

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

1 In the Matter of:

2 IE TMI INVESTIGATION INTERVIEW

3 of Mr. Richard L. Benner  
4 Radiation Chemical Technician 2

5 Mr. Michael L. Kuhn  
6 Radiation Chemical Technician Junior

7  
8  
9 Trailer #203  
10 NRC Investigation Site  
11 TMI Nuclear Power Plant  
12 Middletown, Pennsylvania

13 May 8, 1979

14 (Date of Interview)

15 July 2, 1979

16 (Date Transcript Typed)

17 173 and 174

18 (Tape Number(s))

19  
20  
21 NRC PERSONNEL:

22 Mr. Gregory P. Yuhas  
23 Mr. John R. Sinclair

24  
25  
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1 SINCLAIR: The following interview is being conducted jointly with Mr.  
2 Richard L. Benner. Mr. Benner is a Radiation Chemical Technician 2 at the  
3 Three Mile Island nuclear facility. Also present is Michael L. Kuhn,  
4 That's KUHN. Mr. Kuhn is a Radiation Chemical Technician Junior. Present  
5 time is 3:40 p.m. EDT. Today's date is May 8, 1979. The place of the  
6 interview is Trailer 203 located immediately outside the south gate to the  
7 Three Mile Island site. The individuals present for the interview will be  
8 interviewer Mr. Gregory P. Yuhas from Region I. The spelling is YUHAS. My  
9 name is John R. Sinclair. Last name is spelled SINCLAIR. I am an investi-  
10 gator, the Office of Inspecting and Auditor, U.S. Nuclear Regulatory Commission.  
11 Prior to the interview being recorded Mr. Benner and Mr. Kuhn were provided  
12 copies of the document explaining their rights concerning information to be  
13 obtained regarding the incident at Three Mile Island. In addition Mr.  
14 Benner and Mr. Kuhn were apprised of the purpose of the investigation and  
15 the scope and the authority in which Congress authorizes the Nuclear Regulatory  
16 Commission to conduct the investigation. On the second page of the advise-  
17 ment document Mr. Benner and Mr. Kuhn have answered three questions. The  
18 questions and the responses of both individuals will be recorded as part of  
19 the interview. Mr. Benner, in response to the first question. Do you  
20 understand the above?

21 BENNER: Yes.

22  
23  
24 SINCLAIR: Do we have your permission to tape the interview.  
25

1 BENNER: Yes you do.

2  
3 SINCLAIR: Do you want a copy of the tape or transcript?

4  
5 BENNER: Yes I do.

6  
7 SINCLAIR: Thank you. Mr. Kuhn, your response to the first question, do  
8 you understand the above?

9  
10 KUHN: Yes.

11  
12 SINCLAIR: Do we have your permission to tape the interview

13  
14 KUHN: Yes, you do.

15  
16 SINCLAIR: Do you want a copy of the tape or transcript?

17  
18 KUHN: Yes.

19  
20 SINCLAIR: Fine. Ok, at this time we'll begin by asking starting with Mr.  
21 Benner asking if you'll provide us some information about your work experience  
22 at this nuclear facility or in the nuclear industry.

23  
24 BENNER: I started in September 12, 1977. I came down to Three Mile Island  
25 as a Rad Chem Tech 2 first year. I was given approximately eight weeks of

1 health physics school and trained on the job until November of this year...of  
2 1978, and I was given two weeks of chemistry training. I was in the Health  
3 Physics Department since September 12, 1977.

4  
5 SINCLAIR: Ok, thank you. Mr. Kuhn would you provide some information on  
6 your background and experience?

7  
8 KUHN: I started May 23, 1977 in Rad Chem Department. I had approximately  
9 eight to ten weeks training in health physics training by Ralph Jacobs of  
10 Rad Services and two weeks of training in chemistry. I had some college  
11 chemistry but that doesn't pertain to this and I've been in the corporate  
12 approximately two years.

13  
14 YUHAS: I'd like to explain to you how we're going to do this interview.  
15 What I would like to do is begin with one of you first, Mr. Benner and have  
16 you in your own words describe the scenario of how you became aware of the  
17 incident where you came to work, what you did for the first three days.  
18 After you've gone through it and I'll come back and ask specific questions  
19 about relative events that occurred. Then we'll go through with you Mr.  
20 Kuhn, and the time that we have gone through the complete three day period.  
21 Then I'll give both of you the opportunity to bring forth any problems or  
22 comments that you might have on your own if we haven't covered it in the  
23 discussions. Mr. Benner, go ahead and begin.

24  
25

1 BENNER: The morning of the incident I came to work. When I entered the  
2 security building, I was advised that the alarms were going off in Unit 1  
3 and Unit 2 Aux Buildings. I proceeded to go back to Unit 1 HP. When I  
4 entered Unit 1 HP I think it was Tom Mullavey, who was in the HP Department,  
5 and hee told me to grab an instrument and head for Unit 2, start surveying  
6 and look for people that might be in the building. So I went over and  
7 started going around and I observed a rapid rise in dose rates. You could  
8 stand in one spot and just watch the needle climb. In some areas when I  
9 walked in I would get a reading of maybe fifty or a hundred mR and go back  
10 five or ten minutes later and it might be reading three times that much.  
11 The dose rates were definitely increasing fast. So I went around on the  
12 305 level in some of the cubicles on 305 and I also went to the 281 level  
13 through the cubicles and the hallways and there was water on the floor at  
14 the time and I wasn't in the building that long. I guess about twenty  
15 minutes. I came in about between six thirty and twenty to seven. And I  
16 think it was somewhere around seven o'clock that they blew the radiation  
17 emergency siren and I got out of the building and went into the HP area.  
18 And there technicians, the ones that were there, we did some air samples  
19 and also observed that the background in that area was increasing dramatically  
20 and we did air samples and determined that respirators were required. We  
21 started moving counting equipment out of the area and just about anything  
22 we thought we might need, respirators, any equipment that we thought would  
23 be necessary. The readings at the reactor hatch, which we did take some,  
24 started to climb dramatically. They went from a couple mR up to a couple  
25 hundred in a short period of time. So from there we moved out into the

1 hallway into the first aid room. I was contaminated so I had to go back to  
2 Unit 1 to shower, and put on coveralls. Well then we moved to Unit 2  
3 control room and we were there for a period of time I don't know how long,  
4 and they told us to move to the auditorium. We moved to the auditorium and  
5 then they moved us back into Unit 1 HP. I think that was the sequence.  
6 Anyway, from there, I ended up in Unit 1 control room and I was counting  
7 samples and recording information up there. And that was the first day I  
8 think that was it because I stayed in Unit 1 control room the rest of the  
9 day. The second day I went back into Unit 2 aux building as an escort  
10 with...was it second day they laid down the plastic the first night?..I  
11 don't remember...the day after they laid the plastic on the floor...I went  
12 back to Unit 2 aux building and the levels, the short time I've been around  
13 I've seen some pretty high levels in some areas but these levels, it was  
14 unbelievable what you could run into. And we went down to the primary  
15 neutralizer tanks, myself and an operator, and he had to open a valve down  
16 there. Anyway, we came along the 281 level in the Aux building...at that  
17 time it was covered with plastic. The levels varied from a couple mR to  
18 three, four, five R depending on where you were. But that was the only  
19 entry the first three days that I made after the initial accident. The  
20 rest of the time, I worked at the Observation Center and also in the control  
21 rooms themselves. I did not go back in the Aux building. The only thing I  
22 did that day other than enter the Aux building was to help retrieve clothing,  
23 protective clothing and other equipment, things that we had forgot, help  
24 pass them out, and help move things back and forth.  
25

1 SINCLAIR: What about the 30th?

2  
3 BENNER: 30th?

4  
5 SINCLAIR: Right.

6  
7 BENNER: Friday, Gees. I don't remember, you know, the exact sequence what  
8 days...I lost track of time, really I did. I tell you, I was removed, I  
9 think it was Friday, they started putting me on offsite and also up in the  
10 control room because I had been extended for the quarter to two R and by  
11 this time I was over two R, so or I was pretty close to it, anyway, they  
12 removed me from going into the hot areas. So I was pretty much in the  
13 background until after the first and I stayed up at the Observation Center  
14 it might have been Friday and counted TLDs, so I really wasn't onsite the  
15 one day.

16  
17 YUHAS: Ok, lets go back to some specifics. You got in between six thirty  
18 and six forty in the morning.

19  
20 BENNER: Yes. Right.

21  
22 YUHAS: Ok. Tom Mullavey was already there in Unit 1?

23  
24 BENNER: I believe it was him, yes. It wasn't him. Who was it?  
25

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1 SINCLAIR: Dick Dubiel.

2  
3 BENNER: Oh, it was Dick Dubiel, ok, I wasn't sure.

4  
5 YUHAS: Make the record clear, it was Dick Dubiel.

6  
7 BENNER: It was Dick Dubiel that was there.

8  
9 YUHAS: That told you to go over to the Unit 2.

10  
11 BENNER: Right.

