

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

1 In the Matter of:
2 IE TMI INVESTIGATION INTERVIEW
3 of Mr. Earl D. Hemmila
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6
7
8

9 Trailer #203
10 NRC Investigation Site
11 TMI Nuclear Power Plant
12 Middletown, Pennsylvania

13 May 19, 1979

14 (Date of Interview)

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18 (Tape Number(s))

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20 9

21 NRC PERSONNEL:
22 Mr. Dorwin Hunter
23 Mr. Mark E. Resner
24
25

894 223

1 RESNER: The following is an interview with Mr. Eari D. Hemmila. Mr.
2 Hemmila is employed with the Metropolitan Edison Company, the TMI
3 nuclear facility and his title is control room operator. The present
4 time is 3:24 p.m., EDT, and today's date is May 19, 1979. This interview
5 is being conducted in Trailer 203 which is located just outside the
6 south gate to the TMI facility. Individuals present for this interview
7 representing NRC are Dorwin Hunter. Mr. Hunter is an inspection
8 specialist. He is temporarily assigned to Region III of the U.S.
9 Nuclear Regulatory Commission. Moderating this interview is Mark E.
10 Resner. I am an investigator with the Office of Inspector and Auditor,
11 at Headquarters of the U.S. Nuclear Regulatory Commission. Prior to
12 taking this interview, Mr. Hemmila was given a 2-page document which
13 apprised him of the authority, scope and purpose of this investigation.
14 In addition, it apprised him to the fact that he is entitled to a
15 representative of his choice should he desire one to be present at
16 this interview and also that he is not compelled to talk to us should
17 he not desire to. On the second page of this document Mr. Hemmila has
18 answered 3 questions which I will state for the record.

19
20 RESNER: Question No. 1. Do you understand the above? Mr. Hemmila
21 has checked yes. Indicating that he does understand, is that correct
22 Mr. Hemmila?

23
24 HEMMILA: Yes it is.
25

894 224

1 RESNER: Question No. 2. Do we have your permission to tape the
2 interview? Mr. Hemmila has indicated yes we do. Is that correct Mr.
3 Hemmila?

4
5 HEMMILA: Yes it is correct.

6
7 RESNER: Question No. 3. Do you want a copy of the tape, Mr. Hemmila
8 has checked yes. Is that correct Mr. Hemmila?

9
10 HEMMILA: Yes, I want a copy of the tape.

11
12 RESNER: All right. We will provide you with a copy of this tape at
13 the close of this interview. At this time, for the benefit of those
14 who will be listening to those tapes in the future, Mr. Hemmila, if
15 you will please give us a brief synopsis of your education and job
16 experience in the nuclear field.

17
18 HEMMILA: Graduated from high school in 1965. I went to Eskill High
19 School in Minnesota. Went to the University of Minnesota from 1965 to
20 1968 majoring in business finance. In 1970 I joined the Navy and
21 spent six years in the Navy. I went to nuclear power school, prototype
22 in Idaho and ELT school in Idaho. After this I went to the submarine
23 646 USS Grailing. I got out of the service in June 1976. In October
24 of 1976 I went to work for Metropolitan Edison as a aux operator A.
25

1 RESNER: Resner speaking, aux operator would be what auxiliary operator?

2
3 HEMMILA: Auxiliary operator A.

4
5 RESNER: Thank you.

6
7 HEMMILA: In April of 1978 I bid a control room operator's job. I
8 took my NRC licensing test in November of 1978.

9
10 RESNER: All right, thank you very much Mr. Hemmila.

11
12 HUNTER: Okay Earl.

13
14 RESNER: At this time we will turn the interview over to Mr. Hunter
15 who has some questions for you.

16
17 HUNTER: Okay Earl, I would like to discuss with you the specific
18 activities concerning...

19
20 RESNER: Resner speaking, we had a slight interruption for a moment
21 and will continue.

22
23 HUNTER: I would like to discuss specific activity with you. Earl, as
24 a control room operator and on the 26th of March, you were located in
25 the Unit 2 control room and my understanding is that you were involved

1 directly or indirectly, and we will try to establish that, with the
2 performance of the surveillance procedure concerning the motor driven
3 feed water pumps. 2303 and 27 A and B. Is that correct?
4

5 HEMMILA: That is correct.
6

7 HUNTER: Speaking generally of the surveillance now Earl, as I understand
8 it, the surveillance green sheets which is the computerized schedule
9 and completion sheet are issued to the shift foreman and as the shift
10 foreman in what form would you receive this surveillance activity?
11

12 HEMMILA: I would get the green sheet.
13

14 HUNTER: Would there be any attachments to the green sheets?
15

16 HEMMILA: Normally there wouldn't be any attachments. I would go back
17 and check to see which one it was and take the procedure out of the
18 files and run a copy of it off.
19

20 HUNTER: Earl, would you run a -- is it normal practice to run a
21 complete procedure?
22

23 HEMMILA: I ran a complete copy.
24
25

894 227

1 HUNTER: And attach it to the green sheets?

2
3 HEMMILA: That is correct.

4
5 HUNTER: At the time this particular surveillance was performed would
6 you have run the complete procedure and attach it and then give it to
7 an operator to perform?

8
9 HEMMILA: That is correct, I also run a complete copy of the procedure.

10
11 HUNTER: Do you recall which operator you gave the procedure to to
12 perform?

13
14 HEMMILA: Lionarons.

15
16 HUNTER: In this case, okay good. In this particular procedure, in
17 this particular case, it was in fact a test of the motor driven pumps,
18 and it included valve manipulations and running the pumps to obtain
19 certain tech spec and criteria level test data to verify operability
20 of the pumps. It included the data sheets that the operator was to
21 perform. Does Mr. Lionarons the auxiliary operator, he in fact then
22 would perform the data sheets locally while the pumps were running?

23
24 HEMMILA: That is correct. He would have done it locally at the pump.

