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OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission  
Incident Investigation Team

Title: Nine Mile Point Nuclear Power Plant  
Interview of: MARTIN J. McCORMICK

Docket No.

LOCATION: Scriba, New York

DATE: Monday, August 26, 1991

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406

September 27, 1991

MEMORANDUM FOR: Martin J. McCormick, Plant Manager, Nine Mile Point Unit 2  
FROM: Wayne L. Schmidt, Senior Resident Inspector, Nine Mile Point  
SUBJECT: Review of IIT Interview Transcripts

The IIT has sent the transcripts of interviews conducted with the personnel listed below to the resident inspector's office. If any of the listed individuals wish to review the transcripts they should do so at the resident inspector's office by October 4, 1991. Guidelines for the review of transcripts are provided in the enclosure. If an individual does not review his transcript by that date we will assume that he did not wish to do so and that the statement is correct to the best of his knowledge.

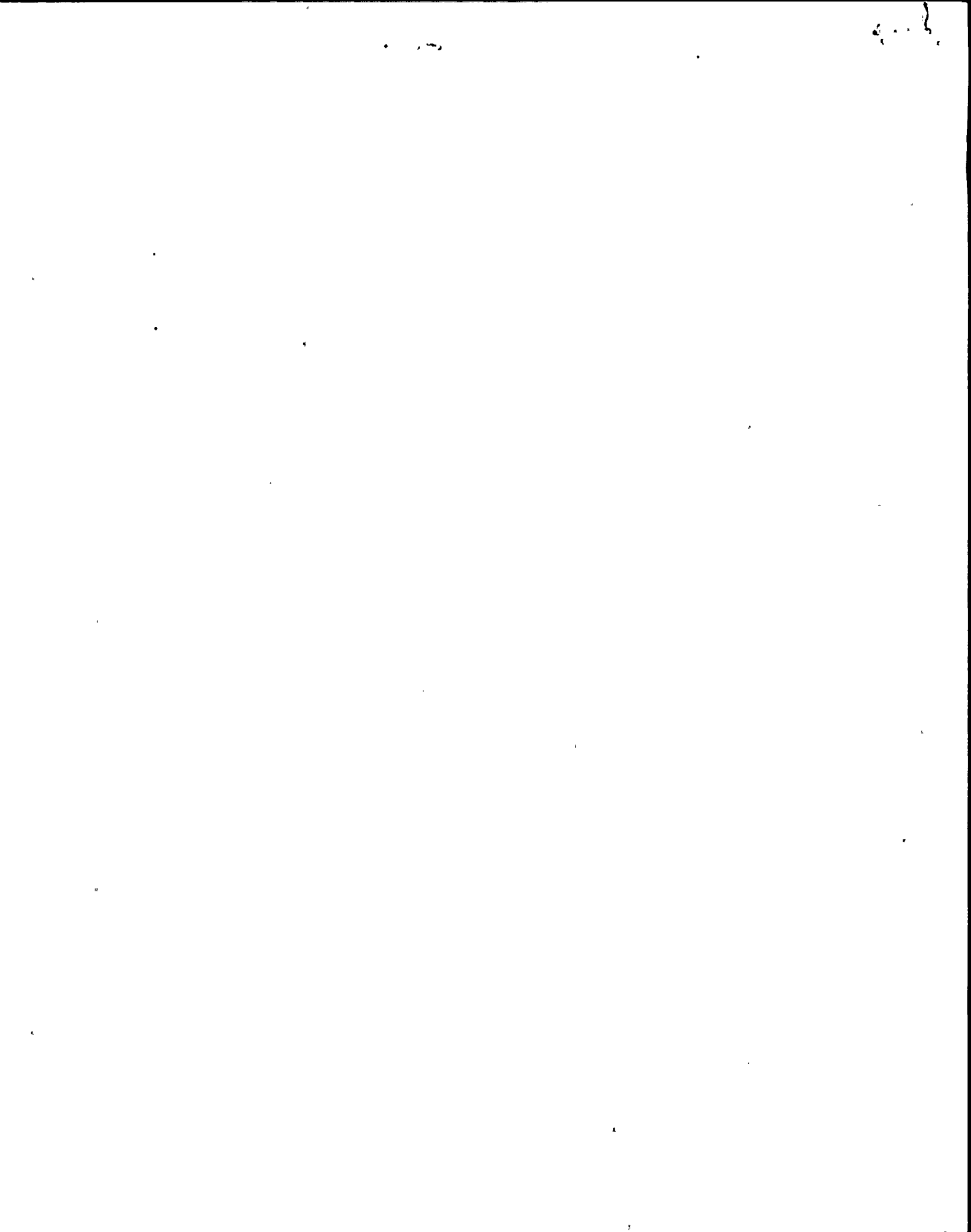
Alan DeGarcia, Steve Doty, Dave Barrett, Jerry Helker, Jim Burr, Bob Crandall, Robert Brown, Amil Julka, Perry Bertsch, James Spadafore, Joe Savoca, Mike Colomb, James Kinsley, Marty McCormick, Chris Kolod, Irinea Ferrer, Fred Gerardine, Anthony Petrelli, Jim Reid, Fred White, Rick Slade, Bruce Hennigan, and Tom Tomlinson.

Thank you for your help. If there are any questions please contact me.

*Wayne L. Schmidt*  
Wayne L. Schmidt  
Senior Resident Inspector  
Nine Mile Point







UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
INCIDENT INVESTIGATION TEAM

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Interview of :  
MARTIN J. McCORMICK, JR. :  
(Closed) :  
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Conference Room B  
Administration Building  
Nine Mile Point Nuclear  
Power Plant, Unit Two  
Lake Road  
Scriba, New York 13093  
Monday, August 26, 1991

The interview commenced, pursuant to notice,  
at 9:55 a.m.

PRESENT FOR THE IIT:  
Jack Rosenthal, NRC  
Michael Jordan, NRC  
Frank Ashe, NRC

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## P R O C E E D I N G S

[9:55 a.m.]

MR. JORDAN: It's August 26, 1991 at approximately 10:00 in the morning. We're at the Nine Mile Point, Unit Two, in the P Building. We're conducting interviews concerning a transient that occurred on August 13, 1991.

My name is Michael Jordan, I'm with the U.S. NRC out of Region III.

MR. ASHE: My name is Frank Ashe, I'm with the Office of Nuclear Reactor Regulation in Washington.

MR. ROSENTHAL: My name is Jack Rosenthal. I'm with the Office for the Analysis and Evaluation of Operational Data, U.S. NRC in Washington.

MR. McCORMICK: My name is Marty McCormick. I'm the plant manager, Nine Mile Point, Unit Two.

MR. JORDAN: Okay, Marty. Why don't you give us a background of what your experience is?

MR. McCORMICK: I have formerly been employed at Philadelphia Electric Company. I began my employment with the Philadelphia Electric Company after high school and after some time in the Navy, worked through a variety of responsibilities from an operator through to a plant manager at Limerick Generating Station.

I had responsibility for picking, probably, the various fossil unit generating stations in the Philadelphia



1 Electric Company System; including plant superintendent, I  
2 was manager of the Philadelphia Electric Company,  
3 maintenance department, and in that capacity had  
4 responsibility for the maintenance of fossil, nuclear and  
5 generating stations -- nuclear generating stations.

6 I also had responsibility in corporate for the  
7 Philadelphia Electric Company's O&M services branch which  
8 involved computer interface with the PSC - PUC and chemistry  
9 -- corporate chemistry.

10 When Peachbottom was shutdown, I guess that was in  
11 1986-87 timeframe, I was assigned to Peachbottom leaving my  
12 responsibilities at that time as manager of the maintenance  
13 department to go down there and manage that closure of that  
14 outage and completion of the outage in order to get that  
15 plant in a stable mode, the management there was being  
16 changed. At one point I was designated as the plant  
17 manager, although before that came to be there was a change  
18 whereby I went to Limerick generating station as a plant  
19 manager and John Franz went to Peachbottom.

20 I went to Limerick in 1987 as assistant to the  
21 vice president there, took SRO certification and became  
22 plant manager, I guess, in June of '88. And stayed there  
23 until an early retirement option came along in 1990 and took  
24 advantage of that opportunity.

25 So, after 37 odd years of experience with the



1 Philadelphia Electric Company I put out a resume and  
2 entertained a variety of options. The Niagara Mohawk people  
3 -- and the opportunity here and the challenge struck my  
4 interest and I decided I would come up here. I came up here  
5 in the end of January, took a two-week intended turnover  
6 from the plant manager at the time, Rick Abbott, which  
7 turned out to be at the end of their refueling outage that  
8 extended into that, so it was kind of a running turnover and  
9 I've been running ever since.

10 It's an interesting place. So I've been here on  
11 the job I guess since about early February.

12 MR. JORDAN: Okay. I guess the best way to work  
13 this is why don't you tell us the day of the event what --

14 MR. McCORMICK: Okay.

15 MR. JORDAN: -- how you came on site, where you  
16 went and what you did for the period of time.

17 MR. McCORMICK: Okay. I had recently procured a  
18 car phone as part of the requirements I felt were necessary  
19 for my job being all over the place and for emergency  
20 purposes, I want to have a telephone available to me. And  
21 on the morning of the 13th I was on my way to work, it was  
22 about a quarter of seven, I guess, in that timeframe, when  
23 my phone -- car phone rang and it was Ken Dahlberg in the  
24 TSC.

25 He said that, "Unit Two was in site area



1 emergency," and I gulped a couple of times and began to say  
2 "what are you talking about -- what happened?" He said,  
3 "There was -- he' thinks, an explosion." He had heard from  
4 his operators that there was a sound of an explosion, he  
5 thinks there's a failure of a transformer. There was a loss  
6 of a control room annunciation.

7 He indicated he was not ready to take over in the  
8 TSC, but that he had been in early because of some problems  
9 on Unit One and the announcements had come over the PA  
10 system so that he went to the TSC and was getting it set up.

11 I didn't talk too long to him, other than my judgment was  
12 that he was not ready to take over; he was not altogether  
13 clear on the status of things in the control room, so I  
14 called the control room. I talked, I'm pretty sure, to Mike  
15 Eron, I didn't talk to Conway, but I think I talked to Eron  
16 and I got the sense from that conversation that they were  
17 then at that stage with all rods in, although there was a  
18 period of time when they weren't sure that they had six  
19 rods, six rods were indicated as not being full in and the  
20 RWM was coming in and out. It was confusing at times.

21 Explaining that they had loss of power, loss of  
22 control room indication and that they had put in an manual  
23 scram. It was not clear to him, although I took the  
24 impression that he was not sure that an automatic scram had  
25 taken place at all and that he had put the mode -- they had





1 put the mode switch in shutdown based on what they saw.

2 We talked about power, he told me about the APRM's  
3 being down-scale and I didn't want to stay on too long, but  
4 I was satisfied that they had level, the core was covered, I  
5 think he used 180 some inches at that time; rods were in,  
6 they were stable, RCIC had been used for level control and  
7 was still available to them, and a sense of somewhat getting  
8 stability to the situation. So I told them I would go right  
9 to the TSC, I wouldn't go to the control room.

10 We agreed on that, and that's where I went. When  
11 I got to the -- as I walked in there was a line building  
12 outside the plant of folks who were being restricted.

13 Oh, incidentally, my green card, it was fortunate  
14 I had the phone because as I came to the plant they were  
15 stopping cars from coming in. I knew what was going on so I  
16 just zipped around everybody and was ble to get into the  
17 plant right away. I think I was concerned because my beeper  
18 hadn't gone off, and here it was quarter of, so I mentioned  
19 ot them then I hadn't -- didn't get anything on my beeper  
20 and as I was coming into the plant then the beeper went off,  
21 the 222 message.

22 I called it in and went to the TSC and when I got  
23 to the TSC Kim was there, there was a number of people there  
24 from Unit One, Bob Tessier, Gary Correll, chemistry and  
25 essentially began to assume the responsibilities of the



1 emergency director, gave direction to have people report  
2 when they were ready to take over, and as people were coming  
3 aboard to make sure that they were properly ready to take  
4 over, that as soon as they were ready I would initiate that  
5 action. I then called the control room again and got  
6 another update and said I would essentially confirm my  
7 previous conversation.

8 MR. JORDAN: Do you have any idea about what time  
9 this is?

10 MR. McCORMICK: I would say about five after  
11 seven, I think in that timeframe. When we talked about the  
12 inverters having lost power, I think in the original  
13 discussion we had, was that power was restored, but  
14 subsequently when I did the turnover I pressed Mike Conway  
15 to tell me what -- how he had restored power. And he told  
16 me that he was on DC -- that he was on the batteries. That  
17 they had bypassed the inverter and they had closed in on the  
18 battery backup.

19 MR. ASHE: Frank Ashe, NRC. Did you mean Mike  
20 Conway or John Conway?

21 MR. McCORMICK: Mike. He was the SSS in the  
22 control room. In other words, he was the emergency  
23 director. We're getting ready to do a turnover. So, Mike,  
24 at this point, was -- and I thought that we were on the DC  
25 backup as opposed to being in the bypass mode to the



1 maintenance feed.

2 I was concerned then for how long could I stay on  
3 those batteries and we talked about the battery being  
4 properly supplied because the other outside sources were  
5 restored and we should not have a problem. Subsequently I  
6 learned -- and I'm trying to remember when I learned that  
7 they were really on the maintenance feed.

8 It didn't seem out of line to me to be on the  
9 battery because that's what you would normally flip to and I  
10 thought that breaker didn't close, so I didn't react to it.  
11 I thought that's where we wanted to be. My only concern was  
12 how long it could stay there.

13 We talked about ECCS being available and there was  
14 two of the pumps which were -- had been marked up, but the  
15 work hadn't been released and they were clearing them. They  
16 said they were available, so I concluded that they were  
17 available when I needed them. They may not have been  
18 operational, but they were available.

19 I think it was about -- after that turnover,  
20 around 7:37, I think by the log, at least by the things I'm  
21 hearing from the -- you know, people who looked at the time  
22 line, that we -- I took turnover as the emergency director  
23 officially.

24 MR. JORDAN: At what time, about?

25 MR. McCORMICK: At 7:37. So, our conversation had



1 taken place, I was satisfied I knew the condition of the  
2 control room, each of my groups reported in sufficiently  
3 that they were ready to take over. And I announced to the  
4 room that the -- I was officially the site emergency  
5 director.

6 MR. ROSENTHAL: Can I --

7 MR. McCORMICK: There was a concern about -- go  
8 ahead.

9 MR. ROSENTHAL: I'm sorry, let me just back-up a  
10 little bit. You're at the TSC at this time.

11 MR. McCORMICK: Um hm.

12 MR. ROSENTHAL: Okay. Rather than the EOF?

13 MR. McCORMICK: No. Joe Firlit called in, he was  
14 coming in -- it was sometime after I did and Kim Dahlberg  
15 was still there and I was busy and I told Kim to talk to  
16 Joe. He informed Joe of what was going on and I could  
17 overhear one part of the conversation and Joe said, "He  
18 would go to the EOF."

19 So he went to the EOF to get setup over there. We  
20 did have a conversation sometime about -- before 8 o'clock,  
21 and I was -- I felt not ready to make a turnover to the EOF  
22 of the corporate responsibility for off-site -- we had some  
23 things we were trying to decide, do we have any radiation  
24 problems and there was preliminary indications that there  
25 was none.





1           The concern I had was -- and there was some calls  
2 from the NRC, I think Tim Martin, somewhere in there got my  
3 attention. And I had to talk to him and give him some  
4 discussion of where we were. I felt fairly confident that  
5 we had a stable reactor. We were on level control through  
6 the condensate start-up line and that was part of the  
7 turnover he was controlling level, I think, at that point.  
8 He still had RCIC available, but he was on level control and  
9 using the condensate start-up line, the 137, I think that's  
10 the number, but let me check that.

11           So, I'm satisfied we had level, pressure under  
12 control, ready to feed the reactor. My reaction then was if  
13 we could get -- continue on that path, what was my jeopardy  
14 from the power sources, and began to think in terms of what  
15 had occurred to the inverters and my judgment was that we  
16 had some kind of a transient from the fall in the  
17 transformer that had locked them out or caused a failure and  
18 if that had cleared, we should be able to go back to normal  
19 power. There would have been a transient coming through,  
20 but I had to -- a fellow had to find that out if I was going  
21 to be able to -- and quite frankly I was thinking in terms  
22 of de-escalating from the site area emergency and what would  
23 I need to do that. I had to have a stable vessel, be on my  
24 way to cool down and also to have stable power. So I asked  
25 the tech group to get a group together with the right



1 operators and technical staff and go down and see what the  
2 inverter situation was and see what we could get restored.  
3 So that was the damage control team, I just remember that  
4 one as a particular one.

5           There was another damage control team  
6 particularly, because I was concerned about seal steam and  
7 did we have aux boilers up. I didn't want to loose vacuum  
8 as you were coming down. And they had some problems  
9 getting a 145 valve open and we needed to get that taken  
10 care of. Also, the turbine had come down on turning gear  
11 and wouldn't go on turning gear, so that was another  
12 requirement to get that thing turned over.

13           And we also were having some problems with people  
14 on how to maneuver to get people into support maintenance.  
15 Ken Coates, who is a maintenance -- my maintenance branch  
16 manager, indicated he needed to get some people in. So I  
17 gave direction to the security people to let in those people  
18 that were required. That subsequently meant some people  
19 came in and didn't go to their accountability stations, so  
20 we had to address that later on.

21           I was hesitant to let everyone go. I mean I had  
22 the site protected, I knew where I was, there were 62 people  
23 that were not accounted for in the first cut of the  
24 accountability. And I didn't want to bring anybody in, but  
25 I didn't want to ship all those people to Timbuktu, either,



1 in the face of some of them I might need. So we had  
2 protected area evacuation, but we did not have a  
3 radiological problem so I didn't want to loose everybody to  
4 some -- send them home or something like that until I was  
5 satisfied I had picked everybody clean that we needed.

6 Later on we decided that we would sent the people  
7 to Volney a part of a -- let's say an adjustment to the  
8 emergency plan. And that took place, and the EOF and I had  
9 several conversations about just how to manage that  
10 situation because there was, coming to me, reports of some  
11 confusion and some road blocks that were causing a problem.  
12 And that off-site control I wanted to get over to the OF to  
13 fix that.

14 Jumping back, I think I should mention I turned  
15 over outside dealings with the off-site groups to the EOF at  
16 some time after 8 o'clock, about 8:05. Joe Firlit and I did  
17 a turnover and he resumed the interface with the off-site  
18 groups.

19 I also, as I recall, had verified early on that we  
20 had made all the notifications to the state and local  
21 agencies so that was done from the control room. The NRC  
22 had been notified. It turned out there was some confusion  
23 there and that was part of the problem with the CAN notice  
24 not going out, but the appropriate parties had been notified  
25 as far as I was concerned.



1           The day just went on through the -- you know, it  
2 was just a long day of trying to get clear and get shut  
3 down, handle things that happened. There was no one major  
4 evolution that sticks out in my mind throughout the day  
5 other than addressing a variety of issues that came from a  
6 variety of sources. Interfacing with the NRC several times,  
7 the EOF, damage control reports, getting in a position much  
8 to my chagrin where I was stuck where I was. I couldn't get  
9 out of the site area emergency based on a review of the  
10 requirements that our procedures called for.

11           I discussed that with Al Salemi who is our manager  
12 for emergency preparedness. Discussed it with the EOF and  
13 my recommendation was that we not try and change procedures  
14 in the middle of this event, I didn't think -- if I were the  
15 region I would be wanting to hear that change. I don't know  
16 what situation they were in in there, whether the right  
17 people were there to make the decision. So, as far as I'm  
18 concerned, that's the wrong time to be deciding what else to  
19 do.

20           So, I had my technical support manager, John  
21 Conway, who was with me in the TSC, to set up a SORC review  
22 and directed him to have a review made of the requirements  
23 to terminate the event; having developed a summary of where  
24 we are right now in the handling of the condition, followed  
25 by a review of what risk we had to fall back, in some way,





1 that is some contingency in case something would change and  
2 put us back into it. I didn't want to terminate and then  
3 have it come back on me. And the EOF took on the  
4 responsibility of getting a recovery plan, which was also a  
5 requirement of the termination criteria. I would take care  
6 of the immediate on-site requirements in terms of the SORC  
7 review and the readiness to terminate.

8           The plant continued to come down slowly towards  
9 cold shutdown. Their concerns were -- a number of times  
10 where they had maybe got their cooled down -- cool down was  
11 of major importance to us so that we didn't over stress  
12 anything on the way down. We also had to perform a test on  
13 the B RHR which would require us to get that into shutdown  
14 cooling in order to verify that a valve stroke which was a  
15 requirement that we had to make that valve operable.

16           And the cool down proceeded slowly but I didn't  
17 want to rush them, just keep it coming and be careful. We  
18 didn't want to get into any kind of a new situation. We  
19 tried to get cleanup on and cleanup was significant because  
20 conductivity was coming up. I had a couple of reports from  
21 chemistry that it was coming up and we didn't exactly know  
22 why that was doing that, although we figured we might be  
23 just part of the cool down process and if we could get  
24 cleanup on it that would take care of it.

25           Later on we found that we had a valve open on the



1 condensate demins, around the condensate demins that came  
2 open on the scram and that was a normal evolution. It  
3 wasn't picked up until chemistry and John Blasiak, who is  
4 also -- he's my branch manager for chemistry, was in the  
5 TSC, he said he would go over to the OSC and see how things  
6 were going and while over there, in his discussions they  
7 realized in reviewing why the chemistry was coming up,  
8 because I had talked to him about, you know, what did he  
9 think was going on; he came to the conclusion that his  
10 bypass valve had come open and we immediately got that  
11 closed.

12 We did try and get cleanup in and there was some  
13 problems doing that. We had a delta flow perturbation which  
14 indicated an ESF actuation isolation of cleanup.

15 I let that normal reporting through the NRC  
16 through the red phone take place there, rather than getting  
17 in the middle of that. And I had some concern brought to my  
18 attention about water hammer. I knew I had to get cleanup  
19 back in so I directed a damage team to go out and look at  
20 that cleanup piping to make sure that that -- something  
21 wasn't broken free. I didn't want to get in and climb every  
22 niche of it, but I wanted them to at least make enough of a  
23 walkdown that I would be assured that something gross wasn't  
24 wrong. They reported back that that was okay.

25 We also had some problems with RHR in the way of a



1 water hammer when they were bringing in the shutdown cooling  
2 that too, we thing, was normal and that's being reviewed. I  
3 don't have the final closure, but I'll get it before SORC,  
4 but I asked for a damage team to walk that piping and make  
5 sure that wasn't any gross problems before we went on to  
6 change over to the shutdown cooling system from suppression  
7 pool cooling.

8 I guess it was about' around six something when we  
9 started our SORC review of the -- well, SORC completed their  
10 review, told me they were pretty much ready, they had all  
11 their -- they were getting their paperwork put together and  
12 as the emergency director I'm also plant manager, I'm  
13 chairman of SORC, but I operated in this capacity as the  
14 emergency director and let John Conway continue as the SORC  
15 chairman.

16 MR. JORDAN: Can you explain what SORC is?

17 MR. McCORMICK: SORC is the site operational and  
18 review committee.

19 MR. JORDAN: Thank you.

20 MR. McCORMICK: So, I had then reviewed each of  
21 their reports, the justification for why we were okay, as I  
22 said where we were, why we had some recognition for  
23 contingency and would not fall back into a situation and I  
24 had satisfied myself through the criteria with the exception  
25 of cold shutdown and while I was in that session, Kim



1 Dahlberg was covering the desk as the site emergency  
2 director at the desk and announced over the PA that we had  
3 achieved cold shutdown.

4 The other part of that termination process was the  
5 SRAB review of the SORC's deliberations plus the recovery  
6 plan. And --

7 MR. JORDAN: What is SRAB?

8 MR. McCORMICK: SRAB is the off-site review  
9 assessment board, they're the off-site review group and it  
10 includes several consultants and others. It's not just a  
11 company organization. I am a member of SRAB also.

12 Carl Terry who is vice president of the  
13 engineering department, is the chairman of that committee  
14 and he, through telecon, I had arranged that he would  
15 participate in our SORC review and then he would have his  
16 comments on the recovery plan.

17 The recovery plan had been faxed over to us, it  
18 was prepared in the EOF and was a -- I think a very  
19 satisfactory document in terms of what we were going to do  
20 next and to investigate the event and recover the plan.  
21 And, in fact, it was the document which had been reviewed  
22 with the AIT team which arrived on site that night in order  
23 to give us -- give them some flavor of where we were headed  
24 in the recovery plan and established the framework for the  
25 organization which has worked for the site throughout this





1 last two weeks.

2           They established Joe Firlit as the vice president  
3 on site as the lead man. I was reporting to him with Rick  
4 Abbott as the -- in charge of the recovery plan with  
5 personnel assigned to cover each of the topics that were to  
6 be worked through on the recovery aspect. That document is  
7 available and has been used extensively throughout this  
8 period.

9           In any event, that evening, having finished the  
10 SORC review, in which called Terry as the SRAB chairman and  
11 someone else was on the phone with him, I just don't recall  
12 who that was, it was more than one in that SRAB telecon.  
13 Concurred that SORC information was adequate. He then -- we  
14 then jointly went through them, we reviewed the recovery  
15 plan, there was a number of changes that were recommended to  
16 the recovery plan and they were made part of the SORC  
17 minutes that evening.

18           Having completed the -- my assessment of the SORC  
19 input as the site emergency director, also that -- having  
20 had SRAB's review of the recovery plan and being in cold  
21 shutdown, I then gave direction to terminate the event which  
22 was 7:37 or in that timeframe, about an hour after we had  
23 reached cold shutdown.

24           So, that's the main points that come to me at this  
25 point subject to questions throughout the day.



1           MR. ROSENTHAL: Can I bring you back to -- I guess  
2 it's roughly the 8 o'clock timeframe. You're in the TSC,  
3 you're in command, and you've got -- I think -- I don't know  
4 what support you had of an electrical nature, at that point,  
5 the concept and it sounds good, was that you were on the  
6 batteries at that point?

7           MR. McCORMICK: At that point I thought I was on  
8 the batteries.

9           MR. ROSENTHAL: So, let's focus in a little bit  
10 more on what goes on. So you're worried about how long can  
11 you stay on the batteries and you want to recover -- you  
12 want to go back to the normal alignment, so you direct  
13 people to do what?

14           MR. McCORMICK: I asked the technical group to get  
15 together the right people and the right operations group and  
16 go out and find out exactly what we had and see if we could  
17 get back on normal power. I didn't want to stay -- I didn't  
18 want to come out of an emergency sitting in some fashion  
19 abnormal and I had to know -- my mind at that time was I had  
20 some kind of a heavy fault, I didn't talk too much about  
21 what I did about the transformer, but I can go back to that.

22           But, in any event, I had a fault that tripped my  
23 main transformer breakers and simultaneously I lost control  
24 of instrumentation. Obviously the cause -- the connection  
25 is made. Now, did the transient do it? Did I burn out



1 anything? How deep into a problem am I?

2 Now, I had a guy, this fellow Crandall, Bob  
3 Crandall, who is the system engineer, was available to us  
4 and they were putting a team under his direction which gave  
5 me the measure of comfort that I had that I had the right  
6 people.

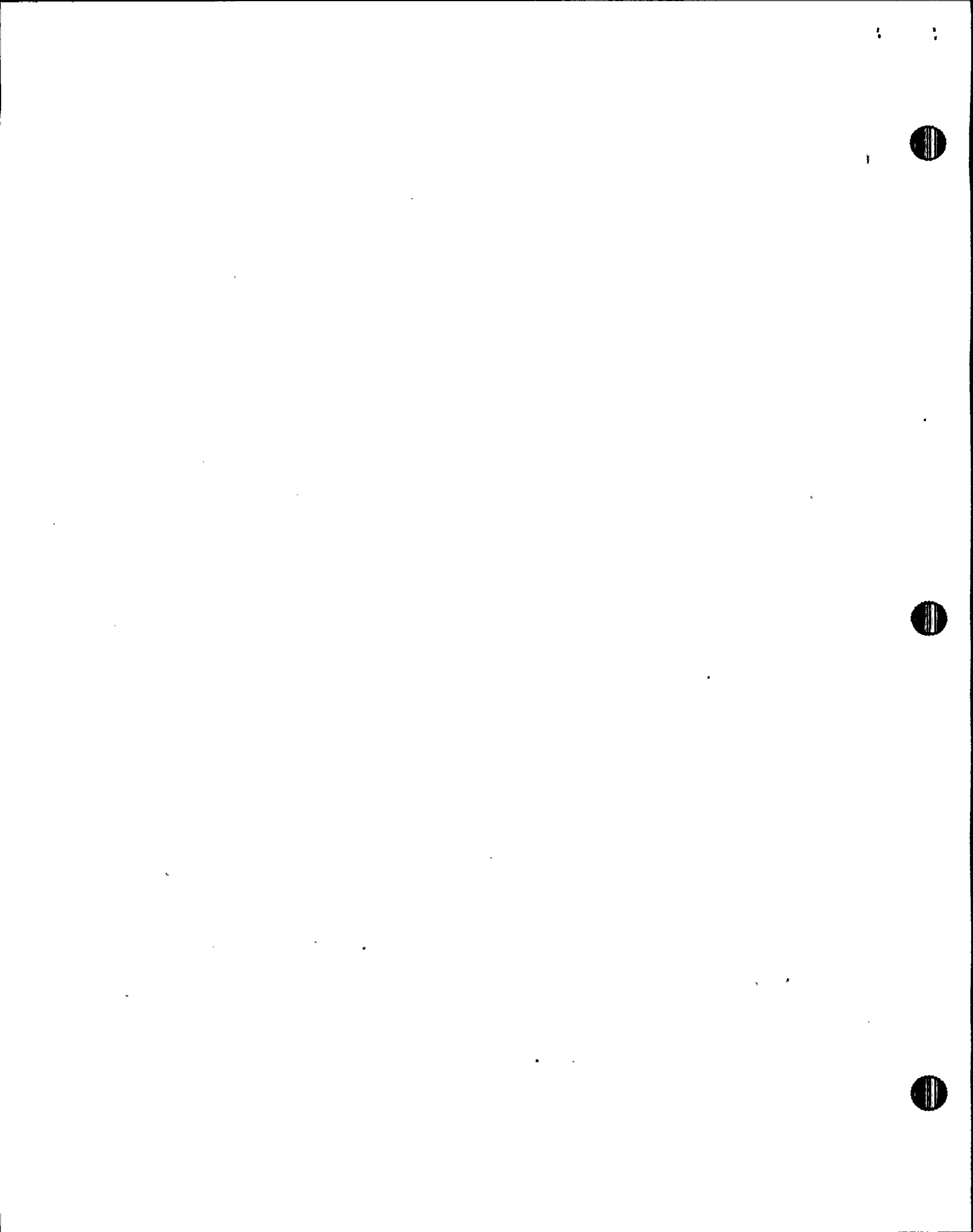
7 I don't have anybody better than he is. He was  
8 it, so with Crandall going out, get a set of operators who  
9 would go down, get the right maintenance people, electricians  
10 and Crandall and go out and trouble shoot and see what we  
11 can do with the goal to see, can I get back? We did talk  
12 about -- I wanted them to develop a plan, I didn't feel any  
13 expertise about how that should be done. I wanted the plan  
14 developed.

15 MR. ROSENTHAL: Sure.

16 MR. McCORMICK: They came back and with a  
17 recommendation that we do the C first, I believe. There was  
18 an action -- maybe it was G, but we had plan to go with the  
19 least impact working back to the A's and B's which had the  
20 biggest impact on the plant. If we could get one back, we  
21 would see how that went, everything normal, then we would go  
22 to the next one, then we would go to the next one, in that  
23 fashion.

24 MR. JORDAN: Was that laid out ahead of time?

25 MR. McCORMICK: Yes.



1 MR. JORDAN: It was.

2 MR. McCORMICK: There was a sequence set up on how  
3 that was going to be done, which was concurred with by the  
4 control room. There were some people who were, you know, Do  
5 we really want to do this, but you've got to make a call  
6 here, and I didn't want to sit here bopping down to the end  
7 and walk out and say, Well, I'm in cold shutdown; now what?  
8 I still have to find out what I have.

9 There was some risk. If it flipped me out again,  
10 well, I might as well find it. That was sort of in my mind,  
11 but I wanted to do it in a controlled fashion and see; if  
12 there was some gross problem, we could always stop.

13 We had a strategy; they had a sequence; and the  
14 first two went back okay. I think C and D went back, and A  
15 and B didn't, and then G did; I think that was the sequence  
16 they did it in: C, D; A, B; G. I think that's the way it  
17 went.

18 MR. ROSENTHAL: Before we start restoring, at that  
19 point the TSC's concern is that you're sitting on the  
20 batteries and have got to get back on the normal alignment.  
21 Now you're an expert on the UPS; you know more than any  
22 other plant manager in the country. I want to talk to you.  
23 I mean, you're plant manager; I don't expect you to know  
24 inside every box.

25 MR. McCORMICK: Somewhere along in there, before





1 we really did it, I knew we were on a maintenance feed.  
2 That went away. In other words, the risk of being on a  
3 battery was gone. I knew that before we started switching  
4 back.

5 MR. ROSENTHAL: Somebody told you?

6 MR. McCORMICK: Yes. Somebody said, It's on the  
7 maintenance feed.

8 MR. ROSENTHAL: Your guys.

9 MR. McCORMICK: Okay; it's on the maintenance  
10 feed.

11 But, still, that didn't make the problem go away.  
12 Now I'm on the maintenance feed; I still didn't know whether  
13 I had a backup. I had a maintenance feed which now put me  
14 on an outside source, but where did I have the normal feed?  
15 What did I have? The intent wasn't from the battery  
16 standpoint as much of a concern. It still left me with the  
17 same unknown: how could I make a judgement that the plant  
18 was fully able to support its situation when I didn't know  
19 all the facts.

20 I subsequently had to make the decision that the A  
21 and B couldn't go back and made the call to terminate,  
22 knowing they were there, but I was able to do some things  
23 out in the Scriba yard as part of the recover to make sure  
24 we understood where they came from outside, and we wanted to  
25 do some things to make sure no one would go into that yard



1 and in some way -- you know, what can you do if the line  
2 goes off? But I didn't want anybody working in there or  
3 doing anything that would somehow impact that source of  
4 energy to those buses.

5 MR. ASHE: Do you recall the information that led  
6 you to believe that you were on the batteries? Was that  
7 someone telling you that?

8 MR. McCORMICK: Yes. The SSS told me that. He  
9 misunderstood what they had done when they went down there.

10 It turned out that they went down and, as we all  
11 know, closed in on the maintenance supply, but his  
12 information to me at the time of turnover was that we were  
13 on the battery. I don't know where that came from. My  
14 understanding is that Mike Eron, who is the assistant  
15 supervisor in the room, told them -- that's my information  
16 as of now -- "Put it on maintenance." He's more  
17 knowledgeable in the inverters than, I guess, Mike Conway  
18 was -- certainly more knowledgeable than I was.

19 My concern at the time was getting some people out  
20 there that understood what it was, and not operators by  
21 themselves. I wanted a team established that could function  
22 in an organized fashion to see what we had and do a  
23 controlled return, with the right people there. The right  
24 people, in my mind, were the tech staff, the system  
25 engineer, with maintenance if they needed them, and



1 operators to get them there when they were going to do the  
2 switching over.

3 MR. ROSENTHAL: So there's a concern: You now  
4 know you're on maintenance feed. You don't have the  
5 electrical -- nobody has the electrical schematics memorized  
6 in their heads. You know you're on the maintenance feed,  
7 and you're worried that, hey, you could lose AC power again  
8 and be right back in.

9 MR. McCORMICK: That's correct.

10 MR. ROSENTHAL: Had other stuff gone on -- I mean  
11 in terms of the reliability of this alternate feed -- that  
12 made you and the other people working with you concerned  
13 over losing it again, or was this more conceptual?

14 MR. McCORMICK: Well, we had had an incident.  
15 When you saying, losing the alternate feed -- we had had an  
16 incident three or four months ago where some people were out  
17 in that Scriba yard, digging, and they tripped a line. It's  
18 a problem, so I had all kinds of controls placed on getting  
19 into that yard. No one goes into that yard without getting  
20 through the SSS and special approvals and to do work in  
21 there.

22 Did I have some concern? I guess you live by your  
23 experiences. I just said, Okay, what can I do? There isn't  
24 a hell of a lot more than saying, Make damn sure that there  
25 isn't anybody in that Scriba yard -- because all of a sudden



1 now they've got trippings; people want to go out and start  
2 inspecting circuit breakers, and a lot of things can get  
3 going, and somebody gets rambunctious. I just didn't want  
4 anybody going near that, as a protective measure more than  
5 anything else.

6 I can't say that I was concerned about some  
7 electrical fault getting me again, because that's part of  
8 life, but I didn't want to introduce anybody in there that I  
9 didn't have direct control over. The knowledge of whether  
10 that was in a requirement or not came from the attempt to  
11 get back on. I mean, you're supposed to be able to switch  
12 back; it should be in synchronism; it should be able to go  
13 back. If it's on maintenance feed, it should go back. If  
14 it didn't, well, I had to know that.

15 If it was a transient that just got through and  
16 was cleared, okay. Did I burn any circuit cards out? I  
17 didn't know what the hell I had there, so I felt that this  
18 was part of the packaging of where we were when we tried to  
19 come into a termination scenario.

20 MR. ASHE: Do you know if that's explicitly stated  
21 in any of your procedures or not -- your actual operating  
22 procedures -- that once the vital buses switch to the  
23 maintenance supply and lock out from the inverter,  
24 restoration back to the vital buses -- do you know if that's  
25 in any of your procedures?





1 MR. McCORMICK: I don't know. I'm not that  
2 familiar with those procedures at all. I guess from other  
3 experiences you can go to a maintenance feed, and you have  
4 to be able to switch back to normal, and the battery is  
5 there in between.

6 Believe me, I'm far from an inverter expert. I've  
7 been around them; I generally know the concept, but my  
8 expertise is really as a power plant person, I guess, not as  
9 a system expert, nor did I try to make that decision. I  
10 tried to get the right people to make that decision. If  
11 they had said, Can't do it, I'd have said, Okay, can't do  
12 it, but I needed some help there, and the guy that I relied  
13 on is the people that I have available to me.

14 Had I not had Crandall or somebody, I might not  
15 have taken that course, but I know him, and he is the system  
16 engineer. I had that input; I may have even have had it  
17 reaffirmed by John Conway who is his -- who is Ray Dean who  
18 works for him who is also on the TSC.

19 The transformer, I want to get on -- I guess on  
20 the record that I didn't totally forget about the  
21 transformer as I think of things I've covered here. I had  
22 had to report, as I said, when I came in that there might  
23 have been an explosion in the transformer yard, so, one of  
24 the first requirements was to get some people out there and  
25 see what happened to that transformer, what was going on.



1 I was told there was an oil leak and I was concerned about  
2 fire. I was told we had fire watch on it and they did do  
3 some valving to cut down the leaks so it was only a small  
4 dribble, there was not -- the transformer was not open in  
5 any way, it was leaking out of a flange.

6 So, I was satisfied that we didn't have a major  
7 conflagration or risk there, although it was -- the  
8 temperature as they told me, was very high on the  
9 transformer the temperature indicator was off-scale high.  
10 We had fire people available to us should it get into a  
11 further problem and the oil leakage -- I think I asked that  
12 that be contained in some way so it didn't run all over the  
13 place as soon as possible.

14 The transformer became a non-problem very shortly  
15 thereafter. I got some pictures, I guess, of the --  
16 somebody came by just to show the leak or something, that  
17 became a non-problem early on once we were satisfied it was  
18 down to normal.

19 The other thing -- I guess the other thing I  
20 didn't mention that the turbine -- that got to be a worry  
21 because I broke that -- I was concerned how did it roll  
22 down, did we have oil all the way down and those are the  
23 normal things to worry about with a turbine sitting out on  
24 the turning gear. And I even gave direction, if they had  
25 to, to take the coupling guard off and put jacking bolts in



1 there and move it around, but they were able to hump it  
2 around a little bit with the turning gear motor and finally  
3 got it to pick up which was a big relief.

4 MR. JORDAN: How did you determine there was no  
5 off-site release? What kind of reports did you get on that?

6 MR. McCORMICK: I got reports from my rad  
7 protection people that they had -- off-site teams had  
8 reported that there was no releases evident. The people in  
9 the plant had indicated that there was no ARM's and so  
10 forth, although there was an ARM going off in turbine hall,  
11 I did hear. It was found to be a non-problem. I had to --  
12 a report came from Preston Swafford who was the -- my branch  
13 manager in charge of rad protection.

14 I also had a preliminary -- an earlier report from  
15 Dave Barcum who was initially in there that there was no  
16 indication of any kind of a release going on. Chemistry  
17 reported that fuel was okay, they had to get a sample of the  
18 reactor coolant and there was no evidence of any iodines and  
19 other things to be worried about. So, no evidence of any  
20 problem.

21 MR. ROSENTHAL: And an ARM is?

22 MR. McCORMICK: It's an area radiation monitor.

23 MR. ROSENTHAL: Area radiation monitor, okay

24 MR. McCORMICK: But the general sense of the  
25 people who were in the plant was there was no high levels of



1 radiation anywhere and there was a few isolated -- oh, a  
2 drain had backed up in one area and down a -- on one of the  
3 lower elevations, I forget just exactly where, but it filled  
4 up and left it at scram apparently and had -- it was a  
5 previously roped off area and the drain backed down and it  
6 was evaporating. It had not exceeded the boundaries that  
7 were already previously established, so I didn't feel that  
8 there was any need to go do anything heroic with that.

9 MR. JORDAN: So they did dispatch off-site teams  
10 to check off-site? Did you dispatch them or did --

11 MR. McCORMICK: That's part of the process.

12 MR. JORDAN: That's part of the process.

13 MR. ROSENTHAL: I'm interested in -- let me tell  
14 you my -- the interview plan that I at least would have.  
15 We'll talk out some of the technical things of the day and  
16 then I'm going to switch topics, talk more programs of you  
17 in your role as plant manager.

18 MR. McCORMICK: Okay.

19 MR. ROSENTHAL: One thing I'm interested in  
20 getting back to the day, for a while, is the dynamics  
21 between the EOF, the TSC control room, in terms of technical  
22 detail. Were you getting technical direction for the EOF or  
23 -- you were commanding --

24 MR. McCORMICK: Right.

25 MR. ROSENTHAL: Okay. Now, with respect to the





1 control room and we're aware of information systems that you  
2 have, like you've got the SPVS and the --

3 MR. McCORMICK: Right.

4 MR. ROSENTHAL: -- for example, at one point in  
5 the day you loose the condensate system -- actually, the  
6 condensate booster -- and I guess there's these MOV-84's, or  
7 what they really are and you recognize you have to do a  
8 work around, et cetera, et cetera; you're familiar with the  
9 --.

10 MR. McCORMICK: Yeah. That was --

11 MR. ROSENTHAL: That's later.

12 MR. McCORMICK: That was pretty much -- when I  
13 took over they were on the by-pass feed. They had already  
14 completed that iteration.

15 MR. ROSENTHAL: Okay.

16 MR. McCORMICK: And the 84 valves, that had  
17 already been made, they said they could go out and we talked  
18 about that and said we decided not to go out in the plant  
19 and open the bypasses because we had established that we  
20 tried this method and it was okay and I didn't -- I didn't  
21 go any further, I had no reason to think that I wanted to go  
22 open that condensate and go out and open those bypasses. On  
23 hind sight, I guess we should have, at some point gotten  
24 that finished, but it dropped off the plate and they had  
25 level control, they had enough ways to go and it just didn't



1 -- I didn't introduce that. But that had -- those decisions  
2 had been made.

3           They had closed the 84's intentionally and by  
4 procedure they're expected to open bypasses around them  
5 before they start them back up. That's the normal -- I  
6 think that's the way the procedure is written. They tried  
7 to open them and I'm -- I guess we can postulate that, at  
8 least at one point they had just condensate up against that  
9 check valve, closed the 84 valves and then put on the  
10 booster pumps and now I've got 700 pounds with 100 pounds  
11 inside the pump casing, so I do have differential across  
12 the valve, that we're looking to see if the torque switches  
13 are -- should be adjusted to open against that. The valves  
14 are obviously designed to do it, but whether the torque  
15 switch should be tweaked up to open the bypass around that  
16 torque to give it enough to get it going remains to be seen  
17 and we're waiting to get that information from the vendor.

18           MR. ROSENTHAL: Okay, but by the time you got  
19 involved they've done work around on that and you've got a  
20 means of flow in and --

21           MR. McCORMICK: They were fine; they were level  
22 control, they were on, they were comfortable with it, level  
23 was normal.

24           MR. ROSENTHAL: So it's the control room that  
25 chose to go off RCIC, to go on the feedwater condensate



1 system?

2 MR. McCORMICK: They had the earlier -- the early  
3 challenge of they got level under control, the swell was  
4 coming, they didn't need RCIC, they shut it down and then  
5 the pressure was coming down with the depressurization; it  
6 got to the point where condensate began to go in and they  
7 shut off condensate and later when they needed water, which  
8 is still before I was fully -- I don't know what time that  
9 all took place, I would have to look at their time log, but  
10 --

11 MR. ROSENTHAL: Early on in the event, before they  
12 recovered the UPS's, is the question of just where the  
13 control rods, as you've said earlier, they know the APRM's  
14 are in and the IRM's are reading downscale and it's my  
15 understanding that you said earlier and as other people have  
16 told us, they believe all the control rods were in, but I  
17 can't -- I don't know what the right word is, prove it? So  
18 they're caught up in this ATWS procedure in a little loop  
19 there.

20 MR. McCORMICK: Which tell them how --

21 MR. ROSENTHAL: Is the TSC in -- I'm sorry.

22 MR. McCORMICK: Okay, go ahead. Was the TSC  
23 involved in that?

24 MR. ROSENTHAL: Um hm.

25 MR. McCORMICK: No.



1           When I talked to them, they said that they had  
2 question about the rods. That was in the car coming in.  
3 There were six rods that didn't show full in, but now  
4 they're showing full in, or they got them to reset. I  
5 subsequently learned that they had reset the scram, and,  
6 when they reset the scram, they got full indication of all  
7 the rods being in, so when I was officially taking over, all  
8 rods were known to be in; there were no other requirements  
9 to do that. The APRMs were down-scale; they had power back;  
10 they had all rods in; and that had been verified. The rod  
11 worth minimizer had been acting in and out; sometimes it  
12 would say they were all in; other times, they weren't. That  
13 was early on, too, when they made the decision.

