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OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission
Incident Investigation Team

Title: Nine Mile Point Nuclear Power Plant
Interview of: BOB BERGENSTOCK

Docket No.

LOCATION: Scriba, New York

DATE: Thursday, August 22, 1991

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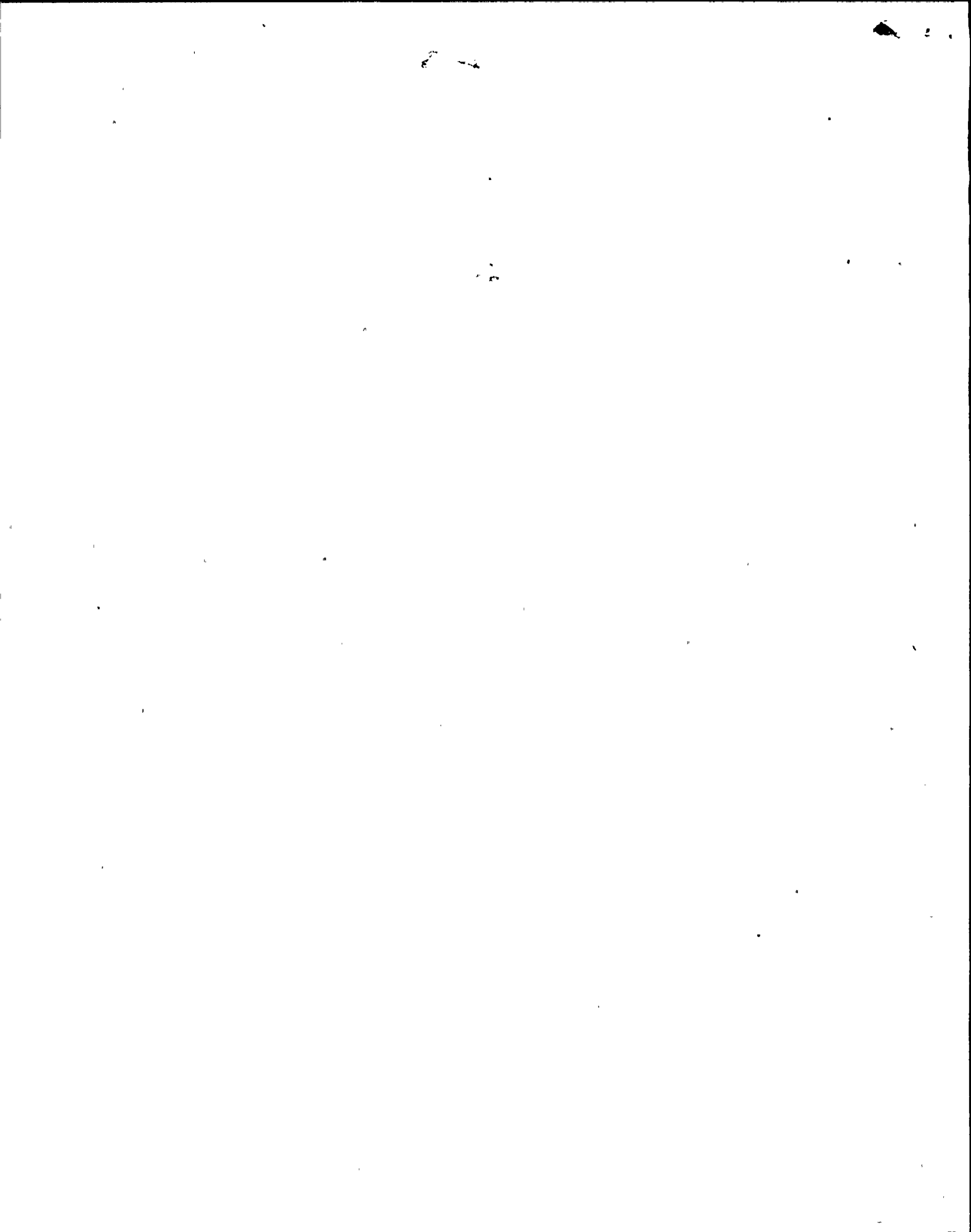
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ADDENDUM TO INTERVIEW OF ROBERT BERGENSTOCK
(Name/Position)

Page Line Correction and Reason for Correction

NO CHANGES REQUESTED

Page ___ of ___ Signature [Signature] Date 8/23/81



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
INCIDENT INVESTIGATION TEAM

Interview of :
BOB BERGENSTOCK :
(Closed) :

Conference Room B
Administration Building
Nine Mile Point Nuclear
Power Plant, Unit Two
Lake Road
Scriba, New York 13093
Thursday, August 22, 1991

The interview commenced, pursuant to notice,
at 3:45 p.m.

PRESENT FOR THE IIT:
Michael Jordan, NRC
Rich Conte, NRC

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P R O C E E D I N G S

[3:45 p.m.]

1
2
3 MR. JORDAN: Okay, it's August the 22nd, 1991.
4 It's about 10 -- excuse me, it's about 3:45 p.m. We are at
5 the Nine Mile Point Unit Two in the P Building. We're
6 conducting interviews concerning a transient that occurred
7 on August 13th, 1991.

