

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: U.S. NUCLEAR REGULATORY COMMISSION

Title: INTERVIEW OF: CHRIS ECKERT

Docket No.

LOCATION: WAYNESBORO, GEORGIA

DATE: TUESDAY, MARCH 27, 1990

PAGES 1-17

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ADDENDUM TO INTERVIEW OF Chris Eckert
(Print Identity of Interviewee)

<u>Page</u>	<u>Line</u>	<u>Correction and Reason for Correction</u>
4	16	TF delete change to Taves correction often
7	20	ZORT LLRT " " "
10	14	training, (PAUSE) new thought - new question not one continuous statement make "did you say ..." a new question - why clarify
11	20	delete "things" add "knowledge items" to clarify the response
102 13	13	About Four weeks ago
13	3	tygon tube watching to make sure if (clarify)
13	10	level movement (clarify)

U. S. NUCLEAR REGULATORY COMMISSION

INTERVIEW OF:

CHRIS ECKERT

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Main Conference Room
Administration Building
Vogtle Electric Generating Plant
Waynesboro, Georgia

Tuesday, March 27, 1990

The interview commenced at 3:35 p.m.

APPEARANCES:

On behalf of the Nuclear Regulatory Commission:

AL CHAFFEE
WARREN LYON
BILL JONES

On behalf of INPO:

PAUL DIETZ

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PROCEEDINGS

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2 MR. CHAFFEE: It's March 27, Tuesday, it's 3:35 in
3 the afternoon and this is the IIT at Vogtle.

4 Whereupon,

5 CHRIS ECKERT

6 appeared as a witness herein, and was examined and testified
7 as follows:

8 EXAMINATION

9 BY MR. CHAFFEE:

10 Q Would you please state your name and position and
11 what position you had in the event?

12 A My name is Chris Eckert, I am a manager in training
13 temporarily assigned to the Operations Department. I am not
14 on shift, I had no role in the event itself with respect to
15 shift operations. Approximately 20 minutes after the event
16 I went to the control room to see if they could use my
17 services in any form.

18 Q I understand that -- do you have some involvement in
19 how the outage activities are planned or put together or any
20 involvement in that type of thing?

21 A No. I -- in my present role, I am an individual
22 contributor as a worker and I was responsible for
23 coordinating local leak rate tests and preparation for the
24 integrated leak rate tests and valve line ups associated
25 therewith.

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1 MR. CHAFFEE: Let's go off the tape a second here.

2 (Brief pause.)

3 THE WITNESS: I did have a role in that I was in the
4 Unit 1 control room. Initially the Manager of Operations
5 Jim Swartzwelder asked me to help maintain crowd control in
6 the control room, so I responded and got a specific location
7 for plant equipment operators to assemble so that they
8 couldn't be heard in the control room and so that activities
9 in the control room could be done in as quiet an atmosphere
10 as possible. I asked various people to leave if they did
11 not have anything specifically they needed and if they
12 needed something, I got them to the right person so that
13 there wasn't a bunch of confusion or questions.

14 Secondly, in the middle of this, I was then asked by
15 Mr. Hopkins, the Operations Superintendent on shift at the
16 time to make the site area announcement. He gave me a sheet
17 and said "Chris, I want you to make this announcement
18 exactly as I've got it written here." I said "Sure, John"
19 and I took the sheet of paper and he took it back and said
20 "Wait, I don't want you to say these words that are crossed
21 out." I said fine. I started to go and he said "Do you
22 understand?" I said "yes, don't say these words here, just
23 say this up here." And he said "That's right, tell me when
24 to push the button for the alarm." So I went to the MC
25 circuit, made sure it was merged, announced the site area,

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1 told John "Push the button, John." John pushed the button -
2 - got the right button, I repeated the announcement and that
3 was it.

4 About ten to fifteen minutes later, Mr. Swartzwelder
5 asked me to do the Unit 2 trip report and so I left the Unit
6 1 area since crowd control was in control and everything
7 seemed to be going pretty well at that point and I did the
8 trip report for Operations Department on Unit 2.

