

A-181A

Tape 34, Beginning of Side B  
April 4, 1990

GPC Exhibit II-181A DOCKETED  
(Staff composite version) USNRC

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OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

Voice: Was it tight?

Burr: It was loose.

Voice: It should have had Loctite™ on it.  
(Intervenor: Burr)

Bockhold: It didn't have Loctite™.

Burr: No Loctite™. Neither did we have Loctite™ on our switch.  
So, maybe that's something we need to [GPC: you should] look  
into.

McCoy: (Inaudible) . . . all of these switches, but we need to have an  
agreed upon plan, line by line, of all the things that we have  
[Intervenor: ought] to look at and test for and all that before  
we affect [Intervenor: touch] those switches that have failed. If  
we don't we are going to get down to the point that maybe we  
can't go back and determine if that's what was wrong. Because  
people are still coming up with theories and ideas and all of that  
about what to check [Intervenor: for Mr. Chaffee]. And you  
know if we are really talking about things in the micron, 5  
micron or less range.

Voice: (Inaudible.)

McCoy: (Inaudible) that research in our shop.

Burr: I don't think so.

Kochery: Not only that . . .

McCoy: You've got to have a microscope basically to see that.

Kochery: The venting mechanism, he wants to get the vented air, wants to  
(inaudible) air [Intervenor: see if there's anything in it].

McCoy: That's right. You have to have a filter. You know this is not  
like taking a cloth and putting it on like we did at start up  
testing. (inaudible) This is much finer than that.

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NUCLEAR REGULATORY COMMISSION  
Docket No. 50-424/425-OLA-3 EXHIBIT NO. II-181A  
In the matter of Georgia Power Co. et al., Vogtle Units 1 & 2  
 Staff  Applicant  Intervenor  Other  
 Identified  Received  Rejected Reporter SD  
Date 10/6/95 Witness

Voice:

(Intervenor: Ajuluni)

Well, we've got all these other switches that we have taken out now. You know right? Failures that have been in the system in the past.

Bockhold:

We've got 7 switches. Seven temperature switches, five pressure switches . . .

McCoy:

They are all quarantined.

Voice:

(Intervenor: Ajuluni)

Yeah and they are all quarantined, but (inaudible).

Bockhold:

(Inaudible) one the P-3 switch, and one logic card.

Voice:

(Intervenor: Ajuluni)

At some point we are going to disassemble these things. And when you disassemble them, we can look inside of them and see if there is debris or junk in there.

Kochery:

That's what -- that's what the Calcon guy said - if there - the switch is venting because of some of the debris - when you open the switch you can see that (inaudible).

Burr:

Normally you can see something with your eye.

Mosbaugh:

It's not as small as microns, you know. One thing that I think we probably ought to do to prove or disprove the particle theory is -- you know we've got some of these lines out there, you know. They are asking about the air quality and so forth. You could take one of these sensing lines and essentially --

McCoy:

Blow it down [Intervenor would delete "down"].

Mosbaugh:

Do an air blow into a white cloth and if there is debris in there, we really ought to know about it. And if there is not it supports our case.

McCoy:

I think that is a reasonable thing to do at some point on the air supply).

- Bockhold: Lets - lets - lets - lets [Intervenor: lets, lets, uh, lets] you and I talk first and then [Intervenor: uh, uh] we need to decide on an organization -- [Intervenor: plan].
- McCoy: What we really need to do right now is to keep this thing going, our test plan that is, that is --
- Bockhold: Our test plan is going.
- McCoy: Yeah, but we've got our key individuals here.
- Bockhold: We need to let them go --
- McCoy: That's right.
- Bockhold: And just you and I talk about organization now. The diesel people need to go work on the diesel procedures that we have going on. I need to read that. After I read that I will reconcur. I will get back to you guys. Okay - have I got any questions?
- Voice: (inaudible)
- Kochery: We have no plans to put the strap-on thermo meter or anything like that on the jacket water standpipe.
- Bockhold: [Intervenor: you, you] He asked you to consider it. --
- Voice: (Inaudible)
- Bockhold: Just consider it and if you think it's not appropriate, we'll say it's not appropriate. But prepare the procedure the way you are going and we can add that, we can add - we can hang a piece of M & TE (inaudible).
- McCoy: One other thing you can do, is somebody set up [Intervenor: said it] there and [Intervenor: is] monitor the point where the heater electrically turns off and on and correlate that with your charts.
- Bockhold: You can't do that without a temp. mod.
- Voice: No, (inaudible).

McCoy: Yeah, [Intervenor: no] you maybe can. You just put a clamp-on amp meter, if you can get to it, or something like that. They said that was the two alternatives. One was to come up with some way to measure temperature. Another that somebody said was monitor when the heater energizes and turns off. What they are trying to get is some relationship between what comes out on that chart verses when the heater is on and off. Isn't that the objective? So I think we just need to look and see if there is some easy way to do that before we rule it out.

Kochery: One thing, also, you know there is a temperature indicating switch thermostat. I believe it has been calibrated. I need to check that.

