

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

1 In the Matter of:

2 IE TMI INVESTIGATION INTERVIEW

3 of

4 Peter P. Velez  
5 Radiation Protection Foreman

6  
7  
8  
9 Trailer #203  
NRC Investigation Site  
10 TMI Nuclear Power Plant  
Middletown, Pennsylvania

11  
12 April 23, 1979  
(Date of Interview)

13 June 28, 1979  
14 (Date Transcript Typed)

15 62, 63 and 64  
(Tape Number(s))

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21 NRC PERSONNEL:

22 Gregory P. Yuhas, Radiation Specialist

23 Dale E. Donaldson, Radiation Specialist

24 Owen C. Shackleton, Investigator  
25

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1 SHACKLETON: The time is now 11:26 p.m. on April 23, 1979. This is an  
2 interview of Mr. Peter P. Velez. Mr. Velez is a Radiation Protection  
3 Foreman for Metropolitan Edison Company at the Three Mile Island Nuclear  
4 Power Plant.  
5

6 Present to conduct this interview is Mr. Gregory P. Yuhas. Mr. Yuhas  
7 is a Radiation Specialist in Region I of the U.S. Nuclear Regulatory  
8 Commission. Also present is Mr. Dale E. Donaldson. Mr. Donaldson is  
9 also a Radiation Specialist in Region I U.S. Nuclear Regulatory Commission.  
10 My name is Owen C. Shackleton. I am an Investigator in Region V, U.S.  
11 Nuclear Regulatory Commission and will be acting as a moderator during  
12 the course of this interview. Prior to getting, of placing this inter-  
13 view on tape, I gave to Mr. Velez a two page document prepared the U.S.  
14 Nuclear Regulatory Commission explaining the purpose and scope of this  
15 investigation. It also identifies the authority by which the U.S.  
16 Nuclear Regulatory Commission conducts this investigation and the  
17 rights that Mr. Velez to refuse to be interviewed or to give a signed  
18 statement. On the second page of this document are three questions in  
19 writing to which Mr. Velez responded in the affirmative. At this time I  
20 am going ask these questions orally for the record. Mr. Velez do you  
21 understand the document that we gave you to read that I am referring  
22 to?  
23  
24  
25

1 VELEZ: Yes I do.  
2

3 SHACKLETON: Do we have your permission to tape this interview?  
4

5 VELEZ: Yes you do.  
6

7 SHACKLETON: And would you like a copy of the tape?  
8

9 VELEZ: The tape and the transcript.  
10

11 SHACKLETON: Ok, you shall sure receive a tape and a transcript. At  
12 this time Mr. Velez for those persons who will be listening to this  
13 tape, would you please identify your education and experience in the  
14 nuclear energy field.  
15

16 VELEZ: I was in the nuclear power program in the United States Navy  
17 for approximately five and a half to six years. I was a mechanical  
18 operator and a engineering lab technician. Upon completing there I  
19 joined the Metropolitan Edison Company. I started out as an auxiliary  
20 operator. I was an auxiliary operator for approximately three years at  
21 which time I transferred to the Radiation Protection Department. I was  
22 a Radiation Protection Technician for three years at which time I was  
23 promoted to a Radiation Protection Foreman which I held since approxi-  
24 mately one year eight months.  
25

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1 SHACKLETON: Allright thank you. Now gentlemen go ahead with the  
2 questioning.  
3

4 YUHAS: I would like to amplify your training with the Navy. When did  
5 enter the Navy?  
6

7 VELEZ: I entered the Navy in 1963.  
8

9 YUHAS: What service schools did you attend in the Navy?  
10

11 VELEZ: I started out in Aviation Machinist Mate School, upon completion  
12 of that I requested and received permission to transfer to nuclear  
13 power program I then went to Basic Nuclear Power Program School in  
14 Bainbridge, Maryland in 1964. I spent roughly I think it's something  
15 like 26 weeks there. Then I went to the prototype training in West  
16 Milton, New York. I went through mechanical operating training and at  
17 the completion of that and qualification I also was sent to the engin-  
18 eering lab tech training program. After that I was assigned to from  
19 graduation I went to United States Navy Submarine School, and from that  
20 point on I was then assigned to a fleet ballistic missile submarine,  
21 the USS Robert E. Lee.  
22

23 YUHAS: Could you describe the training of the Engineering Laboratory  
24 Technician School.  
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1 VELEZ: Basically it's a 8 to 10 week school that they went over the  
2 radiation protection and primary chemistry and secondary chemistry that  
3 we use in the United States Navy nuclear power program.  
4

5 YUHAS: Fine. Are you a high school graduate?  
6

7 VELEZ: Yes I am.  
8

9 YUHAS: Have you attended college?  
10

11 VELEZ: No  
12

13 YUHAS: As an auxiliary operator, did you license with Med Ed and  
14 Unit 1.  
15

16 VELEZ: No I did not.  
17

18 YUHAS: Ok, we are going to have you go through your participation in  
19 the events from the time of the trip at 0400 on April 28, 1979. Could  
20 you just go ahead and start with a scenario of your involvement? How  
21 you were called when and what your actions were.  
22

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1 YUHAS: Would you feel confident in saying that you arrived at the  
2 north gate before 6:55?  
3

4 VELEZ: Yes I would. Well upon arriving and getting permission to  
5 enter like I said I reported to the Unit 1 HP lab. At that time I came  
6 into the lab and I was met by Joe Deman, who is another radiation  
7 protection foreman. He advised me and instructed me of basically what  
8 he knew of what was going on -- that there was an emergency, who was  
9 onsite, and what he had been doing so far. I then started assisting  
10 him on getting the offsite team's and the onsite team's gear. The  
11 offsite team especially because some of the onsite teams had already  
12 picked up their gear. We sent some technicians out to the security  
13 processing building to get the equipment break it out and do the check  
14 on the equipment in case we we had to use it. At that time I was  
15 requested to go up to the Unit 1 control room to assist up there by I  
16 think it was Tom Mulleavy. I went up to the control room he then had  
17 me working on the maps for a while to plotting the different points  
18 where they had people on the island doing surveys. Then when they had  
19 a wind shift or something came up they told me, Pete, I want you to  
20 take a crew out to the observation center and setup out there, and then  
21 picked up an auxiliary operator, myself, and picked up one of the  
22 emergency kits. We went out to the observation center across, on 441.  
23 At that point I maintained communication with the control room. We had  
24 a walky-talky. We setup an air samples there, got on the walky-talky,  
25

1 VELEZ: I was not called. I was reporting to work for normal work  
2 schedule at approximately 0630 that morning. On arriving at the gate I  
3 found that the gate was locked. Upon questioning the security guard he  
4 then informed me that radiation emergency was in place on the island.  
5 I then had to call the shift supervisor in the Unit 1 control room, Ken  
6 Bryan, and request permission to come on the island. Permission was  
7 granted and I reported to the Unit 1 HP lab.  
8

9 DONALDSON: The method by calling in to the control room to receive  
10 permission to enter the site, is that a normal procedure that is followed  
11 on a radiation emergency that has been declared on the site?  
12

13 VELEZ: Yes sir, because when the radiation emergency is declared on  
14 the site, the gates are locked. Anybody requesting permission to enter  
15 has to get it from the shift supervisor.  
16

17 YUHAS: How do you know it was 6:30 when you went to north gate?  
18

19 VELEZ: That's an approximate time. You know 6:30, 6:25, 6:35. As I  
20 normally I leave my house at approximately ten after six and it takes  
21 me on the average 20 minutes to get to work.  
22  
23  
24  
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1 setup and continuously monitored the radiation levels and instructing  
2 the other supervisors that were there as information was coming back  
3 and forth from the control room about what to do their men. Whenever  
4 additional persons were requested to come on to the office for specific  
5 reasons, they come through me. And then we started getting the maps  
6 out breaking them out, and the engineers would then started to get  
7 information plotted on the large map that we have in our kits, so that  
8 we would have some other information other than what was on the island.  
9 That day approximately two to three hours later. Well two hours I will  
10 say Mr. Herbein showed up he then took over at the observation center  
11 at that point on I was just being used in a capacity of get permission  
12 in people get on the island to get off. People who have to go on to  
13 the island I was sort of a relay point. I was also having people going  
14 up and down 441 with dose rate meters taking readings up and down 441  
15 and relay them back him into the control room. We were having problems  
16 with the wind, not being that strong, it was just going in circular  
17 motions. We also were monitoring at the observation center because  
18 that is were all the Met Ed people that were not on the island time  
19 were being mustered, and that day just continued on. After three or  
20 four hours of that, I was then directed to go back onto the island to  
21 relieve when of the other foreman because at this time some of them  
22 were in respirators for quite a long period of time, so I then proceeded  
23 on to the island to relieve the foreman. He came off the island.

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1 YUHAS: What time did you go back on the island?  
2

3 VELEZ: 12:30, 1:00, if I remember correctly.  
4

5 DONALDSON: I would like to backup a little earlier in the morning now,  
6 see if we can get some times put on. You said at approximately 6:30 in  
7 the morning you arrived in the front gate. What time and where did you  
8 finally take a station in the plant?  
9

10 VELEZ: Well after getting permission from the shift supervisor which  
11 took about five minutes to get through to the control room. I then  
12 initially just drove onto the island went in through the processing  
13 center right into the Unit 1 HP lab. Then fifteen minutes 6:45 6:50 I  
14 was in the Unit 1 HP lab.  
15

16 DONALDSON: Ok, the Unit 1 HP lab was being used as what this time?  
17

18 VELEZ: Well that's our emergency control station ECS where all the  
19 monitoring teams come into muster. Those people are in the controlled  
20 areas during any emergency in either Unit 1 or Unit 2 and have to  
21 report to that point for surveying and what not.  
22

23 DONALDSON: And you say there was another HP foreman there also.  
24  
25

1 VELEZ: Yes, Joe DeMan was already there.

2  
3 DONALDSON: Then how long or when would you say you began to muster the  
4 teams and getting them organized?  
5

6 VELEZ: He had already started mustering some of the teams if I remember  
7 correctly. When I got there the onsite teams were already on their way  
8 onsite. At that point, we got a call saying you know get the offsite  
9 teams ready. So we started getting the personnel that were going to  
10 man them and tell them to go out to the processing center and like I  
11 said get their equipment, break open the kits, check out the equipment,  
12 and standby out there for further information.  
13

14 DONALDSON: Okay, that is about what time, where are we right now?  
15

16 VELEZ: Approximately a little after seven.  
17

18 DONALDSON: A little after seven. Other than Mr. DeMan and yourself  
19 were there any other, supervisors, HP supervisors or personnel in the  
20 area yet?  
21

22 VELEZ: No, not at the HP lab just himself and myself were there.  
23  
24  
25

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1 YUHAS: Included in that statement Dale just made, we would also be  
2 referring to Mulleavy or Dubiel.  
3

4 VELEZ: Dubiel was in if I remember correctly Unit 2 control room,  
5 while Mulleavy was in the Unit 1 control room. Because Dubiel initially  
6 goes to the affected control, part of the emergency plan, and Mulleavy  
7 went to the Unit 1 control sor of like a backup.  
8

9 DONALDSON: Am I correct in understanding that at seven o'clock both  
10 Mulleavy and Dubiel were onsite?  
11

12 VELEZ: To the best of my recollection, there were already onsite.  
13

14 DONALDSON: Then after the period of seven o'clock, say from 7:00 to  
15 7:15 did anyone else arrive to help you in the emergency control station?  
16

17 VELEZ: Supervisory wise, no. But we didn't, your know, our technicians  
18 started showing up, that some were just starting to work at 7:00 and  
19 they had, I passed word back out to security, you know, after gaining  
20 permission from the shift supervisor, hey as like the HP personnel in  
21 my department to be allowed to come onto the island. He said no problem,  
22 we need them. So more of my technicians were showing up, the normal  
23 daylight crew that comes in at 7:00. But supervisory personnel, there  
24 was just Joe DeMan and myself.  
25

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1 DONALDSON: What I would like to do here, I have, I will show this to  
2 you, it is an emergency organizational chart out of the emergency  
3 procedures. I would like to fill in some of the people who were filling  
4 in these various functions. I am sure you have probably seen this  
5 before. If you can help me on this, basically at this point in time, I  
6 think that at around 7:00 had an emergency repair party been formed yet  
7 or had it started to be formed?

8  
9 VELEZ: Whether an actual repair party was formed, I couldn't say, but  
10 the shift repair personnel, the shift maintenance personnel that were  
11 there were outside the HP lab, out in the hallway where they have the  
12 call in box for them. There were people there, who I cannot exactly  
13 tell you. But there were maintenance people there.

14  
15 DONALDSON: Do you recall whether or not the supervisor of maintenance  
16 was there?

17  
18 VELEZ: The shift maintenance foreman was there.

19  
20 DONALDSON: Who would have that been?

21  
22 VELEZ: I couldn't tell you right now who it was, I just don't remember.  
23  
24  
25



1 DONALDSON: How about the chemistry supervisor, did he arrive in the  
2 area of the ECS while you were in the area?  
3

4 VELEZ: I don't recall seeing him initially. He may have came in a  
5 little bit later, but initially when I first got there, the first one I  
6 ran to was Joe DeMan and that is the only one I really communicated  
7 with at the time.  
8

9 DONALDSON: During the period of time from say 6:30 to 6:45 when you  
10 were in the area of the plant had you heard any announcements or anything  
11 over the loudspeaker relative to the situation in the plant, declaration  
12 of emergency or anything of that nature?  
13

14 VELEZ: No, the only thing I heard was from the security guard that he,  
15 I asked him why the gate was locked and he told me that a radiation  
16 emergency had been declared on the island. And that is the only word I  
17 had heard until much later on when they continued to pass me the word  
18 every so often, but exact time when I heard it I couldn't tell you.  
19

20 DONALDSON: All right so as of 07:00 then we have teams being formed,  
21 who had taken control of the ECS, who was essentially functioning for  
22 in the ECS and directing the teams?  
23  
24  
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1 VELEZ: When I first got there it was Joe DeMan.

2  
3 DONALDSON: Did Mr. DeMan continue through the morning in that function?

4  
5 VELEZ: Well, up in, we were both sort of assisting each other cause  
6 there was enough going on you can use help until I was requested to go  
7 up to the control room in Unit 1. At that time he was down there  
8 again.

9  
10 YUHAS: About how much after 7:00 did that happen?

11  
12 VELEZ: Forty, half an hour to forty five minutes, ball park number.

13  
14 YUHAS: That is the time went to Unit 1...

15  
16 VELEZ: I was told to go up to the Unit 1 control room.

17  
18 YUHAS: Can you give us a few names of the Rad Chem Techs that you  
19 assigned to the teams, do you remember who was there?

20  
21 DONALDSON: Would you like to look at this chart? Maybe it will help.  
22 I don't know if it will help me or not but at least it, there is some  
23 blocks you can look at.

1 VELEZ: I probably could give you names, but where I assigned them I  
2 probably couldn't tell you exactly cause I know who was there 11:00 to  
3 7:00. Pat Donnoghue was there Mike Janouski was working 11:00 to 7:00  
4 that day, Tiny Davis, Tom Davis was working that day.  
5

6 DONALDSON: Now if I am not mistaken there is a board down there which  
7 is called the Emergency Job Board during some of the drills that I have  
8 observed that board is normally used and filled out is that not correct?  
9

10 VELEZ: During the drills yes.  
11

12 DONALDSON: Do want to expand on that?  
13

14 VELEZ: When I went there I really couldn't say that it was being used.  
15

16 DONALDSON: Do you feel...  
17

18 VELEZ: I did not put anything on the board. The people that I sent  
19 out I did not put their name on the board. I had other things on mind  
20 at the time.  
21

22 YUHAS: Are you aware of any problems that developed in the ECS area  
23 during the period between 7:00 in the morning and lets say 07:45?  
24  
25

1 VELEZ: The only thing that we noticed was that, you know, our backgrounds  
2 were going up. We started, you know, when our foot and hand monitors  
3 and our portable monitors started, the hand and foot monitors initially  
4 started going up and alarming. So we then had guys check out several  
5 though we did notice a slight increase in radiation levels. When I  
6 left the lab area, the area was still, you know, the levels were not  
7 that high where we would have to have evacuated the area there were,  
8 normally they run less than .1 millirem per hour, but they were up to  
9 maybe .7, to .8 mR per hour when I left the area. There was still no  
10 real problem in the lab area.

11  
12 YUHAS: Do you know what was causing that increase to occur?

13  
14 VELEZ: No, I still have not really had a complete grasp of what was  
15 going on. All I knew was that a radiation emergency had been declared.  
16 There was a problem in Unit 2 they were releasing to the atmosphere.  
17 That is basically the only information I had at the time.

18  
19 DONALDSON: At any time from say 07:00 to 07:45 were there any announcer-  
20 ments made over the page regarding the state of the emergency?  
21  
22  
23  
24  
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1 VELEZ: I couldn't say really, I just don't remember that far back  
2 whether or not there was I really wasn't paying that much attention to  
3 the words all I knew was we had a problem and I was trying to go about  
4 to do what I am trained to do.  
5

6 YUHAS: When were you first appraised as to the source of the release  
7 or the cause of the radiation emergency?  
8

9 VELEZ: When I went up to the Unit 1 control room and I talked to  
10 Tom Mulleavy he gave me a brief description he said that basically what  
11 the information he had available. He roughly told me just the basic  
12 description because again he was busy and he just wanted to give me a  
13 brief information so I would at least have some idea of what was going  
14 on.  
15

16 DONALDSON: Where is the normal position or where is the radiation  
17 protection supervisor normally located?  
18

19 VELEZ: During when?  
20

21 DONALDSON: During an emergency where is his duty station?  
22

23 VELEZ: He would normally go to the radiation, to the emergency control  
24 center, which is the HP lab.  
25

1 DONALDSON: The emergency control station.

2  
3 VELEZ: Station.

4  
5 DONALDSON: That would have been were you ...

6  
7 VELEZ: Where I was.

8  
9 DONALDSON: And Mr. Deman were working, is this not correct?

