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Official Transcript of Proceedings

NUCLEAR REGULATORY COMMISSION

Title: Japan's Fukushima Daiichi Audio File
RST Podium - Day 1

Docket Number: n/a

Location: n/a

Date: March 11, 2011

Work Order No.: NRC-1100 Pages 1-5

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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JAPAN'S FUKUSHIMA DAIICHI RST PODIUM AUDIO FILE

+ + + + +

DAY 1

+ + + + +

(CONFERENCE CALL INITIATED.)

(CONFERENCE CALL INITIATED.)

JIM TRAPP: NRC; Jim Trapp.

KAMAL MANOLE (ph): Yeah, this is Kamal Manole.

JIM TRAPP: Yes.

KAMAL MANOLE: And I understand that Bill Ruland was looking for me.

JIM TRAPP: Hold on. He's, he's coming right my way.

KAMAL MANOLE: Okay.

JIM TRAPP: Take care. Hold on just a second.

(Standby.)

BILL RULAND: Hey, how you doing, Kamal?

KAMAL MANOLE: Hi, Bill. I was, I talked to Tim McGinty. I was in Tim's office like maybe like 20 minutes ago.

BILL RULAND: Okay.

KAMAL MANOLE: Is that the same thing, or?

BILL RULAND: Yes. Yes, it is.

KAMAL MANOLE: Okay.

BILL RULAND: That, that -- yes. Then

that's -- yeah, if you talked to him, that's all that was needed for now.

KAMAL MANOLE: All right.

BILL RULAND: Thank you.

KAMAL MANOLE: If you guys need me, give me a call.

BILL RULAND: Okay.

KAMAL MANOLE: All right, take care.

BILL RULAND: Bye.

(Conference call concluded.)

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(CONFERENCE CALL INITIATED.)

RICK HASSELBERG: Reactor Safety Team; Hasselberg.

HOO MARK ABRAMOWITZ: Yeah, Rick, is Mr. Casto there?

RICK HASSELBERG: Mr. Casto, yes. He's back in the PMT room.

HOO MARK ABRAMOWITZ: Okay. Do you want me to transfer -- okay, I'll go to the PMT.

RICK HASSELBERG: Yeah, if you could, the PMT desk.

HOO MARK ABRAMOWITZ: Okay.

RICK HASSELBERG: Okay.

HOO MARK ABRAMOWITZ: Okay, thanks.

RICK HASSELBERG: Bye.

(Conference call concluded.)

(END OF SERIES.)

Official Transcript of Proceedings

NUCLEAR REGULATORY COMMISSION

Title: Japan's Fukushima Daiichi Audio File
RST Podium - Day 2

Docket Number: n/a

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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JAPAN'S FUKUSHIMA DAIICHI RST PODIUM AUDIO FILE

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DAY 2

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(CONFERENCE CALL INITIATIED.)

(CONFERENCE CALL INITIATED.)

11:04:09/11:04:33

RICK HASSELBERG: Reactor Safety Team; Hasselberg.

MIKE CHIAP (ph): Hey, Rick, this is Mike Chiap.

RICK HASSELBERG: Hi, Mike.

MIKE CIAP: I'm at home, and I thought I talked to Peter earlier today --

RICK HASSELBERG: Okay.

MIKE CIAP: -- and said I couldn't come in --

RICK HASSELBERG: All right. That's fine. I think we've got it covered.

There's not a lot going on. Eva Brown is going to do double duty here. If we have a real emergency, you know, we'll call everybody up. But otherwise, go back to bed.

MIKE CIAP: All right. Cool.

RICK HASSELBERG: All right. So, sorry to bother you.

MIKE CIAP: All right, man.

RICK HASSELBERG: All right. Bye-bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

11:04:06/11:06:17

RICK HASSELBERG: Reactor Safety Team; Hasselberg.

EVA BROWN: Hi, Rick. This is Eva Brown. How are you?

RICK HASSELBERG: Hi, Eva. What's up, girl?

EVA BROWN: I got a call to come in. I wanted to know if you all still needed me.

RICK HASSELBERG: Yeah, I think so. Hang on. Let me go get the roster.

EVA BROWN: Okay.

(Standby.)

RICK HASSELBERG: I sure enough have gone and misplaced the roster, but I'm pretty sure that you -- they had, somebody had penciled you and for this next shift.

EVA BROWN: Right, and what's the timing for that? That'll be --

RICK HASSELBERG: That'll be 11. So if you can get in 10:30 -- ah, I was, I had a right next to me here. One second.

EVA BROWN: Okay.

RICK HASSELBERG: Now I've got to pull my

glasses off so I can read it.

Okay; BWR -- okay, Chuck Norton relieved Tim Kolb. We've got you in, coming in at 11.

EVA BROWN: Okay.

RICK HASSELBERG: You're Ms. Night Shift; and then Kolb again; and then Chuck. And then they've got you again and then Kolb, although Frank Collins has indicated that he could do a shift or two if somebody can't.

So, if you want to skip a night or something, I don't know if he could do it tonight because it would be fairly short notice, but --

EVA BROWN: No. I'm --

RICK HASSELBERG: -- but maybe tomorrow night or something like that.

EVA BROWN: -- no, I'm good with tonight.

RICK HASSELBERG: Okay.

EVA BROWN: So it would be From 11 to 7 just like last --

RICK HASSELBERG: Eleven to seven. That's correct.

EVA BROWN: Okay. Well, I'll see you guys in a bit then.

RICK HASSELBERG: Okay, dear.

EVA BROWN: Thank you.

EVA BROWN: Thank you. Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

11:04:54/11:07:08

RICK HASSELBERG: Reactor Safety Team; Hasselberg.

MALE PARTICIPANT: Hey, Rick, I've got Jerry Dojer (ph) on the line. Connecting you now.

RICK HASSELBERG: Jerry Dojer. Yes, thanks.

Jerry?

JERRY DOJER: Hi, Rick.

RICK HASSELBERG: Hey, Jerry, how are you doing?

JERRY DOJER: Good.

RICK HASSELBERG: What's up?

JERRY DOJER: I wanted to -- are you putting me down for seven o'clock in the morning?

RICK HASSELBERG: Hang on one. Let me grab the roster.

(Standby.)

RICK HASSELBERG: Okay, let me see here. Your name is down here for 3:00 p.m. to 11:00, March 12, which is right now, and you're not here, clearly, so that's not going to work. Let me see where else your name shows up.

March 13th is, it looks like Ken Hart is penciled in there.

Steve Bloom, March 14th.

And then we have a to be determined on the 14th, 3:00 p.m. to 11:00 p.m. And I don't see your name prior to that one, Jerry.

JERRY DOJER: Okay. So, so, you know, I think we talked yesterday. I couldn't make it today.

RICK HASSELBERG: Yeah. That's right.

JERRY DOJER: I could make it tomorrow. So if you guys need me --

RICK HASSELBERG: If we need you when? You couldn't make it today. Could you make it tomorrow at 7:00 a.m.?

JERRY DOJER: Yeah.

RICK HASSELBERG: It looks like I may have a hole there.

JERRY DOJER: Yeah, that, yeah, that's what I was asking about.

RICK HASSELBERG: Oh. Oh, okay. That's

what -- I wasn't sure.

JERRY DOJER: Yeah. That's --

RICK HASSELBERG: Okay. Tomorrow at seven, to three then.

JERRY DOJER: Okay.

RICK HASSELBERG: Thank you, Jerry. I appreciate your calling.

JERRY DOJER: All right. Seven to three on Sunday.

RICK HASSELBERG: Yes, sir.

JERRY DOJER: Okey-dokey.

RICK HASSELBERG: Thanks, Jerry.

JERRY DOJER: Take care.

RICK HASSELBERG: Bye-bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

11:05:45/11:08:25

RICK HASSELBERG: Reactor Safety Team; Hasselberg.

BRETT: Hey, Rick, it's Brett. How are you?

RICK HASSELBERG: Hey, what's up, Bud?

BRETT: Hey, I was wondering what wondering what the schedule was. Do you need me to

come in at a 11:00?

RICK HASSELBERG: Yeah. Hang on here. I thought you had indicated that you couldn't come in. I think Mike Moreland is coming in.

BRETT: Okay.

RICK HASSELBERG: I'm pretty sure that's the case.

BRETT: Okay.

RICK HASSELBERG: But let me, let me grab the schedule because I think we have you on the hook for something here.

BRETT: Okay.

RICK HASSELBERG: One second.

(Standby.)

RICK HASSELBERG: Okay, your next one -- it's a little confusing here -- it says 3/13, 11 p.m. to seven. Does that sound right to you?

BRETT: Well, no. I haven't, I didn't, I didn't -- no. I hadn't planned anything yet.

RICK HASSELBERG: Oh, you hadn't, okay.

BRETT: No.

RICK HASSELBERG: They did have you penciled in for 11 p.m. to seven today, and apparently, you had indicated, hell no. And they got Mike Moreland in there. Okay?

BRETT: Okay. No, I was hoping they could find someone else.

RICK HASSELBERG: They did. They tried, they tried Greg Shellenbeck (ph) and then they got Mike Moreland. So we're going to get Shellenbeck in there eventually too.

BRETT: Have you gotten Eric in there?

RICK HASSELBERG: Thomas cannot do it until like sometime after the 13th, so tomorrow's the 13th. We're hoping maybe this will all be wrapped up by close of business Monday for us.

BRETT: Okay.

RICK HASSELBERG: We're hoping.

Compared to last night, the general impression is that it may not, you know, it may not be continuing to get worse.

BRETT: Okay.

RICK HASSELBERG: So that's what we're hoping.

BRETT: All right, so, unless I hear otherwise, planned for 11 p.m. tomorrow.

RICK HASSELBERG: That is correct.

BRETT: Okay.

RICK HASSELBERG: And let me double check -- 11 to seven, 13 to the 14 [sic].

BRETT: Okay.

RICK HASSELBERG: So it would be late night Sunday night.

BRETT: Okay.

RICK HASSELBERG: Okay, bud.

BRETT: Okay. Thank you.

RICK HASSELBERG: You bet. Thank you.

BRETT: Goodbye.

RICK HASSELBERG: Bye-bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

11:07:11/11:08:57

CHUCK NORTON: Operations Center; Chuck Norton.

MIKE CASE: Hi, Chuck. Did I get the Reactor Safety Team?

CHUCK NORTON: Yes, you did.

MIKE CASE: Okay, great. This is Mike Case.

CHUCK NORTON: Hi.

MIKE CASE: Peter had called earlier to see whether I'm coming in at 11 o'clock --

CHUCK NORTON: Okay.

MIKE CASE: -- or inviting me in. So I guess the answer's yes.

CHUCK NORTON: Okay. You're coming in at 11?

MIKE CASE: Yeah.

CHUCK NORTON: Did you --

Did Peter leave?

MALE PARTICIPANT: Yes.

CHUCK NORTON: Okay.

MIKE CASE: Okay, are you --

CHUCK NORTON: -- Mike Case.

Hang on.

MIKE CASE: Okay.

STEVE BLOOM: Hey, Mike.

MIKE CASE: Hey, how are you doing?

STEVE BLOOM: It's Steve Bloom. What's up?

MIKE CASE: Oh, okay. Peter called and, and wanted to know if I was coming in at 11, or wanted to invite me in at 11.

STEVE BLOOM: Oh, okay. Wait. Rick, Rick Seton's (ph) keeping track of, all over this. Just hang on.

MIKE CASE: Okay.

STEVE BLOOM: Okay.

He wants to know if --

RICK SETON: Hey, Mike.

MIKE CASE: Hi, Rick.

RICK SETON: Let's see here. I'm trying to see where we stand.

Sorry; I just got in myself here.

MIKE CASE: Right. Very --

RICK SETON: So, Mike Case -- you did the 11 to seven.

MIKE CASE: Right.

RICK SETON: And it looks like they want a, on the, on March 12th, can you do 11 to seven

again?

MIKE CASE: Yeah. That's today; right?

RICK SETON: Yeah.

MIKE CASE: Yeah. No, yeah. That's okay.

RICK SETON: Eleven p.m. And you get the extra hour, lucky.

MIKE CASE: Oh, that's right. Yeah.

RICK SETON: Yeah. Yeah.

MIKE CASE: Beautiful. Wow, this was a bargain.

RICK SETON: Yeah, that's right. That's right.

Okay, so you get the night shift. You'll be relieved by Skeen --

MIKE CASE: Okay.

RICK SETON: -- and then Ruland, and then Case again.

I guess we're giving Holahan the, the week off.

MIKE CASE: Oh, yeah. I guess so.

RICK SETON: Yeah. Okay.

MIKE CASE: How are things going there?

RICK SETON: Well, I just got here. There's a lot going on.

MIKE CASE: No way.

RICK SETON: It -- no, really. It's, it's been kind of fun.

I've got somebody when I'm in now, sir, so if I, if I can run, I'll do it.

MIKE CASE: You bet you.

RICK SETON: Okay. Thanks, Bud. Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

11:07:55/11:09:40

DAVE SKEEN: This is the Reactor Safety Team. Dave Skeen speaking.

GREG SHELLENBECK (ph): Hey, Dave, this is Greg Shellenbeck.

I was trying to reach the coordinator. I believe it's Pete --

DAVE SKEEN: Yeah. Pete's here.

GREG SHELLENBECK: We're trying to work out scheduling.

DAVE SKEEN: Yeah.

GREG SHELLENBECK: What's going to happen -- I believe we got coverage for tonight at 11 -- Mike Moreland's going to come down at 11.

DAVE SKEEN: Okay. Let me hand you off to him and then you can talk to Pete for just a minute.

Mike Moreland, that's good.

GREG SHELLENBECK: That sounds great, Dave.

DAVE SKEEN: Yeah. Okay, thanks.

PETE: Hello, Michael. Are you able to come in?

GREG SHELLENBECK (ph): No, this is Greg

Shellenbeck.

GREG SHELLENBECK: Oh, okay.

GREG SHELLENBECK: Okay, so I spoke with Mike and have just been kind of talking to all the troops. Mike's coming in at 11.

(b)(6)

(b)(6)

PETE: Okay, so will Mike --

GREG SHELLENBECK: So what I -- yeah -- so what I think would work well, if Mike will be in tonight, I, I think I can swing tomorrow night at 11. So I can do the night coverage for Sunday.

PETE: Okay.

GREG SHELLENBECK: If that works.

PETE: Sunday night and Monday morning.

GREG SHELLENBECK: Yeah.

PETE: You realize, you realize that Mike only has to be here seven hours because it's Spring Ahead. So he gets the deal.

GREG SHELLENBECK: Okay. Yeah, okay.

(Laughter.)

PETE: Humor intended.

GREG SHELLENBECK: There you go. There you go.

So I think that should, that should work

out. That'll give me enough time to, to get this, my goal --

PETE: Okay. And what we'll do is sometime tomorrow, we'll call and confirm that you need to come in --

GREG SHELLENBECK: Okay.

PETE: -- at 11 o'clock Sunday night, to Monday morning.

GREG SHELLENBECK: Okay.

PETE: Okay?

GREG SHELLENBECK: That'll, that'll work for me there, Pete.

PETE: Okay.

GREG SHELLENBECK: I just wanted to get back to you on that.

PETE: I understand. I appreciate it.

GREG SHELLENBECK: Okay. No problem.

PETE: Thank you.

GREG SHELLENBECK: So just give me a holler if you need anything.

PETE: Thank you.

GREG SHELLENBECK: Okay. Thank you. Bye-bye.

PETE: Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

11:04:34/11:13:31

RICK HASSELBERG: Reactor Safety Team; Hasselberg.

HOSEIN ASMALE (ph): Hi. This is is Hosein Asmale. Are we supposed to report to the Headquarters?

RICK HASSELBERG: Who is this, please?

HOSEIN ASMALE: Hosein Asmale. Rick?

RICK HASSELBERG: Hosein, how are you, bud?

HOSEIN ASMALE: Good.

RICK HASSELBERG: Let me --

HOSEIN ASMALE: I'm supposed to come today?

RICK HASSELBERG: Let me look at the roster and see. Did somebody call you?

HOSEIN ASMALE: No. Nobody called me.

RICK HASSELBERG: Okay.

HOSEIN ASMALE: But I was not sure whatever, what, what you --

RICK HASSELBERG: Did you call Hosein?

HOSEIN ASMALE: Rick?

RICK HASSELBERG: Hang on, Hosein.

HOSEIN ASMALE: Rick, nobody called me.

I just wanted --

RICK HASSELBERG: Okay.

Hang on, Hussein. I'm sorry.

HOSEIN ASMALE: Rick, nobody called me. I --

RICK HASSELBERG: We're going to be up for the next few days.

Go ahead, Hosein.

Did you -- I'm sorry.

HOSEIN ASMALE: No, No -- Rick, nobody called me.

RICK HASSELBERG: Okay.

HOSEIN ASMALE: I just wanted to know what the procedure is.

RICK HASSELBERG: Okay. We're not, we're not staffed, you know, full, full team.

HOSEIN ASMALE: Oh, okay.

RICK HASSELBERG: But we, we've been using severe accident analysts, Mike Chiap (ph), has circled Don and we would love to have you take a couple of shifts.

HOSEIN ASMALE: What --

RICK HASSELBERG: Let's see. Don's next shift -- and he says he's not going to be available -- so would you be --

HOSEIN ASMALE: Don who? Don who?

RICK HASSELBERG: Don Dubey.

HOSEIN ASMALE: Don Dubey, okay.

RICK HASSELBERG: Yeah. Could you take a shift March 13th -- that's tomorrow -- three p.m. to 11?

HOSEIN ASMALE: Three p.m. to 11, okay.

RICK HASSELBERG: Would that be okay?

HOSEIN ASMALE: Yeah.

Do we have any information from them? I mean --

RICK HASSELBERG: I can put you on with Don and he can tell you what he knows.

HOSEIN ASMALE: Okay.

RICK HASSELBERG: All right. One second.

(Standby.)

RICK HASSELBERG: Can you talk to Hosein for a minute?

MALE PARTICIPANT: Hold on.

RICK HASSELBERG: Yeah, I'll, I'll quiet that down.

DON DUBEY: Hey, Hussein, this is Don Dubey.

HOSEIN ASMALE: Don, Don, this is Hosein.

I was not sure, I was not sure whether

we're supposed to come to the Headquarters or not. I just, I didn't receive anything. I just called, and Rick is telling me that, you know, you're not showing up tomorrow.

DON DUBEY: Yeah. Yeah, I'm going to be for, actually, for four or five days, so.

HOSEIN ASMALE: Okay. So what's going on? I mean --

DON DUBEY: Okay, have you kept up with the news, or do you want me to fill you in?

HOSEIN ASMALE: Yeah, yeah, yeah. Okay.

DON DUBEY: Okay. Basically, we've got a scaled-down crew on the Reactor Safety Team.

HOSEIN ASMALE: Okay.

DON DUBEY: We don't have everybody here. I can summarize it.

You know, there was an earthquake at the, at the site. There's six units at one site, and 10 miles away is another four units.

HOSEIN ASMALE: Yeah.

DON DUBEY: None of the, as far as we can tell, there was no damage from the earthquake other than losing off-site power.

HOSEIN ASMALE: Right.

DON DUBEY: And the diesel started and

everything was fine. But it was the tsunami. They were saying a 35-to 40-foot wave came in, and basically, all their diesel fuel oil is --

HOSEIN ASMALE: Yeah, no, I know.

DON DUBEY: -- the tanks aboveground had got washed out.

HOSEIN ASMALE: Yeah.

DON DUBEY: So then, and then flooded the diesel. So they lost power.

So they've been in, you know, six units there have been in a station blackout for, for 30 hours now, 36 hours.

HOSEIN ASMALE: Yeah.

DON DUBEY: Unit 1 has, has a BWR Mark 1, but it has an isolation condenser. It's, it's the one in toughest shape because it doesn't AC-independent makeup to the reactor cooling system. So they believe that it uncovered the core for some period of time and got some part partial fuel melting.

HOSEIN ASMALE: Right.

DON DUBEY: They ended up, now, they must have blown down the, the reactor and have injected, and are injecting seawater --

HOSEIN ASMALE: Yeah, I know.

DON DUBEY: -- borated seawater. And then they're venting the containment.

HOSEIN ASMALE: Yeah, no. I, I, I heard.

DON DUBEY: And then Units 2 and 3 have our RCSCI, but those, the suppression pool has reached, you know, 212 degrees Fahrenheit, 100 degrees C and they --

HOSEIN ASMALE: Oh.

DON DUBEY: -- so they stopped RCSI for now.

So far, the level is still above the top of the active fuel, but I don't know what their next step is, because, for there, they're trying to, you know, align fresh water. But, you know, the next step is going to be to vent the containment there as well.

HOSEIN ASMALE: Okay.

DON DUBEY: But what they're, how they're going to make up, I don't know. I don't know if they want to go with salt water, because salt water means the end of life for those, those plants.

HOSEIN ASMALE: I understand.

DON DUBEY: Unit 1 --

HOSEIN ASMALE: Who, who from RST is there now? Is Jason Shafkow (ph) --

DON DUBEY: No. We've only got a skeleton screw --

MALE PARTICIPANT: Yeah, we're screwed.

DON DUBEY: -- yeah -- crew.

You know, Bill Ruland is now the director.

HOSEIN ASMALE: Okay.

DON DUBEY: Rick, myself, and Chuck-somebody, and that's it. We don't have a TH guy. We, we don't have --

HOSEIN ASMALE: Well, I was not -- Don, I was not sure what I'm supposed to do, because I didn't receive anything, so I was just in a holding mode. I was following this because I didn't receive anything.

DON DUBEY: Because we didn't, because we didn't, we haven't activated the Operations Center formally.

HOSEIN ASMALE: Yeah. Just --

DON DUBEY: All we're doing is coming in, monitoring.

HOSEIN ASMALE: Right.

DON DUBEY: Like last night, we says, well, we used some of the long-term, some of the SORCA results for melt-core.

HOSEIN ASMALE: Okay.

DON DUBEY: And we were trying to say, okay, this is a long-term station blackout. You know, it's not a plant-specific analysis, but you're going to, you know, project --

HOSEIN ASMALE: Right.

DON DUBEY: -- you know, there's no mitigation. You're going to have core damage at such and such a time and release at such and such a time.

HOSEIN ASMALE: Right.

DON DUBEY: And that's about all we can do, and try to, to understand.

But a lot of what we're doing, too, is responding, you know, responding to questions from the White House, from the President --

HOSEIN ASMALE: Um-hmm.

DON DUBEY: -- generating questions and answers for the Chairman, whose briefing the White House.

HOSEIN ASMALE: Okay.

DON DUBEY: So, you know, that's, that's about all we can do because we're not in a recommendation mode or --

HOSEIN ASMALE: Right.

DON DUBEY: -- anything like that.

HOSEIN ASMALE: Right. You don't know their systems and everything there, so you don't get any different --

DON DUBEY: Yeah. I mean, one thing we did determine was they didn't have, as far as we can tell, they don't have hydrogen well vent at these units.

So, when they were venting, they were venting into the reactor building. And they had, because they had some fuel failure, they had hydrogen and steam in the reactor building.

HOSEIN ASMALE: Yeah.

DON DUBEY: And that led to a deflagration of some sort.

HOSEIN ASMALE: No, I heard it was a, it was a pump. It was a pump that they -- I don't see where it's from a, from hydrogen. Was it hydrogen?

DON DUBEY: Well, there's two sources that say hydrogen, yep. Two sources said it was a hydrogen -- I, I am questioning whether it was, personally, I don't think it was hydrogen explosion.

HOSEIN ASMALE: No.

DON DUBEY: But, but, but the Japanese ministry say it was. So, you know, I'm not going to argue with them. But they know, they -- I, I, to me,

you're releasing hydrogen and steam. You know, it's, I'm not convinced that there was a -- you know, to me, what, you've created a, you know, iterative situation there. But, you know --

HOSEIN ASMALE: It's BWR; right?

DON DUBEY: Yeah, and there's no, there's no power source.

HOSEIN ASMALE: Yeah.

DON DUBEY: You know, they're in a station blackout. So I don't know.

HOSEIN ASMALE: Okay.

DON DUBEY: But, in any case, all that did was blow up the top and blowout panels of the reactor building. But the containment's still intact as far as I can tell.

HOSEIN ASMALE: Right.

DON DUBEY: So you got, you got partial fuel damage at Unit 1. We don't know how much. It's probably the top, middle of the fuel. It might just be the cladding, you know, some oxidation. We're not sure.

HOSEIN ASMALE: Yeah. Right.

What do I, what should I do now? Should I wait and see if they contact or --

DON DUBEY: No. Just plan on coming into

the Operations Center tomorrow at three o'clock.

HOSEIN ASMALE: Shall I come in to -- because you cannot be there Sunday, so I'm filling in for you.

DON DUBEY: No -- yeah.

HOSEIN ASMALE: Okay, so three to eleven.

DON DUBEY: Right. Yeah.

HOSEIN ASMALE: Okay. So what time are you leaving?

DON DUBEY: Tonight at 11 o'clock.

HOSEIN ASMALE: Okay, so who's going to be --

DON DUBEY: You're going to relieve Jeff Circle, I think.

HOSEIN ASMALE: Okay. Okay.

DON DUBEY: Mike Chiap is taking over for me, from, from 11 to seven, and then, well, and then Jeff Circle after that, and then you.

HOSEIN ASMALE: Okay. Sounds good. I'll be there at --

DON DUBEY: And then maybe Monday._ I don't know. I don't know how long they're going to continue this.

HOSEIN ASMALE: Yeah, Monday at, yeah. Okay. I'll be there on --

DON DUBEY: You know, maybe by Monday, we'll get somebody else --

HOSEIN ASMALE: Yeah. Okay.

DON DUBEY: -- because we've only got, like I said, we're only staffing this with five, six people.

HOSEIN ASMALE: Right. Because, I didn't hear anybody, you know, calling or -- so how did you hear? You just showed up or something?

DON DUBEY: I just showed up.

HOSEIN ASMALE: Oh, okay. I wasn't sure whether I was supposed to -- okay. I'll come in at three o'clock tomorrow.

DON DUBEY: Okay. Thank you.

HOSEIN ASMALE: Okay. Thank you, Don.

DON DUBEY: Bye.

HOSEIN ASMALE: Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

11:09:10/11:10:38

STEVE BLOOM: Reactor safety team. Steve Bloom.

ERIC THOMAS: Hey, Steve. It's Eric Thomas.

STEVE BLOOM: Hey, Eric.

ERIC THOMAS: How are you doing?

STEVE BLOOM: I'm good. Sorry to bother you.

ERIC THOMAS: That's all right.

STEVE BLOOM: Rick Hasselberg's coming in from three to about 11. We need someone to come in at about 11 o'clock tonight.

ERIC THOMAS: (b)(6)

(b)(6)

STEVE BLOOM: Okay.

ERIC THOMAS: -- (b)(6)

STEVE BLOOM: Okay.

ERIC THOMAS: I'm --

STEVE BLOOM: That's fine. I mean, if there's no, if you can't do it, I understand.

ERIC THOMAS: Yeah.

STEVE BLOOM: I mean I'm calling, I've

called everybody up on, on the list, and you were one of three people. So, and you're the first one that got back to me.

ERIC THOMAS: Okay. So --

STEVE BLOOM: All right. I'll, I'll write it down no.

But how about any other shifts the rest of the weekend or, because we're probably going to be doing this Monday and Tuesday, also, next week.

ERIC THOMAS: I could essentially come in, you know, probably tomorrow evening or Monday or Tuesday.

STEVE BLOOM: Okay.

ERIC THOMAS: (b)(6)

(b)(6)

STEVE BLOOM: Okay.

ERIC THOMAS: So, yeah, I think, you know, I can call back in, or if Rick wants to check in with me this evening and try to --

STEVE BLOOM: Okay.

ERIC THOMAS: -- put together a, a, you know, longer-term schedule for the next few days, I'd be happy to do that.

STEVE BLOOM: All right, Eric. Thank you.

ERIC THOMAS: Thanks, Steve.

STEVE BLOOM: Okay, bye.

ERIC THOMAS: Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

11:09:27/11:15:38

STEVE BLOOM: Reactor Safety Team. This is Steve Bloom here.

DAVE SKEEN: Hey, Steve, this is Dave Skeen.

STEVE BLOOM: Hey, Dave, what's up?

DAVE SKEEN: We just got finished with the meeting and I'm on the way back out to the Ops Center. I just wondered, is anything going on? Have we heard more since two hours ago when I left there?

STEVE BLOOM: Hang on one second.

PETER ALTER: Dave Skeen, Peter Alter.

DAVE SKEEN: Yes. Hey, Peter, are you doing?

PETER ALTER: Oh, I'm trying to eat my sandwich.

DAVE SKEEN: Oh, good for you.

PETER ALTER: Yeah.

DON DUBEY: I was just asking Steve -- I'm on my way back to the Ops Center, but I just wondered, did anything of note happen in the last couple hours? Do we know anymore than we did?

PETER ALTER: Were you here for the INPO/WANO --

DAVE SKEEN: No. I left before -- I knew they were going to call in.

PETER ALTER: Yeah, they had that, we had that --

DAVE SKEEN: But I had to go.

PETER ALTER: -- discussion. It pretty much confirmed everything that we had heard up, up to the time you leaving.

DAVE SKEEN: Okay.

PETER ALTER: And they, they also said that Unit 1, that they're putting borated seawater in Unit 1.

DAVE SKEEN: Yep, and the DOE folks said that too at this discussion.

PETER ALTER: So, so the, the thought is, is that they want to make sure that they have borated water below the vessel.

DAVE SKEEN: Yeah.

PETER ALTER: And they essentially have given up Unit 1.

DAVE SKEEN: Okay.

PETER ALTER: Given up on Unit 1.

The other, the other thing that was important was, is that they have reached pressure suppression pressure in Unit 2 --

DAVE SKEEN: Okay.

PETER ALTER: -- which would require, which will, in the SAMGs, would require them to vent the containment. But we don't know how they would vent containment. Obviously, it's a different, a slightly newer reactor, so we don't know whether they have a hardened vent or they'll have to use a direct vent from the top of the dry well. But we feel that they have enough experience on Unit 1 --

DAVE SKEEN: Yes.

PETER ALTER: -- to know that they have to do it gently.

PETER ALTER: And because everything is taking so much longer in Unit 2, we assume that they're at a lower pressure --

DAVE SKEEN: Right.

PETER ALTER: -- in their containment, so they won't be as, they, they won't be trying to do it as fast.

DAVE SKEEN: Yeah, not as high a pressure to begin with.

PETER ALTER: Yeah.

DAVE SKEEN: Okay. What about standby gas treatment? Could they vent through that like they did in the in Unit 1? Is that --

PETER ALTER: We don't know if they, we don't know if they tried to go through standby gas.

DAVE SKEEN: Okay.

PETER ALTER: Yeah. We, we don't know how they tried to vent.

What we've been asked to do is to put together a list of things that would not be research projects --

DAVE SKEEN: Yeah.

PETER ALTER: -- for the Japanese if we end up with a direct contact with them; you know, the second team directly contacting somebody in Japan.

DAVE SKEEN: Well, now I know that, from the discussion I heard down here, DOE seems to have a line in to the vice chair and the chair of the, the Japanese regulatory authority.

PETER ALTER: Um-hmm.

DAVE SKEEN: So they seem to have some information from the (inaudible) guy --

PETER ALTER: yeah.

DAVE SKEEN: -- and Suzuki, I think.

PETER ALTER: Yeah. And it's my, my understanding that that information has been -- Sheron, Brian, Brian Sheron had gotten.

DAVE SKEEN: Yeah.

PETER ALTER: And he, either he or Eric Leeds forwarded to Brian McDermott --

DAVE SKEEN: Okay.

PETER ALTER: -- who is trying to forward it to us, and I don't know how successful that's been yet.

DAVE SKEEN: Okay.

PETER ALTER: Okay?

DAVE SKEEN: Okay. And then the other piece, I would say they were very interested in the question and answers that we had.

PETER ALTER: Yep.

DAVE SKEEN: And I think they have asked -- in fact, the Chairman, I know, called and asked Marty or McDermott to email that over to the White House --

PETER ALTER: Okay, yeah.

DAVE SKEEN: --(b)(6)

(b)(6)

PETER ALTER: Yep. That, that came up during the discussion when, that we just got off, which were the principal --

DAVE SKEEN: Okay.

PETER ALTER: -- you know, the office directors and, and commissioner staff.

DAVE SKEEN: Okay. I mean, one of the --

PETER ALTER: We just got off of that.

DAVE SKEEN: -- one of the questions they gave us after the meeting -- there were, people were standing around talking -- was, how long until we know if this is going to be okay or not?

I said, well, you probably got at least 48 hours is, of what they're doing now, you know, wanting to tell you. It looks like they're going to save it and everything's going to be all right.

PETER ALTER: Um-hmm.

DAVE SKEEN: So I said that would, and I said that makes -- if there's no more aftershocks that are significant that could cause more problems, or some reason they lose water cooling because of an aftershock --

PETER ALTER: Um-hmm.

DAVE SKEEN: I said -- because they're asking how they're getting the seawater in. I said, I don't know. You know, it could be fire hoses; it could be sucking from the circ water intake or something.

PETER ALTER: No, we, we heard, we heard -- well, you were here -- we heard that they were using fire trucks.

DAVE SKEEN: The fire -- yeah.

PETER ALTER: -- to pump in. So they, however they're getting water to a fire main, and they're pumping it --

DAVE SKEEN: Well, there'd be hoses, just throwing hoses out in the ocean and sucking the ocean.

PETER ALTER: Well, or, or, the suction for the fire water system. You know, make up water to the fire water system.

DAVE SKEEN: Yeah.

PETER ALTER: And then they're using a fire-pumper because they can pump more water than, than the poor diesel-driven fire pump, which might be for the entire site.

DAVE SKEEN: Yeah. Yeah, okay.

And then they didn't know anything about the other units. And I said, well, you know, the other units are okay now, as long as they can keep cooling them.

PETER ALTER: Yup. Unit --

DAVE SKEEN: But if not, they're on a slower path to the same kind of scenario, I think.

PETER ALTER: Yep. Unit, Unit 3, from WANO, is cold shut down.

DAVE SKEEN: Okay, good. Good. So they're good.

PETER ALTER: Yeah. And they didn't mention the other three units that had been shut down before the --

DAVE SKEEN: Yeah, and one of them was in a maintenance anyway, so it's good timing.

PETER ALTER: Yeah. Actually, it's my understanding, two were in a maintenance outage and one was in a refueling.

DAVE SKEEN: Okay.

PETER ALTER: And there were up to 40 GE people supporting that.

DAVE SKEEN: So they should be fine.

PETER ALTER: Yeah.

DAVE SKEEN: At least for the short term.

PETER ALTER: Yeah.

DAVE SKEEN: Okay.

PETER ALTER: Yeah. Okay?

DAVE SKEEN: All right. Sounds good.

Well, I should be there in a little bit, but I just wanted to check and see if any major things had happened since we were done here.

PETER ALTER: Yes, sir. Okay.

DAVE SKEEN: Okay. And I'll be back

there in a little while then.

PETER ALTER: Yes, sir. Take your time.

DAVE SKEEN: Good talking to you.

PETER ALTER: Hey, stop and have lunch.

DAVE SKEEN: I might get a sandwich or something to bring up.

PETER ALTER: Okay. All right.

DAVE SKEEN: Okay, sounds good.

PETER ALTER: Okay. Bye.

DAVE SKEEN: Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

11:12:51/11:12:47

PETER ALTER: Reactor Safety Team. Peter Alder. May I help you?

JEFF TEMPLE: Hey, Peter. Jeff Temple. I'm transferring call over there.

PETER ALTER: Okay. Transferring a call earlier.

We're getting a phone call from the Liaison Team being transferred to here.

MALE PARTICIPANT: Oh, good. Okay.

MATTHEW SHARPE: Hello?

PETER ALTER: Hello. This is Peter Alder in the Reactor Safety Team.

MATTHEW SHARPE: Hi. This is Matthew Sharpe. I'm calling from the State Department's Japan Earthquake Task Force.

I wanted to touch base on a couple of things following a bit of the reactor story there if that's okay.

PETER ALTER: Okay. Just a second.

(Standby.)

DAVE SKEEN: Hello. This is Dave Skeen. I'm the Director of the Reactor Safety Team.

MATTHEW SHARPE: Hi. This is Matthew

Sharpe from the State Department's Earthquake Task Force. I had a couple questions on the earthquake situation over there.

DAVE SKEEN: Sure.

MATTHEW SHARPE: I guess, first off, I, I'm looking for updates on information you guys might have. I talked to Mark Schaefer in Vienna, who said you were the right people to talk to. That stuff comes through the IAEA.

DAVE SKEEN: Yeah.

MATTHEW SHARPE: And the last we heard, iodine was planned to be distributed.

DAVE SKEEN: We have not heard that as far as our information that we're getting.

You know, a lot of the stuff we're getting is through the Internet or just TV and whatever experts we have that we can get to. They're pretty busy in Japan.

MATTHEW SHARPE: Yeah.

DAVE SKEEN: So we have, we have reached out to some of the industry folks that we note, and they're getting some secondhand information either through GE who had a team over there that was doing refueling outages anyway, so we're getting some information from them. And then we're getting some

information through industry folks through the WANO group that knows some of the operators in the, in Japan. So, you know, you know, it makes it very sketchy.

And I have not heard that they have started distributing iodine, but I can check on that for you.

MATTHEW SHARPE: I would certainly appreciate it. We're getting this, actually, from Reuters, who's reporting that -- the quote is, "Japanese authorities have told the IAEA that they are making preparations to distribute iodine."

So I guess one of the questions I was going to ask you guys is if you have any kind of standing guidance for health precautions to take if people are evacuated and they have questions about, what should I do.

Is there any kind of either industry standard or agency stuff or even NRC stuff?

DAVE SKEEN: Yes. We do have, you know, standards for how we -- now each state is different on how they distribute iodine; right?

MATTHEW SHARPE: Um-hmm.

DAVE SKEEN: Some of them distribute it to households within a certain distance from the

plant. Some keep it in a warehouse situation, where, you know, people can come and pick it up. So it's done differently state by state here.

It's actually the states that request the iodine from us, and we provide the iodine to the states.

MATTHEW SHARPE: So I guess we don't, you don't have, your international people don't have any kind of connection to Japan beforehand that would have told them what the plan was, in this case?

DAVE SKEEN: I don't think so. No.

MATTHEW SHARPE: But you would expect that they would have that all sort of pre-planned in advance.

DAVE SKEEN: Yes. The Japanese are very good at emergency planning so, whatever it is that they do, they I'm sure they have this, they have thought about this. They do practice emergency preparedness exercises, much like we do in this country. So I think their programs are pretty good.

MATTHEW SHARPE: Got it.

As far as the reactor itself, do you guys anything more recent on that, just to compare notes? You know, we saw the, the statement where they said the plan was now to fill the vessel with seawater.

DAVE SKEEN: We had heard that too, that they were going to use borated seawater to, to try to get coolant into the reactor area.

And, you know, that's kind of the last resort. You never do that unless you have to. So I would say their other sources of water must be exhausted at this point if they're using seawater.

MATTHEW SHARPE: Is the, the concern, the reason it's the last resort is just the, the sort of long-term integrity of the steel, or is that --

DAVE SKEEN: There, there is that. Also, the fact that the water is not filtered when they bring it in from the sea, so you could clog filters with debris or whatever might be in the water that you're using, which reduces flow in that case.

MATTHEW SHARPE: Sure.

DAVE SKEEN: But, yes, the long term is pretty much the chlorides that get in there are very damaging and corrosive to the metal parts.

MATTHEW SHARPE: But that's a long-term concern and not initial?

DAVE SKEEN: Yeah, that's a long-term -- in other words, right now, you're worried about just cooling the core off and being safe. They're not worried about operating this plant.

I mean, you know, chances are, if it's as bad as they say, they, they may not operate the plant again.

So I guess the -- what we've heard is that the explosion was actually the containment building and the concrete structure around the reactor vessel itself. Does that square with what, with what you're --

DAVE SKEEN: No. What, what we see, and we've seen on the television, it appears that it's -- you know, these boiling water-type reactors that they have, they're, the outside containment (it's called a secondary containment building) is a square structure. And it's concrete up so far and then there's corrugated steel that makes up the, probably the top third or so of the building. And it is designed to, to blow away. We call them blowout panels, these steel panels that they have.

MATTHEW SHARPE: Um-hmm.

DAVE SKEEN: So, if there's an over-pressure in the secondary containment, it will blow those blowout panels out.

Now, from what we can tell, it looks like it blew out all the blowout panels and the roof off, which is all just the metal part. But again, from

the pictures we're seeing, it looks like the concrete part stayed intact. And then that's the secondary containment.

The primary containment is actually inside of that, which is the actual reactor vessel --

MATTHEW SHARPE: Um-hmm.

DAVE SKEEN: -- and the torus, where the suppression pool cooling and all that is.

So we do not believe at this point that that's breached. We think that they've been venting that. So there, there was something that caused an explosion in the secondary containment and blew the metal off, but it is not, they seem to have some control over the release that they're having from the actual primary containment right now. So there venting that with a event system through the standby gas treatment system.

MATTHEW SHARPE: And just for my, from my own ignorance, when, when you talk about the part, the part of the secondary containment that was blown out on the roof --

DAVE SKEEN: Yes.

MATTHEW SHARPE: -- does that, I mean, is that remaining effective then? I mean, how, how effective is the --

DAVE SKEEN: No, the secondary containment's basically gone right now. They have the secondary containment.

In their primary containment, there, there is higher pressure in there, so what they're trying to do is, is vent that so that you save the primary containment and have a controlled release, rather than an uncontrolled release.

MATTHEW SHARPE: And so do you guys have any kind of sense of how serious the venting is or what the rates are or what the source term is likely to be, coming from the deliberate venting?

DAVE SKEEN: I don't have the exact numbers on that. We have a protective measures team that looks at the radiation itself as to what it, what the path might be.

MATTHEW SHARPE: Um-hmm.

DAVE SKEEN: And I can probably put you in touch with someone over there.

MATTHEW SHARPE: I probably don't need that level of detail, but maybe I can touch base later on.

DAVE SKEEN: Okay.

MATTHEW SHARPE: And you said it -- what was the name of the team, just in case I --

DAVE SKEEN: The Protective Measures Team is who looks at the release itself and the amount of radiation that's, that's being released and the pathway that it takes.

MATTHEW SHARPE: "The pathway" meaning just the weather pattern in which way the --

DAVE SKEEN: Yes, where the plume would go; where the radiation would be going if it was leaking out.

MATTHEW SHARPE: Okay. That's all extremely helpful, and thanks very much for, for talking to me.

DAVE SKEEN: Okay. And you're Matthew Sharpe with the State Department?

MATTHEW SHARPE: That's right. If you need to get in touch with us, you can just call the State Department Ops Center and they'll put you in touch with the Japan Task Force. And they'll, they'll route your call to whoever you need to talk to.

DAVE SKEEN: Okay. Will do.

MATTHEW SHARPE: Thanks very much.

DAVE SKEEN: Bye-bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

11:15:31/11:18:08

DAVE SKEEN: This is Dave Skeen.

(No response.)

DAVE SKEEN: Hello? This is Dave Skeen, RST Director.

TONY ULSES: Yeah, Dave, it's Tony Ulses calling. I'm on the ground here in LA.

DAVE SKEEN: Yes, sir.

TONY ULSES: I was just calling to see if I could get an update on what happened while we were in the air.

DAVE SKEEN: Let's see. I just got the turnover from Mike Case, so I'll tell you what we know so far, which is still not a lot.

You know there was an explosion overnight; did you hear that?

TONY ULSES: I heard that. Yes. I guess Unit 1 is where it happened.

DAVE SKEEN: Yes, Unit 1.

TONY ULSES: Fukushima.

DAVE SKEEN: From the pictures we can see, it looks like it blew out all the blowout panels, you know, all the, the steel infrastructure above the concrete walls themselves in the, in the

Unit 1 containment.

TONY ULSES: Yeah.

DAVE SKEEN: So it looks like all that on.

TONY ULSES: So, so is the theory that the containment over-pressurized and just popped? Is that the theory, or?

DAVE SKEEN: They don't know for sure. It seemed like it was still -- they think it was a hydrogen explosion.

TONY ULSES: Wow, okay.

DAVE SKEEN: They thought hydrogen was involved that caused the blowout -- all the blowout panels blew out and the roof blew off of it is basically what happened.

TONY ULSES: Okay.

DAVE SKEEN: So that's what we know.

Still, there's, you see reports on TV of radiation increasing. They have increased the evacuation out to 12 miles. I don't know if you knew that when you left. It was six, and now it's 12 miles.

TONY ULSES: Okay. I wasn't aware of that either. Okay.

DAVE SKEEN: So they're evacuating out to

12 miles right now.

Other than that, it's just sketchy. We're not getting a lot of information anywhere; a lot of questions but not, not much else.

TONY ULSES: Okay.

DAVE SKEEN: Now, also, I heard that Jim Trapp is going to be coming and meeting you guys out there, too, so --

TONY ULSES: Yeah.

DAVE SKEEN: So we're going to have a second NRC person.

TONY ULSES: Okay. I just heard that from the, I actually got that from the liaison folks as well. So that's good to know.

DAVE SKEEN: So, yeah, he's supposed to be leaving from Dulles here this morning some time, heading out too. So you'll probably beat him over there, but he'll be over there shortly behind you.

TONY ULSES: Okay. Yeah, that's good to hear.

DAVE SKEEN: Okay. Is there anything you need from us right now?

TONY ULSES: No. I'm good. I've got my dosimetry. The Naval Reactors guy got up here, so we're just, you know, they're refueling the plane and

were heading off.

DAVE SKEEN: Okay.

TONY ULSES: It looks like we're going to fly in to an air force base up in northern, in northern Japan last I heard, so.

DAVE SKEEN: Okay. Well, let us know whatever you need. I mean, call in, and we're here to help.

They're going to man the Ops Center 24 hours a day now, through Tuesday, they said.

TONY ULSES: Okay.

DAVE SKEEN: So we're going to staff up the Reactor Safety Team, the PMT, and all that stuff.

TONY ULSES: All right, Dave. I appreciate it.

DAVE SKEEN: Okay, Tony. Safe flight.

TONY ULSES: Thank you.

DAVE SKEEN: Okay. We'll be in touch.

TONY ULSES: Okay. Thanks.

DAVE SKEEN: Bye, sir.

TONY ULSES: Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

11:10:10/11:22:28

STEVE BLOOM: Reactor Safety Team. Steve Bloom here. Can I help you?

HQ OPERATIONS OFFICER: This is the HOO. I've got Jim Trapp on the line from Japan. I'm connecting him now.

STEVE BLOOM: Okay.

(Standby.)

STEVE BLOOM: Hello?

JIM TRAPP: Hello. Is anyone on the line?

STEVE BLOOM: Hey, Jim. Steve Bloom here.

JIM TRAPP: Hey, Steve, how are you doing?

STEVE BLOOM: So you're in Japan?

JIM TRAPP: I wish.

STEVE BLOOM: Oh, I thought you said you were. I'm sorry. So you're still on your way?

JIM TRAPP: I'm still on my way. I'm actually stuck in Dulles here. We're not getting out until 4:22.

STEVE BLOOM: Okay.

JIM TRAPP: Hey, Steve a question for

you: Would you be willing to give me a current status of the six units?

STEVE BLOOM: The six units -- hang on.

JIM TRAPP: Is there anybody there that can help me out?

STEVE BLOOM: Yeah. Hang on.

It's Jim Trapp. He wants to know the current status. I don't think anything's changed really.

MALE PARTICIPANT: (Off mic).

JEFF CIRCLE: Yeah. Yeah.

Hold on, Jim. We have to lower some, the volume.

This is Jeff Circle. Hi.

JIM TRAPP: Hey, Jeff, how are you doing?

JEFF CIRCLE: Okay.

JIM TRAPP: I heard you were in. I was in there with Mr. Dubey yesterday.

JEFF CIRCLE: Yeah. Yeah, I'm the, I'm the dayshift, so to speak. We're going to be around the clock until at least, at least until Tuesday.

JIM TRAPP: Hey, Jeff, what would be really helpful to me is if -- you know, I kind of want to hit the road running when I get there.

JEFF CIRCLE: Yeah.

JIM TRAPP: So, just for the six units, if you could give me, you know, status of off-site and on-site power and that kind of thing.

JEFF CIRCLE: I, I can tell you about Units 1 and 2. The other, the other units --

JIM TRAPP: Yep.

JEFF CIRCLE: -- the other four units, I know, I think three of them are shut down.

JIM TRAPP: Okay.

JEFF CIRCLE: Or I think they were in outages at the time.

JIM TRAPP: Yeah, that's --

JEFF CIRCLE: So really --

JIM TRAPP: -- if they lost power to those, though, that would be a concern or not a concern? I mean --

JEFF CIRCLE: I would imagine it's still a concern, and we don't know the condition. I'd heard, I heard something when I came in at seven this morning that the other units were okay as far as power was concerned.

JIM TRAPP: Oh, okay. So the four units have off-site power.

JEFF CIRCLE: Yeah, but not, none -- I think they might have, they may have diesels

available, but that's the sketchy thing.

I don't have -- the information, the only solid information I have so far is that 1 and 2 do not have power.

JIM TRAPP: Okay.

JEFF CIRCLE: They're, they're, they're still in an SBO. I think they have DC going on, but it, that's also very sketchy. They said they've had some on-site generators.

We had gotten a briefing from INPO and WANO, who had talked to Tokyo Electric on this, and they said that they had some generators on site. But I don't know what the condition of the switch gear is. There's, what I had heard is that the tsunami took down fuel oil tanks.

JIM TRAPP: Yeah, we heard that last night from Exelon, that when the tsunami came in, he said that it tore them right off their stanchions, is the way they expressed it.

JEFF CIRCLE: Yeah. So you would imagine, if they can truck something on site because they're using fire trucks right now to pump borated seawater into two containment --

JIM TRAPP: Is that just -- that's Unit 1; right?

JEFF CIRCLE: That's unit 1 only.

Unit two, the pool is at saturation right now. Unit 2 has RCSI.

JIM TRAPP: Okay.

JEFF CIRCLE: And, but, but RCSI is questionable because they're, they're, they are hitting their primarily right now.

JIM TRAPP: Yeah, the other thing would be, is you wouldn't think they would have, unless they can manually operate RCSI, you know, independently of DC.

JEFF CIRCLE: Exactly, and I don't think they have the, those B5B measures. It's very hard to do.

Also, there's, there's no suppression pool cooling going on.

JIM TRAPP: Right.

