public affairs manager, a full reactor safety team and others. We've been coordinating though a Government liaison manager with the states of New York and Connecticut and FEMA I.

Our public affairs is prepared to respond

to press inquiries regarding the event, although we've had none. We plan to prepare a press release. The company's had a number of press inquiries and has issued one press release.

As I said, the plants in an alert. They may be ready to terminate now. It's an interesting transient that will require us to follow up on our part. There were no significant releases from the plant and no real hazard to the public as it turns out.

We have Max Schneider who's been following this event. In fact he's on of three inspectors on site - he is the Senior Resident, and he's going to take you through the technical details of what happened this morning.

Go ahead, Max.

MR. SCHNEIDER: Okay. Good afternoon. 8:29 this morning, Millstone, Unit 3 experienced an automatic reactor trip. Alpha-train safety injection actuation system actuated and Alpha-train main steam isolation from a Bravo steam generator low steam line pressure. Operators followed up with manual initiations. Note that the Bravo-train, SIAS and the HD isolation did not actuate. Steam generator safety on Bravo and Charlie steam generators opened and

stayed open and then cycled until they stabilized about 15 minutes later. For your information there are five safeties each steam generator.

At 08:42, operators declared an alert based on unisolable steam line leak outside containment and in accordance with their emergency action level tables due to steam generator safety staying open.

Pressurized Porus and safeties lifted and reseated due to the primary plant going solid on the pressurizer from the safety injection. The highest primary pressure that they saw was approximately 2,345 pounds.

PRT level increased. This is where the safeties and Porus relieved to, pressure relief tank, the PRT level increase to approximately 82 percent, pressure was approximately 70 pounds. The ruptured disk, which ruptures about 86 to 100 pounds, did not rupture.

Complications to the event, the Alpha-train of SI-MSI actuated only. Turbine driven aux feedwater pump, one of three, two motor driven and one turbine driven, tripped when called upon. That has since been reset and is working properly.

One steam generator's safety lifted

approximately 40 pounds below its set point, it lifted about 1140 pounds as compared to 1180 pounds lift set point.

Additionally, a charging system valve, 661, on Alpha charging pump recirculation line valve had a packing leak that had a significant steam plume associated with it. That has since been isolated and they have not had any indications of airborne contamination or releases into the auxiliary building. That's something to follow up on.

Current plant conditions; they are removing heat via the atmospheric dump valve bypass valves. On a main steam isolation, basically you're isolating the steam generators, - so the MSIVs are shut, their bypasses are shut, atmospheric dump valves are shut and accordingly when you button up a steam generator you get the safeties lifting.

Pressurizer level is currently 53 percent, pressure approximately 2260 pounds, temperature approximately 558 degrees. The steam generator levels are approximately 69 percent and pressure is around 1200 pounds, or I mean 1100 pounds. The PRT level is 82 percent and 75 pounds. The licensee is in a procedure where they charge to the PRT to reduce temperature and then subsequently drain the PRT.

Primary sample has been drawn. There are not results yet. And they're also looking at steam generator secondary samples to ensure there's no primary to secondary leak.

Current activities, the licensee has activated the site emergency response organization. Both the technical support center and your emergency operations facility are activated. Along that lines I responded to the site this morning and two residents that work for me are here, Kevin Mangen, Silas Kennedy. Kevin is in the Unit 2/3 control room with me. Silas is responding to the TSC.

The tampering investigation is in progress. There are no results yet, but there are also no indications of tampering at this point. TSC is leading that effort.

The licensee remains in alert and is evaluating termination criteria. According to the licensee, the termination criteria would be getting containment pressure back in the normal band.

When they initiated the safety injection actuation signal, they lost their containment chillers' nonsafety related modes, which trip on SI. As a result, currently containment pressure is approximately 14 pounds. Normally they maintain at

bout 13.5. Containment chillers have been restored and they're looking at getting that containment pressure back down. That's the only one of their alert criteria that they've discussed.

Unit 2, outage activities: Unit 2 is in an outage. They intended to do an RCS drain down drain down below the head flange today. Unit 2's significant outage activities are on hold until they evaluate and decide to deactivate the (inaudible).

The licensee is reviewing tech specs. They are in tech spec 3.7.1. That's for steam generator code safeties. It takes six hours to get to hot standby and a subsequent six hours to get the hot shutdown.

And then following on, they will need to investigate the initiator and determine electronic failure or actual low main steam line pressure.

I really haven't got a solid indication from the licensee as to the understanding which occurred first, the low steam generator pressure causing the SI, MSI, and SIAS or actual steam generator relief lifting causing a low steam line pressure.

That's what I have Randy.