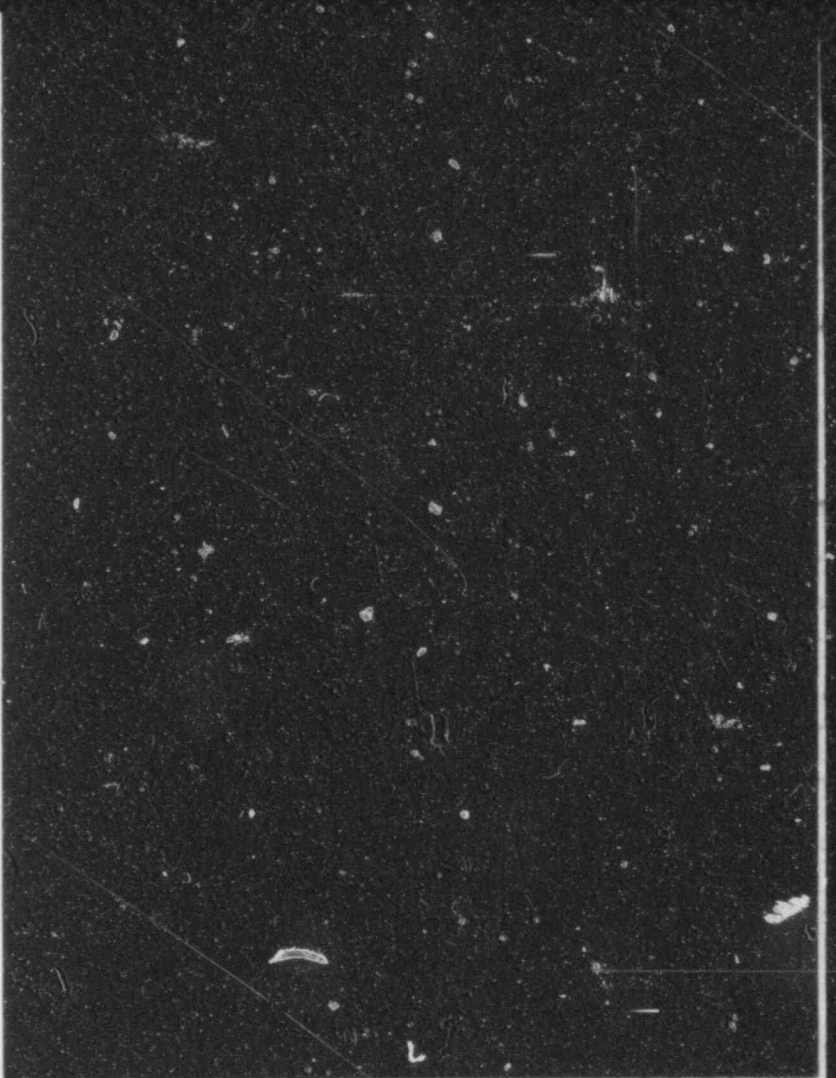
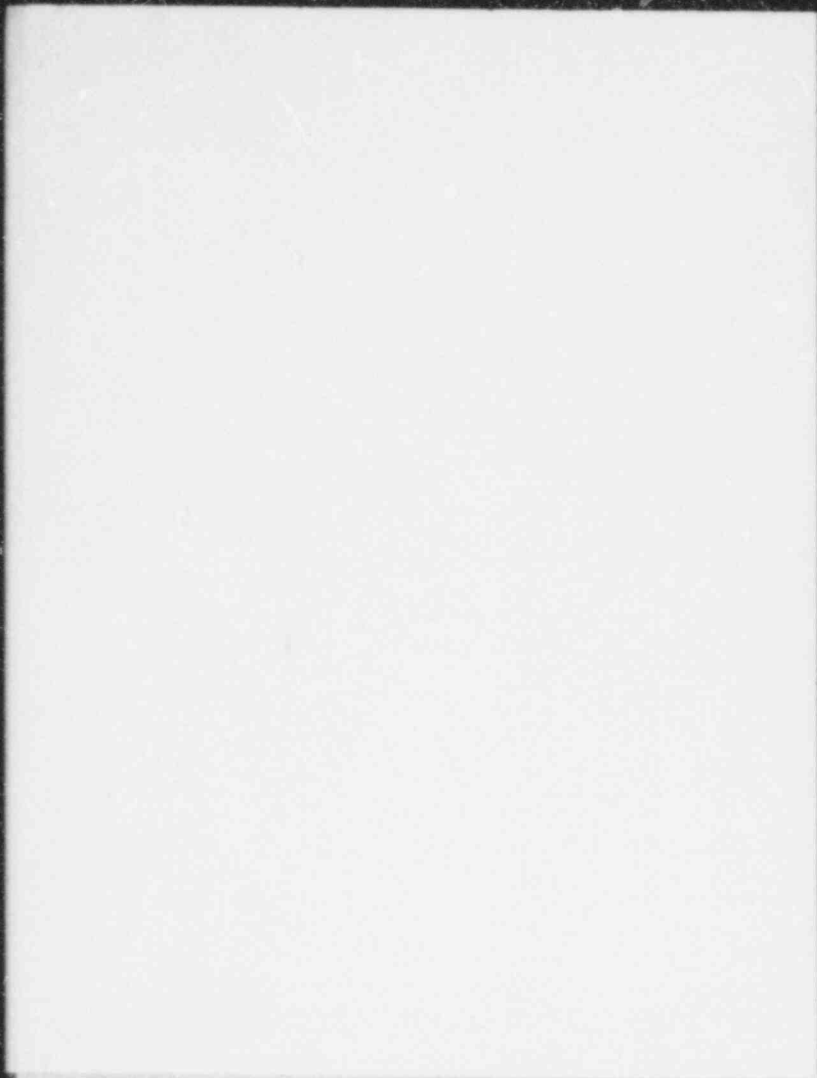
12  
13 YUHAS: To make a tour. What instrument did you take with you when you  
14 went to Unit 2?

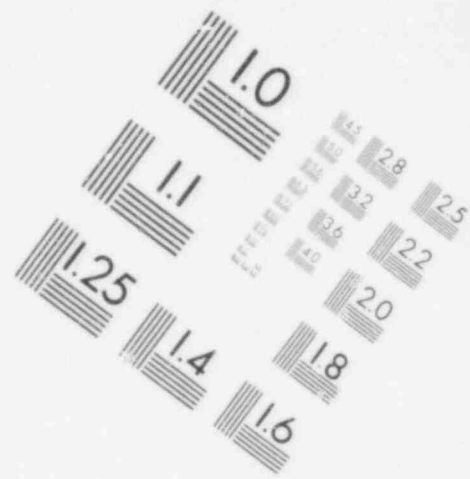
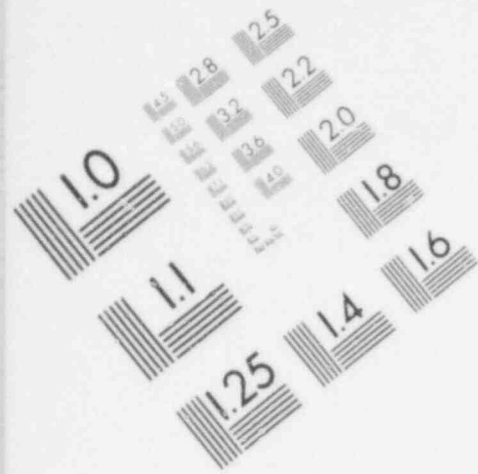
15  
16 BENNER: I took an R02. It's a five R instrument.

17  
18 YUHAS: When you toured the Unit 2 Auxiliary Building, what levels did you  
19 go on that morning?

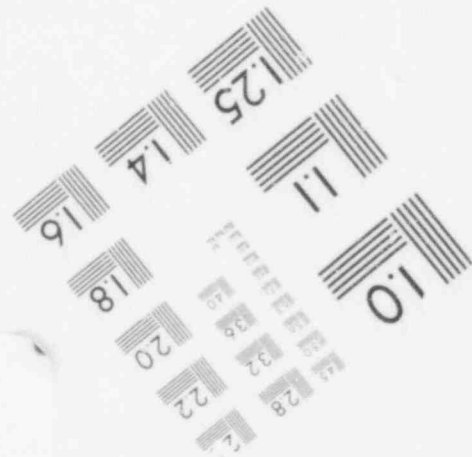
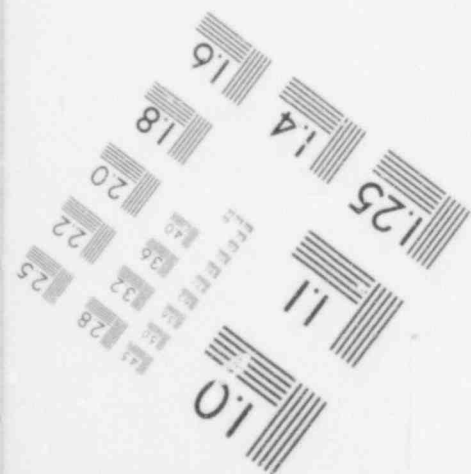
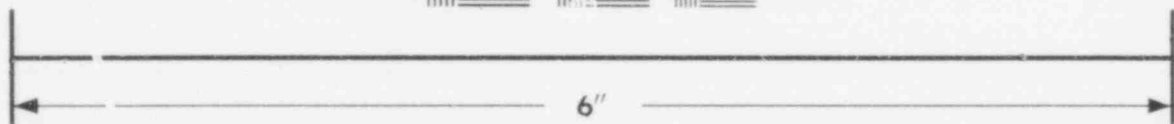
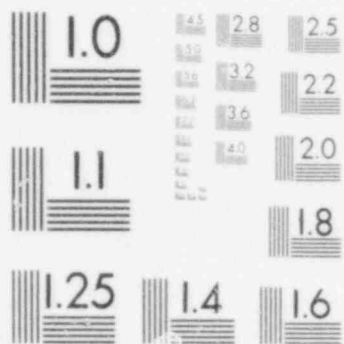
20  
21 BENNER: What levels did I enter? Well, I went on the 305 level and after  
22 I surveyed the 305 level and then there were other techs there with me.  
23 Mike was one. And we went around 305 level and I advised the operators of  
24 areas to stay clear of. I went down to the 281 level and by then basically  
25 what I was looking for was people. Any people that I could find and also

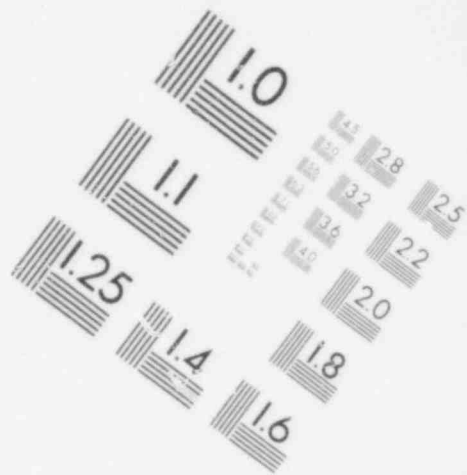
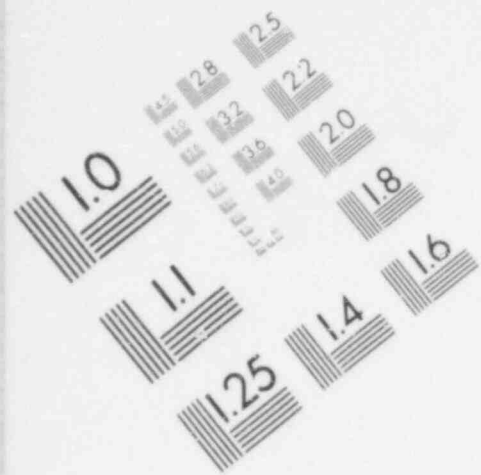