14           They did all the right things well before they  
15 needed any help from me. I can only hope I would have done  
16 as well.

17           Those decisions to reset the scram are part of  
18 their procedure, and they did do that. And they didn't have  
19 to go any further. When they did it, apparently the drive  
20 was still in, and it was enough to keep those drives beyond  
21 their normal full-in position. When they reset, everything  
22 came back to the proper indication.

23           MR. ROSENTHAL: Do you want to spend more on  
24 today? If not, I'm going to propose we take a break.

25           MR. ASHE: The transformers: In your 37 years of





1 experience, I'm certain you've seen transformers fail  
2 before. How would you characterize this one, as compared to  
3 some of the ones that you have seen?

4 MR. McCORMICK: Well, the one that's most recent  
5 in my memory was the one at Peachbottom in 1985 or '86 -- in  
6 that time frame. That was a main unit, 500 kV transformer.  
7 It blew up -- I mean blew up and burned to the crispy  
8 critter. It went. It spilled oil all over the place, into  
9 an open trench, which happened to be open there. A lot of  
10 control cables were there to a relay room -- burnt the  
11 cables out of there. And no spare.

12 As a result of that event -- let me just say my  
13 experience here at Nine Mile. I'm very serious about  
14 sampling oils of transformers. In that transformer down  
15 there, while the oil was okay, it wasn't as good as someone  
16 would like it to have been, given the fault that occurred.  
17 I mean, it was being trended and all those good things, and  
18 it was gradually edging up, indicating that there was  
19 probably some indication of stuff happening.

20 When I was here -- I don't know; I'm going to say  
21 it's the March-April time frame -- I got a sample back on  
22 these transformers. It's part of the routine; they do a  
23 good job here, quarterly. The samples came back, indicating  
24 that one of them was elevated, so, time out, who says that's  
25 okay. I get an okay that it's okay, and we went back and



1 did a lot of additional sampling. I don't know all the  
2 players here, so I had to find if I had the right guy  
3 nodding at me that it's okay. They have a transformer  
4 expert, and I said I wanted it in writing from this guy,  
5 because I don't want to have any other concerns about oils'  
6 being a problem. If it's arcing, I want to know it; if it's  
7 starting to trend, I want to know if.

8           Subsequent samples said that was a bad sample.  
9 They took the first cup out of it. When they ran a flowing  
10 sample and got it and did a complete rerun, the data came in  
11 fine.

12           Certainly I'm familiar with what can happen if you  
13 don't watch the indicators that you have on your oil sample,  
14 and that was being done.

15           MR. ROSENTHAL: Can we go off?

16           [Recess.]

17           MR. JORDAN: We went off the record for a small  
18 break. We are now back on the record.

19           Anything else, Frank?

20           MR. ASHE: Just the transformer characterization.  
21 Could you make a comparison between this and the Peachbottom  
22 event in terms of severity?

23           MR. McCORMICK: Well, in terms of impact to the  
24 transformer, it was -- compared to Peachbottom, this was a  
25 non-event. I mean the Peachbottom was literally a raging



1 fire storm there, impacting bus work and everything else  
2 around there. You know there was separate phase  
3 transformers. It was a horrendous event.

4 This one, even as a -- it was characterized to me  
5 in the TSC, and your black box in your mind, because all you  
6 have -- is trying to think what this would look like. I  
7 mean I even had to try and visualize what I had out there.  
8 It was clearly a B phase, there was some oil spill, there  
9 was leaking out of a flange that was opened up, there was no  
10 bowing of the transformer, the relief valves had lifted if I  
11 could -- I mean that was the kind of information, as I think  
12 back, that I had. So it did pop, it definitely got very  
13 hot, it lifted the release, we spewed some oil out there.

14 In terms of obvious damage to the transformer,  
15 there wasn't any. There was -- the only thing was the  
16 flange was opened up and it was leaking oil so what did that  
17 mean? Did that mean it bowed? Did it mean that the  
18 pressure surge was enough that it would just cause that  
19 gasket to blow?

20 The temperature indicator being high was off-scale  
21 high. That indicator goes to some 180 degrees C or  
22 something, it was driven off-scale high, so I knew I had  
23 heat in there. Asked for an oil sample. And early on,  
24 through the day, I got the oil sample back very high,  
25 particular to the scot, the transformer was in deep doo,



1 deep trouble and from early on I knew that.

2           The samples from A and C were yet to be taken but  
3 I knew that B was a goner and in fact that day I gave  
4 direction -- I'm talking about working with B and get it out  
5 of there, move towards getting the D in. Get a hold of  
6 Higgins or whoever we've got to get to move it out of there,  
7 so those things were under way. I knew I had a damaged  
8 transformer.

9           In terms of physical damage though, it was -- I  
10 had had no assessment. I couldn't make any assessment of  
11 what I had beyond the fact that it was obviously badly  
12 arced inside based on the oil analysis.

13           MR. JORDAN: Water hammer, what are the events of  
14 the day with water hammer and reactor water cleanup and  
15 water hammer and the RHR, the first shutdown cooling? You  
16 say you dispatched a damage assessment team to look at both  
17 of those?

18           MR. McCORMICK: Yeah.

19           MR. JORDAN: And did you get a report back?

20           MR. McCORMICK: I got a report back on both of  
21 them. And one came back in written form. I was RHR was  
22 done fairly quickly, cleanup was a different problem because  
23 of the rad levels and that report came back and I had that -  
24 - I had that later on that evening and we had visual --  
25 verbal report that it was okay, but I got a written report





1 the following day.

2 MR. ROSENTHAL: I know you've only been on site  
3 really six months. Are you aware, had there been a history  
4 of water hammers or RWCU isolations or difficulty of control  
5 or --

6 [Pause.]

7 MR. McCORMICK: Well, there's a lot of cleanup  
8 problems here. Cleanup is on -- we have what we call a top  
9 ten list. When I got here we decided to try and get our  
10 arms around one of the issues that had to be worked first,  
11 the hardest and fastest and I -- each unit went at its best  
12 attempt to come up with those issues which needed the most  
13 immediate attention and the reactor water cleanup system is  
14 a major problem here.

15 It's a very temperamental system, it has a lot of  
16 operating difficulties to it. So much so that I have a  
17 special project team that addresses the controls of it,  
18 engineering is working on looking at ways to change the  
19 seals, I have initiated a mod to put new cleanup -- run  
20 piping up to which is a Limerick fix to inject water into  
21 the seal cavity on the seals, and we're also looking at  
22 replacing the seals in their entirety.

23 We just had a team out of Canada to look at that,  
24 but to make a long story short, I mean, the litany is long  
25 and cleanup is a difficult situation of putting them on and



1 off line. The very performance of the cleanup system, when  
2 I got here, we were changing demins out every third day.  
3 Finally I've got it to every 10 to 12 days by bringing in  
4 special people to work that issue. And everytime you  
5 change out a cleanup demin, you risk the chance of getting  
6 into some kind of a situation with your pumps. We were  
7 having a lot of seal failures. We have seal failures,  
8 probably close to one a month, or damn near, is what I'm  
9 running and this has been an ALARA problem. So, the cleanup  
10 is clearly an issue for Unit Two and it's being worked in a  
11 variety of fronts, most of which are still in the phases of  
12 getting done.

13 I've got a report like yeah thick from a vendor I  
14 brought in to the chemistry group to look at the whole  
15 control system.

16 Therefore, when we did get the delta flow under  
17 these conditions I expected again we had another situation,  
18 I'm not getting the thing fully vented. It was yes, and it  
19 would have been difficult under the best conditions, but the  
20 word -- the delta flow by itself didn't surprise me, but the  
21 report of vibration or water hammer, so they were doing  
22 something different. Now, they were letting down through  
23 the rad waste system and they weren't putting it in under  
24 normal conditions, the reactor is off, my concern was did we  
25 do something different in the course of that and, you know,



1 people do tend to get -- maybe in their intent to get it on,  
2 it was more of a problem than what we would normally  
3 experience, so prudence said, I've got to know is the piping  
4 okay.

5 It didn't surprise me we had the delta flow.

6 MR. ROSENTHAL: Now, on the UPS's themselves, the  
7 non-1E UPS's, I take it the plant was in the process of  
8 replacing at least two of them?

9 MR. McCORMICK: That's before my time. I didn't  
10 make that decision. When I got here there was a -- and I  
11 participated in mod reviews -- money reviews for the job and  
12 had it explained to me what they were trying to do, and  
13 approved the funding under my watch to replace the C and D  
14 UPS and to alter the loading on those buses to reduce it to  
15 something within a much -- they were loaded on the 70-80  
16 percent of capacity in that range that they were running at  
17 and that was more heavily loaded on the normal load than  
18 what we wanted. The receding problems it was recognized by  
19 the -- my predecessor and the mod was to be done this  
20 upcoming outage, as a matter of fact.

21 MR. ROSENTHAL: Was there a general knowledge that  
22 all of them were running hot relative to at least--

23 MR. McCORMICK: Knowledge? Those two were running  
24 hot. There was no -- the others were not running  
25 particularly that much -- that loaded to the point where the



1 others were a problem, but these two were clearly a problem.

2 MR. ROSENTHAL: So the others weren't perceived  
3 to be running hot?

4 MR. McCORMICK: Weren't perceived to be too  
5 heavily loaded for what we would consider normal loading  
6 over a long period of time, but the C and D were perceived  
7 to be too heavily loaded for continued operation over a long  
8 extended period of time.

9 We also wanted to try a different inverter and  
10 some other things we wanted to come into that.

11 MR. ROSENTHAL: Let me -- you had done some work -  
12 - where does reliability-centered maintenance or risk-  
13 centered maintenance, I think everybody calls it by a  
14 different name --

15 MR. McCORMICK: Yeah, reliability-centered  
16 maintenance unit.

17 MR. ROSENTHAL: RCM --

18 MR. McCORMICK: Yeah.

19 MR. ROSENTHAL: -- was required and -- okay. Were  
20 there plans?

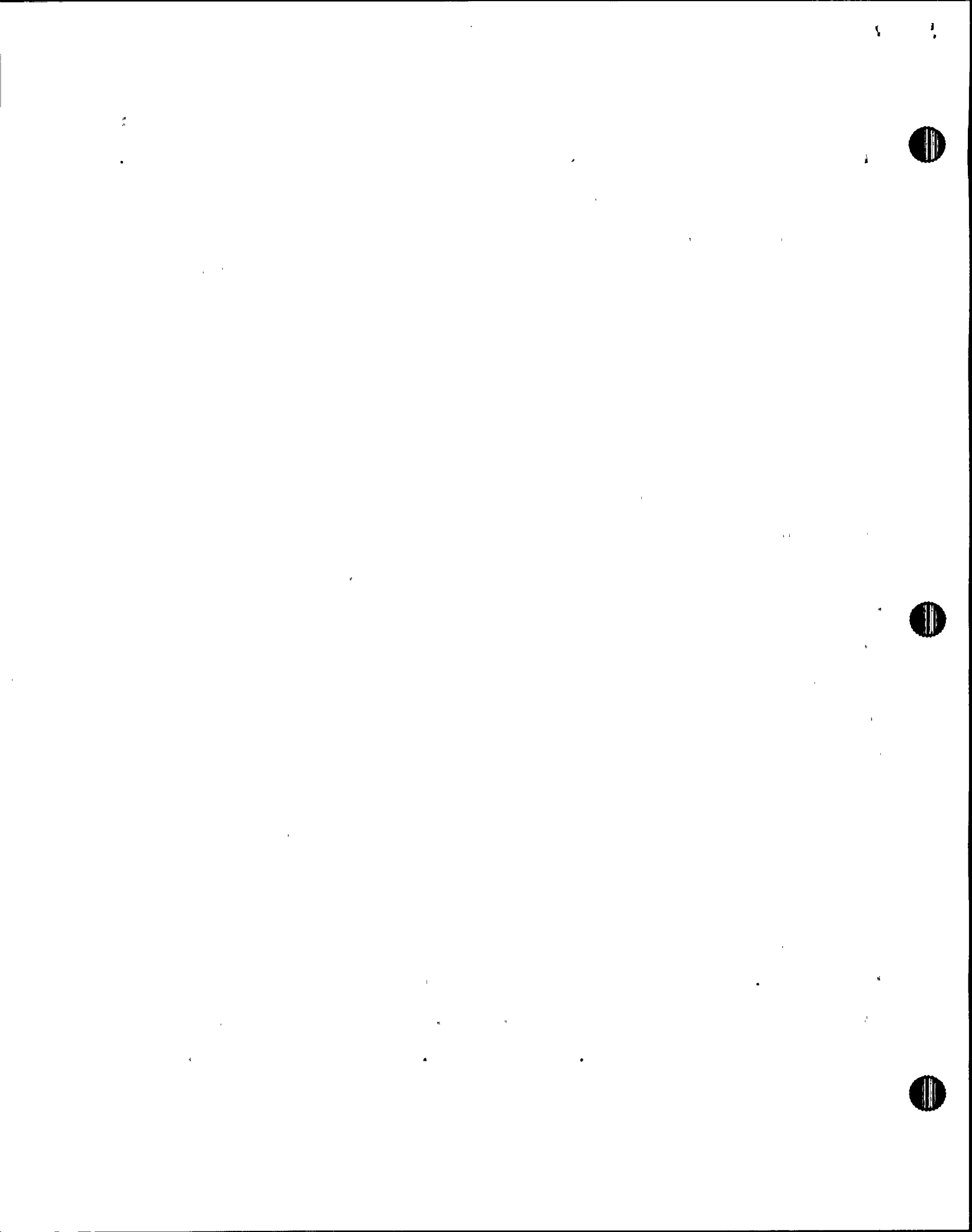
21 MR. McCORMICK: Yeah. You know, you had come into  
22 a place and you think it's going to be -- by force of will  
23 you're going to get everything squared away in nothing  
24 flat, but you find out that there's a lot of other things  
25 that have to be done.





1           My approach, generally, is to understand the  
2 people and make sure that they are functioning with what  
3 they've got without changing the world. It's not my  
4 strategy to come in and start overwhelming people with new  
5 programs because I'm not that smart. I've got to find out  
6 what's there.

7           So early on, it was clear to me that the work  
8 control process here was very manual and very difficult to  
9 implement. They had just come out of a brutal outage, they  
10 were really beat up and it was necessary to get that work  
11 control process under control. And early on that became the  
12 focus, if I couldn't control how work flowed through here I  
13 couldn't get any work done and then I wouldn't -- I don't  
14 know how good the people are. The people are only as good  
15 as the system you have. And we were bringing those  
16 processes very -- I don't want to say quickly, but I was  
17 satisfied that we had progress. We cleared up a lot of the  
18 dumb stuff that was going on. We began to get work done; I  
19 had an interim maintenance manager, I just finally got the  
20 maintenance manager, Ken Coates, when I got here I -- the  
21 previous fellow was -- he had left and I had an interim  
22 fellow who was a contractor to me. A very good guy, but  
23 between us we began to work on the people problems and we  
24 got things moving along to the point where we began to  
25 identify points of disconnect between the work control



1 people and the maintenance worker, the craft. Craft was  
2 generally pretty good. These guys were pretty good, but  
3 they weren't meshing.

4 We established several teams to just talk about  
5 that, put people in the room and find out what it is we've  
6 got to fix here. And we came up with a high performance  
7 maintenance team, so-called, that was going to address the  
8 issues of interfacing between work control, work  
9 performance, training issues, and Kim Dahlberg and I were  
10 responsible for that organization. And flowing from that  
11 came the reliability-centered maintenance thing that said  
12 you've got to get out of the mode of just correcting, even  
13 if we get our teams working right, corrective maintenance is  
14 great, but you're fighting a problem and you've got to get  
15 ahead of it.

16 So another organization then under -- was set up  
17 on the side to come up with a reliability-centered  
18 maintenance organization and what that meant and I might --  
19 you know, we're talking about predictive maintenance,  
20 really. Get ahead of the problem. I had a meeting, I  
21 guess, you know, in early June, mid-June with that  
22 organization; they established what they needed in terms of  
23 people and what they intended to do and I had the  
24 preliminary blessing of Joe Firlit to go ahead on that.

25 We were planning to implement that reliability-



1 centered maintenance program which fits into the total  
2 strategy of using your resources effectively. So I -- we  
3 have a PM program here. I don't claim to know that  
4 everything's in it, although I know it's a damn sight better  
5 than the one I -- some of the ones I've seen around. It  
6 missed this battery and we'll have to take that and be  
7 responsible for that, but I mean we did do a lot -- we do a  
8 lot of PM, we track it, I get reports showing me where the -  
9 - what the backlogs are, I'm much more insistent on safety-  
10 related PM, I'll tell you that, but I have it down to a  
11 trend and I'm working the others down.

12 A lot of work got done here and the backlogs are  
13 down. They were up over, you know, several thousand jobs  
14 and we're down to over -- under 500 in the power-block  
15 maintenance requests here at the end of June. This is not -  
16 -maybe as good as everyone would like it to be in terms of  
17 everything certainly being done, but I feel that it is far  
18 from just a bumbling and not paying attention to its detail.  
19 It had good plans, but it was not as effective implementing  
20 them all and that was the focus, get the barrages out of the  
21 way and we were making good progress on that. And continued  
22 to make good progress.

23 [Pause.]

24 MR. JORDAN: You mentioned your 10 items list that  
25 -- or ten items, you picked 10 systems in --



1 MR. McCORMICK: Top 10, yeah.

2 MR. JORDAN: Top ten systems that you picked --

3 MR. McCORMICK: Right.

4 MR. JORDAN: And you mentioned the reactor water  
5 cleanup system is on your top ten?

6 MR. McCORMICK: Right.

7 MR. JORDAN: Is that for preventative maintenance  
8 or is that just corrective maintenance or problems with the  
9 system --

10 MR. McCORMICK: It's design.

11 MR. JORDAN: It's design.

12 MR. McCORMICK: But it's part of an EO process  
13 that goes with that. You've got a good design, it would be  
14 a good operation. If the design beats you up, you beat  
15 yourself into the ground, you've got to fix the problem.  
16 And certain issues just require going back to the drawing  
17 board and fixing fundamental issues that go with how that  
18 equipment works.

19 MR. JORDAN: Can you give us an idea beside  
20 reactor water cleanup what other type of systems are on  
21 your top ten? Is feedwater on there?

22 MR. McCORMICK: Feedwater? No.

23 MR. JORDAN: Feedwater condensate?

24 MR. McCORMICK: It's not on there. We don't have  
25 any major problems on there.





1 MR. JORDAN: How about safety relief valves?

2 MR. McCORMICK: 'No.

3 MR. ASHE: Are there specific electrical areas on  
4 that list? Do you recall?

5 MR. McCORMICK: Stand by gas is on there, there's  
6 a major change out of the stand by gas system. There's a  
7 need for -- there's a radiological access control area that  
8 we have to get into to put the control access egress from  
9 the plant. We have two levels of cleanup, we have the  
10 cleanup controls and we have the reactor water cleanup pump,  
11 so there's two specific issues on cleanup; pumps being  
12 thought to be one entity to itself, no matter what we do we  
13 have the pumps. And then the control system that goes with  
14 it.

15 Let's see, you mentioned the stand by gas system.  
16 Oh, geez, it just doesn't come to me right now, but I can  
17 provide that list if you're interested in it.

18 MR. ASHE: Okay.

19 MR. McCORMICK: And the thing about top 10's, the  
20 top 10 is a focus of a multitude of things and we said,  
21 okay, let's focus the organization to be sure that they get  
22 the attention and I meet with the vice president on this,  
23 Dahlberg -- he has his top 10 and I have my top 10. And we  
24 review that to make sure that they are on track.

25 We also have -- there was a lot of work -- backlog



1 work that needs to be worked on and we are focusing on  
2 through our mod systems -- modifications, that come down to  
3 the point in saying well, if you keep asking for changes,  
4 what are you going to focus on and so we've cleaned up the  
5 backlog to the point where we're satisfied -- that we're  
6 looking at the -- we're trying to get a top 100 which will  
7 be the major focus of the organization that these are jobs  
8 we want to do within this timeframe.

9           Then out of that top 100 we focus on the top 10  
10 which get high level attention focused on those and I'm  
11 about to remove two of those off the list and move two more  
12 on. So that's a dynamic kind of a thing. But the overall  
13 management of the backlog of mods and engineering  
14 requirements, and what I'm talking about now is going off  
15 the -- I need outside assistance. This is something where I  
16 need a design change or I need a major improvement in a  
17 piece of equipment. Get rid of the pile and focus on where  
18 we're -- what resources we have, what we're going to be able  
19 to get done, concentrate on the station having control of  
20 that and setting that priority and here's the ones we want  
21 you to work on engineering. And of those, here's the ones  
22 we really want you to get done and we meet with this monthly  
23 on, the others will be in the process.

24           MR. ROSENTHAL: Is this -- our post-trip review  
25 your own post-trip review has put that day under a



1 microscope and some maintenance related issues do come out.  
2 Now, there is always procedures, knowledge, work arounds,  
3 you know, I won't see anyone who is big-ticket, but there's  
4 a, you know, loop even limit switch contacts on check valves  
5 of RCIC injection line a little confusion and the problems  
6 with the condensate booster, discharge valves -- actually  
7 they're more like feedwater suction valves, the MOV-84's,  
8 the -- I guess SRV's -- SRV's were habitually leaking and so  
9 it's --

10 MR. McCORMICK: I don't think that's true.

11 MR. ROSENTHAL: I may be wrong. I think we  
12 decided that --

13 MR. McCORMICK: There was leakage, but it wasn't  
14 considered to be -- height increase and suppression pool  
15 temperature to the point where that was way out of line.

16 MR. ROSENTHAL: That's true.

17 MR. McCORMICK: Those things are a funny designed  
18 relief valve. They're insulated and everything else, so  
19 there was some concern that you just get a little bit of  
20 heat and it just builds up, it can dissipate the heat, so we  
21 did have -- to my way of thinking, or at least, no major  
22 problem with the relief valves as being -- they've lifted on  
23 the transient -- two of them which I would think was normal.

24 [Pause.]

25 MR. ROSENTHAL: We're still assembling a couple of



1 dirty switch contacts, you know, there's always something.  
2 There's several here. We'll forget about the details. I  
3 mean, what's your overall perception in terms of how your  
4 equipment performed in the event?

5 MR. McCORMICK: Overall assessment of how it  
6 performed? Well, I sure have a fairly long list of things  
7 that I'm looking at to see why they happened. I have any  
8 one, you know, is probable to happen. The multitude given  
9 the transient that we had, it says there's not a clean  
10 system in many respects. We've had -- taken scrams here  
11 before I guess, but not in my time. I haven't had a scram.  
12 This is my first scram. I've taken the unit off a couple of  
13 times, it came off when I first got here and when they were  
14 studying up the EHC leak and I took it off with the flex  
15 hose earlier on. I had had none of these problems, this is  
16 my first scram so the sense that it's a -- it performed as  
17 you would want it to, I wouldn't say it is there.

18 Most of the things that I'm finding are with the  
19 84 valve. The 84 valve worked through the transient, they  
20 shut it down and now they can't open it up again. We  
21 introduced something into that, they says, well, what's  
22 different? They changed out those valves back in the last  
23 refueling effort. Well, then, what were the limits? What  
24 were the torques for the new switches -- switches set on?  
25 Well, we have an EDC which said we shouldn't change them.





1 They should leave them, they should be okay for where  
2 they're set. Are they set the way they were left? Yes.  
3 Within some smidgen. Okay, they should have worked. Why  
4 didn't they? I don't have the answer to that. So, is that  
5 -- I don't know what that means, I have to find that out.  
6 So we're going back to the manufacturer.

7 MR. JORDAN: How about just the fact of closing  
8 the valves?

9 MR. McCORMICK: Normal.

10 MR. JORDAN: You expect them to close the valves  
11 normally?

12 MR. McCORMICK: In other words, if their  
13 procedures call for them that they have to bring condensate  
14 back, but before they do that they close that suction valve,  
15 that's part of their procedure notes.

16 MR. JORDAN: Then I guess my question is, has  
17 anybody looked to see why do they close that valve and is it  
18 a work around? Is it something that the reason why they do  
19 it is because they get this -- the results if they don't are  
20 bad and therefore bad design, good design, the design is  
21 okay, all valves -- we always should close those valves in  
22 order to get it?

23 MR. McCORMICK: No. What I'm into now, is I say  
24 well, all right, he should be able to close them. He has  
25 other valves to get closed, but he should be able to close



1 that one. And -- but now he should be able to get it  
2 opened.

3 Then we give him a procedure that says, bypass the  
4 valve before you surround the valve to open it. Before you  
5 bring it back, and that's built for -- most of these are  
6 built for a normal -- they're not built for the emergency.  
7 We don't know an emergency to write the procedure for, you  
8 know. So you have -- your procedures are there for how you  
9 normally start up and you have a valve, you go around and  
10 bypass that and in this case they didn't want to take the  
11 time and they had some other things working against them, so  
12 they took their alternate. You don't want to have to be  
13 challenged like that. You should be able to open that valve  
14 and go about your business.

15 So, now we look into say, what else could we do?  
16 Could we leave that bypass open? There's a solenoid-  
17 operated valve downstream of the first hand bypass and we'll  
18 examine that and see if there's another way around that  
19 event. But were we prepared for that eventuality? Nope.  
20 We didn't have --

21 MR. JORDAN: Would you expect your people to be?

22 MR. McCORMICK: Huh?

23 MR. JORDAN: Would you expect your people to be?

24 Would you expect to have procedures --

25 MR. McCORMICK: I would expect them to -- allow

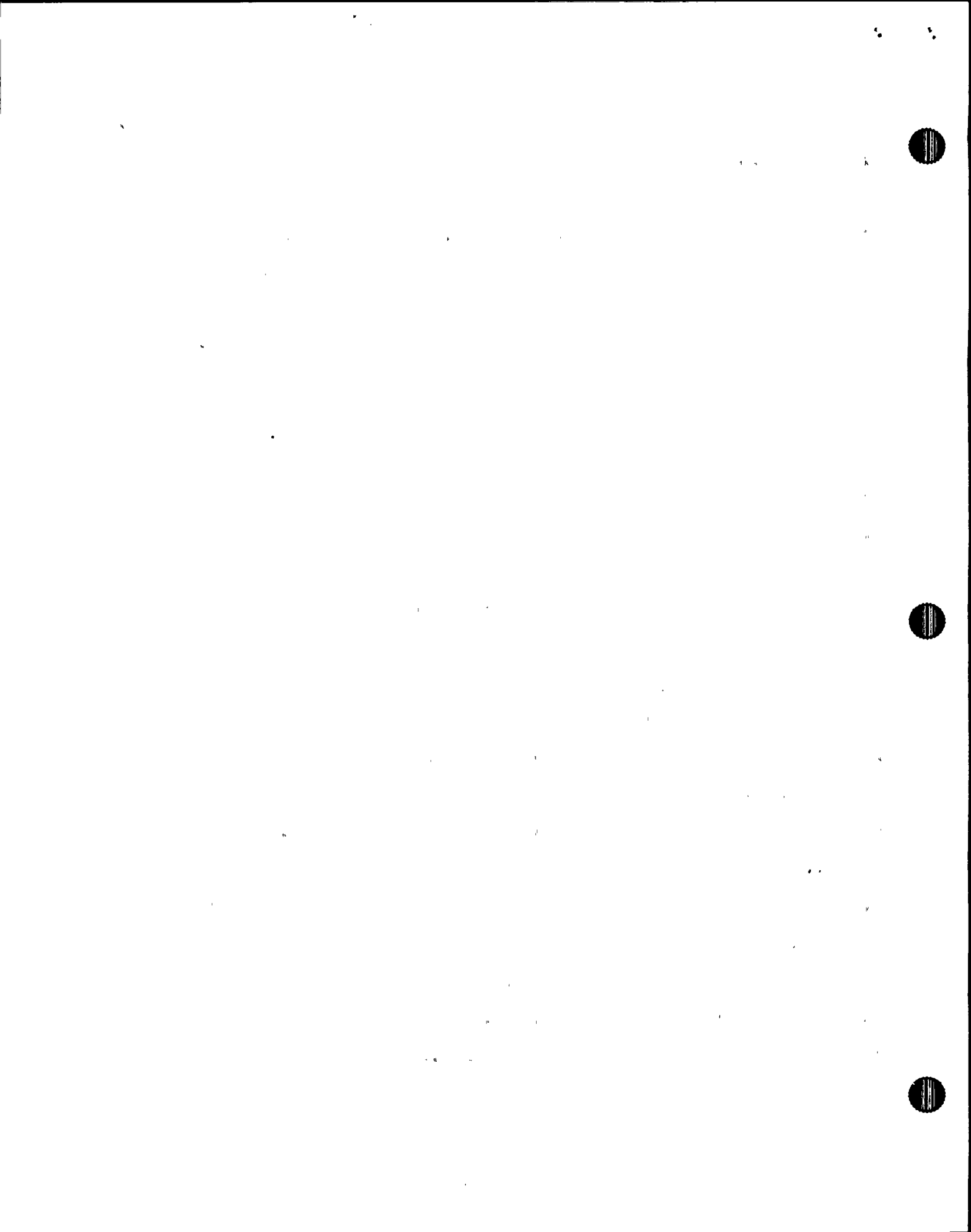


1 them in this type of an emergency to sit back and say, in  
2 order to go out there and open the bypass -- what happens if  
3 they can't -- some type of emergency procedures to allow  
4 them to start it up if they can't get the bypass?

5 MR. McCORMICK: Would I like to have it? Yes.  
6 Did I expect that we would have those in place? No. It  
7 would not be something that I would be driving to get done  
8 because I don't know what emergency to plan for. I think  
9 that if I had the right time and right talent available to  
10 the plant you might want to build in typical event  
11 scenarios, but that's what the whole system -- that's how it  
12 all works, INPO and all the rest of them come together.  
13 What happened to you? And then we try and put those fixes  
14 in place. What's the NRC -- we try and help each other  
15 along the way.

16 If you just go out and start saying the sky is  
17 falling, I don't know where to begin, I'll have six things  
18 over here and maybe that one will get me, I don't know. I  
19 mean, I hear you, I wish I could say I would know which ones  
20 to do.

21 Certainly, I think Jack mentioned an approach that  
22 Salem is using, we had characterized where your biggest risk  
23 is, what's the thing you really want to have happen and if  
24 you really thought about that and you say, well, let's sit  
25 down and do PRA around those things and work on them a



1 little bit and say is there -- are those areas good enough?

2 We cover ourselves, I think, pretty well on the  
3 safety-related because there's not single-failure proof  
4 stuff. You know, we said we rely on the backup system, but  
5 on these others, you know, it's like we talked the other  
6 day. The min flow valve, it comes open. Okay. When it  
7 comes open, now suddenly I've got more water going than I  
8 know what to do with. Now what? The pump trips.

9 Okay. I should be able to put it back, close that  
10 valve. But do I really want that happen to me given one end?  
11 In this instance, it didn't bother them, I think, initially  
12 that they lost those feed pumps. You don't need the feed  
13 pumps, then. You've got plenty of ways to get water there.  
14 You would like to have a feed pump running on min -- on low  
15 flow control that you can keep it going, but it's not the  
16 end of the world. They're trained to handle that.

17 So, I would certainly say that when we do our  
18 lessons learned, we're going to look for ways to say, well,  
19 what do you look for? What do you want to do on those  
20 things that beat us? And we'll follow through on that.  
21 There's many things that we're doing at this plant, looking  
22 for trouble, that didn't happen at this plant that came to  
23 us by industry experience.

24 MR. JORDAN: I had --

25 MR. ROSENTHAL: You also --





1 MR. JORDAN: Go ahead.

2 MR. ROSENTHAL: I believe training is done on a  
3 site basis, or at least the training department reports.  
4 What kind of training did the operators have that you  
5 thought was really relevant to them coping that day?

6 MR. McCORMICK: Well, really relevant is some of  
7 the scenarios where they loose instrumentation. They have  
8 several scenarios that they run where they do loose control  
9 room instrumentation, the full core display, their APRM's,  
10 front instrumentation panels, and I think that those  
11 scenarios -- while not, I'm sure, modeled to the degree that  
12 covers everything that you loose in this event -- or these  
13 events, at least prepared them to handle the major issues of  
14 where is my new core parameters or reactor parameters and  
15 keep the core covered. They were well prepared, I think, to  
16 at least know what the steps were to get into their EOP's.  
17 They get a lot of training -- a lot of damage training.  
18 Those crash and burns are pretty intensive that they go  
19 through, every six weeks.

20 And we've just had team training up here. We've  
21 just had INPO come up and go through the team training  
22 scenario with us and we did that in conjunction with Unit  
23 One. We went into breakout sessions and reviewed our  
24 performance, critiqued how we handled those emergencies. I  
25 sat in on some of those and it was -- I think -- an



1 important issue to that kind of situation where the team now  
2 is the sole protector of what goes on. Their response to  
3 the emergency, how they handle themselves, how they talk to  
4 one another and how they communicated. I think that level  
5 of routine training supplemented by special training was  
6 what cause them to respond effectively.

7           The branch managers and my ops managers and his  
8 assistant Jerry Helker -- Jerry Helker, incidentally, was in  
9 the room the whole time. I decided I wouldn't bring him  
10 down. The ops manager was on day off, but Jerry Helker is  
11 his assistant, a really qualified SRO; very very versed in  
12 EOP's. He helped write them here. He was the right guy to  
13 be in that room, a very steady stable guy. A good  
14 counsellor. And he is one of the two key people that go  
15 over and monitor the training to make sure it's going the  
16 way it should.

17           I participate, but I'm certainly not there as much  
18 as I would like to.

19           MR. JORDAN: You mentioned that the control room  
20 had the sequence of UPS transfer from maintenance power to  
21 normal power. Okay. Do you know how they established that  
22 sequence and why they established the sequence they did?

23           MR. McCORMICK: They did it based on their  
24 assessment of what would be the least impact of the plant  
25 working backup to the more significant ones. If it didn't



1 transfer or if they lost it.

2 MR. JORDAN: Do you know what they used to  
3 determine that? We've been looking for a load list and we  
4 still don't have a good loads list and I was just curious  
5 what -- do you have any idea what the plant was using or the  
6 TSC was using to determine which bus -- or which UPS was  
7 more important or less important?

8 MR. McCORMICK: No, we didn't go -- we -- they  
9 knew enough -- they knew enough. I can't say I knew enough.

10 MR. JORDAN: That's the control room?

11 MR. McCORMICK: They knew enough between that  
12 group that was in the control room and the system engineer  
13 to make that call. I did not make that call. I just wasn't  
14 knowledgeable enough and I think they -- whether they were  
15 working in conjunction with our tech staff, they knew enough  
16 to say we didn't want to start with A and B, C and D were  
17 less impact, A and B being the main instrumentation and G I  
18 think had the process computer. I think it was by -- you  
19 can't say anyone of them was easy to give up, but in terms  
20 of what would bite us the most, I think they were  
21 knowledgeable that the A and B had the control room alarm  
22 and instrumentation where the C and D were into other areas.  
23 And G was the process computer. And most impacted, maybe  
24 the G being left to last because of the transient introduced  
25 would blow the computer out due to its sensitivity of



1 computers. I think that's the way it went.

2 MR. JORDAN: Your event assessment report, can we  
3 get a copy of that? Do you know when that's going to be  
4 issued, or can we get a rough draft?

5 MR. McCORMICK: Let me see if I know which one  
6 you're asking --

7 MR. ROSENTHAL: Abbott's report.

8 MR. JORDAN: Abbott's report.

9 MR. McCORMICK: As contrasted to the safety  
10 assessment report or the -- he's putting together a full-  
11 blown -- it will cover all the issues which has to go to  
12 SORC and so forth. One of those can be a safety assessment  
13 -- but the total package --

14 MR. JORDAN: We want the total package.

15 MR. McCORMICK: Okay. I can -- it won't be done  
16 today, and probably even tomorrow, it's in the course of  
17 being -- still being put together. We'll get you a copy as  
18 sure as anything.

19 MR. JORDAN: Okay. If you want to mark it "draft"  
20 then that's fine, but we would like to have a copy of that.

21 MR. ROSENTHAL: And that would include Spadafore's  
22 input?

23 MR. McCORMICK: Yes. The ISEG guy?

24 MR. ROSENTHAL: Yeah.

25 MR. McCORMICK: Yeah.





1 MR. ROSENTHAL: So it's a matter of days, but not  
2 weeks?

3 MR. McCORMICK: Not weeks. It's got to be days  
4 because it has to be agreed before -- it has to be reviewed  
5 by SORC and approved and if it's not, then we can't feel in  
6 a position to even discuss restart. It's part of our  
7 restart program.

8 MR. ROSENTHAL: Are you going to do special  
9 training or procedure writing or anything germane to this  
10 event?

11 MR. McCORMICK: YEs. There's training of  
12 operators -- additional training of operators in the UPS and  
13 activities and a variety of lesson learned reviews of what  
14 happened and how to operate around them.

15 We've got to find some way around this 84 valve  
16 question.

17 MR. JORDAN: Is that all in the report also?

18 MR. McCORMICK: It was a requirement of SORC  
19 before they even came together. It was part of the  
20 requirements, yeah.

21 MR. JORDAN: Okay.

22 MR. McCORMICK: It will be in there. All of the  
23 things that we think we will have to do to corrective  
24 actions.

25 MR. JORDAN: Okay.



1 MR. ROSENTHAL: I want to backup -- I mean, it's  
2 clear to me that you could have -- you've got PM programs  
3 emphasizing the 1E, the non-1E, et cetera, lack of PM of  
4 the specific batteries here, grabbed you this time, it could  
5 be capacitors have finite lines too, or something like that.  
6 Where do you see this going in terms of PM of this class of  
7 equipment?

8 MR. McCORMICK: Well, I guess I understand your  
9 question, you know, is the rest of the PM complete enough?  
10 I guess you never really know on PM. PM is based on  
11 manufacturer's recommendations, typically, you try and  
12 follow that and you try and -- then you adjust based on your  
13 findings as to what's going on in the plant. If you're  
14 getting something failing at a higher rate than what you  
15 want, you've got to adjust your PM program to compensate for  
16 that.

17 I think probably the lower I would say we would go  
18 is we've written a -- we have this deficiency report --  
19 evaluation report that we do that allows me to get a sense  
20 of what the organization sees and as the plant sees has  
21 problems and I can set priorities to adjust to them.

22 MR. ROSENTHAL: And these include QA?

23 MR. McCORMICK: QA recently did an audit on the PM  
24 program. And it was there finding that there was PM, but  
25 there's kind of -- maintenance does PM, ops does PM, a lot



1 of people do PM. PM programs were developed before startup,  
2 they were done by, in some cases, consultants and other  
3 people that were part of the organization and they put  
4 together what they considered to be the PM program and it's  
5 being implemented for these past three or four years,  
6 whatever it is and it would appear that it's not under one  
7 single group control to say who is managing PM. Who has  
8 really got the overall control of PM? I guess by rights, I  
9 guess it's me, I'm the plant manager. That meeting direct  
10 control is not one that has clearly been my focus at the  
11 moment. I have to admit that.

12 The PM program, as I said earlier, was to get the  
13 program working that I have. But to answer that DER, when  
14 it came through I felt that it would take the organization  
15 now setting down to address and say, well, who is going to  
16 run the PM? Now, once you decide that, then you can begin  
17 to focus on what is not being done, what should be changed.  
18 I would be hard pressed to say to you, I really don't think  
19 I, in all good conscience say I'm going to go out and tear a  
20 part out of your PM program. I haven't said though, I  
21 covered every knit in there. I just can't do that because I  
22 -- but I have asked the system engineers to go back and say  
23 do you see holes, this is my program, is there holes in your  
24 program that you feel should be embellished? And that would  
25 be part of the response of that DER so that we could bring



1 that back in under their control.

2 The system engineering program here is under a  
3 development, it's just really getting its feet on the  
4 ground. We have just, this past, few months got an engineer  
5 assigned by name to every system and a backup that wasn't  
6 here. I found I got a system engineer for every program,  
7 I've communicated that to the control room. Everybody now  
8 knows if this widget breaks here's the guy you go to. He  
9 has responsibility for that.

10 Having done that, does that mean I've got all  
11 those system engineers doing exactly what I want them to do?  
12 No. But we're working on it and we will, through that forum  
13 then get into a position to say, well, your system, your  
14 program isn't going to meet your requirements. Go review  
15 the books, give me any holes and we'll undress them.

16 That would be part of that DER response, that  
17 would be the kind of thing I would be looking for. In fact,  
18 on this system there was a DER written to upgrade the PM on  
19 this. It came in and there was deficiencies in the PM  
20 program noticed by Crandall and I almost -- at the time I  
21 said I'll give you 15 days to get back here with a program.  
22 It took him longer than that, but he came back with a whole  
23 list of PM's that had to be written and I gave him four  
24 months to get it done because I figured I would hit it hard  
25 in the outage. I think one of the things on there is the





1 battery. So, we had system engineering input into this  
2 particular problem where we're working accurately to get  
3 procedures getting ready to be written, they had given me a  
4 target date by the end of this year that would meet the  
5 rewrite of the PM programs for these non-safety related UPS.

6           When we got into that, might we have stumbled on  
7 the fact that this battery was key player. I mean, you've  
8 looked at that instruction book, you don't see big  
9 batteries jumping out at you changing those control  
10 batteries as a part of the PM program buried in the text  
11 somewhere is, oh, by the way. I mean, it's not really  
12 calculated to make the operator -- we operate power plants,  
13 we don't build or design them, tell us what it is to operate  
14 and we'll operate. If we don't do it right, then shame on  
15 us. If switches -- you know, if things don't work as  
16 designed, we fix them and try and put them back right, and  
17 if they don't play the game then I've got to get a new  
18 design. I'm not here, I don't redesign a plant, I operate  
19 what I've got.

20           I expect my people to fix what's here and keep it  
21 working.

22           MR. ASHE: Is there a reason why you wouldn't  
23 necessarily get updates, information from the manufacturer  
24 on various pieces of equipment. Is it a matter of cost or  
25 some other reason that you don't get that automatically?



1           MR. McCORMICK: Well, I don't think it's a matter  
2 of cost, I think it's a matter that these plants, the  
3 vendor, I guess it's a cost to the manufacturer and unless  
4 you go in, maybe with your bid spec and say we want to have,  
5 as part of our purchase the continued update and revision of  
6 these devices, he may or may not do that. We have, again,  
7 as a program through our engineering department to have all  
8 the vendor manuals reviewed on some timeframe and that  
9 requires us to go back to the vendor and call him and say,  
10 "Is there anything new in your instruction book?" Of  
11 course, there's thousand and thousands of these books and  
12 you've got to get part of your -- your organization has to  
13 be geared to do that and make those calls and ask for  
14 updated information.

15           I guess the nearest thing I can think of how it  
16 should work is like in a computer, we buy a computer  
17 system, some mainframe, IBM, or somebody, all the updates to  
18 the program, the operating system, come and say here's a new  
19 one, you want to have us put it in, it will cost you X  
20 bucks, you know, and you make a decision to put it in.

21           But many of the switch manufacturer doesn't do  
22 that. If he comes up with a new design or whatever, he  
23 doesn't really do that. He just sells that to new customers  
24 and if you know about it, fine; if you don't, you don't.

25           In this case, I don't have the answer, but I



1 expect to get an answer why Exide now has all these neat  
2 fixes that when you're in trouble they come out of the  
3 woodwork. We've also chased through it and there's been a  
4 couple of other examples in the industry where they have had  
5 failures. I don't think they stumbled to the fact that it  
6 was the control battery, but there have been other  
7 instances of it. And at least to my knowledge I haven't  
8 received any information that we were at risk at all.

9 MR. ASHE: But is that a general rule at the  
10 station that you don't get the updates for whatever reason,  
11 whether you specified it or didn't or whatever?

12 MR. McCORMICK: It generally takes us to ask for  
13 it.

14 MR. ASHE: Ooay. And unless you've experienced  
15 prior problems, you probably won't ask, is it fair to say  
16 that?

17 MR. McCORMICK: Unless we've experience problems,  
18 you would, on some routine that we are establishing through  
19 the engineering organization to go out and ask for an  
20 update, this was a program under development. It's part of  
21 a, you know, Unit Two program to go out and see was there  
22 any changes to this equipment. But it was not fully  
23 implemented in any way.

24 MR. JORDAN: I don't have any other big questions  
25 to ask, we have a question -- a global question to ask at



1 the end, but are there any other specifics?

2 [No response.]

3 MR. JORDAN: Normally, what I've asked everybody  
4 else and I'll ask Marty. And the question is, the way I  
5 present it, there's good news, bad news, is this and this  
6 says, gee, in the bag of tricks that I had, okay, when this  
7 event happened I am really glad that I had this piece of  
8 equipment or background or whatever. It can be training, it  
9 can be car phone, it can be your beeper, it can be anything.  
10 Okay. The classic event I see out in the plant is, the guy  
11 that goes out in the plant and says, thank God we had this  
12 wrench hanging on this valve, okay, because when I got out  
13 there I needed that wrench and it was there. And the other  
14 side of it says, gee, that wrench wasn't there and I wish we  
15 had that wrench there. So, it's the good the news bad news.

16 In your bag of tricks as a plant manager in this  
17 event what were you glad that you had that you said to  
18 yourself, gee, you know, plant manager, if you don't have  
19 this, you ought to be having this because it really helped  
20 Marty out on the events of the day?

21 What do you wish you had the next time around,  
22 because you say, I really I hope I have this next time  
23 around because it would have been of benefit to me?

24 And the answer to that question you may say, you  
25 don't know of any or you may know of something.





1           MR. McCORMICK: Well, I don't know, I've thought  
2 about it, certainly this is the third site area emergency  
3 since TMI and it was certainly not the kind of a challenge I  
4 wanted to take on, I'll be quite honest, in my first six  
5 months here.