Burr: For the jacket water?

Kochery: Jacket water standpipe.

Burr: No, it was never calibrated.

Kochery: Kenny was telling me it was supposed to be calibrated so that's what I -- I didn't want to say anything because I didn't know.

Hunt: Well I only have one comment on the whole -- after talking to the Calcon man and seeing him play with this air machine that he had and then the putting it in the oil bath and finding differences in the (inaudible). While the oil bath would be 200, this other thing was saying 200, when really it was at 260. I would take that damn air machine and throw it out -- It was out of calibration or something. I don't know what the hell was wrong with it but it was -- so that shifts everything. If it's at 260, if you think it's 200 now. You moved it (inaudible).

McCoy: What is -- I don't know what you are talking about, the air machine?

Hunt: There's, there's a --

McCoy: Is this our machine that we use for calibration?

Hunt: Yeah. It's your machine.

McCoy: So what you are saying is that the machine we were using as a part of our calibration was suspect.

Hunt: Yeah.

McCoy: I haven't heard that.

Hunt: And - well this is what he told me yesterday. But I guess my thought is, I understand that one time they use this, one time they use that. What you are going to have to do is log this thing in and make these people happy -- is you are going to say we are going now, if we are in oil, we are going to use an oil bath. If we are in air, we'll use air, but we will try to use the medium.

McCoy: That is the actual medium.

Hunt: Yeah, then you got a correlation as to how. I'm not saying -- I think you can probably use the oil bath in water.

[END OF INSERT]

[WORDS IN BOLD REFLECT DIFFERENCES FROM GPC II-181]

Bockhold: The switches in the field were calibrated using a water bath inside a thermal well with people lightly tapping on it and watching very closely with the supervision of Cooper engineers right there with our I&C techs.

Hunt: This last time.

Bockhold: Not this last time. This is what we actually have in on the diesel.

Hunt: Now.

Bockhold: Now. What we did on that one switch in the lab **was just done** with the I&C folks.

Hunt: Yeah. But, what I'm saying is the arrangement that we had yesterday in the oil bath was a different arrangement than we had the other day. Oil bath is oil bath and I **suspect** that RTD is RTD. But I think what you need to do is lock in and say "this is the way we are going to do it and this is the equipment we are going to use."

Bockhold: I agree with you. The problem is we have different types of people doing different types of tests and . . . and . . .  
[Intervenor: **and, and, and, and, and**] their perception of the correct test methodology of what they are used to and what their experience is is different. And we have been doing a lot of this stuff in parallel to bring the engines to an operable state. And now we have these quarantined switches that we want to go ahead and do a very rigorous . . . all of us want to do a very rigorous test methodology. **Okay.** And we can't do it with the same people we got still working on the diesels. **Or we can but it will have to be three or four days from now to work on these switches.**

McCoy: Let me go back . . .

Bockhold: And that's the organization I need to talk to you about.

McCoy: Let me go back and get this thing **again.** One of the items that we have already done is that -- is revise the calibration procedures . . . Wasn't that what . . . for these switches?

Bockhold: **For these switches that are on the engines, that are on the engines, we've had close supervision of Cooper engineers out there while they were being calibrated.**

McCoy: We revised --

Bockhold: **We did not.** No, we did not revise our procedures. We, we basically did it in a very consistent fashion and part of this overall thing is **that** we will revise . . .

McCoy: We will revise.

Bockhold: -- the final procedure that we use. Because there is some controversy over whether the way the Cooper people did it is the best way or is there a better way. And we believe there is even a better way than the way Cooper people had us do it. The way Cooper people had us do it was very consistent, **you know.** The thing that was inconsistent was how much **energy** do you **impart** upon the switch when you tap it lightly. But, the Cooper people did it the way they would do it if they were calibrating those switches for this engine and any other engine. We had our I&C shop originally calibrate these switches without giving that piece to Cooper. Okay. Cooper were the people that physically tore it down and put it back and supplied the technical expertise. But Cooper watched **us calibrate the switches** in the plant.

McCoy: **Right.**

Bockhold: **That bullet in that point paper is basically, when those switches were being calibrated the Cooper people closely supervised the technicians that were doing it, and it was done very consistently. And done consistently in accordance with the way Cooper does their calibration.** It was signed off in accordance with our standard procedure. And our standard procedure basically says to raise and lower the temperature three times and you verify **that the switch** responds correctly. **Going to write a special procedure on how to vibrate these things, how fast to raise and lower the temperature, that type of stuff.**

Hunt: **I think that --**

McCoy: That ought to address the issue of (inaudible).

Bockhold: Yeah, that's really a long term **thing**. We believe we've got good switches in the plant now. They were done consistently the way Cooper engineers, you know **think** they should be done. **And that's the way they were done. But, uh . . . .**

Hunt: These **that were changed out** what a couple of days ago, **three or four** days ago, you know, before the **run** -- there were two jacket water (inaudible). Did they supervise **those**?

Bockhold: Yes. Since the event all of the **sensor testing** and **all the** changeouts **have been supervised** by the Cooper people.

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