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

10 MR. CONTE: I'm Rich Conte, Region I.

11 MR. BERGENSTOCK: I'm Bob Bergenstock, licensed
12 operator.

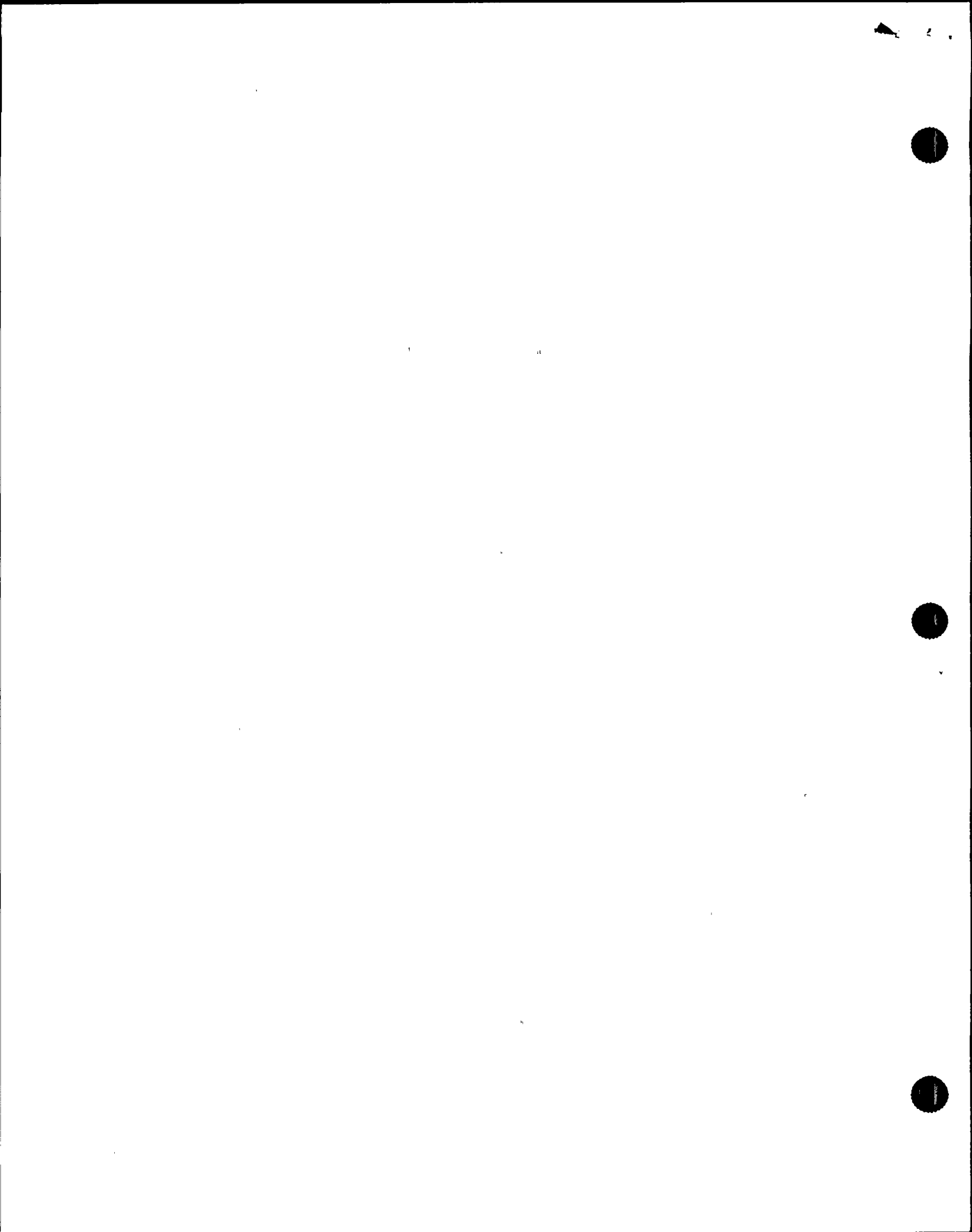
13 MR. JORDAN: Okay, Bob. First, why don't you just
14 give us some background what your background experience is?

15 MR. BERGENSTOCK: Okay. Let's see. Navy nuke,
16 first ship was 1976 and that's my only ship. Let's see, I
17 qualified engineering watch supervisor, engineering duty
18 petty officer, and I was discharged in September 1982.

19 MR. JORDAN: And after your discharge then --

20 MR. BERGENSTOCK: I immediately started working
21 here. I licensed on Unit One in '83 and then I was -- I was
22 hired for Unit Two, but I had to get my license on Unit One,
23 first. Then I was transferred over to Unit Two and I
24 received my license at Unit Two on '85.

25 MR. JORDAN: That's an RO license, SRO license?



1 MR. BERGENSTOCK: Yes, RO license.

2 MR. JORDAN: RO license. Okay. What position do
3 you hold on the shift?

4 MR. BERGENSTOCK: On this shift I'm a licensed
5 reactor operator, NAOE.

6 MR. JORDAN: A -- NAOE?

7 MR. CONTE: The shift -- this is the day shift or
8 the mid-shift at the time of the event?

9 MR. BERGENSTOCK: I was working surveillance shift
10 this week, assigned to training.

11 MR. JORDAN: So you were coming on -- coming into
12 the plant when the event occurred?

13 MR. BERGENSTOCK: Not exactly.

14 MR. JORDAN: Okay, why don't you --

15 MR. BERGENSTOCK: Can I tell you what happened?

16 MR. JORDAN: Sure.

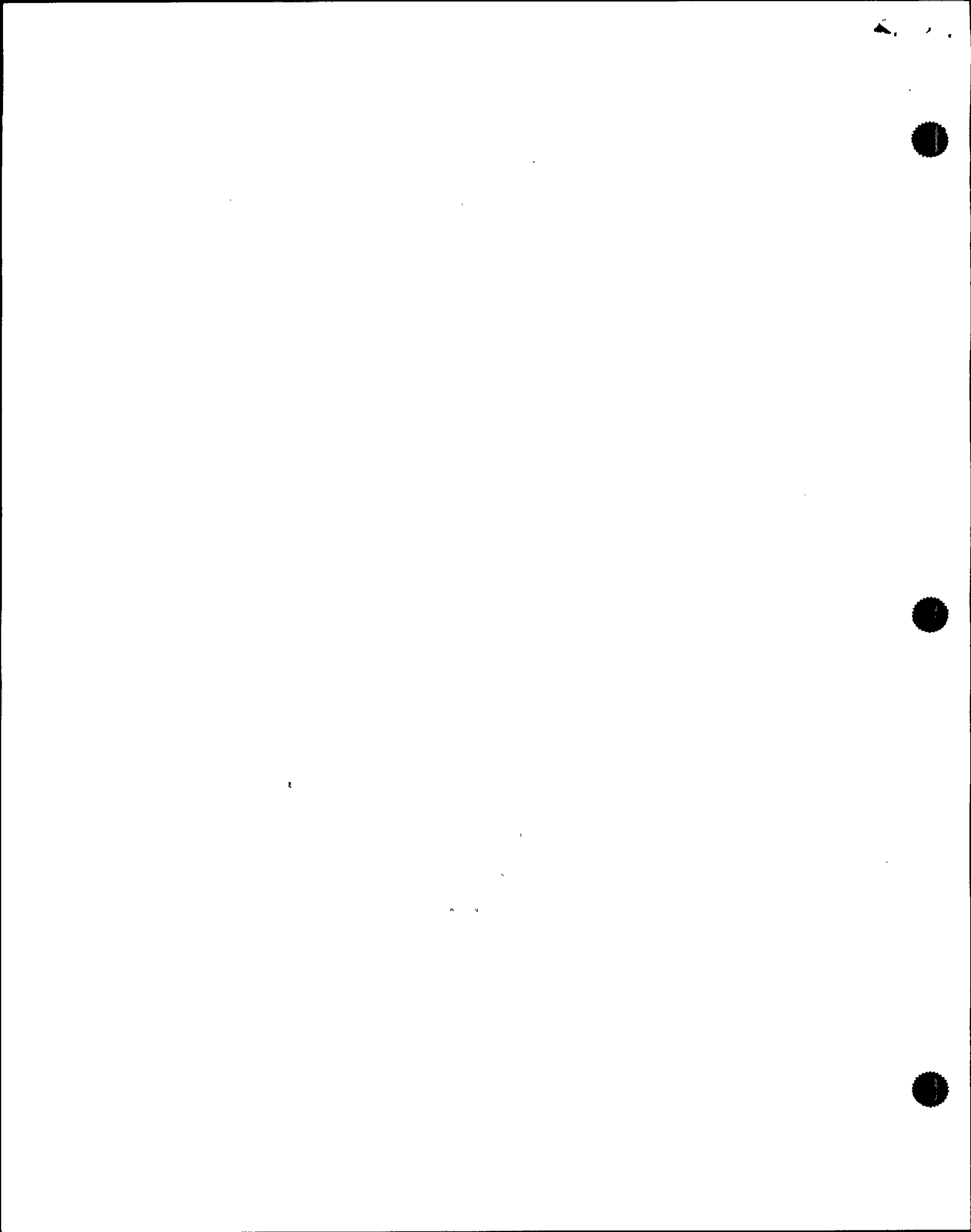
17 MR. CONTE: Sure. Just start your run down.

