

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

1 In the Matter of:

2 IE TMI INVESTIGATION INTERVIEW

3 of Murray N. Leakway
4 Foreman

5
6
7
8 Trailer #203
9 NRC Investigation Site
10 TMI Nuclear Power Plant
11 Middletown, Pennsylvania

12 May 19, 1979
(Date of Interview)

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20
21 NRC PERSONNEL:
22 James S. Creswell
23 Anthony N. Fasano

24 790828 0844

25 685 177

1 CRESWELL: This is an interview of Mr. Murray N. Leakway. The time is now
2 7:10 a.m., eastern daylight time, May 19, 1979. Present to conduct this
3 interview from the U.S. Nuclear Regulatory Commission is Mr. James S.
4 Creswell, a Reactor Inspector assigned to Region 3. Also present is Mr.
5 Anthony N. Fasano. Mr. Fasano is an Inspection Specialist, Performance
6 Appraisal Branch, Inspection and Enforcement, Reactor Construction Inspec-
7 tion. This interview is taking place in Trailer 203 which is located just
8 outside the south security gate of the Three Mile Island Nuclear Power
9 Station. Just prior to beginning this interview on tape, I presented to
10 Mr. Leakway a two-page document, from the U.S. Nuclear Regulatory Commission,
11 which explains the purpose and scope of this investigation. It also identi-
12 fies the authority of the U.S. Nuclear Regulatory Commission to conduct
13 this investigation by the powers granted to it by the United States Congress.
14 This document further explains Mr. Leakway's rights to refuse to be inter-
15 viewed and to have someone of his choice present to sit in during the
16 interview. It also advises him that he does not have to furnish a signed
17 statement. On the second page of this document there are three questions,
18 Mr. Leakway answered all three questions in the affirmative. At this time,
19 to make it a matter of record on this recording, I'm going to ask Mr. Leakway
20 to respond to these questions orally. Mr. Leakway did you understand the
21 document that I'm describing?

22
23 LEAKWAY: Yes, sir.
24
25

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1 INVESTIGATOR: And do we, the United States Nuclear Regulatory Commission,
2 have your permission to tape this interview?

3
4 LEAKWAY: Yes, sir.

5
6 INVESTIGATOR: And would you like a copy of the tape?

7
8 LEAKWAY: Yes, sir.

9
10 INVESTIGATOR: Alright, Mr. Leakway we'll provide that to you at the close
11 of the interview. And now, Mr. Leakway if you would please for the purposes
12 of those who will be listening to the comments that you're furnishing,
13 would you furnish us briefly your work experience since you've come to work
14 for Med Ed?

15
16 LEAKWAY: I've come to work for Med Ed in 1953. It would soon be 26 years
17 of service. I worked under the fossile fuels and at York in the steam
18 plant, in which at that time when I started, it would consist of generating,
19 plus heating the city with the byproduct of the steam. I was Chief Fireman
20 when I left there. I went to the York Haven Hydroplant. I worked there as
21 a repairman, first class, and upgraded to Chief numerous times on that as a
22 repairman, and then had the opportunity, about 3 1/2 years, to come over to
23 TMI to work on the Island. I'd come over as a repairman, then certified
24 welder; then last, almost a year now I gained the job as a foreman.
25

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1 INVESTIGATOR: Thank you very much. Now, I'll turn the interview over to
2 Mr. Fasano and Mr. Creswell.

3
4 FASANO: First, what we try to do is find out events that occurred or your
5 involvement at the time of the events on March 28, 1979. If you could,
6 would you tell us about what you were doing, say one hour prior to the
7 event?

8
9 LEAKWAY: One hour prior? Yes, sir. We were, as you know, my job consists
10 of having both units on shift work and whatever work requests come up or
11 whatever emergency repairs come up, we are assigned to do. At that time,
12 we were working out of Unit 1. At the time I was in the office making a
13 work request when the alarm come off. And I thought it was a test at
14 first. You know, when they said the alarm come off and then when the
15 reactor alarm come up that it tripped, then I figured they had some problem
16 in Unit 2 but which I didn't receive a call. Usually in a site emergency,
17 why, we're on what we call an emergency repair party. When that alarm goes
18 off then we are supposed to corresponds and go down, respond I mean, rather,
19 then return to HP control point and then, for further orders as a repair
20 party. In which, they didn't announce that until about right before 7:00
21 in the morning.