9 MR. DIETZ: On Unit 2, what caused the excessive
10 cool down. At least I understand that you cooled down
11 faster than anticipated?

12 THE WITNESS: I don't agree with excessive cool
13 down. I will say that there was a pressure reduction that
14 was larger than normal. The data that we've been capable of
15 retrieving from the various post-trip computers and
16 recorders in the control room show that TF did not drop
17 below 550. Okay? An operator reported that he saw on top
18 level display that it got to 545, that's not that abnormal.

19 Now then the pressure did get a lot lower. Why did
20 the pressure in the primary system get lower? We had two
21 pumps off, we had the turbine trip and a simultaneous
22 reactor trip. The reactor power reduction was actually
23 faster than the turbine power reduction based upon
24 reconstruction, so we had a cool down even though we had a
25 turbine trip, reactor trip. Reactor power was at four

1 percent when main generator output was still coming down.

2 Second of all, because of the magnitude of the trip,
3 we had aux feedwater initiation, of which only one pump
4 started and we had a TDAFW actuation which is two out of
5 four level transmitters on two out of four steam generators
6 less than 18.5 percent, which is expected. Okay? But the
7 shrink occurred because we lost two reactor coolant pumps as
8 well.

9 Now then you take a look at the massive 70 degree
10 water coming in from TDAFW going into all steam generators,
11 lots of cold water going in. Second of all, you don't have
12 flow in two loops, you have partial flow. So residence time
13 in the steam generators is longer in all loops because
14 you've got some bypass flow and normal flow through the
15 loops that are running. Residence time is longer, you have
16 more cooling effect net and that's _____ (formula).
17 The end result is that the steam generators without the
18 pumps running end up cooling down more, although I can't
19 show that to you on any of our printouts, I can show you by
20 steam generator pressures that those steam generators went
21 down lower and stayed lower for a longer period of time.
22 And so as a result, pressure got lower, main steam line
23 isolation was manually actuated and when it was manually
24 actuated two steam generator pressures started trending up,
25 the other two stayed low and actually trended down a little

1 bit longer. That's just because of the lower flow and the
2 hot water going into that steam generator is actually the
3 cold water from the other loop, so you don't have pressure
4 recovery as fast. Does that satisfy you?

5 MR. DIETZ: Yes, fine.

6 THE WITNESS: Any questions on that? That's the
7 best I can do. We had some problems on data retrieval so I
8 can't specifically say I know these TC's only got to this.

9 MR. DIETZ: What do you mean by problems with data
10 retrieval?

11 THE WITNESS: We're in the middle of a design change
12 for the ERF so we've got our line printer out of service
13 trying to get it up and running, so we missed the line
14 printer output data. And second of all --

15 MR. CHAFFEE: Is that just for Unit 2 or Unit 2 and
16 1?

17 THE WITNESS: That's Unit 2. Second of all, the
18 sequence of event printers are powered from the same bus and
19 there's no design criteria for them to be on separate busses
20 because the printers themselves are not a safety related
21 issue. So when they lost power, my supposition is that the
22 buffer lost power and when the buffer lost power it dumped
23 all that data. So we lost some pretty valuable data from
24 the ERF that can't be reconstructed anywhere else and that's
25 covered in the event critique itself.

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1 MR. DIETZ: I was more interested because I had
2 heard it and it kind of surprised me a little initially that
3 think people thought it had gone down that much.

4 THE WITNESS: I was very surprised and very
5 concerned and I said I've got to figure out exactly why.
6 And so I've done a lot of work with a lot of the guys in
7 Operations. We'll be reconstructing that later.

8 BY MR. CHAFFEE:

9 Q You said that you got into the event 20 minutes
10 after it started?

11 A Approximately. I got to the control room.

12 Q Now is that -- the reason why you went to the
13 control room was why? I'm trying to understand the
14 organizational structure. You said you were a manager in
15 training.