18 MR. BERGENSTOCK: Okay. I was driving by the
19 cooling tower since I had to go over to the training center
20 and I noticed that the plume was rather small. So, when I
21 got over to the training center I phoned over to the
22 control room --

23 MR. CONTE: About what time was this?

24 MR. BERGENSTOCK: Six ten.

25 MR. CONTE: Okay.



1 MR. BERGENSTOCK: 06:10. And I phoned over and
2 Mark Davis was CSO at the time, I believe, answered the
3 phone and said we had a -- exact words I can't remember. It
4 was reactor scram, we're in site area emergency. Then I
5 said, "Okay. I assume you want me right over there?" And
6 they said, "Yes, get over here."

7 So, then I left training center, came over and
8 parked.

9 MR. JORDAN: You didn't have any problems getting
10 into the plant?

11 MR. BERGENSTOCK: Yes. I got to the --

12 MR. JORDAN: How about the driving in?

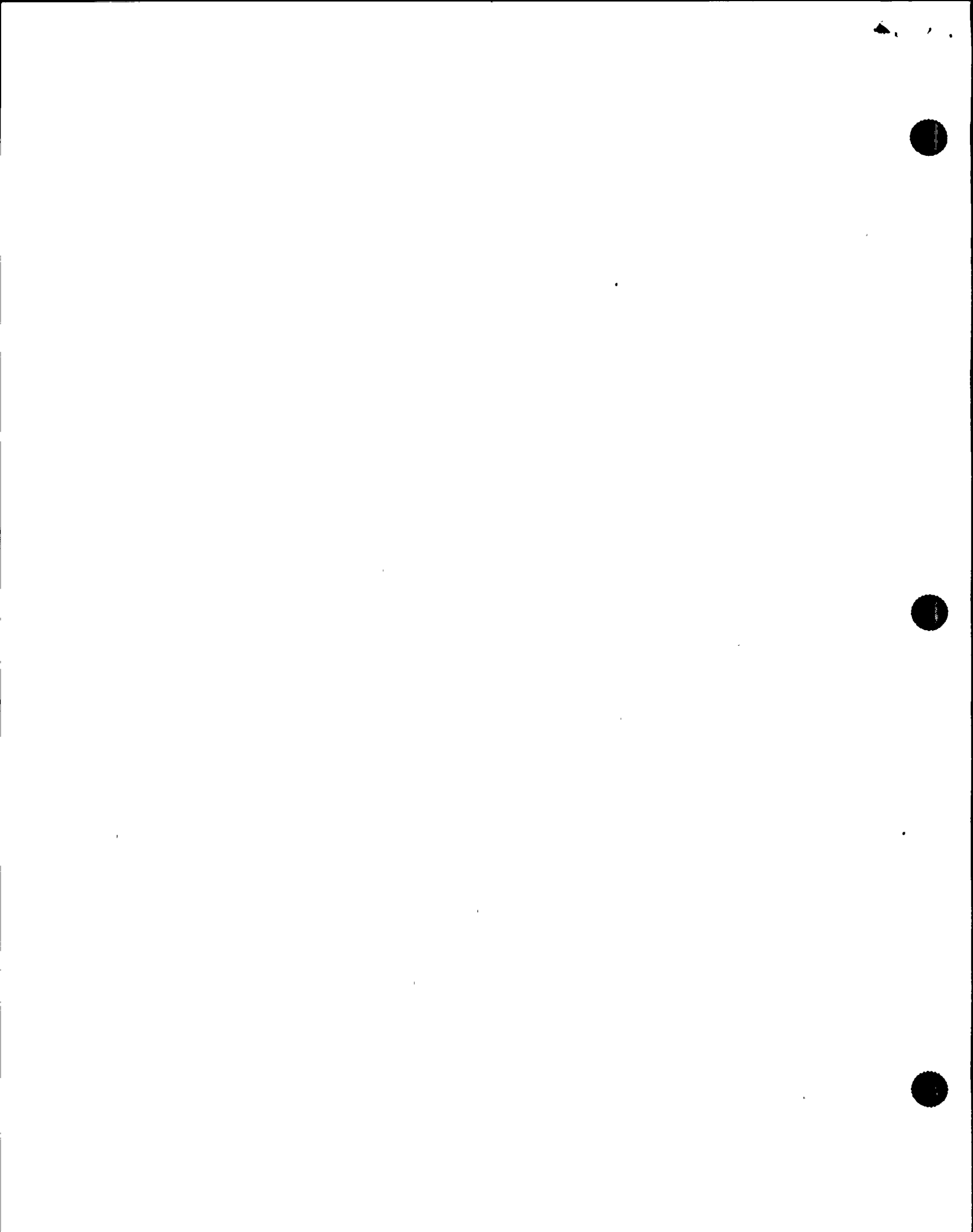
13 MR. BERGENSTOCK: No. No road blocks had been set
14 up yet or anything like that.

15 MR. JORDAN: Okay. Go ahead.

16 MR. BERGENSTOCK: So then I came -- started going
17 towards security building and I seen everybody outside and I
18 said, "This isn't looking good," to myself. So I got up
19 there to the entrance and they weren't letting anybody in;
20 green card, no green card or whatever, so I waited until
21 they allowed people to come in.

22 MR. CONTE: How many people do you think were at
23 that gate outside waiting, approximately? Ten, 20, 30, 40,
24 50?

25 MR. BERGENSTOCK: I would have to guess beginning



1 at day shift with all the electrical maintenance,
2 secretaries were there, I would estimate over 100 at that
3 time.