1 HUNTER: Okay now the way this is set up, he would have run the A pump
2 and taken data and also he would have run the B pump and taken data at
3 that particular day?

4
5 HEMMILA: That is true.

6
7 HUNTER: Okay, that is true. During the performance of this test can
8 you either by looking at the procedure or by recall indicate to me the
9 activity parts of the surveillance that you were involved in the way
10 you guys handled this particular surveillance?

11
12 HEMMILA: The way we handled it was I run a copy of it off and I point
13 out to him what we have to have done. He has the steps which he signs
14 off and if the step involves him he signs off. If it is going to
15 involve me, he calls up me and we both know. What I want to make a
16 point of this I am going also have my hand to the working copy stays
17 with me. I also have a working copy so I can follow him to follow
18 what he is doing.

19
20 HUNTER: Right, he will have the green sheet and the actual...

21
22 HEMMILA: Xerox copy and I will have the working copy so I can follow
23 what is happening.
24
25

894 229

1 HUNTER: All right. Which copy when the job is completed, which copy
2 ends up under the green sheet and in the file to be routed via the
3 shift foreman and into the surveillance.

4
5 HEMMILA: Lionarons' copy ends up.

6
7 HUNTER: And the green sheet.

8
9 HEMMILA: And the green sheet.

10
11 HUNTER: All right go ahead.

12
13 HEMMILA: So we would have gone down the list and done it I would have
14 followed down and when the test was done we would have come back
15 upstairs we would have gone over the stuff that you do in the post
16 test.

17
18 HUNTER: Okay and the post test would indicate to you returning the
19 system to normal?

20
21 HEMMILA: Returning the system to normal valve lineup.

22
23 HUNTER: All right. Looking at this particular procedure, can we pick
24 up... the pumps had been running and data is taken until equilibrium
25 data is reached and then there is a post? What are the post steps I
don't know where?

1 HEMMILA: Okay post steps start the 6.1.20 stop either EFP 2 A or 2B
2 move the eagle eye meter. The eagle eye meter we don't remove, we
3 leave it installed permanently. (WHEW.....)

4
5 HUNTER: Okay so you stop the pump and the next step, if required, you
6 would remove that okay go ahead.

7
8 HEMMILA: And the last step is to insure you have V8 A&B is open, 12 A
9 is open, 7 A/B is closed and shut A&B 39 and 40.

10
11 HUNTER: Okay in this particular case this would put the valves back
12 in the position they should have been in the...

13
14 HEMMILA: Back in the normal lineup. That is correct.

15
16 HUNTER: All right, now let's go back at the first of this particular
17 procedure, Section 6.1 step 6.2. There is 2 sections for anyone who
18 wants to look at this. There is a 6-2 section and a 6-1 and the dif-
19 ference is that the testing is slightly different but the attachment
20 that is A attachment to the procedure, would the operator normally
21 perform that particular attachment?

22
23 HEMMILA: The lineup would be done by the operator. That is correct.
24
25

894 231

1 HUNTER: Would then it be normally included in the procedure as a part
2 of the procedure?

3
4 HEMMILA: Are you talking about the signed off copy?

5
6 HUNTER: Yes

7
8 HEMMILA: No that is not kept.

9
10 HUNTER: He would not then keep that signed off copy?

11
12 HEMMILA: No. The only thing we keep is green sheets. We keep the
13 data sheets and we keep a copy of the front page to insure that the
14 rev number is correct.

15
16 HUNTER: So the procedure and the steps themselves which would include,
17 and make sure I understand, which would include Section 6-2, 6-1 6-2
18 of this particular section would not be kept?

19
20 HEMMILA: That is not kept. No general practice it is not kept.

21
22 HUNTER: Okay the appendix A or B valve lineups is not normally kept?

23
24 HEMMILA: No that is not normally kept.

1 HUNTER: All right. So by looking in the file, we would find the
2 working copy, the date, the working revision cover sheet, the green
3 sheets and the data sheets that the test was acceptable?
4

5 HEMMILA: That is correct. That is what we would have filed. Now in
6 the past up until 6-7 months ago we kept all this stuff. The change
7 came out that said this is all we are going to keep were the green
8 sheets, the cover sheet and the data.
9

10 HUNTER: Okay, on the day that this particular test was performed and
11 I realize it was quite a while back, so we will try to recall as best
12 we can, but on the day this was performed, some of the steps which
13 included turning the pump off, it was my understanding the control
14 room operator operates the control switches on the board and the other
15 the AO operator would not operate those?
16

17 HEMMILA: That is true, the control room operator does operate the
18 valves in the panel.
19

20 HUNTER: Would this be your union - your organization is set up -
21 understanding that the control room operator operates the control
22 board and the AOs do not operate the control board?
23

24 HEMMILA: That is true.
25

894 233

1 HUNTER: If they are in training or there are times when they do
2 operate the control board?

3
4 HEMMILA: What do you mean is in training?

5
6 HUNTER: If they were training for a control room operator job?

7
8 HEMMILA: Yes, they would operate.

9
10 HUNTER: Okay other than training they would normally, during surveil-
11 lance like this, you would in fact operate the pump or the valves on
12 the control board?

13
14 HEMMILA: That is correct.

15
16 HUNTER: All right, let's go back. This test was completed, honestly,
17 I looked for the completed data I looked for the completed test and I
18 looked for the actual signed off steps for the valves. We are talking
19 about the 12 valves, again the 12 valves are the problem that we have
20 had that day indicated by the operators on the 28th that they were
21 closing closed and had to open them, but do you recall during this
22 test after securing the A and B pump and the Appendix A and B that
23 were performed closed those valves, I am sure the operator would have
24 called up and said do you have the valves closed because they had to
25 be closed to perform the test apparently. Okay? Do you recall opening
the valves?