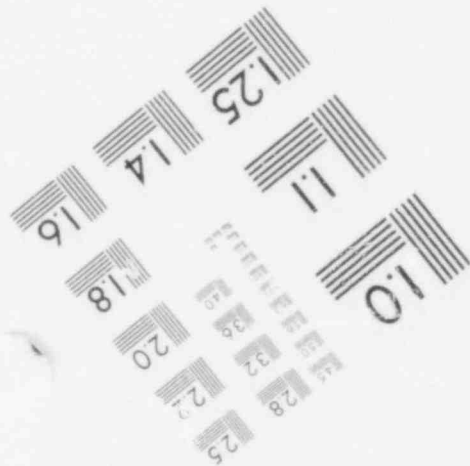
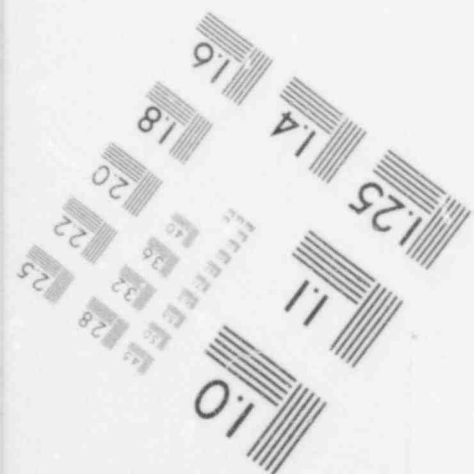
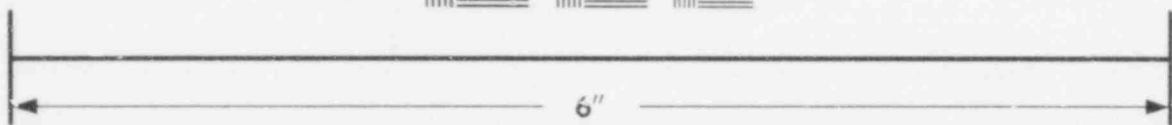
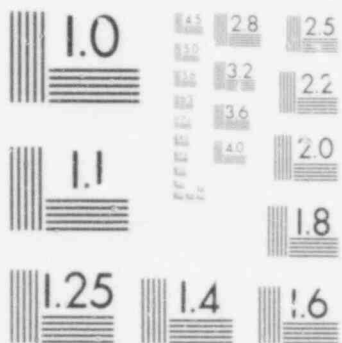


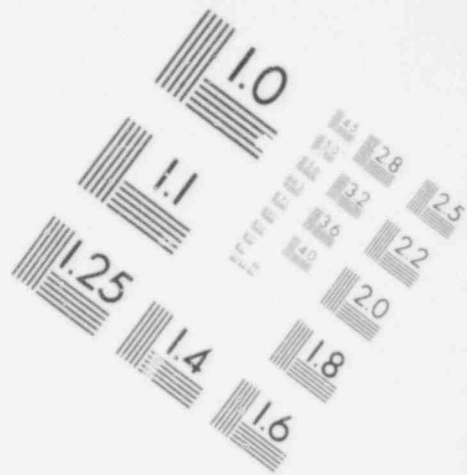
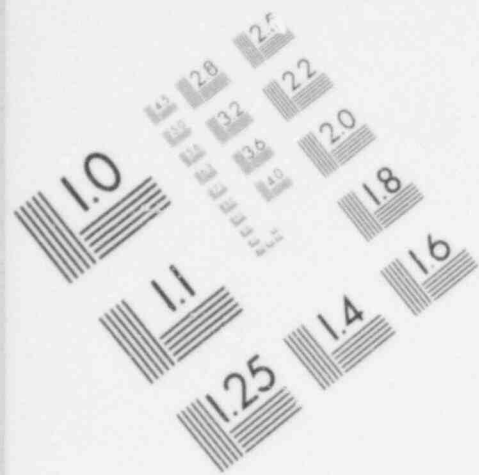
**IMAGE EVALUATION  
TEST TARGET (MT-3)**



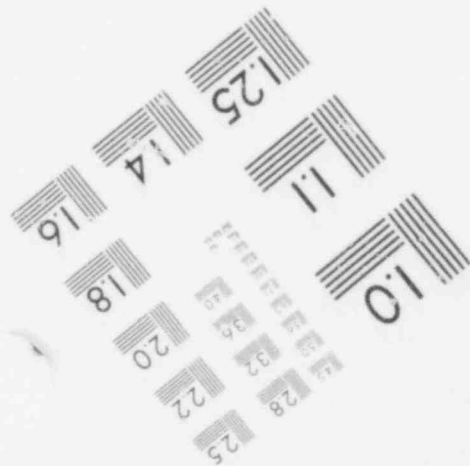
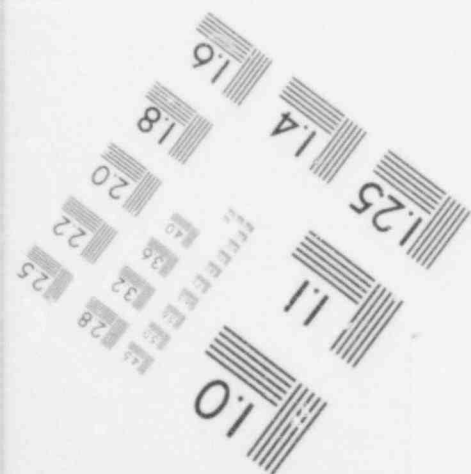
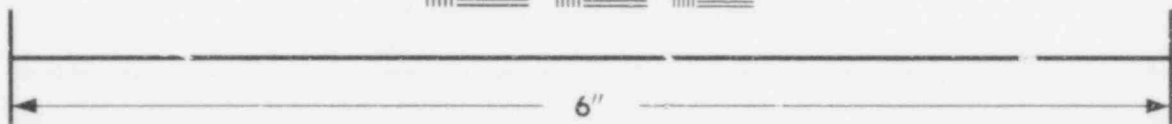
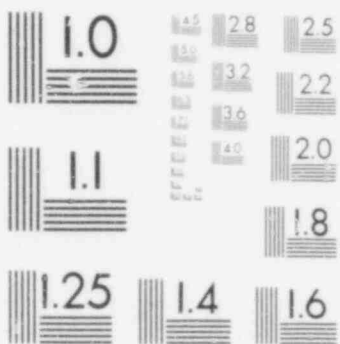


**IMAGE EVALUATION  
TEST TARGET (MT-3)**





**IMAGE EVALUATION  
TEST TARGET (MT-3)**



1 just generally get an idea what was going on down there. I went through  
2 the 281 level and then that was when I came back up to the 305 level I  
3 came back up by the aux operator...by the aux elevator. I heard the  
4 radiation emergency alarm and I heard them tell everybody to get out of the  
5 building. So I went back through the hallway to the HP area. That was it  
6 for the day.

7  
8 YUHAS: How were you dressed when you were touring the 305 and 281?

9  
10 BENNER: (Benner) Street clothes.

11  
12 YUHAS: (Yuhas) Streets clothes and just hand held survey instruments.

13  
14 BENNER: (Benner) Yes.

15  
16 YUHAS: I don't suppose you had glasses on since you apparently don't  
17 normally wear glasses?

18  
19 BENNER: I don't remember whether I did or not...yes, I did as a matter of  
20 fact, because I left them behind. They got contaminated and I left them  
21 behind.

22  
23 YUHAS: As you walk down the hallway from the 305 do you remember any dose  
24 rates that you may have measured?  
25

1 BENNER: Yes. I do remember. The 305 valve alley when I first went back  
2 there was reading 100 mR or so in the hallway and I went up to the far door  
3 and it was reading maybe 150, 200. I went back in later and it pegged it  
4 on the 5 R scale, so I got out. I didn't stay. The makeup tank, I went  
5 down by the makeup tank room at the door I was reading over an R and when  
6 we opened the door we took a reading with a teletector on the nitrogen line  
7 inside the door and it was reading 10 R. And that whole area in there was  
8 exceptionally high. I went into the waste gas decay tank rooms and they  
9 were climbing. They were up 10 to 20 mR on some of the lines in there.  
10 The tanks themselves hadn't reached any proportional level yet. But when I  
11 left the building, I don't remember what I got on the 281 level, but when I  
12 left the building when they sounded the alarm as I ran past the makeup tank  
13 room, I had the meter set on the 5 R scale I was on the opposite side of  
14 the hallway for the makeup tank room and it pegged the needle.

15  
16 YUHAS: Greater than 5 R?

17  
18 BENNER: Greater than 5 R. Yes. And this was however wide the hallway  
19 is...10 foot wide and this was around seven o'clock.

20  
21 YUHAS: You had an R02. Was the window open or closed.

22  
23 BENNER: It was closed.  
24  
25

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1 YUHAS: When you got out did the R02 have a residual reading ?

2  
3 BENNER: That I couldn't say. I don't honestly know because by then the  
4 gas level was getting so high in there that it was pretty hard to tell.

5  
6 YUHAS: Did you take any readings by MUR 720? That's the letdown monitor  
7 or otherwise known as the failed fuel detector.

8  
9 BENNER: Not that I know of, no.

10  
11 YUHAS: Did you take any readings of the rad waste panel?

12  
13 BENNER: I took some reading...there were operators over there...I walked  
14 over there and I think it was like 25 or 50 mR at the time that I walked  
15 over there. And this was before I went down to 281. This was shortly  
16 after I got into Unit 2 Aux building. It was coming.

17  
18 YUHAS: Did you notice anything unusual around the monitor HPR 227?

