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PRESIDENT'S COMMISSION ON THE :
ACCIDENT AT THREE MILE ISLAND :

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DEPOSITION of METROPOLITAN EDISON COMPANY
by JOSEPH H. DEMAN, held at the Three Mile Island
Nuclear Power Plant, Harrisburg, Pennsylvania, on
the 20th day of July 1979, commencing at 8:45 a.m.,
before Stephen McCrystal, a Notary Public of the
State of New York.

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2 A P P E A R A N C E S

3 FOR METROPOLITAN EDISON COMPANY:

4

5 SHAW, PITTMAN, POTTS & TROWBRIDGE, ESQS.
6 Attorneys for Metropolitan Edison Company
7 1800 M Street, N.W.
8 Washington, D.C.

7

8 BY: ALAN R. YUSPEH, ESQ.
9 of Counsel

9

10 PRESIDENT'S COMMISSION ON THREE MILE ISLAND:

11

12 JOAN GOLDFRANK, ESQ.
13 Associate Counsel

13

14 ALSO PRESENT:

14

15 CLAUDIA A. VELLETRI

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18 J O S E P H H . D E M A N , having been
19 first duly sworn, was examined and testified
20 as follows:

21 DIRECT EXAMINATION

22 BY MS. GOLDFRANK:

23 Q Could you state your name, please.

24 A Joseph H. Deman.

25 Q Spell it for the record, please.

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Demam

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2 A J-o-s-e-p-h H. D-e-m-a-n.

3 Q Would you state your current address, please.

4 A 429 West Caracas Avenue, Hershey, Pennsylvania.

5 Q And your current employer?

6 A Metropolitan Edison.

7 Q And your current position?

8 A Radiation protection foreman.

9 Q Have you brought with you a resume?

10 A Yes.

11 MS. GOLDFRANK: I would like to mark this
12 resume of Joseph H. Demam as Exhibit 1.

13 (Above-described document was marked Demam
14 Deposition Exhibit 1 for identification, this date.)

15 Q Is this a resume which you prepared?

16 A It was prepared by the company.

17 Q Could you tell me on what date it was
18 prepared?

19 A I obtained a copy of it approximately July 13.

20 Q Was this prepared prior to July 13?

21 A Yes.

22 Q Is this a copy of what is kept in your
23 personnel file at Metropolitan Edison?

24 A Yes.

25 Q Your resume reflects that you attended RCA

1
2 Technical Institute in New York City.

3 A Yes.

4 Q What dates were you attending that institute?

5 A Approximately 1966 to 1968, the beginning of that
6 year.

7 Q And your resume indicates that you did not
8 graduate; is that correct?

9 A That is correct.

10 Q Could you tell me the kind of courses that
11 you took there?

12 A There were electronic technology curriculum,
13 calculus, circuitry, mathematics, physics.

14 Q Is that a private institution?

15 A Yes, it is.

16 Q And since what year have you been employed
17 by Metropolitan Edison?

18 A 1974.

19 Q What did you do prior to your employment
20 at Metropolitan Edison and since you left RCA Technical
21 Institute?

22 A United States Navy.

23 Q For that complete period of time?

24 A Six years.

25 Q Did you have any training while you were

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2 in the Navy?

3 A Yes, I did.

4 Q What did that training encompass?

5 A Various service schools for machinery repair,
6 various nuclear power schools, nuclear power training,
7 chemistry and lab technician training.

8 Q Were they formal courses?

9 A Yes, they were.

10 Q Did you receive any kind of certificate
11 for completing those courses?

12 A You don't actually receive the certificate; you
13 pass the qualifying test at the end of nuclear power
14 school, and it is on your record that you qualified.

15 Q There were written exams at the end?

16 A Written and oral exams, yes.

17 Q You have had training while employed at
18 Metropolitan Edison?

19 A Yes.

20 Q Are those courses taught by people at
21 Metropolitan Edison?

22 A Yes.

23 Q The courses were held on-site?

24 A Yes.

25 Q Were those courses required by the company?

2 A Yes.

3 Q Did they include course instruction,
4 classroom instruction?

5 A Yes.

6 Q Was there homework to do?

7 A Not formal.

8 Q There was informal?

9 A Yes. For instance, as an example, if you were
10 studying a system, you had the formal course of instruc-
11 tion on the system, and then it was assumed that you,
12 on your own, would go and trace the system and inquire
13 more about the system.

14 Q And that you would take reading home with
15 you and study it?

16 A Yes.

17 Q Were you paid overtime for that work that
18 you did?

19 A No.

20 Q Attached to your resume, there is a computer
21 printout of a list of courses.

22 A Yes.

23 Q Is this a complete list of the courses
24 you have taken at Metropolitan Edison?

25 A It appears to be, yes.

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2 Q These were all courses taught at Metropolitan
3 Edison?

4 A Yes.

5 Q Have you ever gone to another plant to take
6 courses?

7 A Another plant?

8 Q Yes.

9 A No.

10 Q Have you ever gone to consulting firms to
11 take courses?

12 A No.

13 Q Were you given a grade at the end of these
14 courses?

15 A No.

16 Q Was there any kind of evaluation made?

17 A Yes. The instructor evaluated the course, and
18 you did take -- in some of the courses you took exams,
19 and they were evaluated.

20 Q Written exams?

21 A Yes.

22 Q But you were not given a grade?

23 A No, not as such.

24 Q Do you know who that evaluation was sent to?

25 A Training employment?

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Q Was it ever sent to your superior?

A I don't know.

Q What is your evaluation of the courses you have taken at Metropolitan Edison?

A On the whole, I would say they were all very informative and fairly good courses.

Q Were you asked to evaluate what you thought of these courses?

A Not formally, but the instructors were all willing to listen to opinions.

Q When you were taking these courses, how did that fit in with your responsibilities at the plant?

A During the time I was taking courses, I was in training for that period of time. I did not have any other responsibilities.

Q Was attendance taken at these classroom sessions?

A Yes.

Q And a record kept of that?

A Yes.

Q To whom do you report in your responsibilities as foreman?

A To Don Mulleavy.

Q And to whom does he report?

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A Dick Dubiel.

Q Were you on-site on March 28, 1979?

A Yes.

Q What time did you arrive?

A Approximately 6:30.

Q Were you called to come in?

A No, that was my normal starting time, between
6:30 and 7:00.

(Continued on Page 9.)

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Q Could you explain to me what you found when

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you arrived here?

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A Initially arriving on-site I found nothing out of

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the ordinary until I arrived at Unit 1's HP, health

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physics lab. At that point my supervisor was there,

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Dick Dubiel, and that was the first indication that some-

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thing had gone wrong because his normal starting time

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is not until 8:00.

10

Q Did you ask him whether something was wrong?

11

A Yes.

12

Q What did he tell you?

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A He said that Unit 2 reactor had tripped approxi-

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mately 4:00, 4:30, and they were having trouble main-

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taining boiler concentration in the primary system.

16

Q Is Mr. Dubiel usually called in when there

17

has been a reactor trip?

18

A Normally, no.

19

Q Do you know why he was called in on March 28?

20

A Directly, no, I don't.

21

Q Did you ask him why at that point?

22

A I was a little curious as to why he was here. He

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had mentioned that they believed they ruptured the

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reactor core drain tank rupture disc because the relief

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valve had lifted, and because of the fact that they had

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2 trouble maintaining boiler concentration. I believe
3 that is why he said he was called in.

4 Q So at that point you thought it was an
5 unusual trip?

6 A The trip itself, I did not think it was unusual.
7 The fact that we could not maintain boiler concentra-
8 tion, I did think was unusual.

9 Q At that point did he instruct you to under-
10 take certain tasks?

11 A No, because just following that I started receiving
12 high radiation alarms in Unit 1's auxilliary building.

13 Q And what did you do at that point?

14 A Myself and a technician went out with an instrument
15 to determine what the radiation levels were at that
16 time and where they were coming from.

17 Q Was this the first time that the high radia-
18 tion alarms had gone off?

19 A In what time frame are you talking about, compared
20 to normal occurrence?

21 Q Well, no, why you had been called as
22 radiation foreman?

23 A We have had -- radiation alarms can go off because
24 somebody is carrying a high component near a detector.
25 I wasn't sure why the alarm went off. That is why ?

2 went out to investigate. The alarms have gone off
3 before, as I say, from moving a component or with some-
4 body walking with something that is radioactive.

5 Q So in the past the only instances you know
6 of these alarms going off have been connected to some-
7 body carrying something near to those alarms?

8 A In that particular detector, yes.

9 Q When a radiation alarm goes off, you know
10 which detector --

11 A It is an audible alarm. It is very easy to find.
12 This particular alarm that went off is an audible alarm.
13 It is very close in the vicinity of the HP lab and it
14 is very easy to find out which detector is alarming.

15 Q But the only way that you can determine
16 which detector is alarming is from hearing?

17 A No. Normally the control room has indication and
18 they would call me and tell me they have an alarm at
19 this specific detector.

20 Q On the morning of March 28 did they call
21 you and tell you which alarm was going off

22 A No, they didn't have a chance because I responded
23 immediately.

24 Q And you responded because you heard --

25 A I heard the alarm.

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Q And at that point you went to that detector

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to determine what the radiation level was?

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A Yes.

5

Q And what was your conclusion?

6

A Approximately 200 millirem per hour dose rate at

7

that detector coming from the Unit 2 sample lines.

8

Q So at that point by reading the radiation

9

level you can determine, one, the radiation level, and

10

where that radiation level was coming from; is that

11

correct?

12

A Yes.

13

Q Was that radiation level high?

14

A Yes.

15

Q What did you do at that point?

16

A We returned back to the Unit 1 health physics lab

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and instructed the technician to secure the recirc lines

18

to the primary chemistry lab. I secured the recirc

19

sample lines.

20

Q Would you explain what that means?

21

A The normal sample lineup, when you are drawing a

22

sample, a sample comes over from Unit 2 into Unit 1's

23

primary chemistry lab and then returns through the

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recirc lines back to the unit, and it is a continuous

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circuit. When I determined the high dose rate, I had

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them stop the recirc flow. We no longer had unit 1's primary fluid running through the lines.

Q Why did you do that?

A To minimize the dose rate because the dose rate would also go up in the primary chemistry lab.

Q Is the Unit 1 health physics lab the lab for Unit 1 and Unit 2?

A No.

Q There are two separate health physics labs?

A Yes.

Q But the sample also comes into Unit 1?