4 MR. CONTE: Okay.

5 MR. BERGENSTOCK: And then when I was allowed to
6 enter I went to my locker --

7 MR. CONTE: About what time were you able to
8 enter; do you remember seeing a clock?

9 MR. BERGENSTOCK: I want to say 06:27. It was
10 just a few minutes before 6:30, I believe.

11 MR. CONTE: How do you know that with pin point
12 accuracy?

13 MR. BERGENSTOCK: Because I remember looking at
14 the clock and it was just a little before 6:30, I believe.

15 MR. CONTE: Okay.

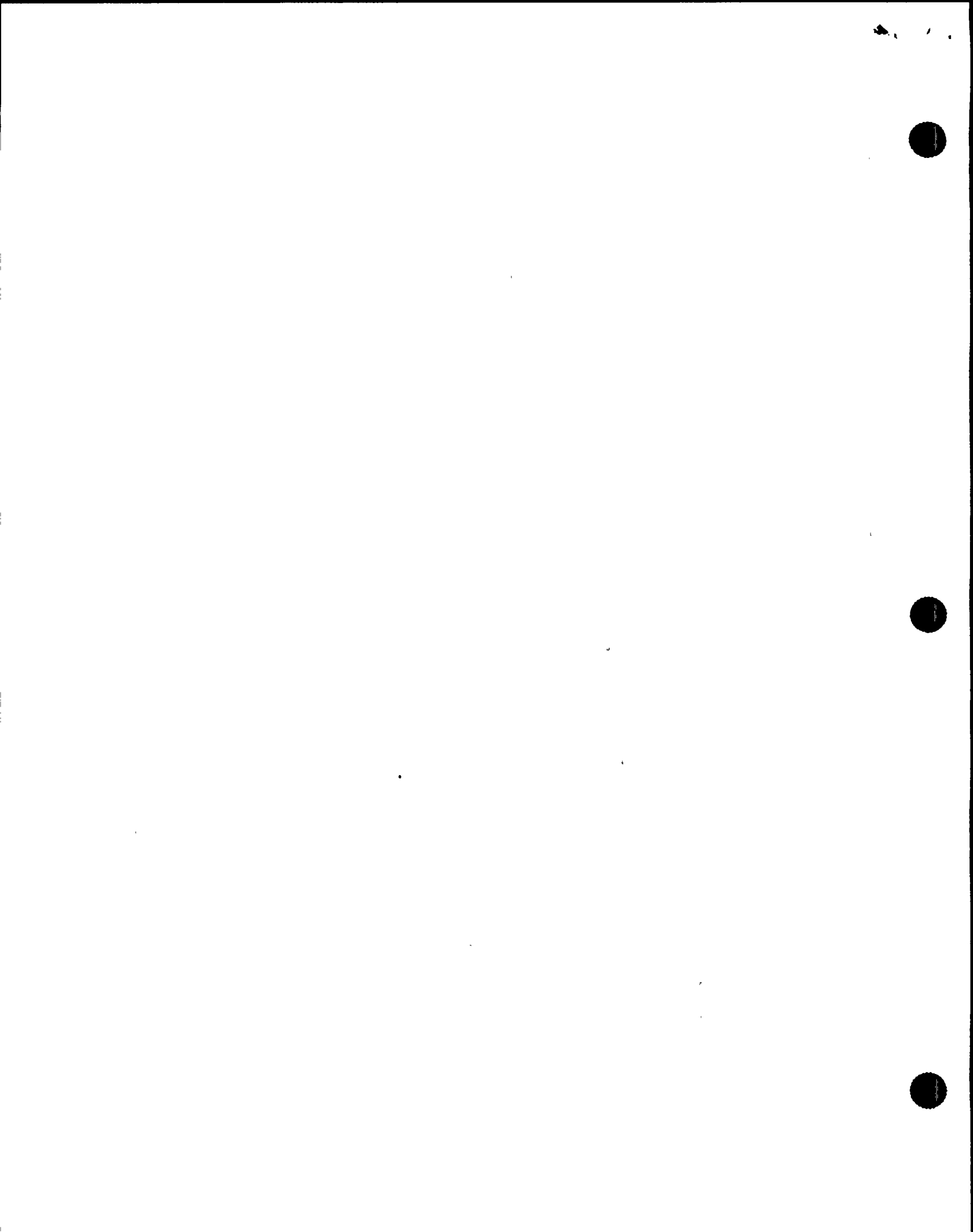
16 MR. JORDAN: Okay.

17 MR. BERGENSTOCK: I went to my locker, picked up
18 my keys, because I knew I would need them to get into
19 various locations and operate valves and whatever needed to
20 be done; my hardhat and I proceeded to the control room.

21 MR. JORDAN: Any problem with lighting to and from
22 the -- or to the control room?

23 MR. BERGENSTOCK: No. No problem.

24 MR. JORDAN: No problem with lighting? Did you
25 ride the elevator up?



1 MR. BERGENSTOCK: Yes.

2 MR. JORDAN: Elevator lighting was okay?

3 MR. BERGENSTOCK: Yes.

4 MR. JORDAN: Okay. I guess you traversed to the
5 control room?

6 MR. BERGENSTOCK: I went in the control room and
7 somebody tried to give me a job to do. And then I said,
8 "No. I see the SSS eyeballing me, I think he has a job for
9 me." And following the chain of command I have to do his
10 job first. And he said, "I want you and Dave Hanczyk to go
11 to Op Support and re-" -- I'm trying to think of the words.
12 "Repower up the UPS's." So I said, "Okay."

13 So, Dave and I went to the OPS support and we got
14 there and they said well, Dave Crandall is waiting for you
15 down on 214 of the control building. So then we went down
16 to the control building, 214 --

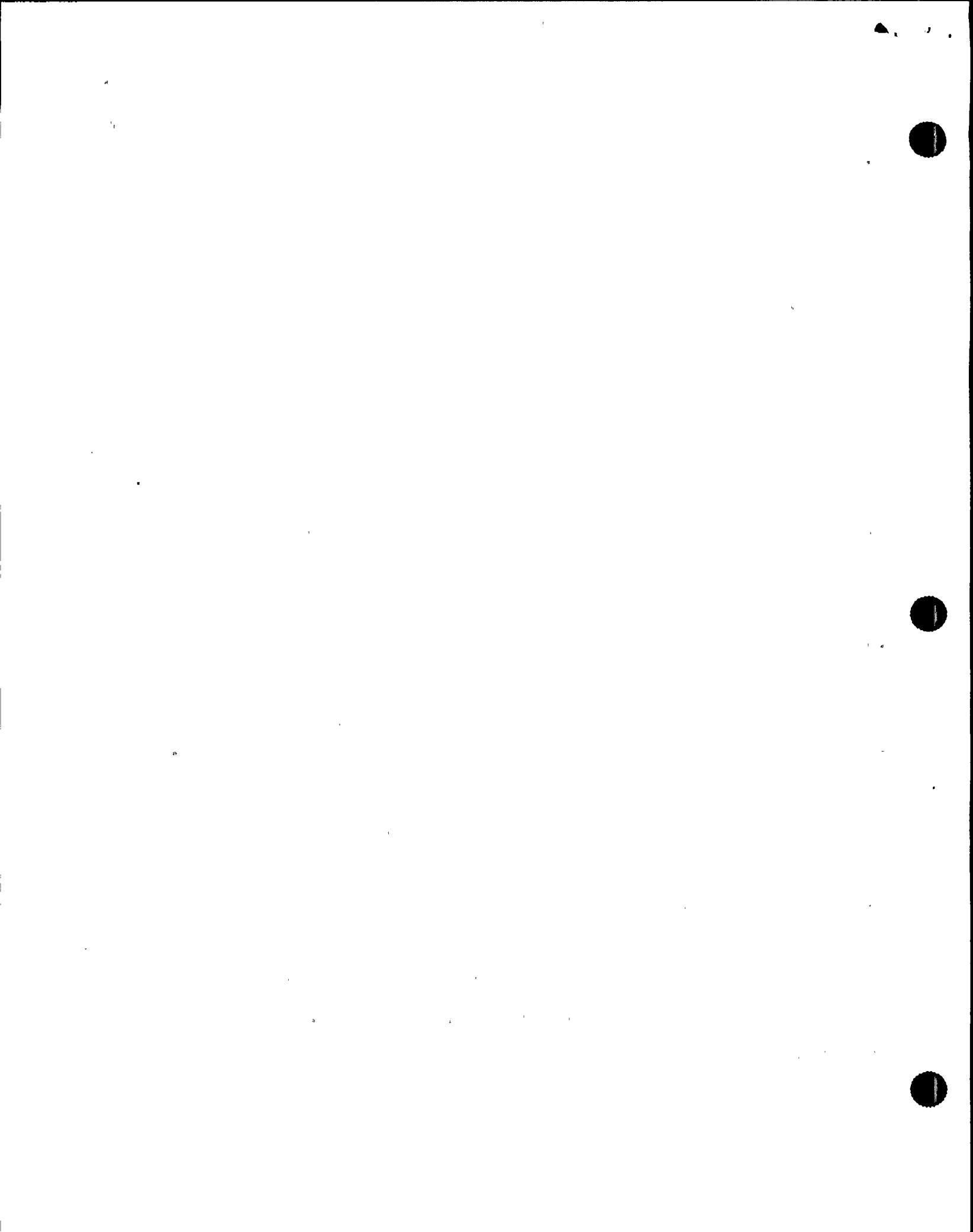
17 MR. JORDAN: Any problem with lighting traversing
18 to the --