16 A I work for Jim Swartzwelder.

17 Q And he is the --

18 A Manager of Operations.

19 Q Okay.

20 A I was assigned LORT/ILRT preps for Unit 1. If you
21 have a problem in a plant, you drop the work that you're
22 doing then provided you're in a safe condition and try to
23 contribute to the recovery because you don't want to have a
24 problem extend any longer if a guy can help.

25 Q Okay.

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1 A So I hadn't heard any --

2 Q So when you arrived then, they recognized you were
3 there and as you said, they used you to help do crowd
4 control type things?

5 A Yes, sir.

6 Q Could you paint a picture for us of what sort of
7 crowd you had to deal with when you got there that you then
8 got into good shape?

9 A Well the first person I saw was an NRC inspector, I
10 can't remember his name. I went up to him and I asked him,
11 "Sir, can I help you?" He said "I've just got some
12 questions that I'd like to ask" and he started asking, and I
13 said, "Well, I'm not sure that right now is the time, but if
14 you want I'll get someone to come over here and talk to you
15 out of the control room so that they can do what they need
16 to do in there." Because the diesel was still down and the
17 primary, the core was still heating up and a lot of things
18 going on.

19 Q Where was he in the control room when he was --

20 A He was in the right spot, he was not on the brown
21 carpet, but he wanted --

22 Q He was trying to get into the brown carpet area?

23 A Well he wanted to talk to somebody. And anybody
24 that wanted in, I moved out. Anybody that wanted in and had
25 a good reason to be there, I said stay there and I'll get

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1 the person to come and talk to you, don't worry about it.

2 Q Okay.

3 A There were five to seven PEO's sitting around in an
4 area by the QPCP.

5 Q I'm not familiar --

6 A Outside the normal controls area, but still in the
7 control room boundary.

8 Q Okay.

9 A I told those guys we'll set up a relay team, when
10 one guy has to leave for anything he'll go by the kitchen.
11 I want the rest of you guys in the kitchen and I want you
12 quiet.

13 Q Okay.

14 A And I sent them all to the kitchen. A couple of
15 engineers wanted information, looking at things and I said,
16 "You don't need that information now, go get this over here
17 and come back in maybe an hour or so." Guys waiting for
18 phone calls, who's calling you, why are they calling on that
19 circuit, and it's because Mr. Swartzwelder wanted it. Sure,
20 you can stay here -- that type thing.

21 Q I see, so you kind of organized the people and
22 quietened things down and got them moved out of the way.

23 A Tried to.

24 MR. CHAFFEE: Does anybody have any other questions?

25 MR. LYON: At the time you initiated this crowd

1 control, did you feel that it was a significant problem or -
2 - THE WITNESS: No, but it could have been because you
3 had more than two or three people in an area and they might
4 just start talking. There was not a noise issue or anything
5 that.

6 MR. LYON: It was sort of a minor and let's make
7 sure we deal with it before it perhaps progresses?

8 THE WITNESS: Yes, sir.

9 MR. LYON: Did you notice anyone that came into the
10 control room that did not follow the usual entrance protocol
11 of getting permission to come on the carpet?

12 THE WITNESS: No, sir.

13 BY MR. CHAFFEE:

14 Q Before you were a manager in training, did you say
15 you were a licensed SRO?

16 A Yes, sir.

17 Q So -- and before that position what position were
18 you in?

19 A Manager of Health Physics and Chemistry.

20 Q Okay. Did you perform any -- during the drill, any
21 activities associated with health physics type activities?

22 A No.

23 Q Okay.

24 A When I was in the control room I scanned a bunch of
25 indicators to see if there were any problems that I could

1 see that I could let the shift know about.

2 Q Did you see any?

3 A No, they were handling everything very
4 professionally.

5 Q To the best of your knowledge, there was no health
6 physics problems that occurred during the event?

7 A No, not that I'm aware of.

8 Q And before you were the Health Physics and Chemistry
9 Manager, what position were you in?

10 A Technical Assistant to the Plant Manager at Plant
11 Vogtle.

12 Q Okay. And have you had any involvement in any of
13 the work that's been ongoing to deal with generic letter 88-
14 17, procedures, anything like that?