19  
20 BENNER: 227. No, the last time I went past there I was running. I was in  
21 a hurry. So I didn't really notice.

22  
23 YUHAS: Do you remember the names of any operators that you saw?

1 BENNER: Not off hand.

2  
3 YUHAS: Was one of them Terry Dougherty?

4  
5 BENNER: I'd have to see them. I'm not that familiar with their names. I  
6 have to connect the name to the person.

7  
8 YUHAS: What parts of you were crapped up or contaminated after this tour?

9  
10 BENNER: Head to fo when I came out and I approached the monitors I  
11 just set everything off. I was just crapped up head to foot. My clothing...we  
12 took a reading on the clothing...was reading 30 mR.

13  
14 YUHAS: I assumed you removed it and went over immediately to the shower?

15  
16 BENNER: Yes.

17  
18 YUHAS: Was it easy for you to de-contaminate yourself.

19  
20 BENNER: It wasn't hard. No, it came right off. We went over to Unit 1 and  
21 showered and once I went through the shower I washed from head to toe and  
22 it came right off.

23  
24 YUHAS: Did you write down any of the readings that you measured?



1 BENNER: No. Didn't take time to write them down.

2  
3 YUHAS: I mean after you came out?

4  
5 BENNER: Oh, after we came out. I don't remember if anybody was recording  
6 them or not. We passed them on to the control room. We called up the  
7 control room and passed on some of our findings. But whether they were  
8 recording them or not I don't honestly know.

9  
10 YUHAS: Do you remember any of the other rad chem techs that you saw in the  
11 auxilliary building about that time.

12  
13 BENNER: Yes. Pat. Donnachie, Mike Kuhn, Dave Zeiders, Tom Davis, Carl  
14 Meyers. That's, at the moment, that's all I can remember.

15  
16 YUHAS: You clearly remember hearing the site radiation?

17  
18 BENNER: Yes I heard them sound that. And they specifically stated to  
19 evacuate Unit 1 and Unit 2 Aux building.

20  
21 YUHAS: When you went back to the Unit 1 ECS station, you said that the  
22 background was increasing. Do you know why?

23  
24 BENNER: You mean in the HP area?  
25

1 YUHAS: Yes.

2  
3 BENNER: The background was coming up and we weren't sure..I mean we realized  
4 the levels were climbing around us so we took some air samples and it was  
5 air activity and then we decided to don respirators at that time.

6  
7 YUHAS: What sort of respirators did you put on?

8  
9 BENNER: Just whatever we had at the time, the standard Scott respirator  
10 with a standard cartridge on it. It wasn't an iodine cartridge.

11  
12 YUHAS: When the word was passed to leave the ECS in the Unit 1 Chem-HP  
13 area what did you carry with you over to Unit 2?

14  
15 BENNER: By that time I was...I was in white coveralls. I didn't even have  
16 street clothes anymore. And I carried two or three instruments. I was  
17 carrying instruments.

18  
19 YUHAS: Most were just portable instruments?

20  
21 BENNER: Yes. Hand held survey instruments. R02, E520 maybe, I'm not sure  
22 exactly what I had. I remember I did have some instruments with me.

23  
24 YUHAS: Could you describe what was going on in the Unit 2 control room  
25 when you arrived about 9:15 or so?

1 BENNER: Up in Unit 2 control room. I'd said there was a lot of not panic,  
2 you know, they were confused and but they were pretty busy up there. I  
3 didn't really watch them too closely. But they were, a lot of discussion  
4 and people were moving around a good bit..the operators..the control room  
5 operators. But they seem to even though there was a lot of confusion and  
6 everything they seem to have...they were pretty cool headed. They had  
7 things under control to a degree...anyway, they weren't...they didn't  
8 panic...I didn't see any panic up there.

9  
10 YUHAS: You didn't stay up there long. Do you know why?

11  
12 BENNER: Gees, I think, I think that was because the gas level climbed in  
13 the control room. I think they moved us out of there to the auditorium for  
14 the same reason. And we stayed in the auditorium, I stayed in the auditorium  
15 only a short time because Fred Hoovey, Unit 2 Foreman, told me to go back  
16 to the HP area because they wanted to move the people out of the auditorium  
17 to offsite. They wanted to get them offsite to get all the extra people  
18 out of here. They didn't all these catalytic and maintenance people hanging  
19 around. So they moved the HP personnel back to Unit 1 HP Lab, which was ok  
20 at the time, you know, to go into, they moved the other people offsite.  
21 That's all I know.

22  
23 YUHAS: Let's talk a little bit more about your trip into the Auxiliary  
24 building on 3/29. Who decided that you had to go into the Aux building?  
25

1 BENNER: I really don't remember who made that decision. All I remember  
2 was they had an operator that had to go in to cycle a valve down by the  
3 primary neutralizer tanks and I don't remember whether I volunteered or  
4 whether they told me or asked me, or what the situation was, that I don't  
5 remember. All I remember was I got suited up with a Scott pack and went  
6 down with this operator to accompany him on his tour to go get this valve.  
7 He had a valve to cycle there and I think he had one to cycle right outside  
8 the seal injection filter area. If I remember correctly.

9  
10 YUHAS: Do you know who the operator was?

11  
12 BENNER: I know him by site, by God, I don't remember his name. I worked  
13 with him for awhile.

14  
15 YUHAS: Ok, and the jobs that he had to do were to operate valves and one of  
16 them was by the seal injection?

17  
18 BENNER: Yeah. And the other one was by the primary neutralizer tanks.  
19 Which at the time the levels weren't bad in there, like a 100 mR...in the  
20 neutralizer tank room.

21  
22 YUHAS: Ok, who briefed you on the job before you went down both yourself  
23 and the operator?  
24  
25

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1 BENNER: I remember they fed me information as, you know, what to expect.  
2 I remember they told me by the decay heat walls, that there was about a 2 R  
3 field in there, which there was. I don't remember who it was, but they did  
4 feed me information and we did not walk through the 305 level because the  
5 makeup tank... we went down the stairs directly into 281 level. And that's  
6 the way we went back up.

7  
8 YUHAS: Was this job on a RWP?

9  
10 BENNER: I believe it was, yes.

11  
12 YUHAS: There was an RWP filled out for this job?

13  
14 BENNER: I'm pretty sure there was, yes. Because I think I got 85 or 95 mR  
15 off it...pretty sure it was an RWP.

16  
17 YUHAS: Could you briefly describe how you dressed and what dosimetry both  
18 yourself and the operator wore?

19  
20 BENNER: Dosimetry, TLD,...fine low range dosimeter. I carried a tele-  
21 tector. We were dressed in I think two pairs of coveralls, couple pairs of  
22 booties, and a wet suit, I remember that wet suit, and Scott pack, and two  
23 or three pairs of gloves. When we come out we were not contaminated that  
24 time, so the clothing was sufficient.  
25

1 YUHAS: Do you know how much the operator picked up?

2  
3 BENNER: Not offhand, no.

4  
5 YUHAS: Were any air samples taken while you were there?

6  
7 BENNER: In the Aux building? Not to my knowledge.

8  
9 YUHAS: In the day that followed, do you know which team you were assigned  
10 to when you were on environmental monitoring or onsite monitoring team?

11  
12 BENNER: Yes. I do. I was on Delta.

13  
14 YUHAS: Was that onsite or offsite?

15  
16 BENNER: That was onsite.

17  
18 YUHAS: Do you know who was with you on the Delta team?

19  
20 BENNER: I'm trying to think. The one was a utility worker, he had a funny  
21 sounding name, it begins with a C or something, I don't remember...he was  
22 my driver. Offhand, I don't remember I think I had three different people  
23 with me at different times. I don't remember who exactly was there. For  
24 awhile I had another rad chem tech and for the life of me I don't even  
25 remember who that was. But we toured the island. Yeah I do...I do remember

1 who it was Harry First. In the beginning when I first went out on Delta  
2 team I was with Harry First. And then they split us up. We weren't together  
3 very long. They split us and gave me a utility worker and I had him the  
4 rest of that day. I'm not sure...I don't remember about the following day.

5  
6 YUHAS: Ok, Good. Ok, Mr. Kuhn why don't you pick it up and tell us how  
7 you got involved.

8  
9 KUHN: This is Kuhn. On the date of the accident I came to work approxi-  
10 mately I guess a quarter of seven and I was informed by one of the guards  
11 at the PC, that the reactor building dome alarm was alarming. And that  
12 they felt we had a problem beginning. I went to the HP area where I picked  
13 up my TLD and my dosimetry and Mr. Dubiel told me to call Fred Hoovey and  
14 Tom Mullavey at home and tell them that there was a problem developing and  
15 he needed them in right away. From there he assigned me to go over to Unit  
16 2 with a dose rate instrument, taking readings along the way and to start  
17 air sampling. I proceeded to Unit 2 picked up an air sampler, went to the  
18 305 beside HPR-227 and started air sampling. I went on taking readings  
19 along the 305 and they kept increasing as I traveled. I had approximately  
20 2 R with an E-520 on the door to the makeup tank room and I proceeded over  
21 to Unit 1 to pickup my respirator...in case of unforeseen difficulties. On  
22 the way back I took my air sampler off, took it into Unit 2 HP lab and Carl  
23 Marris was there at the time counting air samples. I handed it to him and  
24 proceeded to the 328 elevation to take an air sample beside HPR 219. As I  
25 was at 219 taking my air sample the dose rates started increasing from 10