6           I guess I've been in the power plant business a  
7 good while and if I had to face this it would probably be  
8 better at this stage of my career than some time earlier on.  
9 I don't know that I -- certainly I am not an expert in Nine  
10 Mile Two to the level I have been at other plants, but I  
11 generally feel comfortable with my experiences that I know  
12 when to fold them and when to play the game.

13           I think if -- in terms of the people I was very  
14 pleased that I had Jerry Helker in the control room. I was  
15 able to deal with him without bothering the SSS, and a lot  
16 of the conversation we had back and forth, even clarifying  
17 my thinking or my lack of -- my concerns, I was able to talk  
18 to Jerry off line without getting the SSS involved in it.  
19 And he's just a class guy and he knows his business,  
20 probably one of the top notch people I could have had in the  
21 room, so if you were to ask me what was the best benefit I  
22 had, and I think the crew had as backup for the pressure  
23 they were going over and also the transition was Helker and  
24 I felt we had the right guy in the right place at the right  
25 time.



1           On the down side, well, I would like to say I know  
2 power plants. I mean I would say that if I put five years  
3 here I would have felt a lot better about it, I guess. But  
4 hopefully if I put five years here, I wouldn't be in the  
5 problem. That's probably the way I would say it. I don't  
6 run a plant to get it in trouble. And I just didn't have  
7 enough time to do some of the things I would like to see  
8 done, I'm not saying I would have caught it, but I'm going  
9 to tell you I would have been hot on its trail and I think I  
10 was.

11           This is a tough plant, this is called a sweat  
12 plant, you can sweat, you've been sweat and I think I was  
13 probably spoiled by my previous experience, I had -- I had a  
14 reasonably good designed plant and I can't believe some of  
15 the things that we're working with here, and I can tell you  
16 they'll be fixed.

17           MR. ROSENTHAL: Let's stop.

18           [Whereupon, at 11:50 a.m. the taking of the  
19 interview was concluded.]

20

21

22

23

24

25



REPORTER'S CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission

In the Matter of:

NAME OF PROCEEDING: Interview of Martin J. McCormick, Jr.

DOCKET NUMBER: (Not applicable)

PLACE OF PROCEEDING: Scriba, New York

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.

*Mark Handy*

---

Mark Handy  
Official Reporter  
Ann Riley & Associates, Ltd.



# OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission  
 Incident Investigation Team

Title: Nine Mile Point Nuclear Power Plant  
 Interview of: MARTIN J. McCormick

Docket No.

LOCATION: Scriba, New York

DATE: Monday, August 26, 1991

PAGES: 1 - 67

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
475 ALLENDALE ROAD  
KING OF PRUSSIA, PENNSYLVANIA 19406

September 27, 1991

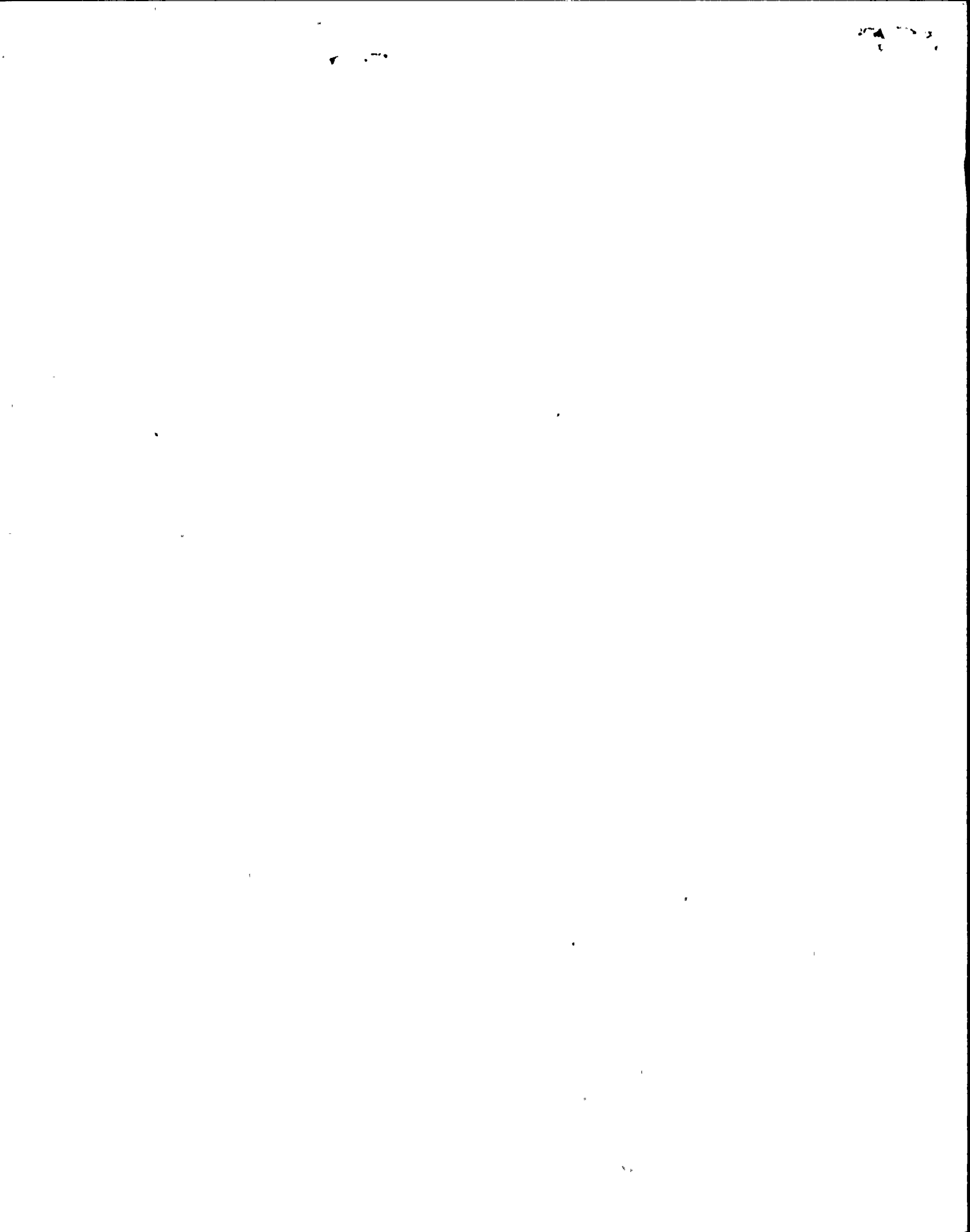
MEMORANDUM FOR: Martin J. McCormick, Plant Manager, Nine Mile Point Unit 2  
FROM: Wayne L. Schmidt, Senior Resident Inspector, Nine Mile Point  
SUBJECT: Review of IIT Interview Transcripts

The IIT has sent the transcripts of interviews conducted with the personnel listed below to the resident inspector's office. If any of the listed individuals wish to review the transcripts they should do so at the resident inspector's office by October 4, 1991. Guidelines for the review of transcripts are provided in the enclosure. If an individual does not review his transcript by that date we will assume that he did not wish to do so and that the statement is correct to the best of his knowledge.

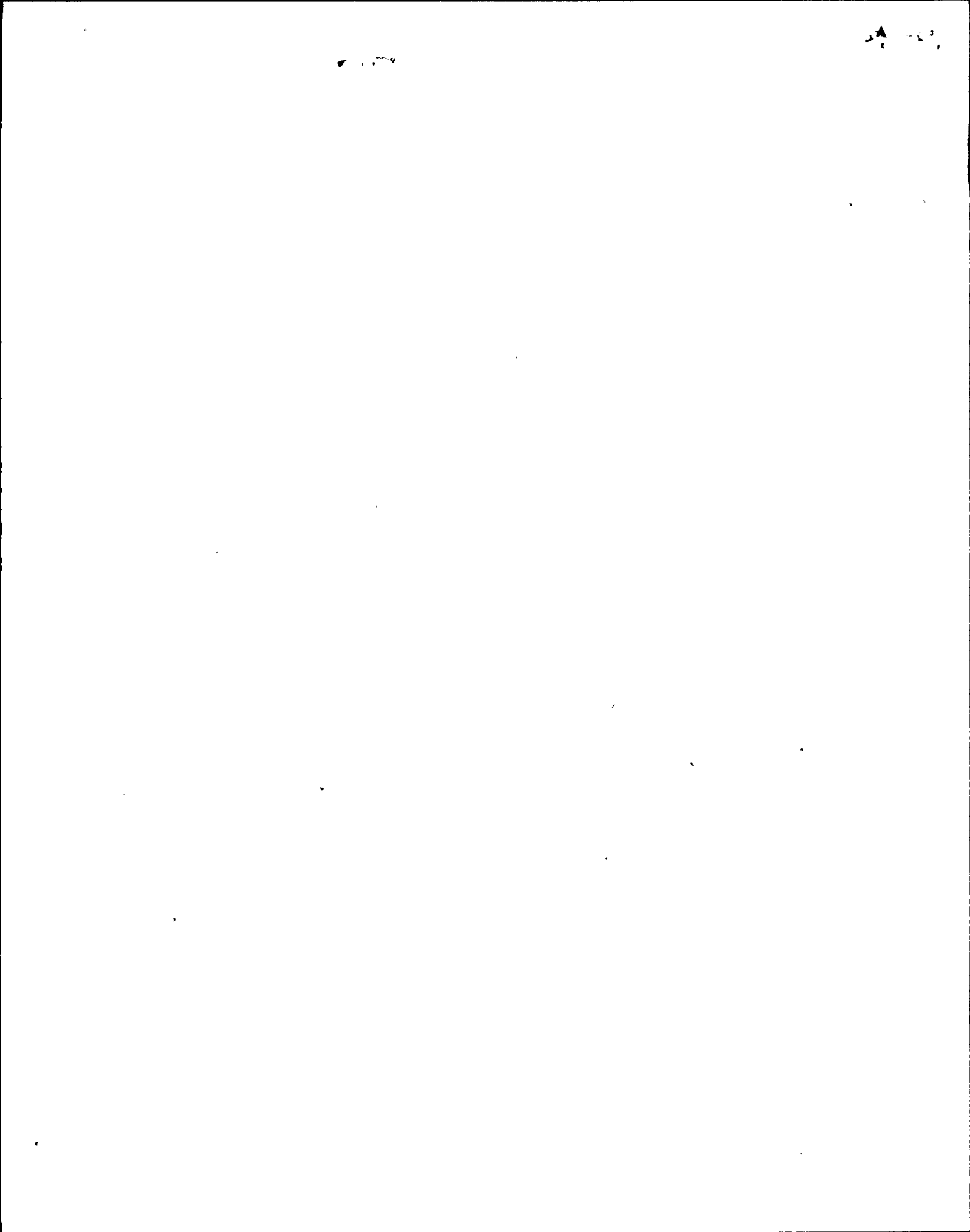
Alan DeGarcia, Steve Doty, Dave Barrett, Jerry Helker, Jim Burr, Bob Crandall, Robert Brown, Amil Julka, Perry Bertsch, James Spadafore, Joe Savoca, Mike Colomb, James Kinsley, Marty McCormick, Chris Kolod, Irineo Ferrer, Fred Gerardine, Anthony Petrelli, Jim Reid, Fred White, Rick Slade, Bruce Hennigan, and Tom Tomlinson.

Thank you for your help. If there are any questions please contact me.

*Wayne L. Schmidt*  
Wayne L. Schmidt  
Senior Resident Inspector  
Nine Mile Point







UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
INCIDENT INVESTIGATION TEAM

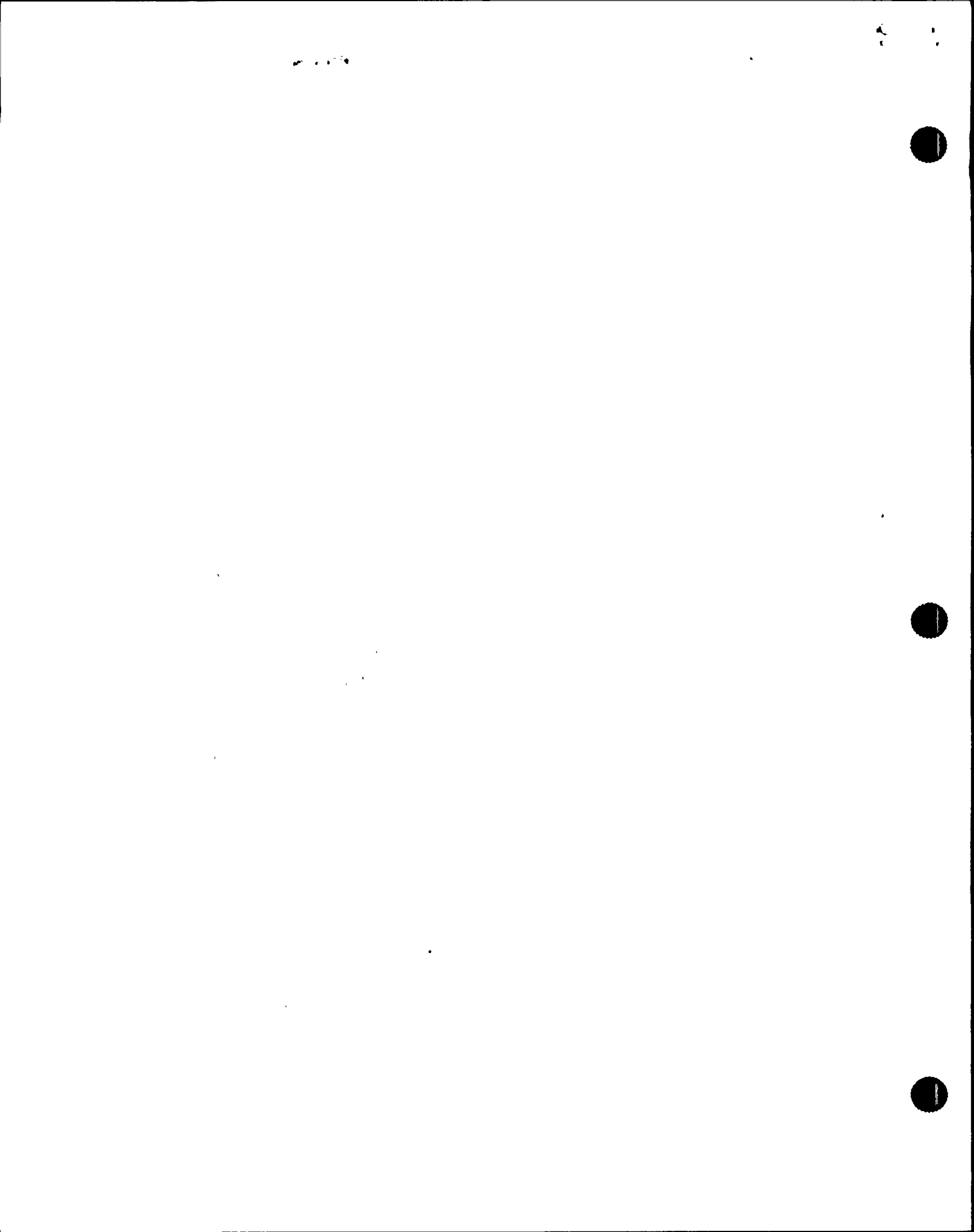
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Interview of :  
MARTIN J. McCORMICK, JR. :  
(Closed) :  
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Conference Room B  
Administration Building  
Nine Mile Point Nuclear  
Power Plant, Unit Two  
Lake Road  
Scriba, New York 13093  
Monday, August 26, 1991

The interview commenced, pursuant to notice,  
at 9:55 a.m.

PRESENT FOR THE IIT:  
Jack Rosenthal, NRC  
Michael Jordan, NRC  
Frank Ashe, NRC



## P R O C E E D I N G S

[9:55 a.m.]

MR. JORDAN: It's August 26, 1991 at approximately 10:00 in the morning. We're at the Nine Mile Point, Unit Two, in the P Building. We're conducting interviews concerning a transient that occurred on August 13, 1991.

My name is Michael Jordan, I'm with the U.S. NRC out of Region III.

MR. ASHE: My name is Frank Ashe, I'm with the Office of Nuclear Reactor Regulation in Washington.

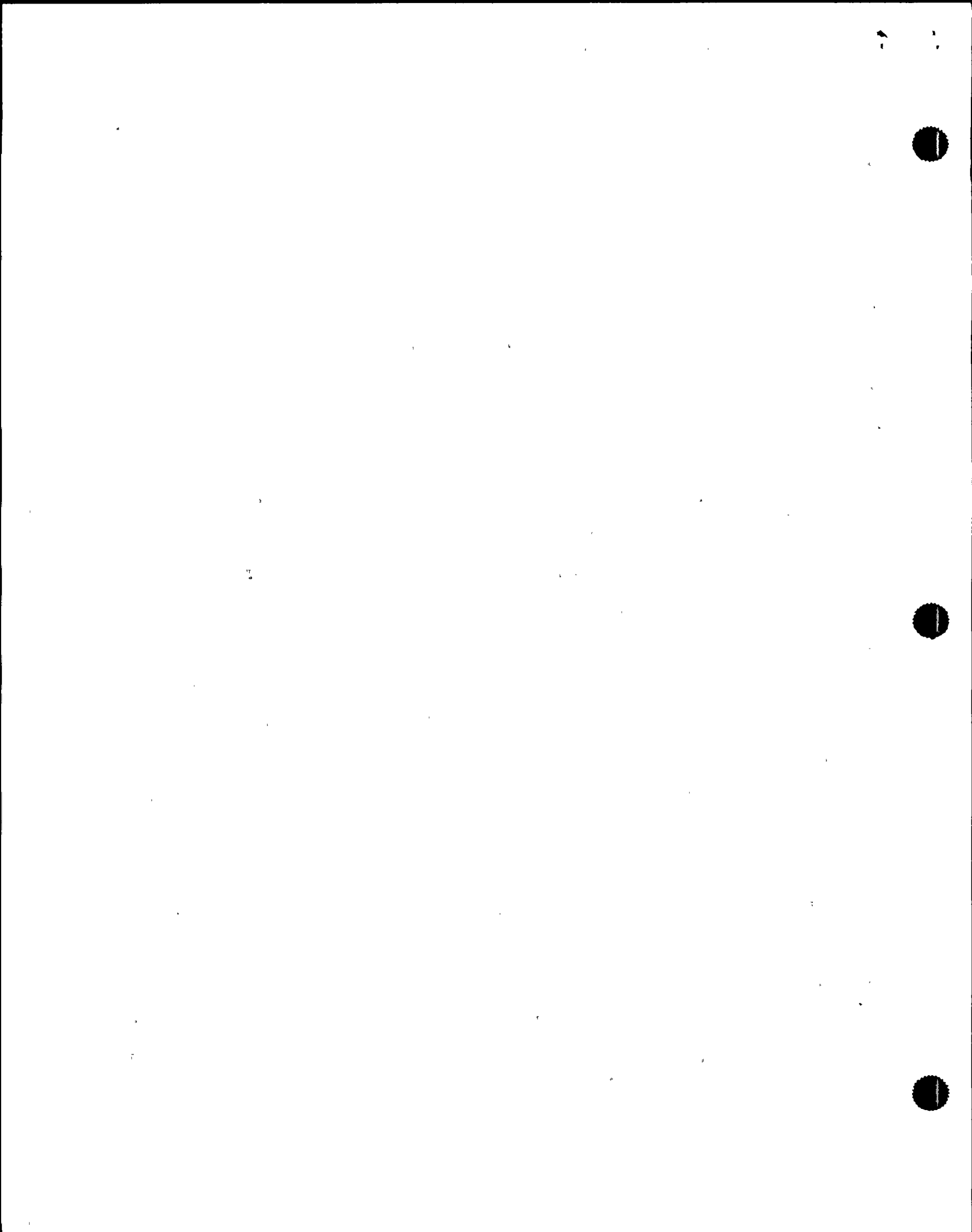
MR. ROSENTHAL: My name is Jack Rosenthal. I'm with the Office for the Analysis and Evaluation of Operational Data, U.S. NRC in Washington.

MR. McCORMICK: My name is Marty McCormick. I'm the plant manager, Nine Mile Point, Unit Two.

MR. JORDAN: Okay, Marty. Why don't you give us a background of what your experience is?

MR. McCORMICK: I have formerly been employed at Philadelphia Electric Company. I began my employment with the Philadelphia Electric Company after high school and after some time in the Navy, worked through a variety of responsibilities from an operator through to a plant manager at Limerick Generating Station.

I had responsibility for picking, probably, the various fossil unit generating stations in the Philadelphia





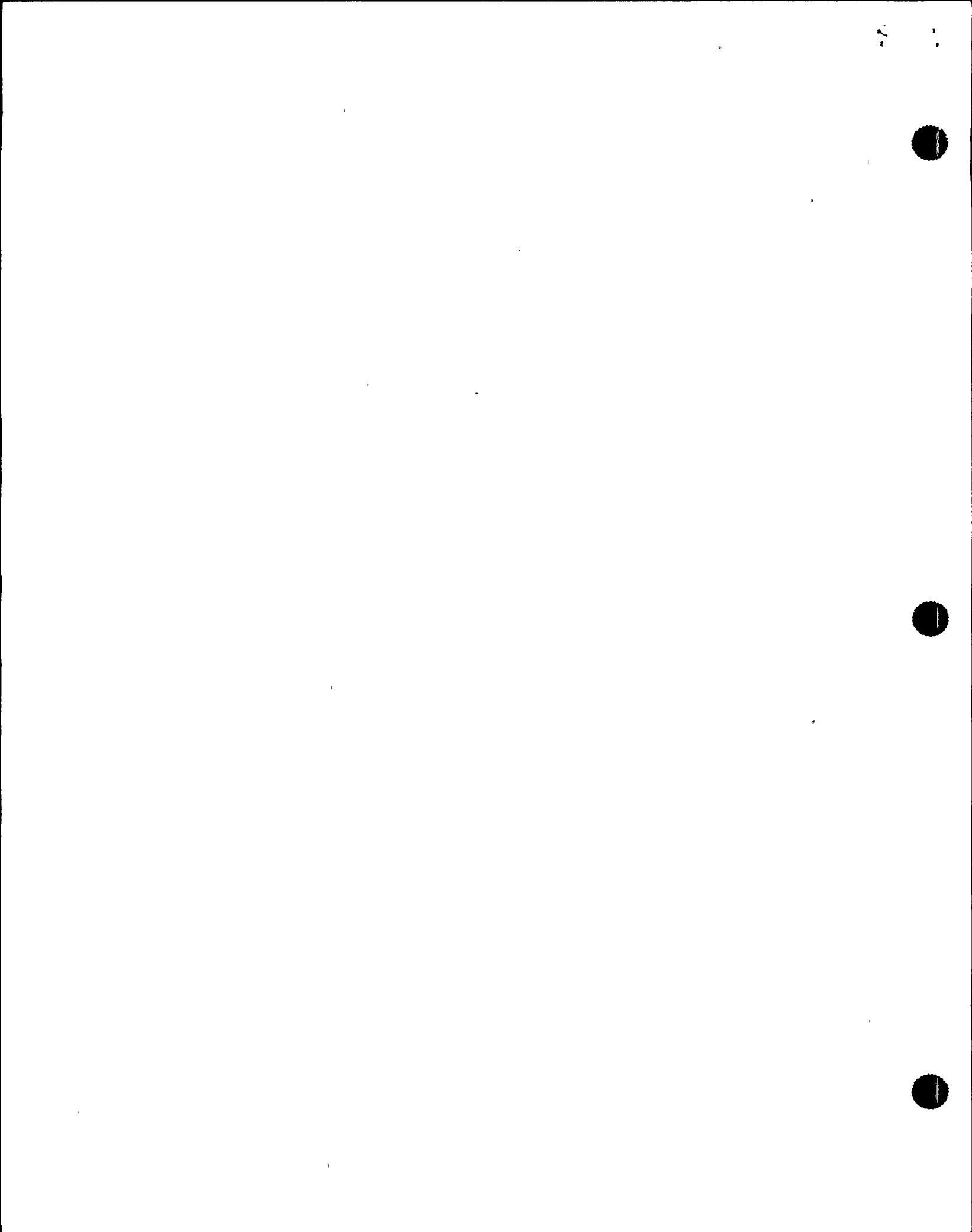
1 Electric Company System; including plant superintendent, I  
2 was manager of the Philadelphia Electric Company,  
3 maintenance department, and in that capacity had  
4 responsibility for the maintenance of fossil, nuclear and  
5 generating stations -- nuclear generating stations.

6 I also had responsibility in corporate for the  
7 Philadelphia Electric Company's O&M services branch which  
8 involved computer interface with the PSC - PUC and chemistry  
9 -- corporate chemistry.

10 When Peachbottom was shutdown, I guess that was in  
11 1986-87 timeframe, I was assigned to Peachbottom leaving my  
12 responsibilities at that time as manager of the maintenance  
13 department to go down there and manage that closure of that  
14 outage and completion of the outage in order to get that  
15 plant in a stable mode, the management there was being  
16 changed. At one point I was designated as the plant  
17 manager, although before that came to be there was a change  
18 whereby I went to Limerick generating station as a plant  
19 manager and John Franz went to Peachbottom.

20 I went to Limerick in 1987 as assistant to the  
21 vice president there, took SRO certification and became  
22 plant manager, I guess, in June of '88. And stayed there  
23 until an early retirement option came along in 1990 and took  
24 advantage of that opportunity.

25 So, after 37 odd years of experience with the



1 Philadelphia Electric Company I put out a resume and  
2 entertained a variety of options. The Niagara Mohawk people  
3 -- and the opportunity here and the challenge struck my  
4 interest and I decided I would come up here. I came up here  
5 in the end of January, took a two-week intended turnover  
6 from the plant manager at the time, Rick Abbott, which  
7 turned out to be at the end of their refueling outage that  
8 extended into that, so it was kind of a running turnover and  
9 I've been running ever since.

10 It's an interesting place. So I've been here on  
11 the job I guess since about early February.

12 MR. JORDAN: Okay. I guess the best way to work  
13 this is why don't you tell us the day of the event what --

14 MR. McCORMICK: Okay.

15 MR. JORDAN: -- how you came on site, where you  
16 went and what you did for the period of time.

17 MR. McCORMICK: Okay. I had recently procured a  
18 car phone as part of the requirements I felt were necessary  
19 for my job being all over the place and for emergency  
20 purposes, I want to have a telephone available to me. And  
21 on the morning of the 13th I was on my way to work, it was  
22 about a quarter of seven, I guess, in that timeframe, when  
23 my phone -- car phone rang and it was Ken Dahlberg in the  
24 TSC.

25 He said that, "Unit Two was in site area



1 emergency," and I gulped a couple of times and began to say  
2 "what are you talking about -- what happened?" He said,  
3 "There was -- he' thinks, an explosion." He had heard from  
4 his operators that there was a sound of an explosion, he  
5 thinks there's a failure of a transformer. There was a loss  
6 of a control room annunciation.

7 He indicated he was not ready to take over in the  
8 TSC, but that he had been in early because of some problems  
9 on Unit One and the announcements had come over the PA  
10 system so that he went to the TSC and was getting it set up.

11 I didn't talk too long to him, other than my judgment was  
12 that he was not ready to take over; he was not altogether  
13 clear on the status of things in the control room, so I  
14 called the control room. I talked, I'm pretty sure, to Mike  
15 Eron, I didn't talk to Conway, but I think I talked to Eron  
16 and I got the sense from that conversation that they were  
17 then at that stage with all rods in, although there was a  
18 period of time when they weren't sure that they had six  
19 rods, six rods were indicated as not being full in and the  
20 RWM was coming in and out. It was confusing at times.

21 Explaining that they had loss of power, loss of  
22 control room indication and that they had put in an manual  
23 scram. It was not clear to him, although I took the  
24 impression that he was not sure that an automatic scram had  
25 taken place at all and that he had put the mode -- they had



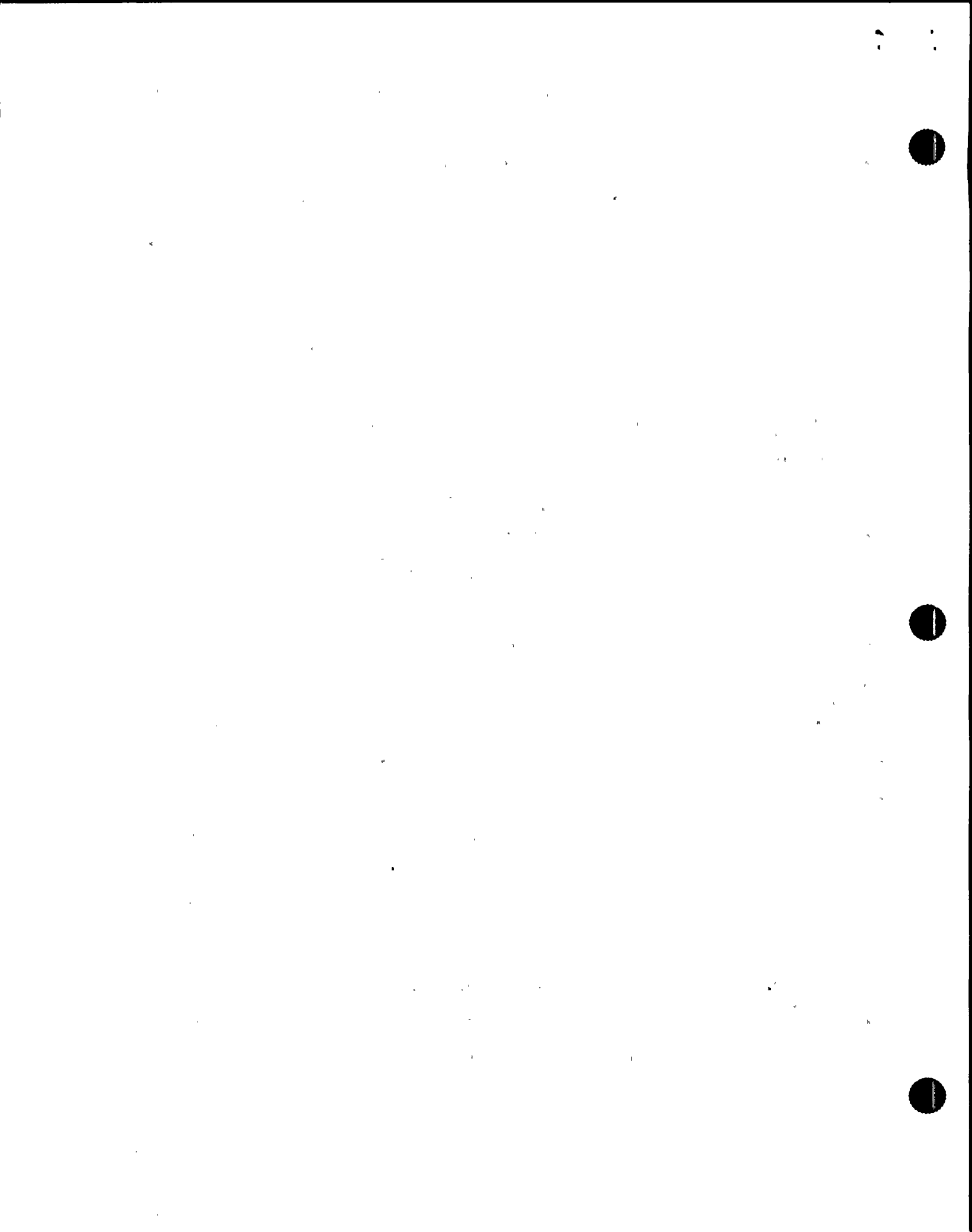
1 put the mode switch in shutdown based on what they saw.

2 We talked about power, he told me about the APRM's  
3 being down-scale and I didn't want to stay on too long, but  
4 I was satisfied that they had level, the core was covered, I  
5 think he used 180 some inches at that time; rods were in,  
6 they were stable, RCIC had been used for level control and  
7 was still available to them, and a sense of somewhat getting  
8 stability to the situation. So I told them I would go right  
9 to the TSC, I wouldn't go to the control room.

10 We agreed on that, and that's where I went. When  
11 I got to the -- as I walked in there was a line building  
12 outside the plant of folks who were being restricted.

13 Oh, incidentally, my green card, it was fortunate  
14 I had the phone because as I came to the plant they were  
15 stopping cars from coming in. I knew what was going on so I  
16 just zipped around everybody and was ble to get into the  
17 plant right away. I think I was concerned because my beeper  
18 hadn't gone off, and here it was quarter of, so I mentioned  
19 ot them then I hadn't -- didn't get anything on my beeper  
20 and as I was coming into the plant then the beeper went off,  
21 the 222 message.

22 I called it in and went to the TSC and when I got  
23 to the TSC Kim was there, there was a number of people there  
24 from Unit One, Bob Tessier, Gary Correll, chemistry and  
25 essentially began to assume the responsibilities of the





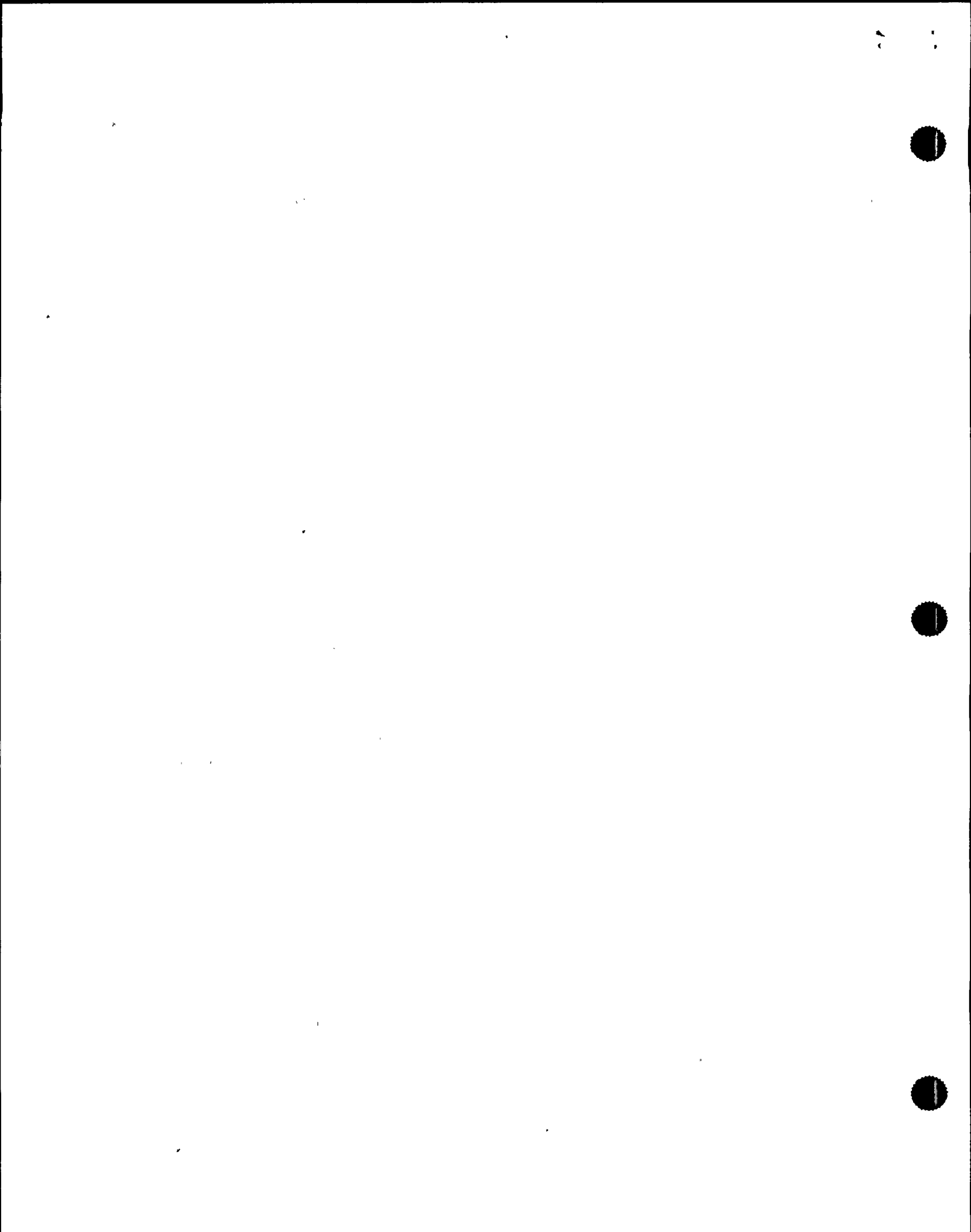
1 emergency director, gave direction to have people report  
2 when they were ready to take over, and as people were coming  
3 aboard to make sure that they were properly ready to take  
4 over, that as soon as they were ready I would initiate that  
5 action. I then called the control room again and got  
6 another update and said I would essentially confirm my  
7 previous conversation.

8 MR. JORDAN: Do you have any idea about what time  
9 this is?

10 MR. McCORMICK: I would say about five after  
11 seven, I think in that timeframe. When we talked about the  
12 inverters having lost power, I think in the original  
13 discussion we had, was that power was restored, but  
14 subsequently when I did the turnover I pressed Mike Conway  
15 to tell me what -- how he had restored power. And he told  
16 me that he was on DC -- that he was on the batteries. That  
17 they had bypassed the inverter and they had closed in on the  
18 battery backup.

19 MR. ASHE: Frank Ashe, NRC. Did you mean Mike  
20 Conway or John Conway?

21 MR. McCORMICK: Mike. He was the SSS in the  
22 control room. In other words, he was the emergency  
23 director. We're getting ready to do a turnover. So, Mike,  
24 at this point, was -- and I thought that we were on the DC  
25 backup as opposed to being in the bypass mode to the



1 maintenance feed..

2 I was concerned then for how long could I stay on  
3 those batteries and we talked about the battery being  
4 properly supplied because the other outside sources were  
5 restored and we should not have a problem. Subsequently I  
6 learned -- and I'm trying to remember when I learned that  
7 they were really on the maintenance feed.

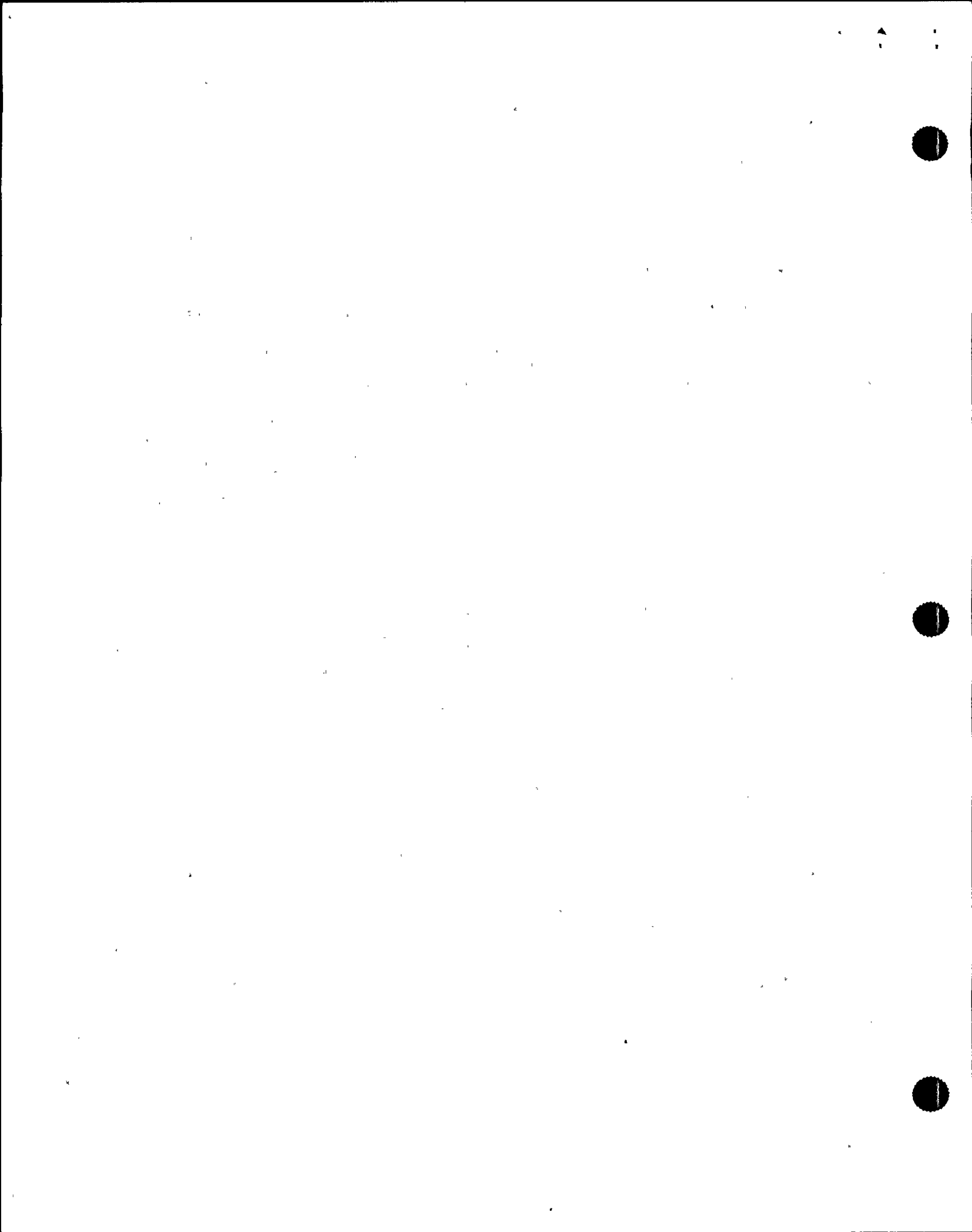
8 It didn't seem out of line to me to be on the  
9 battery because that's what you would normally flip to and I  
10 thought that breaker didn't close, so I didn't react to it.  
11 I thought that's where we wanted to be. My only concern was  
12 how long it could stay there.

13 We talked about ECCS being available and there was  
14 two of the pumps which were -- had been marked up, but the  
15 work hadn't been released and they were clearing them. They  
16 said they were available, so I concluded that they were  
17 available when I needed them. They may not have been  
18 operational, but they were available.

19 I think it was about -- after that turnover,  
20 around 7:37, I think by the log, at least by the things I'm  
21 hearing from the -- you know, people who looked at the time  
22 line, that we -- I took turnover as the emergency director  
23 officially.

24 MR. JORDAN: At what time, about?

25 MR. McCORMICK: At 7:37. So, our conversation had



1 taken place, I was satisfied I knew the condition of the  
2 control room, each of my groups reported in sufficiently  
3 that they were ready to take over. And I announced to the  
4 room that the -- I was officially the site emergency  
5 director.

6 MR. ROSENTHAL: Can I --

7 MR. McCORMICK: There was a concern about -- go  
8 ahead.

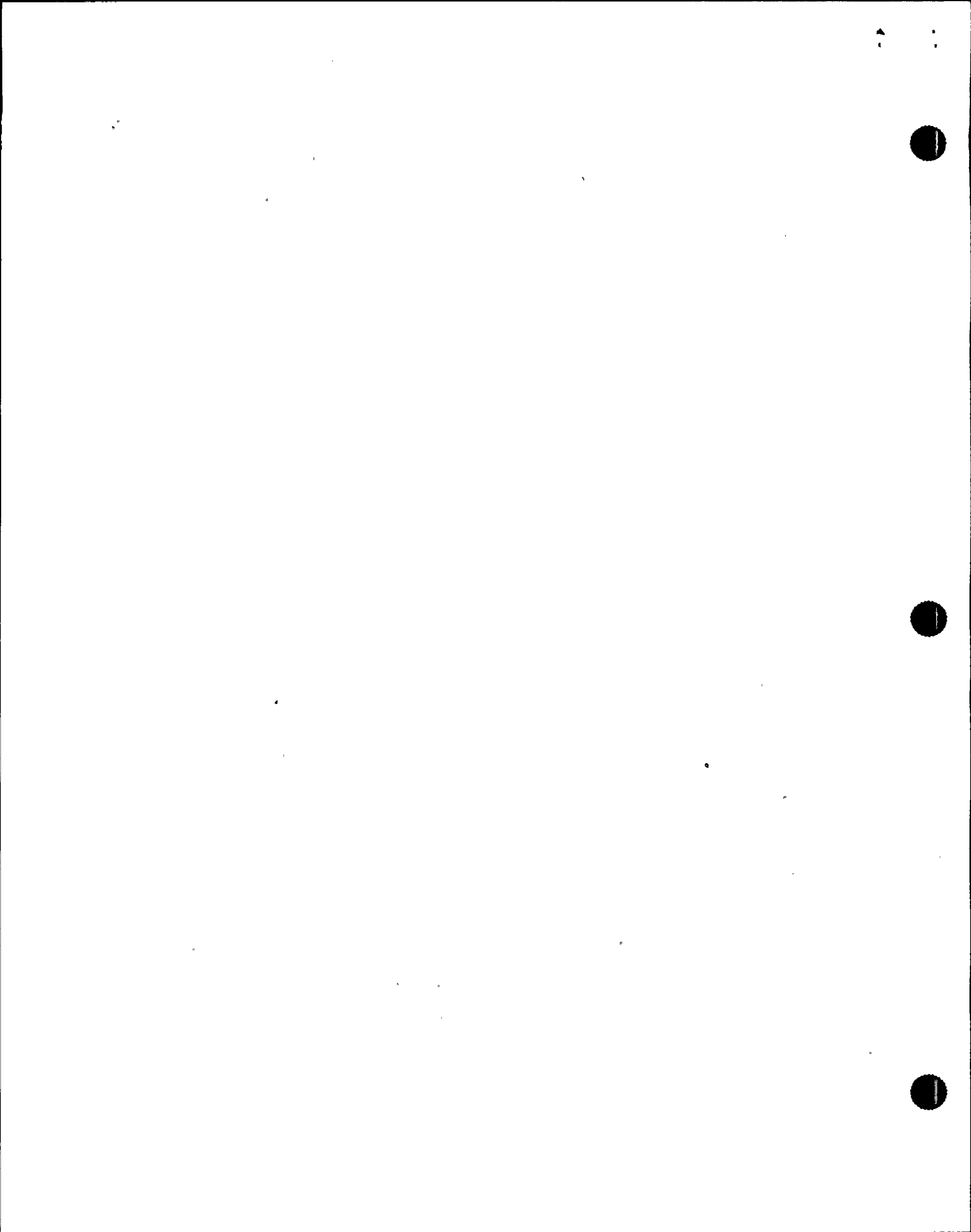
9 MR. ROSENTHAL: I'm sorry, let me just back-up a  
10 little bit. You're at the TSC at this time.