10  
11 VELEZ: That is true.

12  
13 DONALDSON: Okay, and Mr. Mulleavy was in the Unit 1 control room?

14  
15 VELEZ: Yes.

16  
17 YUHAS: Were you in communications with Mr. Dubiel either directly  
18 through to you or through Mulleavy at the time?

19  
20 VELEZ: Through phone talkers and through our walkie talkie system.  
21 The communication had been set up when I got there, there already was a  
22 man on the phone communications with both control rooms and the ECS.  
23  
24  
25

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1 DONALDSON: What time approximately then did you leave Mr. Mulleavy in  
2 the Unit 1 control room or did you stay with him for a time?  
3

4 VELEZ: I stayed up there sort of assisting on the plotting of what, of  
5 the numbers that were coming back on the onsite team for approximately  
6 from 7:45 to approximately 9:00.  
7

8 DONALDSON: Did, are you aware of any reason why the Unit 1 control  
9 room was used essentially for plotting these locations and the doses as  
10 opposed to the normal location down in the ECS and the map located  
11 there?  
12

13 VELEZ: I think basically because the amount of people you had up  
14 there, being you know, with the operators, the shift foremans, who are  
15 trained on the reading of the isopleth and everything. At the time of  
16 the accident, that they might have been able to, started it there and  
17 would have been I feel, feasible to try to shift everything downstairs  
18 again.  
19

20 DONALDSON: Then what I am hearing you say is that Mr. Mulleavy was  
21 engaged in doing dose projections and calculations of source terms and  
22 things of this nature?  
23

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25

1 VELEZ: I think he was doing more or less like a backup, because they  
2 can only do do them in the affected control room. But we also like to  
3 have another set being done as a backup.  
4

5 DONALDSON: You according to the emergency plan are a backup for the  
6 radiation protection supervisor in the emergency control station, are  
7 you not? Part of your, if he is not there you an alternate?  
8

9 VELEZ: The HP foreman is an alternate.  
10

11 DONALDSON: Okay, and in fulfilling the duties of that position is it  
12 normal to do dose projections and things of that nature?  
13

14 VELEZ: If requested we do them, because normally the affected control  
15 room does it. The other control room also does them and we sort of  
16 plot them and if they get into a bind they will request that we also do  
17 a set. But normally in the emergency control station we just try to  
18 plot the plume, plot the levels and try to give recommendations to the,  
19 to Dick Dubiel, basically like during the drills and what not what we  
20 feel, where we should send the people and why we should send the people  
21 to these areas.  
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23 891 162  
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DONALDSON: What was to be set up offsite?

VELEZ: Well they wanted to take a team offsite, they wanted me offsite so that, we know as in the past we have had communications problems with our walkie talkies. If certain teams get in certain locations you need a relay station. And in the past I have always felt and it has been known that you have slight problems if you try to relay information through somebody who doesn't know the terminology that is being used. So Mulleavy felt that it would be good to have somebody out there who can interpret the information and relay it properly or if you heard some information to make sure that what they were being passed over was the proper and check on it before you put in too much false information into the control room.

DONALDSON: How did the communications operate in that manner, did it, did they work well?

VELEZ: Well every once in a while we'd lose one of the offsite especially when they headed south on Route 441, they get in line the cooling towers, we were able to relay, I was able to be us relay station from that team through me back to the control

DONALDSON: In general then you would say that, for the r  
ations with your offsite teams?

1 DONALDSON: Was this a normal, a normal setup with Mr. Mulleavy up in  
2 the Unit 1 control room and yourself or Mr. DeMan or someone another  
3 foreman running the teams in the ECS or did Mr. Mulleavy in past drills  
4 in exercising the plan always take control of the ECS and that location?  
5

6 VELEZ: Mr. Mulleavy during normal drills, and I repeat drills normally  
7 went down to the ECS and took control down there.  
8

9 DONALDSON: Okay, so at, from time period of 07:45 you were assisting  
10 Mr. Mulleavy in the Unit 1 control room in assessment functions as a  
11 backup to the Unit 2 emergency control center, correct?  
12

13 VELEZ: Basically, yes.  
14

15 DONALDSON: Okay, why don't you pick up from there and tell us what  
16 transpired, say the results of your initial evaluations of offsite  
17 doses?  
18

19 VELEZ: When I left the island there still had been none offsite because  
20 everything was still onsite. Approximately 9:00 when they started  
21 seeing the levels at the fence increase slightly at that time I was  
22 requested to go to the observation center.  
23  
24  
25

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1 DONALDSON: Between the period that you were in the Unit 1 control room  
2 helping with assessment functions had you received any readings from  
3 monitor HPR-219?  
4

5 VELEZ: I can't remember if we did or not.  
6

7 YUHAS: In the period of time that you were in the Unit 1 control room  
8 did you look at any indication on the Unit 1 ARMs or effluent monitors?  
9

10 VELEZ: I don't understand what you are talking about ARMs?  
11

12 YUHAS: Area Radiation Monitors.  
13

14 VELEZ: Oh, RMAs, okay. We looked at, alright we were looking at  
15 RMA 4, RMA-6, which are our auxiliary and fuel handling building air  
16 monitors, we saw a slight increases in them. RMA 8 which is our Unit 1  
17 auxiliary and fuel handling combined monitors after it goes out to the  
18 filters, slight increases not that much which we suspected was probably  
19 coming over from Unit 2. RMA 9 was not seeing anything, our reactor  
20 building purge exhaust. The dose rate monitors were basically all the  
21 same there hadn't been that much increase, with the exception of RMAA,  
22 RMAG 4, I think it was, which is in the hot machine shop, which is  
23 located just on the other side of the HP lab area, that was increasing  
24 slightly.  
25

1 DONALDSON: At any time when you were in the Unit 1 control room was an  
2 annunciator received on any of the area radiation monitors?  
3

4 VELEZ: I couldn't say when one came in, because I wouldn't be responding  
5 to it normally the control room operator would be.  
6

7 DONALDSON: You didn't happen to notice if there was a high monitor...  
8

9 VELEZ: No, I did not.  
10

11 YUHAS: What preliminary onsite survey team data was brought to your  
12 attention in that two hour period?  
13

14 VELEZ: Well basically on that first two hour period most of the levels,  
15 you know, weren't that significant, you know we were receiving radiation  
16 a lot of times less than .1 mR per hour, less than .1, then it would go  
17 up to .3 mR per hour. Now this is at the inner security fence on the  
18 SE monitor, well basically the SE locations was a site emergency of one  
19 through ten, I think there are ten points and then approximately about  
20 8:45, quarter to nine, 8:45 or 9:00, again ball park figures, now we  
21 started seeing the increase on those and at about that time I was told  
22 to go offsite. To set up an alternate place at the observation center.  
23  
24  
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1  
2 VELEZ: Yes, you would lose them maybe about five minutes or so when  
3 they would go into certain areas in valleys and what not, and I was  
4 able to try to continue to get communication with them while the control  
5 room was able to do other functions.

6 DONALDSON: Did you have any function in terms of recording data or  
7 were you just there to relay information?  
8

9 VELEZ: We were taking surveys up and down the North Gate. I had some  
10 of the engineers had broken out the map that we keep in the emergency  
11 kit and I set it up inside the observation center and commenced to  
12 start taking, on their own, they started taking notes of numbers that  
13 were coming in in case for some reason the information wasn't getting  
14 directly to the control room, we would have something to relay to them.  
15

16 DONALDSON: You mentioned a map and an emergency kit, what kit is this  
17 and where is it stored?  
18

19 VELEZ: It is a radiation emergency kit, which are normally stored in  
20 the processing center. There is a kit with the radiation monitoring  
21 equipment, the SAM 2, the Pic 6, and there is another suitcase that has  
22 an air sampler and some charcoal cartridges, particulate filters, it  
23 has dosimeters in it, and it has an area map of the whole, within the  
24  
25

1 ten mile radius of the island, which is divided off into different  
2 sections and quadrants that we use to, during the drills and during the  
3 emergencies now, and that map was being used in the observation center.  
4

5 DONALDSON: Are you telling me that there is one kit specifically set  
6 aside for movement to the observation center as a contingency if it is  
7 ever needed, with a map?  
8

9 VELES: We have four kits. We have complete kits at this time one of  
10 our SAM 2's was down for repairs, the work request submitted, waiting  
11 for parts. So that suitcase that had the maps and that equipment  
12 really would not serve anybody any purpose without the proper instruments  
13 so I then took one of those other suitcases that had a dose instrument  
14 from the lab and an air sampler which was in there, I took whatever  
15 equipment other than the SAM 2 because it was being repaired.  
16

17 YUHAS: Do you know how long the SAM 2 had been down for repairs?  
18

19 VELEZ: Yes, approximately three months.  
20

21 YUHAS: Could you, would you classify three months down time as normal  
22 or is that, was there a problem with that?  
23  
24  
25

1 VELEZ: Well the problem was they didn't have the parts to repair it  
2 and you know we had noticed the problems when we did one of our quarterly  
3 surveillances. It would not calibrate properly, we were having problems  
4 with it, so then we then turned in the work request, we turned in the  
5 E&D sheet, which basically says that the surveillance was not completed,  
6 we put down that it was out of service for repair work request admitted  
7 and we were just waiting for the spare parts to come back to repair it.  
8

9 YUHAS: Does that mean that the spare parts weren't available onsite  
10 and had to be ordered from the manufacturer?  
11

12 VELEZ: Yes, had to be ordered offsite.  
13

14 DONALDSON: This wasn't by any chance, the SAM 2 that was found to be  
15 defective during an inspection sometime ago, was it, do you recall?  
16

17 VELEZ: It was kit number 1, whichever one was found to be defective, I  
18 couldn't tell you exactly...  
19

20 DONALDSON: There were two that were defective at the time. One had a  
21 faulty timing circuit. I don't know if you remember that or not and  
22 the other one would not respond, the detector would not respond. Is  
23 this a similar problem, no response?  
24  
25

. 891 169

1 VELEZ: It was inaccurate response, the response based on what we have  
2 in our calibration source just didn't match, we would, it was just we  
3 couldn't get them to read properly.  
4

5 DONALDSON: What kind of experience have you had with these SAM 2's as  
6 far their reliability when you go to use...  
7

8 SHACKLETON: This is a continuation of the interview of Mr. Peter P. Velez.  
9 We went off the tape at 11:58 p.m. April 23, 1979 and we are now resuming  
10 on the second tape and it is 12:01 a.m. April 24, 1979. I might explain  
11 that we are conducting this interview at such an unusual hour because  
12 we had made arrangements to talk to Mr. Velez after he came off shift.  
13 Gentlemen would you please repeat the last question so that we don't  
14 lose what transpired when the tape went off, and shut off.  
15

16 DONALDSON: I believe when the tape ended I had asked you to describe  
17 some of the problems that had seemed to crop up with the SAM 2 instruments?  
18

19 VELEZ: Well basically some of the problems were that timers were not  
20 timed properly, they wouldn't calibrate properly, they wouldn't count  
21 at all sometimes, and it was just a recurring problems most of the  
22 times we were able to, we had parts to make the corrections and repairs  
23 within a couple of days, you know during the period of when we have to  
24 do our surveillance. Sometimes it was with too many of them broke, we  
25



1 would get them done faster. But all in all, every, just about everytime  
2 we have done surveillance on the, which is a quarterly type thing, we  
3 have done surveillance on the SAM 2's I would very be surprised if  
4 there wasn't, if at any time all four of them were working properly.  
5

6 DONALDSON: Had you discussed the recurring problems or had this been a  
7 topic of discussion, and had there been any discussion for replacing  
8 these instruments with other kinds or taking other approaches?  
9

10 VELEZ: Well every foreman basically and I think most of the technicians  
11 also we really because of the way the instruments acted whenever we  
12 tried to use them, mostly for checking them out, everybody really  
13 didn't like the machine because everytime we tried to do anything with  
14 it or we tried to do our surveillance, it turned into a long time  
15 thing, getting them fixed, getting them repaired. And it had been  
16 brought up that maybe we should get them replaced with something better,  
17 but resolving that problem hasn't been completed.  
18

19 DONALDSON: How did the instruments that were operable perform in the  
20 first day or two of the event, did they hold up, did they?  
21

22 VELEZ: Well during the first day one of the three that was operational  
23 broke down. It just, again was the same recurring type problem, the  
24 timer problem. Numbers we were receiving didn't seem to be true, and  
25

1 upon counting samples with the SAM 2 and then bringing the samples and  
2 counting them with other instruments, we were getting differences of  
3 factors of 10, sometimes even factors of 100. Sometimes they would  
4 read high. Most of the times reading high but once in awhile they just  
5 wouldn't read at all.

6  
7 YUHAS: What was the cross comparison instrument that you were checking  
8 it against?

9  
10 VELEZ: A multi-channel analyzer, a Ge(Li) system.

11  
12 DONALDSON: At what time? Which Ge(Li)?

13  
14 VELEZ: We took the Unit 1's Ge(Li) out of the HP lab area and brought  
15 it to the circ water house and built a temporary shield around it.

16  
17 YUHAS: When was that done?

18  
19 VELEZ: It was done days, a day or two afterwards, but we saved the  
20 samples. There were also some samples were flown someplace else, exact  
21 location I do not know, to be counted and at that time we also found  
22 that there was a discrepancy on the analysis results we were getting on  
23 a SAM 2 and what, where they went I am not exactly sure some hospital  
24 that they brought a helicopter in to take the samples to and that  
25 results also showed a variance.

1 DONALDSON: At the, when these readings came in it seemed incorrect, is  
2 this an evaluation that you made on the results or had you heard this  
3 from someone else, that the results didn't seem quite what they had  
4 expected?  
5

6 VELEZ: Well, when I was sitting at the observation center listening to  
7 numbers come in and all of a sudden you would get one number that was a  
8 factor of 100 different, samples were only taken maybe you know, an  
9 hour later, not even that amount of time, it just didn't seem you know,  
10 that it should be that much higher or that much lower depending on  
11 which way they went. And also they were questioned from the control  
12 room, are you sure you're reading the meter properly, are you sure did  
13 your calculations properly, and that type of, we are going back and  
14 forth, and the technician was saying you know, then started passing,  
15 instead of calculating them out in the field were getting the numbers,  
16 the counts per minute, the efficiency on the machine, the volume of the  
17 sample, passed the values back to the control room and having them  
18 calculating the natural activity levels to ensure that there wasn't a  
19 calculation problem out on the field.  
20

21 DONALDSON: Do you recall what the corresponding radiation levels were  
22 in the areas where these high results were being reported, these spotty  
23 high results?  
24  
25

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1 VELEZ: Well mostly was one that I was onsite reading, that they had I  
2 took an air sample at the site, not the site security fence but the  
3 fence around the whole island. The dose rates were reading approximately  
4 .4 or .5 mR per hour and they were getting  $10^{-4}$  microcuries per cc of  
5 iodine. Now those two numbers in my interpretation just didn't seem  
6 right either his portable radiac wasn't reading properly which they  
7 verified by bringing another team over there with an instrument or the  
8 SAM 2 which I suspected wasn't reading properly because of the problems  
9 we have had in the past.

10  
11 DONALDSON: At what time or if you can pinpoint a time, when did it  
12 become known to you that the decision had been made that these readings  
13 were not correct and not representative of iodine levels in the environment.  
14

15 VELEZ: That decision wasn't made by me, I just you know, upon hearing  
16 the numbers I questioned the control room as to the validity from  
17 outside at about the same time the control room was questioning the  
18 persons who had calculated the onsite team because we just, I think  
19 myself and Dick Dubiel in the Unit 2 control room when he heard those  
20 numbers they just didn't, well they didn't seem right and at that time  
21 he, by I feel by sending another team over there I think the other team  
22 then took that same sample and counted again and got what they felt was  
23 better numbers and I think about that time they decided that SAM 2 had  
24 had it.  
25

1 DONALDSON: Alright so we have you out at the, again directing the  
2 team activities out at the observation center, Greg do you have any  
3 questions?  
4

5 VELEZ: Well not directing sort of just assisting.  
6

7 DONALDSON: Who was directing?  
8

9 VELEZ: The teams were being directed from onsite.  
10

11 DONALDSON: I see you were just assisting in terms of relaying, okay,  
12 fine.  
13

14 YUHAS: You mentioned a comment to the effect that some of the results  
15 didn't seem reasonable or logical to you, did you conclude that based  
16 on the briefing that you had been given in terms of the source of the  
17 radioactive release, could you discuss what knowledge had been provided  
18 you as to where the release was coming from and what the isotopic mix  
19 was so that you could evaluate the validity of the numbers that were  
20 being reported?  
21

22 VELEZ: Well I didn't base it on that because really when I left the  
23 control room to go out to the observation center all I really had was  
24 information concerning yes we had a radiation emergency in Unit 2, the  
25

1 reactor had tripped and a possibility that the RC drain tank may have  
2 ruptured a disc and that some of the water may have got transferred  
3 into the auxiliary building causing the release. There was an iodine  
4 problem, there was of course a gas problem, xenon gas, but levels of  
5 actually what was going out, source terms I really had no feel for,  
6 while I was in the control room and when I left because I was not  
7 really directly told and during what I was doing I did not have the  
8 time to really sit down and look at all the numbers that were being  
9 developed I was more of like assisting Mulleavy on getting information  
10 and try to plot the plume direction and everything on the map.

11  
12 DONALDSON: Based upon the functions that you were performing do you  
13 feel that it was necessary for you to have had a briefing, or did, or  
14 should you have had briefing or shouldn't you, did it affect your  
15 performance?