19 MR. BERGENSTOCK: No, every -- at this time -- by
20 the time I had gotten there everything had been put on
21 bypass power. The four breakers were closed in the UPS's.

22 MR. JORDAN: Okay. Thank you.

23 MR. CONTE: You said Dave Crandall was at 214 --

24 MR. BERGENSTOCK: I'm sorry. His name is Bob
25 Crandall.



1 MR. CONTE: Bob Crandall was at elevation 214,
2 what building?

3 MR. BERGENSTOCK: That's the control building.

4 MR. CONTE: Okay. Go ahead.

5 MR. BERGENSTOCK: And then we phoned the control
6 room and told them we were down at UPS 1G and we would like
7 permission to power up UPS 1G.

8 MR. JORDAN: When you say power up, does it
9 already have power on?

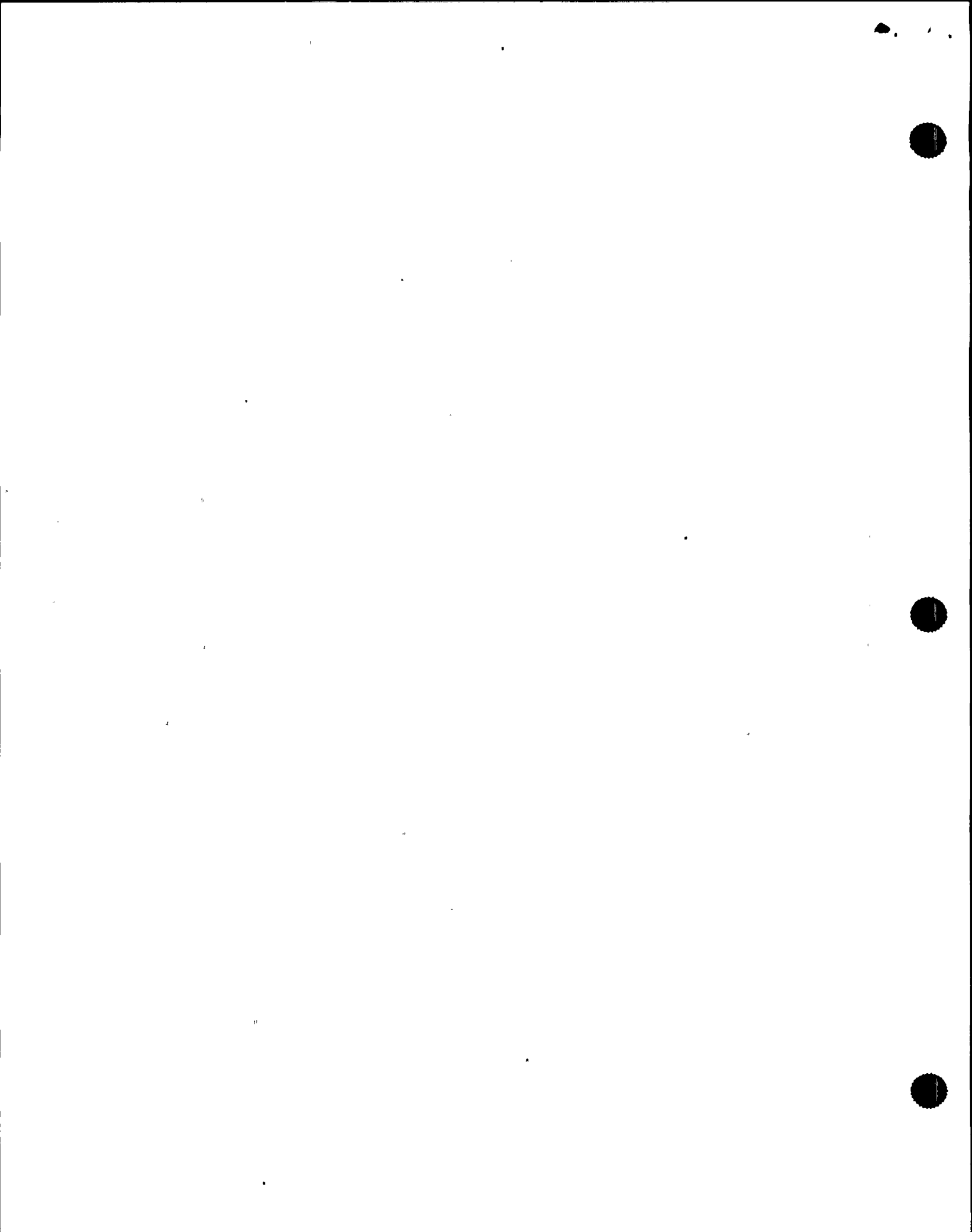
10 MR. BERGENSTOCK: Okay. When I say power up the
11 UPS, the UPS -- all UPS's at this time are on bypass which
12 means that the four breakers are closed, but the UPS itself
13 is not energized.

14 MR. JORDAN: Okay. Thank you. It's on the --
15 what, the four breaker?

16 MR. BERGENSTOCK: Yes, the four breaker is the
17 bypass from what we call the dirty power, it comes straight
18 from your bus and goes to the loads.

19 MR. JORDAN: Okay. Go ahead.

20 MR. BERGENSTOCK: And we phoned the control room
21 and asked permission to energize 1G -- Gulf -- and it came
22 back and said, "No, they want us to start with 1A, B, C and
23 D." So then -- let's see, I'm trying to remember. There
24 was -- at this time there was more than us three there. I'm
25 trying to remember everybody else that was there at the



1 time. There's myself, Dave Hanczyk, Bob Crandall, an
2 electrician, but I can't remember the electrician's name.