MR. PARTICIPANT: May I just add a couple

points. They were not operating with any known fuel leakers and they've completed the chemistry on three of the four steam generators, and they're not detecting any indication of primary/secondary leakage.

MR. SCHNEIDER: That's correct.

MR. LANNING: So our plant's gone forth, then are to continue to monitor their efforts from the site and the Region 1 IRC calling upon headquarters as we need them.

It looks like the plant is at a stable hot shutdown now with a need to continue to watch that pressurizer relief tank where the primary reliefs discharges to. And then the plant plans to go on and cool down.

So we'll be monitoring their efforts. We think the licensee of these probably will be de-escalating from an alert fairly soon here. I guess we're ready at this point for questions that you might have.

MR. GIITTER: This is Joe Giitter. Could you talk about the turbine driven aux feedwater pump again?

MR. HEADQUARTERS OPERATIONS OFFICER: Go ahead, Max.

MR. SCHNEIDER: In response to the event,

the reactor tripped. The turbine driven and motor driven aux water pumps start to feed the steam generators. In this case, the turbine driven aux feedwater pump, when it was asked to start, it started and then tripped. Subsequently they reset it and it is currently working correctly. That would be a followup activity to determine why it tripped.

MR. GIITTER: Could you also explain again, please, the -- you said -- I'm not quite sure, did the a-train SI actuation occur before or after the a-train main steam isolation valve closure?

MR. SCHNEIDER: The Alpha-train safety injection actuation signal and main steam isolation signal came in. And that comes in on one of things, on a low steam line pressuring. And that did come in on the Alpha-train, but not the Bravo-train. And that's another thing that needs -- this licensee needs to understand.

MR. GIITTER: And the steam generators, B and C, in which the safety valves opened, were associated with the a-train?

MR. SCHNEIDER: This is Alpha-train in terms of electronics. You have four steam generators, A, B, C, and D.

MR. NERSES: Max, this is Vic Nerses.

MR. SCHNEIDER: Yep.

MR. NERSES: What's the normal PRT level they operate at?

MR. SCHNEIDER: They do operate with a level I'm not sure, I'm thinking 40/50 percent, but I really wouldn't want to pass that along as fact here. I'll have to find that out.

MR. NERSES: Okay.

MR. REIS: Max, Terry Reis. Would you please go over one more time the current heat removal methodology?

MR. SCHNEIDER: It's atmosphere dump valves have bypass valves. Now the ADV's, when you have an MSI, they get a signal to close, they're buttoning up the steam generator. And so that MSI signal is not yet reset. If they reset the signal, then they could operate them manual electric, if you will. But right now, they're controlling the decay heat using the bypasses around those valves.

MR. REIS: Okay. Thank you.

MR. NERSES: Okay. So, I just wanted to follow up on that question that I had on the a-train low steam line pressure, there was not an associated b-train low steam line pressure. Correct?

MR. SCHNEIDER: Right. If you had a Bravo-

steam generator main steam line actual low pressure, you would expect the Alpha and Bravo reactor protection systems to pickup on that and generate an ESF actuation and have a SIS and an MSI. That didn't happen. It only happened when the Alpha-train ESF. So that's unusual. You would have expected both trains to have seen the same thing and come in.

MR. NERSES: And when that happens and the a-train SI actuation occurs, how many of the four steam generator isolation valves would be effected by that Alpha-train low steam line pressure signal?

MR. SCHNEIDER: Well, it was buttoning up all the steam generators.

MR. NERSES: All of them?

MR. SCHNEIDER: Yes.

MR. NERSES: And is that what happened?

MR. SCHNEIDER: Yes.

MR. NERSES: Okay. And then you mentioned -- I thought that you said that the steam generators, Bravo and Charlie, they're steam safety valves did open, correct, and they actually stayed open unexpectedly, and then they closed, and then they kind of cycled on and off and didn't stabilize until about 15 minutes later, which is unusual? But not the Alpha and the Delta steam generators, they did not open?

MR. SCHNEIDER: They did not.

MR. NERSES: Okay. And there are five safeties on each steam generator?

MR. SCHNEIDER: I'm not sure the total, how many on Bravo and how many on Charlie opened and stayed open and then cycled.

MR. NERSES: Okay. I see. Thank you.

MR. MARSH: I'm Tad Marsh. Are those safeties in the same area, the same vicinity, Bravo/Charlie, generator C? Do you know?

MR. SCHNEIDER: Excuse me?

MR. MARSH: This is Tad Marsh. Are the Bravo and Charlie steam generator safeties in the same physical area?

MR. SCHNEIDER: Approximately -- I'm not sure to tell you the truth. I know what you're talking about and they are in the main steam safety building, but I don't know if they're located right next to each other.