16  
17 VELEZ: I basically feel that it affected it a little way because when  
18 I left the island as the HP foreman to go to the observation center to  
19 try to set up a secondary place to direct people from I really didn't  
20 have a feel of what was going on on the island so I really couldn't  
21 tell you know do I want to send people back on the island or not. If  
22 they come to me, we want them on the island to do this this and this or  
23 to get this I really didn't not have that much information except what  
24 I heard coming over the radio which was mostly just air samples results  
25

1 and dose rates results I didn't have that much information where I  
2 could where I would say safely send a man on the island assuredly  
3 because I hadn't had enough of a briefing and really that much infor-  
4 mation wasn't coming to me out of that area.  
5

6 YUHAS: Where physically did you take up operations in the observation  
7 center?  
8

9 VELEZ: Right out in front of the observation center.  
10

11 YUHAS: In front of the building?  
12

13 VELEZ: Yes.  
14

15 YUHAS: Could you describe the relative timing of arrival of supervisory  
16 and national representatives of Met Ed or GPU during the current time  
17 you were stationed in front of the observation center?  
18

19 VELEZ: When I got to the observation center they already, well that  
20 was part of our drill program, if you cannot get onto the island because  
21 of any type of problem you ought to report to the observation center.  
22 When I reported there the supervisory of maintenance was already there.  
23 Mr. Dave Limroth, whose title I cannot remember even though he is my  
24  
25

1 boss was over there. There were maintenance supervisor, engineering  
2 personnel, most of the island staff was there that was not on the  
3 island.  
4

5 YUHAS: Was there some formal line of communication between the obser-  
6 vation center and either the Unit 2 control room or the Unit 1 control  
7 room.  
8

9 VELEZ: There was exactly who I do know remember was on the phone from  
10 the observation center with Three Mile Island where I don't know, but I  
11 was outside the building with the walky-talky and they were inside the  
12 building. That approximate time, at this time, time just started  
13 becoming all at once and just forgetting, but when Mr. Herbein showed  
14 up he then instructed that more phone be brought over to the observation  
15 center because the observation center had one phone. At that time the  
16 supervisor of I&C, well I don't know if that his exact title Don \_\_\_\_  
17 they notified the telephone company and sometime later exactly how much  
18 I couldn't really tell you. They started to put in more phones into  
19 the observation center, because he wanted communication not just the  
20 island but with other personnel.  
21

22 YUHAS: Do you recall at any time when you were at the observation  
23 center if a group of people who had been evacuated from the island were  
24 brought over to the observation center?  
25

. 891 178



1 VELEZ: Some time later some people did come out off the island. The  
2 exact time again, time was just going by one minute after the other.  
3 They brought to the 500 KV substation, which is just down the road from  
4 the observation center. They told me they were coming out at that time  
5 I sent one of my technicians plus a foreman over to the 500 KV substation  
6 and told them to setup a monitoring point there. Because in case the  
7 monitors on the plant didn't catch I wanted to personnel to be monitored  
8 first before they mingled with the rest of the personnel.  
9

10 DONALDSON: You say these people came off to the island, could you  
11 categorize who are these people? Were they all workers?  
12

13 VELEZ: No we had some electricians who came off the island and they  
14 went all to 500 KV substation. We did find contamination on some of  
15 their clothing, we then removed their clothing and luckily had some  
16 paper coveralls in our kit, and we then put them in paper coveralls and  
17 kept their clothing over there.  
18

19 DONALDSON: Did this go back to this kit? If this kit had been functional  
20 and a team had been sent out and that kit were not available, could you  
21 postulate a little bit what kind of situation you would of been in?  
22  
23  
24  
25

891 179

1 VELEZ: I would of been sitting there with a dose ray instrument in my  
2 hand and that's about it.  
3

4 DONALDSON: Would you think, I realize this may put you on a spot a  
5 little bit, but a need for additional kits or equipment to support that  
6 kind of an operation.  
7

8 VELEZ: I feel that there should be more, because especially if they  
9 keep the same kind because as we found some of them are always down for  
10 repair. Whenever we found them through our surveillance, we found them  
11 to be inoperable. You need I feel at least six to eight total kits  
12 instead of the four because the four kits I would feel the basic minimum  
13 because you want two on site teams you want two off site teams. If  
14 there is a problem with any instruments that you have you should I feel  
15 you should always have something available to replace them with plus  
16 based on a fact that luckily this time the wind was not blowing directly  
17 east. We are able to set up another station at the observation center.  
18 It would of been good to have a complete kit at the center.  
19

20 DONALDSON: Per the emergency planning the observation center is in  
21 fact an alternate location for the conduct of operations. Is it not?  
22  
23  
24  
25

891 180

1 VELEZ: It is an alternate it is the last alternate if you have to  
2 evacuate the island. Even the personnel that are doing this they would  
3 bring their equipment with them.  
4

5 DONALDSON: You were at about 10:00 when Mr. Herbein arrived.  
6

7 VELEZ: Approximate time.  
8

9 DONALDSON: Approximately 10:00 and you were directing again assisting  
10 in relaying communications. Why don't you pick from there?  
11

12 VELEZ: Well approximately at that time Mr. Herbein went into the  
13 observation center. I briefly explained to him what I was doing, what  
14 the engineering personnel were doing on the map. He then instructed  
15 them on what he wanted. What type of information he wanted fed to him.  
16 He then made, as I stated earlier, made the request quote on quote to  
17 get more phone communication into the observation center so he can have  
18 better communication with whoever he wanted to speak to.  
19

20 DONALDSON: You mentioned that Mr. Herbein told you what kind of infor-  
21 mation he wanted.  
22

23 891 181  
24  
25

1 VELEZ: No he directed the engineers that were plotting on the map.  
2 What information he wanted relay to him in his office. There's a  
3 little office off the to the side where plotting all this in there  
4 because that is where the phone was. He wanted to have an idea not  
5 only so we wouldn't have to keep on getting any information on the  
6 control room. They were monitoring then the walky-talkies then the  
7 information that went to the ECS or the ECC they would also start  
8 writing it down and start plotting it so he would be able to look at  
9 the map and look at the numbers and make determinations from that.  
10

11 YUHAS: At what point during this period of time did you started noticing  
12 radiation levels greater than 1 mRad/hr as measured with direct survey  
13 instruments in the unrestricted areas.  
14

15 VELEZ: Well at the observation center, we have never got any dose  
16 rates all the time I was there greater than 0.2 mR/hr because on the  
17 instrument that we use that is about the lowest that you could probably  
18 see. All the time I was there everything was less than 0.2 mR/hr.  
19

20 DONALDSON: How about the other survey teams reporting in?  
21  
22  
23  
24  
25

. 891 182

1 VELEZ: Exact times again. I dont exactly remember, I know they started  
2 getting readings out at the site boundary it started to increase roughly  
3 11:00. They started seeing some of these numbers coming in that showed  
4 the problem is even escalating more. At that time they started. The  
5 offsite team started reporting in dose rates showing nothing.  
6

7 DONALDSON: Were you there for the rest of the day?  
8

9 VELEZ: No I then went back into the Unit 2 control.  
10

11 DONALDSON: About what time was this?  
12

13 VELEZ: A little after noon maybe 1:00.  
14

15 DONALDSON: Upon your arrive in the control room, could you give us  
16 your impressions of what was going on in there the number of people the  
17 mood?  
18

19 VELEZ: When arrived in the Unit 2 control room, my opinion is, too  
20 many people in there too much talking going on.  
21

22 YUHAS: Could you be more specific?  
23  
24  
25

. 891 183

1 VELEZ: Well there were engineers telling people to this, there was  
2 Dubiel trying to do his job to the best ability because during this  
3 type of situation, too much noise with all the thinking that has to go  
4 on and the decisions that have to be made by Dubiel and those personnel  
5 running the plant. There were people in there I felt shouldn't be in  
6 there, or if they were in there because of the fact that they may be on  
7 the repair team they should have been over to the side. There was too  
8 much crowding around the control room area of the panels.  
9

10 YUHAS: Could you tell me approximate how many people were in the  
11 control room?  
12

13 VELEZ: 30 to 40 people ball park number.  
14

15 YUHAS: Can you tell me how many people were in the controlled area?  
16 By this I mean the marked off floor area right in front of the control  
17 consoles.  
18

19 VELEZ: 10 to 15  
20

21 YUHAS: And this was sometime between 12:00 and 1:00 right?  
22  
23  
24  
25

. 891 184

1 VELEZ: Ball park time.  
2

3 SHACKLETON: For people who are unfamiliar with the nuclear power  
4 plant, how many people would normally be in the control room at that  
5 time under normal conditions?  
6

7 VELEZ: Normal conditions you would have two maybe three control operators,  
8 the shift foreman, possible the shift supervisor because here we have a  
9 station shift supervisor who is responsible for both units. He may be  
10 in one unit. You also may have two to three auxiliary operators that  
11 are up there waiting on instructions from the control operators or the  
12 shift foreman to carry out their functions.  
13

14 DONALDSON: Again going back to your experience with drills in the past  
15 that are supposedly run under fairly realistic condtions. How many  
16 people are normally in the control room.  
17

18 VELEZ: During the drill approximately about 20.  
19

20 DONALDSON: Now is this including observers or not included? Excluding  
21 observers how many people?  
22

23 VELEZ: Excluding observers again 15 to 20.  
24  
25

1 DONALDSON: Then when things are being run strictly in accordance with  
2 the organization that is set up for responding to emergencies about 15  
3 or 20 people are what is determined to be needed to conduct the activities  
4 to control the emergency.  
5

6 VELEZ: Again that would be during every drill we have had just about  
7 happens during the day light. Daylight hours when again everybody is  
8 available. All the time I have been here we only had one drill that  
9 happened on the night shift. Normally on a night you wouldn't have  
10 that many people because most of them would be home anyway, but during  
11 the day light drills everybody that has a function to do is there on  
12 the island so therefore they do report to their normal place that is  
13 why you would have the 15. At night time you probably would have about  
14 five.  
15

16 DONALDSON: So the normal compliment of people you would expect to in  
17 the emergency organization in the control room is approximately 15.  
18

19 VELEZ: I would say approximately 15. This is including auxiliary  
20 operators now that may not show up on the chart, but they are there to  
21 perform functions that are necessary throughout the plant.  
22

23 DONALDSON: Was it clear or could you determin who was functioning as  
24 the emergency director at noon on the 28.  
25



1 VELEZ: Well when I got there, Seelinger was there was the Unit 1  
2 superintendent I think he was there. I know Mr. Miller was there who  
3 is the station superintendent, and based on our chart he should of been  
4 in charge. Now I would say he was because he was because he is a  
5 senior man, he does take over.  
6

7 DONALDSON: Did you find. You mentioned there were a lot of engineers  
8 who were asking for things and Dubiel was trying to do his job. Were  
9 there a lot of people making requests that you would see as being  
10 outside the normal emergency chain of command.  
11

12 VELEZ: Some people were making request that were just plain ridiculous.  
13

14 DONALDSON: Could you elaborate on some of those request.  
15

16 VELEZ: Well I was up there and I heard just in the background. I have  
17 to have those filters changed. I heard one of my technicians say but  
18 the dose rate in that area is greater than 1000 R/hr.  
19

20 DONALDSON: What filters? Do you have any ideas what filters they  
21 were....?  
22  
23  
24  
25

891 187

1 VELEZ: They were in the makeup and purification system, I don't know  
2 if they were the seal injection or the seal return filters or the  
3 makeup purification filters. All I heard was filters. At that time I  
4 turned to my technician, and I said what dose rates. He told me I said  
5 ain't changing them it because the maintenance men that were there they  
6 were already saying I aint changing it. I think one of the major  
7 problems is that people didn't exactly realize the kind of dose rates  
8 that were looking at. My instruments that I have on the island the  
9 highest I can measure is 1000 R/hr. My portable radiac equipment which  
10 is the teledetector and when it says 1000 or greater than 1000 how much  
11 greater nobody knows.

12  
13 DONALDSON: Let's go back to this conversation that you overheard. You  
14 may not know the person, if you do I would like to know that, but can  
15 you give me the position that this person was. Was it an engineer who  
16 requested that these filters be changed? Was it a supervisor?

17  
18 VELEZ: He made the initial request to get them changed, but he was the  
19 one that was directing or attempting to direct this repair party to  
20 change these filters. I overheard the conversation I questioned my  
21 technician on what the dose rate was, and he said Pete they are greater  
22 than 1000 R/hr. At that time I told the engineer those filters are not  
23 going to be changed.

1 DONALDSON: Again in looking at this emergency organization chart, the  
2 way your program is setup it appears that the functions conducted  
3 involving radiation protection or the repair party team fall under the  
4 control of Mr. Dubiel, the supervisor of radiation protection and  
5 chemistry. Were any of these request or this particular request was  
6 that run by Mr. Dubiel for his concurrence or review?  
7

8 VELEZ: I don't recall it ever run by him. Now again I just stepped  
9 into the control room I was in there for about 5 minutes when I heard  
10 this conversation.  
11

12 DONALDSON: Then there was a direction going on to a repair party to  
13 begin an operation and you were just coming into the control room and  
14 had not yet received an assignment, but overheard this conservation and  
15 felt it your responsibility then to get control of the situation.  
16

17 VELEZ: Well I want to insure that that job was not done, because like  
18 I said it is greater than 1000 R/hr. how greater nobody knew.  
19

20 DONALDSON: In your estimation do you feel that if you had not been  
21 there that that jobe would of gone on.  
22  
23  
24  
25

891 189

1 VELEZ: It might have been done, but I don't think the repair men or my  
2 technician would of went done and do it, because my technician had just  
3 told me I aint going in there again.  
4

5 YUHAS: Based on previous changeout of those filters. How long does it  
6 take to change those filters with the most qualified people.  
7

8 VELEZ: If everything goes good it takes you to be, you are working  
9 through a hole in the top of the roof which is where the dose rate you  
10 take to plug out and stuff the teletector down in it and that's where  
11 it pegged. The exact time I am not too involved with Unit 2, but on  
12 the Unit 1 filters which are basically the same type and the same type  
13 of work arrangement it takes anywhere from 20 minutes to a half an  
14 hour.  
15

16 YUHAS: In times of the emergency, your emergency plan states that you  
17 will utilize the guidance of the NCRP and the ICRPs for restricting  
18 personnel exposures to save equipment or protect human lives. Who in  
19 that emergency chain of command would have or should have authorized  
20 that kind of exposure.  
21

22 VELEZ: Exactly who I am not sure, but I think it should of come from  
23 Dubiel, because basically that is his function up there if it was that  
24 type of exposure.  
25

1 DONALDSON: Has this ever been discussed in any of your training at all  
2 since under the organization you would fall under Mr. Dubiel's supervision  
3 in the emergency organization has ever been discussed?  
4

5 VELEZ: It has never been discussed with me.  
6

7 YUHAS: Upon entering the control room did you have the opportunity to  
8 look at the area radiation monitoring systems or the effluent monitoring  
9 systems in Unit 2 control room.  
10

11 VELEZ: No I didn't because when I first got there I saw that many  
12 people around the control panel I figured that they don't need another  
13 body, so I stayed back by the shift supervisor's office which is in the  
14 back of the control room. It was at that point that I heard the conver-  
15 sation going on in that corner.  
16

17 YUHAS: Alright after you put out that fire what was your next course  
18 of action.  
19

20 VELEZ: At that time I had a discussion with the engineer, who exactly  
21 it was I am not really sure, and he said well I have to get them changed.  
22 I says you can bypass them if you want, but I am not going in to change  
23 them and I am not telling anybody else to go in there and change them.  
24  
25

1 DONALDSON: Then I am understanding that the change of these filters  
2 was not necessary in order to insure continued operation of the plant  
3 it didn't pose an immediate threat to the degradation of operation of  
4 the plant?  
5

6 VELEZ: I made my decision based on the exposures and actually the lack  
7 of knowledge of exposure that were there. I would not going to set a  
8 man into that type of area unless somebody specifically told me why he  
9 had to go in. I made my decision based on dose rates. Again the lack  
10 of knowledge of the dose rates that were in there and knowing roughing  
11 how long it would take a man to do it in Unit 1.  
12

13 DONALDSON: Looking back let's draw on your experience as an auxiliary  
14 operator in your familiarity with the operational status of the plant.  
15 These filters with who there had been any impact upon the safe bound of  
16 the continued operation of plant. Could it have been considered extremely  
17 vital? What if you you had to go in to adjust seal water flow?  
18

19 VELEZ: Well the exact filters that were there I don't know which one  
20 they were. You have seal injection filters which can be bypassed.  
21 Again I am basing my experience on Unit 1 because when I was an operator  
22 I was an operator on Unit 1. Seal return filters are basically the  
23 same thing. You can if the crud activity is high and it is the seal  
24 injection filter may do some damage on to the seals on the pumps, but  
25

1 whether or not that would degradate the conditions of the plant. No I  
2 couldn't say because I didn't know exactly what the conditions of the  
3 plant were.  
4

5 SHACKLETON: Gentlemen were are going to have to change tape and dis-  
6 continue this interview at this point. The time is now 12:31 a.m.  
7 April 24, 1979.  
8

9 SHACKLETON: The time is know 12:35 a.m. April 24, 1979. This interview  
10 is being continued and being conducted from trailer 203 on Three Mile  
11 Island just outside of the south gate of the security fence. Gentlemen  
12 continue the interview please.  
13

14 YUHAS: Let's go on you are still in Unit 2 control room about 1:00 you  
15 have expressed your opinions relative to the entry to change these very  
16 high dose rate filters. Can me go on with some chronology events while  
17 you were in control.  
18

19 VELEZ: Well after stopping that one job, I \_\_\_\_ to just sit off to the  
20 side waiting from instructions from Dubiel, if he wanted me to do  
21 anything. During that time in my opinion again it was just like con-  
22 fusion was going on over in the corner. Because whether or not, I  
23 myself had not had a good grask from what was going on. All I new was  
24 basically the type of dose rates we were seeing in the building. In  
25

1 trying to acces, well in what locations, so at that time I asked some  
2 of my technicians what kind of dose rate are you seeing here and different  
3 aras of the plant. I started writing down on a piece of paper so in  
4 case any more request came to go look at this equipment or that equipment  
5 I will be there with at least some information in my. Ask the pwople  
6 why do they want to go in there and does it really have to be done.  
7

8 YUHAS: What happened to that piece of paper?  
9

10 VELEZ: That piece of paper, probably, is some garbage can. I do have  
11 some information that I kept for my own records. So in case, anybody  
12 came to me later and said why did you stop that job I would have some  
13 information to based this on.  
14

15 YUHAS: Mr. Velez Consider this official request we would like a copy  
16 of any hand written notes, referring to dose rates, or anything else  
17 that transpired in three day between 0400 on 3/28 to 0400 on 3/31  
18 because we have found a conspicuous absence of documented survey records.  
19 We need anything that you may have.  
20

21 VELEZ: Oh boy, well that book I got it at home I would gladly make a  
22 copy and give you whatever information I got. Again, this is based on  
23 like I said information I received from the technicians, people who  
24 were in the building what they saw what they didn't see.  
25



1 YUHAS: Then we can assume that you will provide us copy.  
2

3 VELEZ: A xerox copy of it.  
4

5 YUHAS: Thank you very much. Ok, let's go on you are still in the  
6 control room. You are recording this periodic data that is coming in.  
7 Who are you interfacing with as far as requests go? Is Mr. Dubiel  
8 asking you Velez what's going on in 281 or could we send somebody in?  
9 Tell us basically the line of communication in this emergency organi-  
10 zation where you fit in?  
11

12 VELEZ: Well basically when I am fitting I am assisting Dubiel if  
13 somebody makes a request to send a team to a point on the island other  
14 then the onsite and offsite monitoring teams. They may want to go down  
15 and check this piece of equipment. I am there to insure that the area  
16 that they are going into based on the information that I have received  
17 already. Dubiel in his position probably a thousand things going on  
18 and on. I like to write things out because I would to be able to show  
19 him, "Dick, do you really want to send somebody and look what I have  
20 here," and then based on that information. I would never really get to  
21 that point because most of the stuff we were doing was down to the lab  
22 area: getting more equipment, how are we doing on our equipment, the  
23 respirators where are they, let's get some more bring 'em up here.  
24 That type of things making sure that things we may need because in may  
25

1 interpretation things were getting worse. They may have to get everybody  
2 that is on the island off the island. Those people that have to stay  
3 in the control room may need more equipment than that was there at the  
4 time.