22 FASANO: One hour before you were up in Unit 1 and you were making out a
23 work request?
24
25

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1 LEAKWAY: Yes, sir.

2
3 FASANO: Alright, do you make out work request?

4
5 LEAKWAY: Yes, sir. In emergency, if something comes up, that there's no
6 work request already prior made out for a job, like if a feed pump packing
7 goes or something like that, well they would give me a call from the control
8 room. They either will start the work request, generate the work request,
9 then I'll have to finish it, so we can go ahead and proceed to do the job.

10
11 FASANO: Was this a work request relating to Unit 1?

12
13 LEAKWAY: Yes, sir. I could probably give it, if you want the number
14 of the work request.

15
16 FASANO: The work that you were doing on Unit 1, this is a finalization
17 for the re n to power after being shutdown?

18
19 LEAKWAY: Yes, in preparation to that, yes.

20
21 FASANO: Your crew, what do they consist of?

22
23 LEAKWAY: On shift work, well they consist of mechanical maintenance, instru-
24 ment department, and electrician's department.

1 FASANO: What work were they, do you know what work they were doing? I
2 mean, just where they were located?

3
4 LEAKWAY: Yes, yes, sir. Mostly, they were all up in Unit 1.

5
6 FASANO: And that's since no work was being done on Unit 2?

7
8 LEAKWAY: Not that I recall.

9
10 FASANO: Do you recall that your people were working on the makeup filters?

11
12 LEAKWAY: Just looking, no, no.

13
14 CRESWELL: Mr. Leakway is referring to some notes that he has in a small
15 notebook.

16
17 LEAKWAY: According to my notes all the men were up in Unit 2 and I did
18 send two men back when they lost the turbine when the reactor tripped. The
19 Unit 2 men, I&C men were assigned up to Unit 1 to work on that, and they
20 sent two of them back when the turbine tripped. This was after the incident
21 happened. Primarily all my men were assigned, had to keep them up in
22 Unit 1 to work.

23
24 FASANO: When, during your assignments, do you have any contact with
25 Catalytic, working crews that come in?

1 LEAKWAY: Very few times, very few.

2
3 FASANO: This would be some other level in your organization then?

4
5 LEAKWAY: Right, some other level. The only contact that I would have with
6 them if they would need tools, special tools out of the tool room at Unit 1
7 or torque wrenches or things like that. That's the only contact that I
8 would have with them.

9
10 FASANO: Do you have any idea of the work that was being done on any of the
11 systems by Catalytic?

12
13 LEAKWAY: No, sir. Couldn't tell you that.

14
15 FASANO: I notice that the unit drain pump was still out, was that out
16 during the, prior to the incident?

17
18 LEAKWAY: Yes, I'm pretty sure it was.

19
20 FASANO: You've been on Unit 1 and 2?

21
22 LEAKWAY: Yes, sir.

23
24 FASANO: How do you compare, I guess you've had the experience with Unit 1
25 during about the same phase of operation as Unit 2. Do you have any compar-

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1 ative feel for the effort that's been taken by maintenance on Unit 2 compared
2 to Unit 1?

3
4 LEAKWAY: Could you explain that to me again, I lost the correlation of
5 that?

6
7 FASANO: It looked like you didn't have to do that much, well your doing
8 most of your work on Unit 1 and ...

9
10 LEAKWAY: The only reason we doing at the time in Unit 1 because we were
11 trying to get that one back on.

12
13 FASANO: But that didn't mean that you didn't have a workload on Unit 2?

14
15 LEAKWAY: Oh yes. You have a workload in Unit 2, but see on the shift, we
16 have to set our priorities, whatever is first, and the shift supervisor
17 gives us that priorities.

18
19 FASANO: Did you know about the problem on the train gear at the feed
20 pump? The auxiliary operators had to go in and continually turn it after
21 shutdown?