11 MR. McCORMICK: Um hm.

12 MR. ROSENTHAL: Okay. Rather than the EOF?

13 MR. McCORMICK: No. Joe Firlit called in, he was  
14 coming in -- it was sometime after I did and Kim Dahlberg  
15 was still there and I was busy and I told Kim to talk to  
16 Joe. He informed Joe of what was going on and I could  
17 overhear one part of the conversation and Joe said, "He  
18 would go to the EOF."

19 So he went to the EOF to get setup over there. We  
20 did have a conversation sometime about -- before 8 o'clock,  
21 and I was -- I felt not ready to make a turnover to the EOF  
22 of the corporate responsibility for off-site -- we had some  
23 things we were trying to decide, do we have any radiation  
24 problems and there was preliminary indications that there  
25 was none.



1           The concern I had was -- and there was some calls  
2 from the NRC, I think Tim Martin, somewhere in there got my  
3 attention. And I had to talk to him and give him some  
4 discussion of where we were. I felt fairly confident that  
5 we had a stable reactor. We were on level control through  
6 the condensate start-up line and that was part of the  
7 turnover he was controlling level, I think, at that point.  
8 He still had RCIC available, but he was on level control and  
9 using the condensate start-up line, the 137, I think that's  
10 the number, but let me check that.

11           So, I'm satisfied we had level, pressure under  
12 control, ready to feed the reactor. My reaction then was if  
13 we could get -- continue on that path, what was my jeopardy  
14 from the power sources, and began to think in terms of what  
15 had occurred to the inverters and my judgment was that we  
16 had some kind of a transient from the fall in the  
17 transformer that had locked them out or caused a failure and  
18 if that had cleared, we should be able to go back to normal  
19 power. There would have been a transient coming through,  
20 but I had to -- a fellow had to find that out if I was going  
21 to be able to -- and quite frankly I was thinking in terms  
22 of de-escalating from the site area emergency and what would  
23 I need to do that. I had to have a stable vessel, be on my  
24 way to cool down and also to have stable power. So I asked  
25 the tech group to get a group together with the right



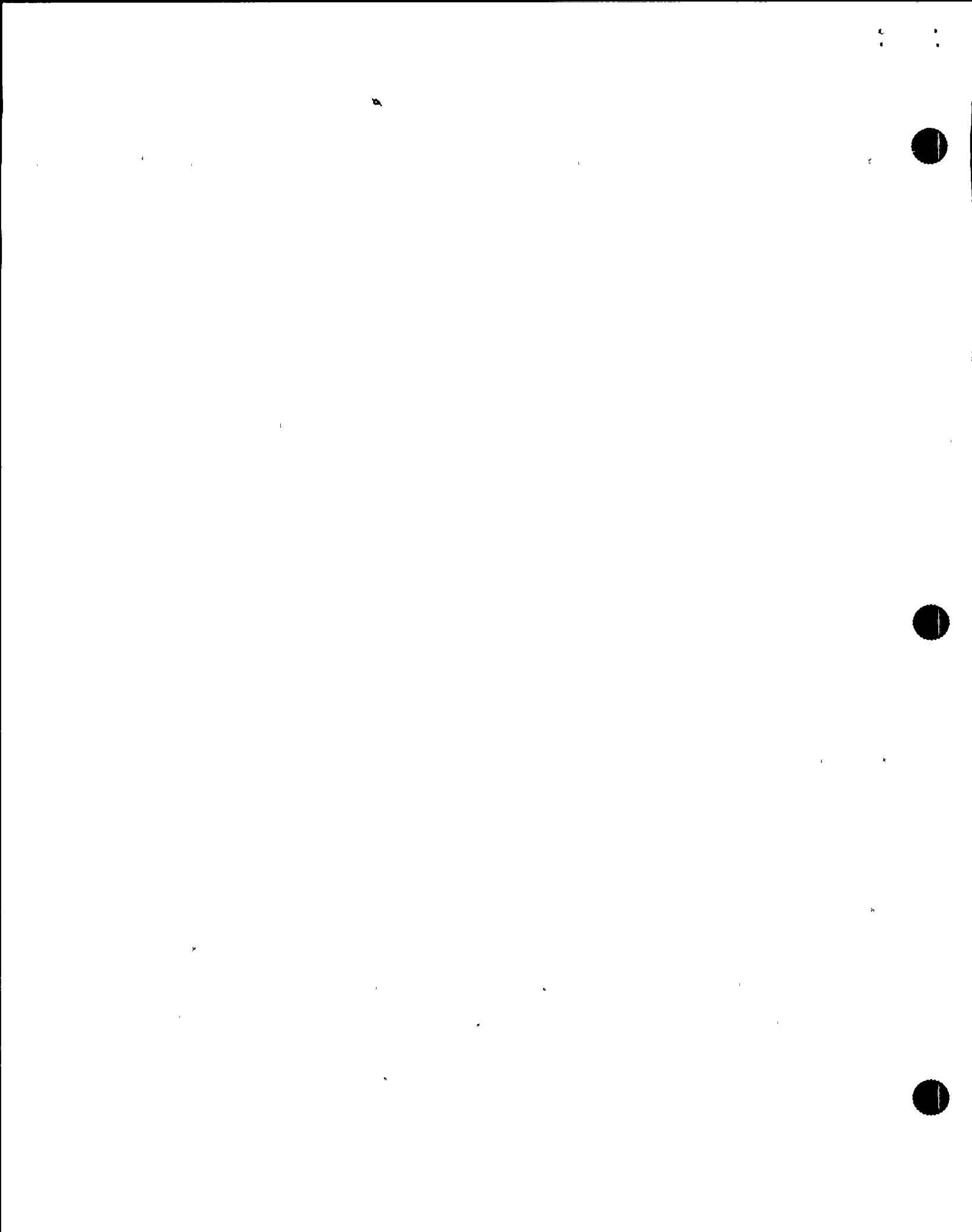


1 operators and technical staff and go down and see what the  
2 inverter situation was and see what we could get restored.  
3 So that was the damage control team, I just remember that  
4 one as a particular one.

5           There was another damage control team  
6 particularly, because I was concerned about seal steam and  
7 did we have aux boilers up. I didn't want to loose vacuum  
8 as you were coming down. And they had some problems  
9 getting a 145 valve open and we needed to get that taken  
10 care of. Also, the turbine had come down on turning gear  
11 and wouldn't go on turning gear, so that was another  
12 requirement to get that thing turned over.

13           And we also were having some problems with people  
14 on how to maneuver to get people into support maintenance.  
15 Ken Coates, who is a maintenance -- my maintenance branch  
16 manager, indicated he needed to get some people in. So I  
17 gave direction to the security people to let in those people  
18 that were required. That subsequently meant some people  
19 came in and didn't go to their accountability stations, so  
20 we had to address that later on.

21           I was hesitant to let everyone go. I mean I had  
22 the site protected, I knew where I was, there were 62 people  
23 that were not accounted for in the first cut of the  
24 accountability. And I didn't want to bring anybody in, but  
25 I didn't want to ship all those people to Timbuktu, either,

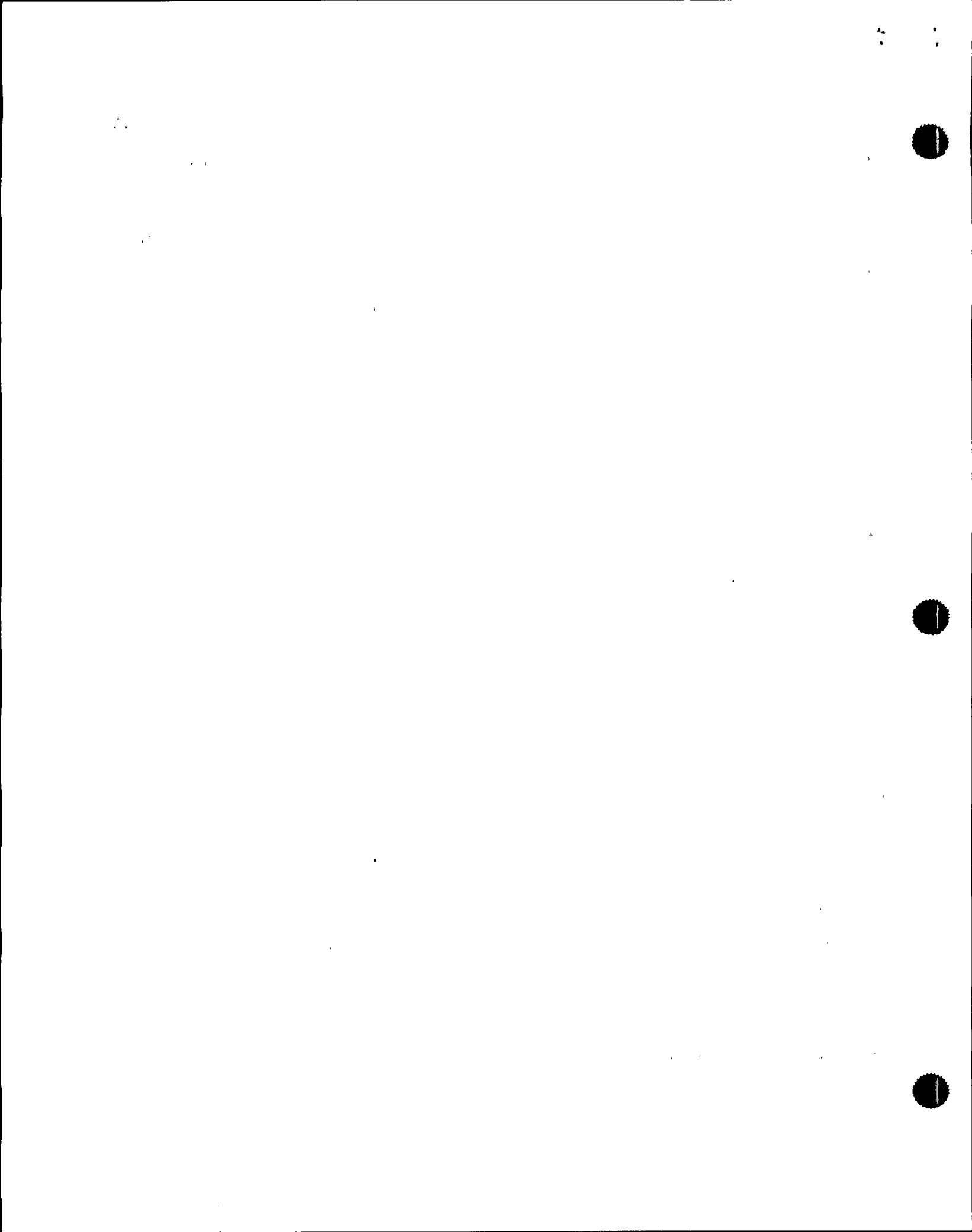


1 in the face of some of them I might need. So we had  
2 protected area evacuation, but we did not have a  
3 radiological problem so I didn't want to loose everybody to  
4 some -- send them home or something like that until I was  
5 satisfied I had picked everybody clean that we needed.

6 Later on we decided that we would sent the people  
7 to Volney a part of a -- let's say an adjustment to the  
8 emergency plan. And that took place, and the EOF and I had  
9 several conversations about just how to manage that  
10 situation because there was, coming to me, reports of some  
11 confusion and some road blocks that were causing a problem.  
12 And that off-site control I wanted to get over to the OF to  
13 fix that.

14 Jumping back, I think I should mention I turned  
15 over outside dealings with the off-site groups to the EOF at  
16 some time after 8 o'clock, about 8:05. Joe Firlit and I did  
17 a turnover and he resumed the interface with the off-site  
18 groups.

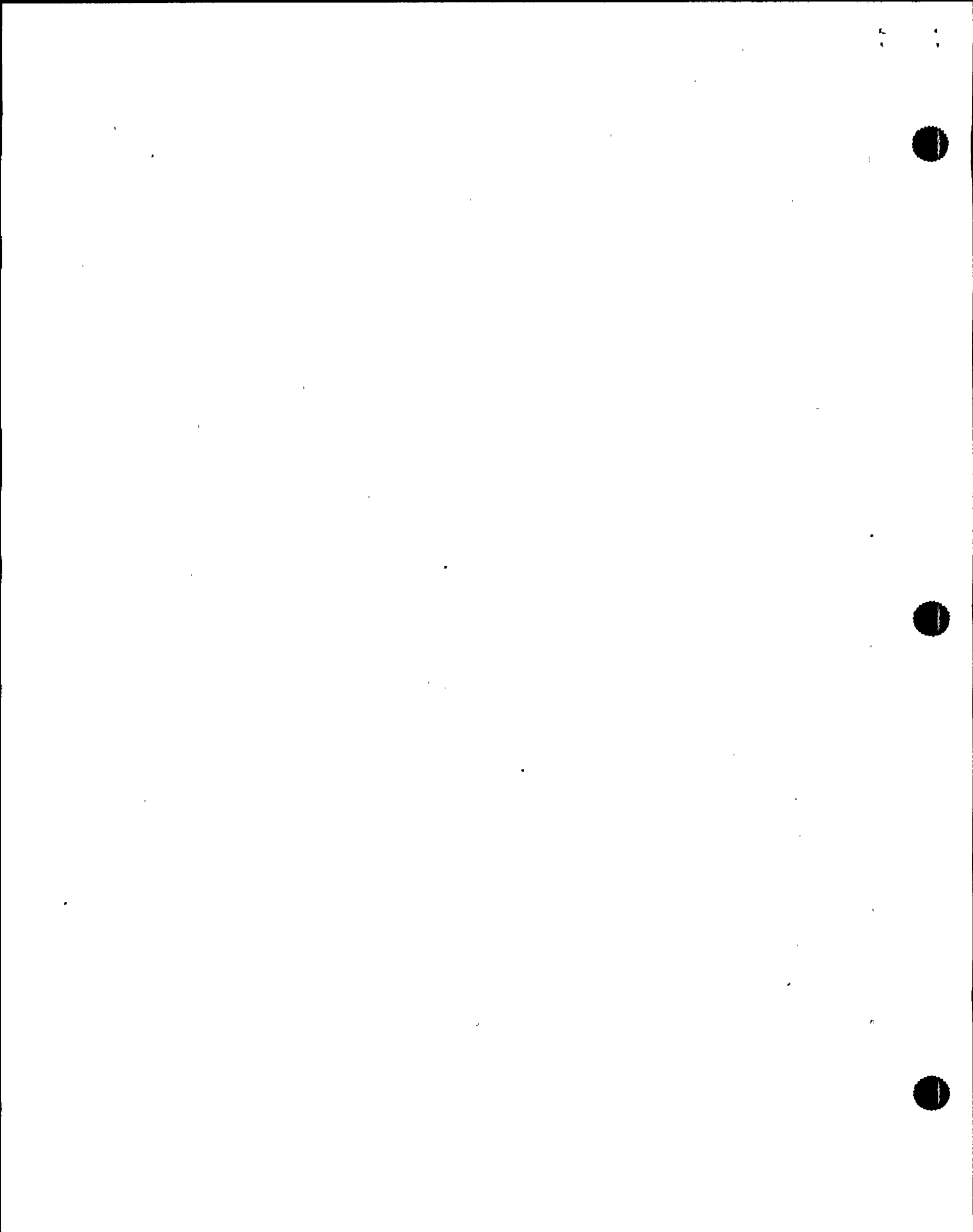
19 I also, as I recall, had verified early on that we  
20 had made all the notifications to the state and local  
21 agencies so that was done from the control room. The NRC  
22 had been notified. It turned out there was some confusion  
23 there and that was part of the problem with the CAN notice  
24 not going out, but the appropriate parties had been notified  
25 as far as I was concerned.



1           The day just went on through the -- you know, it  
2 was just a long day of trying to get clear and get shut  
3 down, handle things that happened. There was no one major  
4 evolution that sticks out in my mind throughout the day  
5 other than addressing a variety of issues that came from a  
6 variety of sources. Interfacing with the NRC several times,  
7 the EOF, damage control reports, getting in a position much  
8 to my chagrin where I was stuck where I was. I couldn't get  
9 out of the site area emergency based on a review of the  
10 requirements that our procedures called for.

11           I discussed that with Al Salemi who is our manager  
12 for emergency preparedness. Discussed it with the EOF and  
13 my recommendation was that we not try and change procedures  
14 in the middle of this event, I didn't think -- if I were the  
15 region I would be wanting to hear that change. I don't know  
16 what situation they were in in there, whether the right  
17 people were there to make the decision. So, as far as I'm  
18 concerned, that's the wrong time to be deciding what else to  
19 do.

20           So, I had my technical support manager, John  
21 Conway, who was with me in the TSC, to set up a SORC review  
22 and directed him to have a review made of the requirements  
23 to terminate the event; having developed a summary of where  
24 we are right now in the handling of the condition, followed  
25 by a review of what risk we had to fall back, in some way,



1 that is some contingency in case something would change and  
2 put us back into it. I didn't want to terminate and then  
3 have it come back on me. And the EOF took on the  
4 responsibility of getting a recovery plan, which was also a  
5 requirement of the termination criteria. I would take care  
6 of the immediate on-site requirements in terms of the SORC  
7 review and the readiness to terminate.

8 The plant continued to come down slowly towards  
9 cold shutdown. Their concerns were -- a number of times  
10 where they had maybe got their cooled down -- cool down was  
11 of major importance to us so that we didn't over stress  
12 anything on the way down. We also had to perform a test on  
13 the B RHR which would require us to get that into shutdown  
14 cooling in order to verify that a valve stroke which was a  
15 requirement that we had to make that valve operable.

16 And the cool down proceeded slowly but I didn't  
17 want to rush them, just keep it coming and be careful. We  
18 didn't want to get into any kind of a new situation. We  
19 tried to get cleanup on and cleanup was significant because  
20 conductivity was coming up. I had a couple of reports from  
21 chemistry that it was coming up and we didn't exactly know  
22 why that was doing that, although we figured we might be  
23 just part of the cool down process and if we could get  
24 cleanup on it that would take care of it.

25 Later on we found that we had a valve open on the



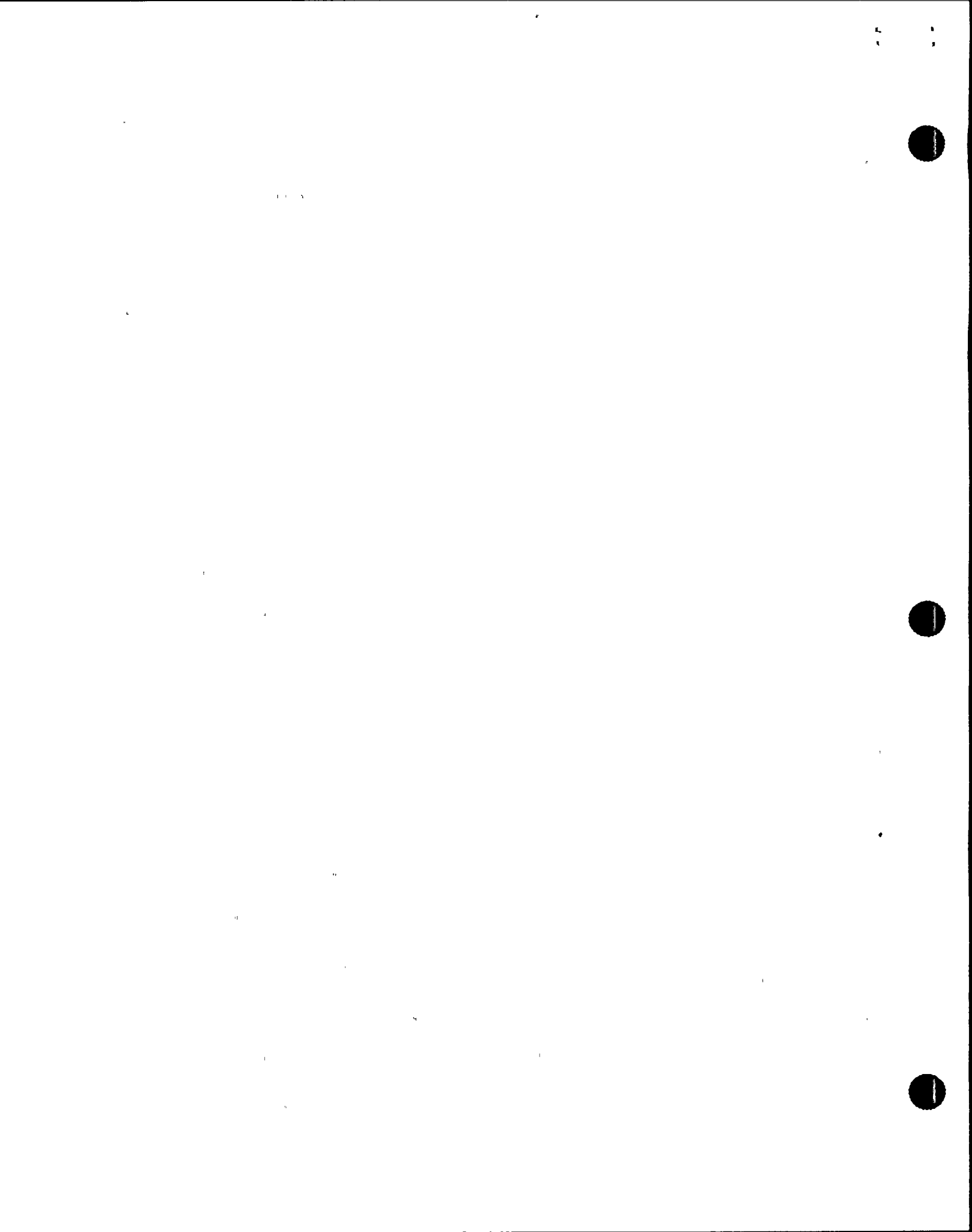


1 condensate demins, around the condensate demins that came  
2 open on the scram and that was a normal evolution. It  
3 wasn't picked up until chemistry and John Blasiak, who is  
4 also -- he's my branch manager for chemistry, was in the  
5 TSC, he said he would go over to the OSC and see how things  
6 were going and while over there, in his discussions they  
7 realized in reviewing why the chemistry was coming up,  
8 because I had talked to him about, you know, what did he  
9 think was going on; he came to the conclusion that his  
10 bypass valve had come open and we immediately got that  
11 closed.

12 We did try and get cleanup in and there was some  
13 problems doing that. We had a delta flow perturbation which  
14 indicated an ESF actuation isolation of cleanup.

15 I let that normal reporting through the NRC  
16 through the red phone take place there, rather than getting  
17 in the middle of that. And I had some concern brought to my  
18 attention about water hammer. I knew I had to get cleanup  
19 back in so I directed a damage team to go out and look at  
20 that cleanup piping to make sure that that -- something  
21 wasn't broken free. I didn't want to get in and climb every  
22 niche of it, but I wanted them to at least make enough of a  
23 walkdown that I would be assured that something gross wasn't  
24 wrong. They reported back that that was okay.

25 We also had some problems with RHR in the way of a



1 water hammer when they were bringing in the shutdown cooling  
2 that too, we thing, was normal and that's being reviewed. I  
3 don't have the final closure, but I'll get it before SORC,  
4 but I asked for a damage team to walk that piping and make  
5 sure that wasn't any gross problems before we went on to  
6 change over to the shutdown cooling system from suppression  
7 pool cooling.

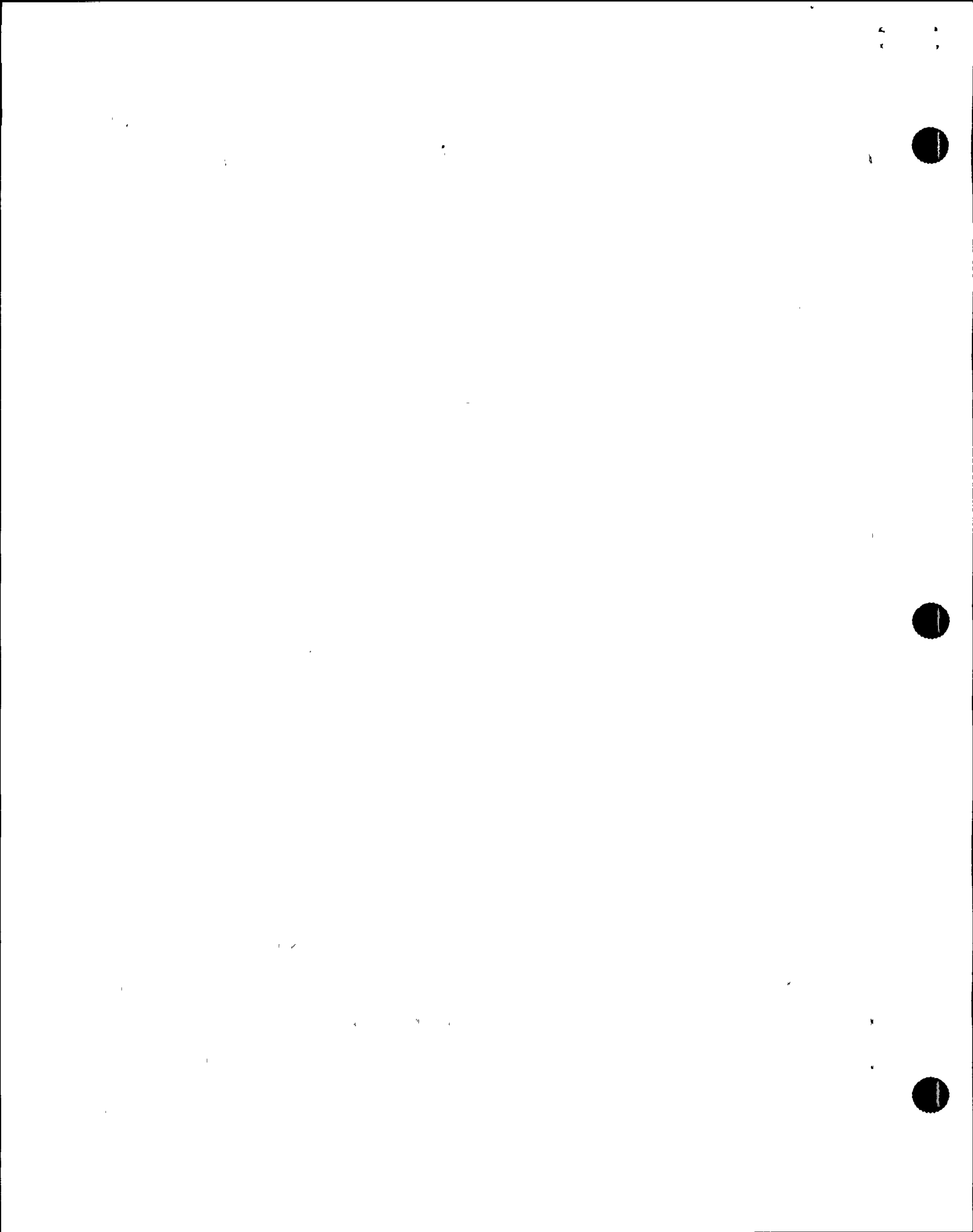
8 I guess it was about around six something when we  
9 started our SORC review of the -- well, SORC completed their  
10 review, told me they were pretty much ready, they had all  
11 their -- they were getting their paperwork put together and  
12 as the emergency director I'm also plant manager, I'm  
13 chairman of SORC, but I operated in this capacity as the  
14 emergency director and let John Conway continue as the SORC  
15 chairman.

16 MR. JORDAN: Can you explain what SORC is?

17 MR. McCORMICK: SORC is the site operational and  
18 review committee.

19 MR. JORDAN: Thank you.

20 MR. McCORMICK: So, I had then reviewed each of  
21 their reports, the justification for why we were okay, as I  
22 said where we were, why we had some recognition for  
23 contingency and would not fall back into a situation and I  
24 had satisfied myself through the criteria with the exception  
25 of cold shutdown and while I was in that session, Kim



1 Dahlberg was covering the desk as the site emergency  
2 director at the desk and announced over the PA that we had  
3 achieved cold shutdown.

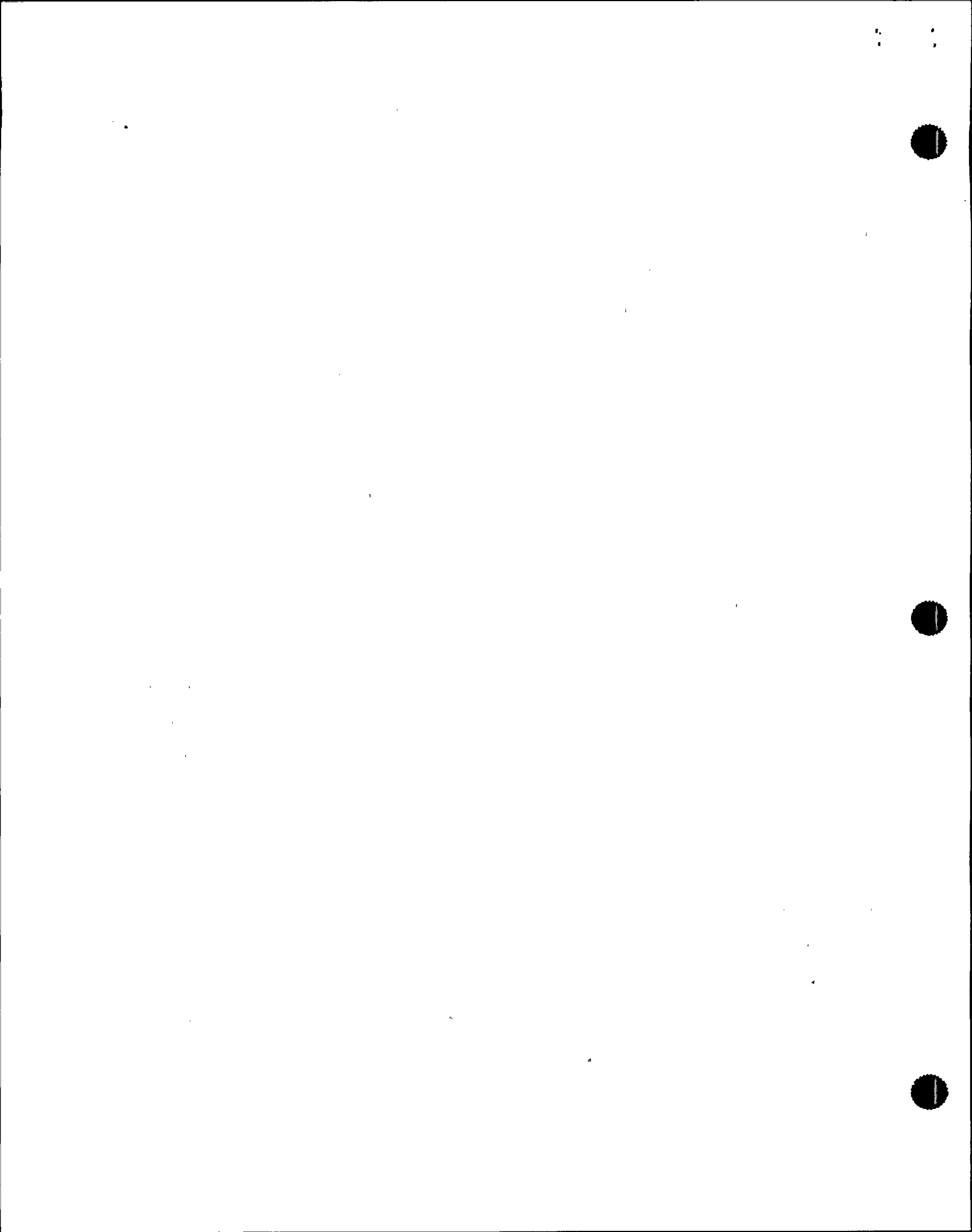
4 The other part of that termination process was the  
5 SRAB review of the SORC's deliberations plus the recovery  
6 plan. And --

7 MR. JORDAN: What is SRAB?

8 MR. McCORMICK: SRAB is the off-site review  
9 assessment board, they're the off-site review group and it  
10 includes several consultants and others. It's not just a  
11 company organization. I am a member of SRAB also.

12 Carl Terry who is vice president of the  
13 engineering department, is the chairman of that committee  
14 and he, through telecon, I had arranged that he would  
15 participate in our SORC review and then he would have his  
16 comments on the recovery plan.

17 The recovery plan had been faxed over to us, it  
18 was prepared in the EOF and was a -- I think a very  
19 satisfactory document in terms of what we were going to do  
20 next and to investigate the event and recover the plan.  
21 And, in fact, it was the document which had been reviewed  
22 with the AIT team which arrived on site that night in order  
23 to give us -- give them some flavor of where we were headed  
24 in the recovery plan and established the framework for the  
25 organization which has worked for the site throughout this



1 last two weeks.

2           They established Joe Firlit as the vice president  
3 on site as the lead man. I was reporting to him with Rick  
4 Abbott as the -- in charge of the recovery plan with  
5 personnel assigned to cover each of the topics that were to  
6 be worked through on the recovery aspect. That document is  
7 available and has been used extensively throughout this  
8 period.

9           In any event, that evening, having finished the  
10 SORC review, in which called Terry as the SRAB chairman and  
11 someone else was on the phone with him, I just don't recall  
12 who that was, it was more than one in that SRAB telecon.  
13 Concurred that SORC information was adequate. He then -- we  
14 then jointly went through them, we reviewed the recovery  
15 plan, there was a number of changes that were recommended to  
16 the recovery plan and they were made part of the SORC  
17 minutes that evening.

18           Having completed the -- my assessment of the SORC  
19 input as the site emergency director, also that -- having  
20 had SRAB's review of the recovery plan and being in cold  
21 shutdown, I then gave direction to terminate the event which  
22 was 7:37 or in that timeframe, about an hour after we had  
23 reached cold shutdown.

24           So, that's the main points that come to me at this  
25 point subject to questions throughout the day.





1 MR. ROSENTHAL: Can I bring you back to -- I guess  
2 it's roughly the 8 o'clock timeframe. You're in the TSC,  
3 you're in command, and you've got -- I think -- I don't know  
4 what support you had of an electrical nature, at that point,  
5 the concept and it sounds good, was that you were on the  
6 batteries at that point?

7 MR. McCORMICK: At that point I thought I was on  
8 the batteries.

9 MR. ROSENTHAL: So, let's focus in a little bit  
10 more on what goes on. So you're worried about how long can  
11 you stay on the batteries and you want to recover -- you  
12 want to go back to the normal alignment, so you direct  
13 people to do what?

14 MR. McCORMICK: I asked the technical group to get  
15 together the right people and the right operations group and  
16 go out and find out exactly what we had and see if we could  
17 get back on normal power. I didn't want to stay -- I didn't  
18 want to come out of an emergency sitting in some fashion  
19 abnormal and I had to know -- my mind at that time was I had  
20 some kind of a heavy fault, I didn't talk too much about  
21 what I did about the transformer, but I can go back to that.

22 But, in any event, I had a fault that tripped my  
23 main transformer breakers and simultaneously I lost control  
24 of instrumentation. Obviously the cause -- the connection  
25 is made. Now, did the transient do it? Did I burn out



1 anything? How deep into a problem am I?

2 Now, I had a guy, this fellow Crandall, Bob  
3 Crandall, who is the system engineer, was available to us  
4 and they were putting a team under his direction which gave  
5 me the measure of comfort that I had that I had the right  
6 people.

7 I don't have anybody better than he is. He was  
8 it, so with Crandall going out, get a set of operators who  
9 would go down, get the right maintenance people, electricians  
10 and Crandall and go out and trouble shoot and see what we  
11 can do with the goal to see, can I get back? We did talk  
12 about -- I wanted them to develop a plan, I didn't feel any  
13 expertise about how that should be done. I wanted the plan  
14 developed.

15 MR. ROSENTHAL: Sure.

16 MR. McCORMICK: They came back and with a  
17 recommendation that we do the C first, I believe. There was  
18 an action -- maybe it was G, but we had plan to go with the  
19 least impact working back to the A's and B's which had the  
20 biggest impact on the plant. If we could get one back, we  
21 would see how that went, everything normal, then we would go  
22 to the next one, then we would go to the next one, in that  
23 fashion.

24 MR. JORDAN: Was that laid out ahead of time?

25 MR. McCORMICK: Yes.



1 MR. JORDAN: It was.

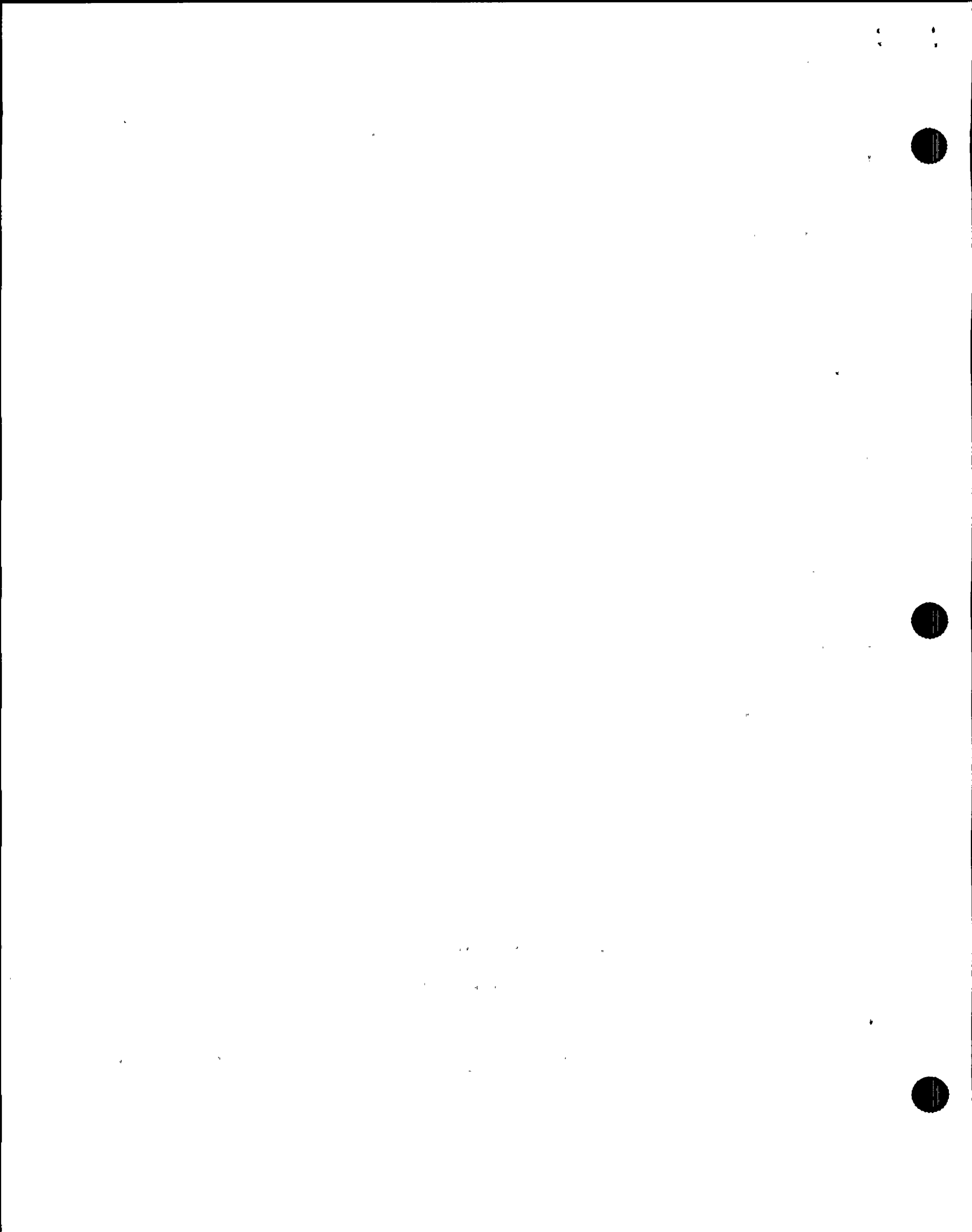
2 MR. McCORMICK: There was a sequence set up on how  
3 that was going to be done, which was concurred with by the  
4 control room. There were some people who were, you know, Do  
5 we really want to do this, but you've got to make a call  
6 here, and I didn't want to sit here bopping down to the end  
7 and walk out and say, Well, I'm in cold shutdown; now what?  
8 I still have to find out what I have.

9 There was some risk. If it flipped me out again,  
10 well, I might as well find it. That was sort of in my mind,  
11 but I wanted to do it in a controlled fashion and see; if  
12 there was some gross problem, we could always stop.

13 We had a strategy; they had a sequence; and the  
14 first two went back okay. I think C and D went back, and A  
15 and B didn't, and then G did; I think that was the sequence  
16 they did it in: C, D; A, B; G. I think that's the way it  
17 went.

18 MR. ROSENTHAL: Before we start restoring, at that  
19 point the TSC's concern is that you're sitting on the  
20 batteries and have got to get back on the normal alignment.  
21 Now you're an expert on the UPS; you know more than any  
22 other plant manager in the country. I want to talk to you.  
23 I mean, you're plant manager; I don't expect you to know  
24 inside every box.

25 MR. McCORMICK: Somewhere along in there, before



1 we really did it, I knew we were on a maintenance feed.  
2 That went away. In other words, the risk of being on a  
3 battery was gone. I knew that before we started switching  
4 back.

5 MR. ROSENTHAL: Somebody told you?

6 MR. McCORMICK: Yes. Somebody said, It's on the  
7 maintenance feed.

8 MR. ROSENTHAL: Your guys.

9 MR. McCORMICK: Okay; it's on the maintenance  
10 feed.

11 But, still, that didn't make the problem go away.  
12 Now I'm on the maintenance feed; I still didn't know whether  
13 I had a backup. I had a maintenance feed which now put me  
14 on an outside source, but where did I have the normal feed?  
15 What did I have? The intent wasn't from the battery  
16 standpoint as much of a concern. It still left me with the  
17 same unknown: how could I make a judgement that the plant  
18 was fully able to support its situation when I didn't know  
19 all the facts.

20 I subsequently had to make the decision that the A  
21 and B couldn't go back and made the call to terminate,  
22 knowing they were there, but I was able to do some things  
23 out in the Scriba yard as part of the recover to make sure  
24 we understood where they came from outside, and we wanted to  
25 do some things to make sure no one would go into that yard





1 and in some way -- you know, what can you do if the line  
2 goes off? But I didn't want anybody working in there or  
3 doing anything that would somehow impact that source of  
4 energy to those buses.

5 MR. ASHE: Do you recall the information that led  
6 you to believe that you were on the batteries? Was that  
7 someone telling you that?

8 MR. McCORMICK: Yes. The SSS told me that. He  
9 misunderstood what they had done when they went down there.

10 It turned out that they went down and, as we all  
11 know, closed in on the maintenance supply, but his  
12 information to me at the time of turnover was that we were  
13 on the battery. I don't know where that came from. My  
14 understanding is that Mike Eron, who is the assistant  
15 supervisor in the room, told them -- that's my information  
16 as of now -- "Put it on maintenance." He's more  
17 knowledgeable in the inverters than, I guess, Mike Conway  
18 was -- certainly more knowledgeable than I was.

19 My concern at the time was getting some people out  
20 there that understood what it was, and not operators by  
21 themselves. I wanted a team established that could function  
22 in an organized fashion to see what we had and do a  
23 controlled return, with the right people there. The right  
24 people, in my mind, were the tech staff, the system  
25 engineer, with maintenance if they needed them, and



1 operators to get them there when they were going to do the  
2 switching over.

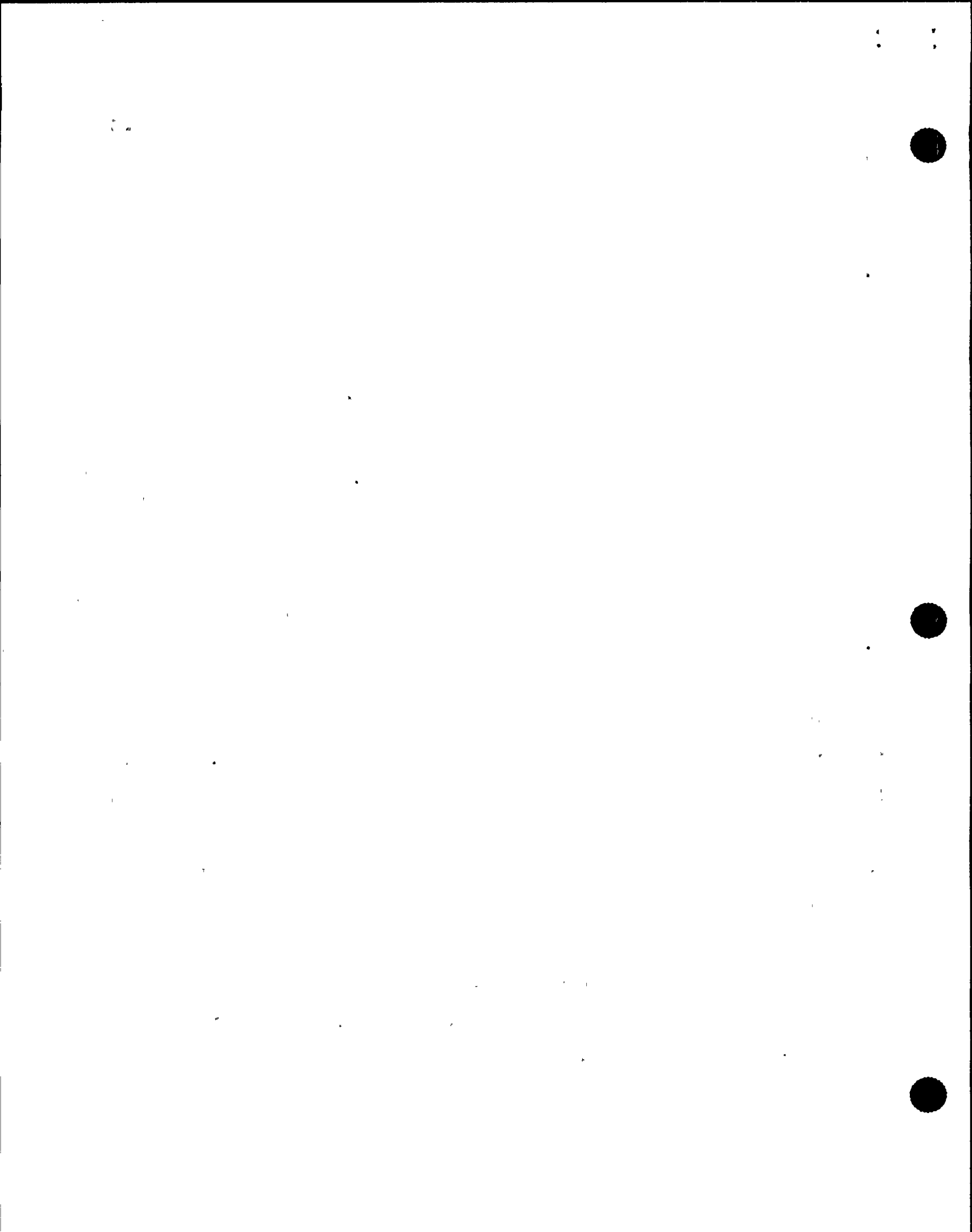
3 MR. ROSENTHAL: So there's a concern: You now  
4 know you're on maintenance feed. You don't have the  
5 electrical -- nobody has the electrical schematics memorized  
6 in their heads. You know you're on the maintenance feed,  
7 and you're worried that, hey, you could lose AC power again  
8 and be right back in.