JEFF CIRCLE: So I don't understand how they can even have RCSI at this stage.

JIM TRAPP: Right.

JEFF CIRCLE: And, you know, unit 1 is an iso-condenser plant, so they're, they're in even worse shape.

JIM TRAPP: Yeah. Yeah, I was surprised when I heard that the iso-condenser secondary boiled

off in about a half an hour. They didn't think that, you know, that would give them a lot of capacity.

JEFF CIRCLE: No. That's true. I think I might have tried for some steam cooling and that was it. And then they just, they blew it down, which meant that they had DC at the time to do it. But, yeah, it is very questionable what happened.

My concern is that, you know, the switchgear might have been compromised if they don't have AC power back because, right now, they're running out of options.

JIM TRAPP: Right. Yeah. And then, when, you know, once, as you know as well, when DC loses -- even if you load-shed it, you know, when you lost DC, now you've gone black in the control room basically.

JEFF CIRCLE: Yeah. Yeah, they, I heard some other reports about -- right now, in fact, as we were speaking, there was a news report on CNN that says now that the, that the Japanese regulator said that they didn't have -- that explosion that we heard about this morning, early this morning, might not have been the reactor building blowout panels. It might have been another secondary building.

(b)(5)

(b)(5) We're getting everything by hearsay and secondhand.

JIM TRAPP: It'll be great if we get some contacts on the ground like myself who can help you.

JEFF CIRCLE: That's what, that's what we're looking forward to.

Now, I know Tony, Tony is on the military transport.

JIM TRAPP: Yeah.

JEFF CIRCLE: Where are you now?

JIM TRAPP: I'm in Dulles. I'm going commercial.

JEFF CIRCLE: You're still in Dulles?

JIM TRAPP: I am. You know, they had a hard time getting a plane that flies back and forth out of Tokyo last night.

JEFF CIRCLE: Yeah.

JIM TRAPP: So, anyway. . .

JEFF CIRCLE: Oh, gosh. And how did, how did you manage to get down to Dulles? I thought you were back in Philly.

JIM TRAPP: No. I'm on a rotation down at Headquarters.

JEFF CIRCLE: You are, and you didn't stop by to say hello?

JIM TRAPP: I know. I know; it takes an event like this for me to come by and say hello.

JEFF CIRCLE: Yeah, you should.

Anyway, no, we, we are, we are probably going to be more in the dark than you'll be --

JIM TRAPP: Yeah.

JEFF CIRCLE: -- in 24 hours or so, when you finally get there.

JIM TRAPP: Yeah. Good. Good.

Hey, so core cooling, I mean, we really don't, we really don't know what's the status. We think that there's been some damage in Unit 1, then, but we don't really know, or --

JEFF CIRCLE: We, we don't know for sure. We, we think, we think they've gone below top of active fuel. That's, that's the word that we were getting.

When they vented, they told us said the off, the off-site site measurement was 100 mR per hour and then it dropped back down to seven. So they -- and originally, we were told about that explosion about that explosion, that it was a hydrogen explosion, but it seems that it might have been a steam explosion. And now they're saying that it might be something else.

JIM TRAPP: That's interesting. I mean, it looked like, it looked -- I was kind of curious about how you build up hydrogen in the -- I don't know if they have a hardened vent or not, where you'd vent externally --

JEFF CIRCLE: Well, yeah.

JIM TRAPP: -- but how they got that much hydrogen in the reactor building.

JEFF CIRCLE: Well, we were, we were discussing that here in fact. And, you know, yeah, if they don't have the hardened vent, it would make, it would make sense that they, if they blow out some ductwork in the reactor building, then eventually they would knock the blowout panels out.

JIM TRAPP: Sure. But that's, there was some video of that and it kind of looked like that.

JEFF CIRCLE: It did. There was this, this brown cloud of smoke that came out of that.

JIM TRAPP: Yeah, which would be kind of indicative of blowout panels going.

JEFF CIRCLE: Right, and that would make sense, you know, if they tried to do that.

It, it didn't seem, it didn't seem plausible that they would generate that much hydrogen in such a short time.

JIM TRAPP: No, unless they got some significant damage going on in the core.

JEFF CIRCLE: Right.

JIM TRAPP: It's very possible.

JEFF CIRCLE: Well, but then, if they vented, they wouldn't have, they wouldn't have the 100 mR-per-hour spike and then have come right back down again.

JIM TRAPP: Yeah.

JEFF CIRCLE: It would have been, it would have been a lot higher, I think.

JIM TRAPP: It's, it's good news. It looks like they can vent and then close the vent. That was a concern last night, you know, would you get fields high enough that you couldn't get vents?

JEFF CIRCLE: Oh, yeah, I, but we don't know, you see, we don't know exactly what one and exactly how they did it because it, it would have to have been a, it would have to have been done locally, manually, and --

JIM TRAPP: Oh, yeah, you'd think.

JEFF CIRCLE: (b)(5)

(b)(5)

JIM TRAPP: I know. I know. It sad.

So, it doesn't sound like we know a whole

lot.

Containment pressure -- do we have any idea of containment pressure or a status of those?

JEFF CIRCLE: No.

JIM TRAPP: No, okay.

JEFF CIRCLE: I've, I heard some, I heard some speculation. I don't even want to -- I mean, I heard 100 psi.

JIM TRAPP: Yeah, I heard that last night.

JEFF CIRCLE: That's, and that's exactly what's carried over to today, but we don't even know that for sure, because that also dropped -- jumped up -- in a short amount of time.

JIM TRAPP: Actually, I really appreciate talking to you because you're caveating all the data. That's so important.

Yesterday, it was like that. We were kind of surmising what was going on.

JEFF CIRCLE: Right.

JIM TRAPP: But we really didn't have any caulking concrete, and it doesn't some like anything has changed.

JEFF CIRCLE: No, and we're still speculating.

JIM TRAPP: Yeah.

JEFF CIRCLE: That's the problem. We don't have concrete information.

I mean I had the -- I'm sure you saw this last night. There was this email to, indirectly to the Chairman, and I was reading that. And, and we don't have much, much more to go on --

JIM TRAPP: Right.

JEFF CIRCLE: -- outside of that call that we had gotten from INPO, which was, I guess, about two hours ago.

JIM TRAPP: Okay. It didn't sound like that captured -- I mean, it was better than anything we had but nowheres near what you would expect.

JEFF CIRCLE: No, and the additional information they gave us was really on Unit 2.

JIM TRAPP: Okay. And just, the pool is saturated and, I guess, RCSI is keeping the --

JEFF CIRCLE: Yeah.

JEFF CIRCLE: -- core covered, but we don't know how.

JEFF CIRCLE: Right.

One good piece of news on both units is that the containments are still intact.

JIM TRAPP: Yeah. You know, the flooding

is a really positive aspect. Last night, you know, it was mostly, you know, it was just doomsday scenarios.

JEFF CIRCLE: Um-hmm.

JIM TRAPP: So, if you can actually get the containment flooding, that's going to be real positive.

JEFF CIRCLE: Yes.

JIM TRAPP: So, I mean, they should let the core cool with the -- you know, that unit will be in much better shape if they can keep the core in the vessel.

JEFF CIRCLE: Right. They've got to get that AC power back. That's the most, that should, that should be their number-one priority at this point.

JIM TRAPP: Now, see, I mean, technically, though, I guess if they, if they were to flood the vessel with borated -- or the containment -- with borated water and, and could maintain that with a fire-pumper, I mean, even, I mean, then they could kind of get power back at their leisure.

JEFF CIRCLE: No.

JIM TRAPP: Well, I mean they could get --

JEFF CIRCLE: No. I still, I'm still leery about that. No, think about it.

If they -- they're flooding containment but they still, they still need to find the means to cool the --

JIM TRAPP: The water in the core.

JEFF CIRCLE: -- the water in the core because it's just not, it's just, they're buying a little bit of time. And what they're doing is they're, they're just getting ready for, for a core breach at this point.

JIM TRAPP: Now, if you, if you, with the containment, though, if you could fill it to a level where you could get it up into the fuel area --

JEFF CIRCLE: Yeah.

JIM TRAPP: -- Could you open up your SRVs and, and just kind of flood the vessel as well?

JEFF CIRCLE: They could do that. Well, I would imagine they could do that as well. They need DC power, of course, to do that.

JIM TRAPP: Yeah.

JEFF CIRCLE: They have to continue, they have to continue with DC power.

JIM TRAPP: Yeah, that's true. That's true because their, whatever accumulators they have,

I'm sure --

JEFF CIRCLE: Oh, that's gone.

JIM TRAPP: Yeah.

JEFF CIRCLE: Well, you know, there is a hydrogen connection. But I don't know. You see, here again, we don't know this plant, and we don't how it's configured.

JIM TRAPP: Correct.

JEFF CIRCLE: Because, I would imagine, I would imagine, if they have DC power, they can depressurize, they could use Archer (ph) service water cross-tie, open up the two valves and then check directly into the core.

JIM TRAPP: Sure.

JEFF CIRCLE: But they, but then they would inject fire water, but who knows if they have any fire water on site. And I, I don't think they would want to put seawater into the core directly.

JIM TRAPP: Yeah. Well, at this point, who cares?

JEFF CIRCLE: Yeah.

JIM TRAPP: As long as it's borated.

JEFF CIRCLE: Yeah.

JIM TRAPP: Good. Well, hey, Jeff, if you come up with any -- it sounds like we aren't too

much further along than we were yesterday with concrete information.

JEFF CIRCLE: No, but we're not making much progress, I can tell you.

JIM TRAPP: But if you hear something, if you'd be willing to give me a call, because I'll be here until about 4:30.

JEFF CIRCLE: Sure. Okay. Do we, do we have your number?

JIM TRAPP: You do, but I can give it to you.

JEFF CIRCLE: Yeah, give it to me.

JIM TRAPP: My cell is (b)(6)

JEFF CIRCLE: (b)(6) what? I didn't get --

JIM TRAPP: (b)(6)

JEFF CIRCLE: okay.

JIM TRAPP: Correct.

JEFF CIRCLE: All right. Yeah, nice speaking to you again, Jim.

JIM TRAPP: Absolutely. Take care.

JEFF CIRCLE: Okay. Bye-bye.

JIM TRAPP: Bye-bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

11:17:02/11:28:18

TIM: GE Hitachi Command Center. This is Tim.

MIKE CASE: Hi, Tim, this is Mike Case from the Nuclear Regulatory Commission.

TIM: Hi, Mike.

MIKE CASE: How are you doing?

TIM: Good. How are you?

MIKE CASE: Good. Could I talk with Mr. Madronero please?

TIM: Hold on one second.

MIKE CASE: If he's available.

(Standby.)

TIM: Hernando's not right not here right now, but I'm going to put on somebody that can talk to you.

MIKE CASE: Okay. Great. Thanks.

TIM: Okay.

BOB AYRE (ph): Good morning. This is Bob Ayre, GEH.

MIKE CASE: Bob -- is that --

BOB AYRE: Yes.

MIKE CASE: Hi. This is Mike Case. I'm the Reactor Safety Team leader over at the Nuclear

Regulatory Commission.

BOB AYRE: Okay.

MIKE CASE: And I guess my predecessor had, had made contact with you folks. And so I just wanted to check and, and, and see if you all had anything new.

BOB AYRE: We actually have --

MIKE CASE: Oh, and by the way, this is a recorded line, so beware.

BOB AYRE: Okay. All right. I appreciate that.

And so, again, my name is Bob Air, and currently I'm the technical lead for the night shift at the GEH Command Center.

MIKE CASE: Okay. Great.

BOB AYRE: And, from the last contact that, that the NRC had with Hernando Madronero, we really have not received any, any additional information. You know, we're monitoring the online news sources, but we have not, you know, I have not received any, any direct communication with the site or any, you know, any additional information since the last contact.

MIKE CASE: Right. We don't really have any other information, other than the news

information.

What are you all thinking? Or, have you heard any information of all about Units 2 and 3? You know, most of the discussion has been about Unit 1.

BOB AYRE: Yeah. Most, most of the discussion's been on Unit 1.

MIKE CASE: You know, I've been --

BOB AYRE: I'm -- I'm sorry -- on the other site, you know, there have been news reports that, you know, the pressure pool temperature reached 100 degrees C, so essentially, they've lost their, their capacity to cool.

MIKE CASE: Right. That was, you know, I got that information, you know, at turnover.

BOB AYRE: Yeah.

MIKE CASE: But I really, you know, I have not heard anything about those other units, you know, since I came on, which is probably around 11.

BOB AYRE: Yeah, and I, and I've not heard anything specific.

There was one major news report, which I believe was on, on Reuters about an hour ago, where we did see that five of the units were in a state of emergency.

MIKE CASE: Right.

BOB AYRE: But I, I don't have any more information on that.

MIKE CASE: Okay. Now, now, as you piece all the information together, what do you think's going on Unit 1?

You can speculate. I will not use it as fact.

BOB AYRE: All right. Well, yeah, what we've heard, several hours ago, we've heard that, you know, iodine was detected in, in a sample. And about --

MIKE CASE: Oh, what? Like a cooling example?

BOB AYRE: An airborne sample.

MIKE CASE: Okay. Okay.

BOB AYRE: And about two hours ago, I believe that METI put out a statement saying that, at the site boundary, cesium had been detected. So --

MIKE CASE: No cesium?

BOB AYRE: I'm sorry?

MIKE CASE: No cesium, you said?

BOB AYRE: Cesium had been detected.

MIKE CASE: Oh, had been detected. Okay.

BOB AYRE: So that would be an indication

that, those two combined would be an indication that, you know, there is fuel damage that is occurring.

MIKE CASE: Okay.

BOB AYRE: Obviously, there's no, there's no way for us to, to know how severe that is.

MIKE CASE: Right.

BOB AYRE: But it does, it does definitely look like the core is, is partially uncovered.

MIKE CASE: Oh, you think so? We got a couple of, you know, through the media stuff, you know, a couple of notions on level.

BOB AYRE: Yeah, and I just heard about five minutes ago that METI had put out a press release saying that the core was partially uncovered. I have not verified that, but it should be, it should be available on the METI website --

MIKE CASE: Okay.

BOB AYRE: -- if that is in fact true. Right. As I said, I, I haven't confirmed that myself. I just heard it in a meeting several minutes ago.

MIKE CASE: You know, but would, you know, at least as far as being below the top of active fuel, most of the information we saw seems to

place it at least above two-thirds core coverage. Is that what you all are hearing or thinking?

BOB AYRE: I --

MIKE CASE: Or have you thought that far?

BOB AYRE: Yeah.

MIKE CASE: You know, we're just trying to piece together these crazy facts that we hear.

BOB AYRE: Yeah. I really, really don't know, because we're really not sure what's going on, you know, in the, in the reactor.

You know, theoretically -- well, I don't know. I can't really speculate on that.

MIKE CASE: Okay.

BOB AYRE: You know, but it does, it doesn't appear that some fuel damage has occurred just based on, you know, the, what they've, what they've identified with the cesium and the iodine.

MIKE CASE: Okay. How about thoughts on the containment itself? What kind of factoids have you heard?

BOB AYRE: Well, for, for a while, we were hearing but they were having issues with attempts to vent the containment. And I, I believe that may have been concerns with venting the containment based on the, based on the dose

conditions, the release conditions.

MIKE CASE: Right. We heard things similar to that too.

BOB AYRE: Yeah. The latest thing I heard about the containment was they were able to complete venting of the containment. And again, I think this is in the, the METI news conference about probably an hour ago, that they were able to vent the containment. They did get pressure down.

There, there's reports of leakage, a water leak. I do not know what that means. I don't know if they're, I don't know if they're talking about a loca or what.

MIKE CASE: Right. Yeah, I may have seen that crawl across the screen or something. I really haven't been able to put that in any, any sort of context either.

BOB AYRE: Yeah, and I haven't either.

MIKE CASE: Okay. Now, when you say it METI, who is that?

BOB AYRE: That's the Japanese regulator.

MIKE CASE: Oh, okay.

BOB AYRE: M-E-T-I.

MIKE CASE: Okay.

BOB AYRE: It's the Ministry of -- I, I

don't know what E-T-I stands for.

MIKE CASE: Okay.

BOB AYRE: But it's essentially the NRC counterpart in Japan.

MIKE CASE: Okay. Now, from a, just from a design aspect, do you know -- because I guess we, you know, in the United States, we backfitted everybody, you know, all the Mark 1 containments, with a hardened vent.

Do you know if they have something similar over there, or?

BOB AYRE: I, I don't know.

MIKE CASE: But like, do you have specific information on the units at all? You know, we've sort of scramble for whatever we can find.

BOB AYRE: What, what we have is we're the original NSSS supplier, so we have original GE design information.

MIKE CASE: Right.

BOB AYRE: We no current, we have no current configuration information for, you know, for any of the units.

MIKE CASE: Okay. So what's --

BOB AYRE: If there's any modifications or any backfit, we don't, we're unaware of.

MIKE CASE: Oh, okay. That makes sense.

Okay, anything else that we should share?

BOB AYRE: No, but I'd appreciate any information that you might have that might be useful to us.

MIKE CASE: You know, I think you, I think we're pretty much sharing the same type of information.

BOB AYRE: Okay.

MIKE CASE: How about the ones -- you know, once again, we speculate -- but we've heard that they're, you know, either feeding the reaction reactor -- I guess this, once again, it probably pertains to Unit 1 because we seem to put everything in the context of Unit 1 -- but they're, you know, they're feeding it either with fire trucks or through fire trucks or, you know, somehow it seems to be fire suppression-type water that they're putting in. Is that what you're hearing?

BOB AYRE: I haven't actually heard that they were actually feeding with anything. You know, I'd seen reports, just extremely vague, like, the situation's improving. I think I saw, I think I saw those words. But I haven't actually heard any other information that they were putting any kind of water

on it.

MIKE CASE: Yeah, so we may be speculating. I don't know where we got, you know, that notion. But, you know, it seemed to be some sort of external source.

But once again, you know, I'm not real good with isolation condenser plants, so I'm not really good on, on the ways they can get water in.

BOB AYRE: Okay.

MIKE CASE: You know, I like those RCSI units. They're much more fun. You know, and they match my background a lot more.

BOB AYRE: Yeah.

MIKE CASE: But I think that's about it on our end.

BOB AYRE: Okay.

MIKE CASE: And we did hear the part about cesium, and so, you know, we got some information on that over on the dose assessment side.

BOB AYRE: Um-hmm.

MIKE CASE: And then we've had, you know, contacts but we don't seem like anybody has a really good source of information.

BOB AYRE: Okay.

MIKE CASE: You know, it's mostly people

sort of doing like you and I.

BOB AYRE: Yeah.

MIKE CASE: You know, just sort of sharing what we've seen through the media.

BOB AYRE: Hey, Mike, I, I don't have your contact number handy. Could you give me that just as a 'just in case'?

MIKE CASE: Okay. Hold on. It's the, I'll give you the Ops Center number, so you've just got to ask for Mike Case --

BOB AYRE: Okay.

MIKE CASE: -- or the Reactor Safety Team.

Brett, what's the Ops Center number?

BRETT: 816-5100.

MIKE CASE: 301-816-5100.

BOB AYRE: 5100.

MIKE CASE: All right. And you're welcome to call any time.

You know, I guess there, what Hernando and Bill had talked about is, you know, if we get new information that we think's valuable to share, that we'll just give each other a buzz.

BOB AYRE: Okay. Yeah, I appreciate that.

MIKE CASE: Very good.

BOB AYRE: All right, Mike.

MIKE CASE: Now you're down in Wilmington; right?

BOB AYRE: Yeah. We're in Wilmington.

MIKE CASE: Okay. Good.

Well, thanks for your help, and if we hear anything, we'll let you know.

BOB AYRE: All right. I appreciate that. Thank you.

MIKE CASE: All right. Have a good night.

BOB AYRE: Bye-bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

11:21:25/11:23:44

BRETT RANEY: NRC; Brett Raney.

MR. (b)(6) Hi. This is (b)(6)
(b)(6)

BRETT RANEY: I'm sorry; I can't hear you. Say it again.

MR. (b)(6)
(b)(6)

BRETT RANEY: Hi. Let me get Mike Case, our RST director.

MR. (b)(6) Okay.

(Standby.)

MIKE CASE: Hi, Mr. (b)(6) This is Mike Case with the NRC.

MR. (b)(6) Hi, Mike. I've been trying
(b)(5)

MIKE CASE: Okay.

MR. (b)(5),(b)(6)
(b)(5),(b)(6)
(b)(5),(b)(6) I can send it to that.

MIKE CASE: Okay. Can I put my -- I

don't -- God bless me, there's a lot of things I know about reactors, but I'm not very good with the (b)(5),(b)(6) (b)(5),(b)(6) Can I put my equipment guy on?

MR. (b)(5),(b)(6)

(b)(5),(b)(6)

MIKE CASE: Okay.

MR. (b)(5),(b)(6) Otherwise, if you're busy, we can --

MIKE CASE: Oh, no. I'll be happy to do it now.

MR. (b)(5),(b)(6) Okay.

MIKE CASE: You were talking to the Ops Center guy?

MR. (b)(5),(b)(6) Yeah, I was talking to the Ops Center guy.

MIKE CASE: Okay.

MR. (b)(5),(b)(6) Let me give you my number here.

MIKE CASE: Okay.

MR. (b)(5),(b)(6)

MR. (b)(5),(b)(6) okay. Now --

MR. (b)(5),(b)(6) And he, he can call that from his (inaudible) (b)(5),(b)(6)

MIKE CASE: (b)(5)

(b)(5)

MR. (b)(5),(b)(6)

(b)(5),(b)(6)

MIKE CASE: Okay, so I, I'm like turned over from Bill Ruland, so I'm on the second shift.

(b)(5),(b)(6)

MIKE CASE: Okay, great.

(b)(5),(b)(6)

MIKE CASE: Okay, so you're going to give him a call?

MR. (b)(6) No, no --

MIKE CASE: Okay, I'll call you.

MR. (b)(5),(b)(6)

(b)(5),(b)(6)

MIKE CASE: Okay. Very good.

MR. (b)(6) Okay. Thanks.

MR. Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

11:22:09/11:23:26

MIKE CASE: NRC; Mike Case.

TONY ULSES: Yes, hey, Mike. It's Tony calling from the airport here.

MIKE CASE: Oh, I'm sorry; say that again.

TONY ULSES: This is Tony Ulses calling, Mike, from the airport.

MIKE CASE: Oh, hi, Tony. How are you doing?

TONY ULSES: I just wanted to see if I can get an update before I get on this plane. I don't know what kind of communication I'm going to have; I doubt, any. So I'm just calling to see what's going on.

MIKE CASE: Okay. The only, the only new information we had was the Chairman got an email back from Dan Poneman, who is the deputy -- no -- from the chairman of, of the Japan Atomic Energy Commission.

And so here's sort of the rundown. Do you want me to read it to you verbatim? It's pretty long.

TONY ULSES: You know, is there a way we can email it to my NRC email account, and I can get

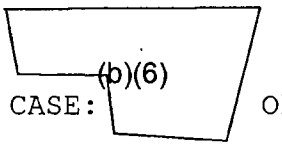
on my BlackBerry, or is that not going to work?

MIKE CASE: Oh, no. That'll work. I've just got to get Brett to do that.

TONY ULSES: I'd appreciate it. Yeah, I just wanted to get an update while I got a chance here because I didn't really --

MIKE CASE: Okay, so we will zap it out to you forthwith.

Do I have your number?

TONY ULSES: My number is, on my BlackBerry, it's 

MIKE CASE: Okay, Tony. We'll get right on it. If it doesn't appear in a little while, I'll call you back and tell you what the problem is.

TONY ULSES: All right, Mike. Thank you.

MIKE CASE: Thank you. Bye-bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

11:16:22/11:32:55

MIKE CASE: NRC; Mike Case.

HERNANDO MADRONERO: Mr. Case, good morning. My name is Hernando Madronero. I was, as of a few hours ago, I was chatting with Mr. Ruland.

MIKE CASE: Right. Yeah, I relieved him and then I checked in once with you guys earlier on, maybe around two or so.

BOB AIR: Yeah, this is Bob Air, Mike. I'm who you talked to.

MIKE CASE: Hi, Bob. How are you doing?

HERNANDO MADRONERO: Mr. Case, I've got you on a speakerphone, and I've got four engineers with me. This is basically my night crew.

I just, I went home, took a couple hours of sleep, and I just came back in.

MIKE CASE: Okay, good. And I should tell you that this is a recorded line. They make me say that.

HERNANDO MADRONERO: I understand. Understand.

MIKE CASE: Okay, great.

HERNANDO MADRONERO: So I'm, I'm trying, I'm calling to see if there's anything we can do to

help, but as I had earlier shared with Mr. Ruland, we've gotten nothing either from METI or the utility. Our efforts so far have been, really, contingency planning, getting us ready for a call or a request for assistance.

Obviously, you've, you've probably been seeing the news. There's been some sort of an explosion.

MIKE CASE: Right, yeah.

HERNANDO MADRONERO: Right now, we are, we are trying to, to, to come up with ideas of what we think it is. So I'm just calling to see if maybe we, your team and my team can engage in a conversation, help each other out with an exchange of information, and quite frankly, let you know that we are standing by, to do anything that you need or, or, or wherever you find information from, that we can assist.

MIKE CASE: Okay, yeah. Quite frankly, you know, since we talked at two o'clock, we've been, we have not gotten any sort of new information that hasn't come through the media, so we're on almost virtually 100-percent media now.

You know, the only thing we know about the explosion is, is what we have seen and heard on

TV. And so we're sort of puzzling about it too.

I don't know; do you have any ideas of what the explosion is or, you know, any thoughts at all in that area?

HERNANDO MADRONERO: Yeah, so I will tell you that my guys believe it's a hydrogen explosion just because of, if you look at the video, it looks like the top -- it's, it's very fast, very high energy, and then it seems to dissipate. But again, that's pure conjecture.

I guess my concern right now is for the surrounding units because the last, the last we had been, or, when I was here about three hours ago, Fukushima Unit 1 was the one that, that had an iso-condenser that was struggling to try to get some sort of, of water back in there, and they, they look like they were burping the reactor.

MIKE CASE: Correct.

HERNANDO MADRONERO: Fukushima 2, which looks to have a RCSI system, I think probably ran RCSI for 12 to 15 hours, exhausted that capability, and, last I knew, they were trying to, to, to either hook up alternate sources of AC power or, or try to flood or get some water in there.

So I'll tell you, quite frankly, I'm

concerned more with the surrounding units than I am with the one that just exploded. It is what it is.

MIKE CASE: Right. You know, we're concerned that we have, we're concerned about those units, too, because, you know, with the explosion, you know, whatever activity they were doing, we thought was going to get disrupted.

We sort of had the sense that they were using some sort of fire truck or something to get some of the water in. But once again, we didn't have any good insight on that.

But, yeah, we're sort of worried about Units 2 and 3 as well. But we haven't heard anything on those, the entire shift.

HERNANDO MADRONERO: Right.

MIKE CASE: You know, all the, all the information we have on 2 and 3 was prior to, it was what Bill turned over to us.

HERNANDO MADRONERO: Yeah, same, same here with us.

My guys were telling me, based on either a TEPCO report or something they had seen on the news, that they stopped venting because apparently the operators were starting to receive excessive radiation doses.

MALE PARTICIPANT: Yeah.

MIKE CASE: Right. Did you get that on 2 and 3? We didn't get any reports of venting on 2 and 3. We got a, a venting report on Unit 1, and we --

HERNANDO MADRONERO: That's all we have.

MIKE CASE: -- and we got the, sort of the high radiation aspect to it as well.

HERNANDO MADRONERO: Did you see the video?

MIKE CASE: Yeah, we've seen the video.

HERNANDO MADRONERO: Yeah, so, okay, so basically, you got everything we've got and we were just -- I mean, I'm just imagining that if people start waking up here, it's going to become pandemonium, so I'm just trying to get myself ready for that onslaught.

MIKE CASE: Right. And, you know, we've sort of been doing the, mostly the notify stuff, so we've notified our chairman. So he, he knows about the update on this. And so we've just been sort of preparing questions for him as to, you know, if it was our site, what questions we would be asking.

HERNANDO MADRONERO: Right.

MIKE CASE: And so we, like you said, we'd be asking about Units 2 and 3. We'd be asking

about, well, is the core covered? We would ask about, well, how are you getting water in there? And those types of things.

How about on, I guess, Unit 1? Any thoughts about the spent fuel pool?

HERNANDO MADRONERO: Well, that, that's one of the things that we were talking about here. We're wondering about the spent fuel pool. Is it just a failure of containment, and perhaps the reactor vessel itself is intact? Or, or did the vessel fail as well and now, not only do you have an uncovered core, but you've got the pool, the -- I mean, that, and those are the same questions we've been asking ourselves.

MIKE CASE: Right. And so, you know, we just have a list of questions now. We don't have any of those answers. I think, I think we're almost identical to the situation that you're in, in that we've got questions and we just have no one to ask them to.

HERNANDO MADRONERO: Well, I, let me ask you this, sir. Is there value in perhaps -- I mean, do you want to ask us your questions and we can -- I mean, I don't know that we can provide you answers but at least maybe we can say, yeah, those are

similar questions as to what we're thinking about.

MIKE CASE: Okay. I've got about 10 of them, and I'll just run them down real quick.

Is Unit 1 core still covered? We already talked about that one.

HERNANDO MADRONERO: Yep.

MIKE CASE: What's the reactor vessel level -- you know, our scenario was, if this was one of our licensees, what would we be be asking at this point?

HERNANDO MADRONERO: Right.

MIKE CASE: You know, what's the reactor pressure vessel level, temperature and pressure, for each of the units?

What's the status of external power and level supplies?

What, what is the effect of the explosion on mitigating measures for the other units?

HERNANDO MADRONERO: Yes.

MIKE CASE: What's the status of the spent fuel and spent fuel pool cooling?

Is the isolation condenser still functional?

What are on-site and off-site dose rates?

Are there ongoing combustible and/or

chemical gas leaks on site?

What's the status of the reactor vessel and dry well for Unit 1?

Is there any fuel measurement data?

What are the protective measures?

And, are there any sea breeze effects?

So that's pretty much our list at this point.

HERNANDO MADRONERO: Yeah, and that's, that's basically everything we, we were, we were going for.

MIKE CASE: Yeah. Anything that we're missing, do you think?

HERNANDO MADRONERO: Well, I guess -- so the, the last time I was here, and this was obviously about one o'clock in the morning, what we had been working on was a series of SAMGs. I'm sure you're aware of those.

MIKE CASE: Yeah.

HERNANDO MADRONERO: We had been in touch with, with Dresden and Quad Cities. We had gotten their EOPs, their SAMGs, and their TSGs.

So what we were going through was, was, if we were the operators and we were trying to keep a core covered without power, these are the different

things we would be going after.

MIKE CASE: Right.

HERNANDO MADRONERO: You know, but obviously, I don't even know that that's, that's applicable right now for Unit 1 because of what happened there with the explosion.

MIKE CASE: Right. Yeah, we were sort of on that path too. You know, we're getting into a little bit of, of a steady state, and so we were sort of asking those questions. Well, was this a real success path, or really, what's our next challenge ahead?

HERNANDO MADRONERO: Right.

MIKE CASE: But, like you said, the explosion sort of took that train of thought and just sort of moved us off that.

HERNANDO MADRONERO: Right. So we've got a similar set of questions for you Unit 1.

But now, as I shared earlier, I'm thinking that my SAMG scenario is more applicable to Units 2 and 3 --

MIKE CASE: That's probably true.

HERNANDO MADRONERO: -- than they were.

I will tell you, and I can't, I can't tell you -- other than just based on the fact that we

believe they may have had RCSI running at least 12 hours in the other two units -- it is our opinion that Units 2 and 3 are maybe 12 to 20 40 hours away from where Unit 1 presently is.

MIKE CASE: Okay. That's a great insight.

How about this? You know, the hundred pounds in -- well, we had some information that I think we sort of got from a website that you all sort of turned us on to -- you know, it indicated that there was about, there was 100 pounds pressure pressure in the Unit 1 containment.

HERNANDO MADRONERO: Yeah, I think we, we --

MIKE CASE: How do we get to 100 pounds?

HERNANDO MADRONERO: We have no idea.

MALE PARTICIPANT: We have no idea.

MIKE CASE: Come on, you guys should know this.

(Laughter.)

HERNANDO MADRONERO: No. No, actually -- and I'll tell you what I shared with Ruland -- we, we called, we reached out to Quad Cities, and we had Quad Cities to fire up their simulator and, and, and these were the conditions:

You've been operating at NOP/NOT for, say, half a cycle. You, you, you suffer a scram. You've got, all your emergency equipment operates for, say, 15 to 30 minutes. And then you're in a complete loss of power.

And tell me what that would do to temperatures, pressures, levels. I was curious about, about containment pressure because we had seen a report that containment pressure is about 1.5 times design, and we had read something that design was about 400 KPA. So what we were seeing was 600 KPA, when we did the math, that equated to about 85 PSIG.

MIKE CASE: Um-hmm.

HERNANDO MADRONERO: What I, what I was trying to figure out was, is there a scenario where the core is intact, the fuel is covered, but yet your, your, your temperatures and pressures in the containment are approaching that?

And what they did is they ran their simulator for about two and a half, maybe three hours. And the most they were able to get was maybe 2.5 PSIG.

MIKE CASE: Oh, wow.

HERNANDO MADRONERO: So I, we're still, we're still at, we still don't -- I mean, I can tell

you we have a theory of how they got to 100, and the theory is probably the same when you've got. You've got, you've got this sort of a primary breach.

MIKE CASE: Oh, right. Yeah. You have to. But, even with the primary breach, can you get up that high?

MALE PARTICIPANT: Oh, yeah. Yeah.

MALE PARTICIPANT: It's all heat transfer.

HERNANDO MADRONERO: Yeah. So it's a 400-megawatt reactor. It's a Mark 1 containment. It's, it's a small little thing. And we're just going under the assumption that maybe they had their iso-condenser running, but once, once they boiled away iso-condenser, maybe the damage from the earthquake or from the, from the wave prevents them from being able to get into that part of the plant and refilling the condenser.

MIKE CASE: Yeah. Okay.

HERNANDO MADRONERO: So let's say they had the condenser running for an hour, two hours, three hours. But that's, that's a nominal amount of cooling that, that you're able to, to impart into this power plant.

We're thinking that the thing just kept

heating and heating and heating. It's a small, relatively small space, so we don't believe that it is unreasonable to get 85 pounds.

One of the guys here had told me that they had seen a report of, or they had seen pressures of 850 KPA, which equates to, I think, 120 PSIG right now.

MIKE CASE: Oh, wow. No, I haven't seen that one.

Okay, but that helps me. The folks that we have are really not iso-condenser guys and so, you know, sometimes we struggle with that sort of aspect of the design.

HERNANDO MADRONERO: Yeah, and the iso-condenser, from what I understand, is nothing more than, than a big giant tank of water. It's like, it's like a radiator in your car.

MIKE CASE: Right.

HERNANDO MADRONERO: You've got this big tank of water that's open to atmosphere. You've got steam in a coil or you've got a coil in this, this body of water. You tap off either one of the main steam lines, it goes in the coil, under water in this tank, it condenses as steam, and it goes right back into the --

MALE PARTICIPANT: Feedwater, one of the feedwater lines.

HERNANDO MADRONERO: -- one of the feedwater lines.

MIKE CASE: Right. I think my conceptual error was really the thought that you would boil off the, the water.

HERNANDO MADRONERO: Yeah, and that's what we think happened. We think -- so we're calculating that anywhere from maybe six hours -- maybe they had six good hours of iso-condenser operation.

Apparently, it's four iso-condensers. It's two sets. It's a pair, with two little isos per set. But I don't know if they were able to run them all, if they, if they only ran one, if, if there was severe damage.

So we're, if you were to assume that everything was running, we think anywhere, maybe six hours of, of usable iso-condenser. But I don't know what the iso-condenser is really, what its impact is overall.

MIKE CASE: Right.

HERNANDO MADRONERO: So, after the iso-condenser runs itself dry, you've got nothing

right now going into this power plant. You're on steam cooling. You start boiling the core. You get to a level where the steam cooling is no longer effective. You've uncovered the fuel. You've got cladding failure. Now you've got fueling failure; right?

MALE PARTICIPANT: It' about three hours.

HERNANDO MADRONERO: The pressures -- yeah -- and we think that's that about three hours.

So let's say the event happens, you've got six hours of iso-condenser. The iso-condenser runs itself dry. You've got nothing going on for about three hours. At the nine-hour point, we think you've got fuel failure. Pressures in the containment itself are building up. They get to about 85 PSIG. They start burping the condenser.

MIKE CASE: Uh-huh.

HERNANDO MADRONERO: We see a report that they're starting to see elevated dose levels. And then we get a report of an iodine-130 --

MALE PARTICIPANT: And then cesium was also --

HERNANDO MADRONERO: And then cesium, and actually, I think I remember cesium from about midnight when I left. So all of that is telling me

--

MALE PARTICIPANT: Yeah.

HERNANDO MADRONERO: -- that they've got a fuel rupture.

MIKE CASE: Um-hmm.

HERNANDO MADRONERO: Iodine and cesium are radioactive byproducts, and they're pure, I mean, this is pure fuel stuff.

MIKE CASE: Right.

HERNANDO MADRONERO: So you're burping this reactor.

At some point, I guess they believe that the dose levels for the operators doing the manual parking are too high. Maybe they extricate these, these operators. But the level keeps rising. Maybe it goes faster than anticipated.

And, and what we're thinking is there was an explosion and containment.

MIKE CASE: Um-hmm.

HERNANDO MADRONERO: Maybe it's hydrogen, but again, this is based on a video that we're seeing.

MIKE CASE: Yeah.

HERNANDO MADRONERO: Right. Yeah.

MALE PARTICIPANT: It was in the ops

building.

HERNANDO MADRONERO: Or, in the ops building; sorry. Ops building is what my guys are telling me.

MALE PARTICIPANT: And it would probably be one of those penetrations. It built up as high pressure and the steam pressurized into the ops building.

HERNANDO MADRONERO: Can you hear that, sir?

MIKE CASE: No, I didn't hear that.

MALE PARTICIPANT: It was a reactor building.

MALE PARTICIPANT: Reactor, yeah.

MALE PARTICIPANT: Yeah, it was the reactor building that blew up.

HERNANDO MADRONERO: Yeah. So, I mean, as you can tell, we're sitting, five of us are on the phone and we're speculating as we're talking to you.

MALE PARTICIPANT: The reactor core is --

MIKE CASE: Okay, I've got to run. I think people need me to run into the next meeting.

HERNANDO MADRONERO: Okay. I understand. So Mr. Case, you have our info. Whatever you need from us, let us know. We're there.

MIKE CASE: Okay. Well, we're going to change shift, I think, starting somewhere around seven,

HERNANDO MADRONERO: Okay.

MIKE CASE: So we'll have another guy, but I'll give him the same contact information and get him to, to get up with you guys early on.

HERNANDO MADRONERO: Great. Thank you.

MIKE CASE: Okay, great. Thanks for your help, guys. Okay. We'll talk again later.

(Conference call concluded.)

(END OF SERIES.)

Official Transcript of Proceedings

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JAPAN'S FUKUSHIMA DAIICHI RST PODIUM AUDIO FILE

+ + + + +

DAY 3

+ + + + +

(CONFERENCE CALL INITIATED.)

RICK HASSELBERG: Reactor Safety Team; Hasselberg.

SPENCE: Hey, Rick. I have -- Spence over here. Did you see that email?

RICK HASSELBERG: Yes. I got right now.

SPENCE: Okay, yeah. And you see it's on the distribution.

RICK HASSELBERG: Limited distribution; understand.

SPENCE: Okay. Thank you.

RICK HASSELBERG: Thank you, sir. Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

FRED BROWN: Reactor Safety Team. This is Fred Brown.

MALE PARTICIPANT: Can I speak to Rick Hasselberg, please?

FRED BROWN: Rick just walked into --

Where did Rick out?

MALE PARTICIPANT: He went to warm up dinner.

FRED BROWN: Oh.

He just walked away for a minute. Can I have him call you back?

MALE PARTICIPANT: Sure, Fred. This is Brett Raney.

FRED BROWN: Hey, Brett.

BRETT RANEY: How's it going?

FRED BROWN: Good. How are you?

BRETT RANEY: Not bad.

I was just calling to check on the schedule because I thought he wanted me to come in at 11, but then I just got an email that showed, showed me not coming in until tomorrow.

FRED BROWN: Well, I have the sheet here. Let me look and see.

Tonight is the 13th. Yeah, he's got you

at 11.

BRETT RANEY: He does, okay.

FRED BROWN: He's got you at 11 tonight, 11 tomorrow, and, and then on the 16th at 11.

BRETT RANEY: Okay. All right. The email that came out shows Mike Moreland at, at 11 tonight, but I guess I will come in at 11.

FRED BROWN: I will -- he should be back in a minute. He just went to warm his dinner. I'm looking at his sheet that he did that off of. He must have just made an error.

But does he have your number?

BRETT RANEY: He -- I can give you the number now. Do you have a pen?

FRED BROWN: Yeah.

BRETT RANEY: It's (b)(6)

FRED BROWN:

BRETT RANEY: Yep.

FRED BROWN: I'll have him give you a call back.

BRETT RANEY: All right. Thanks, Fred.

FRED BROWN: Sure.

BRETT RANEY: All right. Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

FRED BROWN: Reactor Safety Team. This is Fred Brown.

DAVE SKEEN: Hey, Fred, this is Dave Skeen. How are you doing?

FRED BROWN: Good, Dave. How are you?

DAVE SKEEN: I'm doing well.

Hey, I just got a message from Rick Hasselberg to see if I could come in at 11 tonight, and the answer is yes, I am planning on being there 11.

FRED BROWN: Very good. Thank you, sir.

(b)(6)

DAVE SKEEN: (b)(6)

FRED BROWN: Okay. Good. Good. I hope we didn't wake you up.

DAVE SKEEN: No, no. I, I was up. I just happened to hear the phone ring, and by the time I got to it, it was already hung up.

FRED BROWN: Okay. Real good. We, we

(b)(6)

(b)(6) We just wanted to make sure.

DAVE SKEEN: Yeah, okay. Yep, I'll be there.

FRED BROWN: Very good. See you then.

DAVE SKEEN: All right.

FRED BROWN: Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

RICK HASSELBERG: Reactor Safety Team; Hasselberg.

TONY ULSES: Yes, hi, Rick. It's Tony calling. Understand?

RICK HASSELBERG: Who is it?

TONY ULSES: It's Tony Ulses calling, Rick.

RICK HASSELBERG: Hey, Tony. How are you, sir?

TONY ULSES: Just fine, thanks.

Hey, got a quick question for you.

RICK HASSELBERG: Yes?

TONY ULSES: I was reading the morning report. What's, what's going on at Onagawa?

RICK HASSELBERG: What is -- okay, let me give you their team director.

TONY ULSES: Thanks.

RICK HASSELBERG: Okay. Fred, Tony Ulses from Japan.

FRED BROWN: Hey, Tony, how are you?

TONY ULSES: Just fine, thanks.

I was just reading the latest report you all sent out and I'm just wondering, have there been any changes at Onagawa?

FRED BROWN: Yeah. Let me give you the last that we got from Jim Trapp.

Unit 1 -- they are injecting seawater using a fire pump, and they successfully depressurized the primary system. They have DC power, and they were able to refill air accumulators, so they're using a manual depressurization and seawater injection. We've heard it's borated water. We don't have confirmation of that, or how they would be --

~Check for incomplete.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

PETER ALTER: Reactor Safety Team; Peter Alter.

HOO MARK ABRAMOWITZ: Pete, this is Mark Abramowitz. You've got your bridge with the ET unmated right now, so I'm hearing your, a lot of background.

PETER ALTER: Okay.

HOO MARK ABRAMOWITZ: Okay. Thank you.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

PETER ALTER: Reactor Safety Team. This is Peter Alter. May I help you?

ALAN BLAMEY (ph): Peter, this is Alan Blamey calling from Region II. I'm a branch chief.

PETER ALTER: Yes, I know you. Or, I know of you.

ALAN BLAMEY: Okay, yeah. I'm sorry to hear that.

PETER ALTER: No, it's good.

(Laughter.)

PETER ALTER: Yep.

ALAN BLAMEY: Real quick, I just recalled, after seeing some pictures this morning, it looks like Unit 1 had some of the superstructure above the refuel floor, it was probably removed with the hydrogen burn that they had.

But, looking at that, B5B, we went through -- and I'm not sure if you pulled any of the B5B reports that we did for loss of large area of facilities.

PETER ALTER: Okay.

ALAN BLAMEY: And I wanted to provide that information. There, there's some very good information there.

When we did B5B Phase 2 --

PETER ALTER: Yeah.

ALAN BLAMEY: -- we essentially looked at lots of large areas of the plant, and thinking about this, it appears that those units would be comparable to perhaps Duane Arnold, a single unit. Nine-Mile Point, I think --

PETER ALTER: Actually, actually, we know that Unit 1, the BWR with the isolation condenser --

ALAN BLAMEY: Yeah, that's right.

PETER ALTER: -- we have information that's Dresden.

ALAN BLAMEY: Yes, it is.

PETER ALTER: It's a BWR 3.

ALAN BLAMEY: Yes. That would be identical the Dresden.

PETER ALTER: Yep.

ALAN BLAMEY: But if you go back to those reports -- but the difference is, on Dresden, you had a common refuel floor. It looks like these are single refuel floors.

PETER ALTER: These are individual refuel floors.

ALAN BLAMEY: Yes.

PETER ALTER: That's correct.

ALAN BLAMEY: Yes. But if you go back, if you haven't already gone back and looked at the reports, the information I wanted to provide was, number one, were going to Duane Arnold, we, they were very comprehensive in their study. So they're -- and I'm not sure you were --

PETER ALTER: For B5B?

ALAN BLAMEY: Yes, the B5B.

PETER ALTER: Yeah, I did B5B as the, for Riverbend.

ALAN BLAMEY: Okay.

PETER ALTER: All the vivids (ph).

ALAN BLAMEY: Okay. Good. Good.

But I now on, when we went to Duane Arnold, the feedback we had was they were extensive, they were complete, and I don't think we found anything.

So he needed to pull a report or two. I think the Duane Arnold report would probably be good in that it may give you a lot of different options --

PETER ALTER: Um-hmm.

ALAN BLAMEY: -- to have water -- and what we did, of course, we looked at the spent fuel pool. We didn't look at getting water in the containment. I think that was Phase 3 that did that.

We were doing Phase 2.

PETER ALTER: I understand.

ALAN BLAMEY: And then maybe Dresden, if you look at Dresden report as well, that may provide some additional options because of the iso-condenser. I was licensed at Quad City, so --

PETER ALTER: I understand.

ALAN BLAMEY: -- it's the same plant except we didn't have iso-condenser.

PETER ALTER: I understand.

ALAN BLAMEY: Okay.

PETER ALTER: The, the only problem that we have is we don't know to what extent the Japanese have looked into all of these options.

ALAN BLAMEY: Right.

PETER ALTER: And, and as of right now, we are pretty sure that the only way they have any water available to Units 1, 2, or 3 are with fire trucks.

ALAN BLAMEY: Yes.

PETER ALTER: Okay?

ALAN BLAMEY: Well, you know as well as I do, a lot of the work we did with Phase 2, you know, fire trucks was usually a scenario.

Now the only thing, which I never was

able to follow up on, but I often wondered if some of these cement trucks would be able to pump water. The fluid's not nearly as viscous and I don't know how leak-tight they are, but that may be another option with these large booms they have.

PETER ALTER: I understand.

ALAN BLAMEY: Okay.

PETER ALTER: Okay.

ALAN BLAMEY: The other thing is, with most of the BWRs, there's usually an external connection that can connect RHR into externally. So you could bring a fire truck in externally and connect up to that.

PETER ALTER: Yeah. Yeah, we suspect that that's the way they're getting the fire water into containment.

ALAN BLAMEY: Okay. Good.

PETER ALTER: From -- well, from what is referred to as the fire water, to RHR service water, to RHR header.

ALAN BLAMEY: Um-hmm, yes.

PETER ALTER: Yeah, that's how we suspect that's been done, but obviously, we're not getting enough information directly from the site to know that for sure.

ALAN BLAMEY: Yes. Yes. That's correct.

PETER ALTER: Okay?

ALAN BLAMEY: And -- yeah, that was about it. If -- feel free, if, you have my, you probably have my cell phone number up there that you can see.

PETER ALTER: Um-hmm.

ALAN BLAMEY: If you have anything you'd like to bounce off of anybody, just feel free to give me a call. (b)(6) (b)(6) and then I have an NRO retreat Monday, Tuesday, Wednesday of next week.

PETER ALTER: Um-hmm.

ALAN BLAMEY: And that'll be in Southern Maryland.

PETER ALTER: Okay.

ALAN BLAMEY: So feel free, if you have any questions or anything you'd like to bounce off anybody, feel free to give me a buzz.

PETER ALTER: All right. Thank you very much.

ALAN BLAMEY: Okay. So long.

PETER ALTER: Yeah, bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

PETER ALTER: Operations Center, Reactor Safety Team.

MIKE CHIAC: Hi. This is Mike Chiac. Who is this?

PETER ALTER: Peter Alter.

MIKE CHIAC: Hey, Peter.

PETER ALTER: Yeah.

MIKE CHIAC: Hey, I got a call last night from Rick Hasselberg (inaudible) was expecting me in, and I guess I, I wasn't expected to be in.

PETER ALTER: That's correct, and we did have somebody come in.

MIKE CHIAC: Cool. So what's the schedule for today?

PETER ALTER: Hold on. Okay, Jeff Circle is here right now.

MIKE CHIAC: Okay.

PETER ALTER: Okay. Where am I? Here we go.

Today is the 13th -- Jeff Circle. And according to this, three to 11 will be Hosein Asmale.

MIKE CHIAC: Okay.

PETER ALTER: Okay?

MIKE CHIAC: All right.

PETER ALTER: And you're listed as 11 p.m. tonight.

MIKE CHIAC: So, I'm listed at 11 p.m. tonight?

PETER ALTER: Yeah, to Monday morning at 7:00 a.m.

MIKE CHIAC: Eleven to seven, okay.

PETER ALTER: Okay?

MIKE CHIAC: Good enough.

PETER ALTER: All right -- hold on, hold --

MIKE CHIAC: Who else is coming in at 11, just out of curiosity?

PETER ALTER: According to this, Brett Raney.

MIKE CHIAC: Okay.

PETER ALTER: It won't be (b)(6)

(b)(6)

MIKE CHIAC: Yep.

PETER ALTER: Eva Brown.