1 After the test was...
2

3 HEMMILA: I can remember when we got through because like I said
4 before I always had a sheet and followed along to make sure we don't
5 miss any steps. Cooper was the CRO that day who had the desk. He was
6 on duty. And when we got through Lionarons came upstairs and the 3 of
7 us stood up to the panel and we said we had to switch the 7s, 8s and
8 12 valves. I remember specifically saying this. Because I had done
9 this pump just maybe 5-6 times and I know what those valves are.
10

11 RESNER: When you say 3 -- that's Cooper, yourself and...
12

13 HEMMILA: Lionarons
14

15 HUNTER: And Cooper was your peer on duty the control room operator
16 at that time?
17

18 HEMMILA: He had that is correct.
19

20 HUNTER: And Lionarons came up with you and told the three of you
21 then...go ahead...the next step would be to return certain valves to
22 their normal position. Can you relate to us the way you did this
23 and...
24
25

894 235

1 HEMMILA: I don't remember specifically doing it. I remember saying
2 we have to change the 7s and the 8s. Which ever way the 7s and 8s go,
3 I don't remember and open the 12 valves. The three of us stood up at
4 the panel and we said we have to do this, this and this.

5
6 HUNTER: Okay, do you recall doing this?

7
8 HEMMILA: I don't remember specifically touching the switch.

9
10 HUNTER: Did something happen that had taken you away from the test or
11 was there something else going on that you had forgotten in not opening
12 the switches or actually opening the 12 valves and the 8 valves and
13 the 7 valves are closed?

14
15 HEMMILA: During this time as far as I can recall there was nothing
16 else going on.

17
18 HUNTER: So there was a routine type - the 26th on the shift was a
19 routine type shift. There wasn't any other activities going on.

20
21 HEMMILA: As far as I can remember. I can't remember anything specific
22 going on.

23
24 HUNTER: The EF8 valves, what is their function? The emergency feedwater
25 V... 8A and B valves, what is their function?

1 HEMMILA: Recirc valves.

2
3 HUNTER: I know. These are the recirc valves on the A&B feed pumps

4
5 HEMMILA: They are the recirc valves to the condenser I believe. I am
6 not sure. One of them goes to hot well and one goes to the condensate
7 storage tanks and I am not...I couldn't tell you right now. I know
8 that is where they go.

9
10 HUNTER: All right and then apparently when you run a test you set up
11 and close them and then after the test you have to open them back up.

12
13 HEMMILA: That is correct. We have to switch the valves.

14
15 HUNTER: Okay, the EF 39 and 40 valves, the procedure indicates they
16 should be closed. Do you know what the 39 and 40 are?

17
18 HEMMILA: I can't remember specifically what the 39s and 40s are right
19 now.

20
21 HUNTER: Okay. And the 12 A&B are the...generator header isolation
22 valves a...

23
24 HEMMILA: Block valves to block generators.

25
894 237

1 HUNTER: And the 7 A&B valves which you close?

2
3 HEMMILA: The 7 valves like I said are either going to be recirc
4 valves back to the hotwell or back to the condensate storage tanks.

5
6 HUNTER: Okay, so the 7s...

7
8 HEMMILA: 7s and 8s are in fact the recirc valves to either the hot
9 water condensate storage tank.

10
11 HUNTER: Okay and the 39 maybe bypass valve or something else. Let me
12 see. I'll make sure.

13
14 RESNER: We are taking a brief pause here to look over some documents.

15
16 HUNTER: 39 and 40s. Throttle VF 39 and 40 into a flow rate is indicated
17 by the differential pressure corresponds to reference value. That's
18 the valves that are used to set up the actual data. Pressure delta P
19 across the pump and then to calculate the pump head. Okay. Let's
20 look at the...on this particular system the EFB-11 A&B valves are the
21 normal level control valves. What's their normal status during power
22 operation?

23
24 HEMMILA: Normally, those valves are shut.

25
894 238

1 HUNTER: They are shut and are they in manual or they automatic or
2 they're level control valves?

3
4 HEMMILA: Those valves are in automatic.

5
6 HUNTER: And uh, then normal position of the EFB 12 A&B header block
7 valves is normally open?

8
9 HEMMILA: Normal position is open.

10
11 HUNTER: How long have you been on Unit 2 as a control room operator?
12 Since...

13
14 HEMMILA: Since April of '78.

15
16 HUNTER: So you have operated about a year, okay? Have you ever seen
17 the 12 valves closed before?

18
19 HEMMILA: I have seen them close during a test.

20
21 HUNTER: During the test? What about maintenance, have you ever seen
22 them perform maintenance on the pumps? Not asking whether they did or
23 not but you know, were they ever tagged and closed that you are aware
24 of?

1 HEMMILA: I couldn't answer that question. I don't remember.

2
3 HUNTER: Uh, what about the EF-11 valves, do you ever see those out of
4 auto for any reason?

5
6 HEMMILA: I can't remember those ever being out of auto.

7
8 HUNTER: Which shift were you on the 26th? Were you on day shift?

9
10 HEMMILA: I was on day shift.

11
12 HUNTER: And then the 27th?

13
14 HEMMILA: Day.

15
16 HUNTER: And then the 28th?

17
18 HEMMILA: Days.

19
20 HUNTER: Did you have the same position control room operator position,
21 I know you guys split? One time you're on maybe one side of the panel
22 and maybe the next time you are on the other side of the panel, on the
23 28th what was your specific position?

24
25 894 240

1 HEMMILA: When I came to work on the 20th I arrived approximately
2 6:45, went upstairs to Unit 2 control room at which time there was
3 approximately 30 people. At this time I was sent to the ECS to talk
4 to the offsite monitoring teams.

5
6 HUNTER: Okay, then on the 28th then did you spend your time talking
7 the rest of the day with the ECS monitors?

8
9 HEMMILA: I talked to the ECS offsite teams the rest of the day.

10
11 HUNTER: Okay, what about on the day shift of the 27th?

12
13 HEMMILA: 27th.

14
15 HUNTER: That was the day before.

16
17 HEMMILA: I would have been on relief that day which means we would
18 have had the shift.