1 mR to 50 mR to 75 mR to 175 it kept going up and at that time I heard an  
2 go off but I wasn't sure it was the reactor...any of the evacuation  
3 alarms or monitors themselves. They were all going off at the same time.  
4 So I finished taking my air sample and went down to Unit 2 HP Lab again and  
5 Mike Janouski came in and informed us there was water in 280 elevation and  
6 was anywhere from 1 inch to 3 inches deep and anybody going in that area  
7 should have a wet suit on for their protection. Carl Marris had finished  
8 counting my air sample and then it was below the limits and he called Unit  
9 2 control room and notified them and they informed us to evacuate Aux  
10 building. While waiting to do that I checked myself out with a frisker and  
11 I was contaminated. I took my clothes off and put on PC, wet suit, rubber  
12 boots, and so forth. And I stood by for further orders. As we were waiting  
13 for further orders, the air activity started increasing and hand and foot  
14 and RM-14 started alarming in the HP office. We informed operations of the  
15 situation and told them we were going to the hall. Then we...two of u  
16 donned, no it was three of us, because Dick Benner was there at the time  
17 donned respirators and we stood by in the area to see if they wanted us to  
18 go and take any more readings of the Aux building. I called Unit 1 HP Lab  
19 and asked to make sure the model room door was closed because of the  
20 situation with the ventilatic<sup>n</sup> holding drafts from Unit 2 to Unit 1 when  
21 you lose ventilation. They informed us to evacuate Unit 2 HP Lab and I did  
22 as requested. I went out, I took off my protective clothing. They gave me  
23 new paper coveralls to wear and I headed to Unit 1. Upon arrival to Unit 1  
24 I was informed that they wanted some air samples to be taken, we started  
25 taking air samples, the model room door was shut. When I arrived at Unit 1



1 and they were in the process of getting ready to take the chemistry sample.  
2 Feeling at the time, it wasn't wise to de-con myself I postponed that to a  
3 later time. While waiting there, Tom Thompson and Mike Janowski were  
4 informed that they wanted letdown sample taken of Unit 1...Unit 2, excuse  
5 me...reactor letdown system. So they donned their protective clothing,  
6 Scott air packs, and so forth went in and started lines recircing and Mr.  
7 Janowski came out said it was 200 R on the drag valve behind the panel.  
8 They took approximately 50 ml sample left it s... in the primary sampling  
9 lab and left the area.

10  
11 Break here we want to change the tape. The time is 4:11 p.m.

12  
13 SINCLAIR: The time is 4:12 p.m. we're continuing the interview with Mr.  
14 Benner and Mr. Kuhn. Mr. Kuhn was describing.

15  
16 KUHN: Before as I was discussing, they were just finishing taking a  
17 sample, they had gone and purged 50 ml into a beaker and left it remaining  
18 in the RadioChem sampling room. They requested me to don a respirator,  
19 protective clothing and go in and take a one ml sample and put it in one of  
20 our volumetrics to try to be counted which was a ...I'm not sure whether it  
21 was a 1000 ml or 350 ml. I donned my protective clothing, with a high  
22 range...and low range dosimeter and at the time they had a teletector in  
23 the room. I went in I took one ml quickly out of the beaker came, out Dave  
24 Zeiders was there with the plastic v lumetric. I deposit that, he took it  
25 out to try to count it. They informed me also that they wanted a quick

1 boron run to see what the boron levels were in Unit 2 letdown. So I proceeded  
2 over to get my necessary equipment ready to run a boron and they told me to  
3 do it as quickly as possible to cut down on my exposure. So I got a 100 ml  
4 volumetric graduated cylinder. I filled it up with 95 mls of demin water,  
5 (demineralized) went in, took the 50 ml beaker poured 5 mls, approximation,  
6 into the...graduated cylinder and went in to Radio Chem lab and ran my  
7 boron, as quickly as possible. And I came up with the results, I dumped it  
8 into the sink. And proceeded out of the door because, I was informed that  
9 they were evacuating Unit 1 HP lab because of high airborne activity. From  
10 there we went to Unit 1 control room and they dispersed some of us over to  
11 Unit 2 to handle the situation over there that came up, whatever needed to  
12 be done. I went over to Unit 2 to the control room and Dick Dubiel said  
13 two foreman had to go into the Unit 2 aux building to check on three valves,  
14 that they were getting false indications and also to close a breaker on the  
15 328 elevation. I'm not...I know the two gentlemen when I see them...I know  
16 their names...but I cannot think of them right now. We proceeded downstairs  
17 with Scott air packs to outside of Unit 1... Unit 2 Aux Building and donned  
18 protective clothing, it was one pair of paper, one pair of cloth, a wet  
19 suit, it was...a hood, and a plastic cap, a high range dosimeter I don't  
20 think I had. I had a low range and a teletector. Upon...we didn't have  
21 any RWP that I knew of. We went into the Aux Building. On, my way in  
22 they informed me they needed readings on the seal injection filters because  
23 they were thinking about sending someone in to check...to change the seal  
24 injection filters and asked me on my through if I could check it. We went  
25 into Unit 2 aux building down the stairs to the 280 elevation. There was

1 water on the floor. I surmised anywhere from maybe two to three inches so  
2 we went wading through that, and two operators ....two foreman stood outside  
3 the shadow wall and I took contact readings as close as I could with a  
4 teletector and it was 50 R and 75 R. We proceeded down the hallway in  
5 roughly 2 R area the whole time to the close...decay heat close cooling  
6 coolers. We went into decay heat valve area and the readings in there were  
7 approximately 50 mR, and the floor was still dry in that room. We stayed  
8 there for approximately maybe 10 minutes and they couldn't find the valves  
9 so we proceeded to the stairway and proceeded up the stairs to the 328  
10 elevation and I kept watching my teletector and as we reached the 328  
11 elevation at the stair door it was reading approximately 1 R. As I entered  
12 the door it went to 5 R as I walked toward the air filter system it went to  
13 100 R and I told them we're getting the hell out of here. So we turned  
14 around and headed down the stairs. At that time I ran out of air...well, I  
15 didn't run out of air...I should clarify that...my alarm went off on my  
16 Scott air pack and we exited the building the quickest way possible. From  
17 there I went upstairs and told them what my readings were, what the situation  
18 was and they sent me back to Unit 1. I went back to Unit 1 and we were  
19 back in the Unit 1 HP Lab in respirators and I had paper coveralls on. So  
20 what time it was, I lost all track of time the first day. We mainly took  
21 air samples, took readings in the lab what between the control room ...  
22 Unit 1 HP Lab and sometime that evening they told us we could leave and go  
23 over to the Observation Center to get a sandwich they had set up a checking  
24 station at the 500KVA Sub and that everyone must take their vehicles down  
25 there and be frisked before proceeding to the Observation Center. So I

1 went from there to the Observation Center...not the Observation Center...to  
2 the 500KVA Sub...before I left, I went over and got my clothing when I came  
3 out of the aux building, took them over to the Unit 1, I took a shower, de-  
4 con myself, threw my clothes in the laundry, de-con them and so I'd have  
5 something to wear before I left for the 500KVA Sub. When I got to the  
6 500KVA Sub I still had a slight residual contamination which was mainly gas  
7 because I stood there and it decayed off, it blew off in the air. And I  
8 can't remember much more of that first day. Now the second day I was  
9 reassigned to the island. And we went over we were in Unit 2 control tower  
10 in respirators. They wanted us to go in and take a gas sample...gas sample  
11 or charcoal I can't remember which it was now or hydrogen sample on HPR 227  
12 and while we were in there we were supposed to take readings, do like a  
13 quick routine survey of the general area. So Ken Burkholder had done the  
14 305 elevation, so I was going to do the 328 while my gas sample purged, my  
15 charcoal purged. I went to...or was it the 280 I can't remember whether it  
16 was 323 or 280. Must have been the 328. So I went upstairs and took my  
17 readings and the levels had dropped drastically from the day before. And  
18 then when I went down to finish my HPR 227 sample I was informed that they  
19 wanted me to take contact readings on sump tank area so I had to leave the  
20 new bottle and go back down and as I got the new bottle they informed me  
21 they wanted to the seal injection filter area checked for a seal injection  
22 ...seal plate for the RC pumps, to take readings on there. I proceeded  
23 back downstairs to the 280 elevation. I checked the seal injection filters  
24 and it was 100 R approximately three feet from the seal injection filters.  
25 I proceeded back to the doorway and it was 50 R on contact with the door.

1 I opened up the door braced it with my foot, ran my teletector back in as  
2 far as I could, and I had greater than the 500 R so I proceeded down the  
3 hallway in anywhere from a 2 to 4 R field to the sump tank area and on  
4 contact with the one waste tank was only 250, on contact mR. I proceeded  
5 into the cubicle before the sump tank room and my levels dropped down to  
6 like 125 and 175 when I entered the room of the sump..the tank read 2 R on  
7 the north end the middle read 3 R in the south read about 4 R, on contact  
8 with the tank. I proceeded back up took off my sample and left the area.  
9 I can't remember too much more about that day, and the following day I was  
10 put on an offsite team where we took air samples and dose rates, all day.

11  
12 YUHAS: Thank you. Let's go back are you sure it was Dick Dubiel that was  
13 there when you came in on the morning of the 28th?

14  
15 KUHN: Yes I am.

16  
17 YUHAS: And you called Fred Hoovey. Did you get in touch with Mr. F.  
18 Hoovey?

19  
20 KUHN: Yes I did. I got in touch with Mr. Mullavey he said he'd be right  
21 in and I got in touch with Fred Hoovey. And he said he'd be right in.

22  
23 YUHAS: E520, what is the maximum reading that instrument can read?  
24  
25

1 KUHN: 5 R, no no, wait a minute...2 R. Yes, 2 R.

2  
3 YUHAS: That instrument went full scale when you were walking by the  
4 makeup room?

5  
6 KUHN: Yes...In a lot of areas it went full scale.

7  
8 YUHAS: Do you remember what Mike Janowski and Mr. Thompson were wearing  
9 when you were collecting reactor coolant sample? In terms of respiratory  
10 protection?

11  
12 KUHN: Scott air packs.

13  
14 YUHAS: And Janowski told you that the drag valve read 200 R per hour on  
15 contact?

16  
17 KUHN: Yes he did.

18  
19 YUHAS: Now when you got dressed to go in and split the sample, you were  
20 just wearing a particulate filter?

21  
22 KUHN: Yes I did.

23  
24 YUHAS: Not a charcoal.  
25

1 KUHN: Not a charcoal, no.

2  
3 YUHAS: Do you have an instrument with you?

4  
5 KUHN: A teletector.

6  
7 YUHAS: Do you know what the bottle read with the 50 mililiters in it?