Okay?

MIKE CHIAC: All right. Cool.

PETER ALTER: All right.

MIKE CHIAC: See you.

PETER ALTER: Wait a minute. Are you --

[Check for incomplete.]

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

BRETT RANEY: Reactor Safety Team; Brett Raney.

HQ OPERATIONS OFFICER: Hello. I've got Mr. Ulses on the line -- connecting you now.

EVA BROWN: Hey, Tony, how are you?

TONY ULSES: I'm just fine. How are you doing?

EVA BROWN: I'm doing well. It sounds like you guys are having a little bit of an interesting time, even more so than what we thought.

TONY ULSES: Yeah. It's been a little fun. I've got, I have Jim here and Ron Cherry from NNSA listening in on the speakerphone.

MALE PARTICIPANT: (Off mic.)

TONY ULSES: I, I'm sorry. Yeah, I'm sorry. It's been a long --

MALE PARTICIPANT: (Off mic.)

EVA BROWN: Afternoon. Afternoon.

TONY ULSES: Al Remick. I'm sorry.

We wanted to talk and give you guys an update about what we know about Unit 3.

EVA BROWN: Okay. Go ahead. Yeah, go ahead.

TONY ULSES: Well, let me start off here

and I'll give you a rundown. We, we were looking at some local Japanese media and we had somebody translating it for us.

So 11:01 when the explosion happened.

EVA BROWN: I understand, 1101 a.m.

TONY ULSES: Right -- local time.

EVA BROWN: Okay.

TONY ULSES: At 11:15, reports indicate that TEPCO has confirmed that the, that the containment vessel is intact.

They added to the, to the statement that, although they had ordered a 20-kilometer evac around the area, there were some people who remained. They were ordering them to shelter in place following --

EVA BROWN: Okay.

TONY ULSES: -- following this.

After looking at, after, after looking at the video from the TV, we saw what we concluded to be the telltale signs of a hydrogen burn.

EVA BROWN: Um-hmm.

TONY ULSES: That's what we believe happened here.

EVA BROWN: Telltale signs of a hydrogen burn.

PETER ALTER: Right.

And let's see here. What else I got here? The rest of this stuff is just, you know, they're trying to get water into the core, et cetera, et cetera. They're trying to get data.

And then we just got an update. This is some sort of TEPCO press release, which, which was brought in here by one of our local liaisons. And it's an actual hard plant data.

EVA BROWN: Okay.

TONY ULSES: For Unit 3, as of 11:35, they're indicating that the water level is minus 180 centimeters. Now we don't know what the zero on that is. It, it could be normal estimate zero; it could be TAF. We just don't know.

EVA BROWN: Okay.

TONY ULSES: They're giving us the vessel head pressure from the A and the B instrument. They're saying that A is measuring 0.17 megapascals.

TONY ULSES: Zero point one-seven megapascals.

TONY ULSES: They're saying that the B instrument is measuring 0.18 megapascals. You know, they're almost the same measurement.

EVA BROWN: Zero point one-eight

megapascals. I understand.

TONY ULSES: We think we've deciphered the containment pressure measurements being that the dry well pressure measuring 360 kilopascals --

EVA BROWN: Three hundred sixty kilopascals.

TONY ULSES: -- and the wet well measuring 380 kilopascals, so it seems like what they're trying to argue for --

EVA BROWN: Repeat that; I'm sorry.

TONY ULSES: -- those measurements is that both the vessel and the containment remain intact.

EVA BROWN: Well, what was the wet well, again?

TONY ULSES: Wet well was 380 kilopascals.

TONY ULSES: Three eighty; understand.

TONY ULSES: So it seems like, you know, what we're speculating here is that with, with the release of those measurements from TEPCO -- again, this was from a TEPCO reporting --

EVA BROWN: Yeah, we'll pull it up.

TONY ULSES: -- they're trying to argue that the, both the vessel and the containment remain

intact following the hydrogen burn.

EVA BROWN: Okay.

Hey, do you guys have any information on the status of AC or DC power, the mobile generators on site?

JIM TRAPP: Yesterday, they had no AC but they had some DC.

EVA BROWN: Do we know where the DC is? Is it just some batteries? They were talking about car batteries or something.

JIM TRAPP: They're, they actually call them carts, DC power carts.

EVA BROWN: I understand. DC power carts.

TONY ULSES: The, the one thing we noted from looking at the video pictures --

EVA BROWN: Um-hmm.

TONY ULSES: -- comparing the burn in Unit 3 to the burn that happened yesterday in Unit 1, it appears that the burn in Unit 3 had considerably more loft. He said, roughly about four times the met tower in height, versus the Unit 1 burn, which was definitely, which really didn't go much higher than the met tower.

It's, so it's hard to say what that means

other than the fact that, you know, it, it may have been a, it may have been a stronger burn, or I'll use the word explosion; you know, it's the wrong word here.

And we saw -- you know, well, what leads us to the conclusion that it was a hydrogen burn was that we saw a very bright flash go off at the top of, at the reactor building, which would be indicative of a hydrogen burden. And we also saw some pieces of the roof kind of falling around down around it.

EVA BROWN: Okay, I don't -- did we see that in the first one? I don't remember that when the first one up.

TONY ULSES: No, I don't think we actually saw the actual visual of the yellow --

EVA BROWN: The --

TONY ULSES: -- it was a very bright yellow visual.

EVA BROWN: I understand.

TONY ULSES: I, I think the first one, We saw like a shock wave that went off the top, and that was about it.

EVA BROWN: Right. Okay.

TONY ULSES: But, but it was much lower to the ground versus Unit 3, which was definitely

getting some loft.

Thought, you know, it's hard to tell. The met conditions could be different. I mean, it's, it's very difficult to tell, the reasons. You know, the building design is, may have been different. Jim pointed that out; he's absolutely right. You know, the building design could be different. It's hard to tell what it is, but we wanted to point that out as well. That was definitely a difference.

EVA BROWN: Do we have any idea what top of active fuel is, what the measurement is for those units?

JIM TRAPP: No, but if you guys could look at that, that would be helpful.

EVA BROWN: Okay.

TONY ULSES: Yeah, see, that's the problem with these level measurements we're getting. We don't know what the zero is, whether it's, whether it's, you know, whether it's like wide-range zero or whether it's TAF. I mean, I don't know. I'm assuming this is probably field zone measurements, and I don't know where the -- actually, why don't you guys look up zero for field zones? These are probably, this is probably off the field and instruments.

EVA BROWN: Okay, because -- all right. We need to look up what the zero is on the field zone measurements for BWR.

This is like, these units are like Quad; right? Unit 3 is like Quad?

JIM TRAPP: That's correct.

TONY ULSES: Yeah, 3 and 4.

We, we have, we've talked to some of our local liaison folks here, and they're working on getting us some imagery of these sites --

EVA BROWN: Okay.

TONY ULSES: -- (b)(4) so we can see what's going on.

EVA BROWN: Okay.

TONY ULSES: And you make an independent assessment.

EVA BROWN: Okay.

TONY ULSES: Just FYI, that's going to take a while, but they're working it.

EVA BROWN: Okay.

Dave, did you want to -- this is Ulses and Trapp.

DAVE SKEEN: Yeah.

EVA BROWN: -- Okay. Hold on just a second.

Here's Dave.

DAVE SKEEN: You can probably put them on speaker.

(Audio skip -- conversation missing.)

TONY ULSES: So that's pretty much all we know now on Unit 3.

Again, we suspect it was a hydrogen burn based on what we saw from, from the video footage. And based on the data were getting from TEPCO, it appears that both the vessel and the containment remain intact.

DAVE SKEEN: Okay. This is Dave Skeen, Tony. It's a good update there.

So I, I didn't hear all that he you were just talking to Eva about. But, you know, do we have a pretty good idea on Units 1 and 2 at Daiichi now, and whatever happened at Daiini?

TONY ULSES: Well, I, I mean, we believe Unit 2 is stable condition on RCICS because they keep bringing in these battery carts to replenish station batteries and so they'll be able to run RCICS.

And all we have in Unit 1 is that they're continuing to backfill with a mixture of borated mixture of seawater. That's really all we know; no new updates there.

DAVE SKEEN: Do we know if they ever covered the fuel back up completely in Unit 1? That was a question I had when I came in, and nobody seemed to have that answer either.

TONY ULSES: You know, they said they, they had adequate cooling. I don't think we know -- let's see; they were telling us that they had -- let's see. Hold on.

I think, I think they told us, on Unit 1, they were okay. Let's see.

DAVE SKEEN: Okay. So pressure's down and radiation's going down in Unit 1, or they, they think they've got a handle on that one now?

TONY ULSES: Yeah, they do. They said that the level in the RCS was okay. They just said that they didn't have accurate pressure on the Unit 1.

DAVE SKEEN: Okay.

TONY ULSES: Yeah.

DAVE SKEEN: Okay, so right now, we don't see a problem for Unit 2 at the moment. But of course, the one they just had the hydrogen explosion on, it'll be a while before we understand what happened with that one; right?

JIM TRAPP: We did get a report early

this morning that they had lost cooling water to Unit 3 and they tried to restore it, which might tell you, give you a good indication of why they got extra hydrogen that they were trying to vent and would probably lead to the explosion.

DAVE SKEEN: Right.

JIM TRAPP: So they probably had more core damage this morning when they lost cooling water.

DAVE SKEEN: Okay.

TONY ULSES: Okay. We don't fully understand exactly their mechanism of getting seawater into the, into the system. They keep talking about, they've been calling something a pool that they fill with seawater, and then we're kind of hypothesizing that, that they had these pools they fill with water, and then maybe they run the fire hose draw into the pool and pump it to the pumper. I mean, we, we, we just don't know.

DAVE SKEEN: Okay.

JIM TRAPP: You know what would be helpful is to pull the Quad Cities level because we are getting some pretty decent readings now on instrumentation, which I guess, from a positive point of view, now you know they've got an instrument bus

back and they got DC power in Unit 3 --

TONY ULSES: Yeah.

JIM TRAPP: -- if they can tell the levels, and pressures.

DAVE SKEEN: Okay. And how do you want us to send that information on Quad Cities to you guys?

TONY ULSES: You can send it over the, over the email, or you want to --

JIM TRAPP: Yeah, email would be fine --

DAVE SKEEN: Okay.

JIM TRAPP: We've got a fax here, but I don't know what the number is.

DAVE SKEEN: All right. We can email it to you as long as you can print it out there somewhere, see what's going on.

TONY ULSES: Yeah, and we'll, you know, we'll pass off a fax number to you for the future. We've got have the, the guys here how to decipher this number.

JIM TRAPP: Hey, the other key piece of information is, after the explosion, they gave a, a dose rate at the front gate of 20 microsieverts per hour. So they only have 2 mR at the front gate. So it didn't look, from that anyway, that they broke the

vessel or, you know, they broke containment.

DAVE SKEEN: And that's on Unit 3, you're talking about?

JIM TRAPP: Well, it says "front gate," so I assume it's just the site front gate.

DAVE SKEEN: Okay.

JIM TRAPP: But still you're, you know, you're pretty low, 20 micropascals, or, 20 microsieverts.

DAVE SKEEN: Okay.

JIM TRAPP: That's the front gate dose.

DAVE SKEEN: Okay.

TONY ULSES: All right, just another tidbit of information -- we're just, we've been trying to sit down and hook up with the NISA official this afternoon. We're, we're now presuming that that meeting is going to get put off given the response to what happened at Unit 3. So we'll just, basically, all we can say is standby and we'll advise you when that meeting gets set up.

JIM TRAPP: It's probably the best we're going to do. This is just conjecture on my part, but it's probably going to be another call sometime this evening.

TONY ULSES: Yeah. Yeah, most likely.

DAVE SKEEN: Okay. Well, we'll stand by for that.

TONY ULSES: But that's all we know.

DAVE SKEEN: Okay.

TONY ULSES: So far.

DAVE SKEEN: So we'll get you the information on Quad Cities.

Anything else we can do for you from this end?

TONY ULSES: Well, I don't know.

Jim, can you think of anything else?

JIM TRAPP: No. Not now.

TONY ULSES: No. For now, I think we're good.

DAVE SKEEN: Okay. All right.

TONY ULSES: Thanks.

DAVE SKEEN: Guys, if you're anything, let us know.

TONY ULSES: All right, Dave. Appreciate it.

DAVE SKEEN: All right, guys. We'll talk to you soon.

TONY ULSES: All right. Bye.

DAVE SKEEN: Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

GLEN WALKER: GE Hitachi; Glen Walker.

MIKE CASE: Hi, Glen. This is Mike Case from the Nuclear Regulatory Commission.

GLEN WALKER: Hey, Mike. How you doing?

MIKE CASE: Good. I just wanted to check in and see what the latest is down there before all the crazy people descend upon us.

GLEN WALKER: Yeah, the last update we have says that, no change in Unit 1, continue to inject seawater, borated seawater --

MIKE CASE: Yeah, how are you feeling on that one? Do you feel they're stable?

GLEN WALKER: I believe so. I mean, they've been injecting seawater since -- I got to do the math -- I want to say, six, 6:00 p.m. hold on. Let me go get my notes.

(Standby.)

GLEN WALKER: That would have been 6:00 a.m. this morning -- or yesterday morning.

MIKE CASE: Oh, okay. Yeah.

GLEN WALKER: So, and, and there's really been no change in the status on that one.

They should have filled the vessel long ago and moved on to filling containment.

MIKE CASE: Right. Do you guys get, do you ever pick up information from IAEA?

GLEN WALKER: We have looked at those. We had not picked up anything different compared to what we're getting from the TEPCO releases.

MIKE CASE: Well, we were getting a little bit of, of different stuff but, you know, we sort of went with the TEPCO stuff.

You know, we picked up one, you know, maybe a couple of hours ago. And, and I like them because they give me some level information every now and then.

GLEN WALKER: Okay.

MIKE CASE: But you might want to just check that one.

GLEN WALKER: We will definitely take a look at that.

Unit 2, RCSI still is operable and they did relieve pressure, so they did operate the vent valves and relieved pressure and Unit 2 from the containment.

MIKE CASE: Well, yeah, well, sometimes when we read that, you know, the phraseology that the use is that, oh, you know, we, we've completed preparations to do that. And so sometimes we miss

the actual venting itself.

GLEN WALKER: Yeah, and sometimes you've got to look later. Later ones will then say they completed it.

There were a couple where there were several in a row before they actually claimed that they completed the venting.

Hold, hold on a second.

MIKE CASE: Okay.

(Standby.)

GLEN WALKER: Yeah, the last one said, measures to lowering the pressures of the reactor containment vessel has -- excuse me -- has been taken.

MIKE CASE: Right. Okay, yeah, we saw the same language.

GLEN WALKER: Okay. In other ones, it's preparing, or preparations are complete --

MIKE CASE: Right.

GLEN WALKER: -- which didn't necessarily imply that they had, had done that.

And then, on Unit 3, they basically have said that they, they did relieve pressure, lowered the pressure of the reactor. So, basically, they did a blowdown --

MIKE CASE: Right.

GLEN WALKER: -- of the reactor and began injecting seawater --

MIKE CASE: Right.

GLEN WALKER: -- with boric acid.

MIKE CASE: And no, no indication yet, of whether that was successful? We, we assume it to be.

GLEN WALKER: Well, yeah. I mean, they did that -- It was like seven, 7:25 Eastern Time last night, is when they say they would have begun injecting the boric acid into the pool.

MIKE CASE: Okay. Yean, and as far as changes, that was really the only one that we saw.

GLEN WALKER: Yeah.

MIKE CASE: Or, you know, sort of the major one.

GLEN WALKER: Yep. Yes.

MIKE CASE: Ooh, how about this one? I get when I was watching TV, and they said that MOX was being used on Unit 3. Do you know anything about that?

GLEN WALKER: (b)(4)

(b)(4)

(b)(4) This phone's at another table.

Hold on.

MIKE CASE: Okay. Right.

(Standby.)

GLEN WALKER: (b)(4)

(b)(4)

MIKE CASE: Okay.

GLEN WALKER: -- (b)(4)

(b)(4)

MIKE CASE: Okay. Is that, where'd you find that information? Is that available to us, or is that something that you knew?

GLEN WALKER: (b)(4)

(b)(4)

MIKE CASE: Okay. Fantastic. And so I think that might be it for tonight unless we get some different stuff.

Oh, what, what's your overall thought on the status of Unit 3? You know, the other ones, we say, okay, they're stable.

GLEN WALKER: (b)(4)

(b)(4)

(b)(4)

MIKE CASE: Yeah.

GLEN WALKER: (b)(4)

(b)(4)

MIKE CASE: Right. Almost exactamundo with what I'm thinking. I sort of put them in my "approving" column.

GLEN WALKER: (b)(4)

(b)(4)

MIKE CASE: Yep. Okay, swell.

GLEN WALKER: Okay. All right.

MIKE CASE: Well, I think, I think we had a better night than last night.

GLEN WALKER: I think so. We haven't seen any explosions on TV.

MIKE CASE: Correct. Okay, thanks for your help. You guys have been terrific.

GLEN WALKER: All right. Thank you, Mike.

MIKE CASE: All right. Bye-bye.

GLEN WALKER: Good night.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

MIKE CASE: Mike Case; Reactor safety team. This is a recorded line.

TONY ULSES: Hey, it's Tony.

MIKE CASE: Pardon me?

TONY ULSES: Hey, Mike, it's Tony calling.

MIKE CASE: I'm sorry; I couldn't hear that.

TONY ULSES: Mike, It's Tony Ulses. You've got Tony Ulses calling, Mike.

MIKE CASE: Oh, hi, Tony. How are you doing? Just fine, thanks.

Hey, I'm getting ready to head down to Tokyo here for a meeting with some NISA tech folks.

MIKE CASE: Okay.

TONY ULSES: And I put together a list of about 20 questions, so I was wondering if you guys could maybe fire off any questions that you guys want asked down there and just email them to, to my NRC account. I have my BlackBerry up here, so.

MIKE CASE: Okay, yeah --

TONY ULSES: But I'd like to have them in front of me.

Basically, basically, what I want to do

is talk about the status of the plant and get some information from the technical people. I'm going to be talking to them, hopefully in the next couple of hours.

MIKE CASE: Okay. There's only a couple of us here on the overnight shift, but we'll brainstorm a bunch of questions and we will zap it out to you.

TONY ULSES: All right, Mike. I appreciate it. Thanks.

MIKE CASE: Okay, kid. Hang in there.

TONY ULSES: Yeah, we're doing all right. Okay. Thanks. Bye.

MIKE CASE: Bye-bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

MIKE CASE: Mike Case, Reactor Safety Team, Nuclear Regulatory Commission. This is a recorded line.

HQ OPERATIONS OFFICER: Hi, Mike, Headquarters ops officer, and I have --

MIKE CASE: Oh, I wouldn't have done all that formal introduction then.

HQ OPERATIONS OFFICER: Yeah. I've got is the CNSC on the line, so you can do it again.

MIKE CASE: Okay, thanks.

HQ OPERATIONS OFFICER: Okay. Here they are. I'm going to connect to right now.

MIKE CASE: Thanks.

Hello?

LUKE SIGOUIN: Hello.

MIKE CASE: Hi.

LUKE SIGOUIN: Mike?

MIKE CASE: This is Mike Case. I'm the Reactor Safety Team Director for the Nuclear Regulatory Commission. How are you all doing?

LUKE SIGOUIN: Very good. My name is Luke Sigouin with the Canadian Nuclear Safety Commission. I'm the external liaison officer.

MIKE CASE: Okay.

LUKE SIGOUIN: And we have -- I'll introduce, just first off, Gerry Frappier, who who is leading our technical team for the next shift, and I'll turn it over to Gerry.

MIKE CASE: Okay. Luke, what was your last name again, so I can write it down?

LUKE SIGOUIN: I'll spell it for you. S-I-G-O-U-I-N.

MIKE CASE: Okay.

GERRY FRAPPIER: Hi, Mike. My name is Gerry Frappier. Are you guys doing okay tonight?

MIKE CASE: Yeah. Okay, you're going to have to spell your last name, too, so I can give you a proper turnover.

GERRY FRAPPIER: Yep, good idea. It's Gerry with a G --

MIKE CASE: Oh, okay.

GERRY FRAPPIER: -- Frappier, F-R-A-P-P-I-E-R.

MIKE CASE: Okay, great.

GERRY FRAPPIER: So are you just coming on shift or getting ready to leave shift?

MIKE CASE: Oh, no. I'm getting ready to leave.

GERRY FRAPPIER: Okay. Okay, good.

Well, we're just sort of doing a bit of a handover right now and then we're going to be getting ready to, to brief our government, and, obviously, an awful lot of interest here.

And we've been following everything happening in Japan as best we can, both with the IAEA information and with the information directly from the Nuclear and Industrial Safety Agency of Japan.

MIKE CASE: Okay, how about from TEPCO?

GERRY FRAPPIER: And, and from TEPCO, as far as what the actual press releases are.

MIKE CASE: Okay, yeah. We pretty much work with press releases, the IAEA stuff, and, and, you know, just miscellaneous stuff. And then there's, there's a ton of stuff on news too --

MIKE CASE: Yeah, it's --

MIKE CASE: -- some, some of which is not very helpful.

GERRY FRAPPIER: -- and some of it is, is, is misleading. Some, it's not very helpful. And then we have various, you know, back channels as to just people and their contacts and all that stuff, which, again, we take with a grain of salt. But at the same time --

MIKE CASE: Correct. Sometimes you

wonder where they help or, or hinder.

GERRY FRAPPIER: Right.

MIKE CASE: But they're always fun.

GERRY FRAPPIER: But they're always fun and it, and it makes the night go by; right?

MIKE CASE: That's right.

GERRY FRAPPIER: So what we weren't sure, is how much you guys are getting, information, other than the IAEA, TEPCO, and official releases out of Japan.

MIKE CASE: Yeah, no, we're not really getting any different information. You know, the only thing that may be different is, is, you know, the individual information that we get. But that's been pretty sporadic.

GERRY FRAPPIER: Yeah.

MIKE CASE: You know, like, quite frankly, I had no tidbits from anybody this shift, and then I think they got maybe one tidbit from, in the last shift, and actually, we got the same information through the normal sources anyway.

So it's mostly just the normal sources, and quite frankly, it's not a lot of information.

GERRY FRAPPIER: Right. Right. Okay, so would you like to -- we're sort of trying to keep

ourselves up to date.

A few questions that we got that maybe you can, you can help us on --

MIKE CASE: Okay.

GERRY FRAPPIER: -- or, or at least get your view of what it is. And we know it's a bit of a chaotic sort of situation. We're trying to fit things into things we know and things that we're just using engineering judgment on, based on what we're hearing, or whatever.

MIKE CASE: All right. We're using a ton of engineering judgment.

GERRY FRAPPIER: Yeah.

MIKE CASE: You know, we, we, quite frankly, we sort of use the US plants. We sort of pick one that's like it. And so, really, we work with most of the descriptions from the US plants as if they are the real plants.

GERRY FRAPPIER: Okay.

MIKE CASE: So, so you're right. There's a lot of, not guessing, but there's a lot of engineering judgment involved.

GERRY FRAPPIER: Right. And you guys have a bit of an advantage because since you guys actually do have a boiling water reactors, whereas we

do not. So, so our engineering team is a little bit hamstrung by virtue of, we're going over what we know about the Japanese plants and some of the visits and stuff like that we've done, and then just information we pulled from wherever.

MIKE CASE: Yeah, that makes it a little tougher.

GERRY FRAPPIER: Yeah.

But, but a couple of things that, that I have, and, and there's a couple of other people in the room here, and they might have something as well, but --

MIKE CASE: Okay.

GERRY FRAPPIER: -- the first one, and they are talking about Unit 1, but I guess Unit 3 is becoming a keen interest as well.

MIKE CASE: Right.

GERRY FRAPPIER: But I'm just wondering what your view is, as to, they're talking about seawater and boron in the seawater, and a couple of different things we've seen have made reference to putting it on the core. I'm not so sure if that's putting it within the pressure vessel itself or just between the pressure vessel and the, and the containment walls of the, the sort of primary

containment there, what's normally, I guess, referred to as the dry well.

MIKE CASE: Right. Okay, well, you know --

GERRY FRAPPIER: Just, what's your thoughts on what's actually happening there with respect to cooling?

MIKE CASE: You know, our, our -- my impression; I shouldn't even say "our" -- but it's, it's that, you know, they're feeding the vessel using borated seawater. And once again, we really, really don't know the method that they're using to do that, but it's some method to get -- and, you know, for BWR, that's not untypical in that, you know, if you go through the emergency procedures for typical BWR, they'll have steps in there that would, would line it up to, to service water to feed the reactor.

So it's not an unusual step. So, you know, somehow they're adding boron in there too. And so, once again, we don't know the mechanism they're doing it, so it's just not really unusual that they are. So it's going into the vessel.

You know, if, if you follow some of the severe accident guidelines, you know, it'll, it'll eventually get into the primary containment, but once

again, I don't necessarily know that path. And then we did have information that they're using seawater, you know, essentially, in the reactor building. But once again, that was a very weak -- you know, we have no good source on that. You know, I just sort of heard that from the other shift and so I never really saw any information on that at all.

So that's about what we know on the feeding part, or at least the borated seawater stuff.

GERRY FRAPPIER: Right, and, and so that would be for Unit 1.

What are you hearing about Unit 3 with respect to the, the borated seawater?

MIKE CASE: Well, you know, until recently, you know, they, they had been running on, I think on on HPSI and then HPSI shut down. Just recently, there was a couple of TEPCO press releases where they talked about using borated water. So we think they're -- you know, it said that they depressurized through the SRV and then are starting to use borated service water.

So once again, we don't know the exact path, but we just, you know, sort of have information that they are.

Is that what you guys are hearing?

GERRY FRAPPIER: Yeah. Well, to tell you the truth, I haven't heard very much about Unit 3. I don't know whether you've -- because I'm just coming, coming off of a nice little sleep. So I'm, I'm just bringing myself up to speed.

MIKE CASE: Oh, okay.

MALE PARTICIPANT: Actually, we have the same about Unit 3. It's (inaudible) in Unit 3. We have the same about Unit 3, and they are injecting seawater with boron in, into the reactor building.

MIKE CASE: Right. And I think that's a little bit -- you know, the last status we got from IAEA was a little bit different from that.

MALE PARTICIPANT: Exactly.

MIKE CASE: So we've sort of been, you know, we sort of used the TEPCO status because we thought it was later.

MALE PARTICIPANT: Yeah, right.

GERRY FRAPPIER: The, the other one that we're using is, the Government of Japan had an actual declaration from the, the minister, I think, or something. Or, this was --

MALE PARTICIPANT: The spokesman of the Prime Minister.

GERRY FRAPPIER: That's what it was. And this was about 12 hours ago now. They, they were very specific in their description of putting seawater into the primary containment around the vessel as opposed to in the vessel, but there's probably, maybe both happening or whatever, I guess.

MIKE CASE: Oh, yeah. You know, I heard a little bit of that. You know, I never saw anything in writing, so that's why, you know, I just never really followed up on that one. I never really followed up on that one. But I heard that one sort of floating around.

GERRY FRAPPIER: Right, yeah. So they, they seem to be pretty explicit about it, so --

MIKE CASE: Right.

GERRY FRAPPIER: -- so that's a (inaudible) and I, I take it, just trying to keep the vessel, external part of the vessel, as cool as possible.

MIKE CASE: Right. And once again, you know, I haven't really done a lot of research on that one to see whether that's consistent with, with some of the procedures that we have around here, but I just haven't followed up on that one.

GERRY FRAPPIER: Okay. Okay. That's

what I was wondering, whether that was a standard procedure or not.

Changing subjects a little bit, with respect to, they still haven't gotten any backup power, I guess, at Units 1, 2, or 3. I'm wondering if you're hearing anything as to why there's such a difficulty in getting the backup power there. All the -- obviously, the earthquake and all that sort of stuff, but, so this would be a pretty high priority. So I'm just wondering if there's anything else that you guys have on that.

MIKE CASE: No, nothing much on that.

You know, there was an earlier report that -- I forget how they phrase it -- but it sounds like portable generators --

GERRY FRAPPIER: Right.

MIKE CASE: -- coming to the site. And then there was a long period of time where you sort of heard nothing. And then, you know, I can't remember where I, where I saw it, but I saw something that alluded to the fact that they were having problems connecting them up. And I, I think that was relatively recent but I can't remember where I saw that.

But once again, pretty much anything I'll

do is I'll react to something that's written. So it's, it was either in a TEPCO press release or, or, an IAEA one.

GERRY FRAPPIER: Yeah, I think THE IAEA one, they said they were trying to establish continuing to try to establish connection or something like that.

MIKE CASE: Right. so that was, that was the last factoid I saw on that one.

GERRY FRAPPIER: Okay, you didn't have anything as to, you know, why they're having so much problems?

MIKE CASE: Now, other, you know, other than, you know, we get this -- you know, it's probably speculation -- but, you know, about rooms being flooded because of the tsunami. So we, you know, we don't really know the damage that was caused by the tsunami.

You know, so we were never very clear on, you know, oh, why the diesel generators working? And so we get a lot of hearsay information on, that there seemed to be a lot of tsunami activity on the site. But, you know, God knows what happened.

GERRY FRAPPIER: Yeah, right. That's -- you know, like I say, we're sort of speculating that

the main reason the, the backup generators and that were, were not available and obviously the tsunami was bigger than what they had expected in terms of a design perspective.

MIKE CASE: Yeah.

GERRY FRAPPIER: Any, any info that you got on, with respect to hydrogen, we would -- sort of a good sense of hydrogen generation, and then some of this was again for Unit 1.

They would have tried to vent some of that, to relieve some pressure or whatever, and I guess that it didn't go to atmosphere; it went to the secondary containment. And then parts flew somehow or other. And that's how we get that's where we get the hydrogen explosion or the hydrogen burn or something, as some people may be calling it.

But I didn't know if you had any information as to, as to why the hydrogen, or, the venting itself didn't seem to go as planned.

MIKE CASE: No. Nothing factual. You know, there, you know, absolutely no additional information on the explosion issue. And so the only thing we have are, are, like you, it's just regulation.

So all the hydrogen stuff is, to me at

least, it's all speculation because I've never really seen anything on it. And the only thing I can say is, well, make some sense.

MALE PARTICIPANT: Okay.

GERRY FRAPPIER: Yeah, okay, so everybody's just saying, based on how we could see things happening, it's --

MIKE CASE: Yeah, right. Yeah. You know, I guess we had, we have, we were on when the explosion happened, so, you know, we just watched that crazy loop about about a billion times.

GERRY FRAPPIER: Right.

MIKE CASE: And, you know, we just, we were just guessing based on what we saw from the, the clip itself; no, no factual information that I saw.

GERRY FRAPPIER: Okay.

MIKE CASE: Oh, except that, you know, do you see how they call it in the, in, I guess, in the TEPCO reports? They call it a vertical earthquake or something.

GERRY FRAPPIER: Oh, no, I hadn't noticed that actually.

MIKE CASE: Oh, yeah. I think it's in the TEPCO reports. And so, you know, we had no clue what that means, other than it must be something in

the translation.

MALE PARTICIPANT: (Inaudible).

GERRY FRAPPIER: I'm sorry?

MALE PARTICIPANT: (Inaudible) this way.

GERRY FRAPPIER: No, I understand the, like the vertical earthquake. I'm just saying, with respect to hydrogen.

MALE PARTICIPANT: Oh.

GERRY FRAPPIER: The only, the only thing we had, we had heard, and again, very unofficial, just repeated through some people, was that some of the aftershocks and some of the -- which are, which are pretty big earthquakes in their own right --

MIKE CASE: Correct.

GERRY FRAPPIER: -- had, had, had led to some, some internal piping failing that had to do with venting. So.

MIKE CASE: Oh, is that right? No, we hadn't heard that.

MALE PARTICIPANT: Okay.

GERRY FRAPPIER: But, again, one of those ones where, okay, I can see a scenario that that would make sense in.

MIKE CASE: Oh, me too. Like you say, the aftershocks are reasonable earthquakes in

themselves.

MALE PARTICIPANT: Exactly.

GERRY FRAPPIER: The other, the other question I have now, then I'll look to other people here if they have additional ones, is, what's your assessment as to whether they are sort of at a -- I mean, obviously they're not at a, at a, at a final sort of condition or whatever, but with respect to how stable this situation is with Unit 1?

I mean, we've heard talk of the water and drawing down. Now it's sort of below the measured level, which means there's an awful lot of fuel that's exposed, I guess, and maybe all of it. I don't know. And, but at the same time, they're venting; they're adding cooling water.

Any thoughts or speculation as to how stable they have it with respect to future occurrences?

MIKE CASE: No, well, you sort of have all the facts.

You know, I, I didn't see that level. And, you know, our team didn't really talk about -- I guess the level one came out of IAEA.

GERRY FRAPPIER: Right.

MIKE CASE: And that was, I couldn't tell

whether it was before they started the service water injection or not.

GERRY FRAPPIER: Right.

MIKE CASE: You know, I couldn't tell whether they were just giving me a data point in the sequence of events that occurred earlier or they were giving me a data point that, that relates to after they started the service water injection.

GERRY FRAPPIER: Yeah, well, this is why we're a bit confused as to whether they're injecting water into the vessel itself because, if they are, if they have the mechanism to do that, you would think the water level would be going way back up.

MIKE CASE: Right. That's --

GERRY FRAPPIER: I'm not sure, like in your, in your procedures for this type of event, you would be looking to -- you know, I'd pressurize that vessel with seawater as much as possible until they get the point of covering the fuel is much as possible.

MIKE CASE: Yeah. I think we're obviously missing something.

GERRY FRAPPIER: Yeah.

MIKE CASE: Because, you know, there's no talk about a leak from, you know, on Unit 1. But

somehow, you know, in order to get some of the numbers that we've seen, there, there has to be something going on leak wise.

And so, you know, I guess our official position is we're confused two.

GERRY FRAPPIER: Okay. And, and then just in the last piece there, because we were going to see whether you guys have any monitoring results with respect to, to radiation levels and exactly what you were just sort of saying, and what we're trying to sort of piece together as well, how much we think there's maybe not a major leak, or is there a little leak or is this at the, you know, the sort of levels we would expect based on sort of just the, the bit of pressure relieving that's going on.

MIKE CASE: Yeah, and we actually have all other team that does the dose stuff, so I, you know, I really don't have anything -- you know, I really haven't been following the dose stuff other than what I read in, you know, it's going up, it's going down, it it went back up. And I think that was in the IAEA stuff or the TEPCO stuff.

GERRY FRAPPIER: Yeah. Yeah, yeah. We've seen that stuff too there, so.

Well, Jason or anybody, any questions?

MALE PARTICIPANT: Thank you very much.

MIKE CASE: Okay, guys. I'll turn your name over to our, our next shift.

GERRY FRAPPIER: yeah.

MIKE CASE: And maybe they'll like to get in contact and just compare notes again.

GERRY FRAPPIER: Yeah. I think that would be useful to do. I think we both have sort of secondary sources and, like I say, sometimes are very helpful in at least building a scenario in our mind that could be the truth. And, and then it gets confirmed a release or at least we know what to look for when we see official results.

MIKE CASE: Right. And it helps when, you know, if we have holes and you have the same holes, then that's reassuring to know.

GERRY FRAPPIER: Yeah. And, Mike, how do you, how do you spell your last name?

MIKE CASE: Case, C-A-S-E.

GERRY FRAPPIER: CAS --

MIKE CASE: E.

GERRY FRAPPIER: T and Tom?

MIKE CASE: No, no; C. C as in cat.

GERRY FRAPPIER: Got you.

MIKE CASE: Okay, guys.

GERRY FRAPPIER: And do you have a number as to how to get hold of us here?

MIKE CASE: Oh, yeah. Why don't you give me that number? That's a great idea. Holy smokes.

Fire away.

GERRY FRAPPIER: Okay, Mike, you can reach us at (b)(6)

MIKE CASE: Okay.

GERRY FRAPPIER: And your, your, your bridge staff will have our duty officer's contact information if this doesn't work, so you can, you can contact our duty officer, who would get you patched through to us.

MIKE CASE: Okay, who does -- and then we should do that for your name?

MALE PARTICIPANT: Or just get -- that's right.

GERRY FRAPPIER: If you phone that first number, it's going to, it's going to come right into, into our little emergency center here.

MIKE CASE: Right.

GERRY FRAPPIER: And so, and, and Luke will answer the phone. So that would be good.

MIKE CASE: Okay. Very good.

GERRY FRAPPIER: Well, this, this has

been helpful for us. Like you say, sometimes it's good just to know we're not missing anything --

MIKE CASE: Yep.

GERRY FRAPPIER: -- as far as halls in the story or information that, that has come out that we didn't realize how important it was.

MIKE CASE: Okay. Very good. Nice talking to you guys.

GERRY FRAPPIER: Okay. Have a good sleep.

MIKE CASE: Keep up the good work.

GERRY FRAPPIER: Thanks, Mike.

MIKE CASE: All right. Bye-bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

JOHN BASS: John Bass; GEH.

MIKE CASE: Hi, John. This is Mike Case the Reactor Safety Team director of the NRC.

JOHN BASS: Correct.

MIKE CASE: Okay, good, so you remember me from last night?

JOHN BASS: Yeah. Yes, oh, yeah.

MIKE CASE: Okay, now who do I have again?

JOHN BASS: This is John Bass. Let me get one of our managers.

MIKE CASE: Okay, sure.

How are you doing down there?

JOHN BASS: We're doing, doing pretty well. I'm amazed what's going on over in Japan though.

MIKE CASE: Okay, good.

JOHN BASS: Well, here, let me go get the manager. Just a second.

MIKE CASE: Okay.

(Standby.)

JOHN BASS: This is John Bass again. He's on another line. What can I do for you?

MIKE CASE: Oh, I just wanted to touch

base with you guys and just go over the status of things, see what you're thinking, that kind of stuff.

If you want, I can just give a call back in a while.

JOHN BASS: I, I would appreciate it if you do.

MIKE CASE: Okay.

JOHN BASS: Really, our management should be talking to you and not just our engineers. Okay?

MIKE CASE: You would do fine, but okay, no problem.

JOHN BASS: I can give you anything that we -- well, we haven't heard much recently at all on the units other than the, you know, what's being broadcast about the 1F3.

MIKE CASE: Um-hmm.

JOHN BASS: It just seems to be a problem right now.

MIKE CASE: Okay, well, I'll tell you what? I'll call back in maybe 10 minutes or so. Does that --

JOHN BASS: Okay.

MIKE CASE: -- sound reasonable?

JOHN BASS: That sounds reasonable.

MIKE CASE: Okey-doke.

JOHN BASS: Okay. Bye.

MIKE CASE: Bye-bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

GLEN WATFORD: GE Hitachi, Glen Watford speaking.

MIKE CASE: Hi, this is Mike Case from the Nuclear Regulatory Commission.

GLEN WATFORD: Yes, Mike. How are you?

MIKE CASE: Good. How are you doing? Who is this again?

GLEN WATFORD: This is Glen Watford.

MIKE CASE: Hi, Glen. This is a recorded line, just so you know.

GLEN WATFORD: Yes, sir.

MIKE CASE: So how are you doing down there?

GLEN WATFORD: Interesting times.

MIKE CASE: Oh, yeah. Well, that's for sure.

Okay, where shall we start? We don't have any startling information up here. You know, once again, we're mostly doing news reports and press reports.

But do you want to run through the units and see what you all are thinking?

GLEN WATFORD: Yeah. And, and just to be clear, we're in the same situation.

MIKE CASE: Oh, sure.

GLEN WATFORD: We were kidding that we were waiting for our hourly update from NBC.

MIKE CASE: Oh, is that right?

GLEN WATFORD: Yeah.

(Laughter.)

MIKE CASE: So have you guys been using you? I know Bill Ruland, he sort of started the interactions yesterday and so I just -- did the dayshift guys contact you at all, do you know?

GLEN WATFORD: I'm not -- yes. I think we had a discussion with the dayshift. Our dayshift isn't here now, but --

MALE PARTICIPANT: It was late day. There was a call.

GLEN WATFORD: Yeah.

MIKE CASE: Okay, good.

GLEN WATFORD: I don't recall if they said it was Bill or we had talked to Bill maybe even -- I can't keep the times the straight right now.

MIKE CASE: Oh, yeah. Okay, so what's, what do you guys think is going on at Unit 3?

GLEN WATFORD: Unit 3, the last information we had was that I believe around 6:00 p.m. Eastern Standard Time, they reported loss of

HPSI and an inability to restart RCSI. So, at that point in time -- that's now been, I believe, about 12 hours, factoring Daylight Savings Time change --

MIKE CASE: Okay.

GLEN WATFORD: -- we have no information that they've been able to restore any, you know, makeup water.

MIKE CASE: Right.

GLEN WATFORD: Yeah, no, we don't, we have no official word on that either. You know, we had, we had one "he said/she said" type report where, you know, this guy told that guy that told us that told them that they were injecting seawater. But we haven't really considered that a fact yet.

But have you, have you heard anything on that yet?

GLEN WATFORD: No, the only seawater injection we're aware of this in Unit 1.

MIKE CASE: Correct. That's the only one that we're carrying as for sure, or as sure as we can do in the situation that we're in.

GLEN WATFORD: Right. So, really, the last bit and what we've been waiting on is what, what's happening at Unit 3, whether or not they've been able to either restore RCSI or been able to

inject.

(b)(4)

MIKE CASE: Yep.

GLEN WATFORD: (b)(4)

(b)(4)

MIKE CASE: Yeah.

GLEN WATFORD: (b)(4)

(b)(4)

MIKE CASE: We, we were interpreting, you know, the HPSI and RCSI stoppage as, you know, something related to low steam pressure. Is that sort of what you all are thinking?

GLEN WATFORD: (b)(4)

(b)(4)

MIKE CASE: Right. How about level? Have you heard anything about level at the unit?

GLEN WATFORD: The, the only thing we've heard was what was in the TEPCO press release that just said level was decreasing.

MIKE CASE: Okay.

GLEN WATFORD: Nothing, nothing numerical. I think there was a discussion or a question. Somebody somewhere had talked about minus three meters, and we haven't seen anything discussing that.

MIKE CASE: You -- well, guess what? That's exactly where we are too. You know, we -- I don't know where that three-meter one came from. That must, you know, I guess we got that from the shift before.

GLEN WATFORD: Yeah.

MIKE CASE: So we didn't really know what source it came from. But you said it was from the press conference?

MALE PARTICIPANT: No, no, no, no. I think that was the call that, when the NRC contacted us, I believe you let it, or least it was indicated, came from a Swedish source.

MIKE CASE: Oh, okay.

MALE PARTICIPANT: It was media, you know, type source. But we, we hadn't heard anything of that even came close to that, nothing to confirm.

MIKE CASE: Okay, good. Yeah. No, well,

well, we haven't either. So that's the same story that we, we heard.

Okay. Yeah, that's about it on -- okay, what's going on with containment at Unit 3? Do we -- I guess we haven't heard any pressure number; right?

GLEN WATFORD: We have not seen any pressure numbers, but I believe it was -- trying to do the math -- it would have been sometime this afternoon or yesterday afternoon. They did indicate that they had vented the containment at Unit 3. I'm trying to think -- we're trying to look here real quick to see. They had indicated that they had vented.

let me go check my notes. Hold on a second.

(Standby.)

MIKE CASE: Oh, say that again; I'm sorry.

MALE PARTICIPANT: We're just, we're checking our notes right now, but we're also trying to pull up the latest press release from TEPCO.

MIKE CASE: Okay.

GLEN WATFORD: At 6:41 p.m. Eastern Standard Time -- this is according to the Pepco press

release -- they had operated vent valves to reduce pressure and completed that procedure at 6:41 Eastern Standard Time.

MIKE CASE: Okay.

GLEN WATFORD: This, this was the same report that talked about the fact that they had lost HPSI and were not able to restart RCSI.

MIKE CASE: Okay. Oh, okay. Source that one again. I don't know whether we have that one, or maybe we just haven't focused on that one.

GLEN WATFORD: TEPCO press release, right off the TEPCO website, and it says, "As of 8:00 a.m.," which would be Japan time, which would be 6:00 p.m. Eastern Standard Time.

MIKE CASE: Oh, I bet you I do have that one. Maybe I just didn't focus on that. Okay, fantastic.

How about Unit 2? How are you feeling about old Unit 2?

GLEN WATFORD: Haven't heard anything about Unit 2 in some time now. At one point, they had indicated -- this was 12, 18 hours ago -- that they had, it was the first unit they indicated they had portable power connected to it.

MIKE CASE: Oh, is that right? What, how

do you interpret that portable power? Like DC?

GLEN WATFORD: DC and/or portable generators.

MIKE CASE: Oh, okay.

GLEN WATFORD: There was some indication that, you know, sometimes the terminology is difficult to interpret.

MIKE CASE: Yeah.

GLEN WATFORD: But they referred to bringing in a number of cars and, with electricity supply.

MIKE CASE: Right. Yeah, you know, the story on the cars is still kind of vague to us in that --

GLEN WATFORD: Yeah.

MIKE CASE: -- you know, we saw one report that they were, you know, or we assume that they were having trouble connecting it up.

And so, you know, our, our information that the electrical stuff is kind of vague.

GLEN WATFORD: Yeah.

MIKE CASE: Okay, good. But we don't, you know, we don't know what's injecting at Unit 2. Do you guys know what's injecting at Unit 2?

GLEN WATFORD: The last information with RCSI was still running.

MIKE CASE: Oh, is that right?

GLEN WATFORD: And they haven't changed that information.

MIKE CASE: Okay. I'll have to check that one out. RCSI running. That would be good. It's better than our status that doesn't have anything interesting.

Okay, how about -- what's the latest on level I -- or, not level 1 -- Unit 1?

GLEN WATFORD: We haven't seen anything more on Unit 1. They had, you know, they were injecting the seawater and they had, they had temporarily suspended injecting seawater because they were, they'd had another earthquake and were potentially looking at a tsunami coming that was --

MIKE CASE: Right, I guess I heard that.

GLEN WATFORD: That was sometime this morning.

MIKE CASE: Yeah.

GLEN WATFORD: And at a later time, they had reported that they were injecting seawater.

At noon today, they were talking about still injecting borated seawater.

MIKE CASE: Right. In your mind's eye, what do you, how do you see them injecting borated

seawater?

MALE PARTICIPANT: Fire.

MALE PARTICIPANT: they were mixing it in some kind of pit somewhere (inaudible.)

MIKE CASE: I didn't hear that.

MALE PARTICIPANT: They were mixing it and then, and injecting it in.

MIKE CASE: But I'm assuming it would be some sort of fire system maybe injecting through feed water or --

MALE PARTICIPANT: (Inaudible.)

MIKE CASE: But are, you know, is this two operations or as is one operation? I, I think it's one operation, at least our interpretation, potentially using the standby liquid control system.

MIKE CASE: Okay, yeah. You know, that's sort of our theory but it's not like we have a solid theory.

GLEN WATFORD: Right.

MIKE CASE: Okay. Let's see. What else? Okay, how about this? Well, what did you guys -- I guess we were -- we just did the initial explosion. And so what do you think happened at that explosion last night? Or, what's the official theory over there? Do you think it was some sort of hydrogen

explosion as well?

GLEN WATFORD: I mean, that, that would be the most plausible explanation, the buildup of hydrogen either through the venting operations or through various leaks --

MIKE CASE: But --

GLEN WATFORD: -- or reports of weeks. You know, they did report the containment pressure going over 100 pounds.

MIKE CASE: Right. Is, is the containment inerted? Not, not the reactor building, but yes, the containment is inerted for that design.

MALE PARTICIPANT: Yeah.

MIKE CASE: And so it's, you know, I guess the, the additional theory that, that went on in the other two shifts said, you know, somehow, during the venting operation, that, you know, this hydrogen explosion occurred. Is that, is that what you're thinking?

GLEN WATFORD: That, that is a potential, yeah.

MIKE CASE: Okay. What other questions are there? Okay, how about this? You know, with the service water and the injecting service water and the borated water, do you, do you guys think that might

be any clogging issues?

GLEN WATFORD: (b)(4)

(b)(4)

MIKE CASE: But you, you don't see any problem with the injection of service water, with clogging? You know, I, I don't know how they're actually doing it, whether they're using a portable pump or what.

MALE PARTICIPANT: (Inaudible) fire hose.

GLEN WATFORD: (b)(4)

(b)(4)

MIKE CASE: Um-hmm. Okay. Anything else we should be talking about?

I've got a couple of things they gave me that I haven't looked at.

(Laughter.)

GLEN WATFORD: I, I mean, you've covered the main things that we're looking at and been

talking about and trying to get information on.

MIKE CASE: And, and as far as the other site, the Daiichi site --

GLEN WATFORD: Daiini site.

MIKE CASE: Daiini?

GLEN WATFORD: Daiini is two. It is the second site. Daiichi is the first site.

MIKE CASE: Oh, okay. they switched back on me. Okay.

But as far as that other site, nothing spectacular is going on there; right?

GLEN WATFORD: Not that we can see.

One of, one of the units, they've claimed is in cold shutdown, which -- the 2F3 site -- which makes sense because they came of an outage not too long ago, so they probably did not have a lot of the decay heat.

MIKE CASE: Oh, yeah. Well, we had all four units in cold shutdown.

GLEN WATFORD: Well, we haven't seen cold shutdown, but --

MIKE CASE: Okay.

GLEN WATFORD: -- so maybe that's -- the last one I saw just had three in cold shutdown, but they do have off-site power --

MIKE CASE: Correct.

GLEN WATFORD: -- at (inaudible) --

MIKE CASE: Which, at this point, is a great luxury.

GLEN WATFORD: Yes, it is.

(Laughter.)

MIKE CASE: I really appreciate my off-site power.

GLEN WATFORD: Yes.

MIKE CASE: Okay, good. Well, I'll, we'll, we'll generate and sift around for info, and I'll probably give you a call back at least before we, we change over tonight.

GLEN WATFORD: Okay.

MIKE CASE: If that's okay with you.

GLEN WATFORD: That's fine, and we'll be, we'll be staffed around the clock here for some time.

MIKE CASE: Okay. Fantastic.

GLEN WATFORD: All right.

MIKE CASE: Thanks for your help.

GLEN WATFORD: Thank you, Mike.

MIKE CASE: Thank you. Bye-bye.

(END OF SERIES.)

Official Transcript of Proceedings

NUCLEAR REGULATORY COMMISSION

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RST Podium - Day 4

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JAPAN'S FUKUSHIMA DAIICHI RST PODIUM AUDIO FILE

+ + + + +

DAY 4

+ + + + +

(CONFERENCE CALL INITIATED.)