22
23 LEAKWAY: No I wasn't aware of that, I knew they turned them, but I wasn't
24 aware of the time?
25

1 FASANO: Maintenance would not really get involved unless the work order
2 came from some other source, except in an emergency where you write your
3 own report up?
4

5 LEAKWAY: Yes, sir. It would come from control room.
6

7 FASANO: That was feedwater pump 1B where apparently there was some work
8 done on it back in December of last year, I guess. Maybe you are familiar
9 with that?
10

11 LEAKWAY: No. I wasn't familiar too much with Unit 2.
12

13 FASANO: Oh, you were mainly Unit 1?
14

15 LEAKWAY: Well, no I'm both Units. When I say that, I'd like to retract
16 that, I'm more familiar with Unit 1 than I was with Unit 2.
17

18 FASANO: So as far as your memory goes, your people were not working on the
19 emergency feed system? Have anything to do with the valve lineup require-
20 ments?
21

22 LEAKWAY: No, sir. That's all done out of the control room. When we're
23 doing a job we put in our switching and tagging application and they review
24 it and then they'll hang the tags and do the valve lineup. Then we'll do a
25 job and when we finish it, we request that the job was done and return it

1 back to the control room and they take the tags off and they do the valve
2 lineups.

3
4 FASANO: How about the retest? Do you people get involved in a retest?

5
6 LEAKWAY: No, when they retest and then if something happens, you know a
7 fault or something like that, then we will go back on again to do the job.

8
9 FASANO: Okay, operations does retest, you mean operations when you say
10 they?

11
12 LEAKWAY: Yes, sir.

13
14 FASANO: We had, I guess we had, some indication that the 11 valves on the
15 emergency feed system were leaking. Do you have any knowledge of this?

16
17 LEAKWAY: No, sir.

18
19 FASANO: Would these normally leak? Do you know?

20
21 LEAKWAY: You mean through packing or through the valves?

22
23 FASANO: Through the opening?
24
25

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1 LEAKWAY: Through the opening?

2
3 FASANO: You don't know?

4
5 LEAKWAY: No.

6
7 FASANO: Okay, you were in your office. Let's go back just before the
8 trip. Did you notice anything different at all at that time about this
9 trip?

10
11 LEAKWAY: No.

12
13 FASANO: The relief actuation?

14
15 LEAKWAY: In fact, I didn't even hear the relief valves go off until the
16 two men, the maintenance men, they were over in the warehouse getting parts
17 for a job, and they come back in and said the relief valves are blowing.
18 That's when they felt something was wrong when they come over.

19
20 FASANO: This was Newton and ..?

21
22 LEAKWAY: Newton and Wolfe.

23
24 FASANO: Oh, yes. Were you called to do, you said you didn't get a call
25 and it was 7:00, you were still waiting?

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1 LEAKWAY: Well, I'd say it was prior, it was maybe a little before. I
2 can't give you time limit. I know it was before 7:00 when they announced
3 for the repair party.

4
5 FASANO: Okay, now the repair party .. I think I did ask some questions
6 earlier from another person and I understand they did work on the water
7 treatment on Unit 1.

8
9 LEAKWAY: Yes, I did that, but that was after I was relieved. I went down,
10 the men and I went down, the repair party to the control point at HP and as
11 we were waiting for further orders, well my relief come in. Mr. Callenvich,
12 and he said, "Go ahead, you can go home, I'm here." I said, "okay," so we
13 took my men and unfortunately we couldn't get out. We were locked in. So
14 the next procedure to do is to go to the north auditorium and wait. And we
15 were there when Mr. Parnell's shift foreman, he come down and ask me about
16 those valves you have reference to there.

17
18 FASANO: That V62.

19
20 LEAKWAY: V62, 63. We had 63 out, we were working on that and he said they
21 needed the blank 62 and 63. We took the operator off and put blanks on so
22 they could run the water down to Unit 2. And that's when we went from the
23 north auditorium, we were waiting and then we went out to do that stuff.
24 That was Wolfe and Newton was with me.
25

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1 FASANO: Those valves, these are on Unit 1?

2
3 LEAKWAY: Yes, sir, Illinois water treatment.

4
5 FASANO: And what was the, were you told what purpose, why they needed to
6 have these blanks on?

7
8 LEAKWAY: Mr. Parnell said they wanted them open, that they could get water
9 down to Unit 2 and that's the only statement he made to me.