8  
9 KUHN: I think it was only like 2 R. I'm not sure. It wasn't that hot.  
10 My total exposure for the two trips in was 400.

11  
12 YUHAS: Did you run the boron analysis?

13  
14 KUHN: Yes, I did.

15  
16 YUHAS: What was the results?

17  
18 KUHN: Approximately 248 PPM boron.

19  
20 YUHAS: Did you find those results unusual or disturbing?

21  
22 KUHN: Yes, I did for the amount of boron that was normally in the RC  
23 system, but I was later informed we never took into consideration the  
24 sodium injection.  
25

1 YUHAS: Who informed you of that later?

2  
3 KUHN: A GPU chemist.

4  
5 YUHAS: About when?

6  
7 KUHN: Approximately 4 days ago. But I feel that our chemist themselves  
8 felt that we weren't really that low because Kerry Harner said that he felt  
9 that was not a representative number.

10  
11 YUHAS: Did you report that number to the control room?

12  
13 KUHN: I reported it to Kerry Harner who is Unit 2 chemist supervisor and  
14 he reported to Unit 2.

15  
16 YUHAS: Ok. Do you remember the time that the sample was taken?

17  
18 KUHN: No, I don't.

19  
20 YUHAS: Did you have any extremity monitoring on when you were handling the  
21 sample?

22  
23 KUHN: No, I didn't.



1 YUHAS: Have you every used extremity monitoring before, ever worn it on  
2 the job?

3  
4 KUHN: No, never, other than once when I was doing the seal injection filters.

5  
6 YUHAS: When you were doing the seal injection filters what type of extremity  
7 monitoring would you wear?

8  
9 KUHN: This one TLD on my hand. That was in the holding the, pulling the  
10 seal injection filter out of the case.

11  
12 YUHAS: So it wasn't a TLD ring it was just a TLD badge strapped to the  
13 wrist.

14  
15 KUHN: Yes.

16  
17 YUHAS: Did you get a whole body count after you had split this sample?

18  
19 KUHN: Yes, the day of the accident. It was late at night or it was the  
20 following day, no it was the folloiwng day because they asked me to stay  
21 over beyond my regular shift and take over the 500KVA Sub and it was slow  
22 at the time and the gentleman from the body counter... I asked him if he  
23 could do my whole body count and he said yes he was free, so it was approxi-  
24 mately 8:30 at night and he took me down and gave me a whole body count and  
25 it didn't show any appreciable iodine concentration.

1 YUHAS: Do you know what time you entered the auxiliary building with the  
2 two other fellows to close the breakers and operate valves?

3  
4 KUHN: No, I don't.

5  
6 YUHAS: Relative time afternoon of the 28th, evening?

7  
8 KUHN: I could not truthfully tell you.

9  
10 YUHAS: Ok. The numbers that you gave me, the 50 R and the 75 R per hour,  
11 were those teletector numbers on top of the seal injection filters?

12  
13 KUHN: No, they weren't. They were approximately a foot in front of the  
14 seal injection filters.

15  
16 YUHAS: Do you remember who requested that you get those numbers?

17  
18 KUHN: Unit 2 Operations.

19  
20 YUHAS: A specific name.

21  
22 KUHN: I can't remember they...they were going to send in another HP do  
23 that specific job and it was Tom Thompson and he asked me since I was going  
24 by the area if I could take them for him and I said it was no use two  
25 people going in to the same area and I'd picked them up for him. And when

1 I got the readings I called the control room right away, got ahold of Bob  
2 McCann and told him to tell those guys not even to bother to come in.

3  
4 YUHAS: Did you give him Thompson or any of these guys a number of thousand  
5 R per hour?

6  
7 KUHN: No, I ...the only one is the two foreman that were with me when I  
8 was leading the way off the staircase and the 328 we were heading towards  
9 the pit area and as soon as my teletector pegged on the to 50 I kept clicking  
10 up and when it it went pegged on the high range I turned around I had it  
11 extended, I turned around and headed the other direction and we proceeded  
12 out of the aux building.

13  
14 YUHAS: When did it peg on the 1000 R per hour?

15  
16 KUHN: Just as I approached, I'd say I was approximately 8 to 10 feet away  
17 from the equipment opening. I can't remember what they call the opening to  
18 the floor elevation that covers all the levels from raising and lowering  
19 equipment.

20  
21 YUHAS: Ok, just the equipment hatch.

22  
23 KUHN: No, its an opening in the floor where they can lower and bring  
24 equipment in from the outside through the bulkhead into the area inside the  
25 Aux building and by booming it over they can lower it to the basement or  
take up to the...

1 YUHAS: Were you on the 305 elevation then?

2  
3 KUHN: It goes in all the elevations.

4  
5 YUHAS: Ok, but what elevation were you on when the teletector pegged?

6  
7 KUHN: 328.

8  
9 YUHAS: Down on bottom or up on top?

10  
11 KUHN: Up on top. 328. I'd said I was maybe 10 feet away from the exhaust  
12 fans. I think they were exhaust fans for the charcoal banks. I'm not sure  
13 there. They sit right to the right as you come out of the stairways.

14  
15 YUHAS: Did that appear to be the source?

16  
17 KUHN: At the time I thought it was.

18  
19 YUHAS: Do you remember who these other two foreman that went with you?

20  
21 KUHN: Maybe Dick could help me, what's Bubba's name? Bubba Marshall,  
22 Bubba is his nickname and the other one was...I know one was Bubba Marshall,  
23 and he might be able to remember better than I am, but it was two foreman  
24 and the one foreman he told me later he was here from eleven to seven  
25 shift. He was here when the incident began so whenever was Unit 2 foreman  
at the time.

1 YUHAS: ... foreman?

2  
3 KUHN: Yes. He's a shift supervisor.

4  
5 YUHAS: Fred Scheimann.

6  
7 KUHN: Fred Scheimann.

8  
9 YUHAS: Ok, so its Fred Scheimann and Bubba Marshall.

10  
11 KUHN: Yes.

12  
13 YUHAS: Do you know what breakers they were trying to operate?

14  
15 KUHN: I think it was the sump, sump....

16 YUHAS: Sump pump breakers.

17  
18 KUHN: Sump pump breakers...or...I'm not sure but they did it I was informed  
19 by some of the guys in HP that they had gone in later that night again and  
20 came up through the 328 elevation behind the..from the east and the levels  
21 never exceeded 5 R because of the cement wall and that they were later to  
22 able to close the breakers by coming that way.

23  
24 YUHAS: During the course of that tour did you..anybody wear lapel air  
25 samples, anything like that?

1 KUHN: No, the first day other than what we took our original air samplers  
2 from then on we didn't take any. We were just going in with the dose rate  
3 instruments to do specific jobs and it wasn't till later that we started  
4 taking air samples.

5  
6 YUHAS: you came out did you write any of these numbers down?

7  
8 KUHN: No, we didn't.

9  
10 YUHAS: Did you volunteer to make this trip in with these two fellas?

11  
12 KUHN: Dick Dubiel volunteered me.

13  
14 YUHAS: Dubiel told you to do it. Did Dubiel set an upper limit to the  
15 amount of exposure you should have fear?

16  
17 KUHN: He told me to watch my exposure. Dick Dubiel told me to watch my  
18 exposure and to play it by ear. So I tried to cover myself as much as  
19 possible and whoever I'm with.

20  
21 YUHAS: Did they tell you don't take more than an R or don't take more than  
22 2 R or don't take more than 10 R?

23  
24 KUHN: They told me not to take more than 2 R.  
25

1 YUHAS: Then you actually took what 400, you said?

2  
3 KUHN: That day I think I got a total of 18. 1800, 1.8 R.

4  
5 YUHAS: Are you aware of Mr. Scheimann or Mr. Marshall took on this trip?

6  
7 KUHN: I think each gentleman got approximately 800 mR but I'm not sure,  
8 I'd have to look into the records to be sure because our low range dosimeters  
9 went off scale and we didn't have high range.

10  
11 YUHAS: On the 29th did you say you went with Mr. Burkholder to collect the  
12 hydrogen samples?

13  
14 KUHN: No, at the time they had the ventilation system working and we had  
15 an HP office set up in the control room in the corner, we had guiding maps  
16 of the general areas, had tried to mark down what were the radiation levels  
17 at the different spots from the people who had gone in that night and that  
18 we were requested to take hydrogen samples off of HPR227 to be able to  
19 monitor how much hydrogen was in the reactor building, so we were taking  
20 turns. Mr. Burkholder was the first to go in and take a sample. I was the  
21 second person to go in, and Jim Dupes was supposed to be the third. Mr.  
22 Burkholder went in proceeded to get the monitor purging and to collect the  
23 sample and he proceeded to take dose rate readings of the building to  
24 update what our readings were. Approximately eleven o'clock I think the  
25 next scheduled sample was to be taken and I went downstairs donned the

1 necessary clothing got my vial and went in to take a sample. The first  
2 three to four days are were like a jumble where there instances were a day  
3 late late or a day early, it's hard to remember.

4  
5 YUHAS: Burkholder, when he went in to take the containment air sample.  
6 Was that the morning of the 29th?

7  
8 KUHN: I'm not sure. That's what I was just sitting here thinking, too.  
9 I think that was at least two to three days later.

10  
11 YUHAS: I think if I'm not mistaken the first samples of the containment  
12 air were drawn like night of the 30th.

13  
14 KUHN: I think it was the 30th. I think I'm getting my days mixed up  
15 because so many things happened....blump, blump, blump right in a row...it's  
16 hard to pick out certain instances, but I do remember I made two entries  
17 the first day and the second day.

18  
19 YUHAS: Do you remember any dose rates that you may have taken from the 25  
20 cc glass collection chamber, from containment air sample?

21  
22 KUHN: On the one I took I had 1.5 R on contact with a teletector on the  
23 glass sample and in the general area of HPR 227 they had installed so it  
24 must have been later in the accident because I remember they had installed  
25 a vent line that had run through between the monitors so it had to be three

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1 to four days later a vent line from the makeup tanks or somewhere to vent  
2 gas back into the reactor building and that was approximately 2 R on contact  
3 and we made note of it, that you get an extremely high exposure to your  
4 lower body crossing over the pipe to take the samples. And they were in  
5 the process of installing a remote hydrogen analyzer at the time.