A The samples come into Unit 1's primary chemistry lab which is adjacent to Unit 1's health physics lab. There is only one primary sample lab for both units.

(Continued on following page.)

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3 1c

2 Q At that point, after you instructed them to
3 stop the recirculation, what did you do next?

4 A I notified the control room of the situation,
5 notified I executed the recirc, and that I had a high
6 dose rate at that particular detector.

7 Q Who did you notify in the control room?

8 A Control room operator. I don't know his name.

9 Q Would you do that by telephone?

10 A Yes.

11 Q Did they instruct you to do anything at
12 that point?

13 A Not at that time, they didn't.

14 Q To whom did you report next?

15 A Dick Dubiel was right there.

16 Q And did he instruct you to do anything at
17 that point?

18 A Not at that point. I did initiate some action.

19 Q You did not initiate --

20 A I did initiate action at that point.

21 Q What was that?

22 A Obtained a technician and went through Unit 2's
23 auxiliary building to determine the dose rate in the
24 auxiliary building.

25 Q What did you find upon doing that?

2 A An increase in the dose rates in various areas.

3 Q Could you ascertain why?

4 A At that time, no.

5 Q So that your actions were just to measure
6 those dose rates?

7 A Yes.

8 Q And to whom did you report those dose rates?

9 A Dick Dubiel and to the control room.

10 Q How are these recorded?

11 A Initially I didn't record any.

12 Q You reported to him orally what you found?

13 A Yes.

14 Q And what did he do with that information?

15 A I don't know.

16 Q Did he instruct you to do anything at
17 that point?

18 A At that point, I was to return to Unit 1 Health
19 Physics Lab. He had set up -- an emergency had been
20 declared, and we were proceeding to our emergency
21 stations.

22 Q Was this a site emergency or a general
23 emergency?

24 A I think at that time it was site.

25 Q And pursuant to emergency procedures, you

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2 were to go back to Unit 1 Health Physics Lab?

3 A Yes.

4 Q And what were your responsibilities in
5 Unit 1's Health Physics Lab?

6 A I became the emergency control station person
7 in charge.

8 Q And what do those responsibilities entail?

9 A Setting up the emergency survey team, setting
10 up the emergency repair party, sort of coordinating
11 the evacuation of the auxiliary building, setting up
12 the accountability of personnel, just going generally
13 into the emergency plan.

14 Q Had this been rehearsed, so that you knew
15 what your responsibilities were?

16 A Yes.

17 Q How many people at that point were in
18 the Unit 1 Health Physics Lab?

19 A Approximately 8 or 9.

20 Q And they all reported to you?

21 A Yes.

22 Q And from whom at that point were you getting
23 further instructions?

24 A I was obtaining no instructions at that time; I
25 was just going into emergency procedures.

2 Q Were you reporting back to anybody?

3 A No, not at that time.

4 Q Is that pursuant to the emergency plan?

5 A Initially, yes, until communications is set up.

6 Q And what specific actions did you take

7 at that point to implement the plan?

8 A My first action was to try to get survey teams

9 assembled, off-site survey teams.

10 Q And were you able to do that?

11 A Yes.

12 Q Would that be Met Ed personnel off-site?

13 A Yes.

14 Q Or contacting other local people?

15 A No, my own Met Ed technicians.

16 Q And was that group made up of the eight

17 or nine people that were in the Health Physics Lab

18 at that point?

19 A Yes.

20 Q And you proceeded to send some of those

21 people off-site?

22 A No. Initially I sent them up to the service

23 building to break open the emergency kits and check

24 out the equipment.

25 Q And after they did that, did they report

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back to you?

A No, they had phone -- they had walkie-talkie communications, and they just stayed there until I needed them.

Q So that initially their responsibilities were to check out --

A The equipment and wait for instructions.

Q And after they checked it out, did you contact them?

A No. At that time, my immediate supervisor came in and took charge.

Q Which would be whom?

A Don Mulleavy.

Q At that point he took over the responsibilities of implementing the emergency plan?

A Yes.

Q And you reported to him?

A Yes.

Q What specific responsibilities did he give you at that point?

A At that point, mainly I monitored communications, ensured survey teams were properly dispatched, and just generally stood by.

Q When you indicate that you monitored

2 communications, is that between you and the people
3 that you were sending off-site?

4 A Yes.

5 Q Anybody else?

6 A The control room.

7 Q Do you know whom you were speaking with
8 in the control room?

9 A The designated phone talker. Exactly his name,
10 no.

11 Q Was it the same individual every time you
12 contacted the control room?

13 A Yes. They had manned the phones, and there was
14 a designated phone talker.

15 Q Was there any kind of a problem in
16 contacting the people you needed to contact?

17 A No.

18 Q And you were getting your instructions from
19 your immediate supervisor at that point?

20 A Yes.

21 Q How long did you stay on-site that day?

22 A Approximately 18 hours.

23 Q That would be until about midnight?

24 A Yes, one o'clock, around there.

25 Q And when did you have to report back to

2 work after that?

3 A The following morning, initially.

4 Q The following morning at 6:30?

5 A 8:00, but I was sent back home.

6 Q When you arrived the next morning,

7 you were sent back home?

8 A Yes.

9 Q Were you told why?

10 A Yes, to come out at three o'clock.

11 Q Three o'clock that afternoon?

12 A Yes.

13 Q Did they explain to you why there was

14 that change?

15 A Yes. They were putting us, trying to get some
16 facsimile of round-the-clock coverage while maintaining
17 enough people with rest.

18 Q During your responsibilities monitoring
19 communications and ensuring that people were sent
20 out, dispatched to off-site, did anything unusual
21 occur?

22 A Well, the whole morning was unusual because
23 nobody understood, really, what was going on at that
24 time, why we were having the dose rates we were having,
25 the activity we were having. That was not understood

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yet, so the whole thing was unusual.

Q Were you reporting back to the control room as to the dose rates that you were receiving?

A Yes. The control room was made aware.

Q And whose responsibility would it be to determine why you were receiving such high dose rates?

A The control room ECS director.

Q Were you communicating with him?

A No.

Q On what basis did you know that these dose rates were high?

A Based on routine surveys prior to this.

Q So that in the normal course of business, you perform surveillance tests and measure the dose rates in certain areas; is that correct?

A Yes.

Q Are records kept of these?

A Yes.

Q Who would maintain these records?

A HP Department.

Q For how long are they maintained?

A Permanently.

Q Permanently?

A Yes.

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Q Did you go back to these records to measure the dose rates?

A No.

Q You just knew in your head what the normal dose rates had been and compared the dose rates that you were receiving?

A Yes.

Q By what do you measure these dose rates?

A Various radiation detection instruments, Teletector, RO2A, RO2, Ebberlee E520.

Q And all these instruments were available to you?

A Yes.

Q Well, when you dispatched people to determine whether or not the emergency equipment was available, did they find it available?

A Yes.

Q And everything that was needed pursuant to the emergency plan was there?

A As far as I can remember, yes.

Q Do you know what type of health physics procedures are implemented at any other nuclear power plant?

A No.

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Q Have you ever talked with other people at other nuclear power plants to determine what kind of procedures they have?

A No.

Q Do you ever have contact with any of the people at other nuclear power plants?

A No.

Q Do you know how often the radiation levels were measured in the TMI plant?

A Survey frequencies?

Q Excuse me?

A The survey frequencies?

Q Yes.

A How often? Depends on the area you measure. On some areas, they are longer as far as time, and some areas are shorter.

Q Who determines who frequently measurements are taken?

A In most cases, myself.

Q Is this pursuant to any requirement that you make that decision, or is it in your own judgment?

A It depends on the dose rate found. If it is in an area where it is expected that dose rates will vary, then my frequency is increased. If it is in an area

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where I don't expect a change in dose rates, then it is not that frequent.

Q Is there any requirement set down as to a minimum of how frequently you should measure?

A Nothing really formal, no.

Q Is there any informal --

A Informally, we have our own limits. Generally once a week in low-level areas.

Q Who set down that informal requirement?

A HP Department as a department.

Q Would that be Mr. Dubiel?

A Yes.

(Continued on Page 25.)

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Q Are you the only individual that would do that measuring?

A I don't actually do the measuring; the technicians do.

Q And you direct them?

A Yes.

Q And those records are kept indefinitely?

A Yes.

Q In the Health Physics Department?

A Certain portions are kept in the Health Physics Department for a certain amount of time. After that I believe they are microfilmed.

Q And in the past you stated that radiation level alarms had gone off?

A Yes.

Q But only in instances where somebody had passed something by that alarm?

A That is generally the case, yes.

Q Do you remember specifically if there has been a time when they had gone off where that has not been the case?

A It had malfunctioned.

Q Who would that be reported to?

A Control.

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Q And how quickly would those instrumental malfunctions be corrected?

A Quickly. We reported to HP Department and they would send a man out.

Q When you say "quickly," is that a day, two days, a week?

A Within a day, depending on the complexity of the problem.

Q And how would you be sure that it was an instrument malfunction?

A Take a dose of the rate of the area and compare it to what the meter reads.

Q Take a dose rate with another instrument?

A Yes.

Q Do you know if when the plant went critical if there were dose rates taken at that time as a control to measure dose rate?

A You are talking initial criticality?

Q Yes.

A At various stages of Unit 2 operation, dose rates were measured.

Q And those records would be kept?

A Yes.

Q And since the accident are dose rates

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2 continually taken?

3 A In Unit 2?

4 Q Yes.

5 A Not actually continually; on the need basis,
6 depending on what the previous dose rate is. That is
7 approximately as we say because there are so many
8 factors now concerning Unit 2 that, you know, it is
9 not all cut-and-dried for one whole section. It is
10 dependent on the job, dependent on the need to take dose
11 rates, dependent on the personnel going in there.

12 Q You are not involved with that?

13 A Not anymore, no.

14 Q Since when have you not been involved with
15 that?

16 A Approximately a month and a half or two months.

17 Q And why have your responsibilities changed?

18 A I was changed to Unit 1 Health Physics.

19 Q Do you know why that decision was made?

20 A Yes.

21 Q Why.

22 A They needed help in Health Physics for Unit 1.

23 Q How has previously been in Health Physics
24 Unit 1?

25 A Keith Vez and Robert McCann.

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Q And were they no longer in that position?

3 A

One wasn't, yes.

4

Q Which one was not?

5 A

Which one was not?

6

Q Yes.

7 A

Robert McCann.

8

Q And he left Met Edison?

9 A

No.