10
11 FASANO: Actually then, you would then perform the work, your people would
12 perform the work and it would be up to operations then to line the system
13 to Unit 2 for the purposes that they needed?

14
15 LEAKWAY: Yes Sir.

16
17 FASANO: So you would then turn over the finished work, report to the shift
18 foreman ..?

19
20 LEAKWAY: Yes Sir, I reported to him directly that the blanks were on, that
21 they could use the valves.

22
23 CRESWELL: Could you tell me a little bit more about what system were
24 talking about? What lines we're talking about?
25

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1 LEAKWAY: It's the Illinois Water Treatment up in Unit 1 that treats the
2 water, purifies it and they have it that they can valve down into Unit 2
3 with it also, the way I understand.

4
5 CRESWELL: This would be like a makeup water system?

6
7 LEAKWAY: Yes.

8
9 CRESWELL: What were they going to use the water for over at Unit 2?

10
11 LEAKWAY: They didn't tell me sir. In this position as a repairman and
12 everything over here like I said before, we don't do any valving or running
13 the systems or anything. All we do is, when we get a work request if its
14 an apparatus to be repaired, why we do the actual repairing and then we
15 turn it over to the parties involved. Which is operations to do the valving
16 out and running of the equipment. We can run the equipment just for test
17 purposes. When I say that, I'd like to clarify it is like if its electri-
18 cians they want to take some mega readings and things like that.

19
20 FASANO: If it had a procedure that was written, then you would rely on
21 operations or would you perform a retest?

22
23 LEAKWAY: If its a procedure we can...like if its a motor, if you want to
24 take RED read ngs of things like that, well we'll can do that.
25

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1 FASANO: Then you report back to the foreman and tell him the system is
2 complete?

3
4 LEAKWAY: If whatever on the work request if its ... whatever it calls for
5 on that, yes. We complete all that, and we can request the tags can be
6 removed, whoever has the apparatus tagged out and whose name it is why he
7 can request that the tags be removed that the unit is ready.

8
9 FASANO: On the tagging procedure, just a little bit more clarification.
10 Do you have qualified people that are allowed to take these tags or does
11 operations actually...

12
13 LEAKWAY: Operations did the tagging.

14
15 FASANO: They actually perform the ...

16
17 LEAKWAY: Valving out or whatever it consists of, they actually, physically
18 put the tags on near the valves that are required to be open or closed or
19 whatever.

20
21 FASANO: Removal?

22
23 LEAKWAY: And removal, we have nothing to do with that.
24
25

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1 FASANO: Okay, on a daily basis do you report your status to operations?
2 In other words if you're working on a system they have tagged out a parti-
3 cular valve or system for you to do some work, do you then relate back to
4 operations the status?

5
6 LEAKWAY: The only time we'll do that if we complete the job. If its not
7 completed I'll turn it over to the shift coming on. Which is also notes
8 that each shift that they, we call or let know in the Control Room if its
9 an apparatus whatever, whether its essential or anything, what status it
10 is, how far we are ahead in the work, what percent, if we're fifty percent
11 finished or ninety or whatever we have to do. I also report that.

12
13 FASANO: I am just trying to get a feel for how to operations knows the
14 continuing status? When did you leave the site?

15
16 LEAKWAY: It was after dinner, sometime.

17
18 FASANO: In the evening?

19
20 LEAKWAY: No, see I worked eleven to seven, ordinarily I would leave at
21 7:00 and it was after dinner, afternoon.

22
23 FASANO: After 12:00?
24
25

1 LEAKWAY: Yes, sir. We got out of here.

2
3 CRESWELL: Okay, Mr. Leakway, Joe Creswell speaking. You came on duty
4 approximately 11 a.m., on March 27?

5
6 LEAKWAY: No 11 p.m. Sir.

7
8 CRESWELL: 11 p.m. I'm sorry, 11 p.m. How would you characterize the
9 period of time between 11 p.m. on the 27th till about 4:00 a.m. on the
10 28th. Was that pretty much routine type of thing?

11
12 LEAKWAY: Yes, sir. Routine type.

13
14 CRESWELL: Okay. You mentioned in your discussion with Mr. Fasano that you
15 heard an alarm?

16
17 LEAKWAY: Yes, sir.

18
19 CRESWELL: What type of alarm?