19
20 HUNTER: Okay. What did you do on the 27th? Do you recall specific
21 control room positions?

22
23 HEMMILA: That day, I was the one who had the book. I had the desk.

1 HUNTER: So you had the tagging and...

2
3 HEMMILA: No. I had the book.

4
5 HUNTER: You had the book or...

6
7 HEMMILA: I had the shift is what we call it.

8
9 HUNTER: Right the control rods, the control panel...

10
11 HEMMILA: That is correct.

12
13 HUNTER: Would - did you happen to look at the auxiliary feedwater
14 system that day?

15
16 HEMMILA: When I took the panel I always check out pump switches,
17 valves and lights. You know I can't specifically say that those
18 valves are open or shut because I don't remember.

19
20 HUNTER: Do you remember a tag in the location in the specific area of
21 those EF-12 valves, A&B valves? Do you remember a tag in that location
22 or was there tag in that location?

23
24 HEMMILA: I don't remember a tag in there because we do have tags.
25 Caution tags above the panel. I don't remember if there is one on
those specifically or somewhere in the area.

1 HUNTER: Okay now going back to the time frame that on the 26th of
2 March when this particular surveillance procedure was run, you...the
3 last comment was that Cooper and Lionarons and yourself commented that
4 there was specific things you needed to do. As I understand it you do
5 not in fact log these steps on these procedures and then attach that
6 to the procedure to document whether or not you opened the valve?

7
8 HEMMILA: That is correct, we don't.

9
10 HUNTER: And you don't recall specifically yourself opening the valves

11
12 HEMMILA: I don't recall specifically, but I know we stood up at the
13 panel and said that this had to be done.

14
15 RESNER: Do you have any idea who may have initiated the order to open
16 these, one of you three?

17
18 HEMMILA: I can't remember that specifically, but I do recall that
19 after this happened, Cooper told me specifically he opened those
20 valves.

21
22 HUNTER: Okay, thank you. And then the next step after the valves...after
23 that particular step, when the valves should be opened, what is given
24 to the shift foreman? I assume that the next step is to give the data
25 package to the shift foreman.

1 HEMMILA: Green sheet is given to the foreman. Cover sheet to the
2 procedure is given to the foreman and data sheets. These are all
3 stapled together.

4
5 HUNTER: All right. The foreman gets those and he apparently reviews
6 them and then he checks the data to make sure it is in specifications
7 and I also check the data to make sure it is in specifications.

8
9 HEMMILA: What about the actual working procedure and the follow-up
10 procedure that you had? Lionarons _____ had the working procedure
11 that you Lionarons you issued him, excuse me, and Lionarons had the
12 xerox copy procedure and then you had the working procedure? What do
13 you do with those?

14
15 HEMMILA: The working procedure goes back in the files.

16
17 HUNTER: Okay

18
19 HEMMILA: Lionarons...I took them apart and those pages would have
20 been put in the dump or put in the trash can.

21
22 HUNTER: Okay so then a copy of the procedures that I have in front of
23 me and have looked again when I pulled them out of the file contained
24 the green sheets and the sign offs the cover sheets and the data
25 sheets. That is your understanding of the way all of the surveillance
is done.

1 HEMMILA: That is the way it is done.

2
3 HUNTER: Okay, have you ever seen, or have you in fact doing the
4 during this surveillance or other surveillance, have you seen anybody
5 initiate any specific action to for instance after the surveillance is
6 complete to review the valve lineups or check the valve lineups?
7 After the procedure is done? Is it assumed that it is back to normal?

8
9 HEMMILA: I guess I don't understand what you are asking.

10
11 HUNTER: After you performed surveillance in the control room, for
12 instance in this particular case or other cases similar to this, have
13 you seen the shift foreman for instance come back or the shift supervisor
14 and walk the panel down and specifically check valve lineups?

15
16 HEMMILA: I have seen them do it at times, but I can't say they do it
17 all the time.

18
19 HUNTER: Not keyed, was it...would at the times you have seen it, was
20 it keyed to because a particular set valves had been done or was it
21 normal routine job function that they went around and checked the
22 panels?

23
24 HEMMILA: Normal job I would say.

25
894 245

1 HUNTER: More than say I finished the auxiliary feedwater surveillance.
2 You would expect someone to come over and check the valve line?

3
4 HEMMILA: I wouldn't expect that to be normal procedure, no.

5
6 HUNTER: Okay, uh, okay the...

7
8 RESNER: We are going to take a short pause here. The time is now
9 3:50 p.m., EDT.

10
11 RESNER: This a continuation of the interview with Mr. Hemmila. Now
12 it is 3:51 p.m., EDT.

13
14 HUNTER: Thank you, uh, you indicated Earl that Cooper is your cohort
15 on shift, control room operator. Are you on shift now, or did you just
16 get off the day shift?

17
18 HEMMILA: I just got off day shift right now.

19
20 HUNTER: Will you be back on day shift tomorrow?

21
22 HEMMILA: No I won't.

23
24 HUNTER: Days off or...

25
894 246

1 HEMMILA: Today was my overtime day, today I was starting my four days
2 off.

3
4 HUNTER: Will Cooper be starting 4 days off?

5
6 HEMMILA: I don't know Cooper's schedule. Cooper is not on shift with
7 me.

8
9 HUNTER: Okay, so he was just happened to be there?

10
11 HEMMILA: He happened to have the panel that day.

12
13 HUNTER: Thank you I'll look at that. Okay, let's change the subject
14 matter some and let's talk about some training. You in fact were
15 hired on as an auxiliary operator A as you indicated for Met Ed and
16 then you proceeded thru a training program and obtained an AEC license,
17 or an NRC license excuse me. That shows my age. NRC license April '78
18 if I'm correct. Or November '78.

19
20 HEMMILA: November '78

21
22 HUNTER: April 78 you became what? April 78 you were a control room
23 operator...