5  
6 YUHAS: When you got to the control room were people on respiratory  
7 protection?

8  
9 VELEZ: No they were not.

10  
11 YUHAS: What sort of respiratory protective device were available in  
12 the control room at the time of your arrival.

13  
14 VELEZ: Two or three sky air packs and approximately in the emergency  
15 kit the last time we gave it to him there were 25 half face respirators.

16  
17 YUHAS: Half face respirators. What sort respiratory protective pro-  
18 tection did you anticipate the half face respirators would provide.

19  
20 VELEZ: Well basically they are just half face particulate full face  
21 respirators no charcoal cartridges on them at all.

1 YUHAS: Can you describe the Unit 2 control room air recirculation  
2 system and what it is designed to do?  
3

4 VELEZ: Unit 2 I couldn't describe it. I don't know it that much.  
5

6 YUHAS: You said you were ordering more respiratory protective devices.  
7 What sort of equipment were you ordering up?  
8

9 VELEZ: We were going down to the lab area and bring up, we have a  
10 locker of respirators that are not in normal use, we keep locked up.  
11 We were breaking them out to approximately 60 to 75 of them in that  
12 locker, and bring them out of the HP area because on information that I  
13 have received the HP area was getting to a point where it was noninhabit-  
14 able the people had to leave the area. Dose rates were increasing 10  
15 to 15 mR/hr at the HP lab, so I felt best at this time to get as much  
16 equipment as I can, portable radiac equipment, or respiratory equipment,  
17 mirrors, air sampling equipment, just about everything I have in there  
18 bring it out of the area so in case we. We couldn't get into the area  
19 later before the dose rates and and/or airborne problem at least I  
20 would have the equipment available. So I had some technicians go down,  
21 bring out some of the equipment, bring out the respirators.  
22  
23  
24  
25

1 DONALDSON: The respirators that were brought from the HP area. Would  
2 you describe those please?  
3

4 VELEZ: Those were Scott particulate full faced respirators.  
5

6 YUHAS: Particulate full faced?  
7

8 VELEZ: Yes  
9

10 YUHAS: Mr. Velez do you know if there is an approved cartridge iodine  
11 removal canister available?  
12

13 VELEZ: Approved for actually sending somebody in? Not really. There  
14 is none approved that I know of, but in the long run it's better than  
15 not. The iodine charcoal cartridge is better than a regular full base  
16 particulate cartridge if the problems did arrive. At least you will be  
17 affording the man some type of protection even though you wouldn't be  
18 able to account for.  
19

20 YUHAS: Did you have any nonapproved iodine cartridge available onsite  
21 at the time of the accident?  
22

23 VELEZ: My recollection we didn't have any.  
24  
25

1 YUHAS: In other words the only devices which could afford some pro-  
2 tection from radioiodine would of been the Scott airpack?

3  
4 VELEZ: Scott airpack or air line respirators that we have off our  
5 service air system in Unit 1.  
6

7 YUHAS: You are making a point of Unit 1. You are referring then that  
8 the breathing air line system was not available in Unit 2 control.  
9

10 VELEZ: The equipment to use them the three kits or carts as we call  
11 them that have been approved and calibrated and have the proper monitoring  
12 devices on the carts were all in Unit 1 because we had just finished  
13 using them during the Unit 1 outage.  
14

15 DONALDSON: Normally would you expect one of these carts or more in the  
16 Unit 2 area?  
17

18 VELEZ: No. These three carts that we had were specifically assigned  
19 to the Unit 1 they had something requested to be constructed because  
20 basically we had to order the equipment and make them ourselves. I&C  
21 department put them together for us. They had been requested to to be  
22 made for Unit 2 sometime previous 6, 8 months and they still have not  
23 been completed.  
24  
25

1 YUHAS: At what point in the Unit 2 control room would you have recom\_  
2 mended that they use respiratory protective devices?  
3

4 VELEZ: Just on the past experience any time we have an activity greater  
5 than  $3 \times 10^{-10}$  uCi/cc in air and you do not identify the isotope based  
6 on all procedures at that time you put on protective equipment. If you  
7 can identify the isotope, then you go, which would take time because  
8 multi-channel analyzer system, which at this time really wasn't available  
9 to us because of the problem that the dose rates in Unit 1 were going  
10 up, the background was going up, normally would still take an hour to  
11 an hour and a half to get results of our multi-channel analyzer.  
12

13 YUHAS: Does the Unit 2 control room have an air sampling system of its  
14 own?  
15

16 VELEZ: Yes it has the exact number I don't know which one it is HPR. I  
17 don't know which number it is. It samples the air in the control room.  
18

19 YUHAS: What sort of information does that sample system provide you?  
20

21 VELEZ: Particulate level, iodine level and a gas. It's samples, it  
22 takes an air sample out, rather to a particulate detector, an iodine  
23 and a gas.  
24  
25

891 200

1 YUHAS: What other method could be used to determine what isotopes are  
2 present when you're gamma spectrometer equipment was not available.  
3

4 VELEZ: Another way we can use was our Sam-2's. At this time none of  
5 them were available in the control room.  
6

7 YUHAS: What instrumentations were available in the control room? What  
8 did you bring up?  
9

10 VELEZ: I brought up my teletectors, my R02s, my E520s, some Pig 6's,  
11 RN 14s with the HP210 probe that type of equipment.  
12

13 YUHAS: What is this  $3 \times 10^{-10}$  number based on?  
14

15 VELEZ: Based on the isotopes that you would normally see in our plant  
16 in case we leak. If the activity is  $3 \times 10^{-10}$  or less than that, no  
17 other none of the isotopes that you expect to see in the nuclear power  
18 plant would be above their MTC value, so that if it goes greater than  $3$   
19  $\times 10^{-10}$  it takes time to identify at that point we require protective  
20 respiratory protection until we can identify the isotope and then go  
21 to 10 CFR 20 to determine whether or not this isotope is above or below  
22 NPC.  
23

24 891 201  
25

1 YUHAS: Is that number based on those isotopes greater than hour half  
2 life or less than hour half life?  
3

4 VELEZ: Right now I couldn't tell you.  
5

6 YUHAS: Let's continue on. You have got some equipment up there now,  
7 you have ordered more respiratory protective devices. About what time  
8 in the afternoon are we now?  
9

10 VELEZ: About 1:00 a little after 1:00.  
11

12 YUHAS: Could you go ahead and give us some idea of what happens in the  
13 next hours that you are there?  
14

15 VELEZ: I was there for approximately another hour to a hour and a  
16 half, and again it was in my opinion confusion. People were trying to  
17 send people to do things. Go over here and check this like in the  
18 auxiliary building, the radwaste power. The reasons why they wanted to  
19 check it I don't know. There were three or four people other than the  
20 people that should of been given directions, trying to give direction.  
21 I think everybody had their own little space, like the radwaste people,  
22 would worry about their radwaste liquid in the tanks are going this way  
23  
24  
25

891 202



1 and the level of this way. The eligible personnel we would have a  
2 problem with some of the electrical things tripping out here and tripping  
3 out there. Control confusion that's what you want to call it.  
4

5 YUHAS: Were you involved in or are you aware of entries by Mr. Shanon  
6 or Mr. Fuerer into the auxiliary building during that period of time?  
7

8 VELEZ: I was not aware of it at that time I found out later they went  
9 in, but exactly why or who sent them in I do not know?  
10

11 YUHAS: Can you give us a couple of specific examples preferably naming  
12 names and to exemplify your comments about the confusion what is going  
13 on?  
14

15 VELEZ: The engineering department and engineers on the island I do not  
16 know most of them. Especially Unit 2 I am normally assigned to Unit 1.  
17 The request, again came up about seal injector filters, seal return  
18 filters, hey those DPs they're real high we have to change them. Even  
19 after stopping the job once, they still for some reason or other wanted  
20 to go in and change them. One engineer again whose name I do not know  
21 was on Unit 2 said I got to have them changed. I says you want to  
22 change them, go change them by yourself because I am not going down and  
23 I am not sending anybody down. I wouldn't recommend you to go down  
24 either. I feel that for some reason or other they wanted to go in and  
25

1 do stuff just to have something to do. They really had no grasp with  
2 the dose rates and when you told them what the dose rate they still  
3 didn't have a grasp of it.  
4

5 YUHAS: Pete, for those who yet may not be that familiar with the  
6 nuclear power industry and radiation protection. The dose rate that  
7 you are talking about and based upon your estimation of time what would  
8 be the health significance of those dose rates?  
9

10 VELEZ: Well, to go back to that filter job. If a person would of went  
11 on to do that job, based on all the information that I've been shown  
12 within and trained with, he would probably received a lethal dose  
13 anywhere from 500 to 600 R. If that greater to 1000 R was only 1200 or  
14 1300, again like I stated my instruments that I have that is as far as  
15 they will take me. So people say og it is only greater than 1000, but  
16 the problem is how much greater. For some reason it was just like I  
17 feel it is always, operations has to get it done, HP get out of my way,  
18 but this time I was in their way and I made sure I stayed in their way.  
19

20 YUHAS: You continually make a point that you handheld instruments were  
21 only good to 1000 R/hr. How useful was the area radiation monitoring  
22 system to you?  
23  
24  
25

891 204

1 VELEZ: Not very, because first of all I couldn't see it from where I  
2 was. Again I didn't want to go into the area because the people that  
3 were in there, I felt a lot of them in there didn't need to be in the  
4 area, and I was just sort of sitting back so that Dubiel and the people  
5 who should of been in that area. The operator was monitoring them was  
6 taken some readings on them. How often I don't know. How he was  
7 checking them was attempting to find out what was going on there, and  
8 the Unit 2 monitors I am not that familiar as of this monitor to this  
9 location. Most of the information that I received from people who had  
10 it in the building earlier, and they come out and they said it is  
11 reading so much around this area or so much there, and I was jotting it  
12 down on a piece of paper.

13  
14 YUHAS: Are you aware that they secured the Unit 2 auxiliary exhaust  
15 fans?

16  
17 VELEZ: No I was not aware of that.

18  
19 DONALDSON: At any time during your stint in the control room in Unit 2,  
20 was there any discussion about any recommendations that should perhaps  
21 be made regarding protection or protective actions for offsite people  
22 such as evacuation or sheltering during this first day.  
23  
24  
25

891 205

1 VELEZ: I don't recall any. I was out of this area. Most of the  
2 brass, if you want to call them that, go into the ship supervisor's  
3 office. they keep the door open so you can see what most of the communi-  
4 cation available there is some in the control room, but there is also  
5 some up in there.  
6

7 DONALDSON: Up to 1:00 to 2:30 you are in the control room and you are  
8 trying to at least control some of the request for work and after 2:30  
9 then what were your job functions?  
10

11 VELEZ: At about that time I was then sent back outside. We were  
12 swapping foremen back and forth. I was sent back to the observation  
13 center.  
14

15 DONALDSON: What was your next tour the observation center?  
16

17 VELEZ: At this time, they felt things were getting worse they will get  
18 to a point where they may have to evacuate. They sent me out, back,  
19 with specific job of setting up an area of offsite for monitoring the  
20 people that are leaving the site because at this time we did not have  
21 our portable monitors installed and whether or not that would've done  
22 any good. I do not know. At this time at the security processing  
23 center, the people would be leaving unmonitored, you know leaving the  
24 island. We wanted to assure that people did go to a central location to  
25

1 be monitored. So we took some of the equipment off the island and again  
2 we went back to the 500 KV substation, which is just across from the  
3 island setup more equipment to start monitoring the personnel that did  
4 leave.

5  
6 DONALDSON: About what time then was that completed then you moved to  
7 your next job?

8  
9 VELEZ: Well when we first when out and all the way out we took some of  
10 the cloths and we had some boxes of paper coveralls we took them with  
11 us, we took some plastic booties with us. The instruments we set up  
12 the area at the observation at the 500 KV substation. I had two techni-  
13 cians a technician and an auxiliary operator man that point there I had  
14 a couple of foremen came over a couple engineers. I went to the obser-  
15 vation center and asked the maintenance supervisor that was there  
16 "could you give me some people to help out over there." They sent some  
17 engineers over to assist the technicians and the operators that were  
18 over there surveying the people. At that point I came back to the  
19 observation center and then again and then again I was back to the old  
20 relay information back and forth.

21  
22 DONALDSON: On your way off of the island to do this were positive  
23 controls in existance at the gate. Were security people there preventing  
24 entry?

25  
891 207

1 VELEZ: Yes the gate was still being manned and control off the island  
2 was still have to be coming through the permission type. We had to get  
3 permission, what they were doing from the process, from the 500 KV sub  
4 or excuse me from the observation center some people they requested  
5 people to come on for specific jobs to relieve the repair party, to  
6 relieve operators. It was going back and forth through there.

7  
8 YUHAS: When you established the control of the 500 KV in anticipation  
9 of a site evacuation, what instructions did you give the technicians as  
10 far as personal monitoring release limits, what to check for that kind  
11 of stuff?

12  
13 VELEZ: Basically at that time what we had was RM 14s, I told them you  
14 know, they, as they came off to have them park their vehicles in one  
15 location. And I told them just along the side there survey the people  
16 with RM 14's. Any contamination levels above I just, I think said  
17 200 counts above background on the clothing I said we'll take their  
18 clothing and then check the personnel individually underneath the  
19 clothing. Luckily, we did most, we did collect a lot of clothing. I  
20 would said approximately 30 to 40 people lost their clothing, well not  
21 lost, but had to remove their clothing. We put them in the paper  
22 coveralls and the only problem we had was that the location, we had no  
23 water that I knew of at the time. Well some, we did have rags and we  
24 did have, but the water I did know that if there was any there, later  
25

1 on I found there was a spigot around the back you know, but and we only  
2 had one or two personnel that showed contamination on their hands. So  
3 what I did then was just put gloves on their hands. They brought them  
4 back to the observation center and we kept them at the observation  
5 center for awhile, took them back to the 500 KV sub, patted their,  
6 until I instructed them to pat their hands down with the rags and most  
7 of whatever contamination was there and a lot of it what we saw you  
8 survey a person or his clothing and we found this out after just going  
9 back and surveying clothing we had taken up you wait a couple of hours  
10 of person standing around in the wind you survey them again there would  
11 be nothing so basically it was just the xenon gases attach especially  
12 to the double knit slacks and into the clothing. Same thing was happening  
13 on the hands, in the hair you know, you survey them and show a lot, you  
14 step them over to the side you know, take their clothing, if you saw  
15 anything on them you take their clothing off and put them in paper  
16 coveralls up at the observation center then after the mass exodus sixty  
17 or seventy people, that had go on and back off the island to do certain  
18 functions we found that the clothing was you know all of sudden we  
19 surveyed it and there was the levels had decreased so we then brought  
20 the people back and surveyed them again.

891 209

1 YUHAS: Had you developed any guidances as far as say direct measurements  
2 with the HP210 probe on the individuals thyroid as far as a segregation  
3 of those people that may require more sophisticated techniques for  
4 evaluation?  
5

6 VELEZ: At that time no we hadn't.  
7

8 YUHAS: Okay, so in your emergency plan you don't have any alternate  
9 methods of evaluating, quick sorting personnel, for thyroid update that  
10 sort of thing?  
11

12 VELEZ: Whether it's in the plan, I really couldn't tell you.  
13

14 YUHAS: Generally you seem to indicate that the 500 KV station had not  
15 been planned on in advance as the release point in the event of a site  
16 evacuation.  
17

18 VELEZ: Normally it is, normally its the north gate or the south gate.  
19 But due to the fact that most of our people were going to be coming out  
20 of the north gate and we already had enough traffic problem with all  
21 the cars and the reporters and people just bumbling around, I did not  
22 want to keep you know, a line of cars there at the north gate. So I  
23 then directed you know, through the state police that were already  
24 there you know, please I want to ensure that all those vehicles that do  
25

891 210



1 leave come to the 500 KV sub. I instructed the north gate to inform  
2 everybody that came out of the, off the island proceed to the 500 KV  
3 sub for frisking. We then frisked the cars the same way. We didn't  
4 find much on the cars one or two cars that we let sit, then after a  
5 while its gone again.  
6

7 DONALDSON: At any time in your back and forth trips off the island did  
8 you have to wait for a train?  
9

10 VELEZ: I am trying to recall, I remember one, there was a train but I  
11 don't know, I directly wasn't involved getting on and off but I knew, I  
12 heard something about you know, there is a train coming by the, because  
13 the, I remember the security guard informing the control room of the  
14 train going by and then the communication about get the number of the  
15 train, you know which direction, so we could call ahead, you know like  
16 we have practiced in our drills. Again, if for some reason a train  
17 does go by the area where we are having release, we want to know you  
18 know, call the dispatcher, stop the train at some safe location, then  
19 we would as we practiced, not actually gone out and done it, what we  
20 would do go out and survey the train if necessary.  
21

22 YUHAS: Is the paramount concern the train getting crapped up or the  
23 train stopping and blocking both egress routes from the island?  
24  
25

1 VELEZ: In my opinion it would be stopping and blocking both egress  
2 routes, but the information on the train to let it go down the track,  
3 so then they could go maybe into the railroad yard if necessary, to  
4 survey it at that point. Any people that may have been on the train,  
5 if it was a passenger train or just whatever.