LAURA DUDES: This is a recorded line; Laura Dudes, RST.

CHARLIE: Laura, this is Charlie again.

LAURA DUDES: Oh, hi.

CHARLIE: Somebody else had tried to call me. (Inaudible) get another message, and I didn't know if Steve Bloom --

LAURA DUDES: Yeah, it's the same message. We're --

CHARLIE: Okay.

LAURA DUDES: Yeah, we're just doing double duty.

CHARLIE: Okay. So I'm just going back on this number to see who --

LAURA DUDES: Yeah, that's us.

CHARLIE: So it's covered.

LAURA DUDES: Thank you, Charlie.

CHARLIE: Okay.

LAURA DUDES: All right. Bye-bye.

CHARLIE: Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

BILL RULAND: This is Bill Ruland, Reactor Safety Team Director.

JIM TRAPP: Bill Ruland, Reactor Safety Team Director, this is Jim Trapp --

BILL RULAND: Hey.

JIM TRAPP: -- engineer at large in Japan.

BILL RULAND: Hey.

JIM TRAPP: How are you doing?

BILL RULAND: Engineer at large -- Jim, hi.

(Laughter.)

BILL RULAND: Hey, just pretend this is Indian Point.

JIM TRAPP: Oh, God. You know what, Bill? You'd like it to be Indian Point; right? Oh, my God, this is -- yeah. Yeah. And I got a report for you.

BILL RULAND: Okay.

JIM TRAPP: This, this is kind of important.

BILL RULAND: Okay, hold on a second. Let me get my piece of paper. Hold on.

JIM TRAPP: Yep.

BILL RULAND: Hey, would it, would help for other people to hear this? Oh, absolutely.

BILL RULAND: Okay, hold on.

JIM TRAPP: Yep.

(Standby.)

MALE PARTICIPANT: Who are we talking to?

BILL RULAND: Jim Trapp here. Where's the -- is this is the speaker?

MALE PARTICIPANT: Yes, sir.

BILL RULAND: Jim?

JIM TRAPP: Yes. Can you hear me?

BILL RULAND: Yeah. Go ahead.

JIM TRAPP: Okay. You guys have probably already got this report, but it's certainly reported over here that they had an explosion, another hydrogen explosion, in the, in the Number 2 reactor.

BILL RULAND: Okay.

JIM TRAPP: And the, this is the bad news. It happened at 6:10 this morning and it's feared that it has damaged the reactor pressure suppression system, so it looks like it might have been adversely impacted primary containment.

They're reporting, after the blast, the

readings of radiation -- and I'm not sure of the point of, where this was taken -- but they said it was 966.5 microsieverts.

BILL RULAND: Wait. Wait. 900 and

JIM TRAPP: Nine sixty-six.

BILL RULAND: Nine sixty-six millisieverts? Micro --

JIM TRAPP: Micros, yeah. So 96 millirem, and it has gone down to 80 millirem.

MALE PARTICIPANT: We got this information?

BILL RULAND: Yeah, we got this information.

JIM TRAPP: Okay, very well.

And, and certainly the, you know, the issue that you guys could probably help me with is, certainly, the ambassador is going to ask, well, what's the impact of the damage to the suppression chamber?

CHUCK NORTON: Well, Jim, this is Chuck Norton. Was the explosion internal, or was it an external explosion that damaged it? Do they know that?

JIM TRAPP: Well, you know, I believe it's the same explosion that we experienced the last

two days, which would be, you know, hydrogen up in the roof of director building. And, you know, and you've seen the video, but these explosions are, are very energetic.

CHUCK NORTON: Yeah. So we think it was external pressure that damaged the suppression chamber then?

JIM TRAPP: Or, you know, the blast wave of some sort.

CHUCK NORTON: Okay. Okay.

BILL RULAND: Where, where are you now, Jim?

JIM TRAPP: I'm, I'm, I'm actually in Alyssa's (ph) office right next to Ron Cherry, so in the DOE section of the Embassy.

CHUCK NORTON: Okay. Let me tell -- we, we have just a few other questions.

JIM TRAPP: Oh, sure.

CHUCK NORTON: We're still trying to get that -- I know you're having this problem with people, you know, the general saying, where do you want it? We'll have it there in 15 minutes. Right?

JIM TRAPP: Yeah, and that's okay. You know, we've got a DART team here, so it's really their responsibility and we're just participating in

that. But they, you know, they've been relying on us heavily for support and it, it seems to be working.

CHUCK NORTON: Okay. Well, we're, we're

(b)(5)

JIM TRAPP: Oh, God, no. We're, yeah, we're scrambling.

CHUCK NORTON: Yeah, we're going to get back to them and say, hey, guys, we just need it. Even if you give it to us and drips and drabs, we, we'll take it; right?

JIM TRAPP: Oh, yeah. And now the other thing is we were still having some issues the ambassador's going to have to work out with, you know, Tokyo Electric accepting our, our offer. So we've delivered two fire trucks, but they haven't requested any other support.

CHUCK NORTON: Jim, could you clear up another question we have? Are they injecting seawater into any of these three units?

JIM TRAPP: You know, the, the only

thing I got, and we haven't got confirmation yet, is I got an IAEA report, and I think they're pretty good connections into TEPCO. And the report was yesterday at -- and this is the report time; not the time of getting seawater -- but the report at 1535 from IAEA said that they had recovered seawater flow to, to all three units.

CHUCK NORTON: So you believe it's going on at this time?

JIM TRAPP: Well, up to the point where we had the last blast. So, you know, I would expect Unit 1 and Unit 3 to still have seawater flow. I don't, don't know, I would say, after that last blast -- even though, you know, we haven't, they, the blast at one and the blast at three, they never indicated that they lost seawater flow.

CHUCK NORTON: Okay, so --

BILL RULAND: Okay. And they didn't, they didn't indicate that they lost it with 2, but we don't know. We haven't --

JIM TRAPP: Right. And then this is the first one that we had reactor pressure suppression system damage. So, you know, did you blow off the, the connection that they're using. Or, you know, just, it's an unknown.

CHUCK NORTON: They're injecting through RHR, aren't they?

JIM TRAPP: That would be my, that's what I'd surmise.

BILL RULAND: Yeah, it's, but that's all it is, really?

JIM TRAPP: Yeah. Oh, absolutely. But, you know, usually, the fire -- I suspect they're using the fire water spool piece into RHR and into the core, but I'm just surmising.

BILL RULAND: And, and, but again, while we believe it's into the core, we, we've never confirmed it with anybody that it's into the core or into containment, or --

JIM TRAPP: No. In fact, today, one of our efforts is going to be working to try to get -- we've been dealing with ministers of different departments. We need to get down into the EOC, and we made a first attempt to that yesterday and we're going to continue with that. But unfortunately, they injected us into the prime ministers EOC, which is, again, all the ministers.

So we're going to try to get to JNES or someplace that we belong, that we can get some hard information.

BILL RULAND: Yeah, we're, we're getting the bureaucratic runaround.

JIM TRAPP: Exactly. You know, and I don't think it's them. You know, it's just that they don't know, either, and they don't understand the system. So we just got to talk turkey with the right group.

BILL RULAND: Yeah. Yeah.

JIM TRAPP: And we'll get there.

BILL RULAND: Okay.

Is, is there any other questions for Jim about --

CHUCK NORTON: You gave us a lot of really good information in a short time there, Jim. Thank you very much.

MALE PARTICIPANT: We talked about this --

JIM TRAPP: Hey, Bill, this is probably something you don't know, but are they sending -- how many folks are they sending here?

CHUCK NORTON: Another six people.

BILL RULAND: Seven.

CHUCK NORTON: Seven, okay.

JIM TRAPP: Seven more people?

MALE PARTICIPANT: Six.

JIM TRAPP: Six? Because, I, I'd asked for six total including me and Tony, but that's okay if we get more.

BILL RULAND: No, no. It's going to be seven additional.

JIM TRAPP: Okay.

BILL RULAND: See, apparently, the number we asked for was six. But --

JIM TRAPP: Yeah. Well, the third --

BILL RULAND: -- we added, we added Chuck Casto to be the kind of manager/spokesman kind of thing.

JIM TRAPP: Well, that's good because we do have press conferences every day.

MALE PARTICIPANT: Nine additional.

ELIOT BRENNER: Nine additional?

MALE PARTICIPANT: Yeah.

ELIOT BRENNER: See -- this is Eliott here.

JIM TRAPP: That, that's okay. As long as -- I thought it was less. So, six or seven, something like that, that's fine.

ELIOT BRENNER: I thought it was nine total; two plus seven.

MALE PARTICIPANT: Okay, I understood

there were three people from OIP. Now, I may have this mixed up, but I was told nine in total -- Casto, some OIP people, and some technical folks.

ELIOT BRENNER: Yes.

See, I thought it was six technical folks.

JIM TRAPP: Six technical, maybe one communicator, two of us, would be eight.

BILL RULAND: Okay. Hey, and we've got, we've got your number to reach you if needed.

JIM TRAPP: Yeah. And, and the important thing is just to, to kind of the what-if now for answering questions on what does the breach of the suppression chamber mean if they can't recover that.

BILL RULAND: We don't know where it's, how bad it is or where it was breached?

JIM TRAPP: No.

BILL RULAND: Okay. Hey, thanks, Jim.

JIM TRAPP: Okay. Appreciate it.

ELIOT BRENNER: Hey, hey, just remember, this is better than briefing Hub Miller.

(Laughter.)

JIM TRAPP: By 10,000.

BILL RULAND: Bye.

JIM TRAPP: All right. See you.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

DAVE SKEEN: This is a recorded line. This is Dave Skeen with the Reactor Safety Team.

HQ OPERATIONS OFFICER: Hey, Dave, perfect -- this is the Headquarters ops officer. I've got somebody here that wants to talk to you. It sounds like they have an accent, so it sounds Japanese to me. I, I don't know. I'm going to put him through. Okay?

DAVE SKEEN: All right. Thanks.

HQ OPERATIONS OFFICER: Okay, sir, are you there?

AMIR SHAKRAMI: Yes I am.

HQ OPERATIONS OFFICER: Okay. You're talking to Dave Skeen.

AMIR SHAKRAMI: Hey, David?

DAVE SKEEN: Yes?

AMIR SHAKRAMI: This is Amir Shakrami from Exelon.

DAVE SKEEN: Yes, Amir, how are you doing?

AMIR SHAKRAMI: Good, sir. Good. Hey, I got a call from Darren about some request. Did you get a response to those question [sic] yet, or?

DAVE SKEEN: No, not yet.

Let me tell you what we've done. We've talked with Pam Callen this morning.

AMIR SHAKRAMI: Right.

DAVE SKEEN: And Darren Beniak (ph).

AMIR SHAKRAMI: Right. Right.

DAVE SKEEN: And Pam was going to touch base with him to make sure they weren't working at cross-purposes.

AMIR SHAKRAMI: Yeah, yeah. Well, Darren

(b)(4)

DAVE SKEEN: Um-hmm.

AMIR SHAKRAMI: (b)(4)

(b)(4)

DAVE SKEEN: Yeah.

AMIR SHAKRAMI: (b)(4)

(b)(4)

DAVE SKEEN: Um-hmm.

AMIR SHAKRAMI: (b)(4)

(b)(4)

injection, they lost the steam or something?

DAVE SKEEN: Actually, all three units, 1, 2, and 3 over there --

AMIR SHAKRAMI: Right.

DAVE SKEEN: -- have lost, they haven't had it going for about 18 hours now.

AMIR SHAKRAMI: Oh, 18 hours?

DAVE SKEEN: Yeah.

AMIR SHAKRAMI: They were injecting fire from the fire pump; right?

DAVE SKEEN: They were injecting the salt water, but they lost that capability.

So what they're -- the request that came finally from the Japanese was, do we have any thoughts on either high-pressure or low-pressure injection? What would it take and what kind of power sources would it take?

AMIR SHAKRAMI: Um-hmm.

DAVE SKEEN: And how could they do that. So . . .

AMIR SHAKRAMI: (b)(4)

(b)(4)

DAVE SKEEN: Yeah.

AMIR SHAKRAMI: --(b)(4)

(b)(4)

DAVE SKEEN: Right.

AMIR SHAKRAMI: (b)(4)

(b)(4)

DAVE SKEEN: Right. Well, (b)(4)

(b)(4)

AMIR SHAKRAMI: (b)(4)

(b)(4)

DAVE SKEEN: Okay.

AMIR SHAKRAMI: -(b)(6)

DAVE SKEEN: (b)(4)

(b)(4)

AMIR SHAKRAMI: (b)(4)

(b)(4)

DAVE SKEEN: Okay.

AMIR SHAKRAMI: The motor that drives

(b)(4)

(b)(4)

DAVE SKEEN: And that's one plant; right?

AMIR SHAKRAMI: That's right. That's, I'm just, I just -- from memory, (b)(4)

(b)(4)

DAVE SKEEN: Okay. Okay.

AMIR SHAKRAMI: (b)(4)

(b)(4)

DAVE SKEEN: You know, I'm not sure what Japan has. That's a good question.

AMIR SHAKRAMI: (b)(4)

(b)(4)

another.

DAVE SKEEN: Okay.

AMIR SHAKRAMI: You know, (b)(4)

(b)(4)

DAVE SKEEN: Right. Okay. That's a good question. That's something we would have to know.

AMIR SHAKRAMI: Yeah.

DAVE SKEEN: Because, especially if they're using generators off of the carriers --

AMIR SHAKRAMI: That's right.

DAVE SKEEN: -- or something, they're going to be 60-hertz generators.

AMIR SHAKRAMI: That's right.

DAVE SKEEN: Yeah.

AMIR SHAKRAMI: Okay?

DAVE SKEEN: Okay.

AMIR SHAKRAMI: Well, if anything comes up, you can call me direct. Let me give you my cell number.

DAVE SKEEN: Okay.

AMIR SHAKRAMI: It's (b)(6)

DAVE SKEEN: Okay. That's (b)(6)

AMIR SHAKRAMI: That's correct.

DAVE SKEEN: Okay.

AMIR SHAKRAMI: And, as I said, I think they really need to sit down, look at the iso, look at the feed water header, and find ways that they can hook up from any water source and put it through that.

DAVE SKEEN: Okay. That's good feedback, Amir. I appreciate that.

AMIR SHAKRAMI: All right, sir.

DAVE SKEEN: Okay. Now I, I guess Pam and Darren are going to be working this and get back with us anyway; right?

AMIR SHAKRAMI: Well, they asked me really.

DAVE SKEEN: Oh, okay.

AMIR SHAKRAMI: Yeah, they asked me. They, and that's what I'm calling you on.

(b)(4)

(b)(4)

DAVE SKEEN: Okay. What we may try to do, Amir, is get a hold of GE and maybe call you back on your cell phone and just kind have the discussion between us and you and GE.

AMIR SHAKRAMI: That's a good --

DAVE SKEEN: How would that be?

AMIR SHAKRAMI: That's a good, that's a good thing.

DAVE SKEEN: Okay. That sounds good. Well, let me see if I can get a hold of them and then we may be calling you back there. All right?

AMIR SHAKRAMI: Okay, sir. Okay, sir.

DAVE SKEEN: All right. Appreciate it, Amir.

AMIR SHAKRAMI: Um-hmm. Bye.

DAVE SKEEN: Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

DAVE SKEEN: This is a recorded line. This is the Reactor Safety Team; Dave Skeen speaking.

ERIC THOMAS: Hey, Dave, it's Eric Thomas over in NRR.

DAVE SKEEN: Hey, Eric, how are you doing?

ERIC THOMAS: Good morning. Fine, thanks.

Hey, I'm doing the ET brief this morning and I wasn't sure what you guys have over there as far as, you know, any kind of fact sheet on what's going on in Japan. I mean I certainly don't want anything creative, but if there was something you guys could potentially email over.

DAVE SKEEN: Okay. I'll get Brett and see what we can send over for you.

ERIC THOMAS: Okay. Oh, Brett's there?

DAVE SKEEN: Yeah. Eric Thomas, is that what you said?

ERIC THOMAS: Yes.

DAVE SKEEN: We'll just email it to you. Okay?

ERIC THOMAS: Okay. Thanks.

DAVE SKEEN: All right.

ERIC THOMAS: Appreciate it.

DAVE SKEEN: Will do.

ERIC THOMAS: Bye.

DAVE SKEEN: All right, bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

DAVE SKEEN: Reactor Safety Team. This is Dave Skeen. This is a recorded line.

GLEN WATFORD: Yes, Dave, it's Glen Watford with GE Hitachi.

DAVE SKEEN: Hi, Glen. Good to hear from you.

GLEN WATFORD: How are you doing?

DAVE SKEEN: Good.

GLEN WATFORD: Yeah, we've got a room full of folks. You've got basically our back shift for our, our technical team that we've been mobilized here [sic], trying to monitor the situation and provide whatever we can.

DAVE SKEEN: Okay.

GLEN WATFORD: We've kind of gone through

(b)(4)

DAVE SKEEN: Okay.

GLEN WATFORD: (b)(4)

(b)(4)

GLEN WATFORD: (b)(4)

(b)(4)

DAVE SKEEN: Okay.

GLEN WATFORD: Portable generators.

DAVE SKEEN: Right.

GLEN WATFORD: You know, we, we've heard

(b)(4)

DAVE SKEEN: Right, or the Bambi baskets; you know, the stuff they dip into the water and pull up.

GLEN WATFORD: Yeah.

DAVE SKEEN: Yeah.

GLEN WATFORD: Yeah, if that, if that would be any possibility if the problem is moving from the ocean into this pit.

DAVE SKEEN: Right. Okay.

GLEN WATFORD: (b)(4)

(b)(4)

DAVE SKEEN: All right, (b)(4)

(b)(4) Okay.

GLEN WATFORD: (b)(4)

(b)(4)

DAVE SKEEN: Right.

GLEN WATFORD: But the containment was at 50, 60 pounds.

DAVE SKEEN: Okay.

MALE PARTICIPANT: The fire pressure pumps are (inaudible).

GLEN WATFORD: Unless interior had some high pressure capability.

DAVE SKEEN: Okay. (b)(5)

(b)(5)

that, that they lost that or something. I don't know, so --

GLEN WATFORD: Well, if they went to, to filling all three, three reactors with seawater, they may have just simply sucked it dry.

MALE PARTICIPANT: Well, they kept calling it a pit.

GLEN WATFORD: Yeah.

MALE PARTICIPANT: They were mixing boron with seawater in it.

DAVE SKEEN: Okay.

MALE PARTICIPANT: So if they lost the pits, the pits lost water.

MALE PARTICIPANT: So maybe they've lost capability to fill this pit up.

MALE PARTICIPANT: Right. Right.

MALE PARTICIPANT: Which is where maybe a fire boat or the firefighting equipment could help with that.

MALE PARTICIPANT: Yeah, or any something or hoses if there's a pilotable water tank that they can hook up to the fire pump.

GLEN WATFORD: So that was the other thing we were looking at, is the different sources of, of water, even the liquid rad waste tanks --

DAVE SKEEN: Right.

GLEN WATFORD: -- (b)(4)

(b)(4)

DAVE SKEEN: Right.

GLEN WATFORD: There's some, probably some available water in those; maybe not a lot, but something.

DAVE SKEEN: Okay.

GLEN WATFORD: We're assuming they've used the (inaudible) storage tanks probably early in the event.

DAVE SKEEN: Yeah. Okay. Well, it sounds like you guys have got some good ideas.

And I tell you what, Glen? Let me get off here for now and see if we can schedule some kind of brainstorming call where we get everybody on the phone. And I guess this is a good number to call you back on, this (b)(6)

GLEN WATFORD: The better number would be (b)(6) ecause that's a speakerphone in the middle of a room.

DAVE SKEEN: (b)(6) is in your conference room then. Okay.

GLEN WATFORD: And we've got a whole new

shift coming on, so maybe they'll have a whole new set of ideas.

DAVE SKEEN: Yeah. Well, I think that's all we need right now is ideas, and then we'll figure out what we think we can do that might be able to help these folks over there.

GLEN WATFORD: All right.

DAVE SKEEN: All right, I appreciate it. I appreciate getting back with us so quick.

GLEN WATFORD: All right. Thank you, David.

DAVE SKEEN: All right. We'll be talking to you soon.

GLEN WATFORD: All right.

DAVE SKEEN: Bye.

GLEN WATFORD: Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

PAUL NICHOLS: GE Hitachi. Paul Nichols speaking.

DAVE SKEEN: Oh, hi, this is Dave Skeen with the Nuclear Regulatory Commission. This is a recorded line.

Is Glen Watford there?

PAUL NICHOLS: He's turnover right now. Can -- I'm the guy taking over.

DAVE SKEEN: Okay.

PAUL NICHOLS: So we can help if you need.

DAVE SKEEN: Okay. You're in a conference room right now with -- you say you have a speakerphone?

PAUL NICHOLS: Yes. You're on speakerphone here.

DAVE SKEEN: Okay. Are you able to tie in another number into this line, or maybe I could give you a bridge number if we need to do a bridge from this end.

PAUL NICHOLS: Yeah, I can give an attempt.

DAVE SKEEN: Okay. If you can dial, if you can get this number to bridge in --

PAUL NICHOLS: Okay.

DAVE SKEEN: -- (b)(6)

PAUL NICHOLS: (b)(6) and that is Amir Shakarami with Exelon.

PAUL NICHOLS: Understand, Amir Shakarami.

Okay, hold on. Hopefully, I won't drop you off.

DAVE SKEEN: Okay.

PAUL NICHOLS: What, if I do drop you off, what's your, what's the phone number you want me to call you back on?

DAVE SKEEN: The number here is 301-816-5502.

PAUL NICHOLS: 301-816-5502.

DAVE SKEEN: Yes, sir.

PAUL NICHOLS: Okay. Hold on.

(Standby.)

PAUL NICHOLS: -- our phone number. Let me try one more time.

DAVE SKEEN: Okay.

(Standby.)

PAUL NICHOLS: Are you still on the phone?

DAVE SKEEN: I'm still here.

PAUL NICHOLS: All right.

(Standby.)

PAUL NICHOLS: Amir, are you on the phone also?

AMIR SHAKARAMI: Yes, I am.

PAUL NICHOLS: Is the NRC on the phone?

DAVE SKEEN: Yeah, the NRC is here. I'm going to go ahead and put you on speaker so some of our folks getting this to. Okay?

PAUL NICHOLS: Yep.

DAVE SKEEN: All right.

You guys still there?

MALE PARTICIPANT: Yes.

AMIR SHAKARAMI: Yes.

DAVE SKEEN: Okay. Amir, thanks for getting back with us and GE.

We thank you folks for getting with us as well.

I think I've talked with both of you a little bit about, what we're looking for is just brainstorming some thoughts on what are some ways we may be able to do some low-pressure injection to help out the, the three disabled units in Japan.

So, GE, why don't you run through, again, what we had talked about earlier so Amir can hear it

and then so some of my folks here can also hear the discussion that we had earlier.

PAUL NICHOLS: Okay. (b)(4)

(b)(4)

(b)(4)

(b)(4)

Those were the big items that we had thought of here on our kind of 15-minute brainstorming session.

DAVE SKEEN: Okay. And you had said you needed about (b)(4) is what you thought?

PAUL NICHOLS: (b)(4)

(b)(4)

DAVE SKEEN: So how much generator capacity would that take?

MALE PARTICIPANT: Roughly.

PAUL NICHOLS: We'd have to figure that out.

AMIR SHAKARAMI: Yeah, I was, I was

(b)(4)

DAVE SKEEN: Okay. Thanks, Amir.

Okay, Amir, do you want to go through, just quickly, what we had talked about earlier?

AMIR SHAKARAMI: Yeah. I, I think, you

know, on -- I was looking at a much higher level as far as power needs. I think that was what the questions, what size generator or motor we need.

(b)(4)

DAVE SKEEN: Yes.

AMIR SHAKARAMI: Okay, so I don't know what pressures they are at, but --

PAUL NICHOLS: (b)(4)

(b)(4)

AMIR SHAKARAMI: (b)(4)

(b)(4)

for.

DAVE SKEEN: Yeah, that's a good thought, Amir. (b)(4)

(b)(4)

AMIR SHAKARAMI: Yeah, or any way they can, you know, (b)(4)

(b)(4)

DAVE SKEEN: Okay.

AMIR SHAKARAMI: And, and, and what happened the fire pump? It's not functioning, or?

DAVE SKEEN: We just don't have the information. We're kind of flying in the blind here too. We don't know that information either.

MALE PARTICIPANT: The information we had Saturday and Sunday was that they were using a fire truck. And the information I got when I came in this morning, whatever that fire truck was sucking from, this pond, apparently --

MALE PARTICIPANT: Yeah.

MALE PARTICIPANT: -- it lost suction. And if they're still using a fire truck, there's a concern about what is, what is going to fuel that

fire truck to run the pumps that are on board. They run off of the main engine of the truck.

So the concerns would be getting water back in that pond for the fire truck and getting fuel, probably diesel fuel, for the fire truck.

MALE PARTICIPANT: Right.

MALE PARTICIPANT: Once, the hoses that come out of that truck can go into any fire fitting that they have at the plant and get the water in that way.

We don't know what they were using prior to this morning when they lost, or late last night, when they lost suction for the fire trucks, but that was their success path, success path up until I left at three o'clock yesterday afternoon.

PAUL NICHOLS: Okay. (b)(4)

(b)(4)

AMIR SHAKARAMI: Correct.

PAUL NICHOLS: (b)(4)

(b)(4)

(b)(4) I don't know how far away that is, but --

AMIR SHAKARAMI: It's not that far. I mean, they, that's what I thought they were doing. I was there last week, and it's not (b)(4)

MALE PARTICIPANT: (b)(4),(b)(5) (b)(4),(b)(5)

AMIR SHAKARAMI: We haven't, we haven't been asked for that yet, but that's something that could be doable.

MALE PARTICIPANT: Yeah, because they've (b)(4),(b)(5)

AMIR SHAKARAMI: You're saying, so you're saying (b)(4) (b)(4)

MALE PARTICIPANT: Yes. They can --

AMIR SHAKARAMI: Yeah, that's --

MALE PARTICIPANT: Eventually, that's going to have to be done.

PAUL NICHOLS: Right.

AMIR SHAKARAMI: Right.

AMIR SHAKARAMI: We were just concentrating on trying to give them, get water into the reactor at this point though.

MALE PARTICIPANT: Right, and once again,

(b)(4)

PAUL NICHOLS: Oh.

DAVE SKEEN: Okay, well, I think it's good. So we've got, possibly, two power sources. We can, we can do the diesel with the fire truck if that works.

MALE PARTICIPANT: Yeah.

DAVE SKEEN: Or we have to come with generators --

MALE PARTICIPANT: Right.

DAVE SKEEN: -- that might be able to carry the load that they'll need.

AMIR SHAKARAMI: Oh, yeah, and continue the DC control and continue pneumatic, you know, air

(b)(4)

MALE PARTICIPANT: Yes. (b)(4),(b)(5)

(b)(4),(b)(5)

PAUL NICHOLS: Right.

MALE PARTICIPANT: -- (b)(4),(b)(5)

(b)(4),(b)(5)

PAUL NICHOLS: Yeah.

DAVE SKEEN: Okay. Well, I, I think we've got, we've got enough to be dangerous here at this point. So, again, we appreciate the thoughts that you guys have.

FEMALE PARTICIPANT: Anything -- batteries or other -- like --

MALE PARTICIPANT: We, we had, we had understood Saturday that they had renewed DC power for Unit 1 but we don't know what that was.

DAVE SKEEN: Yeah. The information we have on batteries that's coming through from last night was at least they were able to take some of these battery carts, and they were trying to replenish batteries as they discharged. They have some way of, of recharging some of the cells so that they were bringing battery carts out and kind of

replenishing those station batteries as they went along. So I'm not sure what the final answer is on that.

But for GE and Exelon, I, I think we appreciate what you guys have for us now. We're going to take this into our executive team and talk with them about it.

They may want to get on a call with our military folks and figure out what they might be able to provide in the way of support, and we'll brainstorm some things here.

And Amir, I have your cell phone number that we can get back with you if need be.

And for GE, I have this conference room. Is someone going to be around that conference room for, oh, the next hour or so while we try to figure this out on this end?

PAUL NICHOLS: Yeah. We're here on a 24/7 basis until otherwise.

DAVE SKEEN: Okay, great.

AMIR SHAKARAMI: Who is in the conference room at GE.

PAUL NICHOLS: Who is on the conference room? Paul Nichols; I've got the dayshift for today. And then we have a group of eight or so, I think --

AMIR SHAKARAMI: What's the number?

PAUL NICHOLS: Pardon?

AMIR SHAKARAMI: What's the phone number?

PAUL NICHOLS: Oh, I'm sorry.

(b)(6) is the conference number.

AMIR SHAKARAMI: Okay.

PAUL NICHOLS: And then the dial-in number is the same first ones, but it's 1007.

AMIR SHAKARAMI: Thank you very much.

PAUL NICHOLS: Okay, and I have two, two other things.

(b)(4)

DAVE SKEEN: Okay. That's a good

thought. Yeah, that's another option.

MALE PARTICIPANT: Yeah.

MALE PARTICIPANT: That's another option. You had one more.

PAUL NICHOLS: Yeah, the one other thing I, I, I thought you could check is -- because we can't see it -- (b)(4)

(b)(4)

DAVE SKEEN: Yes, sir.

PAUL NICHOLS: (b)(4)

(b)(4)

MALE PARTICIPANT: Yes, we did look into that.

DAVE SKEEN: Yeah. Yeah, we were aware of that. That was another source that we were looking at this morning.

So, well, again, I appreciate the support that both GE and Exelon are providing for us.

I may be turning over here in the next hour or two with the dayshift RST director, who will be Laura Dudes. So, if you don't hear from me in about an hour, you may be hearing from Laura sometime later this morning.

PAUL NICHOLS: Okay. Well, thank you.

DAVE SKEEN: Okay. We appreciate your support.

PAUL NICHOLS: Okay.

AMIR SHAKARAMI: Are you still on, Nicholas?

PAUL NICHOLS: That's Paul Nichols, N-I-C-H-O-L-S.

AMIR SHAKARAMI: Okay; Paul. I don't know, NRC dropped off.

Hey, listen, do you have any update on the two spent fuel, the reactor enclosure blown off, what they're doing to cool the pool?

DAVE SKEEN: Is this is the NRC. We're going to drop off now, Amir, and you guys can --

AMIR SHAKARAMI: Okay. Yeah, yeah. Go ahead. Go ahead.

MALE PARTICIPANT: (Inaudible) been asking about them.

PAUL NICHOLS: Yeah, Amir, the only information that we have, and that was as of the middle of last night, is the pool was about at 65. So, right now, they don't have any ability to cool the pool.

AMIR SHAKARAMI: Sixty-five what?

PAUL NICHOLS: Celsius. So, 150, 155 or so.

AMIR SHAKARAMI: And they don't have a way to cool it?

PAUL NICHOLS: Not at this time.

AMIR SHAKARAMI: And do you know, do you know roughly, is there a time line that they're looking at that they have to have cooling for it?

PAUL NICHOLS: We did some estimates. It may be another few days, four days or something.

MALE PARTICIPANT: Yeah, probably about 12 degrees per day heat-up. They've got a --

MALE PARTICIPANT: Fahrenheit.

MALE PARTICIPANT: Fahrenheit. So they still have a few more days before it would reach boiling. And the boiling rate is only going to be a few gallons per minute, really, to maintain level.

AMIR SHAKARAMI: Okay.

MALE PARTICIPANT: But they need to have a way to actually cool it for that.

PAUL NICHOLS: And that's also without, without taking credit for the atmosphere. And now that the, for Units 1 and 3, since their pools are, don't have a roof on them over them anymore due to the explosion, they're also going to have the

advantage of the cold temperatures, outside temperatures, over there.

AMIR SHAKARAMI: Yeah. Yeah. I'm just worried about the environmental situation, rain and snow. And, you know, Some of it may be good; some of it may be bad. You know, overflow and everything like that. I just don't know the level if, if they get bad storm coming in.

MALE PARTICIPANT: Yeah. O, We're, we're concerned also.

AMIR SHAKARAMI: Yeah. All right. Well, if you all want to get in touch once in a while before the NRC call or after, I'll be happy to do that.

PAUL NICHOLS: Okay. And, just use the number I have, that I dialed today?

AMIR SHAKARAMI: That's correct.

PAUL NICHOLS: Okay. I appreciate it. Thank you.

AMIR SHAKARAMI: Bye-bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

DAVE SKEEN: Reactor Safety Team. This is Dave Skeen.

PAM CALLEN: Hey, Dave. This is Pam Callen from Exelon. How are you?

DAVE SKEEN: Just fine. How are you, Pam?

PAM CALLEN: I'm fine. Eva Brown called this morning and I told her I'd give her a call back once I got into the office.

DAVE SKEEN: Yes.

PAM CALLEN: Okay.

DAVE SKEEN: Let's see. We talked with -- who did we talk to? Oh, Darren Beniak.

PAM CALLEN: Okay.

DAVE SKEEN: And what we're looking for, we explained to him, we've got an urgent request from the Japanese government to try to help figure out some ways that we could get the either high-pressure or low-pressure injection into the core. They've now lost cooling to all three of the units at Fukushima.

PAM CALLEN: Um-hmm.

DAVE SKEEN: And so what we're trying to do is reach out to Exelon and General Electric. I've got a call in with them as well on any ideas or thoughts on, how could we provide low-pressure high-pressure injection? And, what kind of power

needs would we need for that in case we were able to get some temporary generators from the military, US military? What could we do for that?

PAM CALLEN: Okay.

DAVE SKEEN: So that's what we're looking for and just kind of brainstorming on some things you can do, and recognize that we don't have a lot of information on what's going on, on the ground over there right now.

PAM CALLEN: Okay. So we've set up a protocol here to, you know, for any support requests.

DAVE SKEEN: Yes.

PAM CALLEN: So what I'll do is I'll go ahead -- I just didn't get the details from her.

DAVE SKEEN: Um-hmm.

PAM CALLEN: So I'll go ahead and I'll send this out and see if, you know, see if we can't get someone back to you.

You said you did talk to Darren?

DAVE SKEEN: I talked to Darren and he's on it. he understood what the request was, and he said he was he would he could do. They were talking about possibly nine o'clock call, but we need something as soon as you can get it for us.

GE said they could get back to us within about 30 minutes, so we're hoping that we get a call back from them shortly. And if you guys can tell us what everything you think you can do, then we'll set up a call where we can get everybody on the phone and just kind of brainstorm some ideas through it.

But whatever you can do to help us, we'd appreciate it.

PAM CALLEN: Okay. Well, like I said, I'll touch base with Darren, probably first, and make sure we're not duplicating efforts here.

DAVE SKEEN: Exactly.

PAM CALLEN: And we'll, we'll try to be as efficient as we can get back to.

DAVE SKEEN: Okay. Appreciate it.

PAM CALLEN: Okay, Dave. And if you can let Eva know that, you know, I did call back and --

DAVE SKEEN: yep. I'll let her know.

PAM CALLEN: All right. Thank you.

DAVE SKEEN: All right.

PAM CALLEN: Bye-bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

DAVE SKEEN: This is the Reactor Safety Team. Dave Skeen speaking.

DARREN BENIAC: Good morning. This is Darren Beniac, Exelon Nuclear, on a phone call I'm returning.

DAVE SKEEN: Yes, Darren. You're on a recorded line, by the way. I just wanted to let you know that.

DARREN BENIAC: I understand.

DAVE SKEEN: Let me tell you what we've got going on here. We've got an urgent request from the government of Japan to try to help them with ways that we might be able to inject coolant into the disabled reactors at Fukushima.

DARREN BENIAC: Um-hmm.

DAVE SKEEN: So what I've done, I've contacted GE Hitachi and they're working on some ideas for us, and I know Exelon has offering support before.

So this is kind of an urgent thing because we're looking at probably having a phone call as soon as possible, but by nine o'clock this morning anyway, on brainstorming some ideas on how we might be able to either do high-pressure low-pressure

injection into the cores of -- so, to get some coolant back into those, those reactors.

DARREN BENIAC: Um-hmm.

DAVE SKEEN: So I had spoken with Glen Watford at GE and he's working it from their end. But if, if Exelon has any thoughts on this, it would help us too, things like, what would it take power-wise if we could get temporary power? The military's involved in this, and we're looking at what kind of generators we might be able to get to them to supply power if we needed to do that.

DARREN BENIAC: Um-hmm.

DAVE SKEEN: And then, so, if you could tell us what kind of power needs you think it would take and any ideas on how we could get some injection into the cores.

DARREN BENIAC: Okay. So, resources for nine o'clock call, and HOO -- is there a contact number or do we call back into the HOO?

DAVE SKEEN: Well, right now, if you could just brainstorm some ideas and get back to us -- I don't know if it'll be at nine or not. We have to have a call by nine o'clock.

DARREN BENIAC: Okay.

DAVE SKEEN: So we can get information

sooner, we'll set up something sooner.

And I think GE told us they would call us back in the next 15 or 30 minutes with some of their thoughts.

DARREN BENIAC: Okay.

EVA BROWN: Tell him we've talked with Pam Callen.

DAVE SKEEN: So --

EVA BROWN: We've talked to Pam Callen, and she's making calls.

DAVE SKEEN: Oh, one of my staff here said that they've talked with Pam Callen as well, and she's making some phone calls right now too.

DARREN BENIAC: Okay.

DAVE SKEEN: So I wanted to let you know that.

DARREN BENIAC: All right.

DAVE SKEEN: Okay? So you can call this number back, 301-816-5502.

DARREN BENIAC: Okay. Let me write that down. 301 --

DAVE SKEEN: 816-5502.

DARREN BENIAC: -- 816-5502. And the contact name again?

DAVE SKEEN: This is David Skeen, but

just ask for the Reactor Safety Team and someone will -- this is the Reactor Safety Team phone, so it's in our room. So someone will pick it up.

DARREN BENIAC: All right, David. I understand.

DAVE SKEEN: All right. Appreciate it. Thank you.

DARREN BENIAC: Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

DAVE SKEEN: Reactor Safety Team. This is Dave Skeen.

TONY ULSES: Yeah, hi, David, it's Tony Ulses calling.

DAVE SKEEN: Hi, Tony.

TONY ULSES: I'm had a, I had another question for you all if you've got a minute. I'd like to ask you guys if you can do me a favor.

DAVE SKEEN: Sure.

TONY ULSES: What I'm looking for is, in the calcs, an estimate or whatever you want call it. Assuming current decay heat loadings at these units and maybe, maybe a sensitivity range around where we are, how long can we expect, assuming, assuming an uncovered core, that they'd start to see slumping in the core?

Is that something -- I think that's something you guys could probably do with like a melt-core calc or something. Maybe they pulled something out of the NUREG or something that we've already done.

DAVE SKEEN: Okay.

MALE PARTICIPANT: What was the question, Tony, again?

TONY ULSES: The question is, assuming current decay heat loadings at these units and, and like a sensitivity around that point, how long are we looking until we get, until we start getting the core slumping, assuming that the, the core is uncovered partially or totally?

I'm just kind of thinking ahead here. You know, based on --

MALE PARTICIPANT: So are we talking about three days until, until the decay heat removal cycle; right?

TONY ULSES: Well, we know when these things shut down. Off the top of my head, I think it's about last three days, yeah. I think they, they, the unit scrammed at 2:46 local time here Friday. Was it Friday? I think it was Friday.

MALE PARTICIPANT: Okay.

TONY ULSES: Yeah.

So, if that's something you guys can come up with, I would really appreciate it. I just think that's a number that, that we, you know, we want have in our hip pocket here.

DAVE SKEEN: I think it probably is, Tony, it's about four in the morning right now and we probably won't get our reactor guys in for a couple

hours yet, but we could put them on it when they get in in the morning.

Is this something you need right away? Do we need to call people?

TONY ULSES: No, no, no. No, that's fine, Dave. I'm getting ready to go over and get some sack time here, so I just wanted to call you before I leave. Yeah. Yeah, I just wanted to say, you guys aren't fully staffed yet, so --

DAVE SKEEN: Right.

TONY ULSES: -- that's absolutely fine fine. You know, we're going to be fine.

DAVE SKEEN: Okay.

TONY ULSES: Well, I'd appreciate it.

DAVE SKEEN: Yeah, we can do that. How long you going to be off-line for, Tony? I know you're going to go get some sleep. When do you think you'll be back available? So we don't bother you until you're up again.

TONY ULSES: Well, we're going to be rolling into kind of shift work here. Jim's going to cover like 9:00 p.m. local here. He's going to go back and get a little bit of sleep and then come back.

TONY ULSES: I think, you know, I'll

probably be out at least, I'm going to say probably 10 hours or so.

DAVE SKEEN: Okay.

TONY ULSES: I don't know what that makes it. You know, I'm going to go back and get some sleep and get some breakfast and a shower. So, you know, I figure I'll be back in about 10 hours.

DAVE SKEEN: Okay.

TONY ULSES: And if I get back earlier, I'll give you guys a call.

DAVE SKEEN: That sounds good.

MALE PARTICIPANT: Tony, real quickly, you've probably got about 10 to 12 hours, but I, you know, we will get you better numbers.

TONY ULSES: I appreciate it. Thanks. Yeah, as I said, again, I'm just thinking out loud here, that's a number that may be useful to have in our hip pocket here.

DAVE SKEEN: Okay.

TONY ULSES: Unfortunately.

DAVE SKEEN: We'll pass that on to the morning shift guys when they come in, and we'll get some reactor guys to run some numbers for us then.

TONY ULSES: Okay, Dave. I really appreciate it. Thanks.

DAVE SKEEN: Hey, not a problem. All right.

TONY ULSES: All right. I'm out. And I'll talk to you all later.

DAVE SKEEN: See you later.

TONY ULSES: Bye.

(Conference call concluded.)

(CONFERENCE CALL INITIATED.)

DAVE SKEEN: (b)(5),(b)(6)

(b)(5),(b)(6)

DAVE SKEEN: Okay. And who is this again? I'm sorry; I didn't catch your name.

(b)(6)

DAVE SKEEN: (b)(6) okay.

(b)(6)

DAVE SKEEN: Okay.

(b)(6)

(b)(4).

DAVE SKEEN: Yes, Sir. Okay.

(b)(6) So, basically, I just wanted to touch base.

We're, judging from what's in, what's in the press now, Unit 3 and 1 both had, both had, you know, what appear to have been hydrogen explosions.

DAVE SKEEN: Yes, that's what we think.

(b)(6) Unit 2 has just lost its cooling.

DAVE SKEEN: Yes.

(b)(6) And so it's -- yeah.

DAVE SKEEN: And it's possible it could end up in the same place.

(b)(6) Exactly.

DAVE SKEEN: Yeah.

(b)(6) So, and then, and then, but we're not seeing -- I mean, the, Onagawa appears to be, or looks like it's going to be okay.

DAVE SKEEN: Yeah, we haven't heard --

(b)(6) Daiini.

DAVE SKEEN: -- we haven't heard anything else there. And Daiini, I think they still have AC power, so I think they're all right.

(b)(6) Right. Yeah, they're still, they've still got potentially elevated pressures, but they've got AC power.

DAVE SKEEN: Right. As long as they have that, they can keep up with it, I think, so they're all right.

(b)(6) Right. Right. And then, and then the only other thing, the only other thing that, that I thought and I wanted to ask about was at Tokai.

DAVE SKEEN: Um-hmm.

(b)(6) The press seems to be saying

that a, that a cooling pump failed at Unit, at Unit 2 and up to two of the three diesels may be out.

DAVE SKEEN: We heard something about Tokai earlier, but we've been talking with our expert over in Tokyo right now, and he said he's heard nothing else with problems with that.

(b)(6) Um-hmm. Yeah.

DAVE SKEEN: So it seems to be stable right now. The situation seems to be stable, so.

(b)(6) Okay. Yeah, the operator did put something, did put a press release out on their website about it. But my Japanese is terrible.

DAVE SKEEN: Okay, and we got something here. Let's see. It was dated March 13th at 4:53 p.m. in Eastern Daylight Time. Is it says, "Japanese nuclear power crisis averted at second plant."

(b)(6) Okay.

DAVE SKEEN: And I don't know if you have that one or not but that's -- that was from MarketWatch, actually.

(b)(6) Yeah.

DAVE SKEEN: MarketWatch.com had a story that they ran. And it talks about this a little bit too.

(b)(6) Okay.

DAVE SKEEN: But, yeah, but we haven't heard anything else on Tokai. In fact, we asked our experts specifically about other plants, other than the two that were in question, and he said they've heard nothing else from Tokai, so they're assuming that that's okay too right now.

(b)(6) Right. So, and then the only evacuations you guys have heard of were around, were around the two Fukushima facilities.

DAVE SKEEN: Yeah, that was the 20 kilometers at both facilities. Right.

(b)(6) Oh, it's up to 20 at both? I thought --

DAVE SKEEN: I'm sorry -

(b)(6) It's 10 at Number 2, isn't it?

DAVE SKEEN: It was -- let me check that to be sure.

Eva, was the evacuation 20 kilometers at, at --

EVA BROWN: Yes.

DAVE SKEEN: And Daiichi only?

EVA BROWN: Right. Daiini is at 10.

DAVE SKEEN: Okay. Daiini's 10 and Daiichi's 20.

(b)(6) Yeah. That's what I thought it

was.

DAVE SKEEN: Okay.

(b)(6) So, great. I think I'm still on distro. for the, for the, for the updates you guys are putting out. Did you have another one scheduled, coming out?

DAVE SKEEN: There should be one coming out shortly, yeah.

(b)(6) Okay. Cool. I'll keep an eye out for it.

DAVE SKEEN: Okay?

(b)(6) Yeah, Thanks a bunch.

DAVE SKEEN: All right, sir. Call us back if you need something.

(b)(6) Will do.

DAVE SKEEN: All right. Bye.

(Conference call concluded.)

(END OF SERIES.)

Official Transcript of Proceedings

NUCLEAR REGULATORY COMMISSION

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NUCLEAR REGULATORY COMMISSION

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JAPAN'S FUKUSHIMA DAIICHI RST PODIUM AUDIO FILE

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MARCH 15, 2011

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0-C1-3LL10065094 (Contains no words to transcribe.)

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(CONFERENCE CALL INITIATED)

MR. WATFORD: GE Hitachi, Glen Watford.

MR. CASE: Hi Glen, this is Mike Case, reactor safety team up at the Nuclear Regulatory Commission.

MR. WATFORD: Yes sir.

MR. CASE: How are you doing down there?

MR. WATFORD: Doing well.

MR. CASE: I don't have anything specific for you.

MR. WATFORD: Okay.

MR. CASE: But I just wanted to run through the status of things.

MR. WATFORD: All right.

MR. CASE: And see what you're all thinking, see what you are all working on.

MR. WATFORD: Okay. Unit one, it's all been quiet. They are still injecting.

MR. CASE: Hold on a second.

OFF MIC VOICE: The State Department's looking for some information from you. You wouldn't happen to be on the line with the State Department, would you?

MR. CASE: No.

OFF MIC VOICE: Can I ask one of your staff?

MR. CASE: Oh yes.

MR. CASE: Okay, go ahead. Sorry about that.

MR. WATFORD: Unit one, we really haven't gotten much updates that anything has changed, still injecting, level about two-thirds core height.

MR. CASE: Oh, you got a level number? Where did you get that from?

MR. WATFORD: From Hitachi.

MR. CASE: And do we think the water is getting in there?

MR. WATFORD: Yes.

MR. CASE: Well, I'm a little bit two days old I guess. You know, last I, you know I did the mid-shift you know, a day ago, so I missed one (inaudible) shift.

MR. WATFORD: Right.

MR. CASE: So, if it looks like I'm going back in history, I'm just trying to catch up.

MR. WATFORD: That's fine, yes. I mean, when -- I think when I left last night, they had lost cooling to all three.

MR. CASE: Yes, I think I heard that on the news.

MR. WATFORD: Right, and so that's been restored, and -

MR. CASE: Okay. Do you have any dimensions on the injection, you know, do we have an idea of how much water they are putting in?

MR. WATFORD: Hold on a sec. Curt (phonetic) what's the number on the injection?

OFF MIC VOICE: Twenty to 60.

MR. WATFORD: Twenty to 60 tons per hour is the figures we've got.

MR. CASE: Twenty to --

MR. WATFORD: Same as tons per hour unit.

MR. CASE: But we think that's metric tons, right?

MR. WATFORD: Yes, we believe that's metric tons.

MR. CASE: Oh, I guess they wouldn't do gallons per minute.

MR. WATFORD: No, that would be gallons per minute per -- So 4.4 times that, so 80 to 250 gallons per minute.

MR. CASE: Okay.

MR. WATFORD: Approximately.

MR. CASE: Okay. All right. Unit two.

MR. WATFORD: Unit two, I have got to think of the times. So some time yesterday, after they lost injection, they were up to 10 hours without injection --

MR. CASE: Okay.

MR. WATFORD: and uncovered a good portion of the fuel, if not most of it. They have restored injection and as of -- I have got to get my clocks --

MR. CASE: That's right, yes.

MR. WATFORD: As of 8 a.m. this morning Japan time, so 9 p.m. last night -- I could be an hour off one way or another -- they had restored one -- it was like 1.2 meters covered.

MR. CASE: Okay.

MR. WATFORD: At 6 a.m. this morning Japan time, or tomorrow morning Japan -- you know, 6 a.m., which would have been, what, 5 p.m., they reported an explosion, supposedly at unit two.

MR. CASE: Yes.

MR. WATFORD: There was a report that the suppression chamber was at atmospheric pressure.

MR. CASE: Okay.

MR. WATFORD: Since then, in a discussion with HG&E Hitachi, we got indication that the drywell

pressure is still at 60 pounds.

MR. CASE: What, though, after that --

MR. WATFORD: After that, several hours after that. So the belief is there's an instrumentation problem on the suppression chamber pressure.

MR. CASE: Okay, so --

MR. WATFORD: So you are not going to have that pressure in the drywell if you have had a breach in the torus, in the suppression pool.

MR. CASE: Okay, so we had a factoid that said that the suppression chamber went from three atmospheres to one atmosphere, which sort of tracks with yours.

MR. WATFORD: Right.

MR. CASE: But then you got a later indication that there's 60 pounds in the drywell?

MR. WATFORD: Correct.

MR. CASE: Okay. That's interesting.

MR. WATFORD: At the same time that they were reporting one atmosphere in the --

MR. CASE: Oh, okay.

MR. WATFORD: in the suppression chamber and so the conclusion was, there was an instrumentation failure.

MR. CASE: Any -- any update on that since -- so this is as of 5 p.m. today?