9 MR. McCORMICK: That's correct.

10 MR. ROSENTHAL: Had other stuff gone on -- I mean  
11 in terms of the reliability of this alternate feed -- that  
12 made you and the other people working with you concerned  
13 over losing it again, or was this more conceptual?

14 MR. McCORMICK: Well, we had had an incident.  
15 When you saying, losing the alternate feed -- we had had an  
16 incident three or four months ago where some people were out  
17 in that Scriba yard, digging, and they tripped a line. It's  
18 a problem, so I had all kinds of controls placed on getting  
19 into that yard. No one goes into that yard without getting  
20 through the SSS and special approvals and to do work in  
21 there.

22 Did I have some concern? I guess you live by your  
23 experiences. I just said, Okay, what can I do? There isn't  
24 a hell of a lot more than saying, Make damn sure that there  
25 isn't anybody in that Scriba yard -- because all of a sudden



1 now they've got trippings; people want to go out and start  
2 inspecting circuit breakers, and a lot of things can get  
3 going, and somebody gets rambunctious. I just didn't want  
4 anybody going near that, as a protective measure more than  
5 anything else.

6 I can't say that I was concerned about some  
7 electrical fault getting me again, because that's part of  
8 life, but I didn't want to introduce anybody in there that I  
9 didn't have direct control over. The knowledge of whether  
10 that was in a requirement or not came from the attempt to  
11 get back on. I mean, you're supposed to be able to switch  
12 back; it should be in synchronism; it should be able to go  
13 back. If it's on maintenance feed, it should go back. If  
14 it didn't, well, I had to know that.

15 If it was a transient that just got through and  
16 was cleared, okay. Did I burn any circuit cards out? I  
17 didn't know what the hell I had there, so I felt that this  
18 was part of the packaging of where we were when we tried to  
19 come into a termination scenario.

20 MR. ASHE: Do you know if that's explicitly stated  
21 in any of your procedures or not -- your actual operating  
22 procedures -- that once the vital buses switch to the  
23 maintenance supply and lock out from the inverter,  
24 restoration back to the vital buses -- do you know if that's  
25 in any of your procedures?



1           MR. McCORMICK: I don't know. I'm not that  
2 familiar with those procedures at all. I guess from other  
3 experiences you can go to a maintenance feed, and you have  
4 to be able to switch back to normal, and the battery is  
5 there in between.

6           Believe me, I'm far from an inverter expert. I've  
7 been around them; I generally know the concept, but my  
8 expertise is really as a power plant person, I guess, not as  
9 a system expert, nor did I try to make that decision. I  
10 tried to get the right people to make that decision. If  
11 they had said, Can't do it, I'd have said, Okay, can't do  
12 it, but I needed some help there, and the guy that I relied  
13 on is the people that I have available to me.

14           Had I not had Crandall or somebody, I might not  
15 have taken that course, but I know him, and he is the system  
16 engineer. I had that input; I may have even have had it  
17 reaffirmed by John Conway who is his -- who is Ray Dean who  
18 works for him who is also on the TSC.

19           The transformer, I want to get on -- I guess on  
20 the record that I didn't totally forget about the  
21 transformer as I think of things I've covered here. I had  
22 had to report, as I said, when I came in that there might  
23 have been an explosion in the transformer yard, so, one of  
24 the first requirements was to get some people out there and  
25 see what happened to that transformer, what was going on.



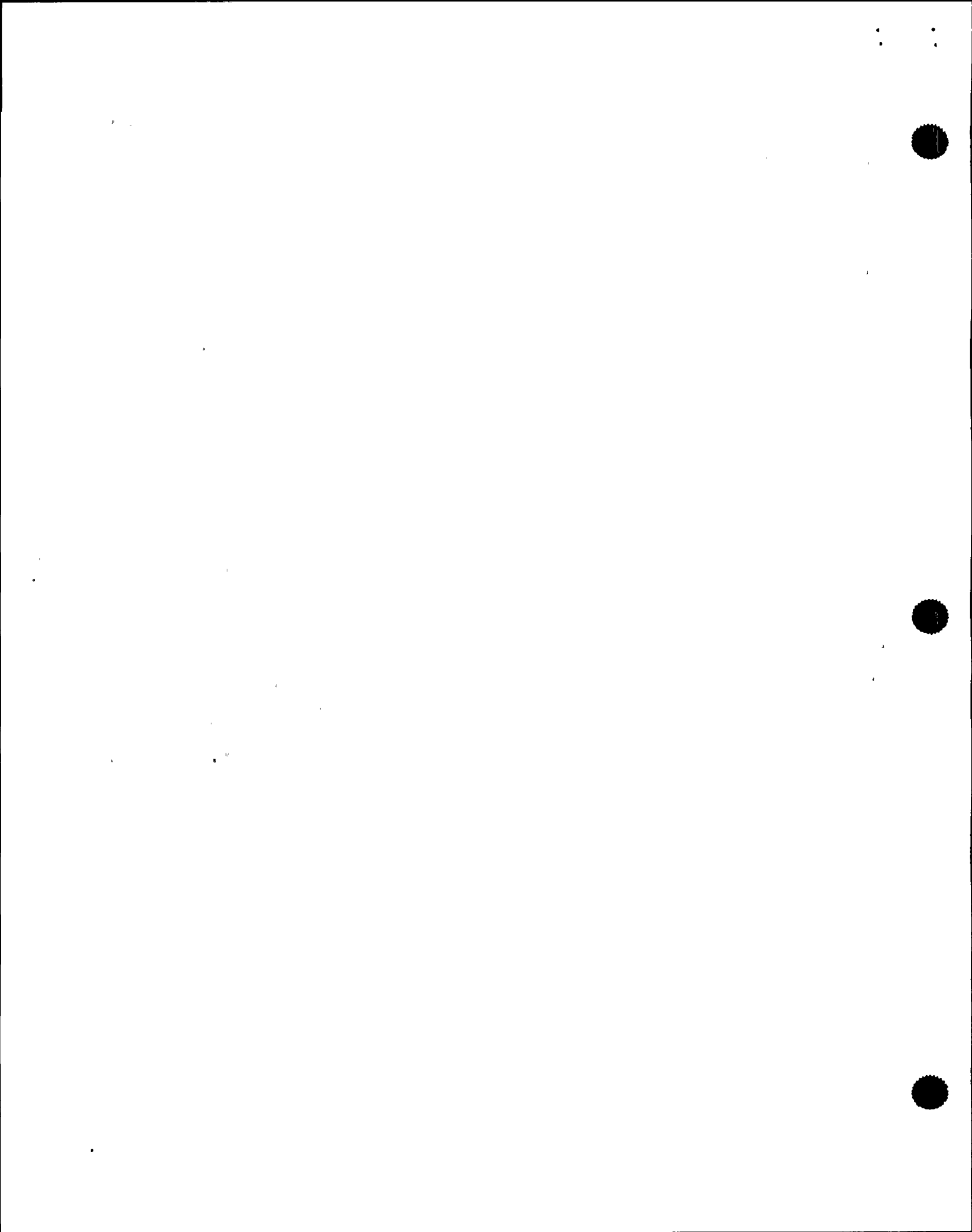


1 I was told there was an oil leak and I was concerned about  
2 fire. I was told we had fire watch on it and they did do  
3 some valving to cut down the leaks so it was only a small  
4 dribble, there was not -- the transformer was not open in  
5 any way, it was leaking out of a flange.

6 So, I was satisfied that we didn't have a major  
7 conflagration or risk there, although it was -- the  
8 temperature as they told me, was very high on the  
9 transformer the temperature indicator was off-scale high.  
10 We had fire people available to us should it get into a  
11 further problem and the oil leakage -- I think I asked that  
12 that be contained in some way so it didn't run all over the  
13 place as soon as possible.

14 The transformer became a non-problem very shortly  
15 thereafter. I got some pictures, I guess, of the --  
16 somebody came by just to show the leak or something, that  
17 became a non-problem early on once we were satisfied it was  
18 down to normal.

19 The other thing -- I guess the other thing I  
20 didn't mention that the turbine -- that got to be a worry  
21 because I broke that -- I was concerned how did it roll  
22 down, did we have oil all the way down and those are the  
23 normal things to worry about with a turbine sitting out on  
24 the turning gear. And I even gave direction, if they had  
25 to, to take the coupling guard off and put jacking bolts in



1 there and move it around, but they were able to hump it  
2 around a little bit with the turning gear motor and finally  
3 got it to pick up which was a big relief.

4 MR. JORDAN: How did you determine there was no  
5 off-site release? What kind of reports did you get on that?

6 MR. McCORMICK: I got reports from my rad  
7 protection people that they had -- off-site teams had  
8 reported that there was no releases evident. The people in  
9 the plant had indicated that there was no ARM's and so  
10 forth, although there was an ARM going off in turbine hall,  
11 I did hear. It was found to be a non-problem. I had to --  
12 a report came from Preston Swafford who was the -- my branch  
13 manager in charge of rad protection.

14 I also had a preliminary -- an earlier report from  
15 Dave Barcum who was initially in there that there was no  
16 indication of any kind of a release going on. Chemistry  
17 reported that fuel was okay, they had to get a sample of the  
18 reactor coolant and there was no evidence of any iodines and  
19 other things to be worried about. So, no evidence of any  
20 problem.

21 MR. ROSENTHAL: And an ARM is?

22 MR. McCORMICK: It's an area radiation monitor.

23 MR. ROSENTHAL: Area radiation monitor, okay

24 MR. McCORMICK: But the general sense of the  
25 people who were in the plant was there was no high levels of



1 radiation anywhere and there was a few isolated -- oh, a  
2 drain had backed up in one area and down a -- on one of the  
3 lower elevations, I forget just exactly where, but it filled  
4 up and left it at scram apparently and had -- it was a  
5 previously roped off area and the drain backed down and it  
6 was evaporating. It had not exceeded the boundaries that  
7 were already previously established, so I didn't feel that  
8 there was any need to go do anything heroic with that.

9 MR. JORDAN: So they did dispatch off-site teams  
10 to check off-site? Did you dispatch them or did --

11 MR. McCORMICK: That's part of the process.

12 MR. JORDAN: That's part of the process.

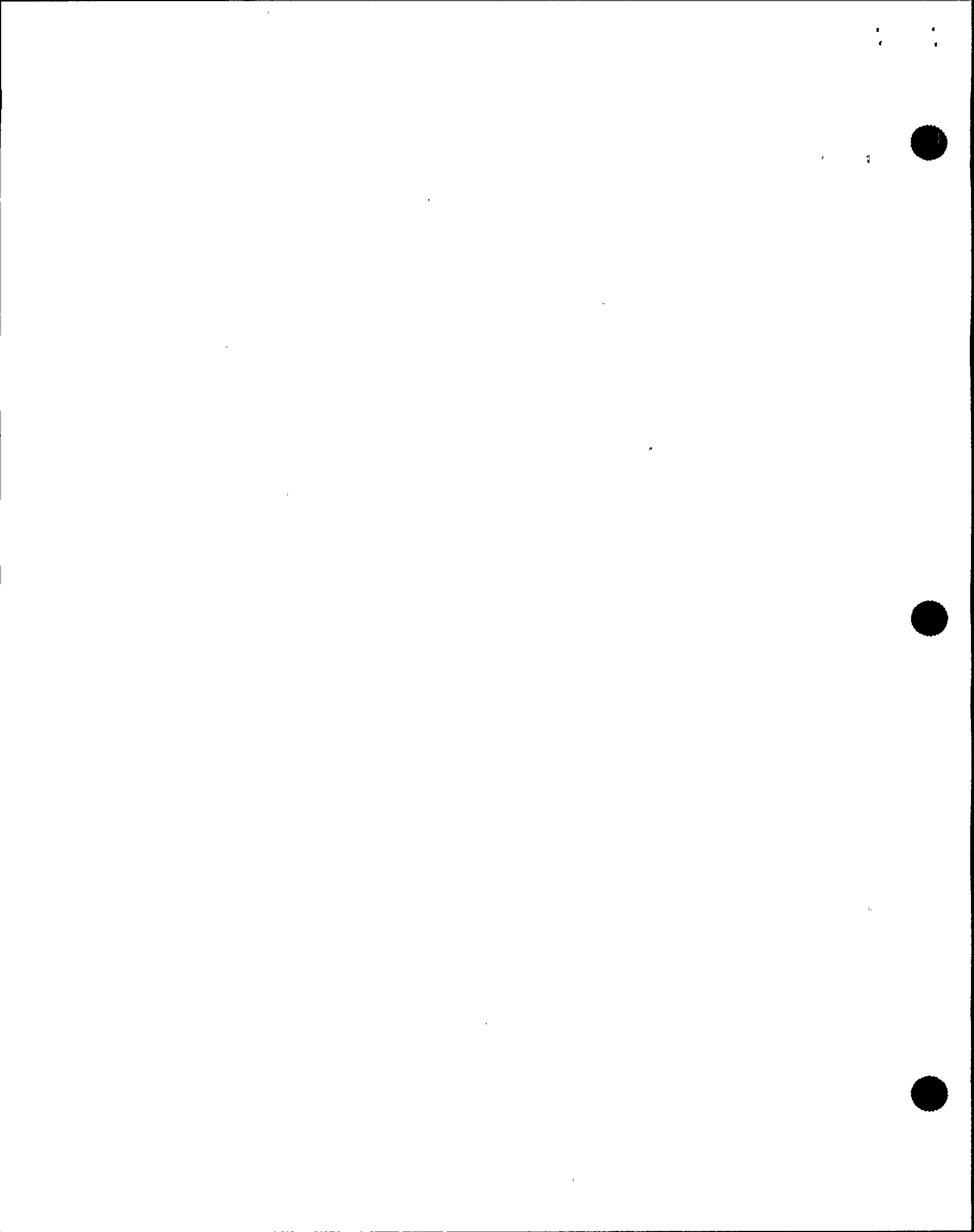
13 MR. ROSENTHAL: I'm interested in -- let me tell  
14 you my -- the interview plan that I at least would have.  
15 We'll talk out some of the technical things of the day and  
16 then I'm going to switch topics, talk more programs of you  
17 in your role as plant manager.

18 MR. McCORMICK: Okay.

19 MR. ROSENTHAL: One thing I'm interested in  
20 getting back to the day, for a while, is the dynamics  
21 between the EOF, the TSC control room, in terms of technical  
22 detail. Were you getting technical direction for the EOF or  
23 -- you were commanding --

24 MR. McCORMICK: Right.

25 MR. ROSENTHAL: Okay. Now, with respect to the



1 control room and we're aware of information systems that you  
2 have, like you've got the SPVS and the --

3 MR. McCORMICK: Right.

4 MR. ROSENTHAL: -- for example, at one point in  
5 the day you loose the condensate system -- actually, the  
6 condensate booster -- and I guess there's these MOV-84's, or  
7 what they really are and you recognize you have to do a  
8 work around, et cetera, et cetera; you're familiar with the  
9 --

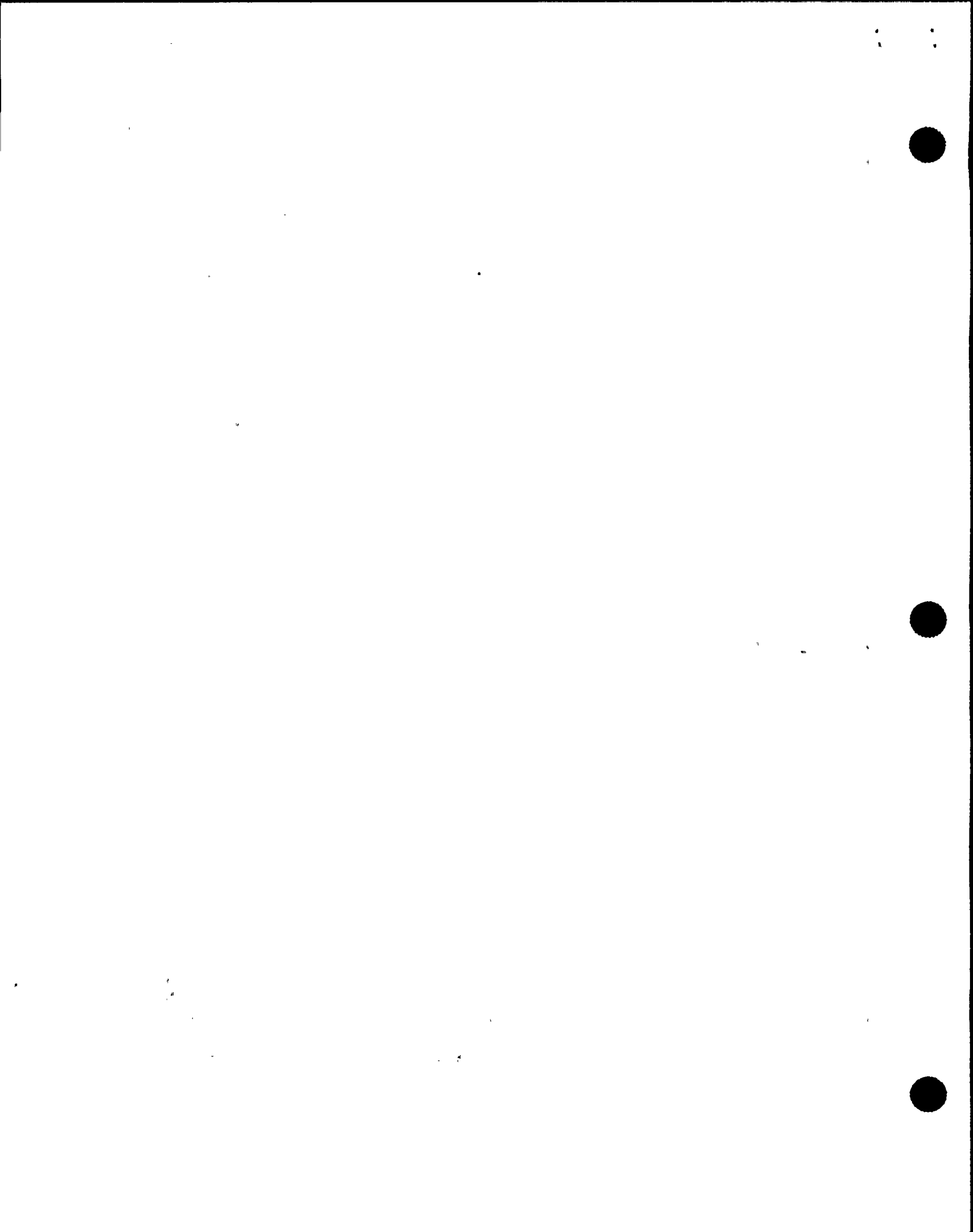
10 MR. McCORMICK: Yeah. That was --

11 MR. ROSENTHAL: That's later.

12 MR. McCORMICK: That was pretty much -- when I  
13 took over they were on the by-pass feed. They had already  
14 completed that iteration.

15 MR. ROSENTHAL: Okay.

16 MR. McCORMICK: And the 84 valves, that had  
17 already been made, they said they could go out and we talked  
18 about that and said we decided not to go out in the plant  
19 and open the bypasses because we had established that we  
20 tried this method and it was okay and I didn't -- I didn't  
21 go any further, I had no reason to think that I wanted to go  
22 open that condensate and go out and open those bypasses. On  
23 hind sight, I guess we should have, at some point gotten  
24 that finished, but it dropped off the plate and they had  
25 level control, they had enough ways to go and it just didn't





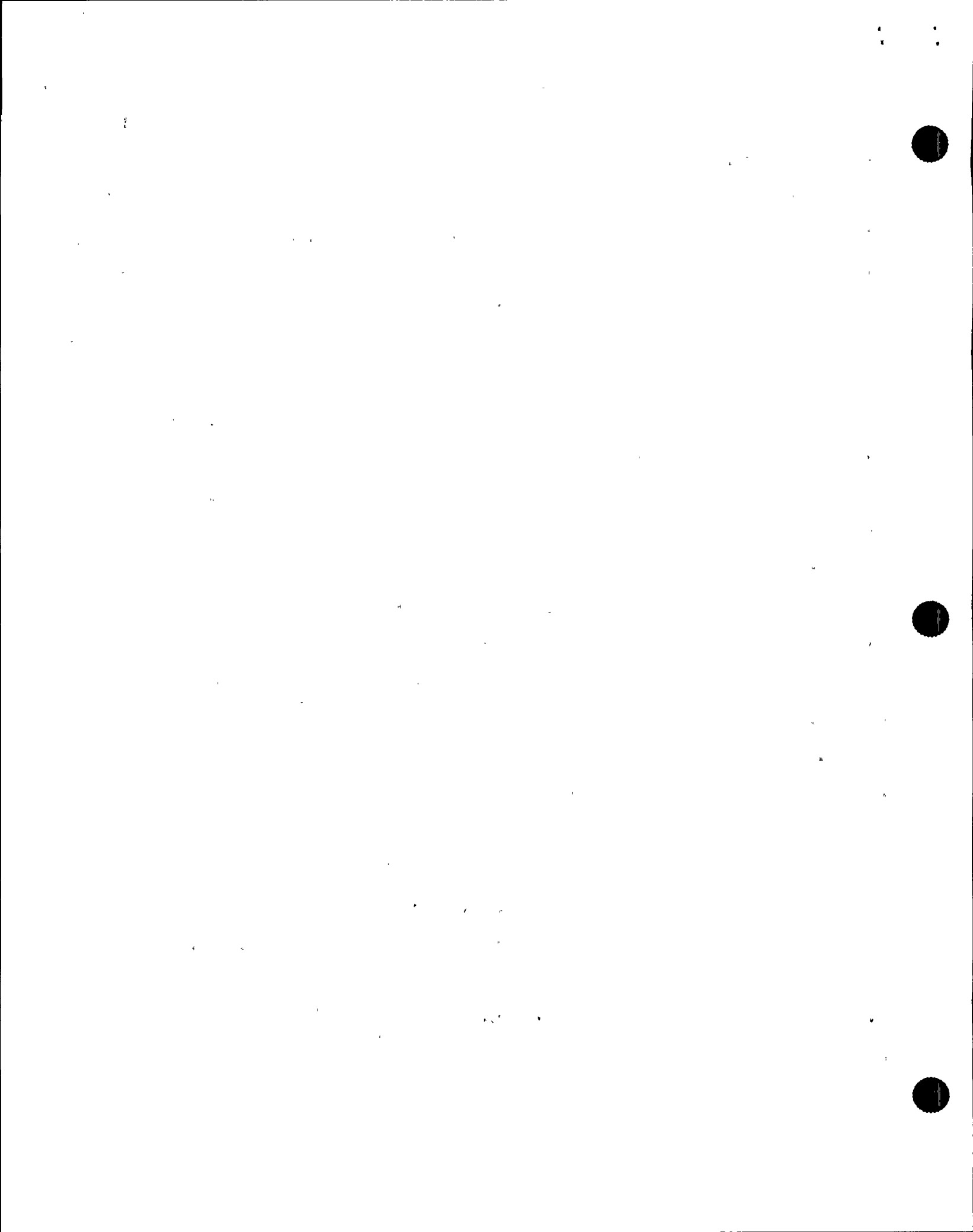
1 -- I didn't introduce that. But that had -- those decisions  
2 had been made.

3           They had closed the 84's intentionally and by  
4 procedure they're expected to open bypasses around them  
5 before they start them back up. That's the normal -- I  
6 think that's the way the procedure is written. They tried  
7 to open them and I'm -- I guess we can postulate that, at  
8 least at one point they had just condensate up against that  
9 check valve, closed the 84 valves and then put on the  
10 booster pumps and now I've got 700 pounds with 100 pounds  
11 inside the pump casing, so I do have differential across  
12 the valve, that we're looking to see if the torque switches  
13 are -- should be adjusted to open against that. The valves  
14 are obviously designed to do it, but whether the torque  
15 switch should be tweaked up to open the bypass around that  
16 torque to give it enough to get it going remains to be seen  
17 and we're waiting to get that information from the vendor.

18           MR. ROSENTHAL: Okay, but by the time you got  
19 involved they've done work around on that and you've got a  
20 means of flow in and --

21           MR. McCORMICK: They were fine; they were level  
22 control, they were on, they were comfortable with it, level  
23 was normal.

24           MR. ROSENTHAL: So it's the control room that  
25 chose to go off RCIC, to go on the feedwater condensate



1 system?

2 MR. McCORMICK: They had the earlier -- the early  
3 challenge of they got level under control, the swell was  
4 coming, they didn't need RCIC, they shut it down and then  
5 the pressure was coming down with the depressurization; it  
6 got to the point where condensate began to go in and they  
7 shut off condensate and later when they needed water, which  
8 is still before I was fully -- I don't know what time that  
9 all took place, I would have to look at their time log, but  
10 --

11 MR. ROSENTHAL: Early on in the event, before they  
12 recovered the UPS's, is the question of just where the  
13 control rods, as you've said earlier, they know the APRM's  
14 are in and the IRM's are reading downscale and it's my  
15 understanding that you said earlier and as other people have  
16 told us, they believe all the control rods were in, but I  
17 can't -- I don't know what the right word is, prove it? So  
18 they're caught up in this ATWS procedure in a little loop  
19 there.

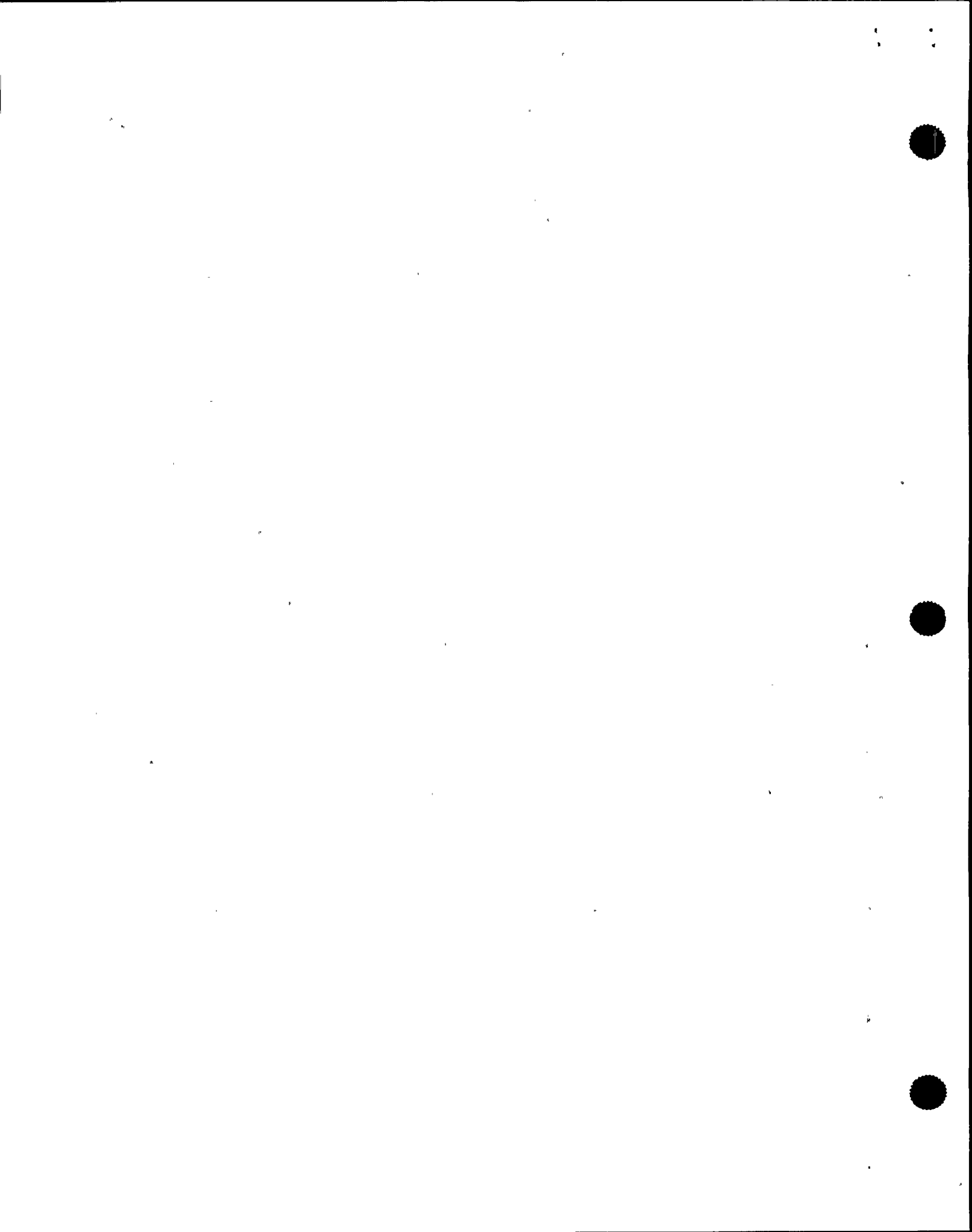
20 MR. McCORMICK: Which tell them how --

21 MR. ROSENTHAL: Is the TSC in -- I'm sorry.

22 MR. McCORMICK: Okay, go ahead. Was the TSC  
23 involved in that?

24 MR. ROSENTHAL: Um hm.

25 MR. McCORMICK: No.



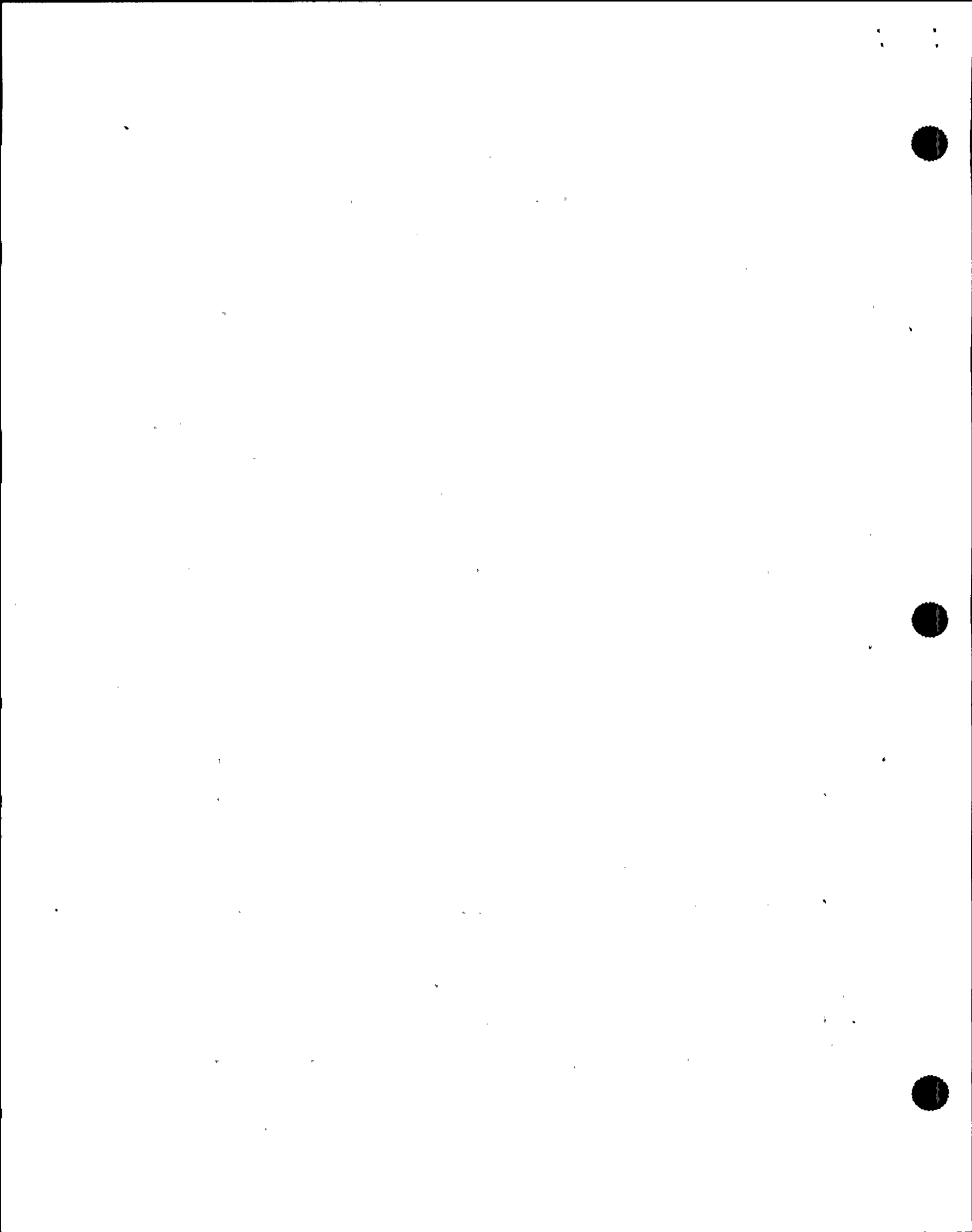
1           When I talked to them, they said that they had  
2 question about the rods. That was in the car coming in.  
3 There were six rods that didn't show full in, but now  
4 they're showing full in, or they got them to reset. I  
5 subsequently learned that they had reset the scram, and,  
6 when they reset the scram, they got full indication of all  
7 the rods being in, so when I was officially taking over, all  
8 rods were known to be in; there were no other requirements  
9 to do that. The APRMs were down-scale; they had power back;  
10 they had all rods in; and that had been verified. The rod  
11 worth minimizer had been acting in and out; sometimes it  
12 would say they were all in; other times, they weren't. That  
13 was early on, too, when they made the decision.

14           They did all the right things well before they  
15 needed any help from me. I can only hope I would have done  
16 as well.

17           Those decisions to reset the scram are part of  
18 their procedure, and they did do that. And they didn't have  
19 to go any further. When they did it, apparently the drive  
20 was still in, and it was enough to keep those drives beyond  
21 their normal full-in position. When they reset, everything  
22 came back to the proper indication.

23           MR. ROSENTHAL: Do you want to spend more on  
24 today? If not, I'm going to propose we take a break.

25           MR. ASHE: The transformers: In your 37 years of

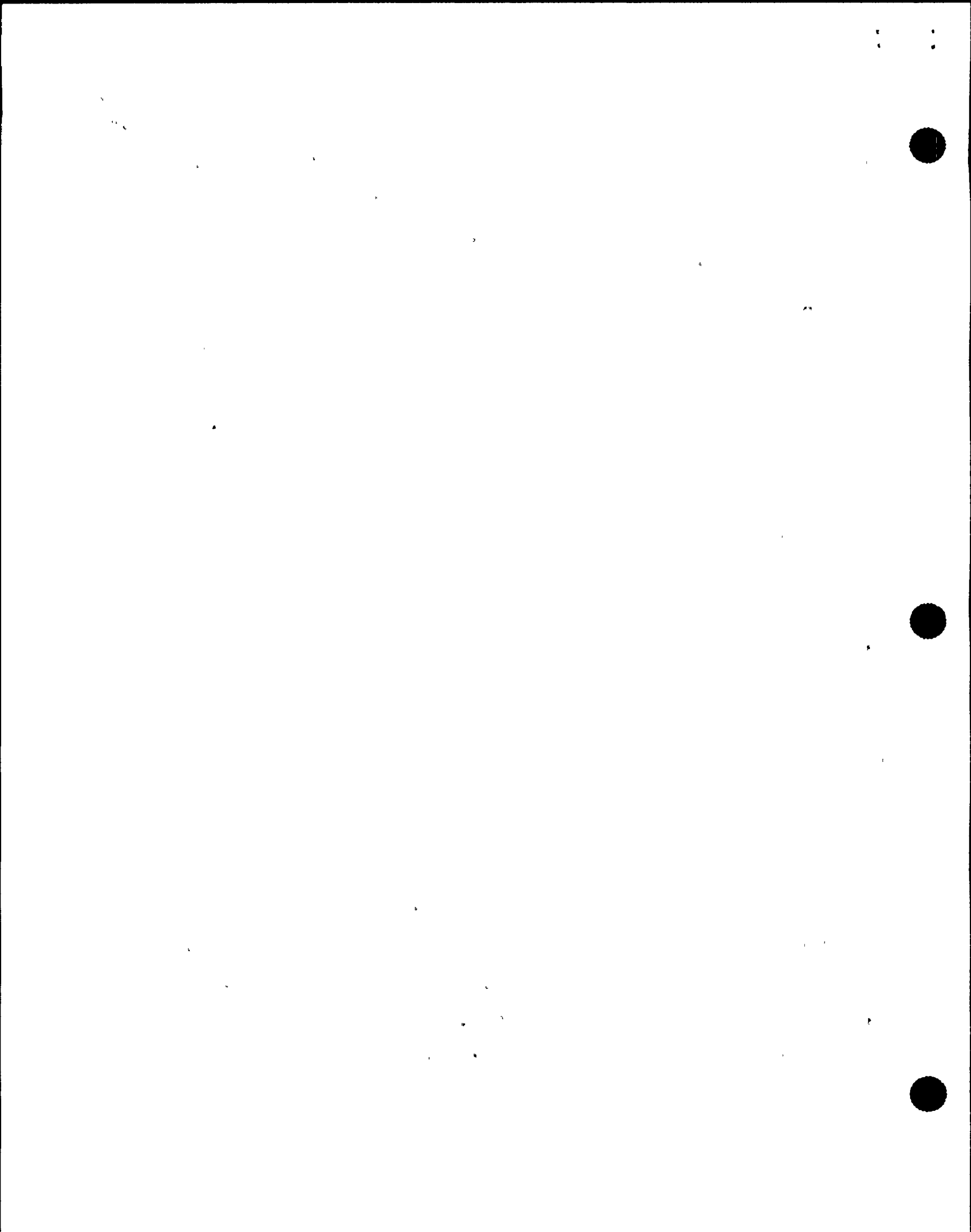


1 experience, I'm certain you've seen transformers fail  
2 before. How would you characterize this one, as compared to  
3 some of the ones that you have seen?

4 MR. McCORMICK: Well, the one that's most recent  
5 in my memory was the one at Peachbottom in 1985 or '86 -- in  
6 that time frame. That was a main unit, 500 kV transformer.  
7 It blew up -- I mean blew up and burned to the crispy  
8 critter. It went. It spilled oil all over the place, into  
9 an open trench, which happened to be open there. A lot of  
10 control cables were there to a relay room -- burnt the  
11 cables out of there. And no spare.

12 As a result of that event -- let me just say my  
13 experience here at Nine Mile. I'm very serious about  
14 sampling oils of transformers. In that transformer down  
15 there, while the oil was okay, it wasn't as good as someone  
16 would like it to have been, given the fault that occurred.  
17 I mean, it was being trended and all those good things, and  
18 it was gradually edging up, indicating that there was  
19 probably some indication of stuff happening.

20 When I was here -- I don't know; I'm going to say  
21 it's the March-April time frame -- I got a sample back on  
22 these transformers. It's part of the routine; they do a  
23 good job here, quarterly. The samples came back, indicating  
24 that one of them was elevated, so, time out, who says that's  
25 okay. I get an okay that it's okay, and we went back and





1 did a lot of additional sampling. I don't know all the  
2 players here, so I had to find if I had the right guy  
3 nodding at me that it's okay. They have a transformer  
4 expert, and I said I wanted it in writing from this guy,  
5 because I don't want to have any other concerns about oils'  
6 being a problem. If it's arcing, I want to know it; if it's  
7 starting to trend, I want to know if.

8           Subsequent samples said that was a bad sample.  
9 They took the first cup out of it. When they ran a flowing  
10 sample and got it and did a complete rerun, the data came in  
11 fine.

12           Certainly I'm familiar with what can happen if you  
13 don't watch the indicators that you have on your oil sample,  
14 and that was being done.

15           MR. ROSENTHAL: Can we go off?

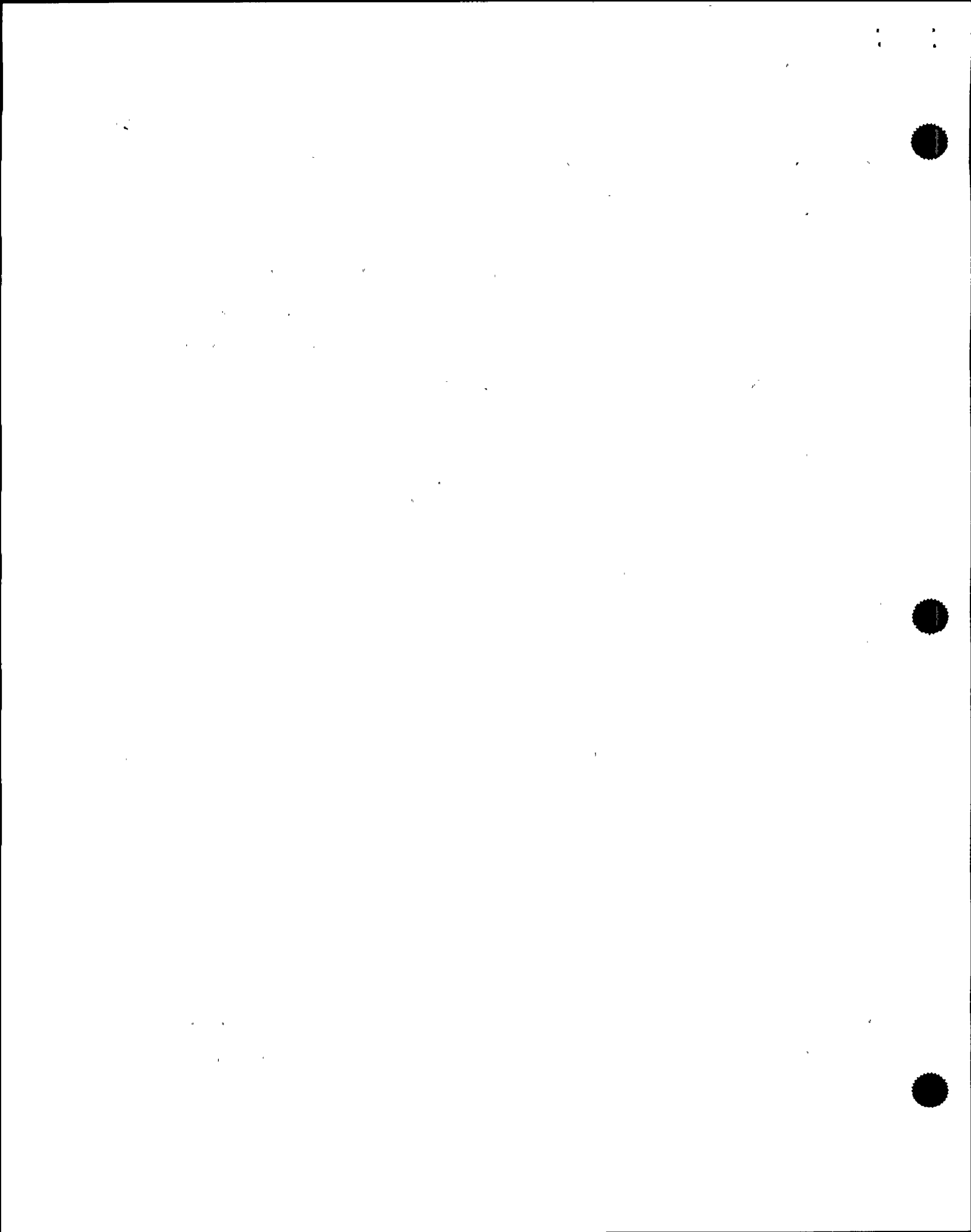
16           [Recess.]

17           MR. JORDAN: We went off the record for a small  
18 break. We are now back on the record.

19           Anything else, Frank?

20           MR. ASHE: Just the transformer characterization.  
21 Could you make a comparison between this and the Peachbottom  
22 event in terms of severity?