6  
7 YUHAS: Didn't you have a routine analyzer on it?

8  
9 KUHN: No, we don't. We always take it over to the RadioChem lab and run it  
10 on our gas partitioner which was by this time in a high radiation area and  
11 so they were trying to eliminate the problem of transporting the bomb with  
12 a glass vial from Unit 1 ...Unit 2 to Unit 1 and cutting down needed  
13 exposure.

14  
15 YUHAS: Very good chronology. At this time I'd like to give you either one  
16 of you the opportunity to bring up any comments you might have to be more  
17 familiar of what went on.

18  
19 BENNER: You mean leading up to the accident.

20  
21 YUHAS: Just addition to the comments that...

22  
23 BENNER: Ok. Prior to the accident a lot of us had been concerned about  
24 exposures. According to our own administrative procedures we were supposed  
25 to equalize exposures, we weren't doing this. Another thing was instru-

1 ments, our instruments were such a state of disrepair that we had very few  
2 available the day of the accident. Most of them were broken, many of them  
3 were torn apart, stripped down from parts to repair other ones, and I don't  
4 know what the problem was but it just we came down to we didn't have the  
5 instruments to do the job. We didn't have as many instruments as we had  
6 techs. We had very few techs.

7  
8 YUHAS: Let me ask you a question specific to the instruments? I have  
9 reviewed the calibration data sheet inservice out of service sheets and  
10 that indicate on the date of the accident about sixteen teletectors only 4  
11 were operable.

12  
13 KUHN: It's very possible, yes.

14  
15 YUHAS: It indicated that like fifteen E120, or E520s excuse me, about six  
16 of them were operable.

17  
18 BENNER: Shortly before the accident only a few days before the accident, I  
19 personally, took instruments down to calibrate them of four teletectors  
20 that I took down one of them was serviceable, three of them were broken. I  
21 took down some R02 and some E520s I don't remember the number. When I came  
22 back up myself and Peg Pelen the one trainee, we carried the instruments  
23 down and I know we had over a dozen instruments and I think we ended up  
24 with like two or three serviceable instruments out of that many instruments.  
25

1 YUHAS: According to the paper work that I have reviewed, less than,  
2 significantly less than half of the instruments that you have were available  
3 on the day of the accident.

4  
5 KUHN: This is probably true.

6  
7 YUHAS: Of all the PIC-6, only 4 were operable?

8  
9 BENNER: Well, they're worthless anyway. I'm sorry but they are.

10  
11 YUHAS: Just prior to the accident right after the outage on the tail end  
12 of the outage in Unit 1 we went around, myself I believe Jim Dupes was  
13 involved. There might have been a couple of other techs, we went around  
14 and looked for instruments. We marked the type of instrument and serial  
15 number on a sheet of paper and the status. And we found most of our instru-  
16 ments in the repair shop and they weren't in the shop being worked on they  
17 were back in the parts cage, sitting because they didn't have the parts to  
18 fix them. That was the status of the instruments very few of them were  
19 available when you wanted an instrument you almost had to fight for it.

20  
21 SINCLAIR: We're going to have to break here to change on to the second  
22 tape. The time is 4:44 p.m.

23  
24 SINCLAIR: The time is 4:45 p.m. and we are continuing the interview with  
25 Mr. Benner and Mr. Kuhn.

1 YUHAS: Mr. Benner you were still, we just caught the tail end of discussion  
2 about why there were so few instruments available at the time of the incident.  
3 You were at the point where you were saying the techs were about ready to  
4 fight with each other to get an instrument.

5  
6 BENNER: Yes. Unit 2, we had pulled a lot of the instruments out of Unit 2  
7 into Unit 1 for the outage. Like I said most of the instruments in Unit 1  
8 were broken. The only good instruments we had and were Unit 2 and we had  
9 some in Unit 1, but the majority of them were Unit 2 instruments, and they  
10 were running short, in fact, I remember specifically delivering just a  
11 couple R02s and maybe one teletector and an E520 Unit 2 shortly before the  
12 accident because they didn't have any servicable instruments. It was  
13 really bad! The instrument situation was to the point where if you wanted  
14 to go into an area and you didn't know whether you could make an entry  
15 simply because you didn't have an instrument. We went into the reactor  
16 building looking for instruments, we couldn't find any. They just seemed  
17 to evaporate, and it turned out that they were definitely torn apart and  
18 just laying around broken. So and you said about Lapel air samplers, well  
19 I'd never even seen one before, when you people came in, that was the first  
20 I had seen one. As far as equipment went, I got the impression when I  
21 first came into the department that they bought what they had to, they  
22 didn't buy anymore and no less. They just bought what they had to and what  
23 they thought would be a bare minimum to get by, and not necessarily did  
24 they go out and buy the best they could get for a dollar. They went out  
25 and bought, I don't know how they made the deals, but they just bought.

1 This is my own impression. Even like respirators and Scott packs, when you  
2 can inventory all your Scott packs, when one man can inventory all the  
3 Scott packs, in less than a day you don't have enough, especially when you  
4 are traveling all over the plant you do it on foot. There just aren't  
5 enough Scott packs to go around, there weren't.

6  
7 YUHAS: About how many Scott packs were there available prior to the incident?

8  
9 BENNER: Prior to the incident Unit 1 had thirty, thirty-two something like  
10 that total. We had like two or three in the HP area, a couple at each  
11 reactor hatch and the rest were scattered all through the turbine and the  
12 aux building. We had six emergency with a little small hand carried air  
13 bottles. Unit 2, I don't remember how many we had over there, we might  
14 have had maybe twenty-five or thirty Scott packs over there. But for the  
15 amount of personnel you have that's not near enough. They weren't placed in  
16 the right places. They weren't in the right positions. Because when we  
17 evacuated the aux building we left a heck of a lot of Scott packs behind.

18  
19 YUHAS: Inside the Auxiliary building.

20  
21 BENNER: Yeah inside the Auxiliary building we had four Scott packs for  
22 each control room. We had a couple setting on each floor. There were two  
23 in the control tower outside of, other than the HP lab, outside of each  
24 level on the landing and one or two at each elevator door in the turbine  
25 building, and then there was like two in Unit 1's control building at the

1 north wall, in other words they were scattered around a couple up in chlorine  
2 house a couple up at circ water house, but that when you mass them altogether  
3 you really don't have many. So we didn't have many to work with. When we  
4 started making entries in the Unit 2 Aux building, we exhausted our scott  
5 packs in no time. We just didn't have any to work with.

6  
7 YUHAS: Is that why Mr. Kuhn you wore a particulate filter when you went in  
8 to take the primary coolant sample.

9  
10 KUHN: The main reason was, you know, they were already being used or had  
11 been used up and you don't use a partial bottle or somebody eses. To get  
12 back to the incident, since I've been here the HP department has taken a  
13 second seat in everything, operations seems to me, now this is my opinion,  
14 runs the Island. In the way of repairing instruments like Mr. Benner has  
15 suggested I&C shops repairs our instruments when they have time. If not  
16 they just set up in a disabled stage of events. Our foremen were just in  
17 the process of getting an outside concern because of this to do all our  
18 repair. But when it comes to manpower to keep areas clean, even in Unit 1,  
19 before the accident, we were always given the least amount of people to do  
20 the job. It seems to me since the accident its got back to the same way.  
21 Where everybody else comes first and HP comes second. I don't feel that's  
22 right when you are looking from the health physics viewpoint.

23  
24 YUHAS: Did the operations staff adhere to HP rules and procedures?  
25

1 KUHN: In those cases the workers themselves tried to, we have some that we  
2 catch and tell them about it, breaking our rules and regulations, but some  
3 were the shift supervisor and the shift foreman feel like they are above the  
4 consensus of the HP department and a number of times our foreman have been  
5 dictated to by operations.

6  
7 YUHAS: Dictated to or did the operations people just forget about the HP  
8 rules and regulations and did what they wanted?

9  
10 KUHN: They were more or less written up by our foreman and informed that  
11 they were going to see that our foremen were taken care of for causing them  
12 to be written up. And when they had a chance to stick him they would stick  
13 him.

14  
15 YUHAS: Is there any other problems aside from these two?

16  
17 KUHN: I feel Mr. Benner was right in that they weren't as I call budgeting  
18 the amounts, with exposures because at one time when Unit 2 was still  
19 functioning we were having problems with the neutron shielding. Mr. Huwe  
20 that was our Unit 2 Supervisor, was the only one at the time that was  
21 really putting up a fuss against operations sending us into Unit 2 reactor  
22 building for needless exposure, and he was always being overridden by his  
23 supervisor and as long as operations wanted it done, operations had their  
24 way.  
25

1 YUHAS: You said Mr. Huwe was being overridden by his supervisor which one?

2  
3 KUHN: Well Mr. Huwe only has two supervisors Mr. Mulleavy and Mr. Dubiel  
4 and I'm not sure which one. Most of the time I feel this is my opinion and  
5 Mr. Kuhn's opinion, that Dick Dubiel overrode the decisions.

6  
7 YUHAS: Did it appear to you that Dick Dubiel was reporting to the operations  
8 group?

9  
10 KUHN: In my opinion he was swayed by the operations group.

11  
12 YUHAS: Mr. Benner do you have any other comments or criticisms ?

13  
14 BENNER: Yes. As Mr. Kuhn said about some of the problems, I, my short ex-  
15 perience here I haven't known Mr. Dubiel very long and certainly haven't  
16 known Mr. Mulleavy too long, but my own observation was Mr. Huwe was more  
17 concerned with personnel and the radiological end of the job and he became  
18 concerned last December along with the technicians that we did have a  
19 neutron problem in Unit 2 reactor building; however, our neutron film  
20 badges were coming back negative nothing on them. So Mr. Huwe, I believe  
21 it was his decision, decided to start using neutron TLDs, which according  
22 to our, the head of our department, they would be more proven yet. But  
23 anyway, myself and Mr. Egenrider went into Unit 2 reactor building to do a  
24 weekly survey and we picked up the equivalent of over 600 millirem beta  
25 gamma and when we came out and they accused us of doing this intentionally.