MR. WATFORD: That update we got was at 9 p.m. tonight, our time eastern -- eastern daylight time.

MR. CASE: Okay, that was a, a 9 p.m. update of, of the information that occurred at 5 p.m.?

MR. WATFORD: No, it was the information as of that time.

MR. CASE: Okay. All right, good.

MR. WATFORD: And there was no, you know, no indication of trending of the drywell pressure that would imply the entire primary system is depressurizing through some hole somewhere. So --

MR. CASE: (Inaudible)

MR. WATFORD: But right now we are skeptical that there's a breach in that portion. They are still injecting, and water level was recovering.

MR. CASE: Okay, what about the loud -- you know, you know what we are thinking? We are thinking that there's a possible ex-vessel along unit two.

MR. WATFORD: Ex-vessel?

MR. CASE: Yes. And we are thinking that the primary containment is damaged. Is that not good

thoughts?

MR. WATFORD: Well, we don't understand how the drywell would be maintaining pressure if the primary, which it is -- I mean, that is the primary containment -- how it would be still at pressure if there was damage in some breach --

MR. CASE: Okay. Your factoid was 9 p.m. it was reading 60 pounds.

MR. WATFORD: Yes.

MR. CASE: Okay. Good deal. That's a discrepancy for us. That's a -- you know we are on a pretty -- okay, I'll ask him --

OFF MIC VOICE: (Inaudible) what are you getting information (inaudible)

MR. CASE: Just about everything.

MR. CASE: Okay. Can I call you back? I think they are asking for my presence.

MR. WATFORD: Okay.

MR. CASE: But you're doing very well.

MR. WATFORD: All right.

MR. CASE: Thank you.

MR. WATFORD: No problem.

MR. CASE: Bye-bye.

MR. WATFORD: All right, bye.

0-C3T-)610065094

(CONFERENCE CALL INITIATED)

RALEIGH: NRC operations. Reactor safety team. Raleigh (phonetic) speaking.

HOO: Hey Raleigh, this is Steve Snider (phonetic) on the HOO and I got the Japanese ministry of foreign affairs standing by on this conference call that Eric Stahl I believe was telling you guys about?

RALEIGH: Yes.

HOO: Is somebody going to join them, I think right now?

RALEIGH: I think we are -- I think -- was calling in -- or, okay. Would it be possible to transfer them to this line or do you want us to call in right now on another phone?

HOO: I think I can transfer this line back through to them. Hold on and I'll transfer you to the bridge, okay? Is this line fine? Is this where you want it?

OFF MIC VOICE: (Inaudible) White House situation roon on the line.

HOO: Fine. Okay, I am going to transfer it up to the bridge. You are going to be on with them, okay? Hold on.

(Pause)

HOO: Okay, you are on the bridge now with our reactor safety team.

(Pause)

JAPANESE VOICE: Hello?

NRC: This is the NRC operations center, reactor safety team. Who do we have on the line?

JAPANESE VOICE: Yes. This is (inaudible), and we are waiting for a call from colleagues from (inaudible.)

RALEIGH: Okay. Great, thank you.

(Pause)

OPERATOR: Hi, you are on the bridge now with our reactor safety team.

MS. ICHIKAWA: Hello. Good afternoon or rather good evening for you. My name is Ichikawa. I am calling from Japanese foreign ministry. We have been trying to organize a conference call and there may have been some miscommunication in the process.

I'd really like to know whether you really received the time to start the conference call.

RALEIGH: I'm sorry. Could you please repeat that?

MS. ICHIKAWA: Yes. We are trying to organize a conference call between your experts and our experts on the Japanese side on the reactor safety

team.

RALEIGH: Okay.

MS. ICHIKAWA: And we have been given this number and we have been trying to organize that telephone conference call.

RALEIGH: Okay. I --

MS. ICHIKAWA: However we actually communicated that we are going to call at 2:25 Japanese time. It is -- it was actually five minutes ago. But we did not receive the confirmation whether we can start the conference call at that time.

So we are still waiting to receive the confirmation on the starting time.

RALEIGH: All right. We are ready to go here at the NRC, if you are all ready.

MS. ICHIKAWA: We are ready on our part. Whenever your side -- your people are ready, we can start.

RALEIGH: We are ready. Our reactor safety experts are here.

MS. ICHIKAWA: Really? Okay. So can I call back again? Do you already have the contact with our embassy, Washington?

NRC: We are on the line.

MS. ICHIKAWA: You have a line?

JAPANESE EMBASSY: Yes, this is the Japanese embassy, we are on line.

MS. ICHIKAWA: Ah, they are already on line?

JAPANESE EMBASSY: Yes. No problem.

MS. ICHIKAWA: Okay. Okay. I'll -- I'll stay on the line and I'll tell my colleagues from the Nuclear and Industrial Safety Agency to call you immediately. So can I keep this line?

NRC: Yes.

MS. ICHIKAWA: Okay. I'll do that.

(Pause)

MS. ICHIKAWA: Okay, please hold on for maybe one minute or two so that they can join.

NRC: Understood. We will wait.

MS. ICHIKAWA: Thank you so much. Thank you so much.

(Speaks off mic in Japanese)

(Pause)

MS. ICHIKAWA: Hello. Hello.

NRC: Hello.

MS. ICHIKAWA: Yes. Our colleagues from the Nuclear and Industrial Safety Agency have been in trouble in having connection with you. They are trying again. Please wait for a minute again.

NRC: Absolutely. Thank you.

MS. ICHIKAWA: Thanks.

(Pause)

(Talks in Japanese off mic)

(Pause)

MS. ICHIKAWA: Hello. Hi. Hello.

NRC: Hello, we are here.

MS. ICHIKAWA: Yes. Yes. Yes. They are still having trouble, hanging again and again. It seems it's not the trouble on your side, but some technical trouble on, on, on our side or our colleagues' side.

So they are still trying. So could you hold again, please?

NRC: Yes, yes. We will hold as --

MS. ICHIKAWA: All right. Great. Thank you. Thanks. Thanks.

NRC: You are welcome.

(Pause)

MS. ICHIKAWA: Hello. Hello again.

NRC: Hello, we are still here.

MS. ICHIKAWA: Yes. Sorry to keep you waiting for so long. They have really trouble in getting to you so we asked them, our colleagues at Nuclear and Industrial Safety Agency, to get to you

first, and then let us know immediately so that we will join.

You will receive their call first and immediately we will join.

NRC: Okay. So we should expect a call right now?

MS. ICHIKAWA: Yes, we are still -- they are still trying, but it may not be in one minute or two. They may have to go to another room to make a call. So it may take 5 to 10 minutes.

NRC: Okay. We will be ready for the call, so whenever it comes in, we will be ready for it.

MS. ICHIKAWA: Good. Okay. Thank you so much. And I wonder if my colleagues at the, our embassy in Washington is listening to us. Are they on line?

If they are not on line, we will inform them.

JAPANESE EMBASSY: We are on line.

MS. ICHIKAWA: Ah, they are on line?

JAPANESE EMBASSY: Yes, and we are listening to everything you said.

MS. ICHIKAWA: Okay. Good. Good. Okay. So we will hang up first and then we will wait for

the call from the NISA people and we will call the embassy immediately so that we can also join.

NRC: Okay, but just to confirm, we expect NISA to call back into the NRC operations center. Correct?

MS. ICHIKAWA: Yes, in 5 to 10 minutes probably.

NRC: Okay. Thank you very much.

MS. ICHIKAWA: Thank you so much. Sorry for, sorry for keep you waiting.

NRC: That's okay.

MS. ICHIKAWA: Yes, okay, talk to you later.

NRC: All right.

MS. ICHIKAWA: Bye.

(Pause)

JAPANESE VOICE: Hello?

NRC: Can you stay on the line or do you want us to stay out?

JAPANESE VOICE: Hello. Hello can you hear me?

JAPANESE VOICE: Hello this is --

0-C4II)L10065094

(CONFERENCE CALL INITIATED)

NRC: NRC operations center. This is a recorded line. Can I help you?

NRC: (Inaudible) the RST. We are trying to connect with the Japanese.

NRC: Okay, I'll transfer you up there. They are waiting for you. Hold on.

MALE PARTICIPANT: All right. Back on again.

JAPANESE VOICE: Hello.

JAPANESE VOICE: Hello.

NRC: Hello this is the NRC RST.

MS. ICHIKAWA: Oh hi, hi, yes. We are -- we have now our colleague Mr. Koyama (phonetic) from the NISA and probably Mr. Nei is just =-= is that him?

MR. NEI: Yes. I passed the phone (inaudible).

MS. ICHIKAWA: We are still waiting for our embassy colleagues to join right now. We are calling our embassy right now.

NRC: Okay, thank you. We'll wait.

JAPANESE EMBASSY: We are already here.

NRC: Oh, okay.

MS. ICHIKAWA: Oh good. Okay. Our embassy people are already there so we can start our conference call. Thank you for your waiting.

JAPANESE VOICE: Hello?

NRC: We are ready whenever you are.

MS. ICHIKAWA: Yes, yes, yes.

MALE PARTICIPANT: Hello?

MS. ICHIKAWA: Hello, yes?

JAPANESE VOICE: Hello.

MR. CASE: Hi, this is Mike Case from the Nuclear Regulatory Commission on the nuclear safety team. (Inaudible) could you run (inaudible) status of each of the units perhaps?

MS. ICHIKAWA: Hello. Yes. Hello.

JAPANESE VOICE: Hello?

MS. ICHIKAWA: Yes, I think that Mr. Nei is on the phone. Yes, my name is Tomiko Ichikawa from the ministry of foreign affairs and I think we have now Nei from NISA on the phone.

MR. NEI: Could you tell me again (inaudible) your questions please?

MR. CASE: Hey, this is Mike Case from the Nuclear Regulatory Commission. Could you perhaps take us through a status of each of the Fukushima units?

Just a general status, not in too much detail.

MR. NEI: Yes. Just -- let me tell you briefly the recent state of the, the, the Fukushima Daiichi plant. It has six units as you know.

MR. CASE: Correct.

MR. NEI: Then each one, (phonetic) let me see, each one had so hydrogen explosion and with quarter measures (phonetic). Then we continued to pour the water into the core still in the two core, to, to, to replace (inaudible).

And unit two, both had hydrogen explosion this morning with also core damage (phonetic, not clear if he actually says "also no core damage" but he often injects an "n" between words in his speech). We continued to pour the water to the cooler (inaudible).

MR. CASE: (Inaudible) containment on the unit two, do you have containment around the vessel?

MR. NEI: Yes, a little, but (inaudible) we didn't have no exact assessment record so far. And for the unit three, we also had a hydrogen explosion with core damages and also the same for the other two units. We continued to pour the water to the cooler (inaudible).

Then reactor four (phonetic) to six

maintained the safe condition because each stopped their operation for (inaudible) later examination, just at the time of the earthquake.

That is all for the unit Fukushima Daiichi.

MR. CASE: Do you know if there -- can you give us how the spent fuel pools are, specifically unit four? Is there -- is there a problem with unit four fuel -- spent fuel pool?

MR. NEI: Yes. We just getting an instant, getting a fire (inaudible) at the reactor -- spent fuel pools at unit four this morning that we don't have enough exact (inaudible) of the spent fuel so far we are not examining.

MR. CASE: Do we know if the spent fuel pool fire is out on that, on unit four?

MR. NEI: Could you speak again?

MR. CASE: Do we know if the -- if the fire with the spent fuel pool in unit four is out?

MR. NEI: I believe so. It means, you know, we got a (inaudible) by the operator to -- operator that the fire is out. However, our, you know, low (inaudible) request, the fire station should examine the -- whether the fire is out or not.

But you know, the authority of the fire

station could not get into the -- the station. Then they had not examined yet.

MR. CASE: They could not get in because of the high radiation levels?

MR. NEI: Right.

MR. CASE: Do you know about what the radiation levels are currently around the Daiichi units are?

MR. NEI: Let me see. Let me see. Okay, you know, Fukushima Daiichi station has trouble with their power supply, so then we asked the operator to get the monitoring -- more, more monitoring of vehicles to -- to get to the (inaudible).

So then there are limited number with the record. Then --

MR. CASE: Okay.

MR. NEI: let me see. We just, I just get the record only enough to (inaudible) near the unit two. I'm sorry. I'm so sorry.

MR. CASE: I'm sorry. That's okay. If you just want to continue with the status of the -- of the fuel pools, that would be helpful, if you would tell us how the unit one fuel pool, unit two fuel pool, unit three spent fuel pool, unit five and six spent fuel pool. Do you know the status of those?

Are they being cooled and do they have water in them?

MR. NEI: You know, we just get into trouble about the spent fuel pools only in the pool so far. (Phonetic). But we need to check the status of the safety level of hte spent fuel pools at the other unit.

MR. CASE: Okay.

MR. NEI: But we don't get it so far.

MR. CASE: Thank you. Do you have any -- any pressure readings or reactor vessel level readings for unit two?

MR. NEI: Let me see the data. Unit two, you mean?

MR. CASE: Correct.

MR. NEI: Right. The level of -- no --

(Pause)

MR. NEI: The level of the reactor pressure, the unit two, this morning, is 0.612 megapascal.

MR. CASE: That's in the reactor pressure vessel?

MR. NEI: Yes.

MR. CASE: Okay. Thank you.

MR. NEI: And the containment vessel pressure, it's approximately 730 kilopascal.

MR. CASE: What about the suppression chamber pressure?

MR. NEI: Suppression chamber. Let me see. Suppression chamber you want?

MR. CASE: Correct.

MR. NEI: It's downsizing, not get the record, downsizing.

MR. CASE: It's downscale?

MR. NEI: Downscale, yes, downscale.

MR. CASE: Okay. Thanks. Do you think that there's an instrumentation problem with that particular instrument?

MR. NEI: We are not sure, so we are not sure, no.

MR. CASE: Okay. Back on unit two. Do we think that water is making it into the reactor core in the reactor pressure?

MR. NEI: Yes, we avoided the -- we put -- we were able to pour the water still to the core of the unit two.

MR. CASE: Do you know, in unit two, if any of the water is going into the drywell itself?

MR. NEI: No, I'm not sure. We are -- yes, we are -- the water for the -- the cooling water for the (inaudible) directly inject to the pressure

vessel.

MR. CASE: Okay. But there's no water going into the drywell itself?

MR. NEI: Yes. We injecting water into the (inaudible) to the pressure vessel, but we not sure the vessel fill over into the containment vessel or no. we are not sure.

MR. CASE: Okay, thanks.

MR. NEI: Then let me give you the information for the Fukushima Daini.

MR. CASE: Okay.

MR. NEI: The second. Fortunately all the four units get into level of low temperature -- the safe condition by this morning.

MR. CASE: Okay. Is there indication of water level in their spent fuel pools?

MR. NEI: Spent fuel pools -- we don't have no record of the spent fuel pools so far. But we don't have no indication have some trouble at spent fuel pool at the Fukushima Daini.

MR. CASE: Have they been inspected yet do you know?

MR. NEI: Uh?

MR. CASE: Have they looked at the spent fuel pools?

MR. NEI: We don't have the correct information by the operator so far, but there are no -- - no tying signal to have troublesome issues of spent fuel pools either by the (inaudible).

MR. CASE: Thanks. Do we have any more questions?

MR. SULLIVAN: Well, I do.

MR. NEI: Yes?

MR. SULLIVAN: Thank you so much. This is Randy Sullivan from the protective measures team at NRC: Just one more piece of information if I may. We believe that spent fuel pools will eventually boil dry if coolant is not made up to them.

Now we understand you have many difficulties on site, but even a very little bit of water, can keep those spent fuel pools from boiling dry and catching on fire.

MR. NEI: Mm-hmm.

MR. SULLIVAN: So, I know they have many problems at the site, but it seems that an inspection and if possible, a bit of water makeup, would go a long way to reducing problems in the future.

MR. NEI: Yes, so we are operational om those issues (phonetic), especially the fact that it run through three (phonetic), because the, you know,

the -- those (phonetic, maybe "both") hydrogen (phonetic) explosions.

MR. SULLIVAN: Yes, yes. We understand.

MR. NEI: Right. That's why we are (inaudible) very carefully to see the condition of spent fuel pools. Also we need to get more water to cool down a temperature, not only the suppression core and the pressure vessel, but also the spent fuel pool.

So we try to get more (inaudible).

NRC: Can I ask one more question on unit four? In -- you have building enclosure that the spent fuel pool is in. Is that enclosure still intact?

MR. NEI: I'm sorry. I have not so exact information on that.

NRC: Okay, thanks.

NRC: Do you have questions for us?

(Pause)

MR. NEI: That's maybe now all now, I could tell you the situation with the nuclear power plant (inaudible) Fukushima prefecture.

NRC: Okay, sure.

MR. NEI: (Inaudible.) So, do you have any other?

NRC: Yes. Yes. One more question. We understand that you have evacuated staff from the

site, but surely there are -- are there still people there attempting to mitigate the accident?

MR. NEI: You know, I -- I tell you the exact knowledge I have. You know, I (inaudible) my (inaudible) emergency control rooms lasted two hours, then by in that time, I heard that there are maybe so 40 to 50 people of TEPCO to keep in their emergency operation room, to try to mitigate the troublesome issues.

But I'm not sure, after two hours my escape but happen or not.

NRC: Okay. Thank you. Do you have information that you need -- or do you have -- do you have information about equipment that is needed at the site, or whether you are getting equipment that you might need to help with the reactors at Daiichi?

MR. NEI: Yes, you know, we are now -- we are still asking for TEPCO to provide after exact equipment list, then I hope they could provide us by the -- by this evening, by this evening Japanese time. I don't have it yet.

NRC: Okay. Okay. So that -- where are you supposed -- who is supposed to provide you that list, at TEPCO?

MR. NEI: It's after the getting this list

or maybe this item, TEPCO would like to get, you know, I would like to provide you too.

NRC: Okay. We --

MR. NEI: It's okay to give, give the list to -- how to -- how to give you the list?

NRC: We don't want the list. We want to know if we can help you somehow.

NRC: Yes, but I, I, I, I thought that the list was going through the embassy, and then, and then we have -- we have NRC staff at the embassy that are providing that list then to other people who may be able to provide that equipment.

NRC: Yes, please make the request to the U.S. embassy in Tokyo.

MR. NEI: All right, I will do that.

NRC: Thank you. That would be great.

MR. NEI: Is there any other questions?

NRC: We are checking. One second please.

NRC: Do you have an idea of the -- of the amount of you know, of the amount of core damage on unit two? Is there -- do you have a feel for that or do you just know that there's water being put in? Have you done any calculations?

MR. NEI: TEPCO get some calculation or -- the estimation, but we don't -- we don't assure the --

we do not assure the estimation yet.

NRC: Okay. Thank you. You don't -- do you have a feel for whether they would be -- the fuel is currently being covered in units one, two and three of the Daiichi?

MR. NEI: Maybe not. So again, so you need to Daiichi two, three, have there so some levels of core damage, then we need to make the assertment, how much in the core damage it occurs, so the by there.

NRC: Okay. I understand that, I was thinking about the water level. Is there water level above the fuel in units one, two and three?

MR. NEI: You know, the -- the -- the -- we cannot believe the, the, the level, reactor water level getting by the -- the -- indicator. But you know, the indicator shows us the reactor water level of the unit two (inaudible) plus over the top.

But we are not sure of that.

NRC: Okay. How about units one and unit three?

MR. NEI: It shows the reactor water levels okay, both in each one, the minus one seven five zero.

NRC: Minus one seven five? (Phonetic)

MR. NEI: One seven five zero. Unit three shows minus one eight zero zero.

NRC: Okay, thanks.

(Inaudible off mic conversation at NRC about significance of these measurements)

JAPANESE EMBASSY: Hello, this is (inaudible), Japanese embassy. I think Mr. Nei also has some questions to the NRC: The (inaudible) has something, I think that it is a good time (inaudible) to ask questions.

NRC: Please do.

MR. NEI: You know, we are now so making us our best effort to calm down these troublesome issues of Daiichi unit at Fukushima Daiichi, but maybe now so after getting so level the calm down situation, we need to get more advice by your side how to treat out the unit one, two, three.

NRC: Right.

MR. NEI: We need to get, you know, we need to get further advice and we are -- from your experience by TMI (phonetic) issues.

NRC: Okay.

NRC: Yes.

NRC: We'd be happy to do that. We do have, I'm sure you are aware, we have two people over

there right now, and we are sending a team over that's probably in the air now, a team of six people, six additional experts to help out, and they should be landing --

NRC: They are landing at 9 o'clock Japan time on Wednesday morning.

MR. NEI: All right.

NRC: If you have specific questions that we can work on, we would be happy to do that back here in Washington, but probably your best bet is work through those contacts to give them the questions and we will work on them.

MR. NEI: Thank you very much for your kind offer. I'm so sorry, so we are so busy to make up for our trouble so that we don't have no time to make (inaudible) or exact questions to get appropriate advice by your side. We are very sorry.

JAPANESE EMBASSY: I'll talk to Mr. Nei -- this is (inaudible) in the Washington D.C. Japanese embassy. I would ask a couple of difficult questions after the (inaudible) after he arrived in Japan. I would like to make first that the where your team arrives at 9 a.m. in Japan, it would be in Tokyo or in other places and the other question is what time will be the most appropriate time for the Japanese side to

approach (inaudible).

OFF MIC VOICE: How do they get in touch with our guys?

NRC: Okay. So they will be arriving in Tokyo, at Narita, and we could have them get in contact with you when they land. What's the best way for them to get in contact with you on Wednesday morning?

MR. NEI: I'm very sorry. My schedule not determined yet.

NRC: Is there a phone number at the operations center where you are at, that they could, they could reach out to?

MR. NEI: I could give you a phone number. It's not operations room but my own office.

NRC: Okay.

MR. NEI: The phone number I could provdie here it's 8-1 --

NRC: 8-1.

MR. NEI: Three --

NRC: Three --

MR. NEI: 3-5-0-1.

NRC: 3-5-0-1.

MR. NEI: 5-9-6-2.

NRC: 5-9-6-2.

MR. NEI: Or you could give us a phone call to our international office.

NRC: Okay.

MR. NEI: The phone number is 8-1 --

NRC: 8-1 --

MR. NEI: Three --

NRC: Three --

MR. NEI: 3-5-0-1 --

NRC: 3-5-0-1 --

MR. NEI: 1-0-8-7.

NRC: 1-0-8-7.

MR. NEI: The name of the director is Mr. Panai (phonetic).

NRC: Okay. So you are aware that there's currently two NRC staff members in Japan? Have you had any contact with them?

MR. NEI: Yes, I met them yesterday. Then I was I got a conference call with them this afternoon maybe now so three hours ago.

NRC: Okay. So the NRC personnel that will be landing in Tokyo will be meeting -- will plan to at some point meet with the NRC's personnel already on the ground. If you'd like to contact the NRC personnel already on the ground, I have a phone number for you.

The number is 0-1-1 --

MR. NEI: 0-1-1 --

NRC: 6-1-0 --

MR. NEI: 6-1-0 --

NRC: 2-4-8 --

MR. NEI: 2-4-8 --

NRC: 9-1-5-5.

MR. NEI: 9-1-5-5.

NRC: And the first part of that we thought was the country code. It's just the country code for the USA and then 6-1-0.

MR. NEI: Yes. Yes. Of course the 8-0-9 the code of the -- the country code of Japan (inaudible).

NRC: Okay. 8-1-9, right.

NRC: This was very informative. Could we set up a time to maybe have another status briefing?

MR. NEI: We could try, but the -- I'm not sure to make an appointment because you know, we cannot make up the schedule even tomorrow.

NRC: Right.

NRC: Okay, we understand. So whenever you want to call back into us though, we'll be pleased to talk to you. So please call the number that you called earlier whenever you are interested in talking

to the NRC personnel.

MR. NEI: Thank you very much for your kind offer.

NRC: We wish you the best. It's really tough what you are going through and we really, we really hope that we can be of some assistance in your, in this troubled times you have.

MR. NEI: Thank you very much.

MS. ICHIKAWA: So thank you very much. I know that the time is very late in Washington, D.C., so thank you very much for waiting to organize this call.

NRC: It's our pleasure. I'm glad we could help and please reach back to us if you need anything else.

MS. ICHIKAWA: Thank you so much.

NRC: Okay. Thank you. Bye.

MS. ICHIKAWA: Thank you. Bye-bye.

MR. NEI: Bye-bye.

NRC: Thank you.

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(CONFERENCE CALL INITIATED)

MR. WATFORD: GE Hitachi, Glen Watford speaking.

MR. CASE: Hi Glen, this is Mike Case from the Nuclear Regulatory Commission again, and this is a recorded line. And it took me a long time to get back, huh?

MR. WATFORD: Yes, I missed you.

MR. CASE: So we were in the middle of unit two. What's the latest from you, I guess?

MR. WATFORD: We don't have anything new on unit two. Unit three still injecting seawater, approximately two-thirds core height.

MR. CASE: Okay, and what do you base that on?

MR. WATFORD: Conversations with Hitachi.

MR. CASE: Do you have a level reading?

MR. WATFORD: Minus 1.7 is at unit three. Yes, minus 2.3 meters.

MR. CASE: Minus 2.3 meters. And the reference level is zero? We got a number from -- let me check with my folks.

(Speaks off mic)

Hey, what number did we get from NISA on

unit three Ken? What number did we get for level on unit three from NISA?

KEN: Minus 1800.

MR. CASE: Yes, we got minus 1800 from them, so that's about right. That's 1.8 meters.

MR. WATFORD: Yes, minus 1.9, minus 2.3 for unit three.

MR. CASE: Okay now, when you guys get level information, you know, how current is that, or is somebody actually, is that a real reading, or is that -- are we just passing around the information that we get like at press conferences or -- where do we get that number?

MR. WATFORD: I believe those numbers are coming from individuals who are getting information from individuals who are in the command center.

MR. CASE: Okay.

MR. WATFORD: I don't believe they are you know, first-hand reports but I think they are sitting taking notes --

MR. CASE: Okay.

MR. WATFORD: of these things and typically, I will tell you these numbers are from -- this would be 8 o'clock last night Japan time. So they are going on let's see, where are we at now, they

are actually headed on towards almost 24 hours old.

MR. CASE: Okay. That's pretty interesting. Okay.

MR. WATFORD: We haven't gotten a new update. By the time we got this, that was probably five, six hours ago, so they have not gotten their updated -- I think they are getting them once or twice a day and so we were just a little bit out of synch on timing.

MR. CASE: Okay, did we talk about spent fuel pools yet?

MR. WATFORD: No, we have not talked about spent fuel pools.

MR. CASE: Okay, what do you know about those?

MR. WATFORD: All we know is unit four, there was an explosion on unit four, as you might have seen on Youtube.

MR. CASE: Oh no, I haven't seen that one yet.

MR. WATFORD: It's not a very good one.

(Speaks off mic)

Hey Bob, could you bring me my phone?

(Returns to main conversation.

And the report of a fire and then a report

that the fire has been put out.

MR. CASE: Okay, and that's from, from TEPCO? Those are TEPCO report?

MR. WATFORD: Those are TEPCO reports through the news.

MR. CASE: Okay. Yes, we were just talking to NISA and they said the fire was out too. Now, we are interpreting that as being a zirconium fire. Is that what you all are thinking?

MR. WATFORD: That's the potential. It was put out, appeared to be put out pretty quick, but you know, we really don't have any information that would tell us one way or another.

MR. CASE: Right, did you get the information that the spent fuel pool is dry or empty or --

MR. WATFORD: We didn't get that it was dry or empty but that it had reached 100 degrees celsius.

MR. CASE: Oh, okay. That's an interesting number. We don't have that number.

MR. WATFORD: Yes, I mean it basically became saturated so it was boiling off.

MR. CASE: Right, yes, you know, I am, I am just reacting to a log entry that said empty. But

you know, we were just on with NISA and so we were asking them about all the spent fuel pools, but God bless them, they really didn't know.

MR. WATFORD: Yes, I mean, we had gotten that some time yesterday it was at 84 degrees, (b)(4)

(b)(4)

MR. CASE: Yes.

MR. WATFORD: We do know, you know, they are working on trying to get water into the spent fuel pool for number four.

MR. CASE: Oh, okay. How do you know that?

MR. WATFORD: Just from talking with Hitachi.

MR. CASE: Okay. Do you know how they are doing that?

MR. WATFORD: No, we don't.

MR. CASE: What NISA told us, that the fire's out but the, you know, it sounded like either the fire brigade, or (inaudible) maybe the local fire people couldn't get up there and confirm that, we

imagine because of doses.

MR. WATFORD: Yes, yes, we have seen the reports, again all from the press, about you know, a wide range of dose rates as high as 40 rem per hour.

MR. CASE: Okay.

MR. WATFORD: Four hundred millisieverts per hour.

MR. CASE: I guess I got that number too.

MR. WATFORD: I believe if I've got mine right, divide by 10 to take millisievert to rem.

MR. CASE: Right.

MR. WATFORD: And we won't even talk about nanograys.

MR. CASE: Oh God, yes. Okay, now do you have dose projection guys?

MR. WATFORD: Yes, we don't have them with us right now.

MR. CASE: Okay. Good. All right, now can we go back to unit two? You know, we might have a gross conceptual error.

MR. WATFORD: Okay.

MR. CASE: You know, when we talked to, whoever it was, NISA, and quite frankly, you know, I don't really understand who I'm talking to. It could be somebody -- you know, it didn't sound like he had a

direct link to good information, you know, it's certainly like somebody removed from information.

MR. WATFORD: Right.

MR. CASE: But it might even have been an international guy. But anyway, I sort of go through the same discussion. Like I said, for some reason, we interpreted the loud explosion and things that went on around that time as, as a breach of the vessel and a breach of containment, and I think we have based the breach of containment on the suppression chamber reading, the one that went from three atmospheres to one atmosphere.

The NISA guy, you know, I didn't, you know, I didn't try and direct him, but he also talked about the suppression chamber pressure, and he said it was downscale, which would be consistent with what you all are thinking.

MR. WATFORD: Correct.

MR. CASE: And then he also reported, you know, like something like 80 pounds in the vessel and 10 pounds in the drywell, which is not consistent with our thoughts that the vessel is not intact. So why are we screwed up?

Why do you think the vessel is intact?

MR. WATFORD: Because it's still

pressurized.

MR. CASE: Based on what number?

MR. WATFORD: (b)(4)

(b)(4)

MR. CASE: Okay, hold on a second.

MR. WATFORD: (b)(4)

MR. CASE: That was, that was drywell pressure?

MR. WATFORD: (b)(4)

MR. CASE: Okay, let me check and see what we got from NISA.

(Speaks off mic)

Hey Ken, what pressure do we get, the drywell pressure, from NISA?

(Returns to main conversation)

We got 10.6 pounds.

MR. WATFORD: (b)(4)

MR. CASE: Yes, 73 kilopascals.

MR. WATFORD: (b)(4)

(b)(4)

MR. CASE: Oh is that right? How are you figuring that? Only because, you, you know, it went down from your 90?

MR. WATFORD: (b)(4)

(b)(4)

MR. CASE: Okay.

MR. WATFORD: (b)(4)

(b)(4)

MR. CASE: Okay, so maybe you could do some thinking around that. You know, well I don't have the doses, but you know, the doses are pretty screaming high, right?

MR. WATFORD: Yes.

MR. CASE: And so if you are -- you know, back to your theory, if the vessel is intact and the containment's intact, what's causing them screaming high rad levels?

MR. WATFORD: (b)((b)(4)

(b)(4)

MR. CASE: Right. Wow. And once again I

didn't talk to the dose guys, but for some, well, you know, most of our projections are driven by this, this vessel breach scenario more than the spent fuel pools, but I'll go over and poke around with them.

MR. WATFORD: Okay.

MR. CASE: Okay, good. Do we have any other news or reviews?

MR. WATFORD: No, it's been pretty quiet as far as getting any udpated information in the last three or four hours.

MR. CASE: Yes, we are -- we will try and go back to our contact, you know, we have people on the ground there.

MR. WATFORD: Okay.

MR. CASE: And we'll see if we can, see if we can get some more information on, on real readings and things like that.

MR. WATFORD: Yes, definitely the vessel and drywell pressures in unit two would be beneficial in understanding that.

MR. CASE: Yes, anything else you think we should be searching for?

MR. WATFORD: We were looking for bottom head temperature.

MR. CASE: Bottom head temperature. Ooh,

that would be a hard one. (b)(5)

(b)(5)

MR. WATFORD: (b)(4)

(b)(4)

MR. CASE: Right. You probably -- you can handle that one.

MR. WATFORD: Maybe so.

MR. CASE: Okay, fantastic.

MR. WATFORD: Okay.

MR. CASE: It's great talking to you. You are doing a great job.

MR. WATFORD: All right, appreciate it.

MR. CASE: Okay, talk to you later.

MR. WATFORD: Bye.

0-C9-SM610065094

(CONFERENCE CALL INITIATED)

MR. CASE: NRC, Mike Case.

MR. FORD: Hello Mike, it's Peter Ford from the UK Health and Safety Executive, nuclear inspections inspectorate.

MR. CASE: Hi Peter.

MR. FORD: Hi, how are you? I'm sorry we are a bit late. There's five of us here.

MR. CASE: Okay.

MR. FORD: I hope there's some, a couple on your side. (Phonetic). What we are trying to do is set up a line of communication between us, because we believe you have better information than we do.

MR. CASE: No, nobody has any good information.

MR. FORD: Well, it's -- well, this is, it's comforting that you say that, because I think everyone is working in a little bit of an information vacuum. So what we wanted to do was just put through what we thought the current situation with those reactors is, and take your feedback really.

MR. CASE: Okay.

MR. FORD: Maybe if it's still out, what we know is fact, what is supposition and just take it

from there.

MR. CASE: Okay.

MR. FORD: I think in the longer term, during the rest of the day, if we can keep, if this number and a line of communication open from time to time, I think that would be very useful.

MR. CASE: Okay, sure. I'll add you to the board. Sometimes it's, you know, sometimes these connections fall apart. But I guess I'll be back in, on the mid-shift, but I'll certainly give a call back.

MR. FORD: Okay. So can I just take your name again please?

MR. CASE: Michael Case. Okay hold on a second. I'm going to put you on the speakerphone, okay?

MR. FORD: Okay.

(Pause)

MR. CASE: Hi Peter are you still there?

MR. FORD: That's me, yes.

MR. CASE: Okay, great.

MR. FORD: Right, just, I might as well just introduce you to people that are here. My name is Peter Ford. We are all nuclear inspectors with the nuclear inspections inspectorate, so involved with -- our emergency center is up and running at the moment,

and we are -- we are in business to collate information and provide nuclear-related briefing to the rest of government, basically.

I've got Len Bruce, (phonetic) Dave Shepherd, Ali Tehrani and Robert Moscrop, (phonetic), and we all have various skill areas around nuclear safety.

MR. CASE: Okay. Are you all like reactor safety type folks or system type folks or --

MR. FORD: A mixture of that and systems safety, a bit of external hazards and seismic, so we are all trying to pull all this together as a bit of a brief for the rest of our organization, for them to send out

MR. CASE: Okay, you have, on our end you have mostly reactors safety team members, so we have another team that does dose assessment, but they are not involved, okay?

MR. FORD: Yes, so do we, so they are not here either.

MR. CASE: Okay, fantastic.

MR. FORD: All right. So, just to be clear, where are you at the moment? What's, what's, what's your role at your side?

MR. CASE: Oh, I'm the director of the --

what do we call it -- reactor safety team, so we are in the ops center as well.

MR. FORD: Right.

MR. CASE: And so we are like you. We are responsible for reactor assessment, and we feed that to our executive team, and they are the ones that make the decisions on what the agency is doing.

MR. FORD: I think we have got exactly the same role then, so I think --

MR. CASE: Yes, it sounds that way to me too.

MR. FORD: (Inaudible) people. Right? I am going to bat over to Ellie to --

MALE PARTICIPANT: Do you want us to introduce ourselves round the table?

MR. FORD: Oh sorry, could you just introduce yourselves around the table please?

MR. CASE: Okay, sure.

MR. STAHL: I'm Eric Stahl. I'm the international liaison here at the ops center.

MS. BROWN: (Inaudible) Brown, I'm a BWR ops specialist and analyst.

MR. FORD: I didn't get that name, sorry.

MS. BROWN: Eva Brown.

MR. FORD: Eva Brown, thank you.

MR. BERRY: Rollie Berry, reactor safety team coordinator.

MR. FORD: Yes, thank you.

MR. CASE: And that's it for us.

MR. FORD: Okay. Great, so we have got all of oyu. You have got all of us.

MR. TEHRANI: Right, Ali Tehrani here, guys. I just want to give you a four-line briefing that is our current understanding of the reactor status. And my colleagues here could correct me as I go along.

Our understanding is reactor one, two and three, that two has now been fully exposed, and one and three are likely to be degrading.

MR. CASE: Okay.

MS. BROWN: What do they mean by fully exposed?

MR. CASE: Yes, what do they mean by fully exposed? Has been or is?

MR. TEHRANI: Is. That's our current understanding of one, two and three.

MR. CASE: Okay. You know, I'm a little unsure on unit two, but one and three we thought were being fed from seawater, and we presume that they were covered, you know, we did have some readings that

indicated that they were, you know, maybe two-thirds core coverage, you know in that sort of area.

MR. TEHRANI: But is your -- the discussion we had yesterday, there was a -- they were not sure whether they were actually able to get any coolant into the reactor pressure vessel. It that -- you are suggesting the they are doing that?

MR. CASE: That's our current understanding, because that's always a good question.

UK NUCLEAR INSPECTIONS INSPECTORATE: Are the turbines working for the RCI (phonetic) feeds, for getting water into the Rps?

MR. CASE: No, that's kind of, for us that would be an old status. The status, we converted maybe two days ago to a status that said they were injecting seawater in. Right, it was actually borated seawater was what was reported to us. I think most of that stuff we got from the TEPCO press releases.

UK NUCLEAR INSPECTIONS INSPECTORATE: Right, but how, how are they actually getting it into the reactor vessel?

MS. BROWN: Yes, we don't know.

MR. CASE: Fire pumps, but we are not sure of the exact flow path.

MR. TEHRANI: That's what Randy said

yesterday.

UK NUCLEAR INSPECTIONS INSPECTORATE: Well yes, I mean, we have spoken to Randy Gauntt at Sandia, who is, who we understand is flying out there, and he was -- he wasn't sure that there was other ways of getting water very easily into the reactor vessel.

MR. CASE: Well, I can neither confirm nor deny that.

(Laughter)

UK NUCLEAR INSPECTIONS INSPECTORATE: Yes, so we came to a conclusion that it's unlikely that there was water being transmitted into the reactor vessel, because the only route seemed to be through the RCIC turbines and there's no instrumentation to operate those. So we thought that's why we are hearing reports of different levels in the, in the reactors.

NRC: Right, in the BWR world, as long as you can depressurize the reactor, and you have a portable pump, you can, you can get the water in there. So it's not, not essential that you have RCIC. As long as, as long as you have safety release valves and can reduce the pressure in the reactor pressure vessel, you can get water in there.

MR. CASE: We haven't, you know we

haven't heard any recent information that would suggest that unit one and unit three are in a bad way that way.

MS. BROWN: Fully exposed.

MR. CASE: Fully exposed, no.

MS. BROWN: No.

MR. CASE: So that would be new to us. So we'll check that out.

UK NUCLEAR INSPECTIONS INSPECTORATE: Can I just ask a -- could you just explain briefly what the route is to get water into the vessel if you don't use the RCIC route?

MR. CASE: With like a portable fire truck, you know, some of it is -- you hose it over to a system that's connected to the RPV --

UK NUCLEAR INSPECTIONS INSPECTORATE: Okay.

MR. CASE: As long as you have the reactor pressure below the head of whatever the pumping is, the water will go in. So if you could use a normal, normal system that's intact, you know, like a normal, like a core spray system or any system that connects to the reactor pressure vessel, and use that piping system to get the water in, and you can connect up a portable hose and pump it in, so long as the

pressure is low enough.

UK NUCLEAR INSPECTIONS INSPECTORATE: So there are, there are other points where you can connect a hose to get water into the vessel.

MR. CASE: Right.

MS. BROWN: That's my understanding.

MR. CASE: Right.

UK NUCLEAR INSPECTIONS INSPECTORATE: Because we got the impression yesterday that there probably weren't. So that's --

MR. CASE: Typically in the modern BWR, they have those pre-staged. But you could, you could ad hoc it too.

UK NUCLEAR INSPECTIONS INSPECTORATE: But these are 40 years old aren't they? The're not modern.

MR. CASE: Yes, you can get it in through feedwater condensate, you know, anything, any pipe that connects.

(Multiple speakers)

UK NUCLEAR INSPECTIONS INSPECTORATE: We understand. Thank you. And you believe they are able to control the reactor pressure vessel in terms of pressure? They are able to use the SRV to get the pressure down provisionally?

MR. CASE: They, they have the capability in that they have SRVs. There's been trouble controlling the pressure, and you know, we got it on, you know, various reports throughout these incidents that, that they were having trouble with pressure control.

But, you know, no specifics on it. So that's sometimes, even -- well, we had one report that even though they had the fire pumps running, the water wasn't getting in there because they didn't have the pressure down low enough. So they do have some pressure control problems, but we just don't know what they are.

MR. TEHRANI: Okay, let me juts dive in to a question and then we will come back to the mainstream of the discussion her. There was a belief that a LOCA might have occurred on the primary circuit, and that might be difficult, that might give them, that might challenge controlling the primary circuit pressure.

Do you have any views on that?

MR. CASE: Okay, say that one again, on an electrical lockout?

MR. TEHRANI: No, a loss of coolant accident.

MR. CASE: Ah, a LOCA, okay.

MS. BROWN: A LOCA. No, I don't think we have -- not a LOCA.

MR. CASE: No, we have never, you know, throughout this whole incident, you know, we have never really a lot of indications of a LOCA, or anything that we could pin down to that.

UK NUCLEAR INSPECTIONS INSPECTORATE: Let me just review the status of each of the -- we need to try to explain why we have got the radiation coming (inaudible)

(Multiple speakers)

MR. TEHRANI: Okay, so, amd moving on to reactor two, understand there had been an explosion and that explosion -- and minor fire, and that fire has now been put out?

MR. CASE: We didn't hear about the minor fire. We heard about a fire on unit four.

MR. TEHRANI: We'll come back to that in a minute.

MR. CASE: Okay, good.

MR. TEHRANI: There is no indication of any fire on reactor two, but there has been an explosion on reactor two.

NRC: Has there?

MR. CASE: Yes, my folks are nodding. Sometimes they get all my explosions confused.

UK NUCLEAR INSPECTIONS INSPECTORATE: Okay.

UK NUCLEAR INSPECTIONS INSPECTORATE: It's all right. We do that as well. Too many explosions to go around.

UK NUCLEAR INSPECTIONS INSPECTORATE: Is there any evidence of damage to the containment on reactor two, because we are getting indications that there may be damage to the torus, the --

MR. CASE: We, we think that we have indication that there might be damage to the torus, you know, based on some pressure readings.

NRC: How do you all figure out that you think you have damage to the torus?

UK NUCLEAR INSPECTIONS INSPECTORATE: Rumor.

UK NUCLEAR INSPECTIONS INSPECTORATE: (Inaudible) statement (inaudible).

UK NUCLEAR INSPECTIONS INSPECTORATE: Yes, update statements from (inaudible) NISA.

UK NUCLEAR INSPECTIONS INSPECTORATE: It's hard to know which ones are correct and which ones are just speculation, but we have definitely seen a

statement that there is damage to the containment, including the torus.

MR. CASE: Okay, good. That's, that's a little reassuring. You know, it's -- we don't have that one nailed. It's a little bit of piecing the puzzle together, but we think there is -- you know, definitely we think the other two containments are intact, and certainly for this containment we think there is a problem.

UK NUCLEAR INSPECTIONS INSPECTORATE: What are the pressures, do you have indications of pressures in the containment buildings of the three reactors?

MR. CASE: I can tell you, you know, we had a discussion with NISA relatively recently, and that we said -- well, and once again you know, any time we get this data, it's really hard to figure out where in the scenario you are getting the piece of data.

UK NUCLEAR INSPECTIONS INSPECTORATE: I understand.

MR. CASE: But they reported the drywell at 10.6 psi. Well, we converted it to psi.

UK NUCLEAR INSPECTIONS INSPECTORATE: But I understand that as well.

MR. TEHRANI: Did you say 10.6 psi?

MR. CASE: And then early on in the incident we were getting pressure, containment pressures that were, you know, close to 100 psi, so there's not really a credible way that they could reduce the pressure that much with what they are doing.

UK NUCLEAR INSPECTIONS INSPECTORATE: That's on reactor two, is it?

MR. CASE: Yes, unit two.

UK NUCLEAR INSPECTIONS INSPECTORATE: It might be better if we just systematically go through each reactor, just get the full status, just so it's clear.

MR. CASE: Okay.

UK NUCLEAR INSPECTIONS INSPECTORATE: So what you are saying is on reactor one, you believe the reactor vessel is being fed with water.

MR. CASE: Yes.

UK NUCLEAR INSPECTIONS INSPECTORATE: Do you have any indications of pressure in the primary vessel and in the containment?

MR. CASE: Not any recent readings.

UK NUCLEAR INSPECTIONS INSPECTORATE: Okay. And I guess you think the status is similar on

three as well?

MR. CASE: Correct.

UK NUCLEAR INSPECTIONS INSPECTORATE: Okay.

MR. FORD: So it's on reactor one then, RPP is (inaudible) so it's the containment is intact?

MR. CASE: Correct.

MR. FORD: And what about the fuel pool (inaudible).

MR. CASE: Which unit? On all?

MR. FORD: Just do R1 first, just try and go through it systematically.

MR. CASE: Unit one, we had -- we didn't get any feedback on the fuel pool level.

MR. FORD: So we don't know about that. So containment seems to be intact.

MR. CASE: Yes.

UK NUCLEAR INSPECTIONS INSPECTORATE: Reactor vessel seems to be intact.

MR. FORD: Reactor vessel is intact.

(Multiple speakers)

NRC: Primary containment.

MR. FORD: All right. Same questions on R2, reactor pressure vessel?

MS. BROWN: It may be. We don't know.

MR. CASE: We have our doubts whether it's intact.

MR. FORD: All right, so question mark on that. So in terms of the core, we don't know whether that's covered or uncovered, do we?

MR. CASE: Say that one again.

MR. FORD: In terms of the core itself.

MR. CASE: Oh yes, we don't know whether it's covered or uncovered.

MR. FORD: We have a question mark on that one.

MR. CASE: Yes. Did we get any level indication on that?

MS. BROWN: No. (b)(5)

(b)(5)

MR. CASE: (b)(5)

(b)(5)

UK NUCLEAR INSPECTIONS INSPECTORATE: Not on two.

MR. CASE: (b)(5)

(b)(5)

MR. FORD: All right. Fair enough. I'll question mark this. We are confident there is a

question mark there. The containment there, what are we saying the status of that is?

MR. CASE: We think it's somehow damaged.

MR. FORD: Damaged, right, that's what we think as well. And the pool, the fuel pool there?

MR. CASE: No information on that.

MR. FORD: Just a question mark. All right, R3, same questions for R3, RPV?

MR. CASE: Seems intact.

MR. FORD: RPV good. The core?

MR. CASE: It seems okay. We got a level reading and it was, you know, something like two-thirds core coverage.

MR. FORD: Okay, yes, that's good. Containment?

MR. CASE: Seems intact, and secondary containment is -- is damaged.

MR. FORD: And the fuel pool, just, what was that again?

MR. CASE: Well, secondary containment you know, because of the explosion, is damaged or gone.

MR. TEHRANI: Okay, that's what we referred to as the reactor building.

MR. CASE: Yes. Right.

MR. FORD: And the fuel pool in that one, R3?

MR. CASE: No specific information on that.

MR. FORD: Right, and so, R4? RPV?

MR. CASE: R4 is fine from a reactor perspective.

UK NUCLEAR INSPECTIONS INSPECTORATE: Okay, so, in that case core is okay. Containment's okay. It's the pool that's the problem there, isn't it?

MR. CASE: Correct.

UK NUCLEAR INSPECTIONS INSPECTORATE: Was that reactor shut down before the incident though, wasn't it?

MR. CASE: Yes, so, you know, I'm a -- we didn't really ask very many questions about containment, so you know, I don't know where they were in their outage or whatever, so you know, I can't say whether the containment is intact or not.

MR. FORD: Do we have any idea why there should be problems with the pool there if it was shut down and -- (inaudible) a bit strange that they should have a problem.

UK NUCLEAR INSPECTIONS INSPECTORATE: Well

it's got the highest, if you think about it --

(Multiple speakers)

UK NUCLEAR INSPECTIONS INSPECTORATE: Can we just confirm the facts first of all? We believe there was a fire associated with the spent fuel?

MR. CASE: Correct.

UK NUCLEAR INSPECTIONS INSPECTORATE: That seems to be associated with the statement that dose rates were elevated?

MR. CASE: Yes. That's consistent with that.

UK NUCLEAR INSPECTIONS INSPECTORATE: Yes, and we think that the fire has now been put out?

MR. CASE: Well --

NRC: That's hours ago.

MR. CASE: Yes, what leads you to believe that it's put out? NISA said it was put out. TEPCO said it was put out. Is that the information that you have drawn that?

UK NUCLEAR INSPECTIONS INSPECTORATE: That's just information we have --

(Multiple speakers)

MR. CASE: IAEA apparently said it.

(Multiple speakers)

MR. CASE: But is that what you are using

for sources on those?

UK NUCLEAR INSPECTIONS INSPECTORATE: It is, yes.

MR. CASE: Okay, great.

UK NUCLEAR INSPECTIONS INSPECTORATE: So you have got nothing that contradicts that?

MR. CASE: No.

UK NUCLEAR INSPECTIONS INSPECTORATE: Okay.

MR. TEHRANI: Do you have any information how the fire was put out?

MR. CASE: No, other than that the NISA fellow said that, you know, what sounded like the fire brigade was, was unable to confirm that it was out, because they couldn't get up there, probably due to dose constraints.

UK NUCLEAR INSPECTIONS INSPECTORATE: Yes.

MR. TEHRANI: Okay. And the NISA guy couldn't give you any information how the fire started?

MR. CASE: No.

(Multiple speakers off mic)

UK NUCLEAR INSPECTIONS INSPECTORATE: Do we know what the inventory was in the pool?

(Off mic, inaudible)

MR. CASE: What, the temperature?

UK NUCLEAR INSPECTIONS INSPECTORATE: The inventory, how much fuel was in the pool.