10

Q Was he transferred to another position?

11 A

Yes.

12

Q Which position was he transferred to?

13 A

Rad waste foreman.

14

Q Do you know why he was transferred to that

15 position?

16 A

There was a position available. He requested it.

17

Q Do you know what the procedures are for

18 transportation of waste out of TMI?

19 A

Of waste specifically?

20

Q Yes.

21 A

The radiological shipping procedures, yes.

22

Q Are you involved with those procedures?

23 A

Yes.

24

Q Could you explain what those procedures are?

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MR. YUSPEH: Could you tell me what kind

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of waste you are talking about?

MS. GOLDFRANK: Radiological waste.

MR. YUSPEH: Low level?

MS. GOLDFRANK: Yes.

A CFR49 has six different classifications. It is very hard on a general basis to talk about shipments.

Q Can you explain to me what the different classifications are?

A You have got limited class. You have got LSA class materials. You have got NOS class materials. You have got Type A material and Type B material. You have got eight groups of materials, different groupings depending on the isotopic content. It is complex.

Q And these materials are divided up pursuant to the regulatory requirements?

A They are not divided up. The material is analyzed to determine what category the material falls into.

Q And depending upon which material, which division it falls into, certain different procedures are prescribed as to how it is to be transported from TMI?

A The Federal regulations prescribe various packaging for various types of materials, various controls for various types of materials, various labelling for

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2 various types of materials.

3 Q And who would draft the procedures at TMI
4 to insure that the regulatory requirements are kept?

5 A You are talking at the present time or prior to
6 March 28?

7 Q Prior to March 28.

8 A Prior to March 28, the Health Physics organization.

9 Q And would you have input into those?

10 A Yes.

11 Q So that the Health Physics organization
12 would have drafted these procedures, and you did have
13 input into those procedures?

14 A No. I said I would have drafted. I didn't have
15 input. Those procedures had been in existence before I
16 got here.

17 Q What would happen if those procedures needed
18 to be revised?

19 A I could revise them.

20 Q And who would review those?

21 A That particular procedure would be reviewed by
22 the PORC committee.

23 Q Would you consult anybody concerning your
24 revisions?

25 A Yes. If I had questions, I would consult my

4.7

1 supervisor or another foreman.

3 Q Another Health Physics foreman?

4 A Yes.

5 Q Would Mr. Dubiel sign off on your suggested
6 revisions before it went to PORC for approval?

7 A Mr. Dubiel or Mr. Mulleavy would have to sign off.

8 Q Since the operation of Unit 2, has he made
9 suggestions in revising the procedures?

10 A Any procedures?

11 Q Concerning the transportation of radio-
12 active material.

13 A No.

14 Q Has anybody else made suggestions to revise
15 these?

16 A I don't know.

17 Q Do you know if the procedures have been
18 revised?

19 A At the time present time, they are in revision
20 now.

21 Q Prior to March 28.

22 A Minor revisions to reflect changes in CFR49.

23 Q And who would have initiated those changes?

24 A It could have been anyone.

25 Q It wasn't you?

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2 A No.

3 Q Do you know when radioactive waste is
4 transported out of TMI if State or Federal officials
5 are notified?

6 A Prior to March 28?

7 Q Yes.

8 A State or Federal officials, no.

9 Q Who would have been notified?

10 A The receiving facility.

11 Q Which is which facility?

12 A It could be Barnwell, South Carolina. It could
13 be Washington -- whoever is receiving the rad waste.

14 Q Do you know if there is a State or local
15 or Federal requirement that where there is transporta-
16 tion of such materials that they be notified?

17 A No.

18 Q And is the Health Physics Department respon-
19 sible for that transportation?

20 A My responsibility is to insure that when it leaves
21 it has the proper forms in the possession of the driver
22 and his truck is properly marked and his material is
23 properly packaged as the receiving facility is aware
24 that they are receiving the shipment.

25 Q And are all those requirements, all those

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2 specific things that you check on, are those require-
3 ments pursuant to the procedures?

4 A Yes.

5 Q And is there a form that you complete at
6 the time a shipment leaves?

7 A Yes.

8 Q Who is that form delivered to?

9 A That form, two copies of the form with originals
10 get sent with the driver. One copy is for his shipment.
11 The other is for the receiving facility.

12 Q Do you keep any form?

13 A Yes, I keep a copy.

14 Q Who is that given to?

15 A Health Physics organization keeps a copy.

16 Q And do you know for how long that is
17 maintained?

18 A Indefinitely.

19 Q Can you tell me how frequent there have been
20 transportation accidents?

21 A In shipments that I have sent?

22 Q Yes.

23 A One accident that I know of.

24 Q Could you explain when that was?

25 A I don't remember. Last year sometime, in the

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5.10

2 beginning of the year.

3 Q Last year, meaning 1978?

4 A '78.

5 Q And could you explain what happened in that
6 accident?

7 A There was nothing wrong with the vehicle. We were
8 sending a liner out and the liner had leaked.

9 Q And what happened?

10 A A foreman and two technicians proceeded out to
11 the truck where it was located, surveyed the truck,
12 surveyed the liner, surveyed the road, the path that he
13 had taken, and found no detectible radiation on the
14 highway.

15 Q Where was he located?

16 A Somewhere on Route 81. I don't know the exact
17 location.

18 Q And where was he going?

19 A That particular shipment, I can't remember.

20 Q And Route 81, that means he was not far from
21 TMI?

22 A He was a distance from TMI.

23 Q Do you remember how far he was?

24 A No. I wasn't involved in that.

25 Q You were not involved in the investigation?

2 A Of that particular shipment, no.

3 Q Have you ever been involved in an investi-
4 gation in a transportation accident? .

5 A No.

6 Q How did you learn of this particular accident?

7 A Through a person who was involved with it as the
8 Health Physics member.

9 Q And he just mentioned it to you?

10 A He mentioned it to me that he had gone out that
11 evening with the survey team, and I worked with him,
12 so I knew about it.

13 Q So it was really just an informal discussion?

14 A With me, yes.

15 Q Would you be formally informed of that kind
16 of accident?

17 A Yes. It wasn't really an accident. It was more
18 a problem with solidification process. The sample
19 wasn't totally solidified, and they had a leak through
20 a liner. It was a problem with the packaging. The
21 packaging was not leak tight. It wasn't really a trans-
22 portation accident as such.

23 Q But in the normal course of business would
24 you have received the forms filled out reporting such
25 an incident?

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2 A No.

3 Q Are there forms completed?

4 A Yes, that is, in an incident like that there would
5 be forms completed.

6 Q But they would not be --

7 A They would not.

8 Q They would not be transported to you?

9 A No.

#6 10 Q And as a result of that incident, do you
11 know what remedy was taken?

12 A Specifically, no.

13 Q What did you do to insure that another
14 incident like that would not occur?

15 A That is something that I do not insure. That is
16 something that is insured through the people involved
17 with buying the containers, with the type of containers
18 they buy and things of that nature. I had no dealings
19 in that.

20 Q And when a form would be completed
21 concerning this incident, it would be sent to such
22 people?

23 A I don't know who it would be sent to. That is on
24 the paperwork. I am not informed of that. I don't get
25 involved in that.

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2 Q How would you insure that the next shipment
3 of waste that you were concerned with would not confront
4 the same kind of incident, the same problem?

5 A My supervisor would inform me of the changes that
6 had been made pursuant to the accident, and him plus
7 other individuals would get involved, and they would
8 make assurances as far as how the packaging went.

9 Q Do you know if they informed you of changes
10 subsequent to this incident?

11 A No, because those liners are the responsibility
12 of the rad waste people, and I am not in rad waste.

13 Q So that you assume that the rad waste people
14 would have taken care of the liner problem?

15 A The rad waste works for the same boss as I do, so
16 supervisor through rad waste would have assured them
17 that the problem is solved.

18 Q Did you check whether or not the problem
19 was solved prior to sending out another shipment?

20 A I personally check? No.

21 Q But your superior never informed you as to
22 the results of this incident?

23 A I knew they had made changes. I assumed the
24 changes they made were correcting the problem.

25 Q How did you know they made changes?

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2 A Discussions.

3 Q Informal discussions?

4 A Yes.

5 Q With people in rad waste?

6 A In rad waste, and my supervisor.

7 Q There was nothing formally sent to you?

8 A No.

9 Q Are there staff meetings in the Health
10 Physics Department?

11 A Yes.

12 Q And who would chair those meetings?

13 A Dick Dubiel.

14 Q How often are these meetings held?

15 A Generally there is a department meeting once a
16 month.

17 Q And what kinds of things are discussed there?

18 A Problems we are having, improvements that we
19 should make, just anything at all related to the depart-
20 ment is discussed.

21 Q How many people would attend this meeting?

22 A All of the staff that would be there presently,
23 which would be all the health physics foremen, all the
24 chemistry and all the rad waste foremen, my supervisor.

25 Q Which would be how many people?

2 A Approximately maybe 10 people.

3 Q And were these meetings worthwhile?

4 A Yes.

5 Q At such a meeting would incidents such as
6 we were referring to previously concerning the trans-
7 portation, would such incidents be discussed?

8 A Yes.

9 Q Do you remember if that particular incident
10 was discussed?

11 A Offhand, no, I don't remember.

12 Q Are there minutes kept of these meetings?

13 A I am not sure.

14 Q Is there a secretary of these meetings?

15 A No.

16 Q Do you keep notes of those meetings?

17 A I keep notes if something pertains to me.

18 Q Do you retain those notes?

19 A Generally not.

20 Q Could you tell me if there is routinely
21 off-site monitoring of the radiation levels?

22 A Yes.

23 Q Are you in charge of that?

24 A Nobody is really in charge of it specifically.

25 It is a surveillance that has to be done. Occasionally

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2 I might assign an individual to do it.

3 Q How is it insured that it is done?

4 A One of the foremen will assign a technician and
5 perform an environmental survey. That person will be
6 assigned by the foreman and will pick up the forms and
7 take a truck and do the survey.

8 Q One individual does this?

9 A Yes.

10 Q And where off site does he monitor?

11 A Various locations.

12 Q The same locations each time?

13 A Yes.

14 Q Who determines what locations are monitored?

15 A It is in a procedure.

16 Q In the surveillance procedures?

17 A Yes.

18 Q And how often is this required?

19 A Once a week.

20 Q And he reports back to you on certain forms
21 as to what he found?

22 A Yes.

23 Q Do you know if this is required by the NRC?

24 A I don't know.

25 Q But it is required by the Met Edison

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2 surveillance procedure?