23           MR. McCORMICK: Well, in terms of impact to the  
24 transformer, it was -- compared to Peachbottom, this was a  
25 non-event. I mean the Peachbottom was literally a raging

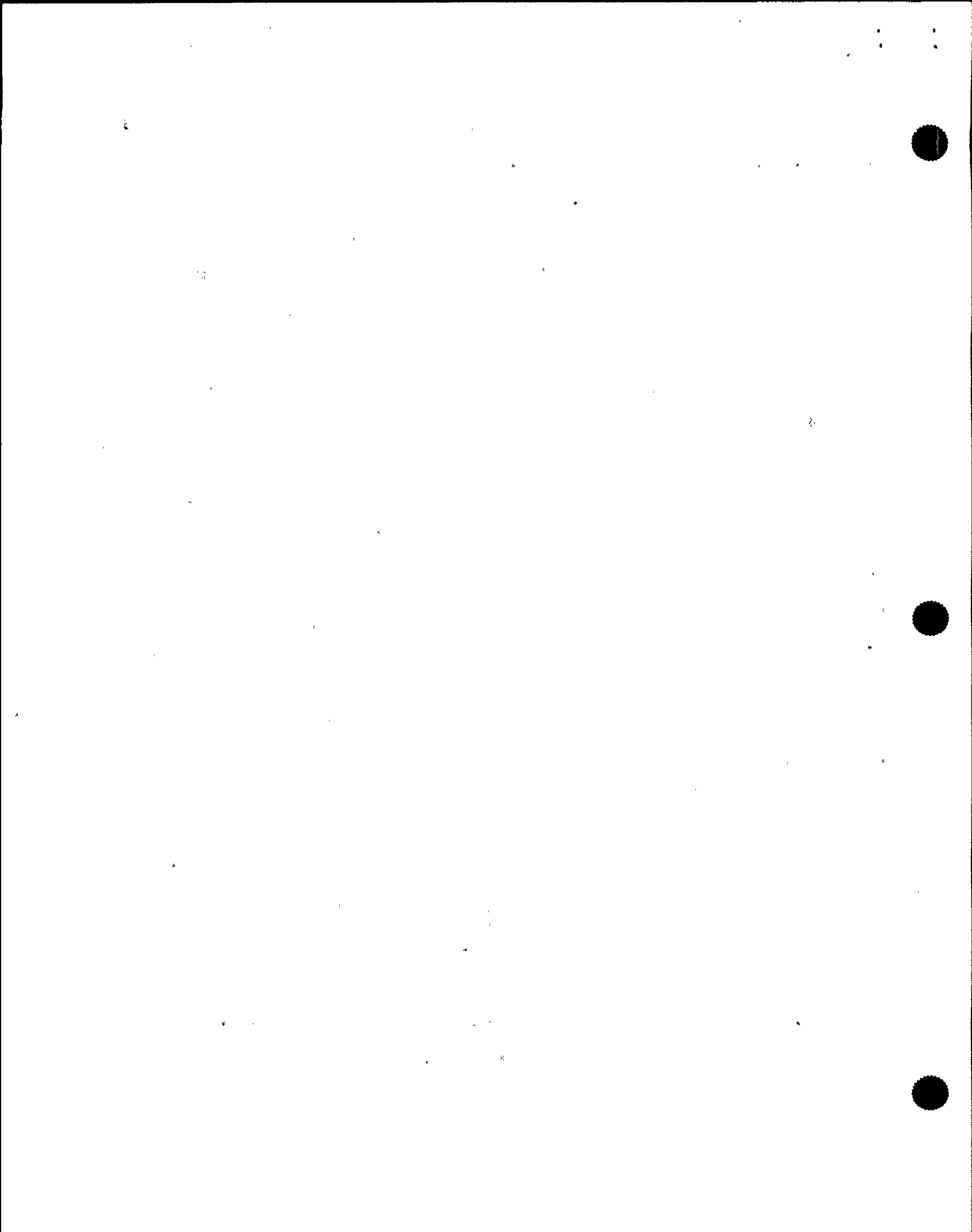


1 . fire storm there, impacting bus work and everything else  
2 around there. You know there was separate phase  
3 transformers. It was a horrendous event.

4           This one, even as a -- it was characterized to me  
5 in the TSC, and your black box in your mind, because all you  
6 have -- is trying to think what this would look like. I  
7 mean I even had to try and visualize what I had out there.  
8 It was clearly a B phase, there was some oil spill, there  
9 was leaking out of a flange that was opened up, the was no  
10 bowing of the transformer, the relief valves had lifted if I  
11 could -- I mean that was the kind of information, as I think  
12 back, that I had. So it did pop, it definitely got very  
13 hot, it lifted the release, we spewed some oil out there.

14           In terms of obvious damage to the transformer,  
15 there wasn't any. There was -- the only thing was the  
16 flange was opened up and it was leaking oil so what did that  
17 mean? Did that mean it bowed? Did it mean that the  
18 pressure surge was enough that it would just cause that  
19 gasket to blow?

20           The temperature indicator being high was off-scale  
21 high. That indicator goes to some 180 degrees C or  
22 something, it was driven off-scale high, so I knew I had  
23 heat in there. Asked for an oil sample. And early on,  
24 through the day, I got the oil sample back very high,  
25 particular to the scoot, the transformer was in deep doo,



1 deep trouble and from early on I knew that.

2           The samples from A and C were yet to be taken but  
3 I knew that B was a goner and in fact that day I gave  
4 direction -- I'm talking about working with B and get it out  
5 of there, move towards getting the D in. Get a hold of  
6 Higgins or whoever we've got to get to move it out of there,  
7 so those things were under way. I knew I had a damaged  
8 transformer.

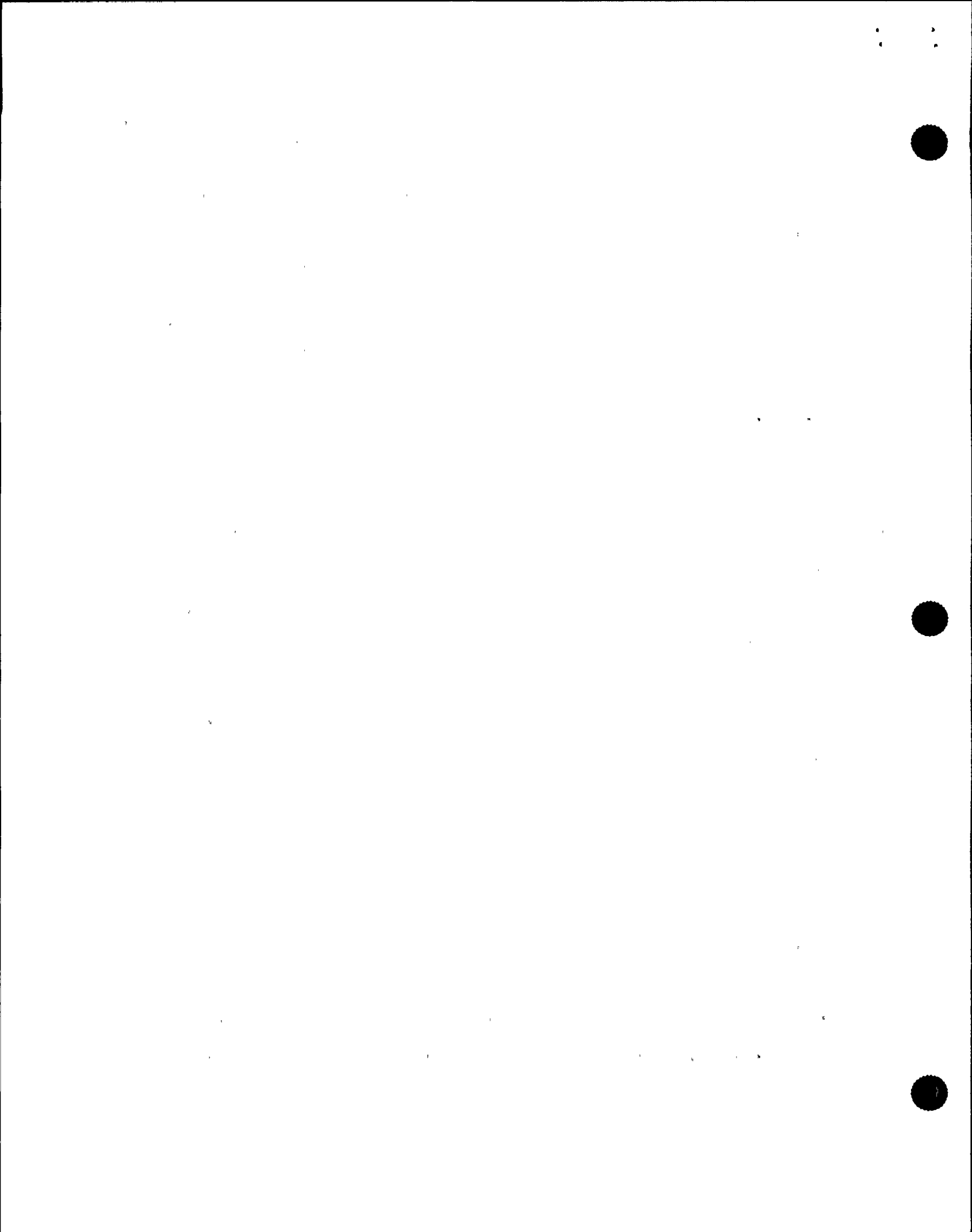
9           In terms of physical damage though, it was -- I  
10 had had no assessment. I couldn't make any assessment of  
11 what I had beyond the fact that it was obviously badly  
12 arced inside based on the oil analysis.

13           MR. JORDAN: Water hammer, what are the events of  
14 the day with water hammer and reactor water cleanup and  
15 water hammer and the RHR, the first shutdown cooling? You  
16 say you dispatched a damage assessment team to look at both  
17 of those?

18           MR. McCORMICK: Yeah.

19           MR. JORDAN: And did you get a report back?

20           MR. McCORMICK: I got a report back on both of  
21 them. And one came back in written form. I was RHR was  
22 done fairly quickly, cleanup was a different problem because  
23 of the rad levels and that report came back and I had that -  
24 - I had that later on that evening and we had visual --  
25 verbal report that it was okay, but I got a written report



1 the following day.

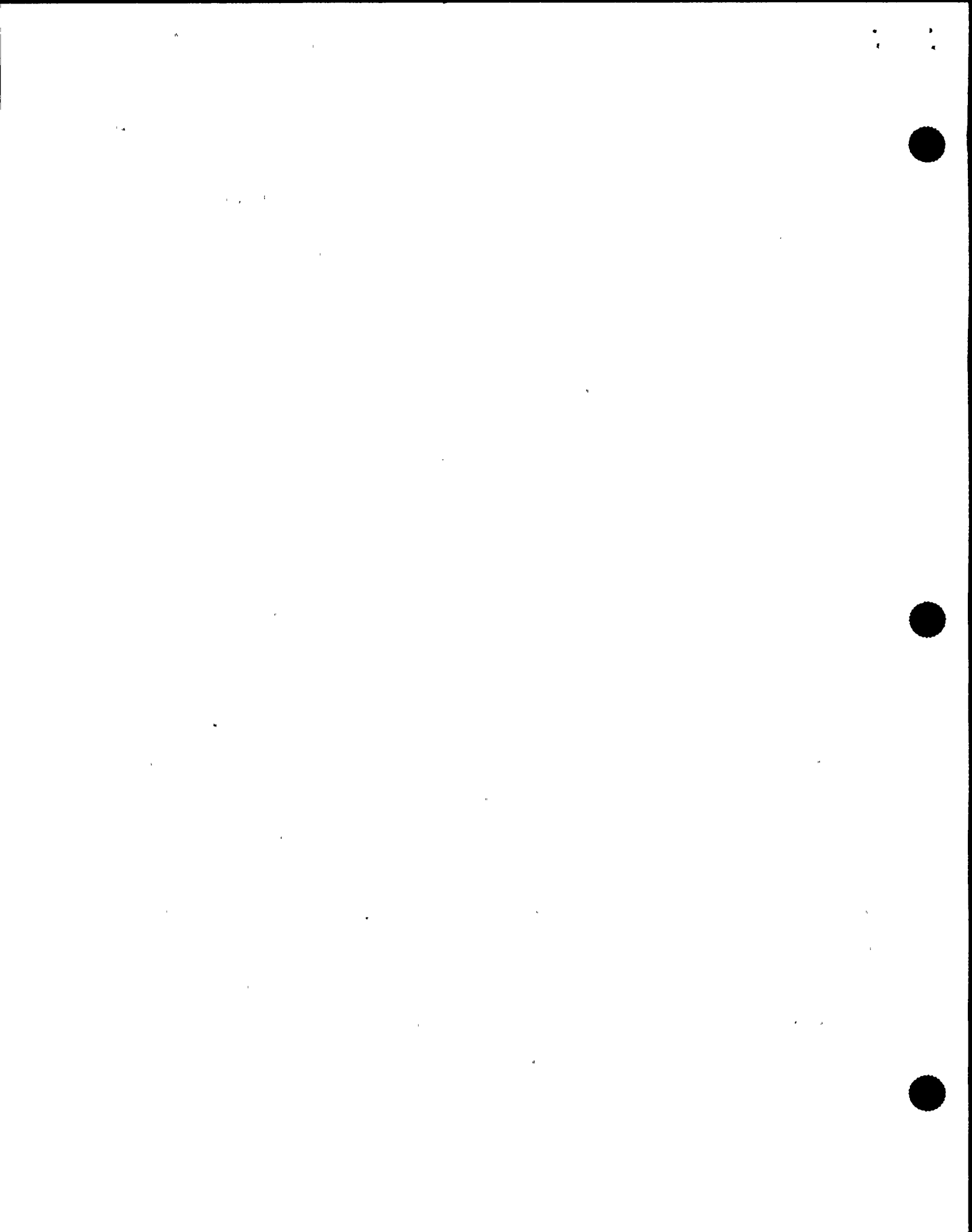
2 MR. ROSENTHAL: I know you've only been on site  
3 really six months. Are you aware, had there been a history  
4 of water hammers or RWCU isolations or difficulty of control  
5 or --

6 [Pause.]

7 MR. McCORMICK: Well, there's a lot of cleanup  
8 problems here. Cleanup is on -- we have what we call a top  
9 ten list. When I got here we decided to try and get our  
10 arms around one of the issues that had to be worked first,  
11 the hardest and fastest and I -- each unit went at its best  
12 attempt to come up with those issues which needed the most  
13 immediate attention and the reactor water cleanup system is  
14 a major problem here.

15 It's a very temperamental system, it has a lot of  
16 operating difficulties to it. So much so that I have a  
17 special project team that addresses the controls of it,  
18 engineering is working on looking at ways to change the  
19 seals, I have initiated a mod to put new cleanup -- run  
20 piping up to which is a Limerick fix to inject water into  
21 the seal cavity on the seals, and we're also looking at  
22 replacing the seals in their entirety.

23 We just had a team out of Canada to look at that,  
24 but to make a long story short, I mean, the litany is long  
25 and cleanup is a difficult situation of putting them on and

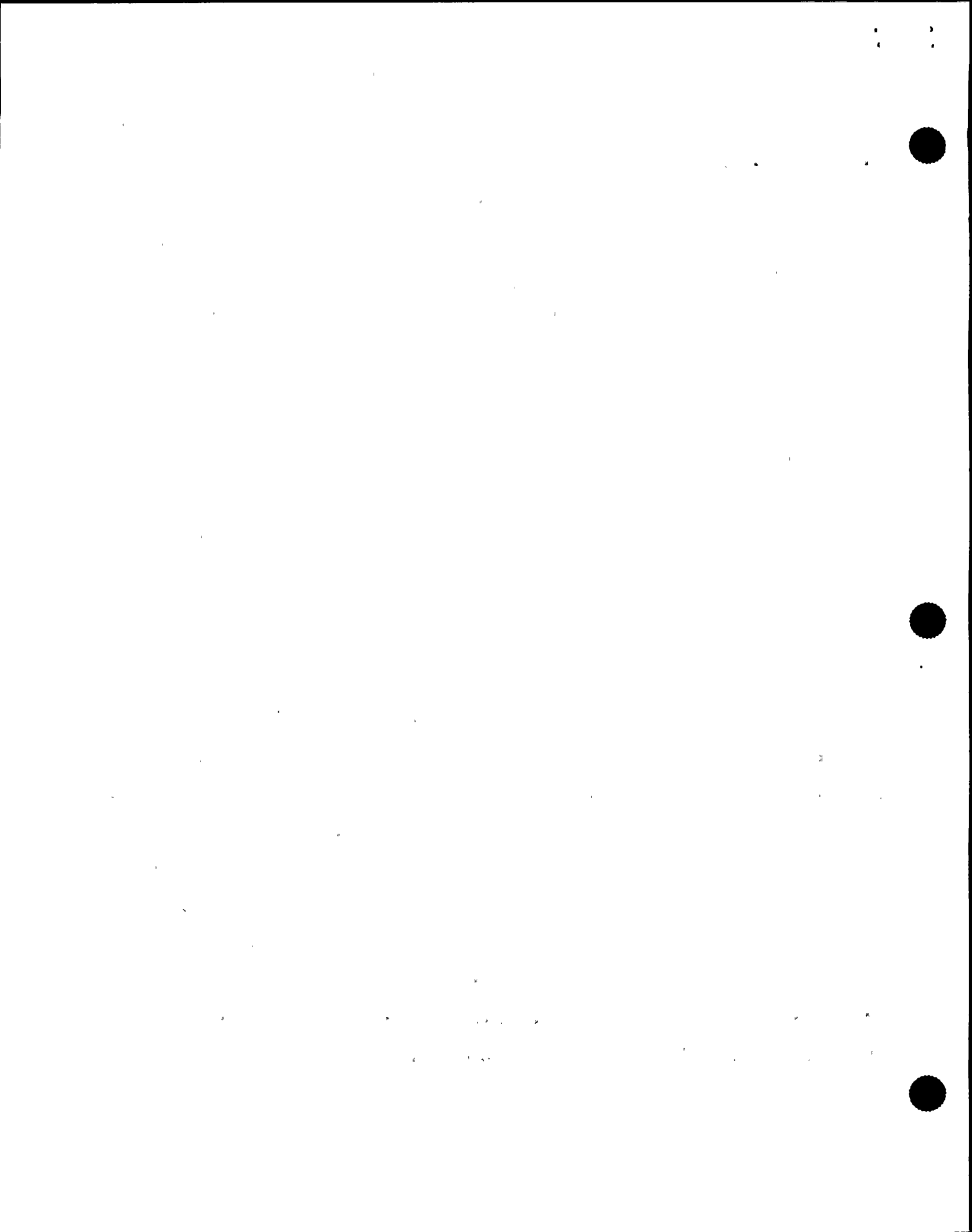




1 off line. The very performance of the cleanup system, when  
2 I got here, we were changing demins out every third day.  
3 Finally I've got it to every 10 to 12 days by bringing in  
4 special people to work that issue. And everytime you  
5 change out a cleanup demin, you risk the chance of getting  
6 into some kind of a situation with your pumps. We were  
7 having a lot of seal failures. We have seal failures,  
8 probably close to one a month, or damn near, is what I'm  
9 running and this has been an ALARA problem. So, the cleanup  
10 is clearly an issue for Unit Two and it's being worked in a  
11 variety of fronts, most of which are still in the phases of  
12 getting done.

13 I've got a report like yeah thick from a vendor I  
14 brought in to the chemistry group to look at the whole  
15 control system.

16 Therefore, when we did get the delta flow under  
17 these conditions I expected again we had another situation,  
18 I'm not getting the thing fully vented. It was yes, and it  
19 would have been difficult under the best conditions, but the  
20 word -- the delta flow by itself didn't surprise me, but the  
21 report of vibration or water hammer, so they were doing  
22 something different. Now, they were letting down through  
23 the rad waste system and they weren't putting it in under  
24 normal conditions, the reactor is off, my concern was did we  
25 do something different in the course of that and, you know,



1 people do tend to get -- maybe in their intent to get it on,  
2 it was more of a problem than what we would normally  
3 experience, so prudence said, I've got to know is the piping  
4 okay.

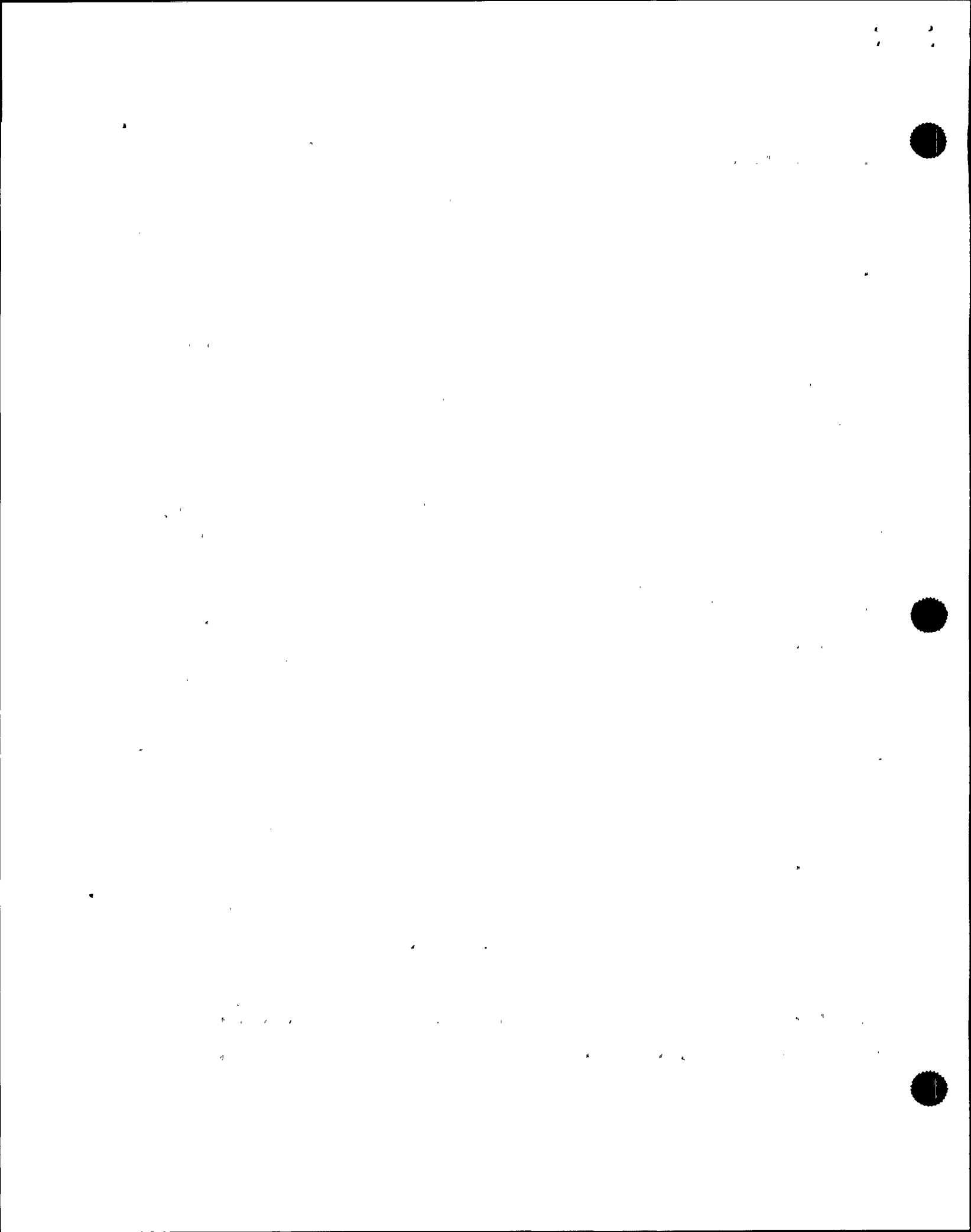
5 It didn't surprise me we had the delta flow.

6 MR. ROSENTHAL: Now, on the UPS's themselves, the  
7 non-1E UPS's, I take it the plant was in the process of  
8 replacing at least two of them?

9 MR. McCORMICK: That's before my time. I didn't  
10 make that decision. When I got here there was a -- and I  
11 participated in mod reviews -- money reviews for the job and  
12 had it explained to me what they were trying to do, and  
13 approved the funding under my watch to replace the C and D  
14 UPS and to alter the loading on those buses to reduce it to  
15 something within a much -- they were loaded on the 70-80  
16 percent of capacity in that range that they were running at  
17 and that was more heavily loaded on the normal load than  
18 what we wanted. The receding problems it was recognized by  
19 the -- my predecessor and the mod was to be done this  
20 upcoming outage, as a matter of fact.

21 MR. ROSENTHAL: Was there a general knowledge that  
22 all of them were running hot relative to at least--

23 MR. McCORMICK: Knowledge? Those two were running  
24 hot. There was no -- the others were not running  
25 particularly that much -- that loaded to the point where the



1 others were a problem, but these two were clearly a problem.

2 MR. ROSENTHAL: So the others weren't perceived  
3 to be running hot?

4 MR. McCORMICK: Weren't perceived to be too  
5 heavily loaded for what we would consider normal loading  
6 over a long period of time, but the C and D were perceived  
7 to be too heavily loaded for continued operation over a long  
8 extended period of time.

9 We also wanted to try a different inverter and  
10 some other things we wanted to come into that.

11 MR. ROSENTHAL: Let me -- you had done some work -  
12 - where does reliability-centered maintenance or risk-  
13 centered maintenance, I think everybody calls it by a  
14 different name --

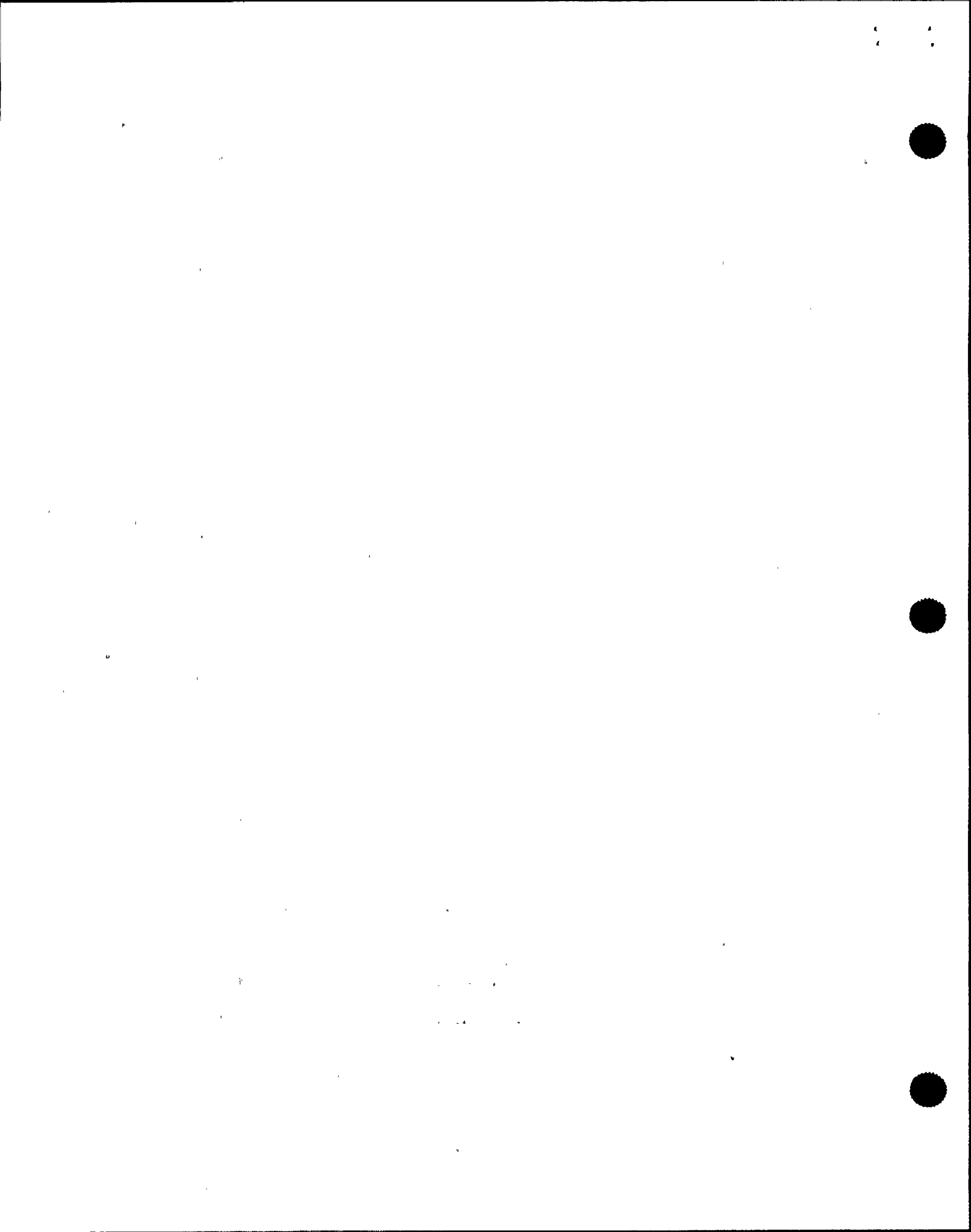
15 MR. McCORMICK: Yeah, reliability-centered  
16 maintenance unit.

17 MR. ROSENTHAL: RCM --

18 MR. McCORMICK: Yeah.

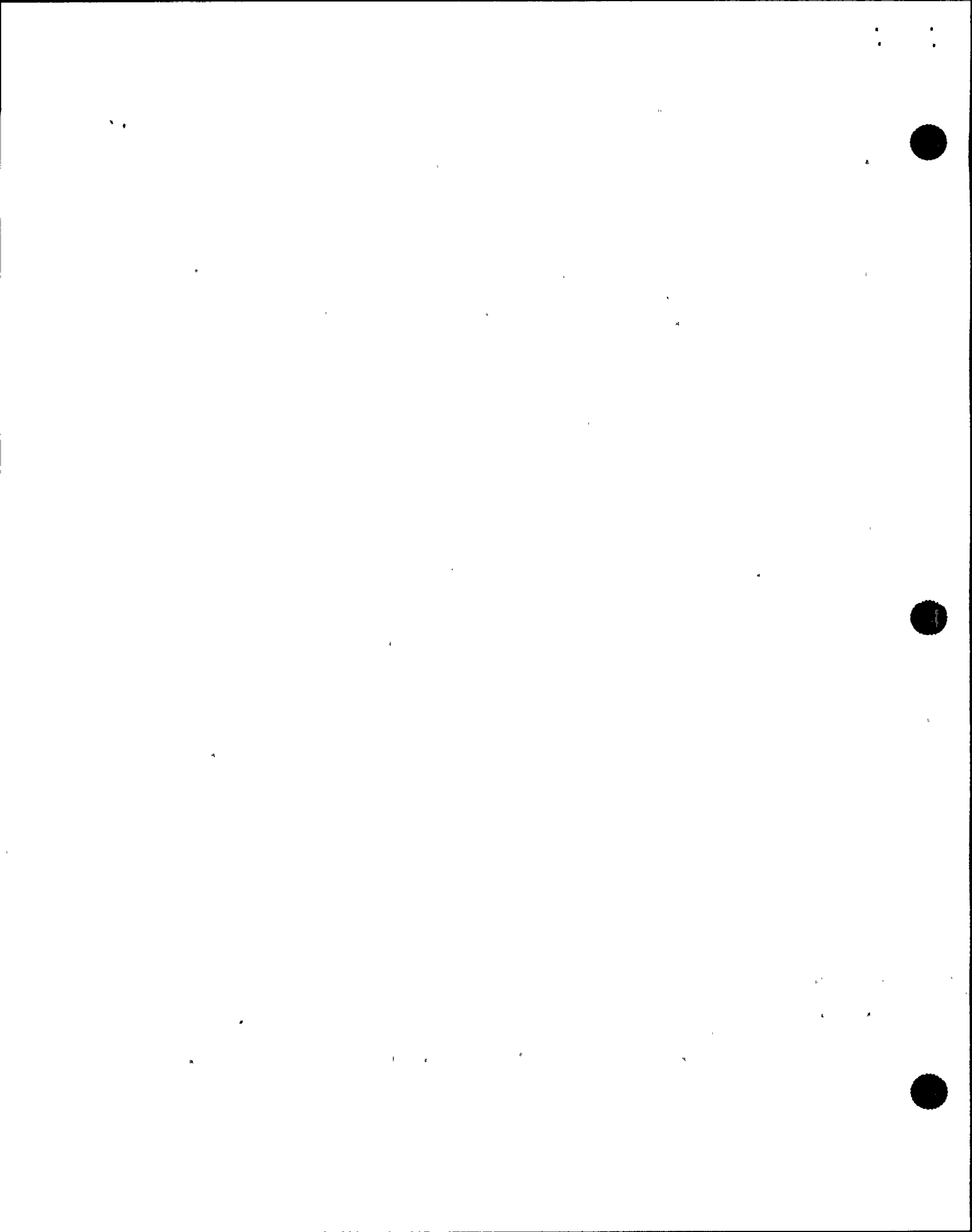
19 MR. ROSENTHAL: -- was required and -- okay. Were  
20 there plans?

21 MR. McCORMICK: Yeah. You know, you had come into  
22 a place and you think it's going to be -- by force of will  
23 you're going to get everything squared away in nothing  
24 flat, but you find out that there's a lot of other things  
25 that have to be done.



1           My approach, generally, is to understand the  
2 people and make sure that they are functioning with what  
3 they've got without changing the world. It's not my  
4 strategy to come in and start overwhelming people with new  
5 programs because I'm not that smart. I've got to find out  
6 what's there.

7           So early on, it was clear to me that the work  
8 control process here was very manual and very difficult to  
9 implement. They had just come out of a brutal outage, they  
10 were really beat up and it was necessary to get that work  
11 control process under control. And early on that became the  
12 focus, if I couldn't control how work flowed through here I  
13 couldn't get any work done and then I wouldn't -- I don't  
14 know how good the people are. The people are only as good  
15 as the system you have. And we were bringing those  
16 processes very -- I don't want to say quickly, but I was  
17 satisfied that we had progress. We cleared up a lot of the  
18 dumb stuff that was going on. We began to get work done; I  
19 had an interim maintenance manager, I just finally got the  
20 maintenance manager, Ken Coates, when I got here I -- the  
21 previous fellow was -- he had left and I had an interim  
22 fellow who was a contractor to me. A very good guy, but  
23 between us we began to work on the people problems and we  
24 got things moving along to the point where we began to  
25 identify points of disconnect between the work control





1 people and the maintenance worker, the craft. Craft was  
2 generally pretty good. These guys were pretty good, but  
3 they weren't meshing.

4 We established several teams to just talk about  
5 that, put people in the room and find out what it is we've  
6 got to fix here. And we came up with a high performance  
7 maintenance team, so-called, that was going to address the  
8 issues of interfacing between work control, work  
9 performance, training issues, and Kim Dahlberg and I were  
10 responsible for that organization. And flowing from that  
11 came the reliability-centered maintenance thing that said  
12 you've got to get out of the mode of just correcting, even  
13 if we get our teams working right, corrective maintenance is  
14 great, but you're fighting a problem and you've got to get  
15 ahead of it.

16 So another organization then under -- was set up  
17 on the side to come up with a reliability-centered  
18 maintenance organization and what that meant and I might --  
19 you know, we're talking about predictive maintenance,  
20 really. Get ahead of the problem. I had a meeting, I  
21 guess, you know, in early June, mid-June with that  
22 organization; they established what they needed in terms of  
23 people and what they intended to do and I had the  
24 preliminary blessing of Joe Firlit to go ahead on that.

25 We were planning to implement that reliability-

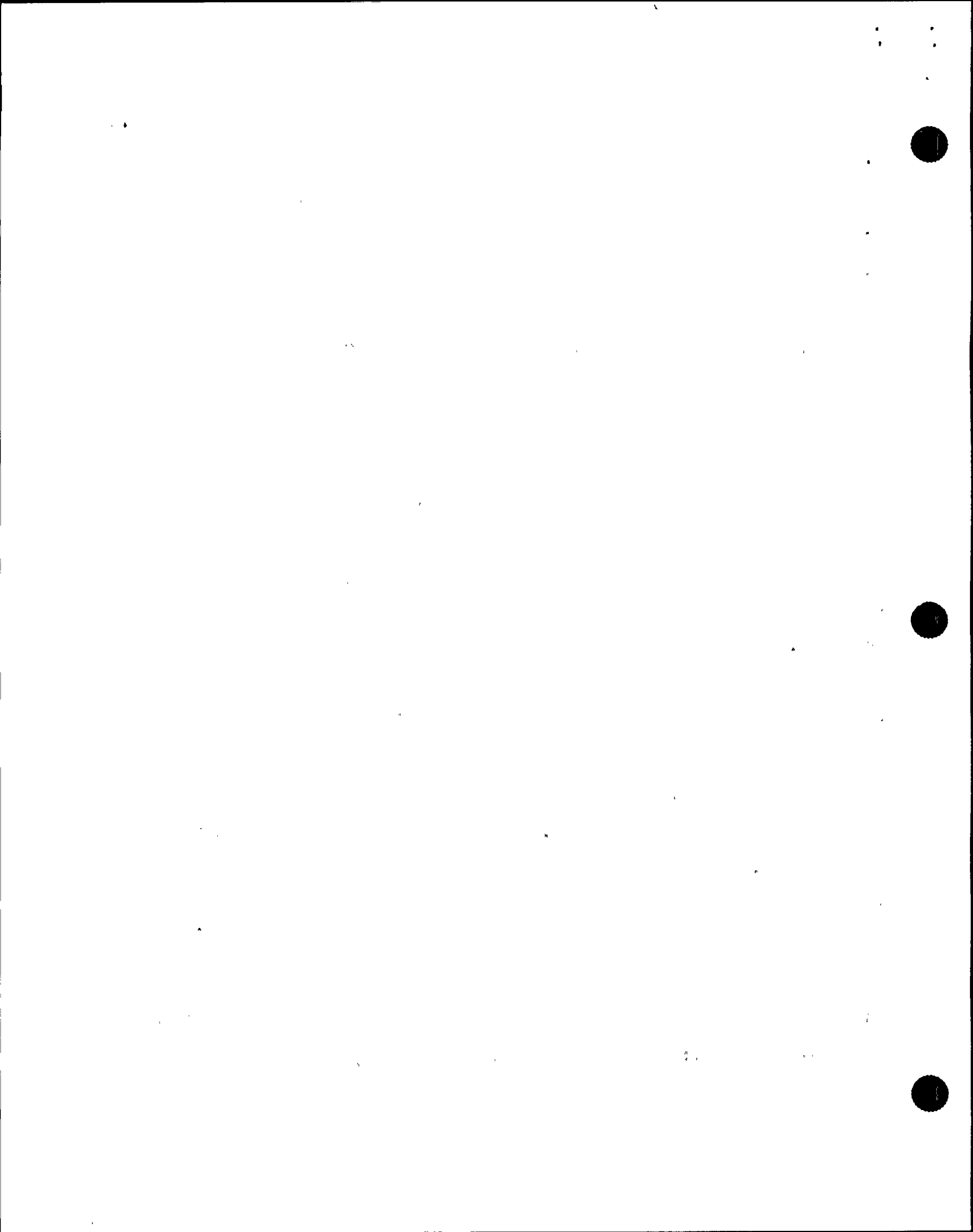


1 centered maintenance program which fits into the total  
2 strategy of using your resources effectively. So I -- we  
3 have a PM program here. I don't claim to know that  
4 everything's in it, although I know it's a damn sight better  
5 than the one I -- some of the ones I've seen around. It  
6 missed this battery and we'll have to take that and be  
7 responsible for that, but I mean we did do a lot -- we do a  
8 lot of PM, we track it, I get reports showing me where the -  
9 - what the backlogs are, I'm much more insistent on safety-  
10 related PM, I'll tell you that, but I have it down to a  
11 trend and I'm working the others down.

12 A lot of work got done here and the backlogs are  
13 down. They were up over, you know, several thousand jobs  
14 and we're down to over -- under 500 in the power-block  
15 maintenance requests here at the end of June. This is not -  
16 -maybe as good as everyone would like it to be in terms of  
17 everything certainly being done, but I feel that it is far  
18 from just a bumbling and not paying attention to its detail.  
19 It had good plans, but it was not as effective implementing  
20 them all and that was the focus, get the barrages out of the  
21 way and we were making good progress on that. And continued  
22 to make good progress.

23 [Pause.]

24 MR. JORDAN: You mentioned your 10 items list that  
25 -- or ten items, you picked 10 systems in --



1 MR. McCORMICK: Top 10, yeah.

2 MR. JORDAN: Top ten systems that you picked --

3 MR. McCORMICK: Right.

4 MR. JORDAN: And you mentioned the reactor water  
5 cleanup system is on your top ten?

6 MR. McCORMICK: Right.

7 MR. JORDAN: Is that for preventative maintenance  
8 or is that just corrective maintenance or problems with the  
9 system --

10 MR. McCORMICK: It's design.

11 MR. JORDAN: It's design.

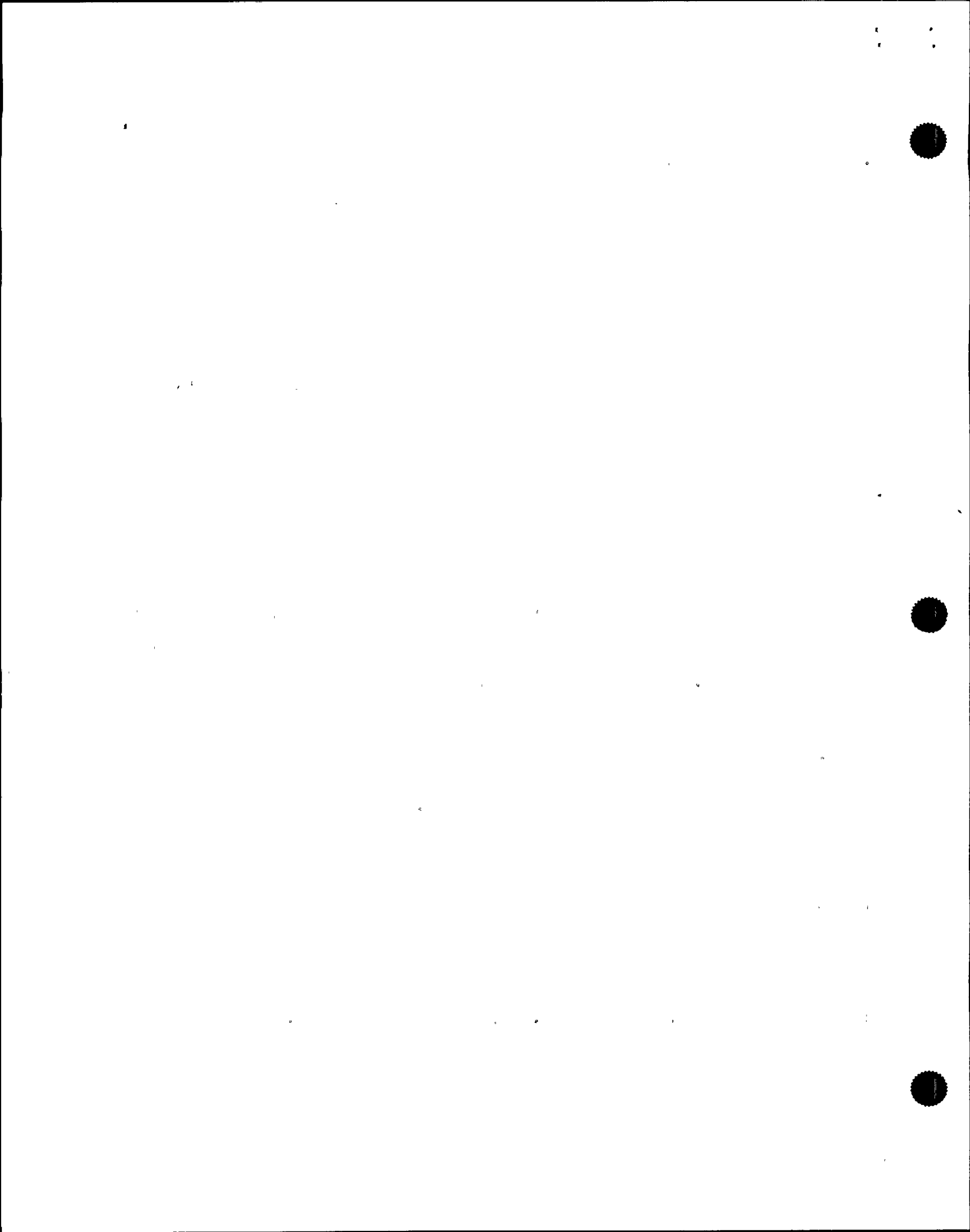
12 MR. McCORMICK: But it's part of an EO process  
13 that goes with that. You've got a good design, it would be  
14 a good operation. If the design beats you up, you beat  
15 yourself into the ground, you've got to fix the problem.  
16 And certain issues just require going back to the drawing  
17 board and fixing fundamental issues that go with how that  
18 equipment works.

19 MR. JORDAN: Can you give us an idea beside  
20 reactor water cleanup what other type of systems are on  
21 your top ten? Is feedwater on there?