UK NUCLEAR INSPECTIONS INSPECTORATE: How much was in there.

MR. CASE: Yes, no, we couldn't get them to give us any level information. You know, we tried on every spent fuel pool to see if we could get them to tell us the level.

UK NUCLEAR INSPECTIONS INSPECTORATE: Okay.

UK NUCLEAR INSPECTIONS INSPECTORATE: So in terms of the elevated radiation doses that they now seem to be measuring, which we have got information on, haven't we, some information on that. Is that consistent with this pool fire? (Inaudible) likely to be the source?

MR. CASE: Well, I haven't talked to the PMT yet, our protective measures team, to really nail down that answer. That's a great question, I have got to follow up on that one.

UK NUCLEAR INSPECTIONS INSPECTORATE: The IAEA statement says dose rates up to 400 millisieverts an hour reported; Japanese authorities are saying there's a possibility that the fire was caused by a

hydrogen explosion. And that's all that we know about it.

MR. CASE: Yes, and I think that's, that's all the information we are working with as well.

MR. TEHRANI: Okay. Mike, do you have any planned further discussions with, with the Japanese this morning?

MR. CASE: No, not this morning. We tried to get on a callback schedule with them, but they weren't able to support that.

UK NUCLEAR INSPECTIONS INSPECTORATE: Can we just focus on reactor two now, because that's obviously the one in the most distress. I just want to understand what the strategy is for going forward with that. I mean, it sounds as though they have got a LOCA in the reactor pressure vessel and so it would be -- and they have also got a break in the containment.

What is their strategy. Are they trying to flood (phonetic) the reactor pressure vessel? Are they trying to --

UK NUCLEAR INSPECTIONS INSPECTORATE: We have heard there's a suggestion that sand is being used, didn't we?

MR. CASE: What, sand?

(Multiple speakers)

MR. CASE: Right, yes, we went through the sand phase as well.

(Laughter)

UK NUCLEAR INSPECTIONS INSPECTORATE: So, I'm sorry, to come back to reactor two, what's your understanding of what their strategy is going forward?

MR. CASE: Well, once again it seems as if they are you know, using borated seawater to pump in there, and did we get a pressure, reactor pressure reading?

MS. BROWN: For unit two?

MR. CASE: Yes.

NRC: Ninety pounds.

MR. CASE: Ninety?

MS. BROWN: That was the 88.8 pounds.

MR. CASE: Yes, 88 pounds. So it's -- based on that reading, it's credible that the portable pump can have the head capacity to get water in there.

Apparently there was a time where the reactor pressure wasn't low enough to get water in, so it may have gone through a phase where they thought they were getting water in and they weren't really successful.

So based on you know, once again based on the little bit of data that we have, that's a reasonable path to be on.

UK NUCLEAR INSPECTIONS INSPECTORATE: So it sounds as they they have still got the fuel in the reactor vessel, and it has some cooling to it.

MR. CASE: Well, yes, there's probably, you know, we think there's probably been some considerable fuel damage.

UK NUCLEAR INSPECTIONS INSPECTORATE: Yes.

MR. CASE: And you know --

UK NUCLEAR INSPECTIONS INSPECTORATE: But it doesn't look like it's melting through the pressure vessel at the moment, does it?

MR. CASE: It could be.

UK NUCLEAR INSPECTIONS INSPECTORATE: Could be. How do you know?

UK NUCLEAR INSPECTIONS INSPECTORATE: Well, I don't know.

MR. CASE: Right, you know, that's what we are trying to figure out, is if there's a way we could tell.

MR. FORD: Okay. All right.

UK NUCLEAR INSPECTIONS INSPECTORATE: Is there anything else from our side that we want to add

now or have we --

MR. TEHRANI: Not at this stage, but if we have a fuller understanding how -- when Mike is finishing his shift and his team, that would give us an opportunity to schedule our next telephone with Mike.

UK NUCLEAR INSPECTIONS INSPECTORATE: Okay.

UK NUCLEAR INSPECTIONS INSPECTORATE: Does that sound good to you Mike?

MR. CASE: Sure. I think we go off in about two and a half hours. Is that right?

MS. BROWN: Yes.

MR. FORD: Okay. Well can we make a date then, for -- it's 8:24, 8:25 UK time. Two and a half hours would make it 9, 10, 11 o'clock UK time, don't know what that is your time.

MR. CASE: Okay, if you want to get together with us, you might want to do it earlier, as we will probably be -- there will probably be twice as many people in here trying to turn over.

MR. FORD: Right, well why don't we do it an hour before that?

MR. CASE: Okay.

MR. FORD: That will be 10 o'clock our

time. What time will it be with you? You are five hours behind us I think aren't you?

MR. CASE: It'll be 6 a.m. for us. Just to confirm, that call will be in one and a half hours.

MR. FORD: One and a half hours, yes.

MR. CASE: I can give you a hint of what we will know different in an hour and a half.

UK NUCLEAR INSPECTIONS INSPECTORATE: We should do it later.

MR. CASE: Probably nothing. But we'd be happy to chat with you.

UK NUCLEAR INSPECTIONS INSPECTORATE: I understand. News isn't coming that fast, so I think it's probably not --

MR. FORD: I tell you what I think is the best thing, Mike. If you use me as a contact, I'll use you as a contact. When we have shift changeover here I'll make sure you know who it hands over to. I'll give you a call in an hour and a half. If there's nothing to report, there's no point having the teleconference and we'll put it back to a more reasonable time. Does that sound good?

MR. CASE: Yes, it does.

MR. FORD: All right, well, I'll give you a call then on the same number in an hour and a half's

time.

MR. CASE: (b)(5)

(b)(5)

UK NUCLEAR INSPECTIONS INSPECTORATE:

(b)(5)

MR. CASE: (b)(5)

(b)(5)

UK NUCLEAR INSPECTIONS INSPECTORATE: (b)(5)

(b)(5)

UK NUCLEAR INSPECTIONS INSPECTORATE: That was one question that just occurred to me. How are they measuring the level indications in the reactor vessel, because we thought a lot of the (inaudible)

and DC was out of action. Do you know how they are actually coming up with these level measurements?

NRC: No, but I imagine that, that, you know, some of that is powered through an invertor. So you know, if it was my plant, you know, some of that batter power that I had, I would use to power that instrumentation after the invertor.

I imagine that they probably have a small cadre of things that work, because we have gotten pretty consistent readings you know, sort of in the same level range, throughout the incident. So I have got to assume that something is reading there.

UK NUCLEAR INSPECTIONS INSPECTORATE: Okay.

MR. CASE: (Inaudible) get them on different units too, so it must -- you know, it sounds consistent to me.

(Multiple speakers)

MR. TEHRANI: Mike, do you have any view who is traveling to Japan from NRC?

MR. CASE: Yes, we got a couple of folks over there right now.

MR. TEHRANI: Okay.

MR. CASE: And then we have a team of about six people -- seven others -- that are somewhere

in the air heading over there. So, you know, we talk to our folks on the ground, and you know, they get some information, but once again, it's not like they have a wealth of information that they are dragging in.

UK NUCLEAR INSPECTIONS INSPECTORATE: Do you have a comms system set up to get sort of validated information once they arrive?

MR. CASE: No, not yet. We haven't got to that point.

UK NUCLEAR INSPECTIONS INSPECTORATE: But will they be feeding back to you when they have it, do you think, or your team?

MR. CASE: Well, we, we, we call them. One's sort of you know, attached to the Ambassador so I think he's a little bit more busy. But one we, we did have one phone call with him earlier on, and we'll probably do another phone call with him in a little while.

UK NUCLEAR INSPECTIONS INSPECTORATE: Okay. So I'm just, just -- because obviously, any information that can be assured as being accurate is very valuable when you have got a sea of information that's uncertain.

So if you have got a route from your guys

when they get to Japan, that would obviously help a lot.

MR. CASE: Right. You know, I think we need to work some of those routines out.

MR. TEHRANI: Yes, okay. Particularly if you are going to have a chat with your guys currently in Tokyo, it would be very useful to get a feedback from you in terms of how that discussion has developed.

MR. CASE: Okay, yes. We will try and do at least one prior to checking in with you folks again in an hour and a half.

MR. TEHRANI: Thank you for that.

UK NUCLEAR INSPECTIONS INSPECTORATE: Thank you a lot.

MULTIPLE SPEAKERS: Thank you.

MR. CASE: Okay guys.

UK NUCLEAR INSPECTIONS INSPECTORATE: Thanks a lot. Okay.

MR. CASE: (Inaudible) work over there.

UK NUCLEAR INSPECTIONS INSPECTORATE: Yes, we are trying hard.

MR. CASE: There you go. Talk to you later then.

UK NUCLEAR INSPECTIONS INSPECTORATE:

Okay. Bye-bye.

NRC: Bye.

0-C9W5HL10065094 (Contains no words to transcribe.)

0-CA!D--10065094

(CONFERENCE CALL INITIATED)

FEMALE PARTICIPANT: Hello? Oh, I'm sorry. I dialed the wrong number.

0-CA-A6-10065094 (Contains no words to transcribe.)

0-CF7J2610065094

(CONFERENCE CALL INITIATED)

MR. SULLIVAN: Reactor safety team. This is Dave Skeen speaking.

VANESSA: Hey Dave, Vanessa with the comms center.

MR. SKEEN: Hey, how are you doing?

VANESSA: Pretty good. I got Izzy (phonetic) here. I am going to put you on speaker, okay?

MR. SKEEN: Okay. Hello?

IZZY. Sir?

MR. SKEEN: Yes.

IZZY: This is (inaudible). Remember yesterday's snafu where you couldn't get into that office because of the TS/SCI?

MR. SKEEN: Yes sir.

IZZY: Well, we got you a pool (phonetic) so if you can come over here we can sign you back in as being read in.

MR. SKEEN: Okay. I'm over in the reactor safety team right now. Could I do it maybe at noon? Is there going to be somebody there at noon time frame, that I could come in?

IZZY: Yes, we will be here at noon, but

if the Chairman calls you in as another -- that's why I need to have you sign it before you walk in the door.

MR. SKEEN: Okay. That's fine. Well, we are having a team meeting right now. If I can get a chance I'll come over before noon. If not, I'll try to get there -- someone will be there that I can just sign the paperwork?

IZZY: Yes, somebody will definitely be here. I will definitely be here.

MR. SKEEN: Okay.

IZZY: Like I said, but if they call you up again, I need to --

MR. SKEEN: Understand.

IZZY: Okay.

MR. SKEEN: Okay, understand. Appreciate that, and if I get a chance to come over before, I'll get some relief here and I'll come over for 10 minutes and sign the papers then.

IZZY: All right, no problem.

MR. SKEEN: I appreciate it.

IZZY: Thank you.

MR. SKEEN: Al right, thank you. Bye.

0-CFE-B610065094

(CONFERENCE CALL INITIATED)

MALE PARTICIPANT: (Speaking off mic before call initiates) so at times, they have been relying on the safety function of the SRVs, which is (inaudible).

There are safety release valves which are remotely operable (inaudible)

MR. TINKLER: Hello.

MR. SKEEN: Charlie Tinkler?

MR. TINKLER: Speaking.

MR. SKEEN: Charlie, this is Dave Skeen. I am the reactor safety team director on the day shift here at the ops center.

MR. TINKLER: Sure.

MR. SKEEN: And I just turned over with Mike Case and he said they had spoken with you last night, some, about spent fuel pools, and --

MR. TINKLER: Yes, I talked to Ruland and I talked to Casto and I talked to Case for a little while about this, we had reports (inaudible) fire in unit four --

MR. SKEEN: Right.

MR. TINKLER: and we talked about what they might do in trying to -- in trying to stop that.

MR. SKEEN: Okay.

MR. TINKLER: Okay. But have they confirmed that they indeed have a zirc fire in that --

MR. SKEEN: No, I think that turned out to be a false alarm, in the end that there was no zirc fire in the pool. But what that did, it spawned a question from the Chairman, and the Chairman's office about well, how long would it take to boil off a cement fuel pool if it's fairly full, like we think these are?

MR. TINKLER: Well, okay, see, because I was kind of surprised that they had boiled it off this quickly but --

MR. SKEEN: Right.

MR. TINKLER: if they, if they had a -- if they offloaded -- it depends when the refueling was when they offloaded the core --

MR. SKEEN: Right.

MR. TINKLER: of the reactor.

MR. SKEEN: Right.

MR. TINKLER: Okay?

MR. SKEEN: Right. Right.

MR. TINKLER: Unit four they reported was about 100 days --

MR. SKEEN: Okay.

MR. TINKLER: Okay. And looking at calculations (b)(5) which was a pretty full pool, assuming, you know, assuming it's about the same way, and I don't have any reason to believe that it would be badly (phonetic) you know, it looked like, it looked like in five days that you'd be getting down to the top of the fuel rods.

MR. SKEEN: Right.

MR. TINKLER: Okay?

MR. SKEEN: That's with no cooling at all, right?

MR. TINKLER: That's with no cooling at all.

MR. SKEEN: Okay.

MR. TINKLER: Now maybe, it may be a little quicker if they sloshed the water out of those pools with the seismic event.

MR. SKEEN: Right.

MR. TINKLER: (Inaudible) pool's rocking back and forth. If they slosh water out of the pool it could take less. We told them -- we recommended last night that they check the water levels, that they know what it is in all those pools.

MR. SKEEN: Yes, and we can make that recommendation, but I can tell you, we have no

communication with the site --

MR. TINKLER: I understand, I can only tell you --

MR. SKEEN: Yes.

MR. TINKLER: Right now, the best, the best, the best calculation we have suggests that somewhere between four to five days, unit four could start to uncover, maybe in five days, could uncover.

MR. SKEEN: Okay.

MR. TINKLER: That depends on how much sloshing. But they are already at four days now.

MR. SKEEN: Right.

MR. TINKLER: Okay? Now we heard, I was told last night, that they have a reactor that was shut down more recently than unit four, and that means the decay in that pool will be higher.

MR. SKEEN: Okay.

MR. TINKLER: Okay. So --

MR. SKEEN: So that would be three to four days or something, maybe you are saying, to boil it down?

MR. TINKLER: It's hard for me to imagine less than about four days.

MR. SKEEN: Okay, yes.

MR. TINKLER: But, but, you know, like I

said, it all depends on how much water they started with, if they sloshed water --

MR. SKEEN: Exactly. Right.

MR. TINKLER: You know there's all sorts of (inaudible). If they had a bad seismic event maybe they could have cracked the liner a little bit, or you know.

MR. SKEEN: Right. Right.

MR. TINKLER: (Inaudible).

MR. SKEEN: And so we don't know any of that information either. Okay.

MR. TINKLER: I don't understand why they don't have any water level -- it's not -- they don't need a lot of instrumentation in that shutdown unit.

MR. SKEEN: Right. We don't know. Like I say, we don't know what (phonetic) they have. We have thousands of questions for them.

MR. TINKLER: I know. I know. So that's --

MR. SKEEN: So we are thinking somewhere between four or five days with no cooling, and a fairly recently offloaded core into the spent fuel pool in somewhere in four to five days.

Okay, now let's go to the next --

MR. TINKLER: Like I said, it depends on

how (inaudible) because that time shifts quite a bit.

MR. SKEEN: Right.

MR. TINKLER: If you've got any news about how recently it's been offloaded --

MR. SKEEN: Right.

MR. TINKLER: I would revise that number, but based on unit four which has been they said refueled about 100 days ago, offloaded about 100 days ago --

MR. SKEEN: Right.

MR. TINKLER: I would have said somewhere a little over four days, maybe five days.

MR. SKEEN: Okay.

MR. TINKLER: Okay. But they are already at four days.

MR. SKEEN: Okay. And on the shorter time frame if it was, say it was just done within the last few weeks, would you say it could be three days?

MR. TINKLER: Yes.

MR. SKEEN: It could boil off in three? So you could see something --

MR. TINKLER: Well yes, yes, if it's really been offloaded you know -- the earliest -- the earliest I looked at -- I'd have to -- I'd have to check. I got a calculation where it's been offloaded

about 20 days --

MR. SKEEN: Okay.

MR. TINKLER: I'd need a couple of minutes to look at it.

MR. SKEEN: Okay. Are you at work now or are you still at home?

MR. TINKLER: I'm still at home, but that's okay, I mean, you know.

MR. SKEEN: Well, if you want to work on that, that would be something to know. That would be a bit of information to have. But again, let's take it a step further now.

Let's assume no cooling, it gets down and boils off. Now, we start a zirc fire and will it start to burn, okay so it starts to burn --

MR. TINKLER: Yes, but now, you are going to have to uncover the rods about half-way down before they will start.

MR. SKEEN: Okay. So you still got a little bit of --

MR. TINKLER: It won't, it won't, it won't happen at the top of the fuel rods. It will happen about half uncovered.

MR. SKEEN: Okay.

MR. TINKLER: But like I tell you, trying

to put it out once it starts is tough.

MR. SKEEN: Right.

MR. TINKLER: The idea here should be to never let that water level get that low.

MR. SKEEN: Right.

MR. TINKLER: Okay?

MR. SKEEN: Okay. So that's -- that's bad, if it gets down half way and we start the fire. Now, let's continue on in this scenario. It continues to burn. We can't get cooling back. How bad does it get?

First, how long -- how long will it burn?

MR. TINKLER: It could burn for over a day.

MR. SKEEN: A day?

MR. TINKLER: It could.

MR. SKEEN: Okay.

MR. TINKLER: You know, it depends on how the fuel is spaced in the pool and a lot of things that we don't know.

MR. SKEEN: Yes.

MR. TINKLER: Okay?

MR. SKEEN: Right.

MR. TINKLER: But I mean --

MR. SKEEN: These are all just

approximations and all I'm going to do is just offer this as expert opinion based on having no knowledge, but just having some wild guesses, we would think it would burn for possibly a day, 24 hours.

MR. TINKLER: (Inaudible) but a lot of the fission products will come out quickly.

MR. SKEEN: Right.

MR. TINKLER: A lot of the radiation will come out quickly, and the fuel will give up practically its cesium pretty quickly, okay? The cesium will come out of the fuel almost, almost entirely, okay --

MR. SKEEN: Within -- within the 24-hour period or more -- quicker than that?

MR. TINKLER: Yes, yes, and some of it will come out even quicker as soon as the zirc fire starts, okay?

MR. SKEEN: So all the cesium within about 24 hours will be burned out, will be --

MR. TINKLER: Yes, will be, you know, could be released from the -- from the -- but like I say -- now some of it could be -- some of it could be retained in the building, okay?

MR. SKEEN: Right.

MR. TINKLER: But if they have another

hydrogen explosion in the building --

MR. SKEEN: Sure.

MR. TINKLER: it could very well have --

MR. SKEEN: Right.

MR. TINKLER: Then the building would be gone.

MR. SKEEN: Okay. Okay. So -- and then the other question was, is there any chance of a criticality from this? I didn't think there was but I wanted to ask you.

MR. TINKLER: No.

MR. SKEEN: If this slumps down, in other words you know, it just melts down into a -- some mass, it's not going to melt through --

MR. TINKLER: That -- no, criticality is not a concern.

MR. SKEEN: And it won't melt through the bottom of the fuel pool or anything? It will just burn like a hunk of metal and --

MR. TINKLER: No. No. Actually once this thing keeps going --

MR. SKEEN: Yes.

MR. TINKLER: It could, it could have a core -- it could react on the reactor floor of the pool just like, if it failed out of the reactor.

MR. SKEEN: Okay. So no criticality, but it could burn through the bottom of the spent fuel pool.

MR. TINKLER: Yes, but by the time that happens, it's given up so much bad radiation, you don't even want to think about it.

MR. SKEEN: Okay. So --

MR. TINKLER: Okay. It's radiation -- the cesium is already gone by that time.

MR. SKEEN: Okay. Now --

MR. TINKLER: And you got four -- you may have four cores' worth of cesium in that pool.

MR. SKEEN: Yes. Okay. So if it was going to burn until it melted through, is that in the 24-hour period, or is that some longer period?

MR. TINKLER: No, that would take longer, but like I said, practically speaking --

MR. SKEEN: Yes.

MR. TINKLER: All the -- most of the volatile radionuclides are gone. The cesium is gone, whatever iodine is left in the fuel is gone, you know -- the cesium is the big land contaminator.

MR. SKEEN: Right.

MR. TINKLER: It's got a 30-year half life. It's got big health effects.

MR. SKEEN: Right.

MR. TINKLER: Okay, that alone is enough to create a disaster in and of itself, four cores' worth of cesium --

MR. SKEEN: Okay.

MR. TINKLER: Because it's got a 30-year half life, the stuff that in the earlier cores has been offloaded is still in there.

MR. SKEEN: Right. Okay.

MR. TINKLER: Okay?

MR. SKEEN: Well, I'm trying to figure out, how do I -- I want to document this and somehow it gets some response back to the Chairman's office, probably by some time today, later today. Are you coming in the office today or --

MR. TINKLER: Later -- I'm going to be in a little -- I'll be in a little later on today.

MR. SKEEN: Okay. Well --

MR. TINKLER: Okay, I'm going to talk to, I'm going to talk to a colleague of mine who works all this stuff, who may be able to get you some other information.

MR. SKEEN: That would be great, if we could just get the paragraphs, you know, I want this high enough level, just, these are assumptions based

on you know, just some generic information. This is what we are thinking it could be. So I want to make sure we give them that, that this -- we have no information specific on these -- these pools.

But in typical -- if it was for so many days, if it's offloaded 100 days, it would be about four or five days to do it, if it was in a 20- to 30-day period then it's probably two to three days to boil off. So, just those kind of things to give him a general sense of what we are talking about. So --

MR. TINKLER: I mean they realize -- I know, I know, I know we can't communicate with them, but they really need to be checking water levels.

MR. SKEEN: Oh we know that, and I think certainly we have people on the ground at the embassy over there, and they have been trying to talk to the TEPCO people themselves but we are not having a lot of success.

We are mainly talking through the regulators to TEPCO and then TEPCO back to the regulator back to us, so it's you know, a lot gets lost in the translation back and forth, but we are doing the best we can.

MR. TINKLER: Yes, yes, no, I understand. I understand.

MR. SKEEN: So --

MR. TINKLER: But like I said, we don't -- we are not -- you -- I just want you to understand --

MR. SKEEN: Yes.

MR. TINKLER: We don't really, because you can't really tell me what the conditions are --

MR. SKEEN: Sure.

MR. TINKLER: I got to -- you -- I got to give you a range of numbers of sometimes.

MR. SKEEN: Sure. No, I understand and that's fine. Just -- I think this is to give the Chairman the feel for what are we talking about, and then he can figure out how he wants to present that if asked that question, right? He'll figure out how far he wants to go.

But I think he is -- I think he will get that question, since there was this concern it might have been a zirc fire in a fuel pool.

MR. TINKLER: Well like I said, when I first heard it, I thought it sounded, it sounded too soon to happen.

MR. SKEEN: Right. Right.

MR. TINKLER: And then they, then the, then the deal was well, maybe they slosh water out.

MR. SKEEN: Sure, sure.

MR. TINKLER: We don't know.

MR. SKEEN: Right, we just don't know.

MR. TINKLER: Maybe the exact line or you know --

MR. SKEEN: Right.

MR. TINKLER: But I would have said it was a little bit early to be in trouble. I would have thought maybe four or five days, but you know, I don't know. If they sloshed water out, it could have happened a little quicker.

MR. SKEEN: Right.

MR. TINKLER: But I would have -- my best guess would have been somewhere between four and five days but that was with a hundred -- that was with an offload that was 100 days --

MR. SKEEN: Sure.

MR. TINKLER: Okay?

MR. SKEEN: Sure.

MR. TINKLER: If you offloaded a couple of weeks and it --

MR. SKEEN: Right.

MR. TINKLER: Anyway I'll check on that.

MR. SKEEN: Yes. And if at some point, let's do a Q&A on this and get something written down that we can pass along to the Chairman. If I get

questioned on this this morning, I'll kind of give them, with caveats, the information you have provided me so far, but I'd rather wait until you get a chance to think about this and write something down and maybe check with a couple of your folks to, you know, so that you are all kind of in tune on this.

So --

MR. TINKLER: Okay.

MR. SKEEN: So you are coming into the office later?

MR. TINKLER: Yes, (b)(6)

(b)(6)

MR. SKEEN: Oh that's fine, but somewhere around shortly after noon or something like that you might have a --

MR. TINKLER: I would think so.

MR. SKEEN: an answer for us? And if you want to come in here and work in the ops center you are welcome to do that, but if you are more comfortable to just go to your office and kind of talk to a couple of guys and write me up a paragraph or so, that would be fine.

MR. TINKLER: Okay.

MR. SKEEN: Okay?

MR. TINKLER: Like I said, I'll know, I'll know in a couple of hours how this schedule is going to go here.

MR. SKEEN: Okay. Well I appreciate it and if you need to get a hold of us you can call us back here, and let me give you the number here in the ops center, where I am, in the reactor safety team.

It's 301-816-5502. And that will put you right into the reactor safety team room.

MR. TINKLER: Okay.

MR. SKEEN: And I'm Dave Skeen, again.

MR. TINKLER: Dave Skeen.

MR. SKEEN: Yes.

MR. TINKLER: By the way, is -- do you know Randy Sullivan?

MR. SKEEN: I do know Randy.

MR. TINKLER: Is he still in this EMT or has he gone home?

MR. SKEEN: He was here all night and he -- he is the one that turned over some information to us this morning.

MR. TINKLER: Okay. Okay. I --

MR. SKEEN: I think he has gone now.

MR. TINKLER: Okay. Okay. Because I talked to him at night and I was wondering --

MR. SKEEN: Yes, he is the one that turned this over to us. He said this is really a reactor safety team issue, and I know you and Mike and he had talked and so Mike is the one that said you just call Charlie. He has got the most information on this. He can probably give you the answer quicker than anybody else. So --

MR. TINKLER: Okay. Okeydoke.

MR. SKEEN: Okay?

MR. TINKLER: Thank you sir.

MR. SKEEN: Bye Charlie, talk to you soon.

MR. TINKLER: Bye-bye.

MR. SKEEN: Bye.

0-CG-EL610065094 (Contains no words to transcribe.)

0-CG-KDL10065094

(CONFERENCE CALL INITIATED)

MR. TINKLER: Tinkler.

MR. SKEEN: Hey Charlie, this is Dave Skeen again. I hate to bother you.

MR. TINKLER: No, it's okay.

MR. SKEEN: Hey, I just got a question from the ET folks here and they want me to run this by you. They are getting reports of -- between units three and four over there, of 40 R per hour, and they are saying could that be shine (phonetic) from the spent fuel pool as the inventory is decreased.

MR. TINKLER: Where is the 40 R per hour being measured?

MR. SKEEN: They just said between units three and four, so you know, we are not --

MR. TINKLER: Well you know, if the water levels are low --

MR. SKEEN: Dropping, right.

MR. TINKLER: you know -- I am not the best guy to convert shine to --

MR. SKEEN: Okay.

MR. TINKLER: But you know, we talked about how they could be down kind of in the neighborhood of the top of active fuel. Okay?

MR. SKEEN: Right.

MR. TINKLER: If you are talking about a dose within the building --

MR. SKEEN: Right.

MR. TINKLER: yes, because it could be, it could be high.

MR. SKEEN: Okay. All right so --

MR. TINKLER: So I don't, I don't know about 40 R per hour.

MR. SKEEN: Right. Right. I'll try to confirm with the dose assessment people and see what they think about it. But that was one question he wanted me to ask. And then also, they think that there may have been a small hydrogen detonation that may have come from the spent fuel pool. Is that possible? As the inventory's going down, would there be hydrogen being created there that could --

MR. TINKLER: Yes, look, if they uncover, if they slowly boil off, it's just like boiling off in a reactor --

MR. SKEEN: Right.

MR. TINKLER: Okay, you'll get a steam reaction --

MR. SKEEN: Right.

MR. TINKLER: You'll boil the water in the

lower part of the pool --

MR. SKEEN: Yes.

MR. TINKLER: That steam will pass over the heated rods in the top --

MR. SKEEN: Right.

MR. TINKLER: and it will have a zirc water -- a metal water reaction just like inside the reactor core.

MR. SKEEN: Okay.

MR. TINKLER: It will produce hydrogen in the reactor building, and it will explode.

MR. SKEEN: Okay. That's good. All right, that's what we are thinking, because there was some reports of some kind of hydrogen explosion, a small hydrogen explosion in that unit. But it wasn't big enough -- it didn't blow the roof off or anything like that, like on one and three, units one and three. So --

MR. TINKLER: Yes, but see, it's what I, what I can't figure out, is if that's happened, then what happens if it continues to get worse?

MR. SKEEN: Exactly. Right, that doesn't make sense either.

MR. TINKLER: Not really.

MR. SKEEN: Yes. Okay. They asked me

that question, I said well I just talked to Charlie, I'll call him back and see what he thinks about that. I'll check it with the doses people and see what they think about the 40 r, and then I'll give them --

MR. TINKLER: Well like I said, if they have -- if they don't know exactly the water level in those pools --

MR. SKEEN: Right.

MR. TINKLER: They have got to find it out.

MR. SKEEN: Yes. Okay. And I'll -- I'll try to feed that to them, and if we hear from Jim Trapp or Tony Ulses that's over there, I'll try to feed that information to them again.

MR. TINKLER: But again, if it's a -- if it's a gradual boiloff because they lost service water cooling --

MR. SKEEN: Right. Right.

MR. TINKLER: from the spent fuel pool, it will produce hydrogen just like inside the reactor core.

MR. SKEEN: Okay.

MR. TINKLER: Only, only it will produce a lot more, because they got four cores' worth of material in that pool.

MR. SKEEN: Yes. Okay.

MR. TINKLER: Okay?

MR. SKEEN: Yes. All right. I appreciate it.

MR. TINKLER: Terrific.

MR. SKEEN: All right Charlie. We'll be talking ot you again, I'm sure.

MR. TINKLER: Bye-bye.

MR. SKEEN: All right. Bye.

0-CGLJ3-10065094

(CONFERENCE CALL INITIATED)

MR. SKEEN: This is the reactor safety team, Dave Skeen speaking.

MR. NORTON: Dave, this is Chuck Norton. I work afternoon shift on the reactor safety team.

MR. SKEEN: Yes.

MR. NORTON: And I was wondering if I could get a little bit of an update of what's going on before I leave. There's a branch call I have to make this morning.

MR. SKEEN: An update right now for reactor safety team, let's see, we are just -- we are looking through to see about the spent fuel pools, what could happen if they lose the inventory in the spent fuel pools, how bad could it be, could there be a fire, could there, you know, what would the radiation release be, that kind of stuff.

So we are kind of what-iffing that stuff this morning is where we are.

MR. NORTON: Last night when I left, there had already been a fire, or at least we thought there was, in the unit four fuel pool, a zirceloy fire.

MR. SKEEN: Right, and that turned out to be in error. It was a lube oil fire on a generator

that had overheated. So it was a lube oil fire at that point. However there was, seemed to be a hydrogen, a small hydrogen explosion that didn't actually you know, blow up the secondary containment.

So that's part of the discussion we are having as inventory goes down in the fuel pool, and once the, you know, could that generate hydrogen, and the answer is yes, as it's passing the top of the, the spent fuel in there, and it gets hotter, that there could be hydrogen generated and that could cause a small explosion.

So we are just kind of going through that now, and I think Charlie Tinkler is going to be in later to work through some of this too. So --

MR. NORTON: Okay, well that's good. I'm glad to hear that was an error.

MR. SKEEN: Yes.

MR. NORTON: How about on unit two? Happened when I was leaving, we had just gotten word with Tony Ulses that all of the fuel had gone ex-vessel and there was a zirceloy fire in unit four. Has hte fuel gone ex-vessel in unit two?

MR. SKEEN: No, it turns out it was not ex-vessel in unit two either, that that was wrong. It seems to be right now the unit two containment is

still intact. So -- and they did restore cooling.

So right now, all three of the disabled units have cooling again for the time being, and the latest I heard was the U.S. is sending four diesel fire -- or diesel pumps that are capable of pumping into say 150 pounds of pressure.

So it sounds like that's -- that's better too. That's better news.

MR. NORTON: Okay now, on three disabled units, are they flooding just the reactor or are they flooding the containment too?

MR. SKEEN: I don't really have that information right now. I know before they were putting seawater down around the outside of the torus as well as into the reactor coolant system.

So I assume that since they lost their water source, was the problem before, they are still having the same pathways that they are injecting. So I am just guessing at that. We don't really know that information.

MR. NORTON: Okay. I sure do appreciate the update, and I'll be in around 2 o'clock.

MR. SKEEN: Okay, sounds good.

MR. NORTON: All right.

MR. SKEEN: All right. Talk to you later.

MR. NORTON: Bye.

MR. SKEEN: Bye.

0-CJLCA610065094

(CONFERENCE CALL INITIATED)

MR. SKEEN: Reactor safety team. This is Dave Skeen.

MR. TRAPP: How are you doing this morning?

MR. SKEEN: Just fine.

MR. TRAPP: (Inaudible) I've run basically 24/7. It calms down here at night so I thought I'd give you a ring and see if you had any info requests or any, any interest in the day's events.

MR. SKEEN: I'm sorry, who is this?

MR. TRAPP: I'm sorry Dave, it's Jim Trapp from Japan.

MR. SKEEN: Oh, Jim, great, yes, we would like to talk to you.

MR. TRAPP: Okay.

MR. SKEEN: So do you have any information from what we heard, I guess the last time we heard from you was 6:30 this morning, right?

MR. TRAPP: Yes, I may have touched base with you a couple of other times during the day, but you know, I'll just share with you, it's very interesting to gather data over here.

I don't know if you listen in to the call,

but we went down a road today that we almost issued some, some protective action guidelines that were, were pretty significant based on the licensee's -- not the licensee's information but the version of the NRC's information.

MR. SKEEN: Uh-huh.

MR. TRAPP: Throughout the day the information they provided us significantly changed.

MR. SKEEN: Well you know that you are hearing these reports on TV about the Japanese folks not trusting their government so much because they don't think they are leveling with them on everything right now.

So I don't know. We are seeing that on television here from our end.

MR. TRAPP: Let me give you an example, and this is kind of extreme. This morning at 8 o'clock, they had one of their high government officials at the prime minister's office building, and he did a press conference, and at 8 o'clock he said at 6 o'clock in the morning that they had an explosion at unit two?

MR. SKEEN: Right. Right.

MR. TRAPP: I'm getting a lot of static. Then he said that they went downstairs, checked some

of the connections on the torus, and some of the connections had broken off, and they possibly lost (audio drops, probably "secondary") containment.

MR. SKEEN: Okay.

MR. TRAPP: About -- they reported a dose of about an r an hour in the -- and it wasn't clear where that area was. They indicated that they had lost core cooling and they indicated that they had significant loss of water level.

MR. SKEEN: Okay.

MR. TRAPP: You know, here, so we went off and ran, Dave, and you know, when you think about it, if there's an explosion and it's not a hydrogen explosion, you know, our concern was, is that the corium finally went through the vessel and they had a steam explosion.

MR. SKEEN: Right. Yes sir?

MR. TRAPP: (Inaudible) explosion resulted in, in damage to the torus, you know, all that started coming together for us. So we really went off on that track that potentially could have lost you know, all three fission barriers, because they admitted to losing two, you know, clearly the fuel is a mess --

MR. SKEEN: Right.

MR. TRAPP: And they admitted to losing

containment. And we thought there was very strong evidence they had lost the reactor coolant system.

MR. SKEEN: Okay.

MR. TRAPP: Throughout the day that whole story changed significantly. All of a sudden the explosion was in unit four, and unit four is probably, you know, unit three obviously is inbetween four and two, and four is about a quarter of a mile down the road, and you know, all of a sudden there was no damage in unit four and they felt that maybe it was just another hydrogen explosion in unit four.

But they couldn't investigate because -- I don't know if you picked up on this, but unit four now has an unverified level in the spent fuel pool. They were in a refueling outage.

MR. SKEEN: Okay.

MR. TRAPP: And they -- when we came there in the morning, they reported a fire in -- a spent fuel fire in unit four. So we left this interview after about an hour and a half with a government official, and you know, what we thought was, you know, that we had one unit with a spent fuel fire and the other unit we had with three fission barriers ruptured and possible ex-core injection.

And interesting enough, by the time we got

back here, you know, because we told them that, that's what we thought we had --

MR. SKEEN: Right.

MR. TRAPP: They send a letter over, a fax over to the Ambassador, and they say our engineers agree with your engineers.

(Laughter)

MR. SKEEN: Our engineers agree with your engineers, huh?

MR. TRAPP: Sure. And then the other thing that was perplexing is that first thing in the morning when we walked in, we were fighting an issue where we have -- and you guys might be able to help me on this one.

MR. SKEEN: Okay.

MR. TRAPP: We have a -- we have a naval asset in Yososka (phonetic), it's spelled, let me see if I can find it, I think it's Y-O-S-O-S-K-A, Yosako? (Phonetic, he means Yokosuka).

MR. SKEEN: Okay.

MR. TRAPP: And the Navy calls us up and says that they were planning on taking pags (phonetic) because they were measuring some significant radiation doses both thyroid and whole body, TEDE.

And it sounded like you know, we sort of

challenged them because the base is probably 180 miles probably maybe, away from the site to the south.

MR. SKEEN: Okay.

MR. TRAPP: And we just couldn't believe in a million years that they were getting, you know, a millirem and a half that far away. You know, it was just, it didn't strike us as credible. The Navy Admiral was adamant, clearly they had a very good understanding of radiation. They used multiple detectors. They did air sampling. You know, sounded like, you know, like a plant or an NRC type HP guy.

MR. SKEEN: Right.

MR. TRAPP: They, I think they got overcome by events, because we were actually fighting that issue kind of, because one of the problems we are going to have here, and this is something you could really help us with, is you know, we are going to have plumes here for a long time. We are beginning to send more sophisticated detection equipment to the island, and you know, we are going to deploy that, and everywhere we go here, we are going to be measuring some kind of millirems.

MR. SKEEN: Right.

MR. TRAPP: And you know, this Admiral was going to shelter children shelter wives, and I forget

what else he was -- maybe shut the base down to wives, children, shelter them, and suspend activities.

And if we have that occurring all over, all over Japan, that's going to be a challenge. What I am getting at is I think we are going to really need some sort of standard that people can have, that you know, here's the pags and I'm not sure if the right pag is going to be, you know, one in five, because I don't think that might be very satisfying.

But it's something you know, we ought to be thinking about, thinking ahead about, because as soon as that detection equipment hits here, everybody is going to be reading something.

MR. SKEEN: Yes, that's a good thought Jim. My other thought is what are the Japanese limits?

MR. TRAPP: You know, I don't know the answer to that.

MR. SKEEN: Because my thinking is, if all of a sudden the military bases are shutting their bases down and protecting people, or doing something different than what the general population is, you know, that's going to send a message too.

MR. TRAPP: That's going to be a real problem, you're right. But to put this in perspective

Dave, this base is like half way down the island from Tokyo.

MR. SKEEN: Yes, it doesn't make any sense that that is coming from the Fukushima site, unless there's another site that's in trouble, or has the wind blown it that far south? I don't know --

MR. TRAPP: (b)(5)

(b)(5)

MR. SKEEN: Yes.

MR. TRAPP: (b)(5)

(b)(5) and let me give you the numbers of this Osaka (phonetic), maybe it's -- oh here it is, it's Y-O-K-O-S-U-K-A, Yokosuka.

MR. SKEEN: Okay.

MR. TRAPP: You know --

MR. SKEEN: Spell it for me again.

MR. TRAPP: Y-O-K-O-S-U-K-A.

JEFF: Jim, this is Jeff. Yesterday we were talking to USAID and they were supposed to get that equipment from that base.

MR. TRAPP: Oh yes, yes. And here's the dose limits that they gave, or the dose that they were measuring. He was measuring 19 mR per hour thyroid, so I guess that's probably iodine 131, which is pretty hefty right, 10 millirem per hour?

JEFF: Yes.

MR. SKEEN: Yes.

MR. TRAPP: But it's probably, I don't know, 200 -- 200 miles away. Its' far. He was measuring a TEDE of 1.5 mR per hour and then he had probably airborne sample of seven point -- seven E (phonetic) to the minus ninth microcuries per -- it just says microcuries, so maybe that's like an airborne sample.

JEFF: That is the picocuries.

MR. SKEEN: Okay.

MR. TRAPP: He said micro -- oh okay, it was a pico because it's to the minus ninth, I'm with you. And we really were -- this was our first real (inaudible) because what he was saying is before the plume was going to move, he was pretty convinced people were going to get like you know, 10 mR and then a 50 mR thyroid hit.

MR. SKEEN: Right.

MR. TRAPP: And he was ready to do some

action.

MR. SKEEN: This is the commander of the military base, the naval base, right?

MR. TRAPP: It was an admiral.

MR. SKEEN: An admiral, okay.

MR. TRAPP: Yes. So you know, and this guy is a gazillion miles away. When we start taking measurements and we get, you know, assets close, and I know other people, you know, because we got these search and rescue teams and all that kind of stuff, they're getting a little closer and they might be taking up a lot of better dose.

MR. SKEEN: Right.

MR. TRAPP: And it's just the concern about -- to get some sort of guidance out there.

MR. SKEEN: Jim, are we getting anything from the, the Japanese government on dose rate across the country or anything? Are they feeding us any numbers?

MR. TRAPP: All we are getting is site boundary stuff that you guys see.

MR. SKEEN: Okay.

MR. TRAPP: That's another picture to be honest with you. You know how I was kind of bitching about the 8 o'clock and then how this thing morphed

throughout the day --

MR. SKEEN: Right.

MR. TRAPP: Nine o'clock, when we were really kind of fighting this issue in our heads, thinking we have something big, the site boundary dose at the gate was up at about an R or 800.

MR. ULSES: This is Tony, I just walked in. I think it was about an R.

MR. TRAPP: Yes, I think it was about an R.

MR. ULSES: It was big.

MR. TRAPP: And then, and then you know, when we were going to obviously engage, Dave, we -- you know, the Ambassador here wanted to put out an evacuation order up to 50 miles, and we were pretty, pretty gung-ho, because what we thought is we had three fission barriers broken and we thought we had a fuel fire.

MR. SKEEN: Right.

MR. TRAPP: Then we called them back and all of a sudden the dose rate -- oh here it is, I had written it down -- what they told us in the morning, it was 1,193 mR per hour at the site gate.

MR. SKEEN: Okay.

JEFF: 1.1R.

MR. TRAPP: I called them back, that site gate number had gone down to 132 mR, so a factor of 10. We called them up and said you know, what, what's going on here guys? Did you finally get water in the spent fuel pool? And they told us that the wind might have shifted.

MR. SKEEN: Okay. Wow. (b)(5)

(b)(5)

MR. TRAPP: That's kind of my concern, is that -- is you know, certainly dosing the population of Japan has got to be a super-sensitive subject, and in fact the individual we interviewed first, who kind of gave us this -- left us -- we left with the idea that we had a big issue, he kept saying how it's so important to be sensitive to communication to the public, and in fact, one of the things they kept asking us is how do we communicate these things to the public. And my fear is, is they might have found a way.

MR. ULSES: You know it's interesting, I have to show you this Jim, Ron just emailed this out a

little while ago. Apparently there's a website that lists the rad data taken and certain sampling for different prefectures around the country. What's interesting is I went to Yokosuka, I wanted to see what it said -- it was basically background --

MR. TRAPP: Sure.

MR. ULSES: during the time period when we were getting the hard data from the Navy that they were seeing mR per hour doses. That just doesn't make any sense to me.

MALE PARTICIPANT: And you know what --

MR. ULSES: You've got the ship right next to the town, and I've been to that place, it's not a real pretty area, that's --

MR. TRAPP: Yes, and this guy, you know, was just clearly an expert health physicist type guy, you know, he has -- the guy who was on the phone, you know, he was just very (inaudible) had good numbers.

MR. ULSES: Yes but the point being, you know, (inaudible) Jim, I mean (inaudible) --

MR. McDERMOTT: Hey Jim, this is Brian McDermott, can you hear me?

MALE PARTICIPANT: We don't know what happened and when. We are hearing things hours after.

MR. McDERMOTT: Jim?

MR. SKEEN: Jim?

JEFF: Did we lose you guys?

MR. TRAPP: We are here. Can you hear us?

MR. McDERMOTT: We weren't hearing you, but there is background here. I just wanted to -- I know you are sensitive to the issues, but just ask that you can do all you can to challenge them when they are giving you data, especially those significant changes, because I know you are well aware of the actions that were almost taken last night based on that data.

A lot of sensitivity. What we are getting from OIP is that you know, people are watching the U.S. moves here as much if not more than the Japanese moves in terms of --

MR. TRAPP: You know Brian, it was kind of funny, because you know, at one point today, Tony and I felt like the biggest idiots in the world, right because --

MR. ULSES: Yes. I can tell you that.

MR. TRAPP: we go, we spin everybody up, we think we've got a big event going on here --

MR. ULSES: (Inaudible) the fleet today, right? That was about it right?

MR. TRAPP: And then, and then, throughout

the day, because the data set kept changing, you know, all of a sudden the explosion was, you know, a quarter of a mile down the street, that evidence that they had on the torus that pipes were blown off were no longer blown off --

MR. McDERMOTT: Right. Understand. I don't know if the word got to you guys. The DOE wrap team should be on the ground there if not already then shortly, and they are bringing detection equipment.

MR. TRAPP:

(b)(5)

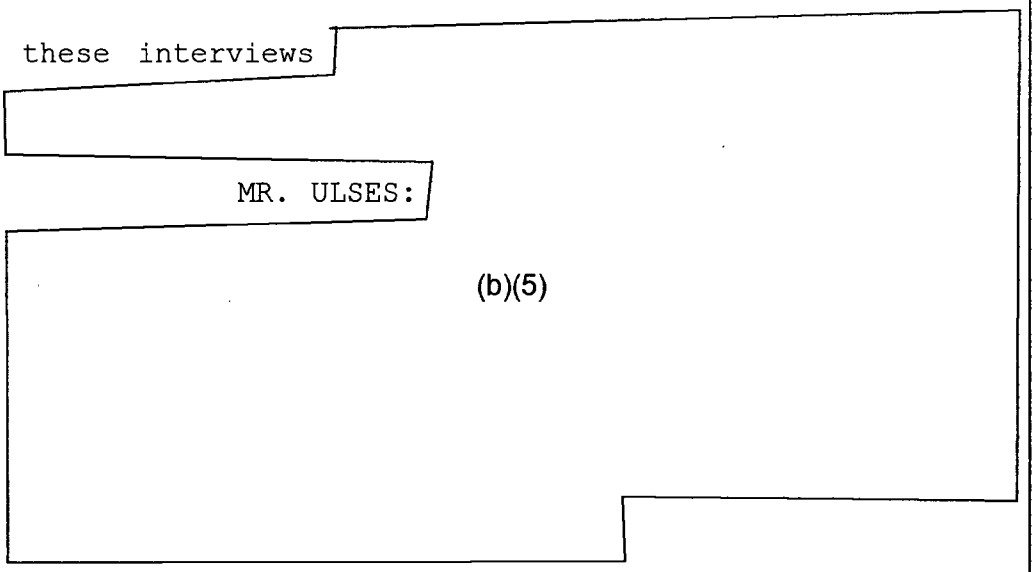
MALE PARTICIPANT:

MALE PARTICIPANT: You know, that would give confidence, right, if the doses aren't getting out, I mean that's the bottom line.

MALE PARTICIPANT: Yes, sounds like we didn't learn anything from Chernobyl.

MR. TRAPP: But you know, we'll see, but I'm just putting that -- because you know, it was

funny, because we sat, I sat down here in the afternoon and I said well, how could I have been that far off, you know, how could I have been that stupid, and then I started reading these press releases and these interviews



MALE PARTICIPANT: Right, well let's just you know -- this is far from over and we will probably run into data problems as we go along, so we know you guys are working hard at it.

MR. TRAPP: Yes.

MALE PARTICIPANT: We'll just --

MR. TRAPP: Yes, we just, we know it caused a lot of people a lot of angst, and we were, we were pretty embarrassed until we, we kind of pulled the record out and laid it down, and --

MALE PARTICIPANT: Yes.

MR. TRAPP: then we weren't as embarrassed. You know, because this isn't just

interviews. This is interviews that their top government officials are doing with the press.

MR. McDERMOTT: Yes. Yes, I mean in terms of that Jim, we are rapidly moving past this. We are looking to okay, what's next, and how's it going. So whatever we can do to be as specific with them, I mean we have been cautious, but cautioned by OIP about the language barrier and really pressing them to be specific and, and trying to confirm a couple of different ways because they are concerned that some of the translations aren't, aren't coming through.

MR. TRAPP: Yes, and you know what, we -- the ladies that do the translation here for us, they keep a transcript. They can go back to that and it's almost like reading an OI transcript. I mean, they have every word, every gesture. These ladies are very good.

MR. SKEEN: That's very good.

JEFF: I just have one question that I wanted to ask Jim. Jim, this is Jeff. I just got off the phone with somebody from the -- from naval reactors over here, that we have been working with on trying to get some equipment from the Navy. Have you heard anything at your end, over there in Tokyo on, as far as the Japanese accepting the equipment from the

Navy?

MR. TRAPP: No, we haven't heard anything like that. I mean, we could go down and ask the DART guys but I haven't heard them, any requests.

MALE PARTICIPANT: You know, basically, with all the equipment, Jeff, it's a deal where we have got all this stuff staged now, like, we have got good pumps available for them --

JEFF: Right.

MALE PARTICIPANT: But there's one guy in their government that needs to make the request, and all they have requested so far is two fire engines, and both of those were delivered, well, this morning for us.

MALE PARTICIPANT: That's all? Nothing, and nothing else, I mean, that's all they want?

MR. SKEEN: Jim, the other issue that we are fighting here now is that we are starting to ask questions about the spent fuel pools. Do you guys have any information on those now? Do they know what the level is? Are they losing level in those fuel pools? Is there any concern about uncovering the spent fuel, or have you heard any of that kind of --

MR. TRAPP: Dave, you know that the four pool is already uncovered and producing hydrogen,

right?

MALE PARTICIPANT: What, unit four?

MR. TRAPP: Yes.

MR. ULSES: Yes, it happened already, I mean --

MR. TRAPP: Yes.

MR. ULSES: they specifically told us, this is one of the areas where there was some changing information, because the fellow we were talking to from NISA on the cell phone call, whenever it was, this afternoon, three or whenever it was, hey specifically said they had a hydrogen explosion in unit four, and they only way you are going to get a hydrogen explosion over a spent fuel pool is for the fuel to fail.