3 A Yes.

4 Q How do you know when a procedure should be
5 undertaken?

6 A There is a preventive maintenance schedule that
7 comes out stipulating that certain procedures are due
8 to be performed on a routine basis.

9 Q From whom does this come?

10 A From the computer room. That is all I can say.

11 Q Is it a computer printout that you would
12 receive?

13 A A computer printout that has a schedule of my
14 events that I am supposed to perform for the week.

15 Q So you receive this once a week?

16 A Yes.

17 Q And you report back to them as to whether
18 or not these surveillance procedures have been completed?

19 A There is a cover sheet that you sign that gets
20 sent back to them.

21 Q So after you had assigned the surveillance
22 procedures to an individual and the individual has
23 reported back to you, you would then check off that
24 you had completed these procedures and sent it back to
25 the computer people?

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2 A Yes.

3 Q And does that have to be sent back within
4 that week?

5 A There is a time frame that it has to be done in.

6 Q Do you always complete it within that time
7 frame?

8 A Yes.

9 Q You have never been unable to complete it
10 within the time frame specified?

11 A Are you specifying environmental procedures or
12 any procedures?

13 Q Any procedure.

14 A No, there are procedures that I don't get done in
15 the time frame.

16 Q And which procedures would those be?

17 A Offhand I don't know of any specifically, but over
18 the course of years you can't meet everyone exactly on
19 time. They are outside.

20 Q For what reason would you be unable to meet
21 certain time frame requirements?

22 A You could be broke down, unavailability of parts
23 for a specific instrument, a number of reasons.

24 Q What other reasons would there be?

25 A Most of the time it is equipment breakdown.

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2 Q And if there is equipment breakdown, that
3 would be reported to somebody?

4 A Yes.

5 Q To whom would that be reported?

6 A To the supervisor so the work can get initiated
7 to repair the piece of equipment.

8 Q When you complete these forms to send out
9 to the computer, would they be notified of the reason
10 why you have been unable to complete the surveillance
11 procedures?

12 A Yes.

13 Q Would they then send you another computer
14 printout saying that this procedure should be completed?

15 A If I turned in a procedure that I know is not
16 complete because of equipment breakdown or whatever,
17 okay, they are not going to notify me that it is incom-
18 plete. I know that, and I turned it in as incomplete.

19 Q Would they do any kind of follow up?

20 A Certain procedures, certain actions are required,
21 when it is not complete, for administration.

22 Q What action?

23 A Some are reportable to the NRC and some are not
24 reportable. Others are off-site analysis that have to
25 hit, and if I can't analyze something because my

1
2 equipment broke down, I have to send it off-site, and
3 then it is going to take longer for the procedure to
4 be done. There are various things.

5 Q In the instance where there is a non-report-
6 able surveillance procedure that you have been unable
7 to complete, what kind of follow up is done on those?

8 A Well, if it can be repaired, then the procedure
9 stays open until I get the data after the completion
10 of the repair. If it is incomplete or
11 it cannot be repaired or for some
12 reason it can never be completed, okay, then it is
13 reported as such.

14 Q Reported back to whom?

15 A That I don't know. I don't know. You are getting
16 back into the paperwork end. I am not involved in
17 that.

18 Q Would that be your two bosses who would be
19 the ones involved in that?

20 A Dick might be, yes. Dubiel would be, yes.

21 Q And concerning reportable surveillance
22 procedures that you are unable to complete, what
23 happens to those?

24 A I don't know who makes the report.

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Q You do not make the report?

A No.

Q Are you consulted?

A I could be consulted as to why it can't be done.

Q What equipment is used in this off-site monitoring of radiation levels?

A There are fixed monitors located throughout that continuously monitor the air. I send a technician out to check those. They are fixed air monitors. They change the filters and collect water samples, and we send them out for analysis.

Q Where are these fixed monitors located?

A There is Goldberg. There is one at Falmouth/Collis Substation, Columbia Marietta -- there is more of them. They are on a list.

Q Where would that list be?

A In the procedures.

Q The surveillance procedures?

A In the HP procedures.

Q And one individual goes out and collects?

A Collects all the samples.

Q How long does it usually take him?

A A day.

Q And how soon after that is this analysis

7.2

1
2 completed?

3 A That day they are sent out to an outside agency
4 for analysis.

5 Q Where are they sent?

6 A Either to Teledyne or Radiation Management.

7 Q Did you not have the facilities to analyze
8 them?

9 A Not for those, no.

10 Q How soon do you get their analysis back?

11 A That generally varies with the amount of samples
12 they receive from other sources, other samples I might
13 have sent for analysis, and that can vary anywhere
14 from a week up to a couple of months.

15 Q In certain instances, it has taken a couple
16 of months to get that back?

17 A Yes.

18 Q Usually because of their backlog?

19 A In a lot of cases yet.

20 Q What other reason would there be?

21 A None.

22 Q Who decided where the off-site monitoring --

23 A Where they are located?

24 Q Right.

25 A I don't know.

7.3

- 1
- 2 Q It was not your decision?
- 3 A No.
- 4 Q You don't know who decided?
- 5 A No.
- 6 Q You have no input into that decision?
- 7 A No.
- 8 Q Periodically, is there a comparison done
- 9 as a result of these samples taken?
- 10 A All of the samples should be background. If
- 11 there is anything that shows up on them, then we
- 12 look at them.
- 13 Q Has there ever been an incident where
- 14 something has shown up?
- 15 A I don't know.
- 16 Q You do not know of an instance?
- 17 A I don't know of any, no.
- 18 Q Would that kind of thing be reported to you?
- 19 A To me? No.
- 20 Q Who would it be reported to?
- 21 A Dick Dubiel.
- 22 MR. YUSPEH: Off the record.
- 23 (Discussion held off the record.)
- 24 (A brief recess was taken.)
- 25 Q On March 28th, did you ever go to the

7.4

2 control room yourself?

3 A Yes, Unit 1 control?

4 Q Unit 2.

5 A Unit 2 control, no.

6 Q Generally, do you have contact with Gary
7 Miller? Did you have contact with Gary Miller prior
8 to March 28th?

9 A Directly, no. I don't have any contact with him.

10 Q Do you have direct contact with Mr. Logan?

11 A I do, yes.

12 Q Under what circumstances?

13 A Prior to March 28th, I was Health Physics No. 2
14 foreman, and Mr. Logan, being No. 2 superintendent, was
15 very frequently there and would occasionally converse
16 directly with me.

17 Q On what issues would he talk to you
18 directly.

19 A Various issues concerning the Health Physica
20 organization, Unit 2 area, surveying conditions of
21 the auxiliary building, things that he required, that
22 he wanted done.

23 Q He would talk to you and not go to
24 Mr. Dubiel?

25 A On occasion he would talk to me.

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Q About specific concerns he had?

3 A

Mainly specific jobs he wanted done.

4

Q These would not be put in writing?

5 A

No.

6

Q It was a job request that he would orally

7

request to you?

8

A Yes.

9

Q These are things he wanted done?

10 A

Yes.

11

Q Would you report back to him having com-

12

pleted those?

13

A On a case basis, yes.

14

Q Do you remember any specific things that he

15

asked you to do?

16

A Yes, the auxiliary building needed to be cleaned.

17

The floors were getting dirty. There was a pile of

18

wood he wanted moved, or he wanted me to check the

19

posting on a couple of doors to make sure they were

20

correct, things of that nature.

21

Q Do you know if, prior to the construction

22

of TMI 2, monitoring was done to know what the exact

23

radiation level was at that point?

24

A In Unit 2?

25

Q Yes.

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A Prior to the construction?

Q Right.

A Prior to the construction, it was just land.
There was no reason to survey it.

Q So that only once construction began or
there was fuel loading, was there monitoring done at
that point?

A Yes. Once fuel comes on-site, that is when we
start the monitoring.

Q That is the first time that you would be
monitoring?

A There are background levels determined, nothing
very specific. There is no requirement to do radia-
tion surveys unless there is a suspected reason. The
suspected reason in this case is we received fuel. So
prior to fuel, there is no requirement and no real
logical reason to do surveys.

Q But you mentioned that there was background
monitoring.

A Yes, that was mainly as a result of Unit 1 being
operational.

Q Would a record be made of those background
monitors?

A There were some readings in the vicinity of

1
2 Unit 2 that are probably on Unit 1's records, yes.

3 Q When you discuss monitoring, this is moni-
4 toring of the air and water supplies in the area?

5 A Yes.

6 Q What else would be monitored?

7 A You were talking about on-site or off-site?

8 Q Both.

9 A Off-site, you are talking about the normal
10 environmental program, in which we are monitoring the
11 river upstream and downstream of the Island and moni-
12 toring the localities in the vicinity of the Island.
13 On-site, you are talking about surveys performed in
14 the service building area, outside of the control area,
15 in Unit 1, which is done semiannually. You are doing
16 routine surveys in the control room which are done
17 on a weekly basis and sometimes daily. There are a
18 varied number of surveys that are performed.

19 Q Is there anything besides air and water
20 monitored off-site?

21 A There was vegetation and milk samples being done,
22 but I don't remember who has the results.

23 Q That would not be your responsibility?

24 A No.

25 Q Do you know whose responsibility that

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Deman

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2 would be?

3 A No.

4 Q Your responsibility was limited to air
5 and water?

6 A My responsibility was limited to following my
7 own procedures, which were the air and water samples
8 of the monitoring.

9 Q Do you know why that decision was made?

10 A No.

11 Q Do you know who made that decision?

12 A No.

13 Q Was that decision incorporated into any
14 surveillance procedures?

15 A I don't know.

16 Q Do you know how the exposure of the popu-
17 lation in the area was measured as a result of the
18 accident on March 28th?

19 A I have seen the final brochure that was put out
20 to the public concerning the exposure in concentric
21 circles from the Island, as far as distance. Exactly
22 how that determination was made, no, I did not
23 any input on that.

24 Q Do you know who was measuring that exposure?

25 A Met Edison, NRC, contracted personnel, NSS -- a

1

2 number of people.

3

Q Are you responsible in any way for that
4 measurement now?

5

A No.

6

Q Do you know to whom it is reported?

7

A The Emergency Control Director receives all
8 direct outside dose rates.

9

Q Do you know who is doing this measuring
10 for Met Edison?

11

A I don't know if we have any teams still doing
12 measuring outside of the area.