3 So, we went over to 237 in the switchgear building
4 and we got permission to energize those UPS's. Oh, boy.

5 MR. CONTE: Were you successful in energizing
6 those UPS's in the switchgear room?

7 MR. BERGENSTOCK: Not all of them. That's what
8 I'm trying to remember -- which ones we had problems with.
9 1-Alpha, A, I believe we left -- we tried energizing it and
10 for some reason we couldn't get it to power up so it was
11 left on with the four breaker closed.

12 MR. CONTE: Are you using a procedure to power
13 this up?

14 MR. BERGENSTOCK: Yes. Dave Hanczyk had the
15 procedure.

16 MR. CONTE: Is it a normal operating procedure?
17 Was it a special procedure?

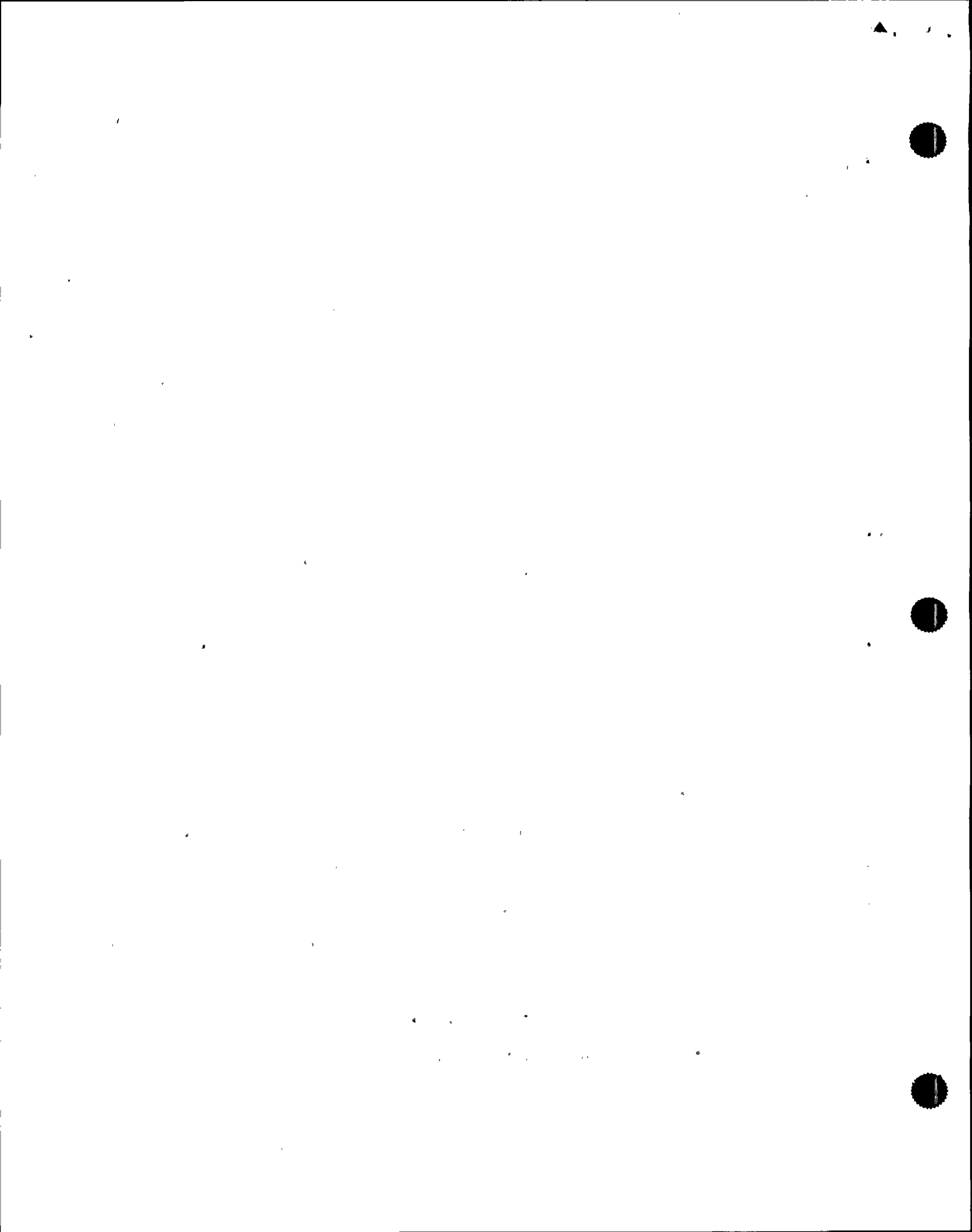
18 MR. BERGENSTOCK: Startup procedure.

19 MR. CONTE: You don't remember the particular
20 section of that startup procedure, do you?

21 MR. BERGENSTOCK: No.

22 MR. CONTE: Is it obvious when you are looking at
23 this procedure that this is the startup section?

24 MR. BERGENSTOCK: Yes. The way our procedures are
25 written it's written up in the start off-normal operating



1 shutdown. Off-normals.

2 MR. CONTE: Okay, continue. So you got the 1A
3 powered up?

4 MR. BERGENSTOCK: No.

5 MR. CONTE: Oh, it couldn't be powered up?

6 MR. BERGENSTOCK: We couldn't power it up.

7 MR. CONTE: I'm sorry, go ahead.

8 MR. BERGENSTOCK: We went to -- with the 1A, when
9 we were trying to power it up, for some reason the 4 breaker
10 kept getting an open signal and at 3 breaker the output
11 breaker never closed in.