MR. TRAPP: But the other thing is, in the morning that explosion was over in unit two, which is a helluva long ways away, and then, every other hydrogen explosion they've had, they've fricking blown the roof off-of the reactor building and it, you know, launched 300 feet in the air, and this one, no damage, you know, and we got some, we got some ability to see what damage and we got some good ability to see what's going on at this site.

MR. ULSES: You know, then we asked this

fellow, so what are you guys doing to refill the pool, and he said they are evaluating it. (b)(5)

MR. TRAPP: Plus, if you take a meter between the unit three and unit four reactor building --

MR. SKEEN: Right. Yes, go ahead Jim.

(Inaudible, multiple speakers)

MR. SKEEN: I'm sorry, we didn't catch that, how much?

MR. TRAPP: (Inaudible)

MALE PARTICIPANT: Can you repeat that please? We didn't get you.

MR. TRAPP: (Inaudible) R.

MALE PARTICIPANT: Three R.

MR. TRAPP: (Inaudible).

MR. SKEEN: Okay, just to be sure, you said 3 R?

MR. TRAPP: Order of magnitude, 4-0 Rem.

MR. SKEEN: Forty R, okay. That's what we had heard previously, we had heard that same, same thought, and our thoughts were it had to be shine coming off the spent fuel pool if they have lost some inventory out of the pool. Is that what you guys are thinking?

MR. TRAPP: (Inaudible). If that's the fuel strength outside the building, imagine what it is in the building.

MR. SKEEN: Right. And have you had any information since then about restoring spent fuel pool cooling or getting some kind of inventory back in there?

MR. TRAPP: They said they are thinking about it.

(Laughter)

MR. SKEEN: Well --

JEFF: We are going to try to brainstorm this on this end and we have a call to GE to ask about some alternatives.

MR. ULSES: You know, we don't know whether or not the pool is intact. We tried to talk to them about that. We didn't get a good answer, whether or not it's just boiloff, we don't know what the level was. We asked him that. He had no idea.

JEFF: But the top of the reactor building is still intact, is that true?

MR. TRAPP: Oh it is for now, but wait till they get the hydrogen and they're going to blow that one too, right?

MR. SKEEN: Right.

MR. ULSES: But for unit what?

JEFF: Four.

MR. ULSES: Unit four, well, I mean, they have burn already over the pool.

MR. TRAPP: Well, maybe, we don't really --

MR. ULSES: Well that's what the guy said.

MR. TRAPP: That's the afternoon explosion, that's the one --

MR. ULSES: Yes, that's the afternoon version of the explosion. So you know, we will -- we will just have to wait and see. That's something we are going to have to push them on hard tomorrow. We need to ask this guy, what are you doing, what's the level of the water, etcetera. You know, (b)(5)

(b)(5)

MR. TRAPP: You know what's kind of funny is the news strategy for the -- and you know I was in the office of the Ambassador and he was just yelling at his counterpart, like I want those guys embedded now, and just getting nowhere with them, and the plan tomorrow is going to try to embed us in Tokyo Electric Power.

JEFF: Great.

MR. SKEEN: That would be great if you could get information from there. What about your regulatory counterparts? Are you having any luck dealing with them?

MR. TRAPP: (b)(5)

MR. SKEEN: Okay.

MR. TRAPP: (b)(5)

MR. SKEEN: (b)(5)

All right. What about the other fuel pools in units one through three?

MR. TRAPP: Oh, this guy didn't even go there. I mean we just, (b)(5)

(b)(5)

MR. SKEEN: Okay. So the four pool has the newest of the three units, of the other three units then? Okay. So we have no information on the other three.

MR. TRAPP: The other issue here is either -- I mean, when the thing blows -- you saw great pictures, but it looks like, it's like a Nine Mile sheet metal containment --

MR. SKEEN: Right.

MR. TRAPP: So you know, if you have a significant fuel event, we don't -- it's not like a

Limerick where you've got the concrete, you know, standby gaps doing three (phonetic) kind of thing.

MR. SKEEN: Right.

JEFF: Right, the classic Mark 1.

MR. SKEEN: Well at some point if they keep losing inventory, they are going to get a zirc fire on that spent fuel and once that starts, there's not going to be a way to stop that.

MR. TRAPP: That's what they told us, right?

MR. ULSES: Yes, that's what they told us they had this morning, so, I'm sorry, our -- (inaudible) one of the things they are saying too, is they are starting to talk about the temperature in units five and six is beginning to increase. So obviously they have no RHR.

MR. SKEEN: Okay, so units five and six, the temperatures are starting to increase in the spent fuel pools there. What about the reactor coolant system?

MR. TRAPP: They said it was in the RCS but we don't really know for sure.

MR. ULSES: Yes, because we asked them questions like is the head on, the head off, and they didn't know.

MR. SKEEN: Okay. What about temporary power Jim? Have we offered generators with maybe some temporary switch gear or something that they could hook into and try to get some power back on some of the pumps?

MR. TRAPP: I think we offered everything you put on the list.

MR. SKEEN: Okay. And so far they asked for two fire trucks?

MR. ULSES: Every day (phonetic) has been -- you guys have been working over time on that, and I think that they may have actually (inaudible) themselves and I don't think the Japanese have taken them up on it. So --

MR. TRAPP: We did get a pretty good play by play of the event. This guy was very familiar -- he was more than willing to talk about what happened from the tsunami, and there was a few things, like the -- when they ran out of water in the pond, remember that was confusing, whey were they sucking out of a pond --

MR. SKEEN: Right.

MR. TRAPP: (Inaudible) pond they had that they were mixing boric acid with, so they would mix the boric acid I think in the pond, and then suck out

of the pond and they sucked the pond dry.

MR. SKEEN: Right.

MR. TRAPP: Then they lost, you know, they lost core injunction (phonetic, perhaps he means "injection") for a couple of days because the pond -- or a day anyway, because they sucked the pond dry.

He did say that when they got the tsunami, it took out all the switch gear that was RHR, service water, he said it was pretty much wrecked.

MR. ULSES: Yes it was --

MR. SKEEN: Okay yes, that's probably true.

MR. ULSES: Yes.

MR. TRAPP: So he said there was no getting that back.

MR. SKEEN: But is there some way they could bring in temporary switch gear, right? You can put switch gear on a truck, and I can put some feeders in it from a diesel generator and them run jumper cables from the switch gear to the, the --

JEFF: To the pumps.

MR. SKEEN: pumps or whatever, I mean, if you have the cabling and stuff to do it, there's ways you can do that.

JEFF: Provided that the pumps are still

intact, because a lot of these are at low elevations in the reactor building.

MR. TRAPP: He also said they had a lot of issues with ADDs. (Phonetic) One of the reasons they had such trouble in the beginning is they couldn't get the ADDs open so they couldn't depressurize.

MALE PARTICIPANT: Right, that's -- and it's funny, because usually they have multiple SRVs in the plant.

MR. SKEEN: Okay.

MALE PARTICIPANT: What about DC power? We heard a story yesterday that there was some problems with DC but they didn't elaborate on it, did you get any more information on that?

MR. TRAPP: No, that's not the same, that they were having problems with it, because one of the units, he said they lost it. I think it was -- because we questioned and we go well how do you get, how did you have pressure, oh it was the unit two.

MR. ULSES: Unit two, yes.

MR. TRAPP: Because he goes oh, you know, we got -- actually they got a big pump on unit two. He claims that he's got, what like, a 400 psi pump on unit two if he's got his pressure rating right. But we asked him, well how are you measuring pressure

because you don't have any DC power, and he just said well we have some ways of measuring power without any electric power.

JEFF: Without DC, they can't depressurize the vessel in order to keep the pump going.

MR. ULSES: Well, I think that's been part of their problem with unit two. The guy was telling us that they were having a lot of trouble with that safety, and they weren't able to keep it open, and so well, you know, they go through these cycles of the, the vessel pressurized, they lose pumping capabilities, they have a drain-down and then they get the safety open again and they went back in business, and so the core's dropping (phonetic) up and down cycle now, for what, four days, I guess.

MALE PARTICIPANT: Yes, it's like (inaudible) from hell.

MR. ULSES: Yes, pretty much, and they've just had a nightmare scenario with that, and that, I think that, I don't know Jim, (inaudible) that pretty much is what's been killing them, is the fact they can't, is that they can't control the safety on unit two.

MR. TRAPP: Yes, because I mean they don't have any, they really don't have any compressors,

right? They don't have any air, they are --

MR. SKEEN: Well, Jim, we offered compressors, I mean, that's another thing. We can give you compressors too, that will get your air capability back for you.

JEFF: There's no conversion necessary. Air is air.

MR. TRAPP: It's on the list.

MR. ULSES: (b)(5)

(b)(5)

MR. SKEEN: I understand. You guys have got to be frustrated just like we are.

MR. TRAPP: We really were, we were rolling along pretty good. I mean we are tired because we are doing these 20-hour days, but we were doing okay (b)(5)

(b)(5)

MR. ULSES: Yes, I mean, we really, we really cycled (phonetic) him today, I was -- he had a tough day.

MR. SKEEN: Well I think their problem is maybe he should have ordered an evacuation, if you are

getting a -- (b)(5)

(b)(5)

MR. TRAPP: (b)(5)

(b)(5)

MR. ULSES: Actually, do we have any recent data out of Yokosuka? I was thinking about calling down there. I got a contact down there. I'm going to call him after we are done and find out what they are reading right now.

MR. TRAPP: Because they did say that they are expecting the wind to shift and they were hoping that this plume that they were seeing down there was only going to be for five hours.

MR. SKEEN: Okay, and it's going to turn back to the sea?

MR. ULSES: No, I think it is going to go inland.

MR. TRAPP: Yes, it is.

MR. ULSES: It's going to go like around the compass wheel and then it's going to go back out

to sea.

MR. SKEEN: Okay.

MR. TRAPP: I think Sunday we are -- Tokyo's right on the, right on the axis of the wind, they said.

MR. SKEEN: Okay.

MR. TRAPP: We experienced a helluva aftershock today too.

MR. ULSES: I felt that, that was wild.

MR. TRAPP: We were running. We were on the eighth floor, and we were going for doorways.

MR. SKEEN: Wow, and then you are in Tokyo, right?

MR. TRAPP: Yes.

MR. SKEEN: Yes, so you are 200 miles south of the Fukushima area, so --

MR. TRAPP: It was pretty, I mean it was, I mean we stood in the doorway for a good three minutes.

MR. SKEEN: Well, I don't blame you for that. Okay, well, is there anything else we can do for you -- we will bring up the issues that you had there Jim, and I will talk to the ET (phonetic) about this. (b)(5)

(b)(5)

(b)(5)

MR. TRAPP: The only thing you could do is, I'm just offering up sympathetic, because we are on these, you know, we are on these big sitcom calls or whatever they are called, CIVITS calls or --

MR. SKEEN: Yes.

MR. TRAPP: and certainly, you know, like

(b)(5)

MR. SKEEN: Okay. Yes, I'll certainly make sure they are aware of that. Okay. Well are oy8u guys getting ready to go to bed?

MR. TRAPP: You know, they are making us do 24 hours. So --

MR. ULSES: Yes, so we are --

MR. TRAPP: We are here.

MR. ULSES: for a while so --

MR. TRAPP: We go home for like a couple

of hours to go to sleep and then we relieve each other and -- because you know, what happens is, you know, our night is your day.

MR. SKEEN: Right.

JEFF: Well you don't have to worry about jetlag.

MR. SKEEN: Well can someone just crawl off on a couch somewhere while the other one sits up for a while and trade off that way or something? I mean, you guys (inaudible).

MR. TRAPP: We are looking forward to this cast of thousands you are sending our way.

MR. SKEEN: Yes, they are (inaudible) I will tell you that. I don't know what their ETA is, but we have sent people so they are trying to get there.

MR. TRAPP: Yes, we are going to -- we are going to aake advantage of that. We will go sightseeing when they get here.

MR. SKEEN: That's a good idea.

(Laughter)

MR. SKEEN: Just a quick note, (b)(5)

(b)(5)

MR. ULSES: (Inaudible) north, (b)(5)

(b)(5)

MR. SKEEN: Yes. Okay. Well, do you guys have any questions before we let these guys go? Any questions from your side?

MALE PARTICIPANT: No.

MR. SKEEN: Okay. Well all right, we appreciate the information guys, and try and get some rest if you can, and we will do our best to help you

(b)(5)

We'll make sure that the Chairman is aware of this.

MR. TRAPP: Appreciate it Dave.

MR. SKEEN: Okay, no problem. All right. I guess check in with us again when you have some information, and other than that, we'll talk to you later.

MR. TRAPP: Thanks a lot.

MR. SKEEN: All right. Thanks guys.

0-CM6)H610065094

(CONFERENCE CALL INITIATED)

MR. ALTER: This is a recorded line. Reactor safety team. Peter Alter.

WILMINGTON JEFF: Yes Peter, my name is Jeff (inaudible) I'm with the NRC: Jeff Ciocco just called me a couple of minutes ago and left me a voicemail asking about phone numbers for INPO.

MR. ALTER: Hold on just a second. Jeff? Jeff? This is somebody asking about INPO.

MR. CIRCLE: Jeff

WILMINGTON JEFF: Yes.

MR. CIRCLE: Yes, I was just on your voicemail, leaving a message. Yes, thanks -- thanks for getting back to me. We were having trouble over here getting INPO's telephone number.

WILMINGTON JEFF: All right. Do you have one?

MR. CIRCLE: Yes, we have one and we got in contact with their emergency response center. What we are trying to do is we were told by our executive team to coordinate all the emergency response centers of all the stakeholders in this, so we have been doing that and we just -- we have a call in to them, because when we called them, they gave us a voice -- a

recorded message.

WILMINGTON JEFF: Okay. But you are through now, right?

MR. CIRCLE: Yes, we got through. We got through.

WILMINGTON JEFF: Okay, I'm going to get off-of here. You have got more important things to do than talk to me.

MR. CIRCLE: Yes, well thanks a lot. Anyway, you are down in Wilmington?

WILMINGTON JEFF: I am. Should I --

MR. CIRCLE: Okay, because --

WILMINGTON JEFF: I head back or --

MR. CIRCLE: No no, not at all, not at all. Just that we have a call, we have a call with GE down there. We just want to make sure enough GE people are in the office so we can speak to them.

WILMINGTON JEFF: Okay.

MR. CIRCLE: Okay. How's the conference? Okay?

WILMINGTON JEFF: It's subdued.

MR. CIRCLE: I would imagine that. That's what I was, really I was getting at, because I was imagining there were a lot of sad faces.

WILMINGTON JEFF: Oh yes, I think most of

the Japanese contingent didn't bother to come. Understandable (inaudible)

MR. CIRCLE: Yes.

WILMINGTON JEFF: Yes. It's subdued. It's kind of humorous sitting you know, listening to people talk about HRA and come up with numbers three to the minus seven (phonetic). But I, I --

MR. CIRCLE: Jeff, Jeff, I have to get going. We have an announcement. Bye-bye.

WILMINGTON JEFF: Bye.

0-CMBA6610065094

(CONFERENCE CALL INITIATED)

MR. SKEEN: Reactor safety team, this is Dave Skeen speaking.

MR. MOSS: Yes hi, my name is Dave Moss from INPO in Atlanta.

MR. SKEEN: Yes sir.

MR. MOSS: And I was asked to contact Rick Hasselberg at this number.

MR. SKEEN: Rick Hasselberg.

MR. MOSS: Yes sir.

MR. SKEEN: He is here. Hang on just a second.

MR. MOSS: Okay, thank you.

(Pause)

MR. SKEEN: Okay, Rick said actually who you want to talk to is me. This is Dave Skeen. I am the director of the reactor safety team with the NRC, and I guess Mike Weber talked to us that INPO is doing a daily status call with the CNOs, is that correct?

MR. MOSS: That's correct.

MR. SKEEN: And you do that at 11 o'clock?

MR. MOSS: That's correct.

MR. SKEEN: Okay. What Mike was interested in is maybe we should set up a standing

call with you guys, maybe before you talk to the CNOs, and maybe we just share whatever information we have before you get on the line with them, and then you could disseminate information, if you hear anything from us, to pass that along as well.

MR. MOSS: Okay. That would be good. You know, we are -- I don't know to what extent you guys are plugged I with a good source of information, you know, on kind of a constant basis, but we have a daily phone call with the Wano Tokyo Center.

MR. SKEEN: Yes, I think that would help and of course we have our sources we are trying to get information to, right, some guys over --

MR. MOSS: Right, and we are having some difficulty, you know, a lot of conflicting information coming and --

MR. SKEEN: (b)(5)

(b)(5)

MR. MOSS: Yes. Yes. Yes.

MR. SKEEN: So I think probably the more sources you can bounce off-of --

MR. MOSS: Right.

MR. SKEEN: Did you hear this, yes, we heard that, no I didn't hear that --

MR. MOSS: Our daily phone call is at

0500 eastern daylight time, it's towards the end of the business day in Tokyo Center, and we send them a list of questions in the evening, our time, which is about the beginning of their work shift, and then a phone call at 0500 and hopefully by then they have the answers to some of those questions.

MR. SKEEN: Okay.

MR. MOSS: Maybe half the questions we are getting answers to, some of them the Tokyo Center doesn't have access to, some of them -- because you know, some of the reports we have that there's nobody in the control room to get that information from.

MR. SKEEN: Exactly.

MR. MOSS: So, so I don't know that there's any -- there's certainly no indication there's any deliberate withholding of information or anything like that, they are trying to share freely but they just flat don't have answers to some of our questions.

MR. SKEEN: Right. Right.

MR. MOSS: And -- but you know, if we get our update at 0500, is like, 9 o'clock a good time or something, you know for as far as a daily call going forward?

MR. SKEEN: Yes, I would say -- let me see. We do our turnover with our ET around, so when

they change out the shift around 7:30, 8 o'clock, and the Chairman comes down and we usually brief him on what's going on for the day or what happened overnight.

And then -- so I would think 9 o'clock would work. That should work out okay.

MR. MOSS: Okay, 0900. Do you want to get together this afternoon some time?

MR. SKEEN: Yes, that would be good too, just to kind of touch base on where we were.

MR. MOSS: We'll share with you what we know. We are -- (b)(4)

(b)(4)

MR. SKEEN: Right.

MR. MOSS: (b)(4)

(b)(4)

MR. SKEEN: Exactly.

MR. MOSS: (b)(4)

--

MR. SKEEN: Right.

MR. MOSS: (b)(4)

(b)(4)

MR. SKEEN: Right.

MR. MOSS: or some of the above and haven't been able to confirm that yet so --

MR. SKEEN: Right, and we have got conflicting information there too, but we can probably talk about that. So what time do you want to have a call this afternoon, do you think?

MR. MOSS: We have a phone call at noon today that involves I think our CEOs and CNOs, and so after that would be helpful, one o'clock or any time after one o'clock.

MR. SKEEN: Okay.

MR. MOSS: Or if you want to do it before that, like you know, some time in the next half hour or so, but --

MR. SKEEN: Let's see. Well, we have got some things going on here right now, so --

MR. MOSS: Okay.

MR. SKEEN: Let's make it one o'clock. That sounds good.

MR. MOSS: Okay, 1300.

MR. SKEEN: So, yes, we will talk at 1300.

MR. MOSS: And then after today we'll start 9 o'clock tomorrow morning?

MR. SKEEN: That's right.

MR. MOSS: Okay. It will likely , at least for the next few days, it will be me on the phone, but at some point we will end up with someone else at the 0900 phone call.

MR. SKEEN: Okay.

MR. MOSS: I'm -- I will have turned over to the oncoming UC (phonetic) at one o'clock, that's our turnover time.

MR. SKEEN: Okay.

MR. MOSS: But at one o'clock, we'll probably have both of us there for this phone call.

MR. SKEEN: Okay, that would be great. And I didn't catch your name again.

MR. MOSS: It's Dave Moss, M-O-S-S. And what was your last name?

MR. SKEEN: Skeen, S-K-E-E-N.

MR. MOSS: Okay.

MR. SKEEN: And I'm the day (inaudible) guy today. Yes.

MR. MOSS: Let me give you a couple of ways to contact us.

MR. SKEEN: Okay.

MR. MOSS: The telephone number that rings right into our emergency response center, is 7-7-0 --

MR. SKEEN: 7-7-0 --

MR. MOSS: 6-4-4 --

MR. SKEEN: 6-4-4 --

MR. MOSS: 8-0-2-1.

MR. SKEEN: 8-0-2-1.

MR. MOSS: Okay.

MR. SKEEN: Okay.

MR. MOSS: And there's an email address that also comes directly there.

MR. SKEEN: Okay.

MR. MOSS: And that's inpo, I-N-P-O-E-R-C --

MR. SKEEN: All one word, inpoerc?

MR. MOSS: All one together, inpoerc@inpo.org.

MR. SKEEN: Okay.

MR. MOSS: That comes directly into the emergency response center as well.

MR. SKEEN: All right great.

MR. MOSS: And this number, 5100, is the best number if we need to get a hold of you?

MR. SKEEN: Yes, you can just call in

there and they can get a hold of us in the reactor safety team room.

MR. MOSS: Okay.

MR. SKEEN: Okay.

MR. MOSS: All-righty, we will call you at one o'clock and then again at 0900 tomorrow, eastern time.

MR. SKEEN: Sounds great. Appreciate it Dave.

MR. MOSS: Thanks, appreciate it.

MR. SKEEN: Thank you.

MR. MOSS: Bye.

MR. SKEEN: Bye.

0-CNQR-L10065094

(CONFERENCE CALL INITIATED)

MR. HASSELBERG: Reactor safety team. Hasselberg.

MR. ANDERSON: Hi, this is Cyrus Anderson (phonetic) at INPO emergency response center.

MR. HASSELBERG: Hi, Cyrus.

MR. ANDERSON: We got a -- Dave Moss, our emergency coordinator, spoke with Dave Skeen --

MR. HASSELBERG: Yes sir.

MR. ANDERSON: to schedule a call for today at 1300, subsequent days at 0900.

MR. HASSELBERG: Okay.

MR. ANDERSON: The question I have is, today I agreed to -- that we would send our sequence of events in advance. I need an email address.

MR. HASSELBERG: Okay.

MR. ANDERSON: And that's --

MR. HASSELBERG: I can give you that. Let me just make sure I have my email here. In fact, I am going to send you a message and you can reply to it.

MR. ANDERSON: Very good.

MR. HASSELBERG: So, when I get, I am going to go to new message, let me have your email

please.

MR. ANDERSON: It's I-N-P-O-E-R-C --

MR. HASSELBERG: I-N-P-O --

MR. ANDERSON: E-R-C --

MR. HASSELBERG: E-R-C, okay.

MR. ANDERSON: @inpo.org.

MR. HASSELBERG: Hang on, I'll put the phone down because I can only type with one finger here.

(Pause)

MR. HASSELBERG: Okay, I am going to send you a test message, I-N-P-O-E-R-C@inpo.org. Test. And I am at R-S-T for reactor safety team, 0-1, that's the work station, H-O-C for headquarters operations center, and --

MR. ANDERSON: @nrc. --

MR. HASSELBERG: @nrc.gov.

MR. ANDERSON: @nrc.gov.

MR. HASSELBERG: And the best way to do it I have found, is if I send you a test message then you can reply to it.

MR. ANDERSON: Sure, okay. But I understood that was R-S-T as in reactor safety team --

(File freezes two minutes 13 seconds in with approximately 30 seconds to go)

0-CO0$H610065094

(CONFERENCE CALL INITIATED)

(Off mic conversation)

NRC: (Inaudible) all this, are they talking to the Japanese directly?

NRC: No, well they haven't been. They -- they are killing themselves trying to find out --

(Phone ringing)

NRC: The Japanese are very close to the (inaudible) --

MR. NICHOLS: Paul Nichols from GEH:

MR. SKEEN: Hi Paul, this is Dave Skeen with the reactor safety team here at the NRC, and I've got some of my team members here with me.

MR. NICHOLS: Yes sir.

MR. SKEEN: We just wanted to touch base with you. I guess we were looking at ideas for how to get water into the spent fuel pools at the stricken plants there at Fukushima.

So we don't know if you guys had a chance to talk about any thoughts. We are willing to listen to you and we an share some thoughts with you as well.

MR. NICHOLS: Okay. It kind of goes along with the same stuff that we sent you yesterday. You need to get, you know, fire pumps would work. The

boats, (b)(4)

(b)(4)

MR. CIRCLE: This is Jeff Circle from the reactor safety team. The question, the question that we have is while getting water into the, into the pool itself, the logistics, because what would happen if you had a situation where the pool had started to boil down or it's mostly boiled down, and access to the refuel floor is restricted, and we were looking at ways of using the existing piping to, to get, to inject water inventory, using those portable pumps.

MR. NICHOLS: (b)(4)

(b)(4)

MR. CIRCLE: Yes.

MR. SHEA: (b)(5)

(b)(5)

(b)(5)

MALE PARTICIPANT: Yes, we all thought -- you are right -- we'd also, another, (b)(5)

(b)(5)

MALE PARTICIPANT: (b)(5)

(b)(5)

MALE PARTICIPANT: So the question is, the question is, is whether they have a lot of -- they must have a leak in the pool then, because for -- for normal burn, or normal evaporation cooling they should be fine for another week or two.

MALE PARTICIPANT: Well, they said that unit four was 100 days just offloaded, so that that was the significant one, that has the significant head load, and it started boiling, they say, I guess within the last 24 hours.

MR. NICHOLS: Right, no, we understand

that, (b)(4)

(b)(4)

MALE PARTICIPANT: Why would they have a fire?

MR. NICHOLS: Pardon?

MALE PARTICIPANT: Why would they have had a fire?

MR. NICHOLS: (b)(4)

(b)(4)

MR. SKEEN: Okay. We haven't heard any of that information Paul. (b)(5)

(b)(5)

MR. NICHOLS: (b)(4)

MALE PARTICIPANT: Any radiation levels in that area?

MR. NICHOLS: We haven't got any information on that, outside of what's in the news.

MALE PARTICIPANT: So you don't know if there was an offload, a full core offload into the pool?

MR. NICHOLS: (b)(4)

(b)(4)

MALE PARTICIPANT: And what about units five and six? Do you know if the pool is -- the core has been offloaded (inaudible).

MR. NICHOLS: No, those are in normal refuel, normal refuel load (phonetic).

MALE PARTICIPANT: You may have had a third of a core offload or something like that, but -- or whatever they had in there, but they were in a process of a normal refuel outage.

MALE PARTICIPANT: Okay, now we understand, also, that there's an osisy (phonetic) or something like an osisy on site, at the Fukushima Daiichi site. Would you know if it's mostly unit one fuel?

MR. NICHOLS: (b)(4)

(b)(4)

(b)(4)

MALE PARTICIPANT: Is the pool -- I thought it was dry cask.

MR. NICHOLS: (b)(4)

(b)(4)

MALE PARTICIPANT: Do you know where that's located on site?

(b)(5)

MR. NICHOLS: Yes, I had asked also but I'm not really sure. (b)(4)

(b)(4)

MALE PARTICIPANT: Have you heard any news about the cooling to that common pool?

MR. NICHOLS: Nothing.

MALE PARTICIPANT: No.

MALE PARTICIPANT: And on that same theme, what about the other units, one, two and three, status on those fuel pools?

Three looks like it is not there anymore,

but is that -- have you had anything on unit three, any information?

MR. NICHOLS: Not on the fuel pool, or one or two for that matter.

MALE PARTICIPANT: (b)(5)

(b)(5)

MR. NICHOLS: That's all we've seen (inaudible).

MALE PARTICIPANT: What is your assessment (b)(5) as far as fuel pool? Have you still get water on that or how -- can you tell?

MR. NICHOLS: I guess I don't want to answer that question yet. I guess the answer is I don't know.

MALE PARTICIPANT: Okay.

MR. SKEEN: Okay.

MALE PARTICIPANT: But that's -- one of our major concerns right now are these fuel pools, so I don't know if there's any way you can impart that back to the, to the company.

MR. NICHOLS: (b)(4)

(b)(4)

(b)(4)

MALE PARTICIPANT: Four.

MALE PARTICIPANT: Is that number four?

MR. NICHOLS: Number four.

MALE PARTICIPANT: Which pool is dry?

MR. NICHOLS: (b)(4)

(b)(4)

MALE PARTICIPANT: Right.

MALE PARTICIPANT: Well, maybe number three, right?

MALE PARTICIPANT: I'm wondering if it's not coming from that common pool.

MR. NICHOLS: (b)(4)

(b)(4)

(b)(4)

MALE PARTICIPANT: And the fuel pool, as far as you know now, in unit for, is still -- the integrity is still intact?

MR. NICHOLS: We don't know.

MALE PARTICIPANT: Okay.

MR. NICHOLS: We do know -- (b)(4)

(b)(4)

MALE PARTICIPANT: Okay, so you don't know if the -- if the fuel is exposed or not?

MR. NICHOLS: (b)(4)

(b)(4)

(b)(4)

MR. SKEEN: Paul, you don't know if they have any way of knowing what the level of the pool is, do you? Do they have any indication, any, any way they can try to get a level on what's going on?

MR. NICHOLS: They haven't told us any of that. We can ask them the question.

MR. SKEEN: Okay.

MR. NICHOLS: (b)(4)

(b)(4)

MR. SKEEN: Okay.

(Multiple speakers off mic)

MALE PARTICIPANT: What's the upper limit of the thermocouple?

MR. NICHOLS: Don't know.

MALE PARTICIPANT: What type of thermocouple, maybe, maybe you would know what types they are, Js, or Ks?

MR. NICHOLS: Don't know that either.

MALE PARTICIPANT: Oh, okay.

MR. SKEEN: Would you guys happen to know what's in the pools in one, two and three? I mean, you guys do refueling for them. Would you know how much they are loaded? It sounds like they have got quite --

MALE PARTICIPANT: (Inaudible) some information on that.

MR. SKEEN: It sounds like they have got quite a bit of, you know, the common pool where they can put fuel in a dry cask or they can put fuel so maybe they are not like U.S. plants and they are so full as we are here over.

MALE PARTICIPANT: Actually, we do -- we did get some information. The reason, the only reason we have this, there's a conference here this week and somebody was doing a presentation on their dry cask storage. They have --

MALE PARTICIPANT: The ASA (phonetic) conference.

MALE PARTICIPANT: ASA conference. Right. And they provided us this document which talked about the common pool which is why we know what's in there, and -- but the numbers they gave us were for the other six pools put together, and they are at about 50 percent capacity of all six, and it doesn't say

there's so much in each pool. It ends up being about a quarter capacity. They're not -- it doesn't look like they are very full, but you know, they could, it was a total for all six so it could mostly be in that unit four pool. I just couldn't tell from --

MR. NICHOLS: It was actually from one the presentations they were going to make this week at the conference.

MR. SKEEN: Okay, so that's better unless the common pool is a problem, because you tell me it's 90 percent full, you said.

MALE PARTICIPANT: It's very full but it's also, it's going to be the oldest fuel.

MR. SKEEN: Right, so it'll be at least heat low, that's for sure.

MALE PARTICIPANT: Right, so, and it's a very, very large pool. Even though you have got a lot of bundles in there that are at low power and there's a lot of water, so I --

MALE PARTICIPANT: It would be kind of interesting to know though, did the earthquake affect that pool, or what the status of that pool is, because I think we are going to start (inaudible) down here, because that seems significance.

MALE PARTICIPANT: Yes, we didn't get any

--

MR. NICHOLS: Yes, we didn't get any report from that. We can ask them the question.

MR. SKEEN: Okay. How often do you guys talk to them over there, Paul?

MR. NICHOLS: The night shift engineering people talk to them at 9 o'clock.

MR. SKEEN: Okay.

MR. NICHOLS: And then, other than that, we have an individual that talks, that texts back and forth, and they are not always reliably getting back to the individual that's here. So --

MR. SKEEN: Okay.

MR. NICHOLS: (b)(4)

MALE PARTICIPANT: Hey, do you, just another side thing, is the status of the operating crews, are they able to get people in and out, or did they lose significant people in the tsunami, or how are they handling manpower?

MR. NICHOLS: Do not -- (b)(4)

(b)(4)

MALE PARTICIPANT: Okay, understand.

MALE PARTICIPANT: Our best and brightest (inaudible).

MALE PARTICIPANT: We are finishing up a call with GE.

(Multiple speakers)

MALE PARTICIPANT: Hey, just one last thing on this unit three, is that right now I think our biggest concern, if there's any way to get a status on that number three fuel pool, what's going on there, and maybe that could be their priority. I don't know -- we are getting some doses, and what is the source of those doses.

MALE PARTICIPANT: Right.

MALE PARTICIPANT: If you look at the status gthey gave us --

MALE PARTICIPANT: Number four fuel pool.

MALE PARTICIPANT: No, number three. Number three.

MALE PARTICIPANT: And we don't know for sure if it's three or four because we are getting readings between the two.

MALE PARTICIPANT: Right, but it looks like number three, just by the pictures. It took significant damage in the, in the explosion, and it's hard to see the fuel pool anymore, and it's there.

And so, and we are getting significant dose releases, and it doesn't appear it would be from the reactor cores necessarily, because we are getting reports that they are pretty much intact. Unit one intact, unit three they say is intact, unit, unit two they say is intact. So there's some significant dose release and what is that attributed to?

You know, is it -- my suspicion, based on pictures, it's unit three but we'd like to get some sort of confirmation and it may be the fuel pool.

MR. NICHOLS: Okay, well we have -- we are asking the same question, but we do have a news statement from the chief cabinet secretary at 1857 local time, and they said that it was 8217 microsieverts per hour at the border.

MALE PARTICIPANT: 8-2-1-7?

MR. NICHOLS: Yes, (b)(4)

(b)(4)

MALE PARTICIPANT: When you say at the border, you mean at the site boundary?

MR. NICHOLS: That's what they -- they said at the border is what they wrote. I don't know what they -- I believe that probably would be but I, I'm not going to speculate.

(Multiple speakers)

MALE PARTICIPANT: It's the 100 millirem per microsievert.

MALE PARTICIPANT: Okay.

MALE PARTICIPANT: Okay, what was the other number, 400 --

MR. NICHOLS: (b)(4)

(b)(4)

MALE PARTICIPANT: That sounds very, very close to what we heard initially of our conversation to 1.1 rad per hour.

MR. NICHOLS: Okay. Well that was, we just heard that reported and (b)(4)

(b)(4)

MALE PARTICIPANT: It's 1 a.m. over there, so when did you -- when did they say this?

MR. NICHOLS: This was -- it was -- it was 1857 on 3/15.

(Multiple off mic speakers)

MALE PARTICIPANT: Okay, we will do the conversion.

MALE PARTICIPANT: We are trying to do a conversion in our head.

(Multiple speakers)

MALE PARTICIPANT: Let me go convert, let me go verify that one more time. I may have written down it wrong so give me a minute.

MALE PARTICIPANT: Okay sure.

(Multiple off mic speakers)

MALE PARTICIPANT: In the meantime, are you going to take a look at some of those -- I mean I realize you don't have isometrics, but can you look at some of the flow diagrams and see what likely areas that they can use to, to inject water into -- oh yes, another question I have. Do they have an alternate decay heat removal system in any of these plants, because that could be another injection source.

MALE PARTICIPANT: Yes, first thing -- Paul just stepped out for a minute to check the number on the question, we can take a look at the drawings that we have, you know, and come up with something, although we don't have isometrics. And then on the --

MALE PARTICIPANT: Yes, we'll have to look and see about alternate decay heat, where it might tie into spent fuel pool, and also if RHR does and try to figure out if there is a way to tie in there because it may have RHR (inaudible) at he spent fuel pool.

MALE PARTICIPANT: Right. Right. Because right now, the way it seems, the way it appears, I

don't think they can get anybody up onto that floor to inject water directly.

MALE PARTICIPANT: (b)(5)

(b)(5)

MR. GRAHAM: This is Mark Graham. (Phonetic). Did you get the last or latest email that Fran Bulger (phonetic) probably forwarded on to you for that equipment list? We would have sent it probably in the last hour.

(Multiple speakers)

FEMALE PARTICIPANT: I know Rick Hasselberg has got the emails.

MALE PARTICIPANT: Do you know who you sent it to here?

MALE PARTICIPANT: Fran's not in the room, so he had, I thought, replied back.

MALE PARTICIPANT: If you tell us the email address, we can forward it appropriately.

MALE PARTICIPANT: Oh, okay. Maybe we'll send it to Rick. It's rick.hasselberg. Hasselberg is H-A-S-S-E-L-B-E-R-G, I think I'm spelling it

correctly, @nrc.gov.

MALE PARTICIPANT: Is there a period between Rick and --

MALE PARTICIPANT: Yes, there is, rick.hasselberg, right, there's a period between the two.

MALE PARTICIPANT: Okay, so we will make sure that we send it, but I guess we added -- we took a look at the list that he sent after we had sent that earlier and had added some -- some power and/or switch gear portable equipment.

MR. CIRCLE: Oh, this is the equipment list, you know, this is the one that we made up.

MALE PARTICIPANT: Okay, so then, you did get it, right?

MR. CIRCLE: It sounds like our -- just to be on the safe side, because I worked on that a little bit, and maybe you can also send it to me, jeff.circle, I am much easier, jeff.circle@nrc.gov.

MALE PARTICIPANT: Okay, so we will make sure that it got -- we get it forwarded to you, we'll forward it to you.

MR. CIRCLE: The thing is, we can, we can propose a lot of this equipment, but they have to accept it. That's the, that's the tough part at this

point.

MALE PARTICIPANT: Right. Okay.

MALE PARTICIPANT: As far as getting water to the pool, the fire protection system may be another avenue.

MALE PARTICIPANT: That's what -- you know, you just reminded me, I was going to ask you that question, because

there is -- most plants I know up on the refuel floor, there is a fire protection either a header or a line. (Phonetic)

(Multiple speakers)

MALE PARTICIPANT: Get their email. I am going to send them a test message. They can reply.

MALE PARTICIPANT: Okay.

MALE PARTICIPANT: And they can send --

MR. SKEEN: Yes, Paul, can you just give us an email to reach you guys down there?

MR. NICHOLS: Yes, it can be --

(File freezes with 10 minutes 48 seconds of recording still to go)

0-CYUC5-10065094

(CONFERENCE CALL INITIATED)

MR. BROWN: RST. This is Fred Brown.

MR. TRAPP: Fred Brown, this is Jim Trapp, how are you doing today?

MR. BROWN: Great Jim, how are you?

MR. TRAPP: Hey, I just wanted to check in with you. I do every morning.

MR. BROWN: Okay.

MR. TRAPP: And just hear ideas. I know I got an email last night, I think it was from the RST, and there was some issues with the habitability of the control rooms. You know, we don't have any direct information on that.

MR. BROWN: Okay.

MR. TRAPP: But you know it wouldn't surprise me, because conditions are kind of dire, right, as you know, unit four, there's certainly a level decrease in the fuel pool. We will take a look at some pictures today, but they said that they might have had -- you know, they had a possible hydrogen explosion in unit four, and that would have probably been the spent fuel.

MR. BROWN: Okay, and so that's -- the -- there was a report that there was fire actually a

couple of levels below in an oil system for something, but that -- there was also a reported hydrogen explosion, you believe?

MR. TRAPP: Yes, because they said that you could, and we will look at it, but they say that you can see that the panels have bowed --

MR. BROWN: Wow, okay.

MR. TRAPP: top of the reactor building so, and you know, they are in some sort of an outage, they weren't sure if they had fuel in the vessel and they couldn't tell me whether they had the head on or the head off.

MR. BROWN: Okay.

MR. TRAPP: But you know, now we are not talking primary containment, you know, I mean --

MR. BROWN: Right.

MR. TRAPP: So and unit -- I mean yesterday what they told us was a couple of different things. We started out the day with a press conference, and they were very excited because they felt they had an explosion inside of the primary containment, and then by the afternoon, that explosion was actually misinterpreted, it was supposed to be an explosion over in unit four.

MR. BROWN: Okay, that's when they thought

they had torus failure, suppression pool failure.

MR. TRAPP: In fact, Fred, it's kind of interesting if you listen to their press conference. They said that they went to the torus and they actually identified the damage. And then by the afternoon they had no damage.

MR. BROWN: It would be interesting that they even got to the torus, but --

MR. TRAPP: Yes, you're not kidding, huh? But they must -- well, you are right, because they could be, with these fire trucks, I guess they are, they are probably pretty remote.

MR. BROWN: Okay. All right. So the latest on unit four is we do believe, based on what we have been told, that there was a hydrogen explosion up on the refueling deck, and there's -- we believe there's a visible indication of bowing of the walls but not outright failure at this point.

MR. TRAPP: Yes, that's what we believe, and we will -- you know we do actually have assets, we can take good looks at that.

MR. BROWN: Good. Jim, I don't know if they have blowout panels the way we do on our secondary containment, but you would have expected those to go first if it's like a quad?

MR. TRAPP: Yes. Yes, I'm not -- it's a good point. I don't know. You know, when we look, we'll look.

MR. BROWN: Okay, they may not -- I think that's a tornado feature and that might not be a design issue there, so --

MR. TRAPP: Okay. And then there was reports yesterday of them trying to come up with a strategy of dropping water in from the roof with buckets or something.

MR. BROWN: Yes, yes, we saw that. We were, it -- that seemed like it would be more appropriate for one and three than four, where you had a roof over the top. But --

MR. TRAPP: Yes, yes. I don't know how you -- well, and again, one and three, it's a good, it's a good strategy. And the other thing is, you know, even for four, I'm not sure how you are going to get -- if you are getting 40 r out in the -- between the units, you are not going to get anywhere near that refueling deck.

MR. BROWN: Right.

MR. TRAPP: And that's about all we know. I have got to go through, we got some reports this morning, and again, the data we are getting is open

source is almost as good as what we are getting from the Japanese regulators.

MR. BROWN: Okay. Hey great. Let me just make sure you know what I know.

MR. TRAPP: Okay.

MR. BROWN: The turnover I got was that INPO has been talking to WANO and WANO in Tokyo has some TEPCO folks assigned.

MR. TRAPP: Okay.

MR. BROWN: And they are getting some pretty good information. So I don't know if we have reached out to WANO there in Tokyo, but that might be worth taking a shot at.

MR. TRAPP: Hey that sound great. You know, is that something you could work from there? Because what we are trying to do this morning is get injected into the TEPCO EOC.

MR. BROWN: That would, yes, so if you're there then you are going to have this direct. That would be the best. Let me -- yes, let me see if we have an INPO contact to work that question back about, about how --

MR. TRAPP: Because we might offer our resources to WANO and that might be a way we can get in the door.

MR. BROWN: Right. The other thing going on that I got turnover on, was GE Hitachi is getting info from their people that were there on plant site. They had 80 folks doing outage work. Now I would have assumed that they have all been evacuated now.

MR. TRAPP: That's correct.

MR. BROWN: But we did, early today there wa s discussion that GE Hitachi would be getting some kind of information at 9 p.m. tonight that we might be able to touch them around midnight, six and a half hours from now, to attempt to get -- so --

MR. TRAPP: That would be good. You know, I guess, as a caution, you know, you have got to be very cautious of all information.

MR. BROWN: Yes. Yes, I think we -- I heard how that played out yesterday with the explosion and the loss of --

MR. TRAPP: I learned my lesson.

MR. BROWN: Yes. Yes. Okay, so those two pieces of data about information flow, INPO is putting -- has a table that is pretty nice and provides a summary. There's nothing on that table that isn't consistent with what you just told me and what we had, but it is a nice tabular format.

MR. TRAPP: You know, the thing is though,

if you look at the table, it says that they did have an explosion in unit two yesterday and it says that they had the breach of containment. So you know, some of the data that is in the tables, isn't collaborated when you, when you talk to the folks here from NISA.

MR. BROWN: Yes, it actually, for building integrity for unit two, it says slightly damaged.

MR. TRAPP: Yes. Which is considerably different than what they are telling us.

MR. BROWN: For unit two?

MR. TRAPP: Correct.

MR. BROWN: So you think the primary containment is damaged or not?

MR. TRAPP: I think it's hard to tell. You know in the morning yesterday they told us it was, and they actually identified the penetrations that were having problems and by the afternoon it was fine and no problem.

MR. BROWN: Okay. Okay. Very good.

MR. TRAPP: You know on pressure what we were told in the morning is that they got to zero pressure on the wetwell but they were still seeing pressure in the drywell and they didn't understand that. Nor do I, but -- so they said that after the explosion, the wetwell pressure indication went to

zero.

MALE PARTICIPANT: Okay. Hey, I am wondering, I have got a question for you on unit four.

(b)(5)

(b)(5)

(b)(5) Is that --

MR. TRAPP: Oh, that's a fact.

MALE PARTICIPANT: Okay. That's a fact. Okay, was any hydrogen generated in the unit four fuel pool?

MR. TRAPP: We believe so because I think we have gotten reports that they had an explosion and the panels are bowed.

MALE PARTICIPANT: On unit four?

MR. TRAPP: Correct.

MALE PARTICIPANT: Okay.

MR. TRAPP: They were in a refueling outage.

MALE PARTICIPANT: So there was a hydrogen explosion and hydrogen generated in there. Okay, so the email that we have got is accurate.

MR. TRAPP: That was what was reported yesterday.

MALE PARTICIPANT: Okay, we have been tasked with -- we have been tasked with trying to set a priority you know, we are looking at fuel pool cooling, or getting something back, and we are trying to develop like a B5b strategy for them to use, to recommend to them.

We'd say the priority would be number four, would be the main one really that you want to get coolant to first.

MR. TRAPP: Well I don't know, I mean unit one and three's fuel pools certainly aren't in good shape either.

MALE PARTICIPANT: Oh, but I was thinking four -- and then -- we are just trying to debate which one should be prioritized.

MALE PARTICIPANT: I wouldn't worry about the priority actually, I don't think that's in the task. But the tasker was what are methods to get water, so let's keep it simple and not --

MALE PARTICIPANT: Okay.

(Multiple speakers)

MR. TRAPP: Unit one and three probably have easier ways, but you know, the concern with those pools is after that blast, what's the condition of those pools.

MALE PARTICIPANT: Right.

MALE PARTICIPANT: Well somebody has suggested that they can use fireboats from (inaudible) water down there and shoot water up there. Is that in an area where dose rates would be too high for boats to go or is that implausible?

MR. TRAPP: Yes, I talked to the PMTT. I think that's plausible.

MALE PARTICIPANT: That is a plausible method.

MR. TRAPP: That's my guess.

MALE PARTICIPANT: Okay. We'll put that in the mix then.

MR. BROWN: Very good. So I got your basic info to us was no, no info on control room habitability, and I don't really have any -- let me, (inaudible).

MR. COLLINS: Jim, Frank Collins. Listening to what you said, that we understand you have no way of knowing control room habitability.

MR. TRAPP: No.

MR. COLLINS: That there was a hydrogen explosion in unit four in the area of the spent fuel pool indicating --

MR. TRAPP: That's what we believe and we

will confirm that with video today.

MR. COLLINS: Okay, being indicated by panels being bowed out. That's what we will confirm?

MR. TRAPP: Yes.

MR. COLLINS: That the unit two torus failure is now being attributed to the unit four explosion?

MR. TRAPP: You know, they backed off-of that too. All they said was the explosion that they reported early on yesterday morning, Japan time, was in fact not an explosion in unit two, it was actually an explosion in unit four, which is kind of amazing to me, because you know, unit four and unit two are not too close together.

MR. COLLINS: So rather than saying unit two torus failure attributed, we'll say unit two explosion attributed to unit four now.

MR. TRAPP: Again, they believe that they did not have an explosion in unit two now, at least that's what they told us.

MR. COLLINS: Okay. I have that you were hearing reports that they are considering ways to drop wtaer into the damaged units?

MR. TRAPP: Correct.

MR. COLLINS: And that open source data

right now is about the same quality to you as regulatory data?

MR. TRAPP: Yes sir.

MALE PARTICIPANT: Probably wont' repeat that though.

MR. TRAPP: Well, (b)(5)

(b)(5)

MR. COLLINS: Right, that's (inaudible) that the RST updated to you that we were establishing contacts with WANO, you are attempting to become embedded in the TEPCO ERC, and we reported that GE Hitachi may have some information from the site and that we have to proceed caution on that information (inaudible) hours or so, and you confirmed that in fact the fuel was uncovered or unit four spent fuel pool.

MR. TRAPP: That's the best information we have.

MR. NORTON: Okay, and another question on the fuel pool. This is Chuck Norton. Does each reactor building have its own fuel pool, one through six?

MR. TRAPP: You know, you could take a

look at the pictures. I think, I think that's going to be the case because I think each one of the reactor buildings is separated by space and my guess is these are located up, kind in the roof --

MR. NORTON: Yes.

MR. TRAPP: if they are typical to what we have. So I think just physically , I don't know if you could -- you know I think, take a look ta the pictures and see, I mean, that was probably the best information we could do.

MR. NORTON: Okay, and is there a seventh pool that's shared between all the units?

MR. TRAPP: I don't have that information.

MR. NORTON: I was given that from the handoff, so --

MR. TRAPP: Yes, I don't think we provided that. I don't know if we have that detail.

MR. COLLINS: I am not saying you did, I am just trying to find out if you know something that --

MALE PARTICIPANT: To confirm something else we have heard.

MR. TRAPP: No I don't -- don't have any info on that. But the one thing I do know is when we were talking unit four pool yesterday, he didn't

indicate that that pool was shared by any other unit.

MALE PARTICIPANT: Okay.

MR. TRAPP: Because we got into talking specifics about the fuel, and how much we expected to have, and the age and that kind of stuff. And you know what he did say, is he did say the reason the four one dried out first was because the fuel was the oldest and most reactive.

MALE PARTICIPANT: Just unloaded from the core 105 days ago.

MR. TRAPP: Okay, right, and so he said that was the one that was going to be most energetic and that's why he thought that one went -- level went down first. So you know, I am thinking independent pools.

MALE PARTICIPANT: Yes, Jim, so there was some confusion here that the cross between -- the BKE (phonetic) would have been higher on the freshly offloaded fuel, which would have -- would have boiled off the -- the pool water sooner.

MR. TRAPP: Yes, and he could really confirm the status, how much of it was in the vessel, and how much of it was in the pool.

MALE PARTICIPANT: Well, we were told that they were doing -- during the 105 days, and I think I

got this from GE --

MR. TRAPP: Oh then, you got good data then from GE.

MALE PARTICIPANT: that it was offloaded and they were doing vessel internal modification.

MR. TRAPP: Oh that's probably solid data then.

MALE PARTICIPANT: Okay and then --

MALE PARTICIPANT: So if you tie these two pieces together, five and six may not have been fully offloaded.

MR. TRAPP: Right.