13

Q Who put out this brochure to the public
14 that you mentioned?

15

A I don't know.

16

Q Was it put out by Met Edison?

17

A Met Edison, yes.

18

Q Did you have any input into that brochure?

19

A No.

20

Q And you don't know who did?

21

A No.

22

Q Prior to March 28th, in your duties, did
23 you have any direct contact with NRC?

24

A Yes.

25

Q With who at NRC?

- 1
2 A NRC inspectors would come and inspect the plant.
3 Most of the time it was Mr. Plumlee, I think.
4 Q And is he the only individual at NRC
5 that you would have contact with?
6 A No, there are other individuals that would come,
7 but he was the most frequent.
8 Q So that the only way that you had contact
9 with people from NRC was when they came into TMI?
10 A Yes.
11 Q And were they all inspectors?
12 A Yes.
13 Q And would you know prior to them coming
14 to TMI?
15 A No, they don't give us that luxury.
16 Q They don't give you advance notice?
17 A No.
18 Q They would just show up one day?
19 A Yes.
20 Q What was your contact with them while
21 they were here?
22 A Mr. Plumlee would come in, state what his function
23 was, why he was there, what he wanted to see, what
24 records he wanted to inspect, what areas he wanted
25 to inspect, and then I would give him my records and

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and go on an inspection tour with him.

Q How frequently would he come?

A That varied. That varied during the time when Unit 2 was under construction and Unit 1 was operational, and then it became frequent when Unit 2 was in the startup phase, trying to obtain operational license. It varied depending on what the plant was doing.

(Continued on Page 55.)

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2 Q Since December 30, 1978 how frequent would
3 he come, prior to March 28?

4 A I think since December I've seen Mr. Plumlee on
5 approximately three visits.

6 Q And --

7 A Maybe more.

8 Q Anybody else from NRC?

9 A He normally would bring another inspector with
10 him.

11 Q Did anybody from NRC come during that
12 period without Mr. Plumlee?

13 A It is possible. I wouldn't know.

14 Q You don't remember an occasion?

15 A I don't. You see, Mr. Plumlee would either get
16 in touch with me or get in touch with any of the other
17 Health Physics foremen. It depends on which supervisor
18 is assigned or for what reason he was there, whether he
19 was in Unit 1 or 2. There was a number of circum-
20 stances depending.

21 Q During the times that he came, would he
22 usually look at the same type of things and ask to
23 inspect the same issues?

24 A No.

25 Q It would change?

8.2

1

2 A It would change.

3 Q Was there any one area that he would look
4 into more than others?

5 A No, not unless he suspected something.

6 Q Was there an incident where he did?

7 A Not that I know of.

8 Q Do you remember certain specific things
9 that he did look into?

10 A He looked into the dosimetry records, radiation
11 work permit records, survey records, signs and postings
12 throughout radiation areas in the auxilliary building,
13 operating procedures. It varied.

14 Q Would he send you a written report as to
15 his evaluation?

16 A A written report would be filed, yes.

17 Q And would you get a copy of that?

18 A On a case basis, I might; not all the time.

19 Q Who would receive a copy of it?

20 A Dick Dubiel.

21 Q Would Dick discuss the report with you?

22 A Yes.

23 Q As a result of that report, were changes
24 ever instituted?

25 A Well, if it was a reportable incident to the

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2 A It would change.

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4 into more than others?

5 A No, not unless he suspected something.

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22 A Yes.

23 Q As a result of that report, were changes
24 ever instituted?

25 A Well, if it was a reportable incident to the

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2 Commission, we would have to make changes.

3 Q Do you remember certain instances that
4 occurred?

5 A No one case did. We had a violation of the posting
6 of an area. He reported that as a violation. We said
7 we would continue surveillance and post the area
8 properly and instruct people to be more careful in their
9 postings.

10 Q Was that an area within the plant itself?

11 A Within the control plant, yes.

12 Q Would Mr. Plumlee check your off-site
13 monitoring also?

14 A Yes.

15 Q Do you know if since TMI 2 was licensed
16 there had been changes in Federal regulations with
17 respect to off-site monitoring?

18 A Do I know that?

19 Q Yes.

20 A No.

21 Q Did you have any contact with the people at
22 Hershey Medical Center?

23 A No.

24 Q Who within your office would have contact
25 with them?

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8.4

2 A For what reason?

3 Q For any kind of surveillance activity.

4 A Dick Dubiel.

5 Q Did you have any participation in drafting
6 the emergency plan for TMI 2?

7 A No.

8 Q Were you ever consulted concerning that
9 drafting?

10 A No.

11 Q Do you know --

12 A Let me clarify one point. I have only been a
13 foreman since October of last year, so if any procedures
14 were written and things of that nature prior to October,
15 I definitely would not have had an input.

16 Q What was your position immediately prior to
17 becoming foreman?

18 A Health Physics and chemistry technician.

19 Q Did you have any involvement on March 28
20 with notifying other agencies?

21 A No.

22 Q Did you feel on March 28 during your
23 contact with the control room that people were in
24 control of this situation?

25 A Yes.

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2 Q Were you at any time consulted as to whether
3 or not a site emergency or general emergency should be
4 declared?

5 A No.

6 Q Do you know under what circumstances those
7 are declared?

8 A Those are declared according to conditions set
9 forth in the emergency procedures, that state when we
10 have various alarms, various dose rates, you now have
11 this type of emergency.

12 Q So there is never a need to contact any
13 individual?

14 A We meet the procedures and have the emergency.

15 Q Had there ever been a time prior to March 28
16 when an alarm would have gone off, maybe as you
17 explained earlier because somebody passed something by
18 a monitoring system that would go off, that conditions
19 were met that the site emergency should be declared?

20 A No, a site emergency is not declared until the
21 alarms that go off are verified. The monitor would go
22 off in my auxilliary building and the Health Physics
23 Department would get a phone call to verify the alarm,
24 verify the conditions.

25 Q And you received such a phone call on

1
2 March 28?

3 A On that initial alarm, no, because I responded
4 before anybody had a chance to call me.

5 Q So that when you responded, you indicated
6 to them that the monitor indicated that radiation levels
7 were high, and based on that, certain situations as
8 described in procedures were met, and therefore a site
9 emergency was declared?

10 A Not just based on that, but there are other
11 criteria that information and assessment is made by the
12 control room. They have the input for these require-
13 ments to declare that type of emergency.

14 Q Could you explain what arrangements are
15 made for worker protection in TMI 2?

16 A At the present time?

17 Q No, prior to March 28.

18 A Prior to March 28, anybody who wants to work in
19 radiation area or a contaminated area must fill out a
20 radiation work permit and a work permit must be filled
21 out by a technician and approved by a senior technician
22 on shift and then approved by the shift supervisor or
23 foreman.

24 Q And what kind of information does that
25 contain?

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2 A Radiation work permit describes the location of
3 the job, nature of the job and the requirements that
4 he must abide by to do that job. There are exposure
5 limitations.

6 Q And are you or is a particular individual
7 that works in that area then informed of certain
8 precautions that must be taken?

9 A He is given a copy of the radiation work permit,
10 and is required to read and understand a copy of that
11 permit before doing the job.

12 Q Is there any kind of explanation given to
13 him?

14 A Yes. The technician is there, filling out the
15 radiation work permit, and if there is any unusual
16 circumstances or any unusual precautions that he should
17 take, it will be explained at the time.

18 Q Are personal dosimeters used?

19 A Yes.

20 Q That is required by Met Edison?

21 A Yes.

22 Q And are they monitored only or are they
23 recorded?

24 A They are the dosimeters that record the readings
25 of these. You fill them out for each entry and also

2 fill out a radiation work permit.

3 Q This is filled out for every time you enter
4 that area?

5 A Yes.

6 Q Or every time you leave that area?

7 A Yes.

8 Q It is filled out, which one, when you leave
9 or when you enter?

10 A You log your initial reading in and log your
11 reading out, and the difference between the two is your
12 total exposure.

13 Q For you it is done every day that you come
14 to work?

15 A Not unless I go into a control area.

16 Q Would you do not do every day?

17 A I do just about every day.

18 Q What other kinds of personal monitoring are
19 done?

20 A Thermal luminescent, also called TLD.

21 Q Would you explain that?

22 A Lithium fluoride is contained in that badge. As
23 they are exposed to radiation, if you apply heat to
24 them, the more radiation they are exposed to, the more
25 light they give off. So depending on the amount of

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63

2 radiation, when you apply the heat to the badge, okay,
3 they will give off a varied amount of light depending
4 on what they were exposed to, and that light is
5 recorded and converted into an exposure.

6 Q And you have to wear one of these every time
7 you go?

8 A The way the present system is set up, I think
9 everybody on the Island is issued an TLD.

10 Q And how is that recorded?

11 A Once a month they get read by the machine, and
12 they read them and that gets put on a computer.

13 Q And those records are kept by whom?

14 A HP, mainly computer files.

15 Q Is there any other personal monitoring
16 besides?

17 A Just the dosimeter.

18 Q What is different in terms of the readings
19 that you get off these two instruments (referring to
20 dosimeter and TLD)?

21 A Okay. This is a very fine accurate badge. This
22 cannot be used to measure your exposure while you are
23 in an area.

24 Q Please, for the record, let me explain that.
25 Mr. Demam is referring to the TLD.

2 A The TLD cannot be used to monitor yourself while
3 you are there, only after the fact. This can be used
4 to monitor yourself while you are there, just by
5 looking into it and reading. It does not have the
6 accuracy of the TLD, but it does advise you, and you
7 can use it and limit a person to X amount of exposure,
8 and this is what you will use to judge perhaps the
9 second one, he will have this read for a more accurate
10 figure.

11 Q Could you tell me who establishes what
12 your exposure limit should be?

13 A Two sources: One, the Code of Federal Regulations
14 and, two, our own administrative procedures.

15 Q And what exactly is taken into consideration
16 aside from the Code of Federal Regulations in setting
17 these limits?

18 A In setting those limits, our administrative limits
19 are designed so that we don't exceed the Federal
20 regulation limits, and we also have some amount of
21 conservatism.

22 Q Who has set these limits?

23 A They are in the administrative procedure and I
24 assume the HP Department has set those limits. They
25 were set before I got here.

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2 Q And who is the department that is monitoring
3 to assure that those limits are not exceeded?