MR. MARSH: I mean they're upstream of their respective main steam isolation valves. Right?

MR. SCHNEIDER: That's correct. You have both atmospheric dump valves and the steam generator safeties that are upstream to the MSIVs. If you needed to relieve steam generator pressure and, of

course, decay heat without a condenser, you can still do that to atmosphere.

MR. MARSH: If this manual operation to remove the decay heat, is that being done in the same physical area as the main steam safeties or is that done remotely from the control room?

MR. SCHNEIDER: It's done remotely from the control room. It's a little more difficult to control that way, then having a full AD available because they because they already do it.

MR. MARSH: Do we have an estimate of how much longer it will take to sample the fourth steam generator to verify primary to secondary leakage status.

MR. SCHNEIDER: I haven't got an estimate on that.

Did -- Wayne, did they talk anything about that from the licensee's brief?

MR. LANNING: Nothing more than it was underway. You know, we expect it soon. And it is the Delta steam line that they're evaluating. The other three stream lines have been evaluated.

MR. SCHNEIDER: Any other questions at this time?

MR. CROTEAU: Yes, Max. Max, this is Rick

Croteau. Is AFW feeding the generators right now?

MR. SCHNEIDER: Yes. All three.

MR. CROTEAU: And is there indication of continued in leakage into the PRT from the PRV's, or the relief valve, the safety valve?

MR. SCHNEIDER: Before they started the procedure to cool that down and then subsequently drain it, they had seen it stabilized about 82 percent or so. They are still looking at the PORVs and safeties. There are three pressurized safeties and two PORVs. They're still looking at down stream tail pipes and evaluating that. But they saw some stabilization. The reason I tell you that is in order to cool it down, they have to pump to the PRT from the primary grade storage tank. So, they're, you know, you can't -- if you're sending something in there, you can't where it's coming from.

MR. CROTEAU: Yes. But they are not having trouble with the level's not getting away from them, or the pressure or anything. Is it pretty stable?

MR. SCHNEIDER: Right. The pressure's about 70 pounds, level's about 82 percent. The rupture disc ruptures between 86 and --

MR. CROTEAU: Yes. I guess. All right. So, they're below that. Okay. Thanks.

MR. BRENNER: Eliot Brenner for Diane Screnci.

MS. SCRENCI: Yes.

MR. BRENNER: Is it your intent to put anything out or just respond to query right now?

MS. SCRENCI: No. We're going to write a press release and put that out.

MR. BRENNER: I'm sorry. Say again.

MS. SCRENCI: I'm going to write a press release and we're going to put that out.

MR. BRENNER: Okay.

MR. PARTICIPANT: Max, there was an earlier report that that pressurizer might have gone solid. Has that been withdrawn or is there any firm information on that?

MR. SCHNEIDER: The firm information is the pressurizer did go solid. When they had a safety injection and are pumping all this water into the RCS, they went solid. And that's what caused the PORVs to -- or the safeties to lift on the primary side.

MR. PARTICIPANT: And as well, might want to follow up and find that out if we got through the event as with other aspects of this event because the other PORVs were probably -- you're operating under water environment and such and we don't know how many

times they cycled and that sort of thing. So there'll be a lot to follow up on this event, during the follow up inspection.

MR. SCHNEIDER: Okay. Thank you. And yes, that sounds good.

MR. PARTICIPANT: Do you know if the operators have detected any evidence of a steam bubble under the head?

MR. SCHNEIDER: Yes. The report the gave us on their debrief is that 100 percent solid.

MR. PARTICIPANT: Okay. Thanks. No bubbles. Okay. Thanks.

MR. CROTEAU: This is Rick Croteau again. Diane, what's the main thing that you're going to stress in the press release?

MS. SCRENCI: I haven't written yet, but I'll say that the NRC's monitoring the situation. We have residents there. We looking at it here and there's been no detectable release.

MR. CROTEAU: Okay. Are you planning on waiting until we hear from that fourth steam generator first?

MS. SCRENCI: It will probably take me that long anyway.

MR. PARTICIPANT: (inaudible)

MS. SCRENCI: Yes. We think they're almost done and I haven't even started yet.

MR. CROTEAU: All right.

MR. HEADQUARTERS OPERATIONS OFFICER: Okay. Last call for additional questions.

MR. PARTICIPANT: Good brief, Max. Thanks very much.

MR. SCHNEIDER: All right. Thank you.

(Whereupon, the phone conference ended at 13:27)

CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission in the matter of:

Name of Proceeding: Telephone Conversation at NRC Headquarters during the Millstone Alert Declaration On April 17, 2005

Event Number: 41607

Location: teleconference

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and, thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings as recorded on tape(s) provided by the NRC.

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