1 HEMMILA: Starting the 24 and 25 somewhere in there.

2
3 HUNTER: Okay in November then you got your license?

4
5 HEMMILA: Yes

6
7 HUNTER: There are a number of things I wanted to ask you. During
8 the...do you recognize the word like category 4 type training material
9 or training exams or training sessions?

10
11 HEMMILA: Yes I do.

12
13 HUNTER: What I have on the category IV training is that you...it is
14 indicated that you have uh...I want to go back and start. Part of the
15 category IV training would indicate that you would have a...that you
16 would have written written test associated apparently with your training
17 program?

18
19 HEMMILA: I had a lot of written test during my training program.

20
21 HUNTER: Okay, the 1-1, 1-2, 2-1, 2-2, and then you had...it indicates
22 a category IV which indicates an oral exam.

23
24 HEMMILA: I had an oral exam at the end of each one of those categories.

25

894 248

1 HUNTER: Okay. It shows oral exam 2, oral exam 3, okay then written
2 test section 3-1, 3-2, 4-1 and 4-2. Can you give me a feel for what
3 this training specifically is, the categories?

4
5 HEMMILA: I don't remember what is in each one of the categories.

6
7 HUNTER: No as far as the break down. Just a general description. I
8 am looking at category I 1-1 and 1-2. 2-1 and 2-2. 3-1 and 3-2, 4-1
9 and 4-2. All right, do you know what that, what those categories
10 mean?

11
12 HEMMILA: No. Training-wise we start off basically with systems.

13
14 HUNTER: Okay.

15
16 HEMMILA: We start off with 1-1, and 1-2 is systems and then as you go
17 up the line such as 2-1, 2-2, uh 3-1, 3-2 and 4-1, 4-2, 5-1, 5-2, 6-1,
18 6-2 til you finally take a mock written test.

19
20 HUNTER: Okay.

21
22 HEMMILA: Mock oral with one of the people of training also.

23 HUNTER: When you get through all of the IV categories program including
24 oral exam V, Category IV oral exam 6, okay and then you take a mock
25 NRC written exam?

1 HEMMILA: A mock NRC written exam.

2
3 HUNTER: All right, all right, are you indicating that you have done
4 all this?

5
6 HEMMILA: I have done all this.

7
8 HUNTER: That's true

9
10 HEMMILA: I have done all this.

11
12 HUNTER: Then there is a mock NRC oral exam, apparently an oral exam
13 and then a mock NRC written and a mock NRC oral exam to prepare you
14 for taking the

15
16 HEMMILA: That is correct.

17
18 HUNTER: Reactor Operator's License? Okay? It indicates here that you
19 had advanced HP requal recertification, do you recognize that particular
20 training?

21
22 HEMMILA: I had that.

23
24 HUNTER: Can you give me an idea of what's involved in the advanced I
25 put it it's after you got your license and it's like in November or
the latter part of 1978. Do you recall what that training was?

1 HEMMILA: Advanced HP training is basically going over the limits
2 basically going over how you calculate airborne, uh, smear samples.

3
4 HUNTER: This indicates 4 hours.

5
6 HEMMILA: Use of instruments.

7
8 HUNTER: Okay, this indicates a 4 hour training period or session or
9 it may be more than one session. Do you recall?

10
11 HEMMILA: I cannot tell you the time spent because we have an awful
12 lot of training.

13
14 HUNTER: Okay. Your training indicates that you have safety and emergency
15 review for Unit 2. Can you recall what that specific training is?

16
17 HEMMILA: That is going over emergency procedures. You are supposed to
18 know what your immediate actions are. The automatic actions, there is
19 a test given on it and what they do for each site they'll probably
20 assign 6 or 8 of them and you are supposed to go over those and at the
21 end of the time you have a test on them.

22
23 HUNTER: Okay is this on a 2 year cycle at this plant where you go
24 through a retraining program?

1 HEMMILA: No it is done every year.

2
3 HUNTER: Done every year. Do you have a annual exam each year.

4
5 HEMMILA: There is an annual exam every year.

6
7 HUNTER: How often are you actually taken out of the plant and put
8 into training? Removed from your duties as CRO and taken in for classroom
9 training?

10
11 HEMMILA: Training is conducted approximately once very six weeks.

12
13 HUNTER: Can you explain that particular schedule and how many hours
14 you have to spend in training at that time?

15
16 HEMMILA: Well, that week would start on Monday morning and go through
17 Friday and be 8-hours a day for a 40-hour week.

18
19 HUNTER: Be six weeks then?

20
21 HEMMILA: Approximately 6 weeks.

22
23 HEMMILA: Okay so you are getting 40 hours. Can you familiarize me
24 with what your normal week would include as a control room operator,
25 what the training would include?

1 HEMMILA: Well, some weeks we would go over systems, uh something that
2 they might have put in the system that is new. Going over old stuff
3 that you had to keep fresh in your mind. Going over theory, going
4 over procedures general plant operations.

5
6 HUNTER: How would you categorize all that training? Would you categorize
7 it as adequate, more than adequate?

8
9 HEMMILA: I think the training is adequate.

10
11 HUNTER: What about the review of past plant transients during each of
12 these 6 week sessions.

13
14 HEMMILA: I can't specifically say that we have sat down and talked
15 about them but we do have a sheet that we have to sign off that says
16 we look at these and of course we do get sheets written on all the
17 incidents which we look at and sign off.

18
19 HUNTER: Can you elaborate, you had a reactor transient on Unit 2 and
20 I'll try to categorize it as one you should have looked at. If the the
21 B main feed pump recirc valves came open at full power and the plant
22 went through a load reject due to this particular type incident and
23 that an operational transient if you will on Unit 2, would you normally
24 see a review of that and a data package indicating to you the problem
25 what happened to that type of information?

1 HEMMILA: I don't believe I would see a package on it. I believe what
2 we would do is talk about it on shift, prior to taking a shift as to
3 what happened. Now we might somewhere down the road maybe in a month
4 or 2 talk about this.