4 A The HP Department. Those limits apply to the
5 entire plant.

6 Q And any exposure outside of your exposure
7 at the plant is not included in that limit?

8 A If you are at a facility outside of the plant
9 that uses dosimetry monitoring devices, you will take
10 that into account, and they will send us a form, and
11 you, yourself, will bring us the form showing that you
12 have received this amount of radiation at the facility.
13 Yes, we have to take that into account. Any exposure
14 you receive for medical reasons, for instance, is not
15 taken into account, no.

16 Q And what arrangements are made for worker
17 protection concerning the clothing that is worn while
18 in an exposed area?

19 A The arrangement is that I maintain a laundry
20 supply, flight clothing supply.

21 (Continued on following page.)
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2 Q So that once you go into an area wearing
3 your work clothing and you come out of that, do you
4 remain in those same clothes?

5 A No. What happens is when you go into a con-
6 taminated area, you will put on an amount of clothes,
7 coverall, boots, hood, all right? You would go into
8 the area, and before you come out of that area, there
9 will be a step-off pad there.

10 That is your boundary between contaminated
11 area and clean area. At that point, you will
12 undress, put your clothing in containers that are
13 designated there and come across that clean area, then
14 monitor to yourself when you get to the HP lab, prior
15 to leaving control area.

16 Q And this system of taking off the clothing
17 that you have worn, with the hood and boots that you
18 would have worn in the contaminated area, is there
19 some kind of training or educational informative
20 session that has gone on that is explained to other
21 workers?

22 A Yes.

23 Q Who would hold those sessions?

24 A The Training Department and/or Health Physics.

25 Q Have you had input into the subject matter

1
2 of those sessions?

3 A Yes.

4 Q How often are those held?

5 A There is a requirement for general employee
6 training at least once a year, and under general
7 employee training, the radiation limits are gone over,
8 a refresher-type thing. Also for people who work in
9 the control areas that are designated RWB personnel,
10 that is, personnel expected to work in RWB areas, they
11 have to go through special instructions.

12 Q What is RWB?

13 A It is a designation saying that they are quali-
14 fied to go into control areas unescorted.

15 Q What about new employees?

16 A New employees, before they go into a control
17 area unescorted, must attend the RWB class.

18 Q And does Training teach those classes?

19 A Yes.

20 Q After having consulted with the HP people?

21 A Yes.

22 Q And are handouts given?

23 A No, not really.

24 Q How long are those sessions?

25 A I believe they are four-hour sessions.

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2 Q Are geiger counters in any way utilized?

3 A Yes.

4 Q For what purpose?

5 A Measuring radiation exposures.

6 Q Under what circumstances?

7 A These are common. Geiger counters are found in
8 your Eberline ES20 instrument, and that is a very
9 common survey instrument.

10 Q That is used in your surveillance procedures?

11 A It used very commonly, yes.

12 Q Were they available on March 28?

13 A Yes.

14 Q And they were utilized?

15 A Yes.

16 Q Where were they on March 28th; where were
17 they physically located?

18 A Your instruments are generally located in the
19 Unit 1 and Unit 2 Health Physics labs.

20 Q And where is the lab located?

21 A Unit 1 Health Physics Lab is located in Unit 1's
22 control tower, in the base of the Unit 1 control tower,
23 and Unit 2 Health Physics Lab is located in the Unit 2
24 service area, as it is called.

25 Q And were those two areas contaminated on

2 March 28?

3 A They became contaminated, yes.

4 Q And how would that affect the use of these
5 instruments?

6 A Those instruments it would not affect the use
7 of, so much. You could wipe them down and clean them
8 and get them out of the area. Those instruments can
9 be used.

10 Large fixed instruments that are in the lab,
11 yes, that did affect them.

12 Q Which instruments would that be?

13 A The GELI Detector, which is a multi-panel
14 analyzer. That is physically in the lab; it is hard
15 to take out. That can't be used. The tabletop
16 counting instruments that are on the table that are
17 not portable, they can't be used in that area. The
18 portable instruments you can take out, and clean them
19 and use them in that short a period of time.

20 Q The portable instruments that you could
21 take out, aside from the geiger counters, were there
22 any others?

23 A Yes. Geiger counters; Teletectors, which is
24 another form of geiger counter; an RO2, which is an
25 ion chamber instrument; RO2A, which is another ion

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chamber instrument with a modification to it, known
a a PIC-6, that is an ion chamber instrument; there
are a number of hand-held portable instruments.

Q And what would you have wiped them down
with?

A A rag, Vaseline cloth, which is an oil-impreg-
nated cloth, any cloth or a water-on-cloth solution.

Q And the instruments that were not portable
that you could not take out of that area, were they
instruments that you would have needed on March 28th?

A At the initial time of the accident, yes. We
would have liked to have multi-channel analyzers, that
GELI system I spoke of, but that was in the lab.

Q Any others?

A Basically, no.

Q What does that GELI detector do?

A A GELI detector identifies the isotopes, and a
survey instrument will give me the dose rate, whill
tell me what the dose rate is, but it will not identify
what specific isotopes I have. A GELI detector is
a panel analyzer, and based on the energy of each
different isotope, they will analyze that and tell
you specifically what isotopes you have and how much
of each.

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2 Q Did you find another GELI detector?

3 A Yes. During the day, Radiation Management
4 Corporation made plans to bring down a mobile unit.
5 The NRC brought down a mobile unit. We had two or
6 three mobile units come down from various places.

7 Q Did you contact those parties?

8 A No.

9 Q So as a result of the unavailability of
10 your GELI detector, you just went on with your tasks
11 with the instruments that were available to you?

12 A Yes. The GELI detector was not necessary for
13 me to do what I had to do. My concern was with the
14 dose rate, not individually what isotopes they were
15 at that time; primarily with the dose rate at the time.

16 Q Could you tell me if face respirators
17 are used in the plant?

18 A Yes.

19 Q Under what circumstances are those used?

20 A Under air activity requirements set forth in
21 CFR 20, based on two things: If the isotopes are un-
22 identified, there is an air limit. The gross activity
23 limit is 3×10^{-10} microcuries per milliliter or cc. of
24 air. That is the gross activity, unidentifiable
25 isotopes. If you can identify the isotopes, you go

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to what is known as MPC Log in CFR 20, and it specifies the limit for each individual isotope.

Q Since on March 28 you could not identify the isotope because you did not initially have this GELI detector, face respirators were used?

A Yes.

Q Were there enough respirators available?

A Initially, yes.

Q What happened?

A Well, we had a large number of people coming into the plant, you know, relieving the other people, plus we had no facilities at the plant to clean them, so we ended up with a backlog and we ran short. If you try to clean them, you can't use them right away, so that was out of the question at the time.

Q Why was it out of the question?

A There was no decontamination. The whole Island, theoretically, was a respirator island. Where are you going to clean it?

Q Where would they have been on March 28th?

A The main quantity of respirators would be located in both Unit 1 and Unit 2 Health Physics labs with an emergency allocation in the control room.

Q Due to the fact that on March 28th there

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were not enough face respirators, people came on the Island without using them?

A They were not allowed to go on the Island without a respirator.

Q So that people were told they could not come on the Island because they did not have a face respirator?

A We had minor holdups because of the lack of respirators, but at that time we got emergency shipments of respirators from some group that came in. So they were -- for a short period of time, we didn't have any, but following that, another shipment did come in.

Q Who arranged for that shipment?

A Warehouse personnel.

Q Do you know from whom they were shipped, do you know the vendors?

A Scott Aviation Company, Mine Safety Appliance Company. I think those are the major two vendors.

(Continued on Page 74.)

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2 Q Are these face respirators one size or are
3 there different sizes?

4 A They are mainly one size to go with the design
5 for being able to seal just about any face.

6 Q So that even people have, obviously,
7 different shaped faces and sizes, there is really one
8 size to fit all faces?

9 A There are different styles.

10 Q Could you explain, please?

11 A Well, if you are a person with a narrow chin or
12 hollow cheekbones, there is a respirator that is made
13 to fit that face much better than, say, a
14 aviation respirator.

15 Q And was there a problem in having available
16 the sizes that were necessary for particular individuals?

17 A On an overall basis, I would say no. Most of the
18 people were able to get a seal with the respirators.
19 There is a check that you make to see if you get a
20 seal by just holding your hand under the cannister and
21 inhaling. If you block out the air inlet and you
22 inhale and you feel the draw on your face, then you
23 have an adequate seal, and we had that on that date.

24 Q Were there instances where there were not
25 the right size respirators for certain people?

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2 A Not that I know of.

3 (Discussion was held off the record and
4 Mr. Phillip Stern representing the President's
5 Commission entered the hearing room.)

6 Q Could you tell me who kept health records,
7 who would be the individual that would keep the records
8 of the dosimeters?

9 A Health Physics organization.

10 Q And who would review these records?

11 A Health Physics supervisor or foreman.

12 Q That would be within your present respon-
13 sibility?

14 A Yes.

15 Q And Mr. Dubiel's?

16 A Yes.

17 Q And was that done with that review?

18 A On a normal basis prior to the 28th?

19 Q Yes.

20 A The monthly records would be reviewed and corrected
21 for error in the computer printout errors and lost
22 dosimeters, people that didn't turn in their dosimeters,
23 the exposure rate of individuals, if high exposures
24 would have been received, the overall records.

25 Q And these records were reviewed about once

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2 a month?

3 A Yes, when all the badges were read.

4 Q So every month they are read?

5 A Yes.

6 Q And analyzed?

7 A Yes.

8 Q And have there been instances where people
9 have been exposed to too much on a radiation level?

10 A Not in achieving the Federal limits that I know of.

11 Q Any exceeding the administrative level?

12 A With permission.

13 Q Excuse me?

14 A With permission.

15 Q Permission from whom?

16 A The Health Physics foreman and Health Physics
17 supervisor.

18 Q Under what circumstances would he give
19 permission?

20 A It would depend if the job had to be done by only
21 that individual, if there was no other competent indi-
22 vidual who could do that. It would depend on his
23 exposure for that particular quarter or that particular
24 year or that particular week.

25 Q Do you know instances where exceptions were

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given on Unit 2 since December 30, 1978 until March 28, 1979?

A Not specifically in Unit 2 because the plant personnel worked both units, so the exposure picked up that a person might receive for that quarter might not all come from Unit 2.

Q Do you know of certain instances where exceptions were given during that period?

A None that I gave that I can recall.

Q Are attendance records kept by the Health Physics people?

A Yes.

Q And illness reports?

A Yes.

Q On each employee?

A On my own technicians.

Q Are these illness and absence reports kept by any other office within the organization?