6  
7 YUHAS: Do you think it would be worthy in consideration of revision of  
8 your emergency plan to go ahead and lay out in advance an alternate  
9 release point which would have equipment for screening personnel,  
10 decontamination and for holding and resurveying?

11  
12 VELEZ: It would be useful if we had an area where we could have equipment  
13 available to check people over properly, for deconning people, if  
14 necessary because again, you don't want to send anybody home that has  
15 any contamination on them and then by keeping them you are causing more  
16 of a problem by having a mass of people waiting around, many of them  
17 scared, many of them frightened and then in the public's view you would  
18 see all these people standing around in the white coats and white suits  
19 and right away in my opinion that causes more panic.  
20  
21  
22  
23  
24  
25

891 212

1 DONALDSON: Okay one thing that I want to clarify, at any time during  
2 the period that we are interested in, that is from the 28th through the  
3 30th, were you aware of the fact of any time that a train blocked  
4 egress to the, from the facility?  
5

6 VELEZ: Actually blocking the egress, I am not aware of, but I heard  
7 that a train had gone through the area. Well that is basically it, a  
8 train had gone through the area, whether it actually stopped and blocked  
9 it I don't remember, I heard discussions about it, but I actually  
10 wasn't involved with it.  
11

12 YUHAS: How long do you stay out at the observation center on this  
13 later trip?  
14

15 VELEZ: To the rest of the time, till I went home which from 6:30 to  
16 7:00 o'clock in the morning was eighteen hours later. Total time was  
17 eighteen hours so whatever that, from 2:00 the exact time I left to go  
18 home I couldn't really tell you. Midnight, 1:00 in the morning, 2:00  
19 in the morning.  
20

21 YUHAS: Okay and in that period of time you were basically coordinating?  
22  
23  
24  
25

. 891 213

1 VELEZ: Coordinating, relieving people on the island, off the island,  
2 getting the teams going here, asking for more equipment, going to the,  
3 Mr. Limroth who was there at the time telling, more equipment that we  
4 knew we were going to need because by this time at night we knew we  
5 were really in for a long haul.  
6

7 SHACKLETON: Gentlemen will stop just for a few minutes, change the  
8 tape, the time is now 1:03 a.m., April 24, 1979.  
9

10 SHACKLETON: This is a continuation of the interview Peter P. Velez.  
11 The time is now 1:07 a.m., April 24, 1979. Continue please.  
12

13 DONALDSON: Pete, we are ready to pick you up on your first hours of  
14 work on the 29th after your returning home at 2:00 a.m. that morning.  
15

16 VELEZ: Well I returned back to work at approximately 7:00 in the  
17 morning. Initially went to the observation center, to report to find  
18 out what duties they had assigned to me that day, at that time I was  
19 instructed to go on to Three Mile Island and report to the control  
20 room. Upon reporting to the control room, there was word going about  
21 an RC letdown sample they wanted taken. It was on, exact time I do not  
22 recall, but a chemistry foreman Ed Houser and myself at that time  
23 decided if well, if they have to take a sample and they really want a  
24 sample, we will take it. Chemistry foreman I wanted because I wasn't  
25

1 too familiar with the lineup, the valve lineup in the lab area but  
2 being that I was a radiation protection technician, previous to that I  
3 was at least familiar with the location, the equipment and the sampling  
4 technique. We went down to the lab, we took a dose rate reading in the  
5 lab, approximate dose rate at that time was 6 to 8 R per hour. We both  
6 realized that once we put the sample sink on recirc, the dose rates  
7 were going to increase vastly.

8  
9 DONALDSON: Pete, would you explain again for the listeners what recir-  
10 culation involves and why that would cause the dose rates to go up?

11  
12 VELEZ: Well basically recirculation is, on Three Mile Island we only  
13 have one primary sample lab, it is located in Unit 1. You have to  
14 bring the sample, which is reactor coolant letdown sample all the way  
15 from Unit 2 through the piping into the Unit 1 lab and then in order to  
16 get a representative sample, you have to basically wait approximately  
17 30 minutes because of the low flow rate you have, you have to get this  
18 water bring it through the lab, through piping, and send it back to the  
19 makeup tank in Unit 2, so that you can flush out the line of any dead  
20 water that may be in there to ensure that you are getting a representative  
21 sample of what is in the primary coolant system.

22  
23 YUHAS: About how long are the incoming lines from Unit 2 to the sample  
24 center?  
25

891 215

1 VELEZ: Two to three hundred feet.

2  
3 YUHAS: What is the diameter of those lines?

4  
5 VELEZ: Three-quarter inch, I am not exactly sure. Stainless steel  
6 tubing.

7  
8 YUHAS: Are those nice smooth bore or are is that three hundred feet  
9 consist of many bends and tortuous paths?

10  
11 VELEZ: Many bends, tortuous paths of unshielded piping in the Unit 1  
12 area.

13  
14 YUHAS: Let me make it clear, did you say unshielded piping?

15  
16 VELEZ: In the Unit 1 area the pipe, the sample lines are unshielded.

17  
18 YUHAS: Thank you, go ahead.

19  
20 VELEZ: We then got the information that they wanted approximately,  
21 they wanted a sample, but they wanted to know is what the dose rate  
22 would be on 100 milliliters of the sample. So Ed Houser and I then, we  
23 went over there, he looked at the print and decided he would go in do  
24 the valve lineup because he knew exact location of the valves better  
25

1 than I did he would put it on recirc after getting it on recirc that I  
2 would then go in draw the sample into a beaker I would then exit he  
3 would go in and measure out the 100 mls of liquid then he would exit I  
4 would then go back in take the dose rate of the sample dump it back on  
5 the 100 mls of sample that were there dump it back into the beaker at  
6 that time he would go in and take 5 ml of the liquid which was required  
7 because they wanted a boron concentration in the primary coolant system.  
8 After setting this down the first entry we went in I opened the valve  
9 to take the sample the initial coolant that came out, to describe it,  
10 it was like alka seltzer. At that time again still not really knowing  
11 about the, what later on turned out to be the volumes of gases that  
12 were in the system, all we knew was there was a bubble in the vessel,  
13 possibly you know I wasn't sure whether the sample line was lined up  
14 properly, so I shut the valve and exited. I told Houser you know this  
15 just doesn't look right because in the past I have never run into this  
16 type of a problem before. He asked me what the problem was, I said I  
17 opened the sample valve and it doesn't look like water, it looks like  
18 alka seltzer, so much gas bubbles. We then surveyed the lab again  
19 with, using a teletector, I was able to put into the lab on the cooler  
20 where we expected, where the highest dose rate would be because first  
21 of all it is the easiest shot to get without having to actually to go  
22 into the lab, you can actually stand behind the shield wall and just  
23 take the probe and the readings on the cooler at this time were ap-  
24 proximately 90 R per hour. I told Houser then you know did we line it  
25

1 up properly. We went back, verified the lineup, we called the control  
2 room asked them to please verify that their valves that they can open,  
3 which we had them do, did indicate open. They said yes, they did  
4 indicate open. They cycled them to verify that they were open, so they  
5 told us they did, we could not tell if they actually did because from  
6 our location. At that time we said okay, I will go back in and get the  
7 sample. I went in took the sample and exited. He went in, measured  
8 out the sample and exited. I went in and took the dose rate on the  
9 sample, came back out dumped it into the beaker, back into a beaker.  
10 He went took his 5 ml and I think at that time he went and isolated the  
11 sample lineup, I am not exactly sure. At this time another chemistry  
12 foreman showed up Gary Reed and we told, no we had built a brick wall  
13 where we have to do the boron analysis, so we could put the beaker  
14 behind the brick \_\_\_\_\_. Just based on the levels we were seeing we  
15 knew the con<sup>1</sup> was going to be highly radioactive. Plus also at that  
16 time I had taken a dose rate on it and read approximately 1,000 R on a  
17 100 ml on contact. When we backed off, exact numbers I have written  
18 down in my book which you I am going to give a copy was approximately  
19 400 R at 1 foot. It was dropping off very drastically, and then as we  
20 backed up even further again 10 to 15 R at three feet, you know, these  
21 numbers weren't exactly correct because the area where I was taking  
22 those numbers was in the lab, because I was not going to take that full  
23 volume sample out of the lab and the measurements were rough estimates.  
24 I used the tile on the floor as distance. I put the sample in the  
25



1 corner and used 1 tile contact, 1 tile for 1 foot away and 3 tiles for  
2 three foot. While they were doing the boron analysis, I went back in  
3 and got the water that was in the beaker and put it in a lead wall that  
4 we had built into one of our cabinets with lead bricks, just to store it  
5 some place and make sure the area is properly marked and put a sticker  
6 over the door, so that if anybody had to open that cabinet, they would  
7 have to rip the sticker off, because it was a double door cabinet that  
8 both doors swing out. I put a caution radioactive material, high  
9 radiation sticker on it, you know and then I wrote on the thing RC  
10 letdown sample approximately 1,000 R per hour on contact. We exited  
11 the area at that time I checked my high range dosimeter that I had on  
12 and noticed an exposure of approximately 7 to 800 millirems. Ed Houser  
13 at this time mentioned to me, he said Pete mine went offscale. I said  
14 well what was it when you went in? He said, approximately  $1\frac{1}{2}$  R and it  
15 was 0 to 5 rem pocket dosimeter. At that time, I said Ed, you should  
16 leave, go get your TLD read, and subsequently, we had found that he had  
17 picked up approximately 3 rem. I had picked up approximately 800, 888  
18 to 900 millirem. How he picked up much more than I, I really can't say  
19 unless it was he, when he went back to isolate the lineup, because that  
20 is the only, because on the average we sort of handled the coolant  
21 roughly the same amount of time and also the fact that you know, the  
22 work we did was sort of split except for that one function of his.

891 219

1 YUHAS: Pete, I'm going to ask you a whole series of questions related  
2 to this. First off I am going to start with the usual concept. You  
3 said that they wanted a primary coolant. Who was 'they'?

4  
5 VELEZ: I was instructed by Dick Dubiel.

6  
7 YUHAS: Did he say why the sample was to be taken?

8  
9 VELEZ: No he did not; he said that they wanted the sample for analysis.

10  
11 YUHAS: Did he say who they were?

12  
13 VELEZ: No, he did not.

14  
15 YUHAS: Did you query him as to the intent of taking the sample?

16  
17 VELEZ: I asked basically who is the idiot who wanted it.

18  
19 YUHAS: And the response?

20  
21 VELEZ: He said out of the another up in the corner some,...I want that  
22 sample. That came from, if I remember correctly, was the supervisor of  
23 operations that was up there. I think it came from him.

1 YUHAS: Did anyone indicate to you that that sample was necessary for  
2 the protection of vital equipment?  
3

4 VELEZ: They instructed me that they had to know the boron concentration  
5 to determine the amount of boron, which is a poison that you put into  
6 plant, to insure that we did have sufficient amount of boron in the  
7 plant so that when they started cooling down we would be able to maintain  
8 a shutdown margin.  
9

10 YUHAS: How much time was afforded you to plan this evaluation?  
11

12 VELEZ: They said they wanted the sample. We took approximately an  
13 hour to get the sample. They were not really telling me that I had to  
14 have it in a hour. All they said is that we wanted to have it by this  
15 time. Which was approximately two hours from that time. Because of  
16 the sample, they wanted the boron analysis and there was also stating  
17 the fact that they wanted to some of the sample and send off for analysis.  
18 Because at this time we had nothing that could count the isotope analysis  
19 on the sample.  
20

21 YUHAS: How much time did you and Houser spend planning this evolution?  
22

23 VELEZ: Approximately a half an hour.  
24  
25

891 221

1 YUHAS: What sort of planning do you do?  
2

3 VELEZ: Well, like I stated earlier we stated who would do what steps,  
4 were we would go, we have all the equipment we have available; we have  
5 our respiratory protection, the Scott airpack that we needed. We broke  
6 that out and our equipment out that we feel we're gonna need, we set up  
7 the lab prior to taking samples. So we did take the 5 ML to run the  
8 boron we would be able to put it behind lead brick. We set up the area  
9 inside the sample room, which sits right next to the lab, the brick  
10 wall so we have some place to put the sample after we were done, and  
11 just orientating ourselves again on the step by step that we were going  
12 to go ahead and do it.  
13

14 YUHAS: Okay. Did you and Houser wear extremity monitoring?  
15

16 VELEZ: At that point there was none available.  
17

18 YUHAS: Please explain that there was none available.  
19

20 VELEZ: Everything that was in Unit 1 had been removed from the Unit 1  
21 HP lab area. We used a whole body TLD. I did have a pocket dosimeter  
22 taped to my forearm; not exactly to my wrist just to keep it out of the  
23 way. Which in the long run it did not do me any good because while  
24  
25

1 reaching to shut the valve afterwards and we had to have taken a sample,  
2 it banged into the side of the sample sink, which at that time, I  
3 ripped my paper coveralls, my lab coat and my wet suit.  
4

5 YUHAS: To make it perfectly clear, did yourself or Mr. Houser have  
6 extremity monitoring on your hands?  
7

8 VELEZ: On my actual hands, no. My forearm I had a pocket dosimeter.  
9

10 YUHAS: Did either yourself or Mr. Houser handle the sample container  
11 when it was full?  
12

13 VELEZ: We both did.  
14

15 YUHAS: When you operated the isolation valves approximately how far  
16 were your hands from the coolant carrying pipe?  
17

18 VELEZ: Well, the valve is right on the pipe.  
19

20 YUHAS: Three inches extended the valve?  
21

22 VELEZ: That is about it.  
23  
24  
25

891 223

1  
2 YUHAS: Did Mr. Houser have a survey meter with him when he did any of  
3 the valve lineups?

4 VELEZ: Well, we surveyed the area before doing the valve lineup. We  
5 survey, like I said, it was 7 to 8 R/hour in the room. We knew it was  
6 going to increase so we did the valve lineup in the lab, with the  
7 exception of the two valves that are opened from the control room. So  
8 the dose rate hadn't changed. I can't say hadn't but we would assume  
9 that the change because there was no flow through system at that time.  
10

11 YUHAS: Now, when Mr. Houser when you took the first sample and thought  
12 something was wrong and it looked like Alka Selzer, Houser went back to  
13 verify the valve pointer. Is that correct?  
14

15 VELEZ: No, we went to the print that was outside in the hallway by the  
16 Unit 1 HP lab to verify the lineup and to make sure that the valves  
17 that he had opened were in sure that the proper valves to open and then  
18 we also stuck the teletector back into the lab, where I would say,  
19 would be 90 R/hour on the cooler.  
20

21 YUHAS: At any time after circ sample flow recirculation was started  
22 did Mr. Houser do anything independent of you? Did he go back to the  
23 sample station to check valves, to operate valves or to shut down the  
24 system?  
25

1 VELEZ: Well, like I said earlier, I am not sure but I think he went to  
2 close the valves he did open to in other words not only, no, they were  
3 going to close the valves in the control room but, I think now the  
4 reason why the great difference in exposures in fact I think he did go  
5 back, I am not sure, to isolate the valve lineup that we had put on  
6 line. Were now looking back I wish we should have just left it alone.  
7

8 YUHAS: Was there any air sample collected in the sample room when you  
9 or Mr. Houser were in there?  
10

11 VELEZ: Negative, there were none.  
12

13 YUHAS: Did you have lapel air samplers available to either yourself or  
14 Mr. Houser during a performance of this task?  
15

16 VELEZ: No, we don't have any at Three Mile Island of our own.  
17

18 YUHAS: As a result of performing the sample did either you or Mr. Houser  
19 receive any form of skin contamination?  
20

21 VELEZ: I did I know for sure.  
22

23 YUHAS: Can you describe the extent and location?  
24  
25

891 225

1 VELEZ: My left wrist and forearm upon surveying was reading approximately  
2 behind the 150 millirem beta on the skin. I went washed myself as best  
3 I could in the decon sink. We were in the area where we were required  
4 to wear fullfaced particulate respirators. At this time we had received  
5 some of the charcoal cartridges and that is what we were wearing. I  
6 went and washed my arms the best I could and even when got to the 500  
7 KV sub it was reading something like 30 mR/hour on my arm.  
8

9 YUHAS: How long of a period elapsed before your arm was down to, let's  
10 say, less than 200 counts per minute as measured with a HP 210 probe?  
11

12 VELEZ: Approximately one full day.  
13

14 YUHAS: About Mr. Houser, was he contaminated?  
15

16 VELEZ: I think he was but to what extent I really don't know. All I  
17 know we both ended up in the shower together. His clothing and my  
18 clothing are still contaminated and stored on the Island.  
19

20 YUHAS: Did you get or did yourself or Mr. Houser get a whole body  
21 count?  
22

23 891 226  
24  
25



1 VELEZ: I had to wait approximately a day and a half because of the  
2 condition of my arm and by going there they would not really be able to  
3 see what was there but we both did in the interim period get a whole  
4 body count.

5  
6 YUHAS: What did that whole body count indicate?