22 MR. McCORMICK: Feedwater? No.

23 MR. JORDAN: Feedwater condensate?

24 MR. McCORMICK: It's not on there. We don't have  
25 any major problems on there.



1 MR. JORDAN: How about safety relief valves?

2 MR. McCORMICK: No.

3 MR. ASHE: Are there specific electrical areas on  
4 that list? Do you recall?

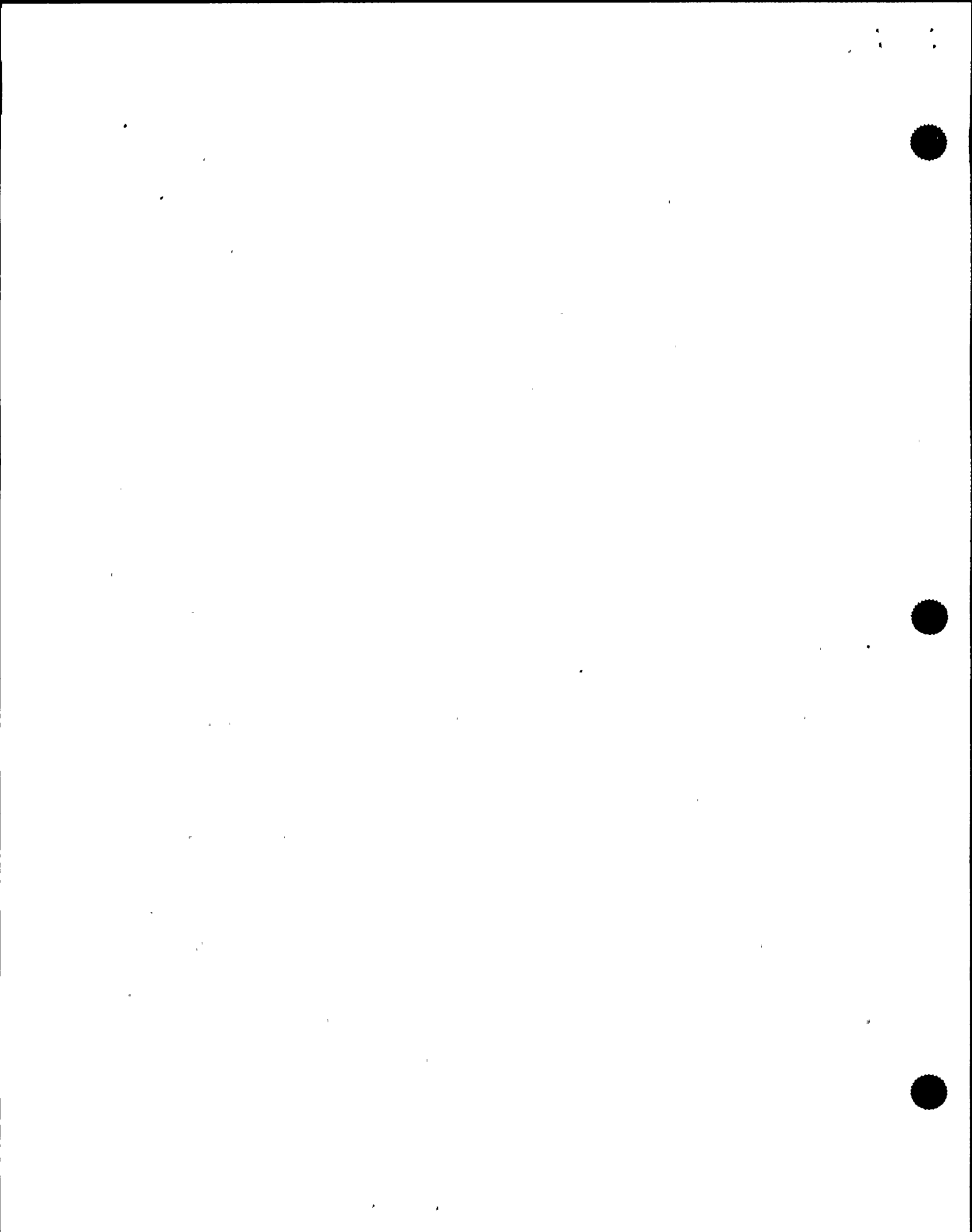
5 MR. McCORMICK: Stand by gas is on there, there's  
6 a major change out of the stand by gas system. There's a  
7 need for -- there's a radiological access control area that  
8 we have to get into to put the control access egress from  
9 the plant. We have two levels of cleanup, we have the  
10 cleanup controls and we have the reactor water cleanup pump,  
11 so there's two specific issues on cleanup; pumps being  
12 thought to be one entity to itself, no matter what we do we  
13 have the pumps. And then the control system that goes with  
14 it.

15 Let's see, you mentioned the stand by gas system.  
16 Oh, geez, it just doesn't come to me right now, but I can  
17 provide that list if you're interested in it.

18 MR. ASHE: Okay.

19 MR. McCORMICK: And the thing about top 10's, the  
20 top 10 is a focus of a multitude of things and we said,  
21 okay, let's focus the organization to be sure that they get  
22 the attention and I meet with the vice president on this,  
23 Dahlberg -- he has his top 10 and I have my top 10. And we  
24 review that to make sure that they are on track.

25 We also have -- there was a lot of work -- backlog

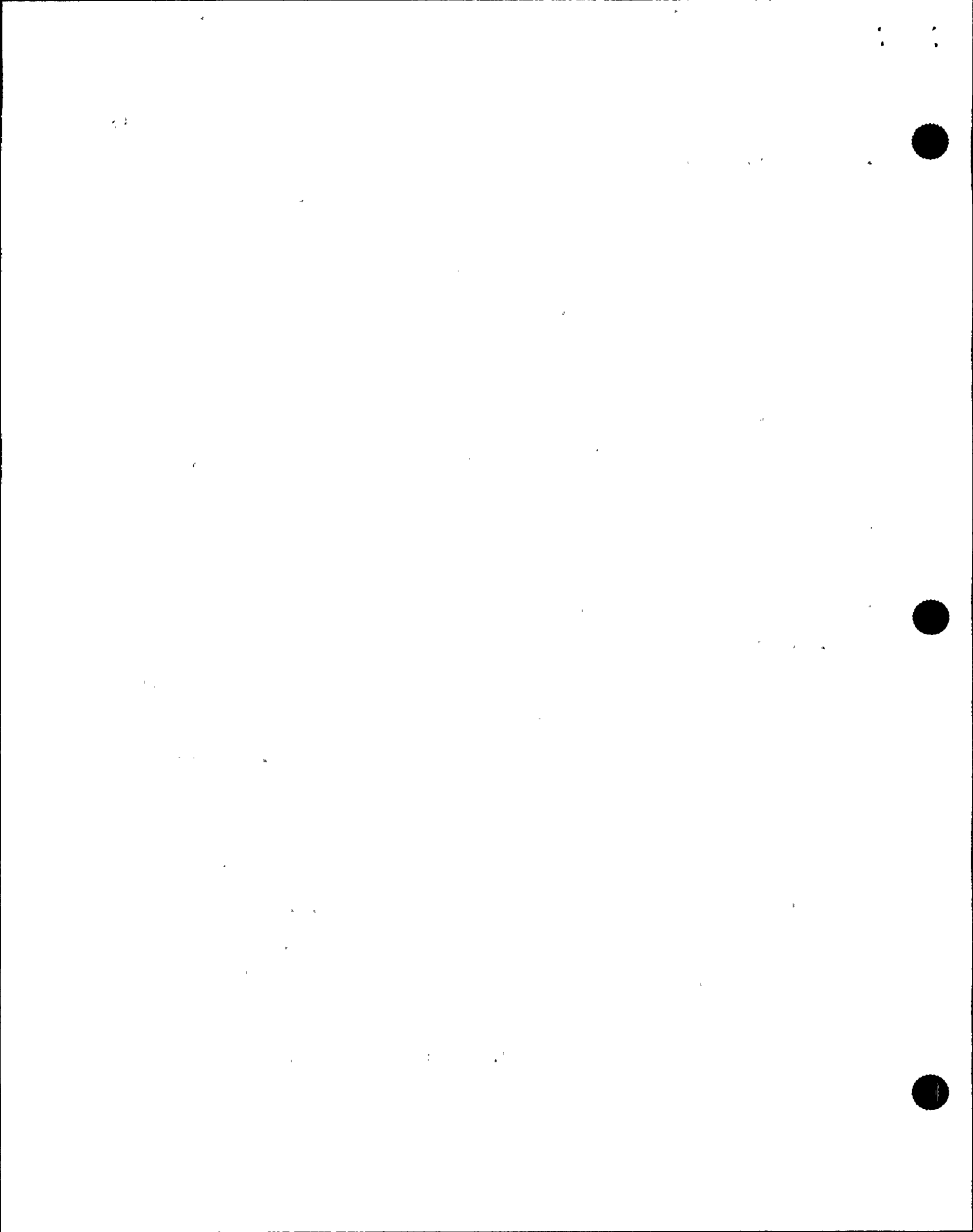




1 work that needs to be worked on and we are focusing on  
2 through our mod systems -- modifications, that come down to  
3 the point in saying well, if you keep asking for changes,  
4 what are you going to focus on and so we've cleaned up the  
5 backlog to the point where we're satisfied -- that we're  
6 looking at the -- we're trying to get a top 100 which will  
7 be the major focus of the organization that these are jobs  
8 we want to do within this timeframe.

9           Then out of that top 100 we focus on the top 10  
10 which get high level attention focused on those and I'm  
11 about to remove two of those off the list and move two more  
12 on. So that's a dynamic kind of a thing. But the overall  
13 management of the backlog of mods and engineering  
14 requirements, and what I'm talking about now is going off  
15 the -- I need outside assistance. This is something where I  
16 need a design change or I need a major improvement in a  
17 piece of equipment. Get rid of the pile and focus on where  
18 we're -- what resources we have, what we're going to be able  
19 to get done, concentrate on the station having control of  
20 that and setting that priority and here's the ones we want  
21 you to work on engineering. And of those, here's the ones  
22 we really want you to get done and we meet with this monthly  
23 on, the others will be in the process.

24           MR. ROSENTHAL: Is this -- our post-trip review  
25 your own post-trip review has put that day under a



1 microscope and some maintenance related issues do come out.  
2 Now, there is always procedures, knowledge, work arounds,  
3 you know, I won't see anyone who is big-ticket, but there's  
4 a, you know, loop even limit switch contacts on check valves  
5 of RCIC injection line a little confusion and the problems  
6 with the condensate booster, discharge valves -- actually  
7 they're more like feedwater suction valves, the MOV-84's,  
8 the -- I guess SRV's -- SRV's were habitually leaking and so  
9 it's --

10 MR. McCORMICK: I don't think that's true.

11 MR. ROSENTHAL: I may be wrong. I think we  
12 decided that --

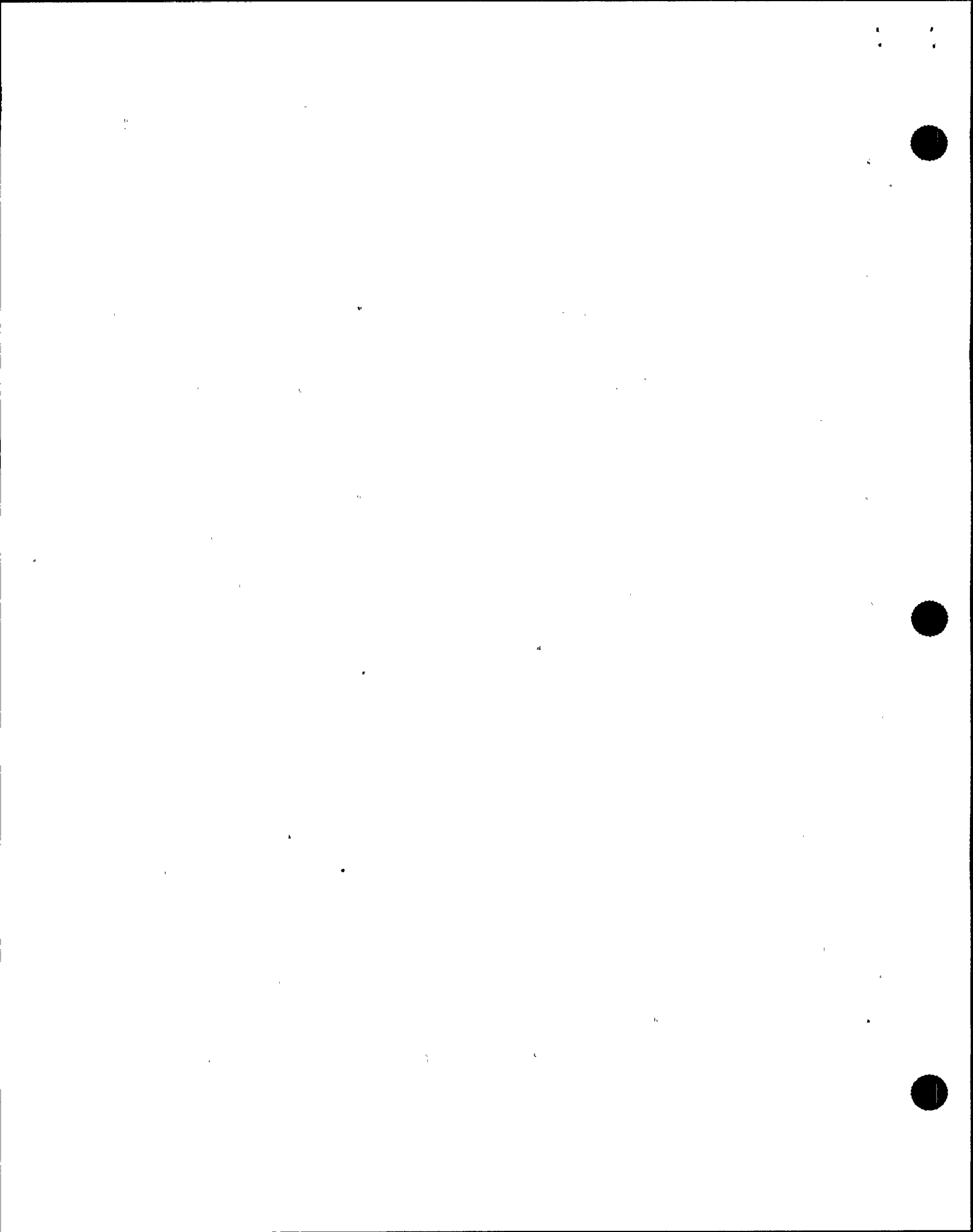
13 MR. McCORMICK: There was leakage, but it wasn't  
14 considered to be -- height increase and suppression pool  
15 temperature to the point where that was way out of line.

16 MR. ROSENTHAL: That's true.

17 MR. McCORMICK: Those things are a funny designed  
18 relief valve. They're insulated and everything else, so  
19 there was some concern that you just get a little bit of  
20 heat and it just builds up, it can dissipate the heat, so we  
21 did have -- to my way of thinking, or at least, no major  
22 problem with the relief valves as being -- they've lifted on  
23 the transient -- two of them which I would think was normal.

24 [Pause.]

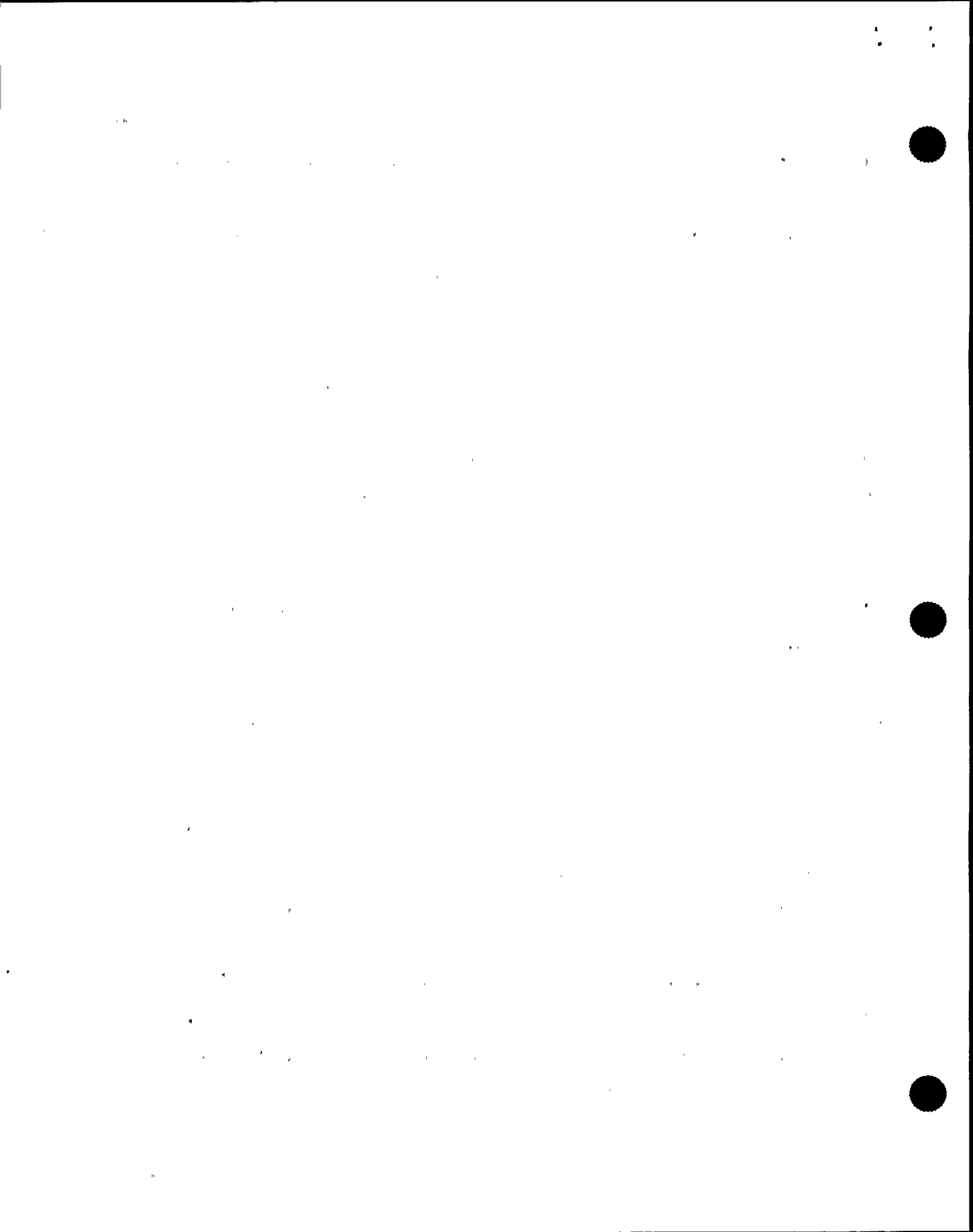
25 MR. ROSENTHAL: We're still assembling a couple of



1 dirty switch contacts, you know, there's always something.  
2 There's several here. We'll forget about the details. I  
3 mean, what's your overall perception in terms of how your  
4 equipment performed in the event?

5 MR. McCORMICK: Overall assessment of how it  
6 performed? Well, I sure have a fairly long list of things  
7 that I'm looking at to see why they happened. I have any  
8 one, you know, is probable to happen. The multitude given  
9 the transient that we had, it says there's not a clean  
10 system in many respects. We've had -- taken scrams here  
11 before I guess, but not in my time. I haven't had a scram.  
12 This is my first scram. I've taken the unit off a couple of  
13 times, it came off when I first got here and when they were  
14 studying up the EHC leak and I took it off with the flex  
15 hose earlier on. I had had none of these problems, this is  
16 my first scram so the sense that it's a -- it performed as  
17 you would want it to, I wouldn't say it is there.

18 Most of the things that I'm finding are with the  
19 84 valve. The 84 valve worked through the transient, they  
20 shut it down and now they can't open it up again. We  
21 introduced something into that, they says, well, what's  
22 different? They changed out those valves back in the last  
23 refueling effort. Well, then, what were the limits? What  
24 were the torques for the new switches -- switches set on?  
25 Well, we have an EDC which said we shouldn't change them.



1 They should leave them, they should be okay for where  
2 they're set. Are they set the way they were left? Yes.  
3 Within some smidgen. Okay, they should have worked. Why  
4 didn't they? I don't have the answer to that. So, is that  
5 -- I don't know what that means, I have to find that out.  
6 So we're going back to the manufacturer.

7 MR. JORDAN: How about just the fact of closing  
8 the valves?

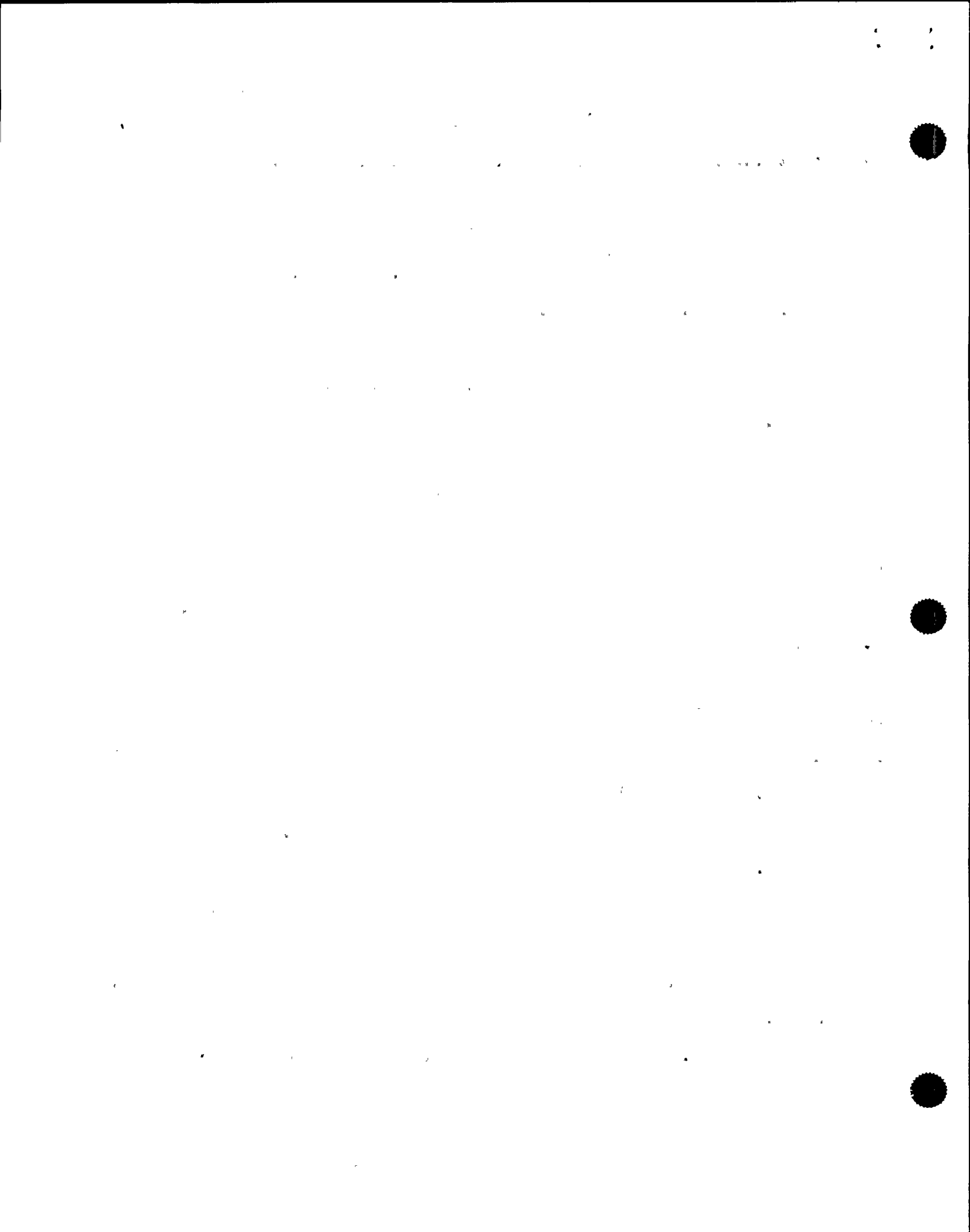
9 MR. McCORMICK: Normal.

10 MR. JORDAN: You expect them to close the valves  
11 normally?

12 MR. McCORMICK: In other words, if their  
13 procedures call for them that they have to bring condensate  
14 back, but before they do that they close that suction valve,  
15 that's part of their procedure notes.

16 MR. JORDAN: Then I guess my question is, has  
17 anybody looked to see why do they close that valve and is it  
18 a work around? Is it something that the reason why they do  
19 it is because they get this -- the results if they don't are  
20 bad and therefore bad design, good design, the design is  
21 okay, all valves -- we always should close those valves in  
22 order to get it?

23 MR. McCORMICK: No. What I'm into now, is I say  
24 well, all right, he should be able to close them. He has  
25 other valves to get closed, but he should be able to close





1 that one. And -- but now he should be able to get it  
2 opened.

3           Then we give him a procedure that says, bypass the  
4 valve before you surround the valve to open it. Before you  
5 bring it back, and that's built for -- most of these are  
6 built for a normal -- they're not built for the emergency.  
7 We don't know an emergency to write the procedure for, you  
8 know. So you have -- your procedures are there for how you  
9 normally start up and you have a valve, you go around and  
10 bypass that and in this case they didn't want to take the  
11 time and they had some other things working against them, so  
12 they took their alternate. You don't want to have to be  
13 challenged like that. You should be able to open that valve  
14 and go about your business.

15           So, now we look into say, what else could we do?  
16 Could we leave that bypass open? There's a solenoid-  
17 operated valve downstream of the first hand bypass and we'll  
18 examine that and see if there's another way around that  
19 event. But were we prepared for that eventuality? Nope.  
20 We didn't have --

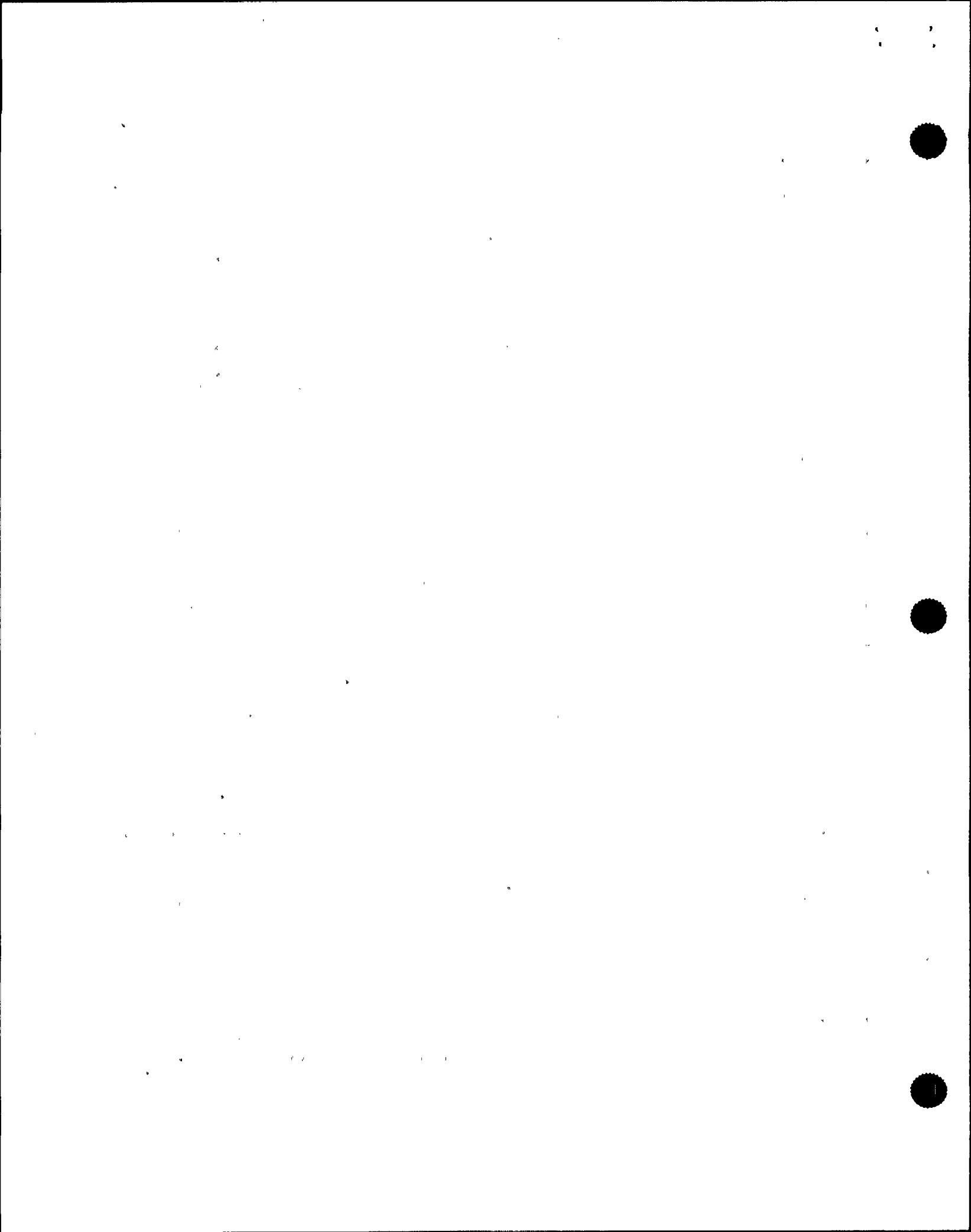
21           MR. JORDAN: Would you expect your people to be?

22           MR. McCORMICK: Huh?

23           MR. JORDAN: Would you expect your people to be?

24           Would you expect to have procedures --

25           MR. McCORMICK: I would expect them to -- allow

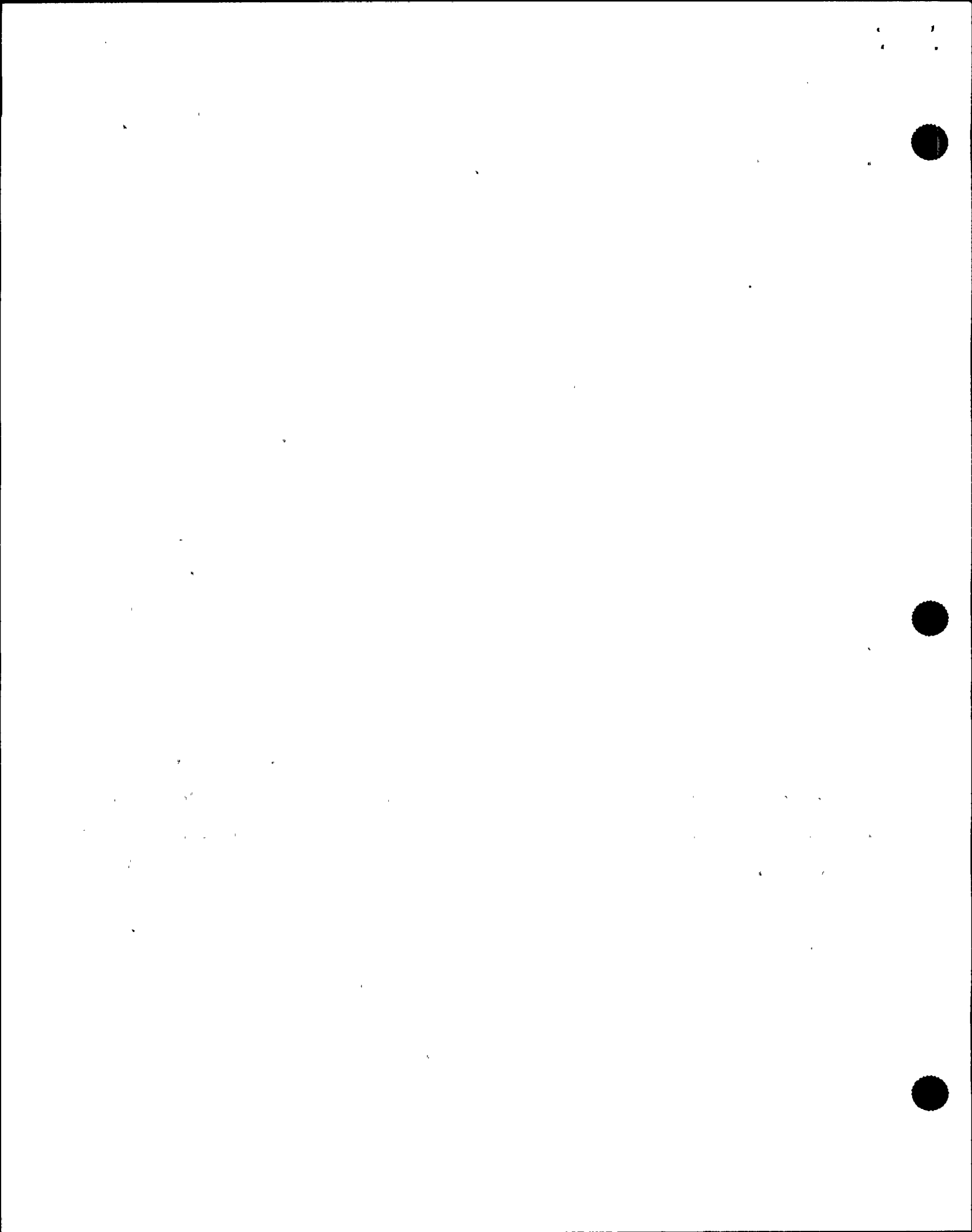


1 them in this type of an emergency to sit back and say, in  
2 order to go out there and open the bypass -- what happens if  
3 they can't -- some type of emergency procedures to allow  
4 them to start it up if they can't get the bypass?

5 MR. McCORMICK: Would I like to have it? Yes.  
6 Did I expect that we would have those in place? No. It  
7 would not be something that I would be driving to get done  
8 because I don't know what emergency to plan for. I think  
9 that if I had the right time and right talent available to  
10 the plant you might want to build in typical event  
11 scenarios, but that's what the whole system -- that's how it  
12 all works, INPO and all the rest of them come together.  
13 What happened to you? And then we try and put those fixes  
14 in place. What's the NRC -- we try and help each other  
15 along the way.

16 If you just go out and start saying the sky is  
17 falling, I don't know where to begin, I'll have six things  
18 over here and maybe that one will get me, I don't know. I  
19 mean, I hear you, I wish I could say I would know which ones  
20 to do.

21 Certainly, I think Jack mentioned an approach that  
22 Salem is using, we had characterized where your biggest risk  
23 is, what's the thing you really want to have happen and if  
24 you really thought about that and you say, well, let's sit  
25 down and do PRA around those things and work on them a



1 little bit and say is there -- are those areas good enough?

2 We cover ourselves, I think, pretty well on the  
3 safety-related because there's not single-failure proof  
4 stuff. You know, we said we rely on the backup system, but  
5 on these others, you know, it's like we talked the other  
6 day. The min flow valve, it comes open. Okay. When it  
7 comes open, now suddenly I've got more water going than I  
8 know what to do with. Now what? The pump trips.

9 Okay. I should be able to put it back, close that  
10 valve. But do I really want that happen to me given one end?  
11 In this instance, it didn't bother them, I think, initially  
12 that they lost those feed pumps. You don't need the feed  
13 pumps, then. You've got plenty of ways to get water there.  
14 You would like to have a feed pump running on min -- on low  
15 flow control that you can keep it going, but it's not the  
16 end of the world. They're trained to handle that.

17 So, I would certainly say that when we do our  
18 lessons learned, we're going to look for ways to say, well,  
19 what do you look for? What do you want to do on those  
20 things that beat us? And we'll follow through on that.  
21 There's many things that we're doing at this plant, looking  
22 for trouble, that didn't happen at this plant that came to  
23 us by industry experience.

24 MR. JORDAN: I had --

25 MR. ROSENTHAL: You also --

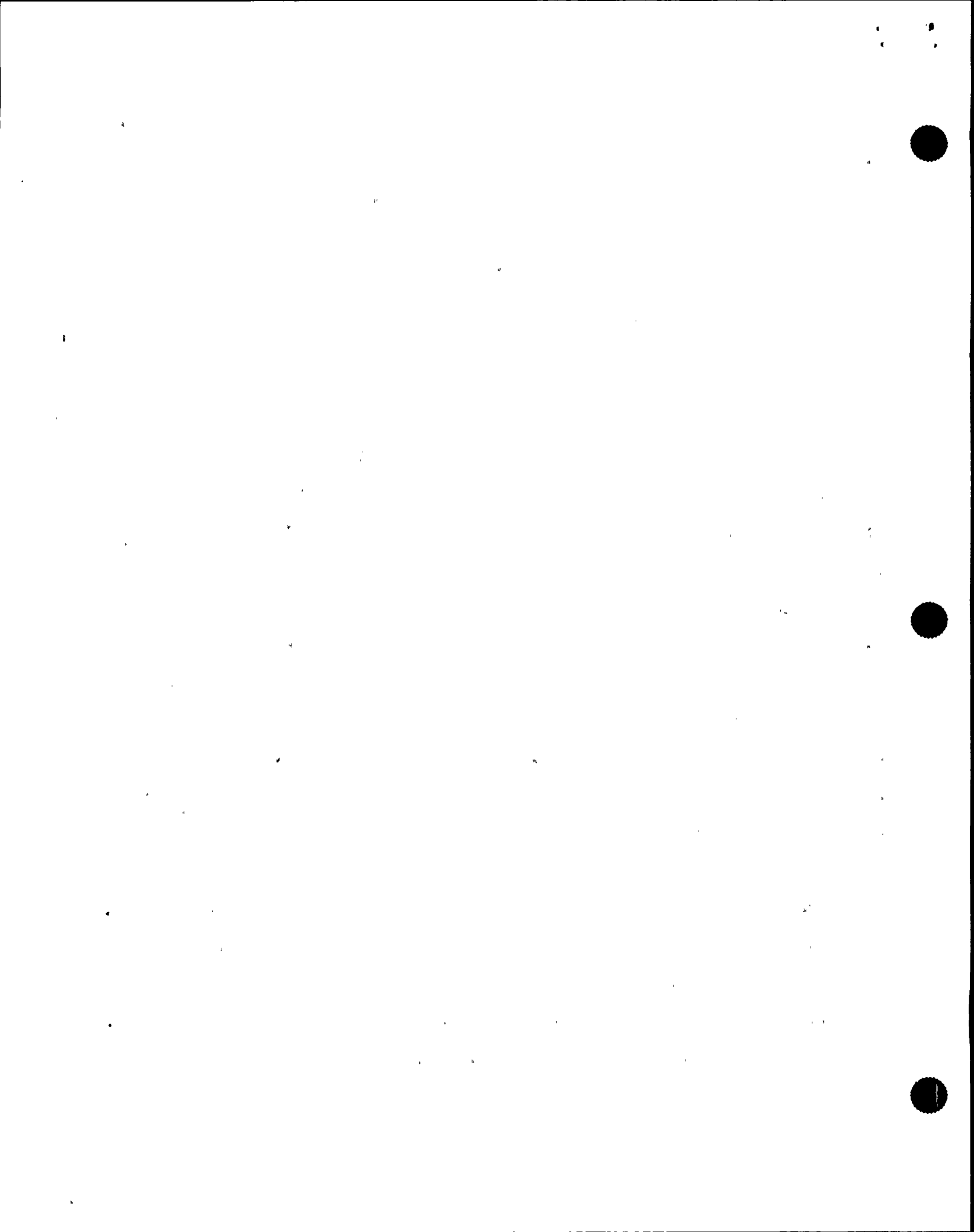


1 MR. JORDAN: Go ahead.

2 MR. ROSENTHAL: I believe training is done on a  
3 site basis, or at least the training department reports.  
4 What kind of training did the operators have that you  
5 thought was really relevant to them coping that day?

6 MR. McCORMICK: Well, really relevant is some of  
7 the scenarios where they loose instrumentation. They have  
8 several scenarios that they run where they do loose control  
9 room instrumentation, the full core display, their APRM's,  
10 front instrumentation panels, and I think that those  
11 scenarios -- while not, I'm sure, modeled to the degree that  
12 covers everything that you loose in this event -- or these  
13 events, at least prepared them to handle the major issues of  
14 where is my new core parameters or reactor parameters and  
15 keep the core covered. They were well prepared, I think, to  
16 at least know what the steps were to get into their EOP's.  
17 They get a lot of training -- a lot of damage training.  
18 Those crash and burns are pretty intensive that they go  
19 through, every six weeks.

20 And we've just had team training up here. We've  
21 just had INPO come up and go through the team training  
22 scenario with us and we did that in conjunction with Unit  
23 One. We went into breakout sessions and reviewed our  
24 performance, critiqued how we handled those emergencies. I  
25 sat in on some of those and it was -- I think -- an





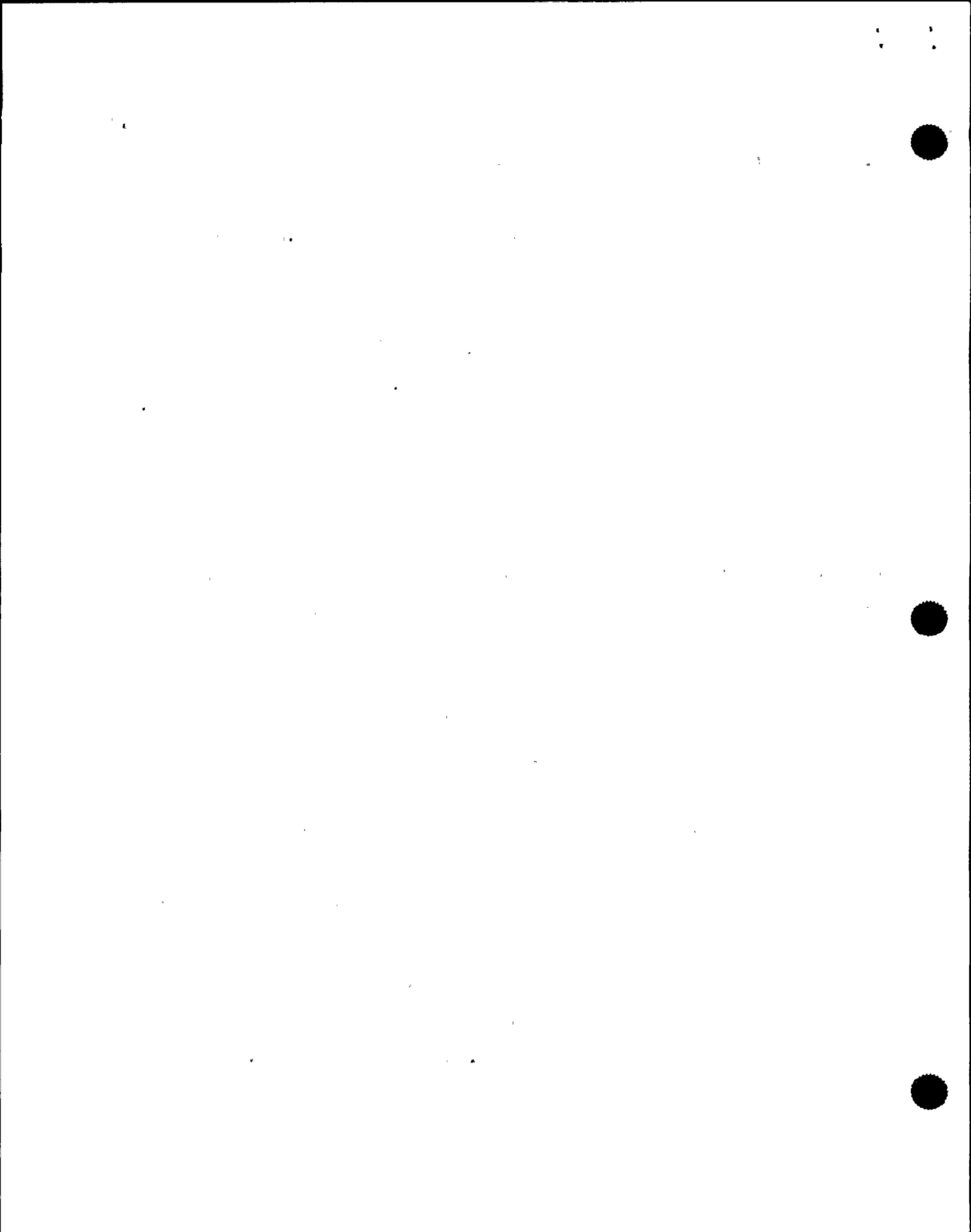
1 important issue to that kind of situation where the team now  
2 is the sole protector of what goes on. Their response to  
3 the emergency, how they handle themselves, how they talk to  
4 one another and how they communicated. I think that level  
5 of routine training supplemented by special training was  
6 what cause them to respond effectively.

7           The branch managers and my ops managers and his  
8 assistant Jerry Helker -- Jerry Helker, incidentally, was in  
9 the room the whole time. I decided I wouldn't bring him  
10 down. The ops manager was on day off, but Jerry Helker is  
11 his assistant, a really qualified SRO; very very versed in  
12 EOP's. He helped write them here. He was the right guy to  
13 be in that room, a very steady stable guy. A good  
14 counsellor. And he is one of the two key people that go  
15 over and monitor the training to make sure it's going the  
16 way it should.

17           I participate, but I'm certainly not there as much  
18 as I would like to.

19           MR. JORDAN: You mentioned that the control room  
20 had the sequence of UPS transfer from maintenance power to  
21 normal power. Okay. Do you know how they established that  
22 sequence and why they established the sequence they did?

23           MR. McCORMICK: They did it based on their  
24 assessment of what would be the least impact of the plant  
25 working backup to the more significant ones. If it didn't



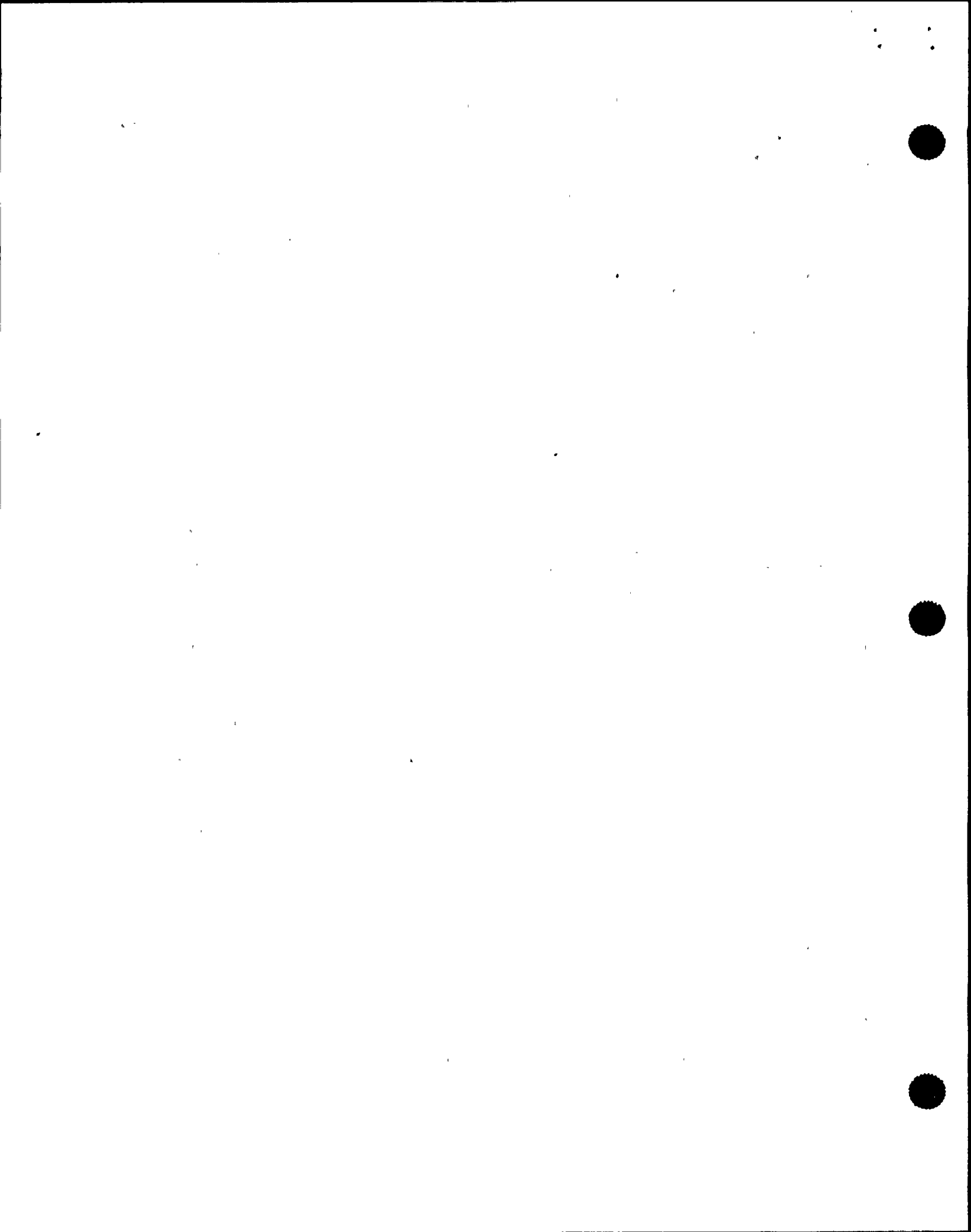
1 transfer or if they lost it.