15 A This is not a judgment but it's going to sound like
16 one.

17 Q Okay.

18 A That's a little bit of an unfair question only
19 because I just completed SRO training and I have dumped a
20 lot of the things that I did prior to SRO school. You know,
21 we studied the generic letter, but we were never -- we
22 studied the generic letter, we knew the actions and the
23 requirements that we were supposed to take, were
24 knowledgeable of the procedures. My group -- I was also the
25 corporate ISEG Manager. My ISEG group did the review of

1 that back in '88 before I got to Plant Vogtle and I know
2 that they came up and worked with the plant staff and got a
3 number of things resolved. I don't remember everything
4 specifically and the training program is very intense.

5 Q Oh, when you say manager in training you mean in
6 training for SRO qualification, is that what you've been
7 doing?

8 A That was one of my duty assignment as a manager in
9 training, quotes around the manager in training, and I'm
10 still a manager in training. I'll be going on shift as an
11 SRO.

12 Q I see. When did you complete the SRO training?

13 A Four weeks ago.

14 Q Did that SRO training include -- it sounds like --
15 tell us about what was included in the SRO training relative
16 to generic letter 88-17.

17 A I don't remember the generic letter by number, we
18 don't teach generic letters by number.

19 Q Oh, I'm sorry. The generic letter that addressed
20 the loss of shutdown coolant.

21 A It teaches you -- in our training program, we teach
22 that there's a potential for boiling in a very short period
23 of time. Worst case scenario, ten minutes I believe it
24 says. Second of all, we also state that our procedures tell
25 us various different ways to get cooling back even if you

1 don't have RHR and it leads you to the backup methods;
2 gravity feed, SI flow if you can get it, keeping the core
3 covered, tygon tube watch to make sure boiling is occurring
4 and you know what the level in the core is doing, get the
5 thermocouples hooked up, get containment integrity. You
6 know, I'm just relating large, big picture issues off the
7 top of my head. There are probably even more that I can
8 remember.

9 Tygon tube watch is required whenever you're doing
10 movement or you have inaccuracies within the level
11 indicators themselves, having a continuous watch.

12 Q Do you happen to remember how long ago you got this
13 particular segment of the SRO training, couple of months,
14 couple of weeks, any idea?

15 A No.

16 Q Okay.

17 A Well into the middle of last year.

18 Q Oh, okay.

19 A Long time ago.

20 Q Do you remember anything in terms of any numbers,
21 like you said ten minutes worst case for getting boiling --
22 do you remember anything in terms of time frames for getting
23 the equipment hatch in place or anything like that?

24 A Off the top of my head, no.

25 Q Do you know if this guidance exists in any of the

1 procedures?

2 A There is some guidance and I can't remember which
3 procedure right now.

4 Q Okay.

5 A I could probably go and find the procedure.

6 Q No, I'm just trying to get a perspective. I'm not
7 expecting you to know all the details, I'm just trying to
8 get a feel for what kind of training you've had and part of
9 that is knowing how long ago it was because I know -- I
10 guess that's it.

11 MR. LYON: You indicated you'll be in the control
12 room?

13 THE WITNESS: Under instruction.

14 MR. LYON: Under instruction, assigned to --

15 THE WITNESS: A shift supervisor.

16 MR. LYON: Okay. So you will not be on your own, so
17 to speak?

18 THE WITNESS: I don't know the exact plans yet,
19 those details are still being looked at. I may eventually
20 be on my own, I don't know.

21 MR. LYON: Okay. Do you know which unit yet?

22 THE WITNESS: I have a dual unit license.

23 MR. LYON: So it could be either one?

24 THE WITNESS: Yes, sir.

25 MR. LYON: And -- okay, since we don't know whether

1 you'll be on your own, so to speak, or not, let me just stop
2 there.