MALE PARTICIPANT: Yes, we don't know the status of anything on five and six, other than they were shut down when the tsunami hit.

MALE PARTICIPANT: Okay. Hey Jim, I do have one piece of info that I got from OIP that may be helpful to you. One of the OIP folks got an email directly from a TEPCO person.

MR. TRAPP: Yes, I saw that. We are going to try to exploit that connection.

MALE PARTICIPANT: Yes, fine. Good. Good. and you saw the reference to RHR?

MR. TRAPP: I did not.

MALE PARTICIPANT: Yes, so on that -- at

unit four it's confirmed that the pressure at the outlet of the pumps of the ECCF system has been decreased. We stopped the RHR system, B, for the inspection at 8:05 p.m.

MR. TRAPP: Yes, that's -- which seems like a good thing to do if you have no AC power.

MALE PARTICIPANT: Yes, exactly, right? And that's what I was going to ask, is there some change in AC power that I wasn't aware of.

MR. TRAPP: Welcome to my world.

(Laughter)

MALE PARTICIPANT: But you get it with better sushi.

MR. TRAPP: You know, we don't even get food.

MALE PARTICIPANT: Oh, geez.

MR. TRAPP: You know, they expect 24/7 coverage, we have only got two guys and we literally, you know, if we are -- because when the sun goes down here, everything gets rolling in Washington, so --

MALE PARTICIPANT: Right, right. The phones ring from this end. Okay. Well, I think the cavalry is on the way for you though.

MR. TRAPP: That's going to help. Then we'll get some sushi.

MALE PARTICIPANT: Yes.

MR. NORTON: I've got -- getting back to fuel pool, I have got a report here, (b)(5)

(b)(5)

(b)(5) about media reports indicate that TEPCO is considering using firefighting helicopters to lift water and drop it into the pool at unit four.

(b)(5)

MR. TRAPP: Maybe they will drop a little charge on the roof first to make them a hole.

MALE PARTICIPANT: (b)(5)

(b)(5)

MR. TRAPP: Okay. Yes, oh no, yes, and I mean, that would be a strategy that I'd exploit. I mean, why not take the roof out?

MALE PARTICIPANT: Yes.

MALE PARTICIPANT: And didn't they say the backup plan is to use fire trucks to spray water into the pool? Well, once again, how are you going to get through the roof or the containment wall?

MR. TRAPP: Yes, you know, four is obviously, is probably more challenging to get water

on the fuel pool than one and three.

MALE PARTICIPANT: Okay.

MALE PARTICIPANT: I think we heard through a hole on the side for the fire trucks.

MALE PARTICIPANT: We did.

MALE PARTICIPANT: Yes, that they have tapped through the building somehow.

MALE PARTICIPANT: They have?

MR. TRAPP: Oh no, that was the plan. And I guess the other thing we ought to start thinking about is the unit two pool. We haven't heard much about that. But these things seem to keep popping up in sequence, you know, you know, I'm pretty -- it would be surprising to me if they had any flow going in the unit two pool.

MALE PARTICIPANT: So Mike can you take a stab at helping NARAC out --

(Multiple speakers)

MALE PARTICIPANT: These are MOX loads.

MALE PARTICIPANT: Jim, thanks a lot for your comments on what's going on with the fuel pool.

MR. TRAPP: Very good. You guys take care.

MALE PARTICIPANT: All right.

MALE PARTICIPANT: Thanks Jim, you too.

MR. TRAPP: Yes, see you.

0-CZCAHL10065094 (Contains no words to transcribe.)

0-CZQ1)-10065094

(CONFERENCE CALL INITIATED)

MR. COLLINS: RST. Frank Collins.

MR. SKEEN: Hey Frank, this is Dave Skeen. How are you doing?

MR. COLLINS: Hi Dave.

MR. SKEEN: Hey listen I just heard on the radio that they are now seeing a fire coming out of the Fukushima plant. Is that unit three where we suspected the fuel pool might be smoking?

MR. COLLINS: Don't know -- what's the , what's the breaking news over here?

(Speaks off mic)

Dave Skeen is saying that they are seeing fire at possibly unit three.

(Pause)

(Background voices)

MR. COLLINS: Right now, we are looking. CNN has got video of it. They are saying it's unit four.

MR. SKEEN: Unit four?

MR. COLLINS: Yes.

MR. SKEEN: Okay, they just said the Fukushima plant. I thought we saw before, it looks like it was smoking, the unit three, but we had had

Charlie Tinkler working on some analysis for the spent fuel pool and zirc fires and that kind of stuff, so I didn't relay that to Fred before I left. But he may want to call Charlie Tinkler if he needs some information on that.

MR. COLLINS: Okay.

MR. SKEEN: I think Charlie is -- his cell phone and his home number were both on the board over there, on the white board.

MR. COLLINS: Charlie Tinkler is working on spent fuel pool. What's the analysis he is working on?

MR. SKEEN: Zirc fires -- the question the chairman had had that we were working on for a question for him, was what would happen if they boiled the water off, right?

MR. COLLINS: Okay.

MR. SKEEN: And so Fred was going to say zirc fire, of course, it will probably burn within about 24 hours, burn most of --

MR. COLLINS: Currently showing like 30 hours away.

MR. SKEEN: Okay.

MR. COLLINS: That's from our status board.

MR. SKEEN: Okay.

MR. COLLINS: Okay, but Charlie is working on a report.

MR. SKEEN: He was working on some analysis and he was going to talk to some of his colleagues and I talked to him earlier this morning and I thought he would get something back to us before the end of the day.

But somebody might want to touch base with him and kind of see where he is because if there really is a fire at one of the spent fuel pools, we are going to want to know more information.

MR. COLLINS: Okay, we will check with him. Thank you.

MR. SKEEN: Okay, appreciate it Frank.

MR. COLLINS: Okay. Thank you.

MR. SKEEN: All right sir, talk to you later.

MR. COLLINS: Bye.

MR. SKEEN: Bye.

0-D9DSL610065094

(CONFERENCE CALL INITIATED)

MR. BROWN: RST. It's Fred Brown.

MALE PARTICIPANT: Is Chuck Norton there?

MR. BROWN: Yes, just a second. Thank you.

(Pause)

MR. NORTON: This is Chuck Norton.

MR. WATFORD: Yes, this is Glen Watford with GE Hitachi.

MR. NORTON: Oh okay. Hey, I think we are going to put you on the speakerphone. I think some other people -- you have had your talk with --

MR. WATFORD: No, I was just getting back to confirm on the spent fuel pool storage, the high density and also offer to send you a pitch from TEPCO that has got more information on their spent fuel storage capability.

MR. NORTON: Okay, so what do we know about, is it high density on unit four?

MR. WATFORD: Basically, what we know is they have re-racked the units. We don't have the details but you know they have re-racked --

MR. NORTON: I am going to put you on speaker. Okay. Can you hear us?

MR. WATFORD: Yes.

MR. NORTON: Okay.

MR. WATFORD: So the information we have is actually from a presentation that TEPCO made at a conference, and it says, on units one through six, that they have re-racked the pools to increase the storage capability. So we don't have details other than we do have some information on the total capacity at the site, and I was going to send that information on to you guys.

MR. NORTON: Okay, charles.norton@nrc.gov.

MR. WATFORD: charles.norton@nrc.gov.

MR. NORTON: That's correct.

MR. WATFORD: Okay.

MR. NORTON: Okay.

NRC: Have you -- we have been watching the news talking about another fire in unit four. Are you going to talk with the -- when you talk with Tokyo, you are going to talk about that too, right?

MR. WATFORD: Yes, we were told that that was on the fourth floor of the reactor building, and that it has since been extinguished or actually has gone out, were the words from a short conversation with -- with folks in Tokyo.

We'll confirm that at the 2100 call.

NRC: And what you are telling us is directly conflicting with what CNN is putting out, but that doesn't surprise me.

MR. WATFORD: Understand.

NRC: So we have got -- we have already gone over the questions we'd like you to ask, and we are anxiously awaiting your call back after.

MR. WATFORD: All right. Okay thank you.

NRC: Thank you.

MR. WATFORD: All right bye.

NRC: Bye.

0-DD7(8-10065094

(CONFERENCE CALL INITIATED)

MR. BROWN: (b)(5)

(b)(5)

(Phone ringing)

MR. TRAPP: Jim Trapp.

MR. BROWN: Hey Jim, Fred Brown. Hey, have you heard any -- (b)(5)

(b)(5)

MR. TRAPP: (b)(5)

(b)(5)

MR. BROWN: Okay, it's -- we talked about bowed panels this morning. It's a little worse than that.

MR. TRAPP: Yes, did you, I mean I haven't debriefed with him, but did you -- I guess you got something off-of a CNN --

MR. BROWN: (b)(5)

(b)(5)

MR. TRAPP: I doubt it, but --

MR. BROWN: No actually, no, this could be lower, because you could look at this. And --

MR. TRAPP: (b)(5)

(b)(5)

MR. BROWN: Okay, so, (b)(5)

(b)(5)

MR. TRAPP: We have got a spent fuel pool fire then.

MR. BROWN: Hard to -- hard to, hard to see what's left at the pool or around the pool.

MR. TRAPP: Oh okay, so you think -- I'm sorry -- I have got to move here a second. Hold on.

(Pause)

(b)(5)

MR. BROWN: Very significant. Widely spread.

MR. TRAPP: Okay, you know, we don't have any -- oh, interesting. There's a lot of stuff going on here. (b)(5)

(b)(5)

(b)(5)

MR. BROWN: Yes.

MR. TRAPP: (b)(5)

(b)(5)

MR. BROWN: Yes.

MR. TRAPP: Put it that way.

MR. BROWN: Yes. So --

MR. TRAPP: (Inaudible)

MR. BROWN: So just to --

MR. TRAPP: (b)(5)

(b)(5)

MR. BROWN: (b)(5)

(b)(5)

MALE PARTICIPANT: (Inaudible).

MR. TRAPP: Yes, because I mean, well, both of the, one, two and three are all bad, but you know, do they see an smoke or flames coming out of it still or --

MR. BROWN: On three, significant what is either steam or smoke. Nothing on four, from two hours ago, with respect to that.

MR. TRAPP: You are seeing smoe and steam come out of three?

MR. BROWN: That's what the evidence appears to indicate, and we actually --

MR. TRAPP: We have got to take a better look. Because we were just, you know, our mission was just to go up and look at four. We weren't looking at three. Do you think it's like something else in three? Because three blew up yesterday or the day before yesterday, right?

MR. BROWN: Yes, hey, Jim, Jack the ET is asking if I can get you transferred into the ET area. Let me talk to Frank and see if we can transfer this. Otherwise I'll call you right back from in there. We are going to transfer you here.

MR. TRAPP: Yes.

(Pause)

JACK: Hang on Jim I am going to transfer you up to the ET bridge.

0-DE--EL10065094

(CONFERENCE CALL INITIATED)

MR. BROWN: RST. This is Fred Brown.

MR. NOSER: Hi, this is Chris Noser from naval reactors.

MR. BROWN: Hi Chris, what can I do for you?

MR. NOSER: How are you doing?

MR. BROWN: Good.

BSS. I had a quick question that they forwarded me to you to ask, which is, I'm here in our ECC (phonetic) as well, and we had seen on the news some reports of removal of the remaining workers from the plant there due to radiation concerns, and I was calling to see whether you had any mroe I guess, reliable channels that you have heard that through other than through the news.

MR. BROWN: We were just talking to the folks we have in the embassy and they had not been told that.

MR. NOSER: Okay, so there is not a separate channel that we have heard -- I mean, (inaudible) jump on a news story as being a guaranteed, reliable source as we have learned from other experiences (inaudible) couple of things that

had been contradictory to the news and turned out to be right, so --

MR. BROWN: We have not got any confirmation of the removal of folks from the site.

MR. NOSER: I expect you'd be told when that happened, from your folks there. And I expect they'd hear it.

MR. BROWN: When the Japanese government told them, they would tell us.

MR. NOSER: Right.

MR. BROWN: There is -- I get, at this point, what I would tell you personally is from the latest things we have seen, we might not be surprised if they have evacuated from the site.

MR. NOSER: I understand that, and we have heard some of the same things --

MR. BROWN: Yes.

MR. NOSER: through our folks there too.

MR. BROWN: Yes.

MR. NOSER: Okay, is there any way I can leave you my name and number and if you do hear anything, (inaudible) can you give me a call?

MR. BROWN: Yes, I'm just going off shift. But I am doing turnover right now. So this is perfect.

MR. NOSER: That would be great. It's Chris Noser, N-O-S-E-R.

MR. BROWN: Okay.

MR. NOSER: And the number here is (b)(6)

(b)(6)

MR. BROWN: (b)(6)

(b)(5) please let you know.

MR. NOSER: Right, okay?

MR. BROWN: Very good.

MR. NOSER: Thank you.

MR. BROWN: Sure Chris, good luck.

MR. NOSER: Thanks. Bye.

0-DFNT--10065094 (Contains no words to transcribe.)

0-DFO66L10065094 (Contains no words to transcribe.)

0-DFO-GL10065094 (Contains no words to transcribe.)

0-DFOL(610065094 (Contains no words to transcribe.)

(End of Day 5 in series)

Official Transcript of Proceedings

NUCLEAR REGULATORY COMMISSION

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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JAPAN'S FUKUSHIMA DAIICHI RST PODIUM AUDIO FILE

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MARCH 16, 2011

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0-D-4I1-10065094

(CONFERENCE CALL INITIATED)

MR. NICHOLS: Paul Nichols with GE Hitachi.

MR. SKEEN: Hey Paul this is Dave Skeen at the NRC: How are you doing today?

MR. NICHOLS: Just fine, how are you doing?

MR. SKEEN: Good. I got a message here to give you a call, so I am calling you.

MR. NICHOLS: Yes sir, I wanted to make sure we had closed the loop on giving you the information from this morning's meeting. I had given some information to your person, caller here, like a half hour, 45 minutes ago, while you guys were on another phone.

MR. SKEEN: Yes, yes.

MR. NICHOLS: I wanted to make sure you got that information and I also wanted to confirm that you guys also got the pdf of a presentation.

MR. SKEEN: Okay, let me check on that and see. I haven't -- I haven't seen it yet, but I have been kind of busy here. I was in an ET meeting --

MR. NICHOLS: Yes, I understand that, we

gave -- there was a presentation that was made by the TEPCO people about the spent fuel casks and the spent fuel storage at that site actually.

MR. SKEEN: Okay.

MR. NICHOLS: And that was at the PSA conference down here in Wilmington and we had sent it earlier this morning but I was asked to resend it again, so I just wanted to make sure it made it to your --

MR. SKEEN: Okay. I'll check on that to make sure we have it.

MR. NICHOLS: Okay, and because a lot of the information I gave you about the gentleman is in that -- we took it from that presentation.

MR. SKEEN: Excellent, okay. We'll check on that and see. Okay, and have you heard the latest status, or do you guys have a status from the different units over there, or --

MR. NICHOLS: We have only what we have been seeing in the news and what we heard from you guys this morning. The last thing we heard from you guys was, it appears that we may not have pool integrity for number four.

MR. SKEEN: That's right. There's some discussion that unit three may be in the same

condition. I mean I don't think they lost the wall, I think there's a crack or there may be a way that they are losing inventory in there, but they seem to think if they can still get water into it, that they could keep up with the leak rate and at least keep water in there, but we don't have a lot of confidence in that strategy right now, because they haven't been able to put water in to the spent fuel pool for some time now already.

MR. NICHOLS: Okay.

MR. SKEEN: So it could be headed the same way and of course the worst scenario is that two and one may end up in the same place eventually without cooling so --

MR. NICHOLS: Right.

MR. SKEEN: So now we are brainstorming ideas of what can we do, especially for one and two, to get water in and then for three and four, how can we just drop sand or cover the rubble pile in some way or something like that, so --

MR. NICHOLS: Right, no one of the, one of the -- I think we supplied some information on, on four this morning, at like 6:30-ish. (b)(4)

(b)(4)

(b)(4)

MR. SKEEN: Right, right.

MR. NICHOLS: (b)(4)

(b)(4)

MR. SKEEN: Right.

MR. NICHOLS: (b)(4)

(b)(4)

MR. SKEEN: Right, yes, I understand that.

MR. NICHOLS: (Inaudible) (b)(4)

(b)(4)

MR. SKEEN: Right. Our problem right now is we are trying to figure out are the R fields so high above this pool, you know, can I get pilots to drop material from above and what height do they have to be to have any kind of chance.

MR. NICHOLS: (b)(4)

(b)(4)

MR. SKEEN: Yes, the pumper trucks.

MR. NICHOLS: (b)(4)

MR. SKEEN: Again, our problem is that

the R fields are so high we can't get people up around the pools and so we have no information on level, or you know, what the condition is.

MR. NICHOLS: (b)(4)

(b)(4)

MR. SKEEN: Yes, if they could get it up. I think they said it's 30 meters they have got to lift it, which is about 100 feet, 90 feet, 100 feet. So it's pretty high up to get it up over the reactor, side of the reactor building, and get it into the pool, is what they were telling us.

MR. NICHOLS: Okay, well --

MR. SKEEN: It's a thought. I mean we thought about that too, with the concrete, it's something that's in there. But again, we just don't know at this point. So we are looking for equipment, trying to find what the military might have available over there. We have contacted industry folks here through INPO about what kind of equipment they may have, you know, heavy equipment or what might be available.

MR. NICHOLS: Right.

MR. SKEEN: So I think they are coming up with plans for that stuff right now. We probably won't know a lot until tomorrow morning. Over there it's about, well it's a quarter to midnight over there right now so --

MR. NICHOLS: Right.

MR. SKEEN: I think they were going to try to get some readings on radiation tomorrow with some flyovers to kind of see where they are, and see what might be possible.

The other point on unit three, it looks like from the aerial photos we have seen, that on unit three the debris field from the explosion kind of fell over the top of the fuel pool, so you know, we probably can't drop directly down on the pool. But can I drop sand, or whatever, on the debris over the top to at least cut down the dose that's coming out, the rad dose that's there. So --

MR. NICHOLS: (b)(4)

(b)(4)

(b)(4)

MR. SKEEN: So it was over the spent fuel pool or --

MR. NICHOLS: (b)(4)

(b)(4)

MR. SKEEN: So this was pieces of pipe, you said?

MR. NICHOLS: (b)(4)

(b)(4)

MR. SKEEN: Okay. Okay. So all that was on the refuel bridge when it -- when they had this event?

MR. NICHOLS: Right.

MR. SKEEN: Okay.

MR. NICHOLS: It was piled pretty high, they said.

MR. SKEEN: All right. And that could have fallen down into the pool then.

MR. NICHOLS: That's totally speculation,

but --

MR. SKEEN: Yes, if it got shook pretty good, you would think probably stuff fell off there.

MR. NICHOLS: Yes, because it --

MR. SKEEN: Okay.

MR. NICHOLS: (Inaudible) up in the air so --

MR. SKEEN: Okay, well, that's good info. We didn't have that before. So that's good to know. Okay. Well I think that's all we got right now Paul. I appreciate you guys giving us that information. I'll check and make sure we have got that presentation that they gave and --

MR. NICHOLS: Okay, if you don't, give me a call back and I'll make sure, I'll try it again.

MR. SKEEN: Okay. Will do.

MR. NICHOLS: Okay, thank you for calling back.

MR. SKEEN: All right, thank you sir.

MR. NICHOLS: Yes, bye-bye.

MR. SKEEN: All right.

0-DG$G7-10065094 (Contains no words to transcribe.)

0-DG$H--10065094 (Contains no words to transcribe.)

0-DGC9J610065094 (Contains no words to transcribe.)

0-DGDJIL10065094 (Contains no words to transcribe.)

0-DGEJJ610065094 (Contains no words to transcribe.)

0-DGF46610065094 (Contains no words to transcribe.)

0-DGF5EL10065094 (Contains no words to transcribe.)

0-DGFY9610065094 (Contains no words to transcribe.)

0-DGGG6610065094 (Contains no words to transcribe.)

0-DJ1G)-10065094 (Contains no words to transcribe.)

0-DJ1TIL10065094 (Contains no words to transcribe.)

0-DJFYG610065094

(CONFERENCE CALL INITIATED)

MR. ISLAND: NRC, Pat Island. (Phonetic)

OPERATIONS OFFICER: This is a headquarters operations officer.

MR. ISLAND: Yes.

OPERATIONS OFFICER: I was wondering if you guys wanted this phone on the RST bridge and muted. That way when we send someone up to the RST bridge you guys will be able to hear them.

MR. ISLAND: Sure that's fine. You can do that.

OPERATIONS OFFICER: Okay. And just if you can just mute that phone that will be fine.

MR. ISLAND: All right.

OPERATIONS OFFICER: Thank you.

0-DJGPAL10065094 (Contains no words to transcribe.)

0-DKKD!610065094 (Contains no words to transcribe.)

0-DY9D1610065094 (Contains no words to transcribe.)

(CONFERENCE CALL INITIATED)

MR. MOSS: WANO, Dave Moss.

MR. SHEA: Hello, this is Jim Shea at the NRC in the emergency response center.

MR. MOSS: Yes sir.

MR. SHEA: You were going to give us a call and we were going to put you on conference.

MR. MOSS: Okay, which number to call? I will need to run down to the conference room and use a different phone, but -- can I do that?

MR. SHEA: Yes. The number is 3-0-1 -

MR. MOSS: 3-0-1 --

MR. SHEA: 3-0-1 8-1-6 --

MR. MOSS: 8-1-6 --

MR. SHEA: 5-5-0-2.

MR. MOSS: 5-5-0-2. Okay I will call you in about two minutes.

MR. SHEA: Understand.

MR. MOSS: Okay thank you.

MR. SHEA: Bye.

0-DYCFB610065094

(CONFERENCE CALL INITIATED)

MR. SHEA: NRC: Jim Shea, ops center.

MR. MOSS: Hi, this is Dave Moss from INPO.

MR. SHEA: Yes.

MR. MOSS: I was trying to contact Dave Sheen, or Dave Skeen.

MR. SHEA: Yes, Dave is tied up with briefings but this is Jim Shea. I am the BWR analyst and I got out our RST team, the technical staff here, and we are -- we are prepared to discuss the issues with you.

MR. MOSS: Okay.

MR. SHEA: So let me put you -- give me a second, I'll put you on speakerphone for the staff.

MR. MOSS: Okay.

MR. SHEA: Hold on.

0-DYDCC610065094 (Contains no words to transcribe.)

0-DYDTD610065094 (Contains no words to transcribe.)

0-DYEB5L10065094 (Contains no words to transcribe.)

0-E!-I)610065094 (Contains no words to transcribe.)

0-E!TU-610065094

(CONFERENCE CALL INITIATED)

MR. MOSS: INPO, Dave Moss.

MR. SKEEN: Dave, this is Dave Skeen at the NRC: How are you doing?

MR. MOSS: Had better days. Others are having worse.

MR. SKEEN: I understand.

MR. MOSS: What can I do for you?

MR. SKEEN: Hey listen, a couple of things. First of all we have got a new request for equipment in -- you know, some pumps and all that stuff, we did a quick pdf of it. We have sent it out to our naval folks in Japan and they are going to see what they have available, and so we are going to send it to you for information as well. But --

MR. MOSS: Just for (inaudible)?

MR. SKEEN: Yes. This is for the -- you know, four trains of cooling that they get from the ocean up into the spent fuel pools.

We got some new information from our team over there, from the Japanese, from METI, in Japan, that says they think the number four spent fuel pool is still intact, that the wall that was blown out was a supporting wall, but the liner itself is still

there, so if that they can get water in there, they think they are still all right.

So we are trying to develop four trains of cooling water to come from the ocean up into the site. So we will send you the specs on all the stuff that we heard they said they needed.

But here's our bigger problem, and they asked me to call INPO just to see. The problem is going to be who can operate this equipment, you know, install it and operate it, and so our executive team asked if I could call INPO to see if, are there contractors that can do that kind of work, or what would it take to get somebody over there?

Now, recognize, they are going to be in an R field, right? I don't know what the, the radiation is going to be in that area, so I don't know that you will find any takers from contractors to even do that work.

But I said I would ask. So I am asking.

MR. MOSS: Well, let me just be -- understand exactly what the request is.

MR. SKEEN: Okay.

MR. MOSS: (b)(4)

(b)(4)

(b)(4)

MR. SKEEN: Yes.

MR. MOSS: This is something different, right?

MR. SKEEN: No, this is -- it's a, I guess a continuation of what we had this morning, right? They got more details on what it was they were looking for.

MR. MOSS: Okay.

MR. SKEEN: After talking with the Japanese themselves, our team said here's what they are asking for. This is what the Japanese have asked us to try to provide.

MR. MOSS: Okay. And that is what? (Inaudible)

MR. SKEEN: It's, you know, it's like three pumps per train, a pump to suck the water out of the sea, to have a booster pump to run it up the 500 meters, whatever it takes to get up to where the actually pumper would be, the spray pumper, and then the spray pumps that could pump at least 50 meters high at 100 feet away.

So we are trying to scramble to get that equipment, and all the piping that goes with that. So, but the Japanese have also asked for assistance

in installation and operation of this equipment, so you know, the U.S. government, we can't send needy guys or military guys in here to do that.

So one question that the ET asked was, would there be contractors willing to go in there and do that work. I said I doubt it but I would ask. So I'm asking.

MR. MOSS: Okay, well, we'll poll.

MR. SKEEN: Okay.

MR. MOSS: See if folks are aware of it --

MR. SKEEN: Okay. The other piece, we got an email, and I haven't seen it yet, but I mean I saw it, but I haven't got it with me, the Chairman of Bechtel said they are willing to help, anything they can do to help the situation, so if I get a name and a number for you I might have you tie in with them to try and keep all the industry stuff going together. So --

MR. MOSS: Okay.

MR. SKEEN: Rather than talk to them separately, if we could tie in some way with you guys.

MR. MOSS: Okay.

MR. SKEEN: Okay?

MR. MOSS: All right.

MR. SKEEN: Okay, I just wanted to let you know. And we should be sending you this pdf of -- we just did a quick sketch as they were telling us what it was they were looking for, so it will give you some idea of what's going on.

MR. MOSS: (b)(4)

(b)(4)

MR. SKEEN: Yes.

MR. MOSS: (b)(4)

MR. SKEEN: They believe if they get water in there, that they can flood that back up.

MR. MOSS: (b)(4)

(b)(4)

MR. SKEEN: That's what they are telling us.

MR. MOSS: Okay. All right.

MR. SKEEN: I don't know where they are getting their information, but that's what they think.

MR. MOSS: Okay. It -- this is the NRC folks over there, or this was what TEPCO --

MR. SKEEN: This was METI, which is the government folks --

MR. MOSS: Okay. Okay.

MR. SKEEN: right, that run NISA, which is their regulator.

MR. MOSS: Their regulator.

MR. SKEEN: So their information was this.

MR. MOSS: Okay.

MR. SKEEN: And so they would discourage doing sand or anything else right now, and they would try to put water into all four pools at this point.

MR. MOSS: Okay. Any update on unit three?

MR. SKEEN: Unit three they think is degraded, so it's leaking somewhat. But if we can get enough flow rate in there that they can keep the water above the fuel --

MR. MOSS: Okay.

MR. SKEEN: So that's what they are trying to do.

MR. MOSS: Okay.

MR. SKEEN: Okay, and we'll get you this information out just shortly. So we will get it to you as soon as we can.

MR. MOSS: All right, hey, thanks a lot. Appreciate it.

MR. SKEEN: All right Dave.

MR. MOSS: Bye-bye.

MR. SKEEN: Talk to you later.

0-E$7G(-10065094

(CONFERENCE CALL INITIATED)

MR. SKEEN: Reactor safety team, this is Dave Skeen speaking.

MR. ROBERTS: Hello Mr. Skeen, this is Tom Roberts from naval reactors.

MR. SKEEN: Yes sir.

MR. ROBERTS: We have been extended an invitation to send a rep over to join you and --

MR. SKEEN: Certainly.

MR. ROBERTS: and interact, and I have got the first shift.

MR. SKEEN: Lucky you.

MR. ROBERTS: Yes, so I was looking for some insights on where to park and how to get to the EOC.

MR. SKEEN: That's a good question. I think we will have to clear you through security. If you come around -- are you familiar with where the NRC is?

MR. ROBERTS: Yes I am. The 2 White Flint building?

MR. SKEEN: The 2 White Flint, right. If you come down the street by the metro stop, that's Marinelli I think, come down Marinelli Street, you

will see the security gate off to your left. If you'll pull in there, we'll have to let them know you are coming, and give them your information, and see if we can get you a visitor pass and all that to get through.

MR. ROBERTS: Okay, on the left. I was picturing coming in, I'm familiar with the RIC (phonetic) where the Bethesda North Marriott is.

MR. SKEEN: Yes. Yes.

MR. ROBERTS: So that's Marinelli right, that comes in?

MR. SKEEN: Right.

MR. ROBERTS: And you say a left? Because the building is on the right when you are coming from the --

MR. SKEEN: Oh, I'm sorry, it's a right. If you are coming in that direction, you'll turn right after you go past the building, go through the stop light, past the metro, the metro parking garage is on the left-hand side, you'll see the security gates on the right and just pull in there and you know, you'll have to give them your credentials, who you are, and all that, and what is your ETA? When do you think you'll be here?

MR. ROBERTS: Probably in about 40

minutes.

MR. SKEEN: Okay. And then tell them that -- who you are, you are with naval reactors, to support the reactor safety team in the ops center, in the NRC incident response center. And let's see, in 40 minutes, will I still be here? Yes, I'll still be here.

So if you want to give them my name, David Skeen --

MR. ROBERTS: Okay, David --

MR. SKEEN: S-K-E-E-N --

MR. ROBERTS: S-K-E-E-N.

MR. SKEEN: who is the reactor safety team director. And they now have you -- I think they have visitors parking inside. If they have visitors' slots they will tell you where to park. If not, there's also some outside parking slots outside the parking garage area, but hopefully they can give you some directions on where to park there.

MR. ROBERTS: Okay, sounds good, and we are probably going to set up a shift rotation so I'll just pass on whatever works to my successor, whoever that is.

MR. SKEEN: That's fine. Okay. And your name was Tom Roberts with naval reactors.

MR. ROBERTS: Naval reactors. Right.

MR. SKEEN: Okay, so let me pass this information forward so when you get here we will kind of grease the skids to get you in then.

MR. ROBERTS: Okay.

MR. SKEEN: All right sir. And do you have a number I can reach you, your cell phone or something if you are on the way and --

MR. ROBERTS: Sure, I'll give you my personal cell since that has Blackberry capability. Our work cells don't. It'

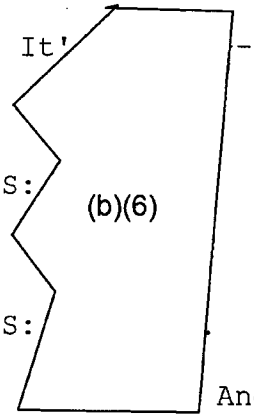
MR. SKEEN:

MR. ROBERTS:

MR. SKEEN:

MR. ROBERTS:

MR. SKEEN: And if you have any trouble, you can call the ops center number, 301-816-5100.



MR. ROBERTS: Right.

MR. SKEEN: And ask for reactor safety team and we will get somebody to get you in.

MR. ROBERTS: Okay, great.

MR. SKEEN: All right sir.

MR. ROBERTS: I'll see you in a bit.

MR. SKEEN: Yes, see you in a little bit.

Bye.

0-E$-ID610065094

(CONFERENCE CALL INITIATED) MR. SKEEN: Reactor safety team. This is Dave Skeen.

MR. GODY: Hey Dave, Tony Gody here. How are you doing?

MR. SKEEN: Good, how are you doing Tony?

MR. GODY: Good. Hey, I just got done with doing a tour at global facility with Commissioner Apostalakis.

MR. SKEEN: Yes sir.

MR. GODY: And after -- at the end of the tour they did bring us over to their emergency response center and gave us a briefing on that support center, its (inaudible) possibilities, and how they are supporting TEPCO and all their other partners in Japan and NRC, INPO and NEI.

MR. SKEEN: Okay.

MR. GODY: One of the things that they mentioned during that meeting was that they got the impression that the NRC had (b)(5) (b)(5) if it was something that could be shared.

MR. SKEEN: Right. We got that request earlier, and we are trying to figure out -- I think Brian McDermott was working, how about we could do

(b)(5)

And so -- but he thought there was something we could do with an (b)(5) that we could share with folks. So they did ask that question earlier and I know that they were working on that. So --

MR. GODY: All right, now recognize, (b)(5)

(b)(5)

MR. SKEEN: Sure.

MR. GODY: They have capability, so --

MR. SKEEN: And who is this again? Who was the people that were asking?

MR. GODY: The Global -- GLE -- I'll give you a contact name if you want. It's not the exact person but they can help you get there.

MR. SKEEN: Okay.

MR. GODY: The person that I would recommend you to is Nicole Holmes. She is the chief operating officer of Global Nuclear Fuels.

MR. SKEEN: Okay.

MR. GODY: It's Nicole Holmes, H-O-L-M-E-S.

MR. SKEEN: Got it.

MR. GODY: And her cell phone number is (b)(6)

MR. SKEEN: (b)(6) - what did you say, (b)(6)

MR. GODY: That is correct.

MR. SKEEN: Okay. Okay. All right. That's fine. And we have been in contact with I guess GE Hitachi's ops center down there. We have been talking with Paul Nichols I think is their daytime guy down there and we ahve been in touch with him since the beginning.

So I assume, is that the same place?

MR. GODY: It sounds like it. They're tied in 24/7 on our bridgs right?

MR. SKEEN: That's it. And they are in Wilmington, yes.

MR. GODY: Yes.

MR. SKEEN: Okay.

MR. GODY: That's the same place.

MR. SKEEN: Okay, so I'm talking to them regularly, so I will talk to them again and see. Again, I know this morning we were looking at, could we release something (b)(5) and so we will see what we can find out on that.

But you are telling me (b)(5)

(b)(5)

MR. GODY: Yes.

MR. SKEEN: So I don't know (b)(5)

(b)(5)

MR. GODY: Yes, but I don't know if they could actually -- yes. You need to fully explore that.

MR. SKEEN: We will. I won't do anything without our INFO SEC (phonetic) people understanding what the issue is.

MR. GODY: Okay excellent.

MR. SKEEN: Okay got you.

MR. GODY: All right, thank you and good luck.

MR. SKEEN: All right. Thanks Tony. Talk to you later.

MR. GODY: Bye.

0-E$W(I610065094

(CONFERENCE CALL INITIATED)

MR. SKEEN: Reactor safety team. This is Dave Skeen speaking.

OPERATOR: Putting a call through you.

MR. SKEEN: Okay. Hello?

MAJOR COOK: Hello this is Major Cook from US Forces Japan.

MR. SKEEN: Yes sir Major Cook.

MAJOR COOK: How are you doing?

MR. SKEEN: This is Dave Skeen, yes, I'm still here.

MAJOR COOK: Okay. Hey great. Hey I just wanted to give you a little bit of an update on this boron shipment.

MR. SKEEN: Okay.

MAJOR COOK: I know you are waiting on a POC for Vandenberg.

MR. SKEEN: Right.

MAJOR COOK: Hey, I just spoke with our log planners and they are really building this mission as we speak.

MR. SKEEN: Okay.

MAJOR COOK: But just fyi, and educate me on this too, like I mentioned earlier, there's a lot

of, there's an army of smart planners. They may actually send this thing commercial. So the point being is, I don't know what port it's going to leave out of yet.

MR. SKEEN: Okay.

MAJOR COOK: So we'll --

MR. SKEEN: Well we are standing by, at Diablo Canyon, they are just standing by (phonetic). But our understanding was before that they checked with UPS and Fedex and they would not fly that to Japan.

MAJOR COOK: The difference is we actually have contracts specifically with Transcom, who do this -- there's other contracts, not just those guys but other --

MR. SKEEN: Okay.

MAJOR COOK: things, so --

MR. SKEEN: Sure, we don't care who flies it, just so as we get it over there. So anything you have got you can work out is fine with us.

MAJOR COOK: Copy. So that's what I was getting at, is we will get back with you on where it's going to go, and who we need to talk to. And what I have told Paycom (phonetic) what we told Paycom is -- what I told Paycom is you guys were

ready to move it today. So --

MR. SKEEN: Okay.

MAJOR COOK: Is that a true statement?

MR. WILLIAMS: Major Cook this is Joe Williams.

MAJOR COOK: Yes sir.

MR. WILLIAMS: I work with Mr. Skeen. That is correct. You can coordinate with Mr. David at Diablo Canyon at the numbers that I provided.

MAJOR COOK: Copy.

MR. WILLIAMS: I can also tell you that in trying to coordinate form this end I spoke to Colonel Phil Barkes at the Pentagon. I apologize that I don't have the full organization he is affiliated with, but I reached him through the National Military Command Center. His telephone number is (b)(6) and I also forwarded to him the email that you sent me with the tasking information, so I was trying to be sure that we had a smooth transfer to Vandenberg or whatever destination where this material needs to go within the U.S. for transport.

MAJOR COOK: I copy sir. I appreciate that. I tried to call Mr. David. His phone was busy. That's fine. We can let him know where he

needs to send this stuff and who he needs to talk to, to -- so we can get our hands on it.

MR. WILLIAMS: Okay, great.

MR. SKEEN: Okay we appreciate it Major Cook.

MAJOR COOK: Thank you gentlemen. I really appreciate your effort.

MR. SKEEN: All right, thank you sir.

MAJOR COOK: Okay thank you.

MR. SKEEN: Bye-bye.

0-E-90L610065094 (Contains no words to transcribe.)

0-E-9D(610065094

(CONFERENCE CALL INITIATED)

MR. NICHOLS: Hello, Paul Nichols, GEH:

MR. SKEEN: Paul, this is Dave Skeen with the NRC again. How are you doing ?

MR. NICHOLS: Fine.

MR. SKEEN: Hey listen, I am having another thought here. You know, we are trying to get some trains of equipment, some pumps, piping, all that kind of stuff, over to the site. Our plan now is to try to get at least four trains of pumps, valves, fittings and spray pumps to try to put water into the spent fuel pools with you know, sprayers of some sort from you know, rocket fire launchers or fire trucks.

MR. NICHOLS: Right.

MR. SKEEN: We've got the U.S. Navy looking at trying to put some equipment together for us that's already there in Japan.

MR. NICHOLS: Okay.

MR. SKEEN: Our problem is the Japanese have asked, have requested help in installing and operating this equipment when it gets to the site. And here's my thought. I just thought, well you had guys doing refueling over there.

MR. NICHOLS: Actually they are all back here.

MR. SKEEN: Oh, they have all left. Because I was thinking some of them must be --

MR. NICHOLS: We have already brought them all back.

MR. SKEEN: Okay. I thought some of them must have Japanese -- they speak Japanese. Okay. So that may not --

MR. NICHOLS: There may be some others over there. I can ask and see if there are some locals that work for us that would still be there. But all our expatriate kind of people are all back here.

MR. SKEEN: Okay. Because what I think we need at least, you know, the Navy can supply the equipment, possibly they could show someone how to use it before they ship it, right, to say this is the stuff, this is how you work this, and how you work that, but if their manuals are in English, and the Japanese guys don't have English capabilities, then this is going to be a problem for them at the site.

MR. NICHOLS: Okay well let me, let me go next door to that part of our team and I can --

MR. SKEEN: See if you have any resources

available that would be willing to do this, or you know, help with them on the site. I know, I mean definitely, there's certainly radiation there, right? So that's something they have to consider.

But I just thought -- I thought of that because we are trying to figure out, well how in the world, even if we give them this equipment, which they don't know how to operate, what good is it going to do them?

MR. NICHOLS: Right, no I understand and I will go next door and ask and I will call you back either way.

MR. SKEEN: Okay. Appreciate it Paul.

MR. NICHOLS: Thank you for your call.

MR. SKEEN: Thanks.

MR. NICHOLS: Bye-bye.

MR. SKEEN: Bye.

0-E-F5K610065094

(CONFERENCE CALL INITIATED)

MR. SKEEN: Reactor safety team. This is Dave Skeen.

MAJOR COOK: Hey sir, it's Major Cook. How are you doing?

MR. SKEEN: Good, how are you doing Major Cook?

MAJOR COOK: Good. Hey just fyi, we sent the formal tasker and our guys are starting to build load plans and stuff like that on it --

MR. SKEEN: Okay.

MAJOR COOK: Boron.

MR. SKEEN: Yes.

MAJOR COOK: And I probably should be able to do this mathematically, but do you know approximately how much the 55-gallon drums weight, or approximate quantities?

MR. SKEEN: Let me, let me check real quick. Hang on just a second.

(Off mic)

Hey, I've got Major Cook on the line. Do we know about how much the boron weighs per drum or bag or --

MALE PARTICIPANT: Forty pound bag, 5,500

pounds per pallet.

(Returns to main conversation)

MR. SKEEN: Okay, Major Cook, it's --

MAJOR COOK: Roger.

MR. SKEEN: Okay, it's not in drums now. They are saying it's 40 pound bags and it's 5,500 pounds per pallet.

MAJOR COOK: Okay I'm sorry, hold on. Forty pound bags --

MR. SKEEN: Forty pound bags and it's loaded on -- each pallet weights 5,500 pounds.

MAJOR COOK: Okay. Each pallet -- hold on -- each pallet --

MR. SKEEN: Forty gallon -- 40 pound bags.

MAJOR COOK: Okay, each pallet weighs how mucH/

MR. SKEEN: 5,500 pounds, 5-5-0-0.

MAJOR COOK: 5,500 pounds okay. Sounds good.

MR. SKEEN: Okay.

MAJOR COOK: Forty pound bags, each pallet weighs 5,500 pounds. Got it.

MR. SKEEN: That's right. Do you need anything else?

MAJOR COOK: No I think that's good for now. I appreciate it.

MR. SKEEN: Okay. Well anything you need, let us know.

MAJOR COOK: Absolutely, thank you for all your support sir. I'm also trying to track down a POC for, at Vandenberg.

MR. SKEEN: Okay.

MAJOR COOK: (Inaudible) what this does is it at least formally kicks the ball rolling.

MR. SKEEN: Okay.

MAJOR COOK: Okay?

MR. SKEEN: Yes, and we have been talking with Diablo and they are getting ready to put this stuff on trucks and figure out how to get it there. They are just waiting to hear from -- yes, we just need to know where to take it to the Vandenberg.

MAJOR COOK: Got you. All right.

MR. SKEEN: So any time you get that information let us know.

MAJOR COOK: Roger sir.

MR. SKEEN: All right thank you.

MAJOR COOK: Okay bye.

MR. SKEEN: Bye.

0-E-G03L10065094

(CONFERENCE CALL INITIATED)

MR. ABELAIRAS: GE Hitachi, Victor Abelairas.

MR. SKEEN: Hi Victor, this is Dave Skeen, the director of the reactor safety team at the NRC:

Sorry I missed your call. I was in another meeting but they did get a message to me. I understand you wanted to talk about the possible coordination of, of supply drops.

MR. ABELAIRAS: Understood, yes, that's correct. We, we did receive your request and we are trying to figure out -- we have a few questions for you --

MR. SKEEN: Sure.

MR. ABELAIRAS: to get (inaudible) on this. Have you been in touch with TEPCO regarding the equipment drop? In other words, do they know what equipment is coming out to site?

MR. SKEEN: No. What we got, we got it through the government, through METI, at a meeting with our staff that's over there on the ground. And what they relayed to us is this is the equipment they think is needed at the site.

MR. ABELAIRAS: Okay, so --

MR. SKEEN: So it's not TEPCO themselves. It was the government that we were talking to.

MR. ABELAIRAS: Okay. And would we be able to get a list of the equipment that you are dropping so that we understand the right level person to help with the instruction manual?

MR. SKEEN: Yes. Hang on just a second.

(Pause)

MR. SKEEN: Okay. I'm not sure we sent you guys our specs on that. I know we sent it to a couple of different people. But we can get that sent to you if you have got an email there, we can send it to you.

MR. ABELAIRAS: Yes, if you could send it to the emergency response email. I'll give that to you right now.

MR. SKEEN: Okay.

MR. ABELAIRAS: Okay, and it's G-E --

MR. SKEEN: Okay.

MR. ABELAIRAS: So that's ge.hitachinuclearresponseteam -- all one word --

MR. SKEEN: Okay.

MR. ABELAIRAS: @(inaudible).com.

MR. SKEEN: Dot com, okay, we'll get

something to you there. I know we have sent it just to INPO because we talked to them earlier too. But we'll send you all this stuff that we were asking for.

And again, the Navy may have some of this stuff, but they may not have all of it. So if there's holes that someone else could fill, that would be good, or we are just trying to reach out right now and see what we can find. So --

MR. ABELAIRAS: Okay, and we -- we are assuming that this ties back to a request that was made a few days back to spec out some of the equipment that might be needed from GE.

MR. SKEEN: Yes.

MR. ABELAIRAS: So, okay.

MR. SKEEN: And also, did anyone talk to (b)(4)

MR. ABELAIRAS: Yes, and that's the second item I have for you.

MR. SKEEN: Okay.

MR. ABELAIRAS: (b)(4)

(b)(4)

MR. SKEEN: Okay.

MR. ABELAIRAS: (b)(4)

(b)(4)

(b)(4)

MR. SKEEN: Yes. And I am not sure we are at that point yet. So --

MR. ABELAIRAS: Correct. We do have a few companies that you may want to talk to regarding robots.

MR. SKEEN: Okay.

MR. ABELAIRAS: I have one of them here with me it's called ROV Technologies.

MR. SKEEN: Okay.

MR. ABELAIRAS: And ROV, I assume, stands for remote operated vehicle.

MR. SKEEN: Right.

MR. ABELAIRAS: And the number I have here is 8-0-2 --

MR. SKEEN: Okay, 8-0-2 --

MR. ABELAIRAS: 2-5-4 --

MR. SKEEN: 2-5-4 --

MR. ABELAIRAS: 9-3-5-3.

MR. SKEEN: 9-3-5-3.

MR. ABELAIRAS: And I believe I have one more company for you that's via email, and I could send you both these items through email if you put your email address in the -- when you send me the --

MR. SKEEN: Yes, we can do that.

MR. ABELAIRAS: Okay. Once we get that, we'll see who we have available, if anybody, and we are also in contact with HG&E which is our counterpart in --

MR. SKEEN: Yes.

MR. ABELAIRAS: in Tokyo.

MR. SKEEN: Yes.

MR. ABELAIRAS: And so they may be able to have some folks that help.

MR. SKEEN: Okay great. We would appreciate that. All right sir. We'll get you an email out straight away.

MR. ABELAIRAS: All right. Thanks Dave.

MR. SKEEN: All right. Thank you bye.

MR. ABELAIRAS: Bye-bye.

0-E-J) 9-10065094

(CONFERENCE CALL INITIATED)

GEH: GEH, (inaudible).

MR. SKEEN: This is Dave Skeen with the NRC with the reactor safety team. I was looking for Paul Nichols.

GEH: Hold on a a second please.

MR. SKEEN: Thank you.

(Pause)

MR. NICHOLS: Hello, Paul Nichols.

MR. SKEEN: Paul, this is Dave Skeen again. I hate to keep bothering you.

MR. NICHOLS: That's okay.

MR. SKEEN: (b)(4)

(b)(4)

MR. NICHOLS: Yes we do.

MR. SKEEN: or already in Japan, or --

MR. NICHOLS: I believe -- well I can't, I know we have some available, where they are at I don't know, but I'll fix somebody on it nad I'll -- and I'll call you back on that too.

MR. SKEEN: That sounds good. If you can

get some information on that, let us know. I would sure appreciate it.

MR. NICHOLS: Sure will, either -- I'll call you either way.

MR. SKEEN: Okay, thank you sir.

MR. NICHOLS: You're welcome.

MR. SKEEN: Bye.

MR. NICHOLS: Bye.

0-E----L10065094

(CONFERENCE CALL INITIATED)

MR. ULSES: Hello Tony Ulses can I help you?

BILL: Hey Tony, Bill (inaudible).

MR. ULSES: Hey Bill, can I call you back in a couple of minutes?

BILL: Yes, call the reactor safety team, the incident response center.

MR. ULSES: Okay, sounds good. Thanks. Bye.

BILL: Bye.

0-EVR!JL10065094

(CONFERENCE CALL INITIATED)

MS. BROWN: Reactor safety team.

OPERATIONS OFFICER: Yes, it's Howie, the headquarters ops officer on a recorded line. We do have some folks calling in the GE (inaudible) bridge. Do you guys want to go ahead and connect into that bridge?

MS. BROWN: Yes, but let me have Scott Sloan call you from the station where everybody is sitting.

OPERATIONS OFFICER: Sounds good.

MS. BROWN: Hold on, let me see if I can get the number.

(Pause)

MS. BROWN: Aren't you looking for Bechtel?

(Inaudible)

(Pause)

MS. BROWN: Bill said they should be put on the pumping bridge.

OPERATIONS OFFICER: Yes well we -- there is no pumping bridge. We created a bridge for them. I'm just letting you know that bridge is already up.

MS. BROWN: Okay.

OPERATIONS OFFICER: Okay, so you guys need to call in here so we can connect you to the bridge.

MS. BROWN: Understand.

OPERATIONS OFFICER: Okay.

MS. BROWN: Bye.

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0-EVSA3L10065094

(CONFERENCE CALL INITIATED)

MS. BROWN: Reactor safety team. This is a recorded line.

OPERATIONS OFFICER: Hello this is headquarters operations officer. I have Tony Ulses on the other line.

MS. BROWN: Yes, go ahead. Hi Tony.

MR. ULSES: I just want to pass on some info for you guys.

MS. BROWN: Okay.

MR. ULSES: We got a fellow calling us from Patch River. He's got -- they got a remotely-operated helo with a two-ton load capacity --

MS. BROWN: Hold on, I'm writing quickly. Remote operated helo?

MR. ULSES: Yes, with a two-ton load capacity. We are thinking that maybe that's useful for this (inaudible). I want to pass on his contact information to you guys.

MS. BROWN: All right. Do we have a name?

MR. ULSES: I have a name. His name is Gregory Lynch.

MS. BROWN: Gregory Lynch.

MR. ULSES: And I have two telephone numbers for him.

MS. BROWN: All right, I'm ready.

MR. ULSES: (b)(6)

MS. BROWN:

MR. ULSES: Right, and the other number is and it's a cell phone, (b)(6)

MS. BROWN:

MR. ULSES: Correct.

MS. BROWN: All righty.

MR. ULSES: All righty. Thanks.

MS. BROWN: Thank you. Bye.

(End of Day 6 in series)