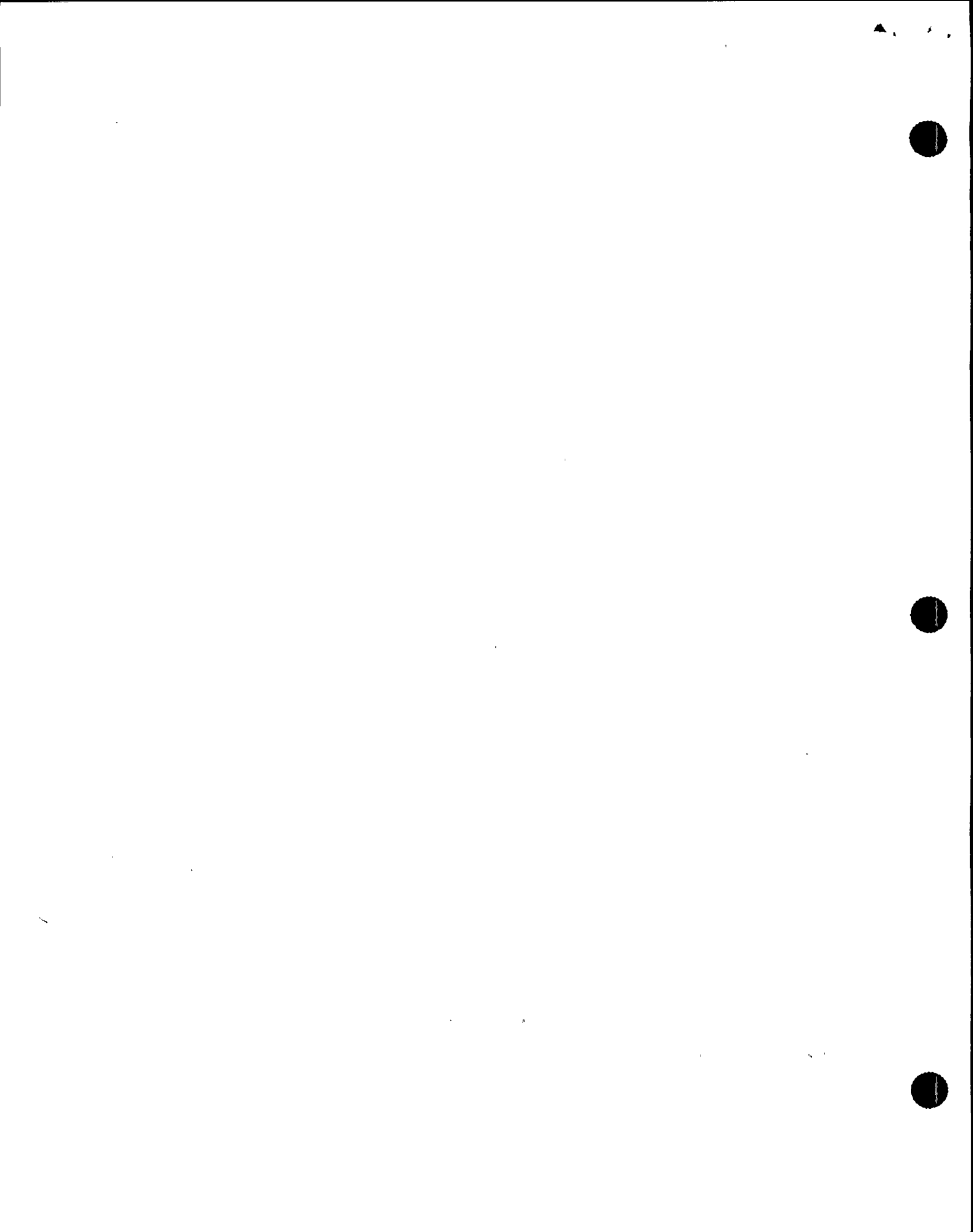
12 The way I remember energizing these was we closed
13 the input power first, your 1 breaker.

14 MR. CONTE: Did it close, or did it already trip,
15 go to neutral?

16 MR. BERGENSTOCK: Okay, I'm starting to remember
17 more now about that one, the 1A. That's -- we closed it in.
18 They closed --

19 MR. CONTE: Now, wait. Before you started this,
20 were there any logic alarm lights in and did you have to
21 reset any?

22 MR. BERGENSTOCK: When I got down there previous
23 to myself going down there, other operators had been down
24 there and closed in the four breakers and repositioned the
25 breakers so as far as alarms and initial conditions after



1 the incident, I don't have first-hand knowledge of that.

2 MR. CONTE: When you were getting ready to close
3 CB1 at the time you closed CB1 did you have to reset any
4 logics or did --

5 MR. BERGENSTOCK: I don't remember -- I personally
6 did not reset any logic and I don't remember seeing any
7 alarms in.

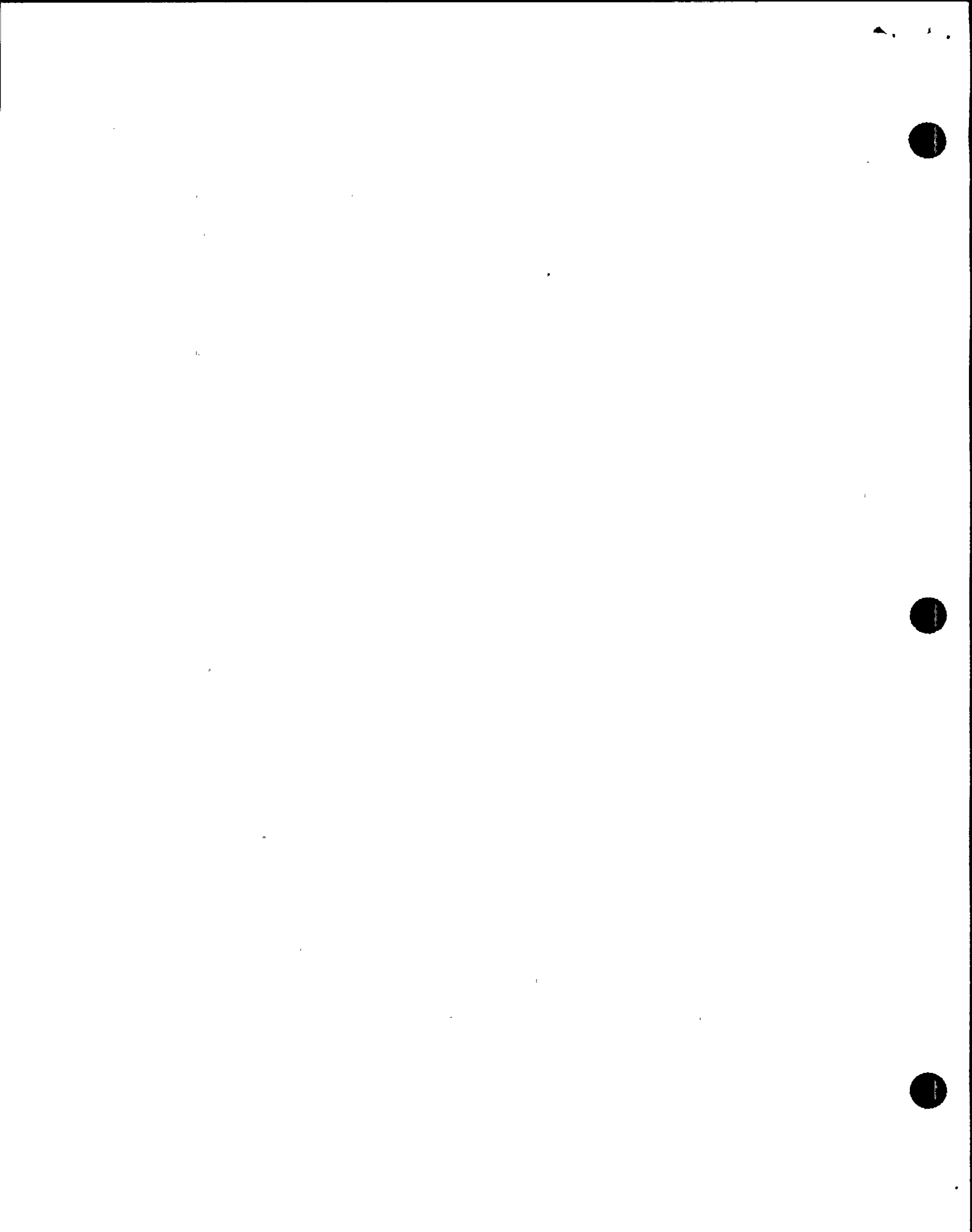
8 MR. CONTE: Okay. So you closed CB1. It closed.
9 But what happened to CB3?