A Payroll.

Q Payroll would keep those?

A Yes.

Q Would that information from payroll be communicated to you?

A Not for personnel outside my department.

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78

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Q Concerning personnel in your department?

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A Yes. There are time slips and doctors' notes required to go from my department for signature before they go to payroll.

6

Q If somebody is reporting in sick for a period of time or even for one day, is an explanation required?

9

A Doctor's note, yes.

10

Q Every time that somebody reports in sick they are required to have a doctor's note?

12

A Yes.

13

Q And in that note is it required to explain?

14

A Not that I know of.

15

Q Do you know what is required to be in that note?

17

A The note is required to give proof that the person is available to come back to work and that he was under a doctor's care for the period of illness.

20

Q It is not required as to what that illness is?

22

A No, that is confidential between the doctor and the employee.

24

Q When an employee begins work, is there medical screening, a medical history taken of that

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2 employee?

3 A A new employee?

4 Q Yes.

5 A That would start?

6 Q Yes.

7 A I can only say for my own case, yes. I couldn't
8 say about all the employees in all the other depart-
9 ments.

10 Q Do you know about people, technicians,
11 under you?

12 A Yes.

13 Q And a medical history would be taken on
14 those?

15 A I can't answer that because I am not sure.

16 Q Do you know if there is a continual medical
17 history kept of employees?

18 A There is a yearly physical that we have to go
19 through for respirator protective devices.

20 Q Does Met Ed provide that physical?

21 A Yes.

22 Q On-site?

23 A Yes.

24 Q Is there any kind of psychological screening
25 done of new employees?

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A I am not sure of that either.

Q Was there any done for you?

A No.

Q Is there any psychological screening done during the course of employment at Metropolitan Edison?

A Not in my case, no.

Q Do you know of people that work for you who would have had such screening?

A Of the people that work for me, no.

(Continued on following page.)

2 Q Were you involved in any emergency plan
3 drills?

4 A Yes.

5 Q Can you explain when those drills occurred?

6 A On the same basis we are required to perform a
7 drill for the NRC.

8 Q When was the last time you performed your
9 drill for Unit 2?

10 A I think it was six months prior to the accident.
11 I can't exactly remember when.

12 Q Can you tell me what took place in that
13 drill?

14 A A scenario was worked up to come up with an
15 accident for Unit 2, and the emergency drill went
16 into effect, and the scenario was followed as far as
17 off-site monitoring teams, where they would be sent,
18 what exposures they would report back to personnel,
19 and actions that would be taken, simulation of repairing
20 parts in the building for failed parts that might have
21 caused the accident, things of that nature.

22 Q And did you know in advance this drill
23 was going to occur?

24 A I knew in advance when the drill would occur.

25 Q And who informed you that there would be

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81

2 a drill?

3 A My supervisor.

4 Q And what were your particular responsi-
5 bilities during that drill?

6 A AGain, it would be if I was a radiation chemistry
7 technician, and I would be responsible to the foreman
8 in charge of the emergency control station.

9 Q Do you remember specifically what your
10 responsibilities were during the drill?

11 A In certain drills, I was sent on the off-site
12 teams. In other drills, I was sent on the repair party
13 team. In other drills, I was assigned to chemistry
14 for sampling.

15 Q The latest drill prior to March 28, what
16 were your responsibilities then?

17 A I was in emergency control station, and I was
18 a foreman. I was under the direction of the emergency
19 control station director, which would have been Don
20 Mulleavy, I believe, and again it was monitoring
21 communications, assisting him in assigning teams,
22 generally working under him.

23 Q Similar to your responsibilities of
24 March 28?

25 A Yes.

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2 Q Was an evaluation done of this drill?

3 A Yes.

4 Q How was that evaluation conducted?

5 A There were observers who critiqued the drill
6 while it was in process. Then at the conclusion of
7 the drill, the observers had a meeting and went through
8 a particular critique.

9 Q Were you with people that participated in
10 the drill?

11 A No, just the observers themselves would get
12 together.

13 Q And were their conclusions communicated
14 to you?

15 A Certain ones, yes.

16 Q Which ones were those?

17 A In one case, there was a communications problem
18 that came up during the drill, and myself and a couple
19 of other individuals looked into solving that communi-
20 cations problem.

21 Q So particular problems that came up with
22 respect to responsibilities that you had were com-
23 municated to you?

24 A Yes. If they were within my realm of responsi-
25 bility, then I received input. If the were critiqued

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2 items directed toward other departments or other
3 areas, then I wouldn't have needed to have input.

4 Q Were these concerns communicated to you
5 directly by these observers?

6 A No, they came out under -- I think the observers
7 got together and they wrote a general critique form,
8 and that was generated to various supervisors, as far
9 as I am aware.

10 Q Did you see that written critique?

11 A I can't remember. I might have, but I can't
12 remember.

13 Q How were you informed of what the ob-
14 servers concluded?

15 A Discussions.

16 Q With whom?

17 A Some of the observers, some of the supervisors.

18 Q Did Mr. Dubiel go over with you this
19 critique?

20 A Yes.

21 Q Did anybody else formally discuss it with
22 you?

23 A No. It wouldn't be anybody else's responsibility
24 but Mr. Dubiel's.

25 Q And who were these observers?

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2 A That varies. At one time I was an observer.

3 Q There would be particular individuals
4 chosen to be observers of the drill?

5 A Yes.

6 Q Chosen from Metropolitan Edison personnel?

7 A Yes.

8 Q And how many observers would there be?

9 A That is hard to say. In my location in the
10 Health Physics Lab, you might have two observers there;
11 you would have maybe two observers that went out on
12 the off-site team, a couple of observers in the
13 control room, a varied number. The total number
14 I couldn't tell you.

15 Q These observers actually went with you
16 as you did your specific tasks?

17 A Yes.

18 Q Did they comment to you as you were
19 doing the task or after the task was completed?

20 A They commented to me as far as what I should be
21 simulating. On a drill, it is hard to simulate unless
22 you know what you are supposed to get. They would
23 give me instructions as far as what readings I am
24 supposed to be getting. They wouldn't tell me what
25 they are supposed to mean, but they would say, "At

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2 this point, you would receive this reading."

3 They would just give me instructions and wouldn't
4 really comment.

5 Q Did the people who are appointed as observers
6 rotate as these drills were performed?

7 A Yes, for the most part.

8 Q Were there certain people that were always
9 observers?

10 A I would say yes, three.

11 Q People in Training?

12 A Yes.

13 Q Who would appoint these observers?

14 A I don't know.

15 Q Do you know at the time you were an
16 observer who appointed you?

17 A No.

18 Q Who told you that you would be an observer
19 in that drill?

20 A Dick Dubiel, I think.

21 Q Do you know if, in the specific drill
22 closest to March 28, 1979, if off-site agencies were
23 involved in that drill?

24 A Off-site agencies were made aware that we were
25 having a drill, yes.

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2 Q Would they be contacted as to their spe-
3 cific roles if this had not been a drill?

4 A Yes, I believe they would have, in the emergency
5 plan.

6 Q Do you know if they were?

7 A No.

8 Q Did you have any contact with off-site
9 agencies during this drill?

10 A No.

11 Q In any drill, have you ever had any
12 contact with off-site agencies?

13 A No. It is not my responsibility.

14 Q Do you know how often medical facilities
15 were called on prior to March 28, 1979?

16 A For what, drill purposes?

17 Q For any backup facilities that were needed,
18 not for drill purposes.

19 A Just medical facilities?

20 Q Yes.

21 A I have no idea.

22 Q Do you know of any incident where they
23 were?

24 A No. That would be only through Safety.

25 Q Do you know who made the decision to

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2 evacuate workers from the plant on March 28?

3 A No.

4 Q Did you have any input into that decision?

5 A No.

6 Q Were you supplying information to anyone
7 within Metropolitan Edison on March 28th?

8 A What type of information?

9 Q Concerning radiation levels.

10 A In the emergency procedure, through this phone
11 talker in the control room, yes.

12 Q Is that the only person?

13 A Yes.

14 Q Did you communicate with anyone from GPU?

15 A No.

16 Q With the NRC?

17 A No.

18 Q Did you have any contact with anybody
19 from any other government agency, state or local?

20 A No.

21 Q Did you know that information you were
22 communicating to the control room was to be used to
23 inform the public of any information?

24 A No.

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Q So you do not know the specific person in the control room that you have contact with?

A No.

Q Do you have any role in drafting operating surveillance procedures?

A Operating procedures, no. Surveillance procedures pertinent to Health Physics Department, yes, to a certain extent.

Q And what is your role in that?

A Not so much drafting but if changes need to be made to them, or if I feel that changes need to be made to them, I make a change.

Q You would draft that change?

A I will draft the change and submit it.

Q Submit it to whom?

A My supervisor.

Q And whose approval would that need to be instituted as a surveillance change?

A My supervisor plus PORC committee.

Q Would you be asked to make a presentation to PORC as to that change you have recommended?

A No. If it wasn't clear as to what the change was, they would contact me for an explanation.

Q Have there ever been design changes made at

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2 Three Mile Island 2 since it became commercial that
3 would require surveillance changes?

4 A None that I know of that I can recall.

5 Q If there were design changes that took
6 place, how would those changes be communicated to you?

7 A If there was a design change in a physical system
8 or departmental type system within the controlled
9 areas of the plant, I would be made aware of them
10 simply for the fact that they would have to go through
11 the Health Physics Department to go ahead and do the
12 work.

13 Q So prior to the design change being
14 implemented, you would be consulted?

15 A Yes, for the Health Physics requirement for them
16 to do the physical work in the area.

17 Q Do you remember instances where you were
18 consulted?

19 A On design changes?

20 Q Yes.

21 A In Unit 2, no.

22 Q In Unit 1?

23 A In Unit 2 I didn't have then because I would
24 have been a technician at the time.

25 Q So as far as you know there were no design

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changes that occurred in Unit 2 that you were consulted on?

A That is true.

Q So had you been consulted, would that have been in a memorandum for or orally?

A Orally. The person who was involved with it would come down or call me on the phone or see me and talk about it.

Q Would you be consulted on design changes that only required your permission to undertake that change?

A Yes.

Q You would not be informed of design changes that may have created a problem in terms of your performance?

A All my surveillances are encompassed within my control area. For the most part any work that they do that will alter my surveillance in that control area or physically have to go in that control area to perform work, I would have been made aware of. Yes, I would have to, myself, or another foreman.