1 We were in there like 45 minutes. What we found was we found 250 mR neutron  
2 in the elevator in the Unit 2 reactor building. We found on the operating  
3 floor we found in a general area of like 25 to 200, inside the D rings on  
4 the in-core area we found greater than 5 R. That's all the further the rem  
5 ball goes up to is 5 R. We stayed clear of these areas. We went up on top  
6 of the D ring in order to do a thorough survey, we went on top of the D  
7 ring and we did a neutron survey up there and we found that over the reactor  
8 area, over the pool area and everything, it was reading greater than 5 R  
9 neutron. So we reported this and we read our TLDs that day. Converted it  
10 with, as per the the formula we were given, and it came out to mine 649  
11 millirem beta gamma equivalent. We reported this and of course like I said  
12 they accused us of dawdling in there to get this. Well I don't know, but  
13 anyway. They then questioned the validity of the findings whether we found  
14 neutron in there. So Joe DeMan and Fred Huwe took a rem ball they also  
15 questioned the accuracy of the rem ball, they took a rem ball, they went  
16 into the reactor building they measured a field set a TLD in the field and  
17 timed it, took it out read the TLD and it compared favorably with the  
18 findings that the rem ball gave so they were together. They also, it is my  
19 understanding that, Mr. Huwe sent TLDs out to be shot by Hartshaw and they  
20 turned to be very accurate and then we were told by Mr. Plumlee, NRC inspector  
21 that the film badges that we were using were for 50 MeV neutron and we  
22 received like 1 to 3 MEV neutron. In other words they had like 5% or 10%  
23 accuracy in our situation. The TLDs were a lot more accurate. But they  
24 ignored this.  
25

1 YUHAS: T... Who is they?

2  
3 BENNER: Mr. Dubiel, specifically. I think i.r. Mulleavy would like to have  
4 turned on his back on it. I'm not sure whether he did or not I don't  
5 remember. But our department the heads of our department ignored for a  
6 while and then when Mr. Plumlee came in and started talking to the techs  
7 about this we raised the question to him. All of a sudden Mr. Logan, the  
8 Unit 2 Superintendent, and also Mr. Dubiel and Mr. Mulleavy started getting  
9 interested in this neutron problem. Well then they discovered that the  
10 shields around Unit 2 reactor were empty. They were supposed to be full  
11 with water. They neglected to do something or other, anyway, the water  
12 evaporated and they never filled out of 12 shields, or cubicles, I think  
13 there was only one or two of them that had any water in it. So they brought  
14 the reactor down and they filled them back up. This didn't cure the problem  
15 but it lowered it tremendously. But I found that this is what we run into  
16 all the time, they don't listen to us enough. We tell them something,  
17 we're in there working all the time. We see these things. We see a problem  
18 coming we can tell them about it. They ignore us.

19  
20 YUHAS: Again they, was that your supervision?

21  
22 BENNER: This is our supervisors, in our department and I get the impression  
23 it goes all the way up, you know, the people at the top, our supervisors  
24 all the way up, just really aren't that interested as long as everything  
25 runs nice and there are no big problems or anything, that's it. It's fine  
and dandy.

1 SINCLAIR: We are going to take a break here for a minute. The time is  
2 4:58 p.m. We are going to continue with the tape, the time is still 4:58  
3 p.m.

4  
5 YUHAS: Do you know of whether the same condition existed, for instance,  
6 among the auxiliary operators. Did they find things that were wrong and try  
7 to take it up to their supervisors and not get anything done?

8  
9 BENNER: Yes, I can't name any specific items but with talking to the  
10 auxiliary operators I think that they had the same problem that we did. It  
11 just seemed to be a division. We were on one side, the technicians and the  
12 operators, and management was on the other side the fence and as long as we  
13 listened to what they told us everything was fine. Sometimes you'd find  
14 somebody that would refuse to do what they specifically outlined, but not  
15 too often.

16  
17 YUHAS: Were any of these recommendations documented?

18  
19 BENNER: To my knowledge I don't honestly know. I never documented any  
20 myself. We don't have a suggestion system or anything around here. I  
21 don't think they want to hear from us. But in fact I suggested last year  
22 that they put one in and they said it was a waste of time. But there are,  
23 I mean if you go to a supervisor I've always been taught you go to a supervisor  
24 and you tell him you have a problem, he should look into it. There were  
25 some that would. The majority of them would ignore you.

1 YUHAS: Do either of you have any reason to believe that an individual  
2 deliberately made a defect in the system that either precipitated or aggravated  
3 the incident that occurred on the 28th?  
4

5 KUHN: Other than through cleanup of Unit 2 we found a lot of garbage in  
6 different strainers. When the plant initially, before it started up, they  
7 run the systems through strainers if there is any tools, equipment, rags  
8 and so forth there cleaned out before they get to the pumps. They found a  
9 lot of 2 X 4s, hammers, wrenches and so forth in the screens, but since  
10 that time there was some minor things broken but to say that some individual  
11 did it because of hate towards the company I can't honestly say I know.  
12

13 BENNER: I don't know of anyone who had enough hatred or despised the  
14 company or nuclear power or what have you, enough to sabotage the plant.  
15 Offhand I don't know of anybody. I can say this, going back to the plant  
16 itself, that plant from the beginning, when it was under construction, it's  
17 really a very poor designed as far as the layout. It's the layout of the  
18 plant. I not talking about the design equipment inside, but the layout of  
19 the plant itself is very poor for a nuclear plant, because there are too  
20 many lines running at knee level, ankle level, too many rooms you can't  
21 really get into. They block you off, they take and build a doorway and  
22 then they put pipes in front of it so that you couldn't get in and out.  
23 They take and build a doorway and forget to build the wall, you know, and  
24 this and you go downstairs you'll find it a room that has no purpose whatsoever.  
25 It's just there. It was never designed for anything, in fact, it was just

1 as if it landed there by accident. This is was my impression when I first  
2 went through there and I though well they will correct this later but they  
3 didn't. Some of it, they corrected a little bit of it, but they didn't  
4 correct much.

5  
6 YUHAS: Do you fellows have any other comments?

7  
8 KUHN: Mr. Kuhn does. This is Kuhn. Just before the accident, GPU had  
9 sent two representatives from NUS to talk to us, look over the situation to  
10 see where they could alleviate problems that were developing, that other  
11 companies were getting citations from the NRC about, and to maybe be able  
12 to upgrade our equipment, if needed, upgrade our personnel, give GPU what  
13 training that might help us to achieve, me as an HP myself, I feel like we  
14 should be trained more often. We work a six week rotation, we have a week  
15 of training, and other than the eight weeks of training we had before we  
16 had before we started, anything I picked up I picked up from my own reading  
17 procedures, talking with people, I feel we have some good people, NUC navy  
18 people (nuclear) who were on submarines that were trained by the government  
19 they know what they are doing. I was lucky I was put on a good shift and I  
20 had good training. I mean, I can't kick at it, but whether the company  
21 would have listened to these people they told us that they recommended that  
22 we have more people that we did not have enough equipment and that our  
23 supervisors were a little lax in some of their practices, but before they  
24 could ever turn it over to GPU which I feel GPU was trying, the accident  
25 occurred and it was all in vain. This is Kuhn. My opinion is, still, if at

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1 NUC plants, if they have a training program they should implement it and...well  
2 train people. I mean it should refresh your courses and keep it upper most  
3 in your mind, not let you know it but it takes you a couple minutes to  
4 think about it.

5  
6 BENNER: I go along with Mr. Kuhn on what he said and also I want to bring  
7 out the point that we were running this show down here, two units, a total  
8 of five laboratories with a four man shift. Sometimes it was only a three  
9 man shift. When you are trying to run two complete nuclear units with only  
10 three to four men, especially on a backshift, or on a weekend, and if  
11 anything does happen like it did, you are bound to be short handed anyway  
12 you look at it. Plus the fact that we have on a shift normally you have  
13 two senior techs and two junior techs. Now the senior techs are trained to  
14 do a little bit more than the junior techs but they are also trained they  
15 are also authorized to sign certain paperwork. The juniors are not allowed  
16 to do this. They could alleviate some of their problems simply by putting  
17 in like a mode of progression or something to get all the techs on the same  
18 technical level instead of having two grades of techs except maybe a training  
19 grade, you know, to bring it up. They could alleviate some of these problems  
20 where all the techs would be authorized to do the same thing. Instead of  
21 having say, a man come to you and say of well I can't do this because my  
22 man is in the reactor building and you will have to wait an hour till he  
23 comes out. This slows down work and just makes things more difficult. But  
24 the manpower problem definitely is a sore spot and they were going to hire  
25 more techs, we were promised more techs, and somebody killed it.

1 KUHN: I would like to make a comment about that. At the beginning of the  
2 year Gary Miller came in and we were starting to have weekly discussions of  
3 the problems and mutual grievances. He informed us that at the beginning  
4 of the year there were six jobs for six new technicians or juniors in the  
5 works, and that had our foremen maybe Mr. Mulleavy, Mr. Dubiel, never  
6 followed through and they were eliminated from the budget. So in my estimation  
7 they did not feel that there was any more need for techs.

8  
9 YUHAS: Gentlemen, I certainly thank you for coming in and spending this  
10 time with us and giving us your input as to what you're involved in an  
11 your comments on the program in general. Should you have any additional  
12 comments feel free to contact us, we will be happy to talk with you. I  
13 think for now we'll quit. I want to make one other point. Prior to start  
14 of this interview the gentlemen Mr. Kuhn and Mr. Benner informed me that  
15 the management of the utility Metropolitan Edison has requested to hear  
16 their copies of the tapes. Both individuals have been informed that a copy  
17 tape they will be provided is there own personal property and it is their  
18 responsibility to do with it as they see fit. Is that correct gentlemen?

19  
20 BENNER & KUHN: Yes.

21  
22 SINCLAIR: The time is 5:08 p.m., May 8, 1979 and this will conclude the  
23 interview with Mr. Benner and Mr. Kuhn.  
24  
25