7  
8 VELEZ: After cleaning up it indicated, I think, something like 20  
9 nanocuries were shown but then after the next day a real good shower  
10 and some cleaning solvent that I received from the RMC trailer, Badodine  
11 a surgical wash solution, which I again did a good wash job on my hair,  
12 in my head and my arm again. I went back in and he said it was very  
13 low level, so based on that I assumed it was mostly skin contamination.

14  
15 YUHAS: Do you consider the fact that your arm was contaminated for  
16 over 24 hours would have resulted in any kind of significant dose to  
17 the skin in your arm?

18  
19 VELEZ: Yes, it probably was.

20  
21 YUHAS: Do you know anyone has calculated that dose?

22  
23 VELEZ: I did.

24 . 891 227  
25

1 YUHAS: What did you calculate the dose to be?

2  
3 VELEZ: Well, the way I did it I said well it started out after the  
4 first washing was just a couple of minutes after it happened. It was  
5 roughly 30 to 40 mR, like I stated, and 24 hours later it was down to  
6 less than 200 counts. Actually it was more than that, now that I think  
7 about it, it was about 36 hours because the fact that even when I went  
8 through the whole body count I scrubbed it again and gradually I just  
9 felt I went to wipe it off 30 or more down to this area might average --  
10 well it decayed so much in this amount time so the average dose it came  
11 out to something like 300 or 400 mR, I figure.

12  
13 YUHAS: What was the dose measured, what instrument?

14  
15 VELEZ: On my arm.

16  
17 YUHAS: Yes.

18  
19 VELEZ: Well, with an E520.

20  
21 YUHAS: And what type of tube?

22  
23 VELEZ: GM.

24 891 228  
25

1 YUHAS: An HP-177 or 185?

2  
3 VELEZ: Side window GM-2.

4  
5 YUHAS: Open window?

6  
7 VELEZ: Open. Different between the open and closed.

8  
9 YUHAS: Did either you or Mr. Houser have your contaminated parts  
10 scanned to identify the isotopes for the amount of microcuries present  
11 on your arm?

12  
13 VELEZ: I didn't, I can't say whether Houser did or not.

14  
15 YUHAS: Did either you or Mr. Houser provide either fecal or urine  
16 samples?

17  
18 VELEZ: I provided urine samples. I do not know whether Houser did or  
19 not.

20  
21 YUHAS: What was the sample time? How long after the incident did you  
22 provide the urine sample?

23  
24  
25 . 891 229

1 VELEZ: Approximately eight hours.

2  
3 YUHAS: Have you received any results of that urine sample?

4  
5 VELEZ: I haven't got any results yet. Well, I haven't been informed  
6 of the results. Whether they have them, I don't know.

7  
8 YUHAS: Do you suppose that there might be better ways to calculate the  
9 skin dose than time averaging based on meter reading?

10  
11 VELEZ: It probably is but I personally don't know.

12  
13 YUHAS: About how much of your area was contaminated to the levels that  
14 you described?

15  
16 VELEZ: Oh, an area about the size of a softball.

17  
18 YUHAS: So about a five centimeter square per diameter, five centimeter  
19 square square diameter would be about the size of a softball. What  
20 effect was witnessed by the Unit 1 control room when you processed the  
21 sample? When you start recircing and collecting it.

22  
23 VELEZ: The Unit 1 monitors in the auxiliary building started going up  
24 and the control building started going up because of the leaks we had  
25 on the valves.

1 YUHAS: Did this result in the Unit 1 control room having to go on  
2 masks?  
3

4 VELEZ: Whether they went on masks or not I am not sure because I  
5 wasn't up there.  
6

7 YUHAS: Did collection of sample result in extensive contamination of  
8 the Unit 1 chem lab area?  
9

10 VELEZ: The sample room, yes. The chem lab not much because there is a  
11 door and the ventilation system does go the other way. It goes from  
12 the chem lab into the sample room but the sample room did get contaminated.  
13 Levels I really can't tell you how much.  
14

15 YUHAS: What do you estimate that your hand use was during the period  
16 of time that you were manipulating these valves and moving the samples?  
17

18 VELEZ: I haven't really thought about what the explanation was because,  
19 like I said, I used the pocket dosimeter. When it broke, it went off  
20 scale when I banged it. Now whether it happened.  
21

22 YUHAS: How do you know it went off scale when you banged it?  
23  
24  
25

891 231

1 VELEZ: I had finished reading it just prior to when I was standing  
2 behind the operating panel when I went to go in for the last time and  
3 it was reading roughly 2R. Then I reached in and I put it on it was  
4 reading 1R and when I reached in I banged it and I brought it back real  
5 quick and looked again and it was gone. So estimation that 1R that was  
6 there and then when I saw what I had picked in my whole body, I felt  
7 that that's basically...  
8

9 YUHAS: Did you perform a dry run on this evaluation before you did it?  
10

11 VELEZ: We discussed it. Actually go in and performing a dry run, no  
12 we didn't do it.  
13

14 YUHAS: Did anyone time you as far as time in, time that your hands  
15 were within six inches, time that your hands were in contact in other  
16 words if you had perform a dry run someone could have watched you with  
17 a stop watch and time the amount of time that your hand was close in to  
18 these valves or close into handling the sample or when it was actual  
19 around the sample? Did anybody do anything like that?  
20

21 VELEZ: No.  
22

23 YUHAS: Did anybody do anything like that afterwards?  
24  
25

891 232

1 VELEZ: Well, after the first sample was prior to taking any other  
2 sample, a procedure was written. They put in, based on our experience,  
3 and our recommendation more shielding was put in in front of the sample  
4 cooler in front some of the sample lines so then each step was timed  
5 and practiced inside the secondary chem lab.  
6

7 YUHAS: Did you have any remote handling tools to handling the beakers  
8 with or to operate the valve with when you did the job?  
9

10 VELEZ: We have a remote handling tool but I wouldn't use it because at  
11 that time it didn't work anyway. It's just a little grasping thing and  
12 with the coolant I didn't want to take any chances on dropping or  
13 breaking the beaker.  
14

15 YUHAS: Tell me. In collecting a primary cooling sample, if you were to  
16 be trying to evaluate the extent of what has happened to the core,  
17 would you want to take a pressurized coolant sample so that you could  
18 measure the total gases in solution and then after you expanded it and  
19 made that measurement and got a collection of the gases that came off  
20 then measured a boron? Do you think that would have been of more value  
21 to you than just an unpressurized beaker?  
22  
23  
24  
25

891 233

1 VELEZ: Well, the pressurizer sample would give you more information  
2 not only would you have the gas information. But you would still have  
3 the liquid information off the degasified liquid which would give you  
4 the other information and you also can a boron off degasified liquid.  
5 They could have done that but at this time they wanted, first of all  
6 they just said they want a regular RC letdown sample.  
7

8 YUHAS: Did anyone suggest to them that there might be a better way of  
9 doing this so that they can get more meaningful information and less  
10 exposures?  
11

12 VELEZ: I don't think so. It was just the sample was needed within so  
13 much time because at this time they had to get that one percent shutdown  
14 margin. They had to resure that they had the boron levels in the  
15 plant.  
16

17 YUHAS: Did you or either Mr. House suspect that this evaluation might  
18 result in more than five rem?  
19

20 VELEZ: We thought it may be a possiblity but again I looked at it from  
21 the fact that when I would go down there we would put it on looking  
22 recirc looking at the sample roughly how much time we thought it would  
23 take and that's what I based my decision whether I am going to go in  
24 and take it or not. At that time I figured possibility up to approxi-  
25



1 mately 2 rem again. All I could use was what they had told us. They  
2 told us that approximately coolant may read from anywhere from 800 to  
3 1000 R. Now we were instructed to that fact looking at what the have  
4 seen in the piping and this and that over Unit 2.  
5

6 YUHAS: Did either Mr. Mulleavy or Mr. Dubiel sit down in a quasy quiet  
7 atmosphere and discuss all the cautions that should be taken when you  
8 knew you were going to go in and be dealing with the samples of that  
9 level of radioactivity?  
10

11 VELEZ: No.  
12

13 YUHAS: Were you and Mr. Houser given enough time in a semi quiet  
14 atmosphere and evaluate what precautions you should take to protect  
15 yourself and to minimize the release of radiation resulting from such a  
16 sample?  
17

18 VELEZ: Well the best time again if time was given everything would  
19 have been looked. I doubt if the sample would have taken at that time  
20 but under the conditions we were working in at the time and the require-  
21 ments that they needed the sample for we just did the best we could.  
22 We're looking at was there and what we had to do.  
23  
24  
25

. 891 235

1 YUHAS: Is this another situation where you feel that you got caught in  
2 an operations need and succumb to their need because you thought as a  
3 professional in this field you could get it done without someone getting  
4 hurt?

5  
6 VELEZ: Well, basically I knew we going to get a fair amount of exposure  
7 and my it's my thinking I don't know whether it's right or wrong. I  
8 would rather do it myself as a foremen and get the exposure because  
9 normally my job does not require me to go into these areas where if I  
10 sent a technician in to do the job I am losing, "a worker" that may be  
11 used later in other type of functions and Mr. Houser and I both decided  
12 we would take the sample instead of sending technicians in to take  
13 them.

14  
15 YUHAS: Would it be unfair of me to assume that both you and Mr. Houser  
16 are very high on level of expertise around this plant?

17  
18 VELEZ: Well, expertise is different. I feel I am fairly trained. I  
19 was a technician, Mr. Houser was a technician, there would probably not  
20 be too many people around to know that sample lab better than Houser  
21 and he needed someone to help him. Because one man I felt couldn't  
22 have done the job. I did have the experience meaning that I was a  
23 radiation technician for close to three years and I worked with it and  
24 I have done it so I felt rather than getting a technician which we were  
25

1 short of at the time, because they were out on this team and that team.  
2 I felt it was best that I would assist him instead of trying to get a  
3 technician that may get an exposure well, later on would not be of any  
4 to me.  
5

6 YUHAS: Did either you or Mr. Houser consider that this was very early  
7 into the acc--  
8

9 SHACKLETON: This is the continuation of the interview with Mr. Peter  
10 P. Velez, the time is now 1:44 a.m. on April 24, 1979. The last tape  
11 discontinued at 1:36 a.m. April 24, 1979. Gentlemen continue.  
12

13 YUHAS: Pete this is at least the second instance that you have mentioned  
14 where the teletector has pegged, had you requested or anyone else  
15 requested a meter with a higher range at this point.  
16

17 VELEZ: After the first one, we asked to get something that could read  
18 higher than that. At that time a request went out to radiation management  
19 corporation no, excuse me Rad Services because we knew that they had  
20 some instruments that went higher than that. But they still I still  
21 have not seen them.  
22

23 . 891 237  
24  
25

1 YUHAS: This is 4/24 and you are telling me that even though you knew  
2 that several areas in the plant are greater than 1,000 R/hr no one has  
3 yet to come up yet capable of reading what the dose rates are?  
4

5 VELEZ: I'm not saying that they haven't come up with them, I have not  
6 seen them. I have been working in the control room for the last 2-3  
7 weeks we have continuously asked for them and one of the problems was  
8 they said first of all they had to get calibrated and I still have not  
9 seen the instruments.  
10

11 YUHAS: Pete, do you want to offer us any more information relative to  
12 this primary coolant sample you think would be helpful in future emergency  
13 planning or actions in regard to taking large single exposures.  
14

15 VELEZ: Basically, one of the worst problems we had in there was the  
16 lack of shielding but it is designed in the sample system itself in the  
17 lab. Now it is all right during normal operations, but I don't think  
18 when they designed the lab they ever thought of it the fact that what  
19 would happen if you had to go in there and get a sample under conditions  
20 like these?  
21

22 YUHAS: Excuse me Pete, but if I remember correctly your FSAR states  
23 that sample lines are to be shielded and that sample station is to be  
24 shielded.  
25

891 238

1 VELEZ: Well the room is within concrete block wall. I am talking  
2 about the actual lines themselves that are in the lab. The lines that  
3 run from, one of the reasons we had problems in unit one was because  
4 after we draw the sample soon as you step out of the unit 1 HP area you  
5 are looking straight up at the sample lines that come in from Unit 2  
6 and they are not shielded. I feel, we have complained about this many  
7 of times in the past because just under normal operating procedures we  
8 know that in a couple of years when crud started building up and all  
9 these little bends and turns and 90 degree turns that are in these  
10 lines are going to be crud traps. That is the area where the sample  
11 lines run is right at the fuel receipt area where we receive new fuel  
12 and that is generally the area where our utility men do our packaging  
13 of our laundry and we knew it and it runs right through the hot machine  
14 shop which sits right at the area and we told them that in a couple of  
15 years, just under normal operations the dose rates in these areas will  
16 get fairly high because the crud traps are that are there. Basically,  
17 the answer that we received well engineering is designing something on  
18 that.

19  
20 YUHAS: You mean to tell me this is going on for more than a year?  
21  
22  
23  
24  
25

891 239

1 VELEZ: Well, since the initial installation of the lines, questions  
2 have been brought up about them, about why did they bother shielding  
3 them in the model room which is an area just off the fuel handling area  
4 in Unit 1 which is a normally non-occupied area but yet out in the  
5 hallway they just run out you can jump up and touch them .  
6

7 YUHAS: Let me ask you another question from a chemistry point of view,  
8 if you had a reactor coolant system where you suspected the cladding  
9 failed that there might be dissolved fuel in the coolant system, what  
10 affect do you suppose 300 feet of torturous 3/8 inch stainless steel  
11 pipe might have on the validity of the analysis performed on that  
12 coolant sample?  
13

14 VELEZ: Probably would lose half of anything you were trying to find  
15 down the pipes. Lucky if you get any flow at all. The small lines are  
16 very long and when you are down in pressure as the sample comes out and  
17 that was one of the major problems we had on the other sample: that we  
18 take you have to recirc such a long period of time and during all this  
19 time you are bringing that coolant down to those pipes and you have  
20 lost a large vast area. Basically, right now we're looking at if we  
21 attempt to start up unit one, where do we go to sample unit 1, we do  
22 have tech spec requirements on sampling and analysis. Something is  
23 going to have to be done because I am sure they're still going to want  
24  
25

1 more reactor coolant samples in the future and even though the levels  
2 do go down, unless shielding is put in unnecessary exposure to the  
3 personnel doing the normal unit 1 sample during the same room.  
4

5 YUHAS: Do you have any idea why Unit 2 did not have its own primary  
6 sample station?  
7

8 VELEZ: Design I guess. I really don't know exactly why.  
9

10 YUHAS: Okay, let us move on to, you have the primary coolant sample  
11 taken during the day on 3/29 after that you came back and deconned your  
12 arm, what did you do from then on?  
13

14 DONALDSON: Can we have a time just for reference about the time you  
15 finished the RC letdown?  
16

17 VELEZ: About 11-12 I think as I said earlier, the exact time I am not  
18 really sure. The sample time would be on the bottle on the information  
19 that they have.  
20

21 YUHAS: You think I am going to read that bottle.  
22  
23  
24  
25

. 891 241

1 VELEZ: After that about 2 hours later I was back off the island because  
2 since we did exposure on houses Houser's high range pocket dosimeter  
3 showed possibility they could have gotten 2-3 rems. Both of us left  
4 the island to get out TLD read and also to get whole body counted which  
5 I could not because of the fact that my arm was still contaminated and  
6 we reported back to the observation center and stayed at the observation  
7 center approximately the rest of the day which is another total of 14  
8 to 16 hours again back to doing the normal routine directing people.  
9 Everybody was reporting to the observation center relieving teams  
10 making sure that people got fed because there were times when people  
11 were went periods of time not being fed relieving people when ever it  
12 was necessary.

13  
14 YUHAS: Let me ask you one other question about the primary coolant  
15 sample. The pocket dosimeters that you and Mr. Houser wore, were they  
16 calibrated?

17  
18 VELEZ: Yes they were.

19  
20 YUHAS: How did the pocket dosimeter results compare with the TLD  
21 results?

22  
23 . 891 242  
24  
25



1 VELEZ: The pocket dosimeter that I had on next to my TLD showed an  
2 exposure of approximately 900 and it came out to be approximately 880  
3 (mrems).  
4

5 YUHAS: How about Mr. Houser?  
6

7 VELEZ: Mr. Houser said his went off scale. It started out at  $1\frac{1}{2}$  and  
8 it so at that point in time you really could not tell. It was still  
9 visible on the pocket dosimeter but was beyond the five rem mark.  
10

11 YUHAS: And his TLD indicated  
12

13 VELEZ: Approximately 3-3.1 rem.  
14

15 YUHAS: Do you know that Mr. Houser incurred any additional occupational  
16 exposure  
17 between the 29th and the first day of the month of April?  
18

19 VELEZ: No he was instructed, I personally instructed him and again  
20 Dubiel  
21 instructed him not to come on the island. He was to remain off the  
22 island at the observation center at, for the rest of the time during  
23 the quarter.  
24

25 . 891 243

1 YUHAS: Do you know in fact that he did that?  
2

3 VELEZ: Yes, he did not go back on the island.  
4

5 YUHAS: Okay, so you worked on the day of the 29th again till midnight?  
6

7 VELEZ: Approximately that time 11:00 until midnight.  
8

9 YUHAS: On the 29th did you notice that additional health physics  
10 support was coming and arriving at the observation center for direction  
11 to survey teams of implant?  
12

13 VELEZ: Well, we started receiving, one of the problems we were having  
14 we had two technicians on a team because everybody else was doing their  
15 own things so we finally started getting assistance from the engineering  
16 department, the QC department to act as the other driver and then we  
17 started getting technicians from Nuclear Support Services which we have  
18 a contract with for two years, the next day they started showing up so  
19 we were able to relieve some of our technicians with them and technicians  
20 just started showing up from all different plants. Other foremen from  
21 other plants were showing up to give assistance and the only problem  
22 there was everybody was showing up but nobody knew who was in charge.  
23  
24  
25

891 244

1  
2 YUHAS: Who was directing the allocation of this manpower?