Q And if another foreman would have been consulted concerning design changes, would he communicate that to you?

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2 A This is prior to March 28?

3 Q Yes.

4 A Yes, because I was the Unit 2 health physics
5 foreman.

6 Q You were the only --

7 A No, myself and another gentleman.

8 Q If he had been consulted as to design
9 changes, would he have informed you of that?

10 A Yes.

11 Q Did he at that point?

12 A No.

13 MS. GOLDFRANK: Off the record.

14 (Discussion was held off the record.)

15 Q Going back to the drill that we talked
16 about, the one most recent to the March 28, 1979 acci-
17 dent, you explained that there were drills
18 that went along with you grading your tasks, and as a
19 result, since there was not an incident or accident
20 that occurred, they worked up a scenario that they were
21 telling you what your readings should be.

22 Do you know who developed that scenario?

23 A Training Department.

24 Q Did you have any input into that development?

25 A No.

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Q It was fully the responsibility of Training?

A Yes.

Q Do you know who in Training was responsible for that?

A No.

Q With respect to the critique that was a result of that drill, do you know how that information was relayed so that any revisions would be made to an emergency plan?

A No, I don't.

Q Do you know if as a result of that critique any revisions were made?

A I believe there were a couple, but I couldn't say specifically what they were.

Q Do you know whose responsibility that would be?

A No.

Q Did you have any involvement in that?

A No.

Q The drill that we are talking about, was that drill on Unit 2?

A I don't remember.

Q Would it have been a drill for Unit 2 or Unit 1 or both?

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2 A I believe it would have been one or the other.

3 Q You don't remember whether or not it was

4 Unit 1 or Unit 2?

5 A No.

6 Q Do you remember if there has ever been a

7 drill for Unit 2?

8 A Yes.

9 Q But you don't remember if this specific

10 one was for Unit 2 or Unit 2?

11 A Right.

12 Q Do you remember when the drill occurred

13 for Unit 2?

14 A No, I don't. We had a drill for licensing, but

15 I don't remember when it occurred. I haven't the

16 vaguest idea when it occurred.

17 Q You mean the division licensing?

18 A No, the license to allow us to go critical.

19 Q Was that the only drill that you had?

20 A No. We had other drills that we were required to

21 perform, and that was once a year drill for licensing.

22 We have five or six pre-drills prior to the one for

23 the Commission.

24 Q So that there was a drill required for the

25 NRC once a year?

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A Yes.

Q And prior to that you would have five or six drills to prepare for that?

A That is right.

Q In those five or six drills, would there be the same scenario that was performed in that drill for the NRC?

A No.

Q They would be different?

A Yes.

Q Would you know in advance what the scenario was going to be for the NRC drill?

A No.

Q But you would know the day that that drill occurred?

A Yes.

Q Would you be told anything prior to that drill concerning that drill?

A No.

Q Just the date that the drill would occur?

A Just that there was going to be a drill.

Q You would not know your responsibilities prior to that drill?

A No.

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2 Q The five or six drills that occurred prior
3 to the drill for the NRC, would they always be different
4 scenarios?

5 A Yes.

6 Q Is a record kept of these drills that occur?

7 A Yes.

8 Q Who would keep those records?

9 A I am going to assume Training does.

10 MS. GOLDFRANK: I would like to request
11 that if there is a record kept of drills on
12 Unit 2 by Training, that they be produced.

13 Q Do you know whose responsibility it would
14 have been to contact off-site participants in a drill?

15 A No. That is specified in the procedure.

16 Q It was not your responsibility?

17 A No.

18 Q You mentioned with respect to the most
19 recent drill to the March 28 incident, that there had
20 been some communication difficulties that you were
21 concerned about. Could you be a little more specific
22 in explaining?

23 A The drill procedure or the emergency plant
24 procedure specifies the communications setup, what phone
25 lines are to be used and what cross-ties would be

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2 cross-connected between the two units, and there was
3 some problem in that area of cross-connecting the units.

4 Q Do you know if there is a 'list of parti-
5 cipants maintained anywhere when a drill occurs?

6 A I don't know.

7 MS. GOLDFRANK: I would like to mark as
8 Exhibit 2 a scenario for TMI annual radiation
9 emergency drill of 11/8/78.

10 (Above-described document was marked
11 Demam Deposition Exhibit 2 for identification,
12 this date.)

13 Q Will you please look at what has been marked
14 as Exhibit 2? Looking at this Exhibit, have you ever
15 seen this before?

16 A That document?

17 Q Yes.

18 A No.

19 Q It refers to an emergency drill of
20 November 8, 1978, correct?

21 A Yes.

22 Q Is this the drill that you would have been
23 referring to that you remember was the most recent to
24 the March 28 --

25 A This drill does refresh my memory, yes. I think

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2 this might have been the recent one.

3 Q If you would look at the second page of
4 this Exhibit, there appears to be a list of personnel
5 attending, correct?

6 A Yes.

7 Q Your name does not appear on there, correct?

8 A That is true.

9 Q Do you know why?

10 A No.

11 Q Does that appear to be a complete list of
12 people included in that trial?

13 A It does appear to be complete.

14 Q So it appears that there is a list of
15 26 names. Is that approximately how many people would
16 be included in a drill?

17 (A brief recess was held.)

18 (Record read.)

19 Q (Continued) It appears that there are two
20 other pages that also list people which I believe would
21 make it a total of 45 people involved. Does that appear
22 to be the amount of people that would have been
23 involved in this drill?

24 A Directly involved, yes.

25 Q Would there have been other people directly

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involved?

A Normal plant personnel continuing to go about their business were not involved in the drill since from the standpoint you still have an operating plant, you still have to maintain your operators, you have to maintain people that aren't directly involved in the drill because of the fact you still have an operating plant.

Q Do you know any reason why your name did not appear?

A That is what I am searching for now, and I can tell you that the only thing that comes to mind in trying to recall was that I was there for a number of the practice drills, but maybe I was not there for the actual drill in front of the Commission if that is what this one is. This is the drill in front of the Commission; as I have said, we have had five or six practice drills, and it is very feasible that personnel involved in the practice drill, all those personnel would not be involved on the day of the drill for the Commission. This obviously was the one for the Commission.

Q As indicated on the front page of Exhibit 2,

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2 there appear to be three people representing NRC.

3 Would this, then, have been the yearly drill for the NRC
4 for Unit 1?

5 A Well, just the reference to the heading on the
6 first page, it says "Scenario of TMI Annual Radiation
7 Emergency Drill of 11/8/78." That would have been the
8 one for the Commission due to the fact this is the only
9 drill. This wouldn't have been written up for the
10 practice drills.

11 Q This same kind of document?

12 A Not in this formalized manner as far as opinionated.
13 I don't think this formalized document with this
14 heading would have been written up for the previous
15 drills that were practice for this drill. But this is
16 the official annual report and this is the one that
17 was done in front of the Commission.

18 (Continued on following page.)
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Q But there are reports, maybe not in the same form, of every drill that took place?

A That I don't know.

Q The Training people would be the ones who would handle that?

A Hazarding a guess, I would say the Training people are the ones who have the full reports.

Q Did you take any notes on March 28th of that event?

A No.

Q Did you, as a result of the event on March 28th, write any memoranda?

A No.

Q Could you tell me if you have been interviewed or deposed by anybody else concerning March 28?

A Yes.

Q Can you tell me who else?

A The Nuclear Regulatory Commission, general public utilities, and the President's Commission.

Q And three of those were interviews?

A Interviews.

Q Have you been deposed by anybody else?

A No.

Q Who at the NRC interviewed you?

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2 A Mr. Yuhas, Greg Yuhas. I think Mr. Collins might
3 have been there, and I don't know for sure. There was
4 another gentleman that I don't recall his name. I know
5 who he is, but I just don't have his name.

6 Q Do you know what position at NRC they
7 are in?

8 A I don't remember what region. It is on the
9 transcripts, but I don't know offhand.

10 Q Were you provided with transcripts of
11 those interviews?

12 A Yes.

13 MS. GOLDFRANK: I would like to request
14 that we be provided with transcripts of the
15 interviews with people from the NRC and GPU.

16 MR. YUSPEH: Off the record.

17 (Discussion held off the record.)

18 Q At this time, I would like to recess this
19 deposition. I have no further questions.

20 MS. GOLDFRANK: Do you have any questions?

21 MR. YUSPEH: I just have one thing I would
22 like to clarify for the record, and that is the
23 fact that at least in two points, Mr. Demam mentioned
24 CFR citations; on one occasion with regard to
25 packaging and labeling of transportation, he

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mentioned CFR 49, which, if someone wanted to check, I believe they would find to be Title 49 of the Code of Federal Regulations. On another occasion, he mentioned CFR 20. I believe that would refer to Title 10 CFR, Part 20, relating to certain radiation exposure standards.

MS. GOLDFRANK: We have no further questions at this time, and I would like to explain that maybe at some future date we would have some further questions, and that we might have to call you back at some future time, but we will let you know.

(Whereupon, the deposition was recessed at 11:20 a.m.)

JOSEPH H. DEMAN

Subscribed and sworn to
before me this ___ day of
----- 1979.

Notary Public

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WITNESS

DIRECT

Joseph H. Deman

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E X H I B I T S

DEMAN DEPOSITION
FOR IDENTIFICATION

PAGE

1	Resume of Joseph H. Deman	3
2	Scenario for TMI annual radiation emergency drill of 11/8/78	96

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2 STATE OF NEW YORK)
3 COUNTY OF NEW YORK) ss.:

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5 We, STEPHEN McCRYSTAL, Notary Public, and
6 STANLEY RUDBARG, Certified Shorthand Reporter
7 and Notary Public, of the State of New York,
8 do hereby certify that the foregoing deposition
9 of METROPOLITAN EDISON COMPANY by JOSEPH H. DEMAN
10 was taken before us on the 20th day of July 1979.

11 The said witness was duly sworn before the
12 commencement of his testimony. The said testimony
13 was taken stenographically by ourselves and then
14 transcribed.

15 The within transcript is a true record of
16 the said deposition.

17 We are not related by blood or marriage to
18 any of the said parties nor interested directly
19 or indirectly in the matter in controversy; nor
20 are we in the employ of any of the counsel.

21 IN WITNESS WHEREOF, we have hereunto set
22 our hands this 20th day of July 1979.

23 *Stephen McCrystal*

24 STEPHEN McCRYSTAL
Stanley Rudbarg

25 STANLEY RUDBARG, CSR.