5
6 HUNTER: Would this be specifically in the retraining program?

7
8 HEMMILA: Yes it would.

9
10 HUNTER: Is that the way it is normally...what about a reactor trip?
11 Trip packages made up after a reactor trip and you are on four days
12 off and you came on and there had been a trip, how would you pick that
13 up?

14
15 HEMMILA: You mean if we came on to take the shift?

16
17 HUNTER: Right and there has been a plant trip. It has been returned
18 to service and you know there has been a problem while you weren't
19 here. How would you pick that up.

20
21 HEMMILA: But you say that plant's back in operation?

22
23 HUNTER: Right the plant is back to normal.

1 HEMMILA: Basically by looking in the log book.

2
3 HUNTER: Reviewing the logs. Okay now subsequent to that would you in
4 fact pick it up in training or retraining during your six week program.
5 Do you look at all the reactor trip packages?

6
7 HEMMILA: That is difficult to answer because it varies as to where
8 you were and what shift you were on when this happened. If you were
9 coming up on the week where you would have that training then I would
10 say yes you would but, say you had just finished your training week,
11 then you wouldn't see it again for six weeks' time. So it depends on
12 the cycle where you are.

13
14 HUNTER: Would you see if you just came off training and a week later
15 one of the shifts had a trip would you routinely see that trip package
16 at your next six week training program?

17
18 HEMMILA: I would see something about it.

19
20 HUNTER: Would it be minimal or how would you characterize that as
21 being covered?

22
23 RESNER: Let's break the tape here. Give Mr. Hemmila a little time to
24 think about this one and the time is now 4:04 p.m.

1 RESNER: This is a continuation of the interview with Mr. Earl D.
2 Hemmila. The time now is 4:05 p.m. and Mr. Hemmila was about to give
3 us an answer.
4

5 HUNTER: I'll go back and restate. If in fact you have a unit trip
6 and you substantiate...anytime there is a unit trips it's important.
7 Would you see this formerly in a retrain program, and have formal
8 discussion of this particular event given to you by the training in-
9 structor or some member of management? Earl what I mean is -- it
10 comes up on the schedule and you know that your going to be provided
11 with that information?
12

13 HEMMILA: We would have paper work given to us, telling us about the
14 trip, explaining the trip. Now I can't specifically say that would
15 sit down and talk about it, but we would have the paper work available
16 to look at.
17

18 HUNTER: Earl, what would this paper work..? How does it come through?
19 Do you actually get the trip package itself to review to look at the
20 trip and the cause of the trip?
21

22 HEMMILA: Each one of us would be be given a package. It's nothing
23 that you would have to sign up, but it would just be a package stating
24 circumstances, causes, collections...
25

894 256

1 HUNTER: If in fact Earl, you had a question about this particular
2 package, who then would you ask the question to? Who would you ask to
3 get clarification on some information that's in that package?
4

5 HEMMILA: If I had any problems, the person I ask would be Brown or
6 Boltz.
7

8 HUNTER: And these two fellows are...
9

10 HEMMILA: The training people.
11

12 HUNTER: Are the training people. Would you talk to your shift
13 foreman?
14

15 HEMMILA: I might talk to my shift foreman.
16

17 HUNTER: Your shift supervisor?
18

19 HEMMILA: I might talk to him too. I might possible contact all of
20 them. In fact I might talk to some other people. I mainly talk to
21 people that were on at that time of the trip.
22

23 HUNTER: During the trip?
24
25

894 257

1 HEMMILA: That's right.

2
3 HUNTER: Okay. You indicated that the package would be provided.
4 You did not have any sign off that would certify that you had read the
5 material, and you also indicated that in training it might, not that
6 it isn't, but it might not presented to you in a formal type lesson
7 planned in agenda for your six weeks training 40 hours during that
8 week it would say "during this week we're going to cover the reactor
9 trip number 3, 4, 5 and 7," which has occurred since the last time you
10 were in the training?

11
12 HEMMILA: I don't think I would see that, no.

13
14 HUNTER: You have not seen that being asked?

15
16 HEMMILA: I haven't seen that, no.

17
18 HUNTER: What about procedure changes in this 40 hour session? Did
19 you see procedure changes that were made during the last -- since you
20 last had been in retraining?

21
22 HEMMILA: No. We did not go over that in training. That's done on
23 our own on the shift in a form of a sign off copy.

24
25 894 258

1 HUNTER: Do you in fact sign off that you have reviewed those changes?

2
3 HEMMILA: Yes, I do.

4
5 HUNTER: Okay. If you had questions on that who would you talk to?

6
7 HEMMILA: I would speak to the supervisor or the foreman.

8
9 HUNTER: A licensee event report is a report that your management
10 reports to the Nuclear Regulatory Commission, when a incident occurs,
11 and it could be the failure of a piece of equipment to meet the techs
12 spec requirement like a alternate feed pump. In fact, say it took you
13 into the action statement in the techs spec and then there's a 30 day
14 report, generally on that particular item to clarify you to give you
15 some background. Also if a piece of safeguard equipment fails or
16 found in the inoperable condition, you fail to meet a surveillance.
17 This is normally reported to the NRC and then -- in your case through
18 your management if you have found something wrong. And then it would
19 be reported to us for review by your management also by NRC. During
20 this 40 hour training, have you seen any formal...or do you formally
21 cover operational events, licensee reports to us during the training?

22
23 HEMMILA: Formerly we do not but I would say that once again we have
24 a book that we read and sign off.

25
894 259

1 HUNTER: But again it's a formal system as a sign off.

2
3 HEMMILA: It's a sign off copy, yes.

4
5 HUNTER: Do you have any problems with that system yourself or do you
6 feel like it's adequate. Has it worked for you?

7
8 HEMMILA: I usually read it approximately once a week. However, at
9 times it might have been put in sooner I hav'nt seen it for a week's
10 time, so say that's something that should be going over a lot more
11 formerly than leaving it up to the individual person to sign off.