2 MR. JORDAN: Do you know what they used to  
3 determine that? We've been looking for a load list and we  
4 still don't have a good loads list and I was just curious  
5 what -- do you have any idea what the plant was using or the  
6 TSC was using to determine which bus -- or which UPS was  
7 more important or less important?

8 MR. McCORMICK: No, we didn't go -- we -- they  
9 knew enough -- they knew enough. I can't say I knew enough.

10 MR. JORDAN: That's the control room?

11 MR. McCORMICK: They knew enough between that  
12 group that was in the control room and the system engineer  
13 to make that call. I did not make that call. I just wasn't  
14 knowledgeable enough and I think they -- whether they were  
15 working in conjunction with our tech staff, they knew enough  
16 to say we didn't want to start with A and B, C and D were  
17 less impact, A and B being the main instrumentation and G I  
18 think had the process computer. I think it was by -- you  
19 can't say anyone of them was easy to give up, but in terms  
20 of what would bite us the most, I think they were  
21 knowledgeable that the A and B had the control room alarm  
22 and instrumentation where the C and D were into other areas.  
23 And G was the process computer. And most impacted, maybe  
24 the G being left to last because of the transient introduced  
25 would blow the computer out due to its sensitivity of



1 computers. I think that's the way it went.

2 MR. JORDAN: Your event assessment report, can we  
3 get a copy of that? Do you know when that's going to be  
4 issued, or can we get a rough draft?

5 MR. McCORMICK: Let me see if I know which one  
6 you're asking --

7 MR. ROSENTHAL: Abbott's report.

8 MR. JORDAN: Abbott's report.

9 MR. McCORMICK: As contrasted to the safety  
10 assessment report or the -- he's putting together a full-  
11 blown -- it will cover all the issues which has to go to  
12 SORC and so forth. One of those can be a safety assessment  
13 -- but the total package --

14 MR. JORDAN: We want the total package.

15 MR. McCORMICK: Okay. I can -- it won't be done  
16 today, and probably even tomorrow, it's in the course of  
17 being -- still being put together. We'll get you a copy as  
18 sure as anything.

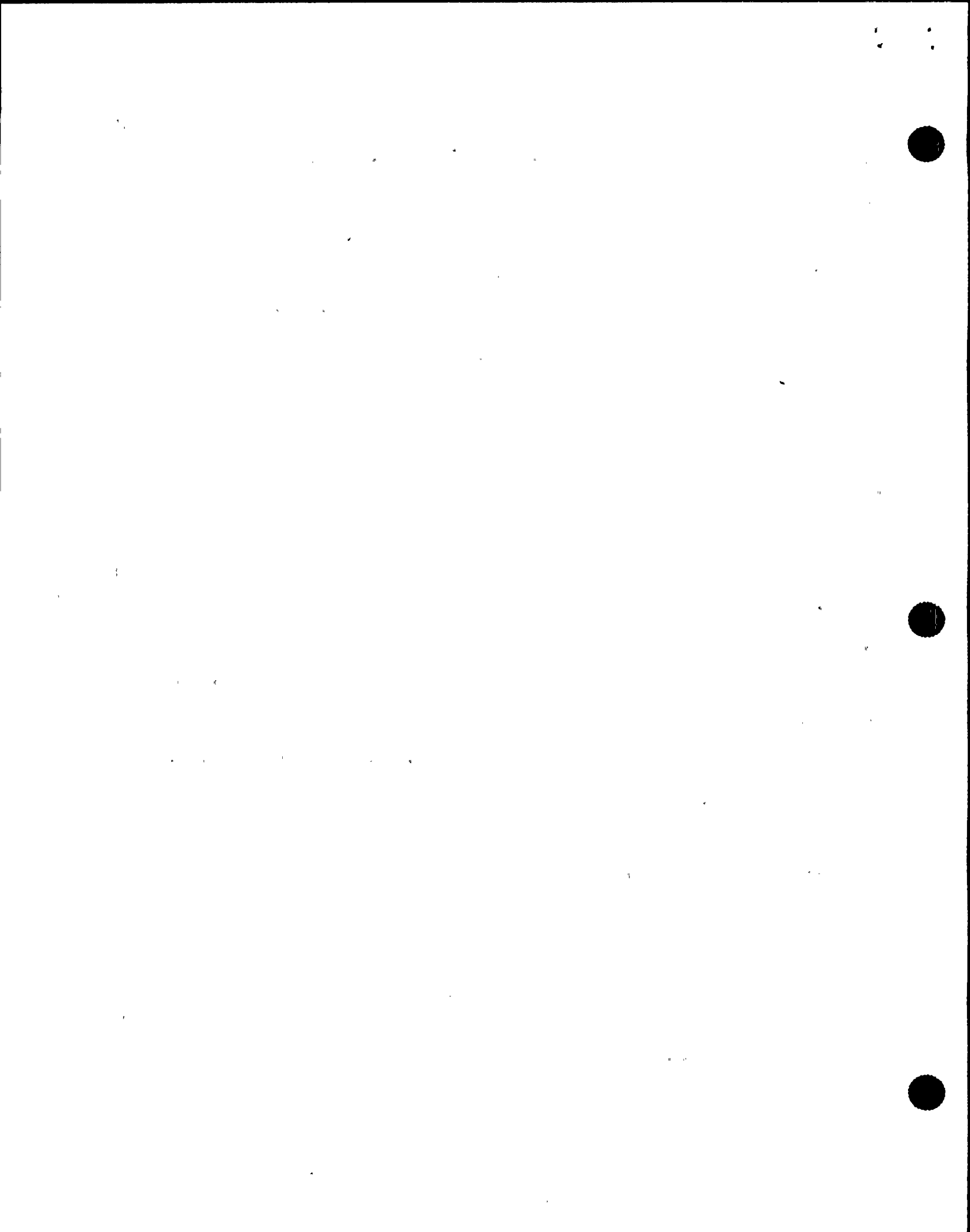
19 MR. JORDAN: Okay. If you want to mark it "draft"  
20 then that's fine, but we would like to have a copy of that.

21 MR. ROSENTHAL: And that would include Spadafore's  
22 input?

23 MR. McCORMICK: Yes. The ISEG guy?

24 MR. ROSENTHAL: Yeah.

25 MR. McCORMICK: Yeah.



1 MR. ROSENTHAL: So it's a matter of days, but not  
2 weeks?

3 MR. McCORMICK: Not weeks. It's got to be days  
4 because it has to be agreed before -- it has to be reviewed  
5 by SORC and approved and if it's not, then we can't feel in  
6 a position to even discuss restart. It's part of our  
7 restart program.

8 MR. ROSENTHAL: Are you going to do special  
9 training or procedure writing or anything germane to this  
10 event?

11 MR. McCORMICK: YES. There's training of  
12 operators -- additional training of operators in the UPS and  
13 activities and a variety of lesson learned reviews of what  
14 happened and how to operate around them.

15 We've got to find some way around this 84 valve  
16 question.

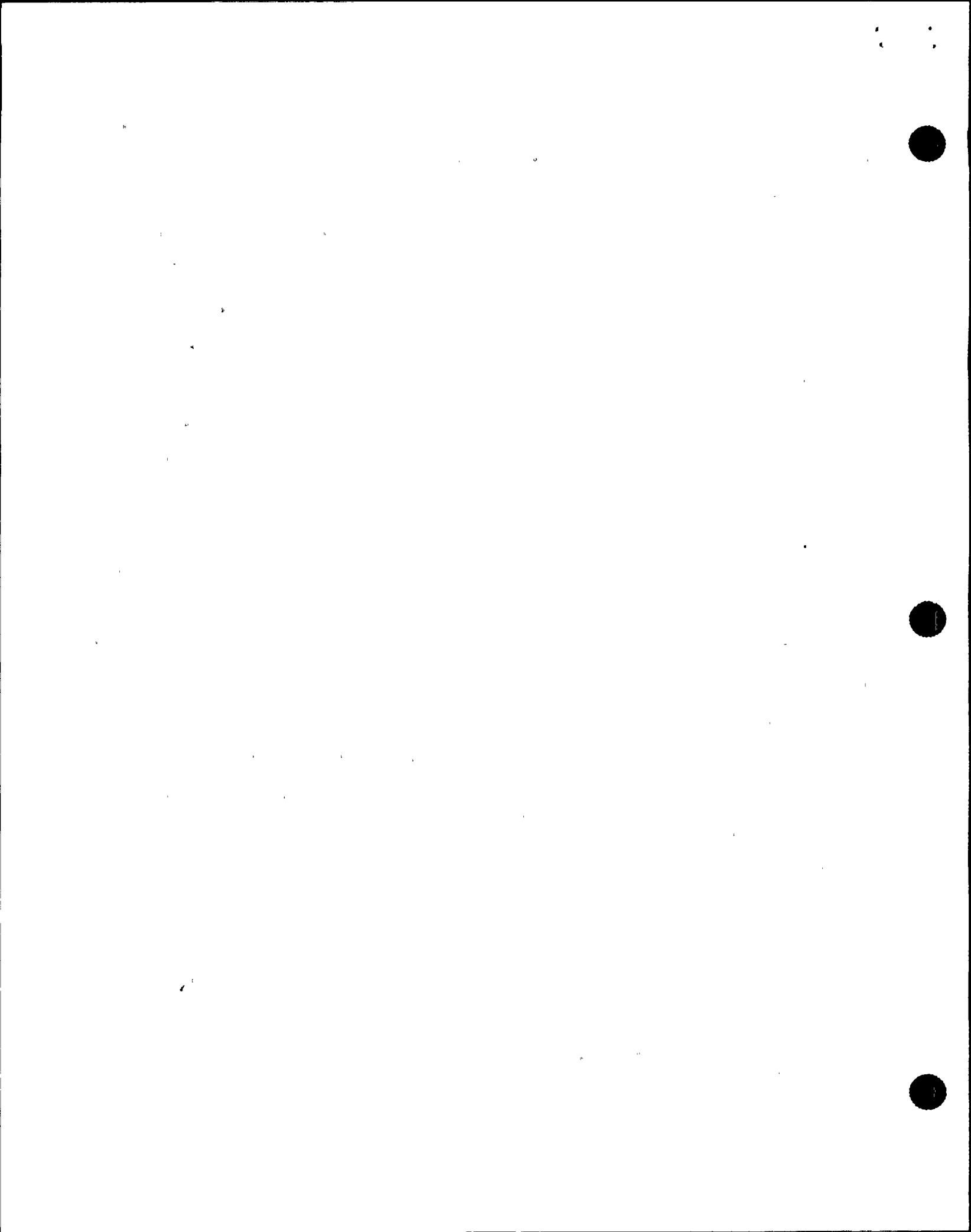
17 MR. JORDAN: Is that all in the report also?

18 MR. McCORMICK: It was a requirement of SORC  
19 before they even came together. It was part of the  
20 requirements, yeah.

21 MR. JORDAN: Okay.

22 MR. McCORMICK: It will be in there. All of the  
23 things that we think we will have to do to corrective  
24 actions.

25 MR. JORDAN: Okay.





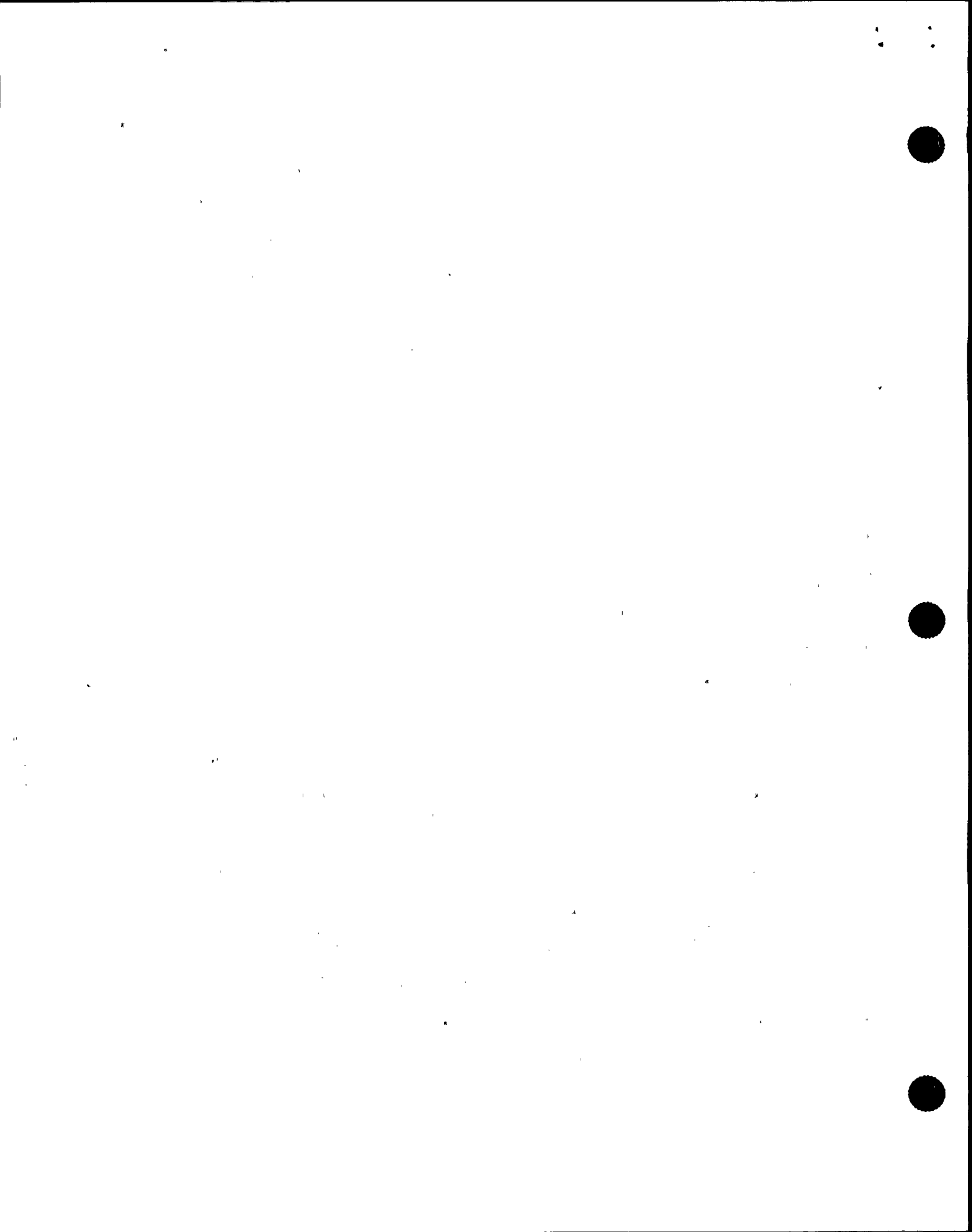
1 MR. ROSENTHAL: I want to backup -- I mean, it's  
2 clear to me that you could have -- you've got PM programs  
3 emphasizing the 1E, the non-1E, et cetera, lack of PM of  
4 the specific batteries here, grabbed you this time, it could  
5 be capacitors have finite lines too, or something like that.  
6 Where do you see this going in terms of PM of this class of  
7 equipment?

8 MR. McCORMICK: Well, I guess I understand your  
9 question, you know, is the rest of the PM complete enough?  
10 I guess you never really know on PM. PM is based on  
11 manufacturer's recommendations, typically, you try and  
12 follow that and you try and -- then you adjust based on your  
13 findings as to what's going on in the plant. If you're  
14 getting something failing at a higher rate than what you  
15 want, you've got to adjust your PM program to compensate for  
16 that.

17 I think probably the lower I would say we would go  
18 is we've written a -- we have this deficiency report --  
19 evaluation report that we do that allows me to get a sense  
20 of what the organization sees and as the plant sees has  
21 problems and I can set priorities to adjust to them.

22 MR. ROSENTHAL: And these include QA?

23 MR. McCORMICK: QA recently did an audit on the PM  
24 program. And it was there finding that there was PM, but  
25 there's kind of -- maintenance does PM, ops does PM, a lot



1 of people do PM. PM programs were developed before startup,  
2 they were done by, in some cases, consultants and other  
3 people that were part of the organization and they put  
4 together what they considered to be the PM program and it's  
5 being implemented for these past three or four years,  
6 whatever it is and it would appear that it's not under one  
7 single group control to say who is managing PM. Who has  
8 really got the overall control of PM? I guess by rights, I  
9 guess it's me, I'm the plant manager. That meeting direct  
10 control is not one that has clearly been my focus at the  
11 moment. I have to admit that.

12 The PM program, as I said earlier, was to get the  
13 program working that I have. But to answer that DER, when  
14 it came through I felt that it would take the organization  
15 now setting down to address and say, well, who is going to  
16 run the PM? Now, once you decide that, then you can begin  
17 to focus on what is not being done, what should be changed.  
18 I would be hard pressed to say to you, I really don't think  
19 I, in all good conscience say I'm going to go out and tear a  
20 part out of your PM program. I haven't said though, I  
21 covered every knit in there. I just can't do that because I  
22 -- but I have asked the system engineers to go back and say  
23 do you see holes, this is my program, is there holes in your  
24 program that you feel should be embellished? And that would  
25 be part of the response of that DER so that we could bring

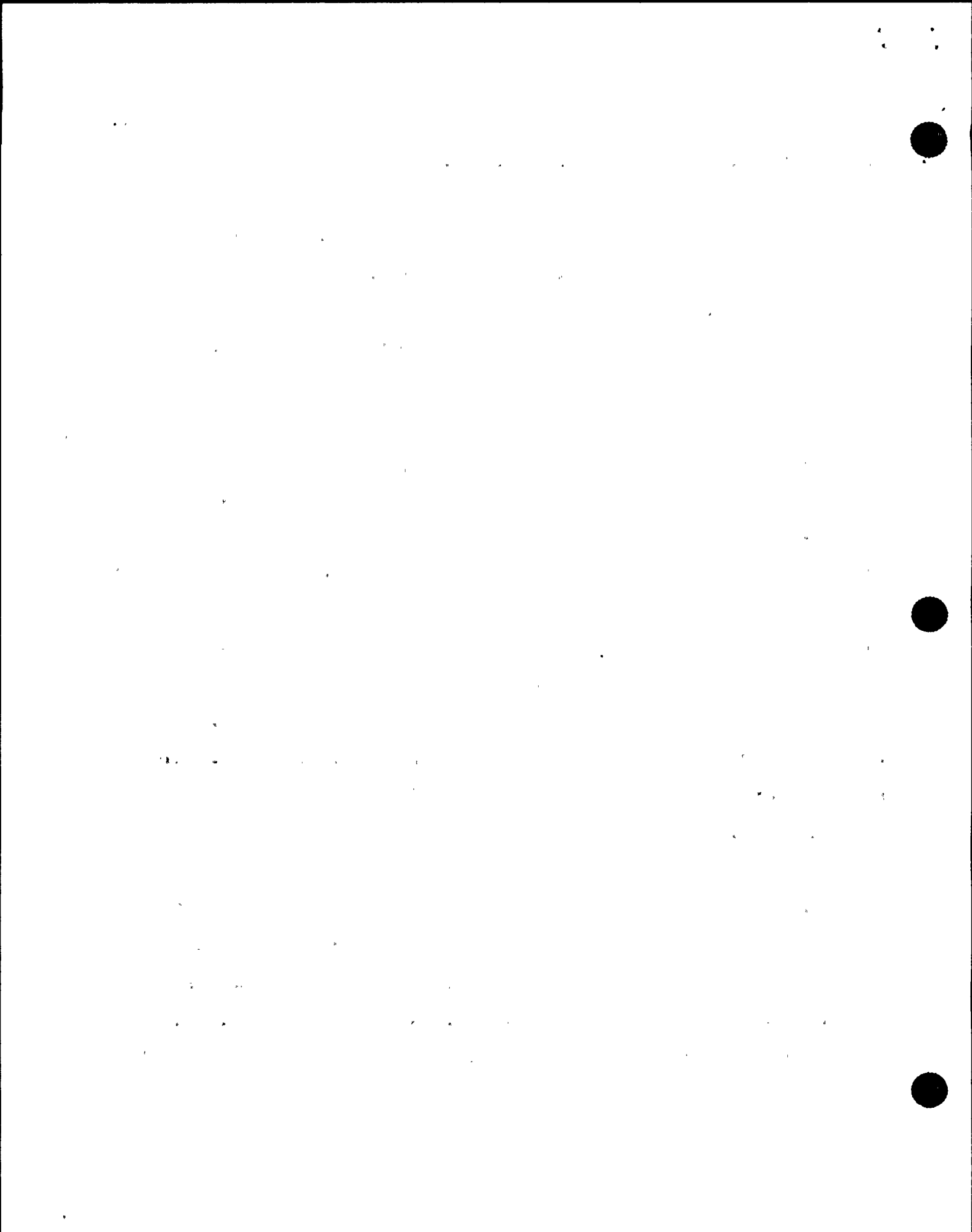


1 that back in under their control.

2 The system engineering program here is under a  
3 development, it's just really getting its feet on the  
4 ground. We have just, this past, few months got an engineer  
5 assigned by name to every system and a backup that wasn't  
6 here. I found I got a system engineer for every program,  
7 I've communicated that to the control room. Everybody now  
8 knows if this widget breaks here's the guy you go to. He  
9 has responsibility for that.

10 Having done that, does that mean I've got all  
11 those system engineers doing exactly what I want them to do?  
12 No. But we're working on it and we will, through that forum  
13 then get into a position to say, well, your system, your  
14 program isn't going to meet your requirements. Go review  
15 the books, give me any holes and we'll undress them.

16 That would be part of that DER response, that  
17 would be the kind of thing I would be looking for. In fact,  
18 on this system there was a DER written to upgrade the PM on  
19 this. It came in and there was deficiencies in the PM  
20 program noticed by Crandall and I almost -- at the time I  
21 said I'll give you 15 days to get back here with a program.  
22 It took him longer than that, but he came back with a whole  
23 list of PM's that had to be written and I gave him four  
24 months to get it done because I figured I would hit it hard  
25 in the outage. I think one of the things on there is the

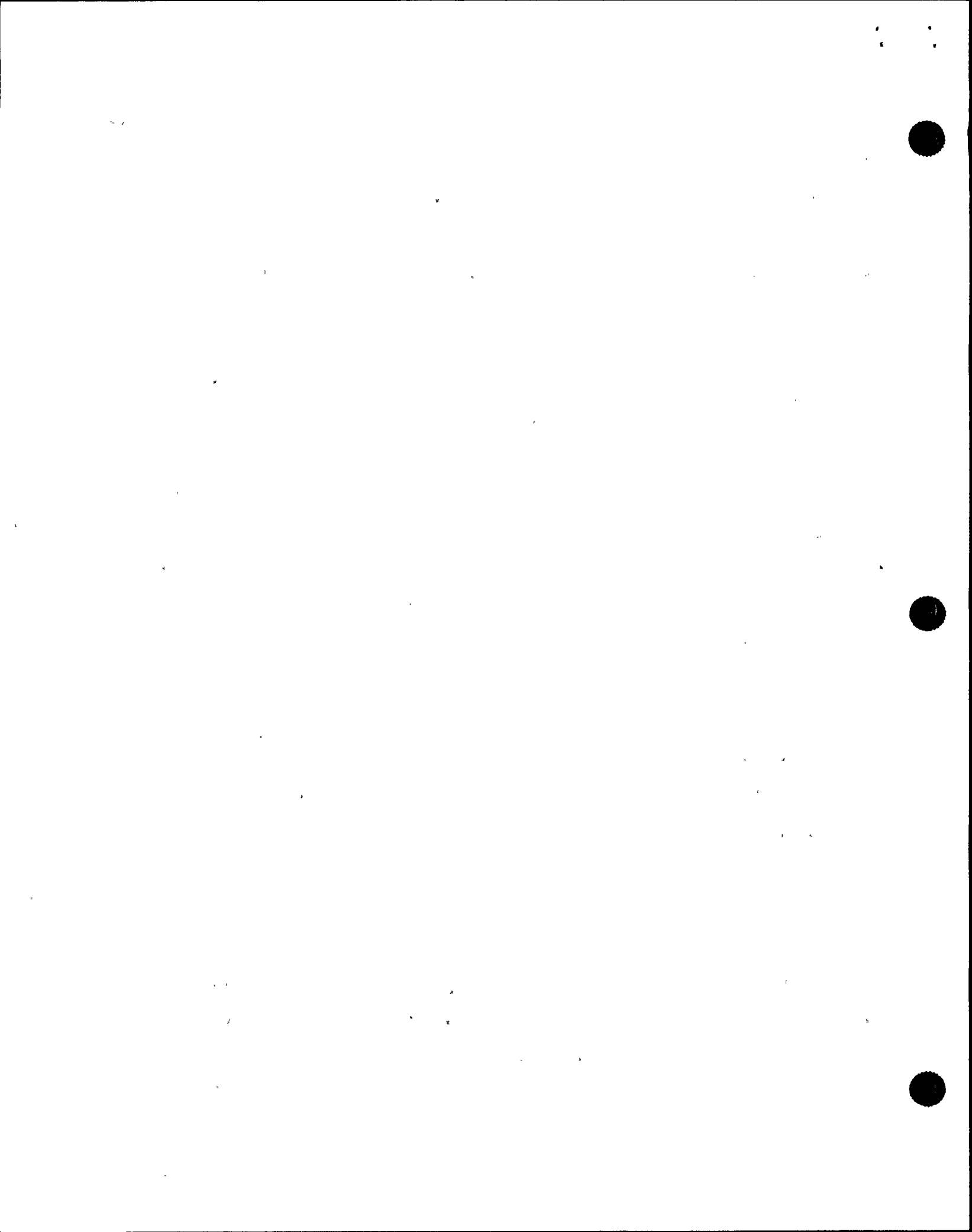


1 battery. So, we had system engineering input into this  
2 particular problem where we're working accurately to get  
3 procedures getting ready to be written, they had given me a  
4 target date by the end of this year that would meet the  
5 rewrite of the PM programs for these non-safety related UPS.

6           When we got into that, might we have stumbled on  
7 the fact that this battery was key player. I mean, you've  
8 looked at that instruction book, you don't see big  
9 batteries jumping out at you changing those control  
10 batteries as a part of the PM program buried in the text  
11 somewhere is, oh, by the way. I mean, it's not really  
12 calculated to make the operator -- we operate power plants,  
13 we don't build or design them, tell us what it is to operate  
14 and we'll operate. If we don't do it right, then shame on  
15 us. If switches -- you know, if things don't work as  
16 designed, we fix them and try and put them back right, and  
17 if they don't play the game then I've got to get a new  
18 design. I'm not here, I don't redesign a plant, I operate  
19 what I've got.

20           I expect my people to fix what's here and keep it  
21 working.

22           MR. ASHE: Is there a reason why you wouldn't  
23 necessarily get updates, information from the manufacturer  
24 on various pieces of equipment. Is it a matter of cost or  
25 some other reason that you don't get that automatically?



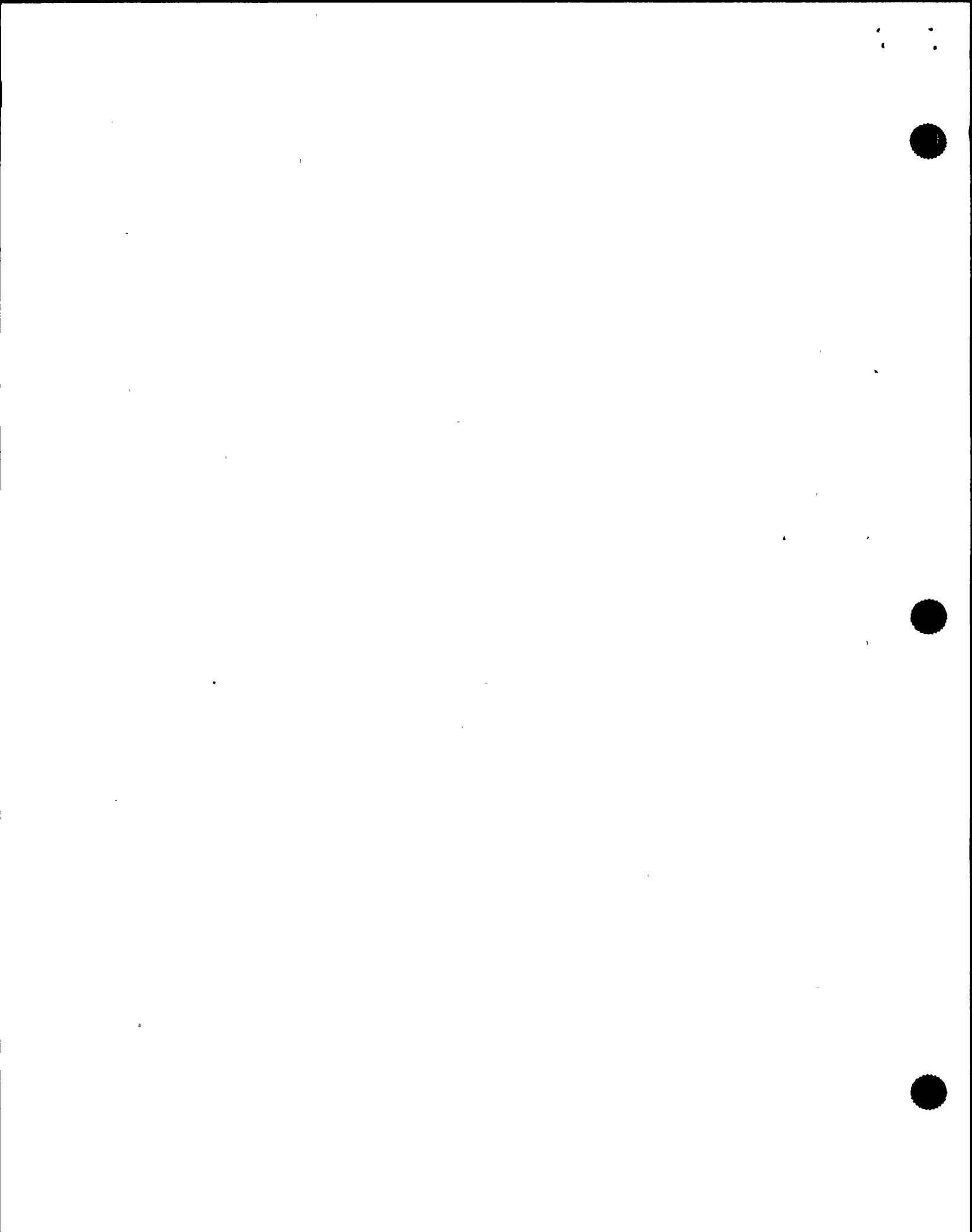


1           MR. McCORMICK: Well, I don't think it's a matter  
2 of cost, I think it's a matter that these plants, the  
3 vendor, I guess it's a cost to the manufacturer and unless  
4 you go in, maybe with your bid spec and say we want to have,  
5 as part of our purchase the continued update and revision of  
6 these devices, he may or may not do that. We have, again,  
7 as a program through our engineering department to have all  
8 the vendor manuals reviewed on some timeframe and that  
9 requires us to go back to the vendor and call him and say,  
10 "Is there anything new in your instruction book?" Of  
11 course, there's thousand and thousands of these books and  
12 you've got to get part of your -- your organization has to  
13 be geared to do that and make those calls and ask for  
14 updated information.

15           I guess the nearest thing I can think of how it  
16 should work is like in a computer, we buy a computer  
17 system, some mainframe, IBM, or somebody, all the updates to  
18 the program, the operating system, come and say here's a new  
19 one, you want to have us put it in, it will cost you X  
20 bucks, you know, and you make a decision to put it in.

21           But many of the switch manufacturer doesn't do  
22 that. If he comes up with a new design or whatever, he  
23 doesn't really do that. He just sells that to new customers  
24 and if you know about it, fine; if you don't, you don't.

25           In this case, I don't have the answer, but I



1 expect to get an answer why Exide now has all these neat  
2 fixes that when you're in trouble they come out of the  
3 woodwork. We've also chased through it and there's been a  
4 couple of other examples in the industry where they have had  
5 failures. I don't think they stumbled to the fact that it  
6 was the control battery, but there have been other  
7 instances of it. And at least to my knowledge I haven't  
8 received any information that we were at risk at all.

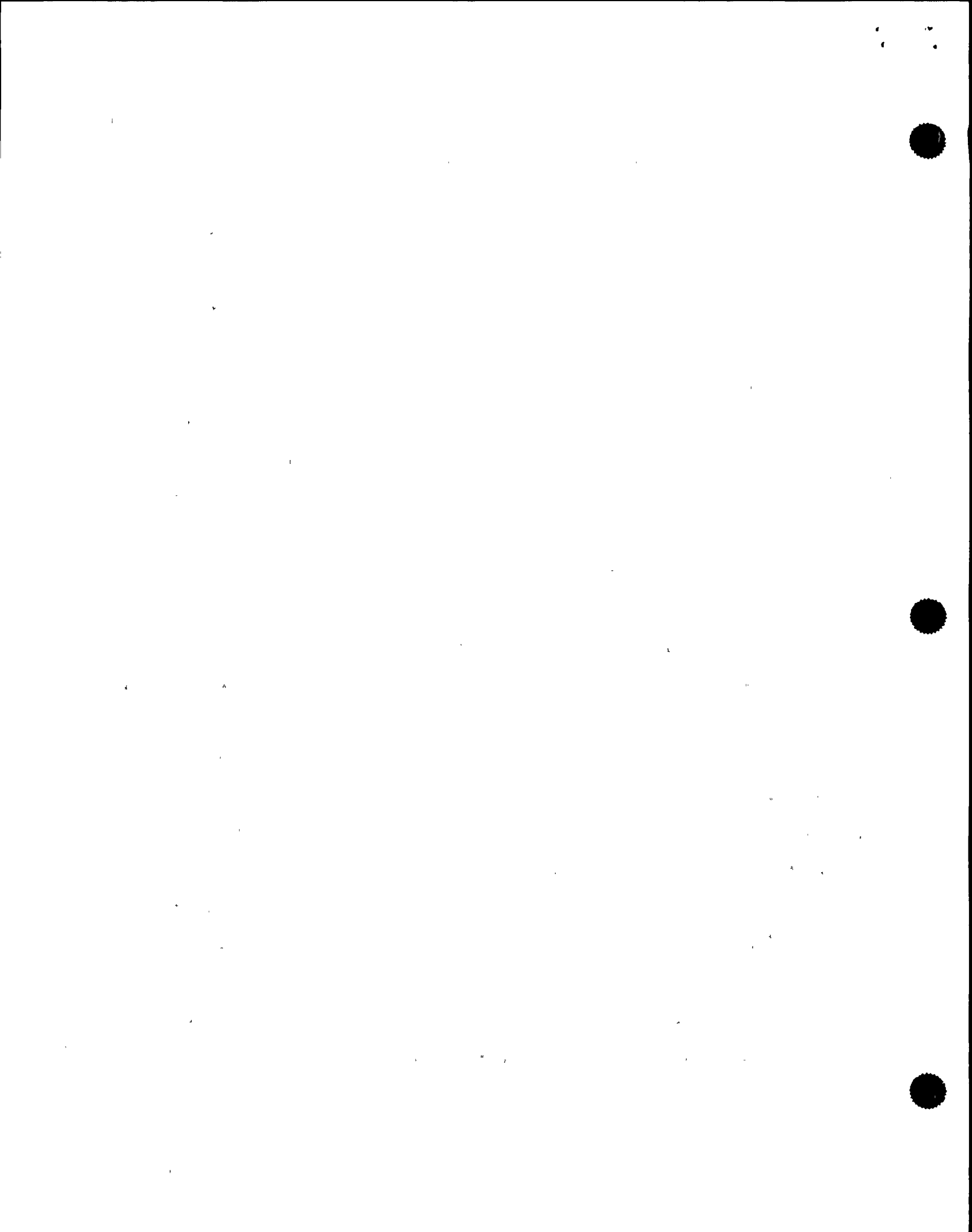
9 MR. ASHE: But is that a general rule at the  
10 station that you don't get the updates for whatever reason,  
11 whether you specified it or didn't or whatever?

12 MR. McCORMICK: It generally takes us to ask for  
13 it.

14 MR. ASHE: Ooay. And unless you've experienced  
15 prior problems, you probably won't ask, is it fair to say  
16 that?

17 MR. McCORMICK: Unless we've experience problems,  
18 you would, on some routine that we are establishing through  
19 the engineering organization to go out and ask for an  
20 update, this was a program under development. It's part of  
21 a, you know, Unit Two program to go out and see was there  
22 any changes to this equipment. But it was not fully  
23 implemented in any way.

24 MR. JORDAN: I don't have any other big questions  
25 to ask, we have a question -- a global question to ask at



1 the end, but are there any other specifics?

2 [No response.]

3 MR. JORDAN: Normally, what I've asked everybody  
4 else and I'll ask Marty. And the question is, the way I  
5 present it, there's good news, bad news, is this and this  
6 says, gee, in the bag of tricks that I had, okay, when this  
7 event happened I am really glad that I had this piece of  
8 equipment or background or whatever. It can be training, it  
9 can be car phone, it can be your beeper, it can be anything.  
10 Okay. The classic event I see out in the plant is, the guy  
11 that goes out in the plant and says, thank God we had this  
12 wrench hanging on this valve, okay, because when I got out  
13 there I needed that wrench and it was there. And the other  
14 side of it says, gee, that wrench wasn't there and I wish we  
15 had that wrench there. So, it's the good the news bad news.

16 In your bag of tricks as a plant manager in this  
17 event what were you glad that you had that you said to  
18 yourself, gee, you know, plant manager, if you don't have  
19 this, you ought to be having this because it really helped  
20 Marty out on the events of the day?

21 What do you wish you had the next time around,  
22 because you say, I really I hope I have this next time  
23 around because it would have been of benefit to me?

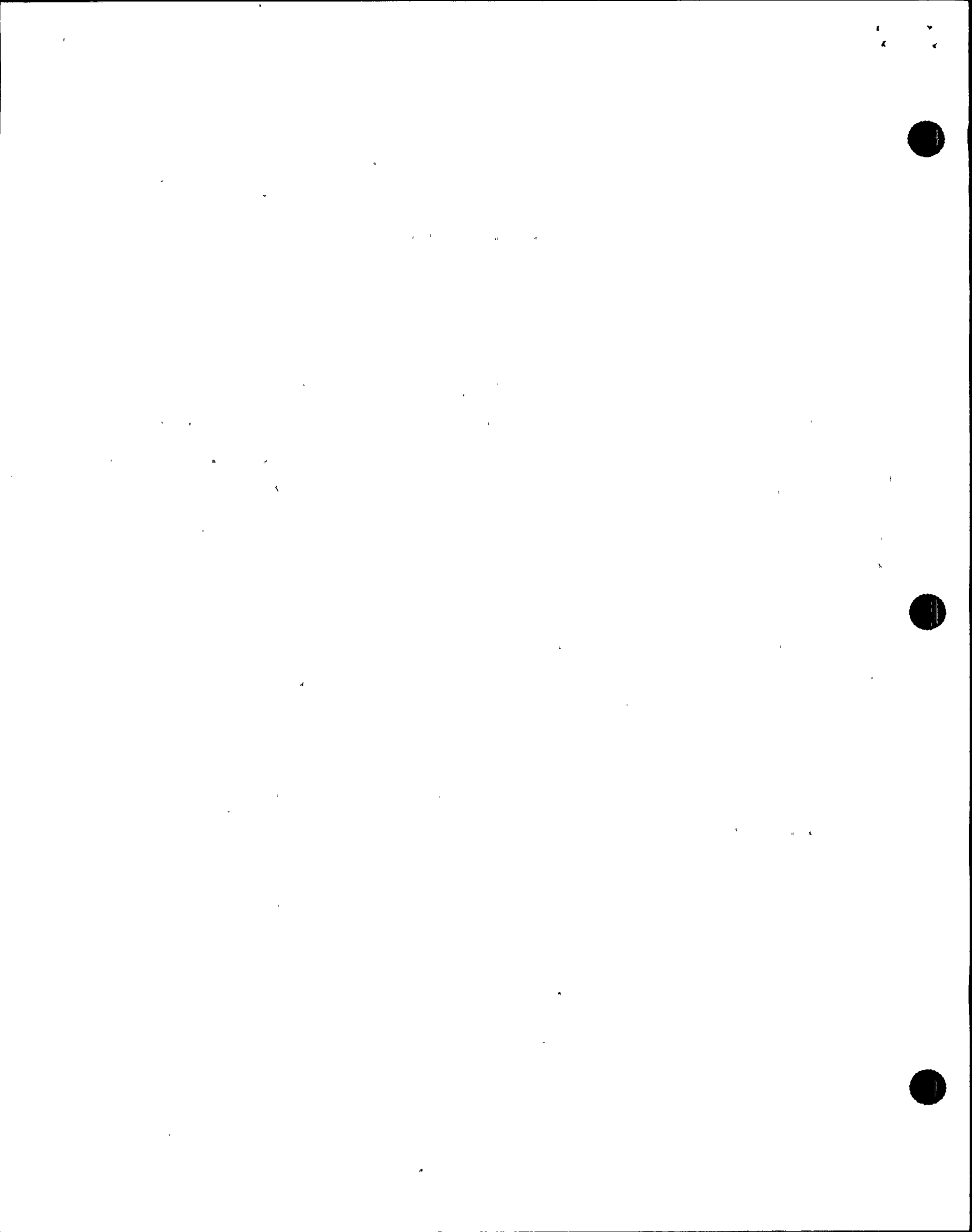
24 And the answer to that question you may say, you  
25 don't know of any or you may know of something.



1           MR. McCORMICK: Well, I don't know, I've thought  
2 about it, certainly this is the third site area emergency  
3 since TMI and it was certainly not the kind of a challenge I  
4 wanted to take on, I'll be quite honest, in my first six  
5 months here.

6           I guess I've been in the power plant business a  
7 good while and if I had to face this it would probably be  
8 better at this stage of my career than some time earlier on.  
9 I don't know that I -- certainly I am not an expert in Nine  
10 Mile Two to the level I have been at other plants, but I  
11 generally feel comfortable with my experiences that I know  
12 when to fold them and when to play the game.

13           I think if -- in terms of the people I was very  
14 pleased that I had Jerry Helker in the control room. I was  
15 able to deal with him without bothering the SSS, and a lot  
16 of the conversation we had back and forth, even clarifying  
17 my thinking or my lack of -- my concerns, I was able to talk  
18 to Jerry off line without getting the SSS involved in it.  
19 And he's just a class guy and he knows his business,  
20 probably one of the top notch people I could have had in the  
21 room, so if you were to ask me what was the best benefit I  
22 had, and I think the crew had as backup for the pressure  
23 they were going over and also the transition was Helker and  
24 I felt we had the right guy in the right place at the right  
25 time.





1           On the down side, well, I would like to say I know  
2 power plants. I mean I would say that if I put five years  
3 here I would have felt a lot better about it, I guess. But  
4 hopefully if I put five years here, I wouldn't be in the  
5 problem. That's probably the way I would say it. I don't  
6 run a plant to get it in trouble. And I just didn't have  
7 enough time to do some of the things I would like to see  
8 done, I'm not saying I would have caught it, but I'm going  
9 to tell you I would have been hot on its trail and I think I  
10 was.

11           This is a tough plant, this is called a sweat  
12 plant, you can sweat, you've been sweat and I think I was  
13 probably spoiled by my previous experience, I had -- I had a  
14 reasonably good designed plant and I can't believe some of  
15 the things that we're working with here, and I can tell you  
16 they'll be fixed.

17           MR. ROSENTHAL: Let's stop.

18           [Whereupon, at 11:50 a.m. the taking of the  
19 interview was concluded.]

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1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that this is crucial for ensuring the integrity of the financial statements and for providing a clear audit trail.

2. The second part of the document outlines the specific procedures that should be followed when recording transactions. It details the steps from identifying the transaction to posting it to the appropriate accounts in the general ledger.

3. The third part of the document discusses the importance of reconciling the accounts regularly. It explains how this process helps to identify and correct any errors or discrepancies in the records, ensuring that the books are balanced and accurate.

4. The fourth part of the document discusses the importance of maintaining proper documentation for all transactions. It highlights the need to keep receipts, invoices, and other supporting documents for a sufficient period of time to facilitate auditing and to provide evidence in the event of a dispute.

5. The fifth part of the document discusses the importance of reviewing the records periodically. It explains how this helps to ensure that the records are up-to-date and that any errors are identified and corrected as soon as possible.

6. The sixth part of the document discusses the importance of maintaining a clear and organized system for the records. It provides suggestions for how to set up a filing system that makes it easy to find and retrieve the information you need.

7. The seventh part of the document discusses the importance of staying up-to-date on changes in accounting standards and regulations. It explains how this helps to ensure that the records are prepared in accordance with the most current requirements.

8. The eighth part of the document discusses the importance of seeking professional advice when needed. It explains how a qualified accountant or auditor can provide valuable guidance and assistance in preparing and maintaining the records.

REPORTER'S CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission

In the Matter of:

NAME OF PROCEEDING: Interview of Martin J. McCormick, Jr.  
DOCKET NUMBER: (Not applicable)  
PLACE OF PROCEEDING: Scriba, New York

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.

  
\_\_\_\_\_  
Mark Handy  
Official Reporter  
Ann Riley & Associates, Ltd.