3 BY MR. CHAFFEE:

4 Q In this particular event, you got into it 20 minutes
5 into it -- at the time you got into the event -- well when
6 you were in the control room and you were doing some of the
7 crowd control, did you have any -- were there any
8 observations that you made that you remember that stand out
9 in terms of things they were doing relative to the diesel
10 starting or tripping or things relative to the core heating
11 up or anything along those lines that stick in your mind or
12 were you just basically focused on the crowd control?

13 A I was focused on crowd control. I saw Dave Vineyard
14 and Perry Vannier working on getting core thermocouples to
15 read, monitoring heat up rate, making sure the people were
16 in the podium, supervisors knew about it. I saw Bruce
17 working with -- I can't remember who was over on the diesel
18 generator panel -- general observations but I saw that
19 people were working in coordination. That diesel came up,
20 boom, Perry is over there trying to get -- observing NSCW
21 start, saw the pump start, valves aren't open yet, watched
22 his watch, started timing the discharge valves cycle open.
23 As soon as they were cycled open he went to get RHR.

24 Q Did you know the plant was in a site area emergency
25 when you went into the control room?

1 A No.

2 Q Did you -- were you aware that the plant was in a
3 site area emergency at some point and if so, how did you
4 become aware of it?

5 A Probably about two to three minutes before they
6 started the diesel generator, something clicked in my head
7 and said, oh, my God, we don't have any AC over here. And
8 that's when crowd control became very important to me
9 because I knew anything they could do would help. That's --
10 probably I overheard something that Vannier or somebody
11 said, "the core is heating up", sitting there looking just
12 down the panel and all the lights were, you know, indicating
13 that nothing was running. And I started looking around and
14 surmised that we were there. Then John gave me the message
15 and I knew we were there.

16 MR. CHAFFEE: I don't have any other questions. Do
17 you guys have any others?

18 (No response.)

19 MR. CHAFFEE: Thank you very much.

20 (Whereupon, the interview was concluded at
21 3:57 p.m.)

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This is to certify that the attached proceedings before the
U. S. Nuclear Regulatory Commission in the matter of:

Name: Interview of CHRIS ECKERT

Docket Number:

Place: Vogtle Nuclear Generating Plant, Waynesboro, GA

Date: March 27, 1990

were held as herein appears, and that this is the original
transcript thereof for the file of the United States Nuclear
Regulatory Commission taken stenographically by me and,
thereafter reduced to typewriting by me or under my
direction, and that the transcript is a true and accurate
record of the foregoing proceedings.

WILLIAM L. WARREN
Official Reporter

Ann Riley & Associates

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QUARANTINED EQUIPMENT LIST

REV. 3 Dated 3/29/90

ATTENTION

At all times, the licensee is responsible for quarantined equipment and can take action involving this equipment it deems necessary to:

- Achieve or maintain safe plant conditions,
- Prevent further equipment degradation, or
- Test or inspect, as required by the plant's Technical Specifications.

To the maximum degree possible, these actions should be coordinated with the Team Leader in advance, or notification made as soon as possible.

Except for the above no licensee action is authorized on quarantined equipment without IIT team approval. The IIT team will concur in the licensee's action plan for each trouble shooting quarantine item.

Upon approval the Licensee will implement this plan and ensure the IIT team leader or designee is informed as agreed to in each action plan.

The Licensee is maintaining the following Items Quarantined:

1. POL Truck (Allowable to use for normal deliveries)
2. 230 KV Insulator to Reserve Auxiliary Transformer 1A (Broken on 20 MAR 90)
3. All components replaced since initiation of the event, starting or tripping logic and 1A & 1B D/G sequencers.
4. ERF recorded Trip Package - Unit 1 (NOTE: Database memory tape maintained by J. P. Cash)
5. Diesel Generator A (DGA)

ITT TEAM LEADER: AT Chaffee 13-29-90
Date

SUBMITTED BY: H. L. Beacher 3-29-90
Date

EXTENSION: 3769 BEEPER: 138