12
13 HUNTER: If there was something in there that you needed to see
14 before you assumed the watch you might not read it. That's what
15 you're saying.

16
17 HEMMILA: That is possible.

18
19 HUNTER: Okay, fine I understand. Alright, do you recall reading any
20 operational event reports and reviewing an operational transit concerning
21 loss of feedwater in Unit 2 previous to this time?

22
23 HEMMILA: I don't remember reading anything about it.

1 HUNTER: There has been a couple of loss of feedwater transients that
2 had been quite severe in these plants, Unit 2 included, and of course
3 other B&W plants. Do you recall having specific instructions in
4 training on reactor plant transients?

5
6 HEMMILA: Oh, we have had specific training. I could tell you what
7 to do in case reactor trip.

8
9 HUNTER: Right.

10
11 HEMMILA: Loss of feedwater.

12
13 HUNTER: Okay.

14
15 HEMMILA: The procedures are there for you.

16
17 HUNTER: Oh, Okay I...

18
19 HEMMILA: You're suppose to know the immediate actions.

20
21 HUNTER: I understand that. What about specific training in review
22 of an actual transit that happened at TMI-2 in March 29, 1978 or
23 November the something of 1978. Do you recall specifically reviewing
24 those transit in detail?

1 HEMMILA: I cannot remember specifically going over it.

2
3 HUNTER: Okay. Let me ask you again, concerning the emergency procedures,
4 these procedures, you should know the immediate actions?

5
6 HEMMILA: Yes, you should.

7
8 HUNTER: And how often do you review those?

9
10 HEMMILA: I can't specifically say how often it is reviewed, but I
11 know we have a set of them each three months that we have got to go
12 over. Plus the fact a person on his own has to look at those periodically
13 too.

14
15 HUNTER: Okay would you be -- would you again pick up emergency procedure
16 review or changes to the procedures in the training -- or again - is
17 this a sign off type?

18
19 HEMMILA: No, no, this is something we would do down there in training.

20
21 HUNTER: Okay. Part of the emergency procedures? Would that include
22 the off normal procedures or the...?

23
24 HEMMILA: The off normal we look at too.

1 HUNTER: Normal operating procedures changes you indicated it's just
2 a sign off...

3
4 HEMMILA: It's just a sign off copy.

5
6 HUNTER: If the change comes through. In the training on systems
7 during this 40 hours of training, how would you characterize that
8 training on systems? Take for instance emergency feedwater system and
9 this was, one or two of each of these systems, or three or four I
10 don't know? How would characterize what you have been given on say, a
11 review of the emergency feedwater system, what would be included?

12
13 HEMMILA: Well, we would talk about the pumps and valves associated
14 with the system the interlocks, power supplied to the pump and the
15 motors. We would talk about ES signals to the pumps to the valves,
16 flow paths, the amount of flow that you would see, pressure that you
17 ought to see.

18
19 HUNTER: Would you in fact during the system review pick up any
20 changes that were made to that system in thr form of field change,
21 facility change, modification?

22
23 HEMMILA: Yes, we would.
24
25

894 263

1 HUNTER: Would you in fact pick any procedure changes that had occurred
2 on that system on the surveillance procedure, or on the operating
3 procedure like meaning more routine operating procedures that you do
4 once per month or what?

5
6 HEMMILA: If it's going to be something that's going to affect the
7 operation of the system, major change, yes that would be gone over.
8 But if it was something like they change the wording or something
9 maybe added a small instrument valve or something that wouldn't be
10 gone over. But anything that would affect the operation of the system
11 that would have been gone over.

12
13 HUNTER: Looking at the emergency feedwater system have you seen any
14 major changes in that system in the last -- I'll say six months since
15 last summer, in the way it's been operating?

16
17 HEMMILA: The packing of the pumps a couple of times it's got hot.
18 We had to take the packing out. The power supply seems to me to be --
19 to remember we had that power supply to one set valve changed. I
20 can't remember which one it was.

21
22 HUNTER: Okay. What about the -- let me ask you a specific question
23 and I'm interested because it shows...up and in a way of doing a sur-
24 veillance procedure? I would like to ask you also in the way of the
25 normal operating also in the way of doing a surveillance procedure,

1 for instances? Do you know of any --have you got a feel for any major
2 changes that were made during anything that would ring a bell to you?

3
4 HEMMILA: It seems to me that 12 valves, and I can't, and I am not
5 exactly sure about the time frame, but those valve where opened before
6 on a procedure. And it seems to me that the data that we got wasn't
7 good data so those were added and put down as being shut during this...

8
9 HUNTER: The procedure that we are looking for is Revision 4 8378.
10 It indicates that the 12 valves, the 12 A valves, or the emergency
11 feed pump A, the initial valve line on the places that valve to the
12 close position. But it also indicates that the 12 B valve be closed.
13 And the Appendix B the 12 A valve is closed when this pump is done and
14 the 12 B valve is closed, also when its pump is done. Do you recall
15 that particular item? That they have actually prior... previously the
16 surveillance was being run with those valves open and then more recently
17 in the fall of 78, are they in fact operating with one of those valves
18 closed?

19
20 HEMMILA: It seems to me that those valve were added to the list and
21 put down as shut. Prior to this we did them open.

22
23 HUNTER: And what was the problem at time do you recall when the
24 valves were open -- did it meant -- did it affect the data that you
25 were trying to take?

1 HEMMILA: It did affect the data.

2
3 HUNTER: Do you recall any other changes in the way of doing that
4 surveillance procedure that you were aware of?

5
6 HEMMILA: I can't think of any right off hand.

7
8 HUNTER: Earl, do you recall if that philosophy was covered in training
9 or retraining?

10
11 HEMMILA: Changes in the valve lineup you mean?

12
13 HUNTER: For that particular surveillance valve line for doing that
14 test, do you recall if that was covered?