3  
4 VELEZ: The foreman that was there either myself, Bob McCan or Fred  
5 Huwe or Joe DeMan. Because they really was at this time still no chain  
6 of command set up, we were just, we knew who we had sometimes, other  
7 times people would just show up and the NSS people we sort of knew  
8 their qualifications because they had just left a week prior they were  
9 here for Unit 1 outage so we knew they were qualified, through looking  
10 into their records when they first showed up so they were able to use  
11 them, other ones we tried to keep mostly offsite teams we tried to  
12 instruct them, on the use of our SAM-Z's the two we had left and at  
13 this time also more had been brought in.

14 YUHAS: When did backup counting room equipment arrive?

15  
16 VELEZ: Well it was a day or two later when we pulled out Unit 1 Ge(Li).  
17 We went back to unit 1 HP lab area and removed the multi-channel analyzer  
18 from unit 1 and we set it up in circ water house on the Island. Exactly  
19 when the other one showed up I am not exactly sure. It might have been  
20 that day or the 29th or 30th, RMC came some others, SAI, one showed up  
21 from there I think two days or three days later, they requested some  
22 more we were just because the volume of samples that were were doing it  
23  
24  
25

891 245

1 was really too much to do on our equipment because our equipment takes  
2 about an hour to an hour and a half and other ones were able to get the  
3 information out faster than ours.  
4

5 YUHAS: You left on midnight the 29th. And when did you return?  
6

7 VELEZ: Well, if I can check my calendar I will have all the hours down  
8 that I worked those days. Let me see if I can tell you. Back on the  
9 30th I was back again at 7 a.m.  
10

11 YUHAS: What duties did you assume at 0700 on the 30th?  
12

13 VELEZ: Basically the same that I had on the 29th? From the observation  
14 center  
15 setting teams relieving personnel, Bob McCann and I were working together  
16 on the same basic rotation 12 hour shift but normally turned into about  
17 13 or 14. One of us was going to the island to see basically if we  
18 could assist there to get certain surveys done, move personnel around,  
19 check on equipment available go into the warehouse because we knew  
20 normally in the wa. house because normally all the stuff associated  
21 with HP is in one section of the warehouse. Go into the warehouse pick  
22  
23  
24  
25

891 246

1 up our equipment and pull it out. At that time it was still a problem  
2 because there was nobody in the warehouse. One of our technicians had  
3 to break into the door to get in, it was still locked.  
4

5 YUHAS: So you continued working on the 30th again until midnight?  
6

7 VELEZ: That was another 14 hour day.  
8

9 DONALDSON: Let me pick up a few things on the 30th. Beginning on the  
10 30th were technicians from outside contractors and other agencies being  
11 integrated in the organization?  
12

13 VELEZ: At that time there wasn't that much of an organization. They  
14 were just bodies that they told us were technicians. There were some  
15 foremen that we did know like one was Dennis Trout who had worked at  
16 TMI he was HP Foreman and now working at Berwick. He came down with  
17 another one of the supervisors from up there he brought us some equipment  
18 some of his technicians came down. Organization was still in a mixup.  
19

20 DONALDSON: Let me put it a different way. These bodies that were  
21 appearing in the general area, were any of them working on the Island?  
22  
23  
24  
25

891 247

1 VELEZ: They were on the Island but mostly as onsite teams.  
2

3 YUHAS: They were on the Island.  
4

5 VELEZ: Yes  
6

7 YUHAS: Were any of them involved in implant activities? on the 30th?  
8

9 VELEZ: The 30th no. They were mostly the onsite teams were driving  
10 outside on  
11 the island yet outside the security parimeter. Taking surveys they  
12 were well we did when they first came was we got two of them and assigned  
13 it with one of our crews to go around first floor just for nomenclature.  
14 You know they say go next to the building and show them where all the  
15 different sampling points which we have posted on the fence are located,  
16 just to show around the Island how to get to the area how to get to  
17 this area. After approximately 4-6 hours or 8 hours with the team the  
18 Island is not that big. You can sort of pick it up fairly easily if  
19 you have just common sense. At that time we were able to use them to  
20 lead our technicians to bring our technicians on to start doing work on  
21 the Island where we were more familiar with than the personnel who had  
22 showed up to assist us.  
23  
24  
25

891 248

1 DONALDSON: What was the status or how did the facility entry exit the  
2 facility compare with normal operations, were you going in and out of  
3 the same gates?  
4

5 VELEZ: No about this time you were going in and out the North gate but  
6 you were  
7 using busses everybody would muster at the observation center and a  
8 school bus would take you from the observation center to the north gate  
9 at which time you disembarked that bus got mustered in and checked in  
10 at the north gate to security boarded another bus which took you onto  
11 the island to the processing center.  
12

13 YUHAS: At this point in time on the 30th what was the status of the  
14 facility?

15 Were there any worries about additional releases, of potential for  
16 increased activities in various areas of the plant?  
17

18 VELEZ: Again, being an HP foreman, the information coming to us was  
19 not that  
20 great. This I still at that time I still was not sure what was going  
21 on in the plant. Were there any provisions or discussions made for how  
22 your people, yourself, or anyone who was on the island would be evacuated  
23 should the situation on the Island degrade to the point where evacuation  
24 would be required? No actual discussion other than the normal way we  
25

1 would take about it. Emergency plan which is sort of hazy because we  
2 were already in an emergency condition. You know nothing was really  
3 set down and said hey, in case things ever get worse this is what we  
4 want you to do. I assumed then that if things did get worse we would  
5 go back to the routine thing where depending on where you were where  
6 you went to get monitored to muster prior to leaving the plant.  
7

8 DONALDSON: Approximately how many people would you guess were on the  
9 Island at any one time during this period on the 30?  
10

11 VELEZ: 100-150.  
12

13 DONALDSON: How many buses were available?  
14

15 VELEZ: One.  
16

17 DONALDSON: How many people approximately does that bus hold?  
18

19 VELEZ: 40. 40 seated but I am sure you can crowd in 60 or some strap  
20 hangers.  
21

22 . 891 250  
23  
24  
25



1 DONALDSON: Were there any interim procedures developed or disseminated  
2 to either the technicians who were coming from other sources or your  
3 own people as to how you should respond to any continuing emergencies  
4 that should occur on the Island.

5  
6 VELEZ: Actual paper work no. Mostly it was just through word of  
7 mouth.

8  
9 DONALDSON: Could you just give me the basics of these?

10  
11 VELEZ: The basics, before I know myself and Bob McCan I noticed also  
12 Fred Huwe and Joe Deman, when people would arrive you know, we tried  
13 to, again to the best of our ability you know, what was going on again  
14 since we did not have all the information we were not exactly sure.  
15 But we basically told them about if you are on the island and something  
16 does happen this is, at this time most, just driving in their vehicles  
17 and there were in direct communications with the control rooms through  
18 walkie-talkies I said if you are not sure of what is happening get on  
19 the horn and give them a call. If you still get no answer get off the  
20 island.

21  
22 DONALDSON: Did you tour or walk through a majority of facility on the  
23 30th? Have the opportunity to see the inside to see the what...  
24  
25

1 VELEZ: Well the processing center service building, turbine buildings  
2 none of  
3 the auxiliary buildings or fuel handling buildings.  
4

5 DONALDSON: In terms of fire protection and developing fire hazards did  
6 you, did  
7 anything happen to catch your eye regarding unsafe practices that might  
8 have precipitated a problem beyond the scope of what you are already  
9 dealing with, that it a fire hazard?  
10

11 VELEZ: Yes there were many fire hazards, equipment was just strewn  
12 around left  
13 to lie where when people first left the area. Offices were being used  
14 you know. Things just discarded. Sanitary facilities were actually  
15 the worst.  
16

17 DONALDSON: Were there any piles of boxes, papers?  
18

19 VELEZ: Yes  
20

21 DONALDSON: In the Unit 1 service building area, I believe it's the  
22 oil-fired preheaters?  
23  
24  
25

891 252

1 VELEZ: Unit 1 service building?

2  
3 DONALDSON: After you go through the process center, then in through  
4 the office areas and off to the left, you have some oil-fired preheaters  
5 over there, are there not?  
6

7 VELEZ: Not that I know of, not in Unit 1.  
8

9 DONALDSON: What do the oil-fired... auxiliary boilers?  
10

11 YUHAS: O.k., auxiliary boilers.  
12

13 DONALDSON: Did you note any leakage of diesel fuel or...  
14

15 VELEZ: That's normal.  
16

17 DONALDSON: Did you note any piles of boxes in close proximity to any  
18 of the leaking oil?  
19

20 VELEZ: We have our fuel oil skid for the auxiliary boilers, has had  
21 slight leakage on the pump--packing leakages--and they are in sort of  
22 trough that has a... we have to put in absorbol in all the time, and  
23  
24  
25

891 253

1 just across from their within 15 or 20 feet is where they normally  
2 store the trash to be picked up and taken out of the turbine building,  
3 and that was stackup like it normally is.  
4

5 DONALDSON: Were you in the control room at any time between 8:00 in  
6 the morning of  
7 the 30th and noon on the 30th?  
8

9 VELEZ: Really couldn't tell you if I was there. I was in there some  
10 time during  
11 that day, but between 8:00 and noon I really couldn't say if I was in  
12 there or Bob McCann was in there... we were just swapping back and  
13 forth all the time.  
14

15 DONALDSON: Were you aware of any discussions that took place on the  
16 30th relative to  
17 the implementation of protective actions in the environment for the  
18 general population?  
19

20 VELEZ: No, I was not aware of any.  
21

22 YUHAS: On the 30th or on the 29th, the main access to the facility  
23 was via the north gate, is that correct?  
24  
25

1 VELEZ: True.

2  
3 YUHAS: Approximately how many guards were manning the north gate?

4  
5 VELEZ: Three to four guards were there.

6  
7 YUHAS: What were the guards' intended function?

8  
9 VELEZ: One was to check badges, ensure TLDs are being worn at the time  
10 because  
11 at that point wanted them to have them; issue some TLDs to those personnel  
12 whose TLDs were left on the Island because were not there when the  
13 accident occurred; and that was their function. On the exit function  
14 we had some radiation, health physics people, or people from NSS sur-  
15 veying the people coming off.

16  
17 YUHAS: You're sure this was the night of the 30th?

18  
19 VELEZ: 30th, 31st, in that frame of time.

20  
21 YUHAS: In your tour of the plant, once you went through the guard's  
22 center at the north gate, were there any guards or any security equipment  
23 in operation at the process control center near Unit 1?

1 VELEZ: It was all turned off.  
2

3 YUHAS: Were there any guards in the service building in the normally  
4 manned viewing areas and CEA where the guards normally sit with the  
5 television monitors and alarm control panels.  
6

7 VELEZ: There wasn't a guard on the Island other than a rover that you  
8 call whenever  
9 you had to get into a gate.  
10

11 YUHAS: Were all the doors inside the protected area unlocked and  
12 voided?  
13

14 VELEZ: I couldn't say all of them, but there were some that were open.  
15

16 YUHAS: Could an individual walk, once he got inside the north gate,  
17 into either Unit 1 or Unit 2 auxiliary building?  
18

19 VELEZ: Unit 2 auxiliary building without going through a control  
20 point, no. Unit 1  
21 auxiliary building, oh, the doors were open, but we did have signs  
22 posting at the door. We didn't have people there at the time.  
23  
24  
25

891 256

1 YUHAS: But the doors were unlocked, is that true?

2  
3 VELEZ: Yes, the doors were unlocked.

4  
5 YUHAS: To both units? Unit 1 and Unit 2?

6  
7 VELEZ: Yes.

8  
9 YUHAS: Was a control point manned continuously at either Unit 1 or  
10 Unit 2? Unit 2, again, on the 30th or the 31st, I can't actually tell  
11 you, they did have outside the normal HP control point we did have a  
12 technician available there.

13  
14 YUHAS: That was on the 31st I believe. Were the guards instructed at  
15 the north gate to have people coming off the buses, when they change  
16 buses, to go to the 500 KEV to be surveyed?

17  
18 VELEZ: We were still trying to survey everybody. This is about the  
19 time, I'd say the exact date... maybe when I look at my book I'll be  
20 able to tell better... it was about this time we found that we were  
21 having a problem with going all to the Observation Center. Some people,  
22 even though you instructed them to go there, made a left and went the  
23 other way, which we had to call some people at the home and ask them to  
24 please come back or instruct them to come back, because it's in this  
25

1 frame of time where we started to get survey people at the north gate.  
2 What we did was, there were some vehicles allowed on and off the gate,  
3 those vehicles we would instruct to go to the 500 KV substation and  
4 then in the ensuing problem that some didn't show up we started a  
5 procedure by where the north gate would call the 500 KV sub with the  
6 name, with the vehicle ID, the registration plate number, roughly how  
7 many people in the vehicle, and if they had not showed up there in some  
8 period of time they were to call back and we would have to go look for  
9 them.

10  
11 YUHAS: Were the guards searching packages, or personnel with metal  
12 detectors or were they giving patdowns at the north gate to keep people  
13 from going in?

14  
15 VELEZ: No, they were not.

16  
17 YUHAS: Was the metal detector operable at the process control center?  
18

19 VELEZ: It wasn't being used.  
20  
21  
22  
23  
24  
25

891 258



1 YUHAS: Point of interest. On the night of the 30th, this inspector  
2 observed individuals passing past the guards, boarding the buses,  
3 circumventing all security and having uncontrolled access to virtually  
4 any and all areas throughout the facility, both Unit 1 and Unit 2.  
5

6 DONALDSON: The final question I have in the area of access to the  
7 site. To your knowledge, was there any way or any means of account-  
8 ability instituted during this time frame?  
9

10 VELEZ: The only accountability they could have had was at the north  
11 gate, by the  
12 fact that when you went in, you had a badge on.  
13

14 DONALDSON: At any time did they write down the number...  
15

16 VELEZ: ...My badge number, 325.  
17

18 DONALDSON: They did write your number down. Were they doing that from  
19 the south gate?  
20

21 VELEZ: I couldn't tell. I never go on or off the south gate.  
22  
23  
24  
25

891 259

1 YUHAS: The south gate was not open for access at that time. All  
2 access up to the 31st was being controlled through the north gate.  
3 Point of interest. This inspector noted on the morning of the 31st  
4 that numerous people were leaving via the north gate and were not being  
5 instructed by the guards to report to the 500 KV station for frisking.  
6 This matter was addressed with the Unit 1 superintendent, Mr. Potts,  
7 who stated that he would take immediate action to ensure that this  
8 condition did not continue to exist. I think we're up through the  
9 period of concern. This tape is about to run out, so we've got maybe a  
10 few more minutes. What I'd like to do is to give Pete a chance to  
11 address those issues that he feels are of concern and need to be considered,  
12 not only from TMI's point of view but from general health physics  
13 emergency planning point of view. We'd like to give you as much time  
14 as you want or as little as you want.

15  
16 VELEZ: Basically, from this side of it, I again used to be an operator  
17 and I now am in the Health Physics Department. As an ex-operator, I am  
18 now seeing it from the HP side of it, whether or not it's this plant  
19 alone or all of them in the industry, for some reason or other all  
20 plants seem to be operations-oriented. By that I mean that the operators  
21 are there, their function is to produce megawatts, because megawatts  
22 produce money. HP department I feel is there not as a hindrance but  
23 sort of like to slow them down to make sure they try to do it properly.  
24 I use the word "try" because many times we've been circumvented. We  
25

1 have had problems, again, at this plant, where I felt that proper HP  
2 practices were not overlooked but bypassed for the intent of getting  
3 the job done. I personally had, while I was in the bargaining unit,  
4 received 3 days on the street for refusing to go inside the secondary  
5 shield of the reactor building at 100% power, to "look for something  
6 that's leaking." I at that time told my foreman, who is no longer  
7 employed here, "no way in the world am I going in at 100% power. What  
8 for?" If there is a specific job that has to be done, I'll do it. He  
9 said "that's your job." I said "bring the reactor down in power. Take  
10 it down to 25%, reduce the dose rates, I'll go in." He says nope. I  
11 said I ain't going in; I subsequently received 3 days on the street  
12 without pay.

13  
14 SHACKLETON: Gentlemen, let's stop at this point. The time is 2:13 a.m.,  
15 April 24, 1979. We'll change tapes.

16  
17 SHACKLETON: This is a continuation of the interview with Mr. Peter P. Velez.  
18 The time is now 2:14 a.m., April 24, 1979. Please continue, Mr. Velez.

19  
20 VELEZ: Like I was stating, at that time I received 3 days on the  
21 street without pay for refusing to go inside the secondary shield at  
22 100% reactor power, which I felt was unnecessary exposure to me. Other  
23 times, things have come up just for the expediency of keeping the plant  
24  
25

1 on the line or not having to reduce power, that even under recommendations  
2 from an HP foreman, myself, the foremen that were there before me, this  
3 job just doesn't ... I mean, why do it now, it was a fact that it had  
4 to be done because we want to keep going. Throughout my time on the  
5 Island, I've always made recommendations that I felt that the HP Department  
6 should be a separate entity from the operations group. Because whether  
7 or not someone wants to admit it, if you are a human being and you're  
8 working for this man, and this man makes out your evaluation on basically  
9 how much pay raise you're going to get, everyone is looking for their  
10 own pocket in the long run. That's livelihood. It's kind of hard for  
11 a person to try to prevent the job from being done. I don't deal with  
12 them people, I just go through my bosses. But yet when my boss gets  
13 pressured from the operations point of view, and the operations personnel  
14 are the ones that are going to make his evaluation, even though you're  
15 trying to do the best you can, you still have that in the back of your  
16 mind. I feel it puts undue pressure on that gentleman in that position.  
17 Many times we've wanted to stop jobs, we told have to them do certain  
18 things, but this would take too much time. One simple thing is, we  
19 have in Unit 1 a borated water storage tank that sits over by the  
20 fence. 2 years ago on a refueling in Unit 1, we stated, hey, you're  
21 going to have to go nice and slow to get this water out of the spent  
22 fuel... the refueling transfer canal... process it slowly, because the  
23 capacity of the demineralizer, roughly only 140 gpm, to fill the tank  
24 back up, because if not, we're going to have a radiation problem outside  
25

1 the fence. Again, for the expediency, to get the job done, it was not  
2 done slowly, and the next thing we knew we had half the road roped off.  
3 Again, once the operation gets back online, it's not their problem  
4 anymore. It is now HP's problem. Whenever you try to stop a job, or  
5 slow down a job, next thing you know you get pressured from certain  
6 shift supervisors that say hey the job has to be done we're going to do  
7 it no matter what. We've had instances where an HP foreman wrote up a  
8 shift supervisor on an HP violation because the gentleman entered an  
9 area that was locked when our procedures say any area greater than 1 R  
10 per hour must be locked. In order to gain access to that area, you  
11 must get permission from a radiation protection foreman or supervisor,  
12 and a shift foreman or supervisor. The gentleman went in there without  
13 permission, without a radiation work permit, was written up by a radiation  
14 protection foreman, and was in turn threatened by another shift supervisor  
15 that he should not pick on shift supervisors.