20
21 LEAKWAY: It was an announcement over the PA system that the turbine tripped.

22
23 CRESWELL: Okay. Do you recall what members were on your crew that night?

1 LEAKWAY: You mean the whole repair ...

2
3 CRESWELL: Approximately how many people would you have working for you?

4
5 LEAKWAY: Well it was two electricians, four I&C, two repairman out on that
6 night.

7
8 CRESWELL: You recollect any other names?

9
10 LEAKWAY: Yes Sir.

11
12 CRESWELL: If you could just run down through those for us.

13
14 LEAKWAY: Wolfe and Newton, Mechanical. Sesne and, oh boy, I can't even
15 think of his name.

16
17 CRESWELL: Just take your time.

18
19 LEAKWAY: Wow, I can't think of him. I can't even recall that incident.
20 I know them by face and, I can't even recall their names.

21
22 CRESWELL: Can you remember any other people besides those two?

23
24 LEAKWAY: No.
25

1 CRESWELL: Okay. You mentioned that you sent two I&C men over to Unit 2.
2 Do you recall who requested those people?

3
4 LEAKWAY: No I don't. Paul Keene, he's another incident man who was there
5 cause he stayed over to work in Unit 2. I don't know who we called about
6 going over.

7
8 CRESWELL: Okay.

9
10 LEAKWAY: See sometimes it depends where I'm at, especially I&C which
11 is located right adjacent to the control room which I guess you know both
12 units. A lot of times the shift foreman whoever wants them will come right
13 over and say, "Hey, I need you here," and which in turn he'll call me later
14 and say, "Hey, I'm working on this job." Cause I could be over at Unit 1
15 or Unit 2 ...

16
17 CRESWELL: So the operations people can request your people to do things,
18 without really having to work through you?

19
20 LEAKWAY: But then usually the shift foreman will contact me and say ...

21
22 CRESWELL: Do you remember what those two I&C men worked on when they went
23 over there?
24
25

1 LEAKWAY: I have to check here in my notes here. Oh that's when they lost
2 the turbine.

3
4 CRESWELL: Okay, would you normally have a couple of I&C guys go over on a
5 turbine trip to do work?

6
7 LEAKWAY: Yeah, usually they call them on the instrumentation end of it.

8
9 CRESWELL: Okay. What would they normally be doing on a turbine trip?

10
11 LEAKWAY: Well they were over there checking on the, the instrumentation on
12 the turbine. I'm trying to think of the proper name of it which I can't
13 right now, its right in the west end of it.

14
15 CRESWELL: Is it Control .. Electro Highride Control System?

16
17 LEAKWAY: That's it.

18
19 CRESWELL: Some people call it the EHC.

20
21 LEAKWAY: Yeah, EHC. I'm sorry I didn't think of that one.

22
23 CRESWELL: Okay. Are you the man in charge of maintenance in a situation
24 like that?
25

1 LEAKWAY: At the time yes, if we are on the back shift.

2
3 CRESWELL: Do you recall if you called offsite to anybody during that day?
4 To your supervisor?

5
6 LEAKWAY: No. I had no occasion to.

7
8 CRESWELL: Okay. Who is your supervisor? Who do you report to?

9
10 LEAKWAY: John McGary.

11
12 CRESWELL: This emergency repair crew, I believe that the proper name for
13 it.

14
15 LEAKWAY: Yes Sir.

16
17 CRESWELL: When was it first formed?

18
19 LEAKWAY: That was formed before I believe, before I'd come over to the
20 Island, cause I remember coming on the Island the first time coming over in
21 about a month and month in a half and I was on shift work and I got involved
22 in it. And they were just setting it up then.

23
24 CRESWELL: I guess what I'm asking though is normally, during normal course
25 of operation you would have what you call an emergency repair crew. Would
you or did you classify your group as an emergency repair crew?

1 LEAKWAY: All shift workers, no matter what shift they are on, are considered
2 on the emergency repair crew.

3
4 CRESWELL: Okay. Whenever you have like a site emergency or general emergency
5 something like that, does that crew report to somebody?

6
7 LEAKWAY: They report right down to HP as the standard procedure.

8
9 CRESWELL: Okay. When did this happen on the day of March 28th?