15
16 HEMMILA: No, I don't recall if that was covered.

17
18 HUNTER: Okay. In this particular training you indicated...it is
19 indicated that you have 4 hours of condensate polisher training. Is
20 that a fact?

21
22 HEMMILA: Yes.

23
24 HUNTER: Do you recall...well actually you have more than that, in
25 any case you have 8 hours. Do you recall that training?

1 HEMMILA: Yes.

2
3 HUNTER: And do you recall the reason why you had that training?

4
5 HEMMILA: Well the polishers are difficult to operate. If anyone has
6 been down there, they know that we have had problems with the polishers,
7 as far as taking the resin and transferring it back and forth.

8
9 HUNTER: What did that? Can you characterize that training for me?
10 What it included?

11
12 HEMMILA: Well, we talked about the system. We talked about taking
13 the resin and sluicing it back and forth, adding an acid caustic,
14 rinsing it in. We talked about how to put up polisher in service, how
15 to take one out of service, maximum system delta P, delta P across the
16 polisher, delta P across the resin trap.

17
18 HUNTER: Earl, had this plant had trips, reported to your knowledge,
19 because of the polisher system?

20
21 HEMMILA: Yes, it had.

22
23 HUNTER: Do you recall reviewing those during that training or was
24 the training basically for polisher system itself?
25

1 HEMMILA: I don't recall as far as what you're talking about the
2 polisher training is...

3
4 HUNTER: If the training barely is getting to -- if the polisher
5 outlet valves close you loose suction to the booster pumps.

6
7 HEMMILA: It's true.

8
9 HUNTER: The booster pumps trip on low suction.

10
11 HEMMILA: It's true.

12
13 HUNTER: And when the booster pumps trips the feed pump trips.

14
15 HEMMILA: It's true.

16
17 HUNTER: And you have had this happen the loss of one booster pump,
18 one feed pump. All booster pumps...I guess really lost the whole
19 train. This particular trip was apparently a loss of a condensate
20 pump demineralizer booster pump, feed pump trip. But have you reviewed
21 this -- have you personally reviewed this type of transient before at
22 this plant?

23
24 HEMMILA: I had looked at it on my own.

25
894 268

1 HUNTER: But as a formal lecture or a formal program in training?

2
3 HEMMILA: I do not believe so.

4
5 HUNTER: You have a couple of gentlemen you were talking about asking
6 questions in training? They're apparently your training instructors,
7 they would be the ones who would provide the lectures during the
8 40 hour week?

9
10 HEMMILA: It could possibly, be those two guys or it could possibly
11 somebody else associated with training.

12
13 HUNTER: Does management sometimes go teach. Like let's say for
14 instance, Jim Floyd is the operation supervisor, does he sometimes
15 teach in training?

16
17 HEMMILA: No Jim does not teach.

18
19 HUNTER: Basically they maintain within their training group?

20
21 HEMMILA: With their training group, but there has been time when the
22 supervisor or foreman from one of the shift also had a class and gone
23 over some subject matter.

24 894 269
25

1 HUNTER: Okay. During the 40 hour weeks, would you characterize that
2 as formal class room training or is it self study?

3
4 HEMMILA: Some of it is formal classroom training, some of it is self
5 study.

6
7 HUNTER: Could you give me feel for how much is a form of class room
8 lectures and how much is self studying.

9
10 HEMMILA: I'd say half and half.

11
12 HUNTER: About half and half. How do you feel about that particular
13 half and half self study formal? Did that seem adequate to you? Were
14 you getting the information that you needed as a control room operator?

15
16 HEMMILA: I think in some areas it's adequate and some areas it's not
17 adequate.

18
19 HUNTER: If it's not adequate in certain areas, Earl, how would you
20 get that information to your management?

21
22 HEMMILA: How would I get the information to the management that I
23 didn't feel it was adequate?

24
25 894 270

1 HUNTER: That's right. You personally didn't care, didn't feel like
2 any part was inadequate?

3
4 HEMMILA: Well, I could talk to the supervisor, training people...

5
6 HUNTER: Have you done this in the past?

7
8 HEMMILA: No, I haven't.

9
10 HUNTER: Oh okay. Is there a formal mechanism available for you to
11 write a memo, or to so to speak, indicate to management that you
12 request that they review this particular area and get an answer back
13 to you personally. Sort of like filling out a maintenance order, the
14 maintenance order comes back to you a copy or a copy of it is on your
15 desk?

16
17 HEMMILA: No.

18
19 HUNTER: We completed this job. You're the guy that initiated it,
20 why do you go check to make sure that you're happy with it? Is there
21 anything else added?

22
23 HEMMILA: No, there's not.

24 894 271
25

1 HUNTER: Uh, I don't have anymore questions. I would like to comment
2 that if you had any comments as far as, you know, anything concerned
3 with the training, or the plant, or the program, or NRC, or whatever,
4 feel free to take this being taped it will be used probably by a lot
5 of people. If you think of anything in the future that you want to
6 come back and tell me or us and say "Hey we really do sign that off."
7 I am very interested in pursuing when you stop signing off this particular
8 procedure. The data can be there including the whole data package in
9 that decision and we'll pursue that... but if you do come up with
10 something or have any kind of information, comment to give us, or have
11 an area you want to look at I think that we should look at it because
12 it is a problem. Feel free to get a hold of us, and we will be glad
13 to sit down and talk with you and listen any time.

14
15 HEMMILA: I don't have any more comments.

16
17 RESNER: I have one question. Earl, have you ever felt that the
18 training was inadequate? We discussed contacting with management and
19 you said you never did, it was a challenge, but you never did. Have
20 you ever felt as though your training was inadequate.

21
22 HEMMILA: No, I have never felt that. I have always felt that the
23 overall training has been very very good.

24
25 894 272

1 RESNER: Okay thanks. This concludes the interview. The time now is
2 4:44 eastern day light time.
3
4
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6

7 894 273
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