16  
17 YUHAS: Let me interrupt. Because of the severity in the number of  
18 instances involving license or senior license personnel that have  
19 actually resulted in overexposure, I feel it is important you relate to  
20 us the names of the individuals involved in the case you just described.

21  
22 VELEZ: Well, the foreman who wrote up the other person was Fred Huwe.  
23 He wrote up Ken Bryan, who is a shift supervisor, because Ken Bryan  
24 entered into an area in Unit 2--the exact area I'm not sure--because he  
25

1 violated our procedures. Approximately Fred told me he was then told  
2 by Bernie Smith, another shift supervisor, "you don't pick on shift  
3 supervisors. We'll get even with you."  
4

5 YUHAS: As a result of that, did Mr. Huwe withdraw his writeup?  
6

7 VELEZ: No, the writeup went through. He would not withdraw it, and  
8 I'm glad he didn't. The incident did go to the station superintendent;  
9 the final results of that I don't know.  
10

11 DONALDSON: Could you repeat the names for us one more time?  
12

13 VELEZ: The one who was written up was Ken Bryan, written up by Fred Huwe,  
14 who in turn was, I call it a threat, was threatened by Bernard Smith,  
15 another shift supervisor. Subsequent to that, during the Unit 1 outage,  
16 the one that we just had, I ran into a problem where, again for the  
17 expediency of getting the job done, wrong information, whether maliciously  
18 or just a fact of the pressure a shift supervisor is under to get the  
19 job done, was given to me and again I had no reason to believe the man  
20 would either maliciously or otherwise tell me a lie, I opened up the  
21 auxiliary building for entry, based on analysis that showed airborne  
22 activity greater than  $3 \times 10^{-10}$  in the auxiliary building; the actual  
23 number was  $6.5$  to  $7.0 \times 10^{-10}$ . The whole incident occurred because  
24 they wanted to go back in there and continue working. I had evacuated  
25

1 the building based on my initial sample that showed activity greater  
2 than  $3 \times 10^{-10}$ . A subsequent sample was taken; I was not in the lab at  
3 the time. I was out doing other functions I have; I was then called by  
4 my supervisor, Tom Mulleavy, and instructed that the shift supervisor,  
5 Greg Hicks, had received a phone call from the HP lab that the levels  
6 were now  $3 \times 10^{-10}$ , less than  $3 \times 10^{-10}$ . I then called the shift  
7 supervisor; he said, yes, they are less than  $3 \times 10^{-10}$ . I then informed  
8 him, o.k., then, you can open up the auxiliary building for normal  
9 entry. Approximately 10 minutes later, I called the HP lab to ask them  
10 to get another sample to verify that the decrease I thought was happening  
11 was continuing on down and we didn't have a reoccurrence of a leak that  
12 we really had no idea where it was coming from at the time. We found  
13 it was coming from the reactor building, sucking out into the auxiliary  
14 building. At that time, my technician, Mike Gabner, to put it bluntly  
15 jumped down my throat about who the hell opened up the auxiliary building.  
16 I then told him it was I, and he said what the hell did you do that  
17 for, and at that time he had told me that the shift supervisor had  
18 called down, asked him what the level was, he told him it was approxi-  
19 mately  $6.95 \times 10^{-10}$ ; it would take approximately 2 to 3 hours to open up  
20 the building, based on (1) by the time we get the results off the  
21 Ge(Li) where we can identify, or (2) looking at the rate of decrease  
22 that we have seen. This is what... he did not tell the supervisors,  
23 but he told them he was basing his time estimate. At that time, I  
24 called the shift supervisor, he did not answer the phone, I called the  
25

1 control room operator, instructed them to evacuate the building. After  
2 arguing with him, because he wanted to know on whose authority I was  
3 evacuating the building, I said "on mine. I'm an HP foreman, I can do  
4 it." I then instructed him, "either you evacuate the building, pass  
5 the word from up there, or I'm going to pass it from where I am." I  
6 felt I should go to the control room because they are the controlling  
7 center for the whole plant. At that time he asked me "well who are  
8 you?" I says "Pete Velez, you know who the hell I am." "And where are  
9 you?" I said "I'm in my office now, but I'm going out the gate." I  
10 then went in to my boss and I told him I quit.

11  
12 VELEZ: Subsequently, I had a discussion with... on my way out, I  
13 decided that, well,  
14 the men who hired me should have at least... I owe him the respect to  
15 tell them why the hell I'm leaving. I went in to his office, I told  
16 him what the problem was, I was very upset....

17  
18 YUHAS: Who are you talking about?

19  
20 VELEZ: Gary Miller. At that time, I sat down with him, Tom Mulleavy  
21 was called to the office, Dick Dubiel was called to the office, and  
22 Dave Limroth was called to the office. We sat there and had a discus-  
23 sion for about an hour to an hour and a ha f, about why was I so upset.  
24 Gary Miller wanted specifics, and specifics he got. Basically, it's  
25



1 things that have been creeping up like this for a long time, and my  
2 basic thing was "why did you hire me to be a foreman if I can't do my  
3 job? I might as well not even be here, I'll go someplace else." After  
4 going home, cooling down a little bit, I did come back to work, and I  
5 didn't quit. I'm still here. But whatever came of that discussion,  
6 all I know is that the following day Mr. Miller did set up a meeting  
7 with all his shift supervisors and his shift foremen. What came out of  
8 that meeting, I still don't know. My biggest problem is, you write up  
9 somebody, either myself or technicians, and it's kind of hard for a  
10 technician who's a yellow hat, writes up a foreman for violating a  
11 procedure, or violating one of our procedures, with... as simple as it  
12 may be, because you never hear what's been done about it. But then if  
13 he doesn't see anything being done about it, again it might be the  
14 company policy, you know, you say "why the hell should I worry about  
15 it" as long as I watch out for myself. The plant was this one, or all  
16 of them I don't know. This is the only one I've ever worked on. For  
17 some reason or other, like I stated at the beginning, they are all  
18 operations oriented. It's get the plant on the line, keep it on the  
19 line. I'm sure they wouldn't do anything to really endanger people...  
20 their lives, I'm hoping that, but there are sometimes where rules are  
21 bent, broken, circumvented, or really you don't know what happened,  
22 because you're not there. But the following the day you say well how  
23 did you do that? Many a times I've asked the question, based on our  
24 procedures, a radiation protection foreman or supervisor must be notified  
25

1 to go into certain areas that are locked. Now one being an ex-operator--I  
2 know operators have to go in there. But yet, when I have the duty, and  
3 we've brought this point up again and again, and nothing has ever  
4 happened about it--I've never been called to get permission, I've never  
5 giving my technician authority to give that permission--but yet based  
6 on the rounds, you look at the logs, I know they've gone in there.  
7 Actually who I could never say, because you can never get anybody to  
8 tell you who gave the permission or what is comes out is, "the shift  
9 foreman told me to do it." The operator is sort of in a bad condition,  
10 because he's there doing a job, he's working for the shift foreman or  
11 supervisor, and when you're ordered to go something, you'd better have  
12 a good reason not to. Many of the foremen or supervisors don't want to  
13 hear--I'm talking operations type--HP reasons. It's whether they don't  
14 really understand the significance of what they're doing, or they are  
15 under such pressure because there is pressure--where it's coming from I  
16 don't know, whether it's self-imposed, because everyone doesn't want to  
17 be the one holding up something, that's human nature. You don't want  
18 to be the one that's holding up something. But I feel when it comes to  
19 safety period, whether it be radiological or just regular safety which  
20 again on this Island is about nil, they're overlooked, bypassed, cir-  
21 cumvented, or just out and out overruled. Many times it's the overruling  
22 that get you so mad you're about ready to quit.

1 YUHAS: To keep things in perspective, how long ago did this incident  
2 happen where you had to meet with Mr. Miller or quit the company?  
3

4 VELEZ: In the last week of the Unit 1 outage, which was, let me check  
5 my calendar  
6 please... the week I think of the 12th to the 18th of March. We just...  
7 that week.  
8

9 YUHAS: Very recently.  
10

11 VELEZ: Yes.  
12

13 YUHAS: Let me ask you a couple really brief questions... we don't  
14 want to tie you up because it's already 3:30 in the morning, and I  
15 think we'll give you a few days to cool off during our investigation,  
16 and we may ask to talk with you again. My parting question. When was  
17 the last time you were trained in the requirements of 10 CFR 19?  
18

19 VELEZ: 10 CFR 19?  
20

21 YUHAS: Notices and Instructions to Workers.  
22

23 VELEZ: Me actually set down and been instructed... when I was a technician.  
24  
25

1 YUHAS: How long ago was that?

2  
3 VELEZ: A year and a half, 2 years.

4  
5 YUHAS: Are you aware that it is your responsibility as a worker, if  
6 you observe an item of noncompliance with the Federal regulations, to  
7 inform the licensee and, if necessary, to inform the Commission of such  
8 items of noncompliance?

9  
10 VELEZ: I've heard of that.

11  
12 YUHAS: Have you ever informed the Commission's inspector onsite of  
13 these items that you have described to us which were apparent items of  
14 noncompliance?

15  
16 VELEZ: On these items, no, because I've informed the licensee and  
17 again, around here it takes a while to get any results back, whether  
18 that has gone forward I do not know.

19  
20 YUHAS: One final comment. Could you briefly make just a cursory  
21 observation of the NRC's presence and their effect during the first few  
22 days of this event?

23  
24 . 891 270  
25

1 DONALDSON: Please feel free to be very candid, also.

2  
3 VELEZ: Well, again, due to the condition that we were in, the first  
4 couple of days I felt some of the inspectors were what I feel as very  
5 picky. Example: we had a gas sample that we had to ship out, that an  
6 airplane was coming to take, where exactly I can't remember right now,  
7 and we had to package the sample up--it was going out DOT exempt, the  
8 NRC was taking the responsibility for the sample. Just little things  
9 that sort of irked you: I came in with a sample container, a special  
10 one we had made up--lead pipe is basically what it was--and to properly  
11 mark it I put a sticker on it that said "Caution: Radioactive Material."  
12 This was going to go inside a bucket, which was going to go inside a  
13 drum, and I wanted to ensure that either individual case was marked,  
14 even though I knew where they were going I marked it. I took this  
15 thing with the sticker on it and I put it on the floor. I turned  
16 around to go get an instrument, because the gentleman was going to  
17 bring the gas samples out, and an inspector asked me "is that thing  
18 full?" I said "no, it isn't, not now." He said, "where're the Empty  
19 sticker?" At that time I blew up, I said "it's going to be full in  
20 about a minute." He said, "if it's empty, it has to have an empty  
21 sticker on it." At that time... I got an empty sticker, stuck it on  
22 it, and asked the gentleman to leave the HP lab. He said, "Why?" I  
23 said I have a sample coming out, its exposure readings I don't know  
24 what they are, the guy's taking the readings, I said unnecessary people  
25

1 are not required at this point. He huffed and puffed and left. Sub-  
2 sequently, I did go to another NRC inspector and told him about this,  
3 Gallina I think his name is, I can't remember his name, and he said he  
4 will take care of that problem for me, and subsequently the problem was  
5 taken care of. We have had, on the whole, they have helped us, but I  
6 think one thing that they are forgetting. They go around, they can go  
7 all around the plant. I am normally required to stay in a certain  
8 area, because of the requirements that I have of signing RWPs in Unit 2  
9 control room for ensuring that the people going into the area have at  
10 least an idea of what they're going in to, showing them on the maps.  
11 Some of them--again, I don't know all the inspectors that are here  
12 personally--I know some because they've been here before; they come up  
13 and they sarcastically, in my opinion, say "How come you're not doing  
14 this? How come you're not going that? Do you know that this is going  
15 on over there?" I haven't left that room. Many of them, though, have  
16 come with constructive criticism, which I welcome, but there are the  
17 few who I feel if they want to make an inspection of this place right  
18 now, shut the whole thing down, because there are some rules and regu-  
19 lations that are being bent, and I think some that are being broken.  
20 Under the conditions we're operating in, if we can make the decision on  
21 the best information we have available, on what we see and on what we  
22 have. Whatever I have available to me is what I have to use, unless  
23 it's an extreme type of thing and then we back off. I personally have  
24 stopped a job because of the problem I had with a certain type of a  
25

1 hood that we wanted to use that I did not feel, based on the information  
2 that was on the box it came in, that it was proper. This is again  
3 another thing. I was pressured to let them go to work...by the operations  
4 people, because they want to get the damn job done. It's too late now  
5 to be in a rush in my opinion. We've got to slow down. You want them  
6 to use this thing, you get somebody on here to relieve me who's going  
7 to approve these because I sure the hell ain't. All in all, I would  
8 say the majority of the inspectors have assisted us, have provided  
9 constructive criticism, but normally as a human being you bypass all of  
10 that and the only thing you really see are those one or two pains in  
11 the ass that bother the hell out of you. The picky things, I just try  
12 to forget them, but sometimes they stick in the back of your mind and  
13 just keep on pinging at you. I feel they are there to help us, being  
14 real sarcastic and picky with us, hey you know you're not doing this,  
15 hey I caught you at this that's not the way to approach it. The approach  
16 is hey I think maybe you should do it this way. All in all they've been  
17 helpful, but again it's that one or two that can bother the hell out of  
18 you and ruin the whole day. Break your train of thought, things you're  
19 trying to do. Even now, 2, 3 weeks into it, there are still things  
20 that are coming up that you try to get something done, and you're still  
21 going back to the same point, because that's been my biggest bitch all  
22 the time, operations pressure. They still want, for some reason or  
23 another, to be in a rush to get the job done. I feel there is no  
24 reason to rush now. Whatever happened has happened. Why compound it  
25

1 by rushing? A slight example, again I ran up against, a truck left the  
2 Island. I as an HP foreman was called, nobody gave the truck authority  
3 to leave, was called by the chemistry coordinator and instructed that  
4 the iodine levels in the water that was in that tank, and they gave me  
5 the numbers,  $10^{-6}$ ,  $10^{-7}$  uCi/ml, I'm not exactly sure. Upon receiving  
6 that information I went to the shift supervisor who was there and  
7 instructed him to get that truck back on the Island. I had to argue  
8 for 5 minutes, maybe more, for him to finally make that decision,  
9 because at first he was "aw, it can't be a good sample." But it was  
10 the only one I had. "Well it can't be right." "I don't care if it's  
11 right, this is the only one I have, this is what I have to go by. Get  
12 the damn truck back on the Island." After approximately 10 minutes,  
13 approximately 5 to 10 minutes, the call was placed because the truck  
14 was under a State Police escort because it was an oversized vehicle,  
15 the call was made to return the truck to the Island. But again, that's  
16 what it took. I don't have the authority, really, in the chain of  
17 command that is here, to say "this is it" or "this ain't it." There's  
18 always somebody pressuring you into "this is the way I want it done, if  
19 you don't like it, leave." I think that's one of the reasons why one  
20 of the foreman has left. He felt enough... he takes everything personal,  
21 where I just get to the point with him that I just don't do it and let  
22 them jump all over me. When I leave here, I come back the next day and  
23 start all over again. That's basically all I've got.



1 YUHAS: Is this foreman who you talked about, was that recent?

2  
3 VELEZ: He just turned in his 2 weeks' notice, leaving on the 30th of  
4 this month.

5  
6 YUHAS: And what is his name?

7  
8 VELEZ: Fred Huwe

9  
10 DONALDSON: Pete, during the course of this long and extremely helpful  
11 conversation, you've used the word "outage." Could you just briefly  
12 explain, for the people who may not be familiar with this term, what it  
13 means. As you explained, and I bring some things together here, the  
14 Unit 1 of Three Mile Island was in an outage just a few days prior to  
15 the incident with Unit 2.

16  
17 VELEZ: Well an outage... when we discuss an outage, Unit 1 had to go  
18 down for  
19 refueling. From approximately February 17 the plant is shut down and it  
20 goes to approximately 5 to 6 weeks of refueling operation, maintenance  
21 on equipment, surveillance on equipment, checking on equipment, and  
22 getting the plant back up on the line. We call that an outage; it's a  
23 5-6 weeks planned step of events to go from operation, shutdown, refuel,  
24 heatup, and back on the line.

1 DONALDSON: Allright, thank you very much. Any further questions,  
2 gentlemen?

3  
4 YUHAS: I just want to express our appreciation for your openness and  
5 for sitting here after working a 10-hour shift for 3½ hours talking  
6 with us; we realize that's a super pain in the ass, and we really do  
7 appreciate you giving us this time. I think somewhere down the line,  
8 maybe 18 months from now, you'll find a lot of things that you've  
9 brought up will have been implemented at other facilities in terms of  
10 emergency planning and hopefully in delineation of responsibility of  
11 the health physics departments.

12  
13 VELEZ: Well, that's other plants. I'm just hoping that they happen  
14 here.

15  
16 SHACKLETON: Thank you very much, Mr. Velez. Any further questions?  
17 All right, gentlemen, we'll close this tape off. The time is now  
18 2:39 a.m. in the morning, Tuesday, April 24, 1979.  
19  
20

21 . 891 276  
22  
23  
24  
25