10
11 LEAKWAY: We got the announcement, like I said before. It was about, give
12 or take, I know it was around 7 or before 7:00. It was close to 7:00 for
13 the shift change. I know that.

14
15 CRESWELL: So did all of your crew, the people reporting to you report down
16 to HP?

17
18 LEAKWAY: Yes Sir.

19
20 CRESWELL: Are you responsible to make sure that all of them are there?

21
22 LEAKWAY: Not necessarily, I guess in a sense it would be, yes, under the
23 procedure that we have everyone has that responsibility that they should be
24 there.

1 CRESWELL: Its your recollection that all the people .. that they showed
2 up?

3
4 LEAKWAY: My recollection. It was a little confusing but ...

5
6 CRESWELL: What was the nature of the confusion?

7
8 LEAKWAY: It wasn't panic. Don't misunderstand me in that. It was just at
9 first they thought it was a test, you know. They usually throw them unan-
10 nounced. Then we realized it wasn't a test and the men were all ready as
11 far as that goes, and they responded real well.

12
13 CRESWELL: So you reported down to Health Physics and its your recollection
14 that your crew all showed up down there?

15
16 LEAKWAY: That was at Unit 1 that's the control point.

17
18 CRESWELL: At Unit 1 the health physics area at Unit 1.

19
20 LEAKWAY: Yes, sir.

21
22 CRESWELL: Okay and then do you receive instructions then from someone
23 there or are you still in charge?
24
25

1 LEAKWAY: No my responsibility ends there as far as receiving unless I
2 receive instructions from either the control room or HP.

3
4 CRESWELL: Okay, did you receive such instructions?

5
6 LEAKWAY: Not at the time, no, till I was relieved and then I went up to
7 the auditorium.

8
9 CRESWELL: So you or none of your people were dispatched over to Unit 2 to
10 do any ..?

11
12 LEAKWAY: No, sir.

13
14 CRESWELL: What about the two I&C men that were over there earlier, did
15 they report back to you?

16
17 LEAKWAY: They reported back, my recollection.

18
19 CRESWELL: So during a period of till about 12:00 or so on March 28, there
20 was no maintenance call for any maintenance type of work?

21
22 LEAKWAY: Well the only one, our relief that was up in Unit 2 control room,
23 they went. They reported to Unit 1 control point they relieved us. Then
24 we left, and then they later on, we found out they went to Unit 2 Control
25 Room.

1 CRESWELL: Oh. Okay.

2
3 LEAKWAY: The repair, the emergency repair party. Now what they did I have
4 no idea.

5
6 CRESWELL: Okay. Getting back to the 11 valves that Tony mentioned earlier,
7 had you ever or any of your people had to work on those valves for leakage
8 problems?

9
10 LEAKWAY: No, my men personally no, not that I know of. There was some
11 work had been done on them but I don't know what it consisted of.

12
13 CRESWELL: You happened to know who did the work on the 11 valves?

14
15 LEAKWAY: No, sir.

16
17 CRESWELL: You know the type of work?

18
19 LEAKWAY: No, sir.

20
21 CRESWELL: Have you ever been involved with any work on the, what's called
22 the EMOV, electromatic relief valve?

23
24 LEAKWAY: No, sir.

1 CRESWELL: I guess that's about all I have. Owen, I'll turn it back over
2 to you if Tony doesn't have any further questions?

3
4 FASANO: No, I don't have any further questions at this time.

5
6 INVESTIGATOR: Alright, Mr. Leakway, while we have the advantage to have
7 you here with all your years of experience, and after having gone through
8 this incident at Three Mile Island, we'll appreciate, and this is an oppor-
9 tunity for you if you have any thoughts that you'd like to furnish to our
10 Commission to help other sites similar to yours in handling a situation
11 like this and after going through the experience, do you have any recommen-
12 dations?

13
14 LEAKWAY: What I've been involved in wasn't that, like I said before wasn't
15 too much and the recommendations would only be hearsay because I wasn't
16 really involved in it and it be useless to either say anything about it.

17
18 INVESTIGATOR: Alright, sir. If there is no further questions then gentler-
19 men, then we'll terminate this interview, the time is now 7:41 a.m., eastern
20 daylight time, and this is a conclusion of the interview.