10 MR. BERGENSTOCK: Okay, well, we doing a manual
11 restart. There is a little toggle switch. You have auto
12 restart, manual restart and I believe there is a third
13 position, manual, I believe.

14 Closed in the 1 breaker and in the course of
15 events, of discussions, whatever, somehow I -- you have
16 numerous meters up on this panel, I said we don't have any
17 input voltage here, something is not right.

18 MR. CONTE: With the CB1 closed?

19 MR. BERGENSTOCK: With the CB1 closed, so then we
20 said hmmm -- so then we discussed it and we said, well, we
21 don't have any supply power even with CB1 closed, no voltage
22 so then we checked the supply breaker and the panel, I can't
23 remember -- it was Panel 300, just behind it, and its
24 breaker was tripped, so we reset the breaker and then we
25 read 600 volts.



1 MR. CONTE: Did CB1 remain closed?

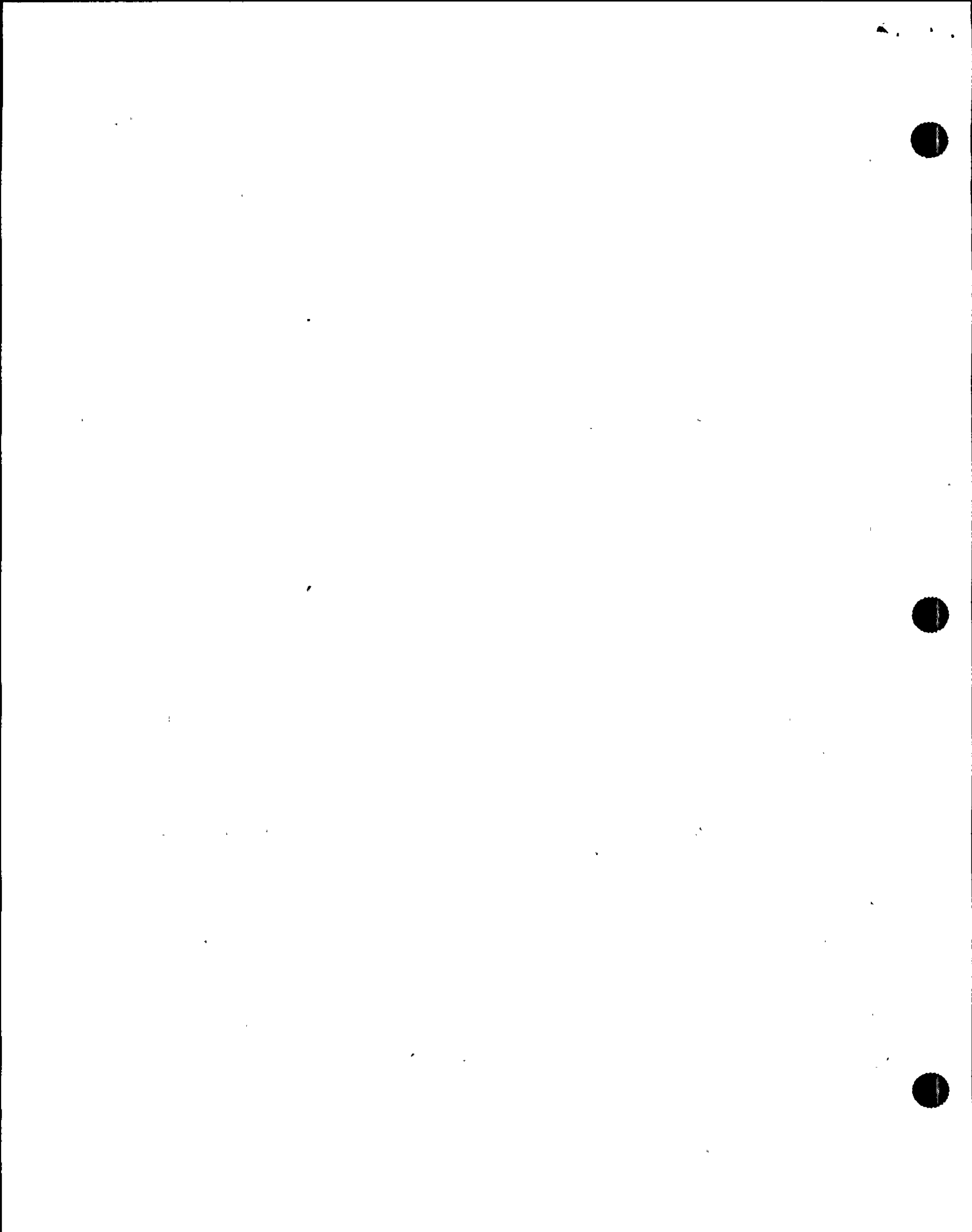
2 MR. BERGENSTOCK: That's what I am trying to
3 remember. I remember it did trip open. I am not sure
4 whether it was instantaneous or not, but what I remember
5 distinctly about it was that the 1 breaker did trip open
6 again and we checked the 300 panel and its breaker had
7 tripped again also, so we said that's it. Something is
8 wrong internally. We are not going any further with 1A. We
9 are leaving it on bypass power before breaker closed.

10 MR. JORDAN: When you close in the CB1 breaker, do
11 you have to open the CB4 breaker before you close in the CB1
12 or just leave the CB4 closed in and then you close in the
13 other? In other words do you do a dead bus transfer --

14 MR. BERGENSTOCK: No. There's more, there's more
15 breakers involved here. You have a breaker 2, which is a DC
16 power supply, and you have a breaker 3 which is the output
17 breaker and what happens on a manual start is you take the
18 toggle switch, you close in your 1 breaker to power up the
19 UPS, and your 4 breaker is still closed, powering loads.

20 So what you do then is you toggle closed -- the
21 little toggle switch -- for your 3 breaker and when the 3
22 breaker closes the 4 breaker is supposed to automatically
23 open. It's a make before break.

24 MR. JORDAN: So you never got to that point before
25 the 1 breaker tripped back off again?



1 MR. BERGENSTOCK: No. I don't believe we did.

2 Dave Crandall was keeping -- he had a notepad
3 like you have and he was keeping a running tally of
4 everything that was going on at the time, so his notes or
5 when you talked to him he has a document of what happened at
6 each UPS ongoing from ten days ago.

7 THE REPORTER: Did you say Dave Crandall?

8 MR. BERGENSTOCK: I'm terrible with names. His
9 name is Bob Crandall.

10 MR. CONTE: Dave Hanczyk, Bob Crandall -- and
11 you're Bob what?

12 MR. BERGENSTOCK: Bob Bergenstock!

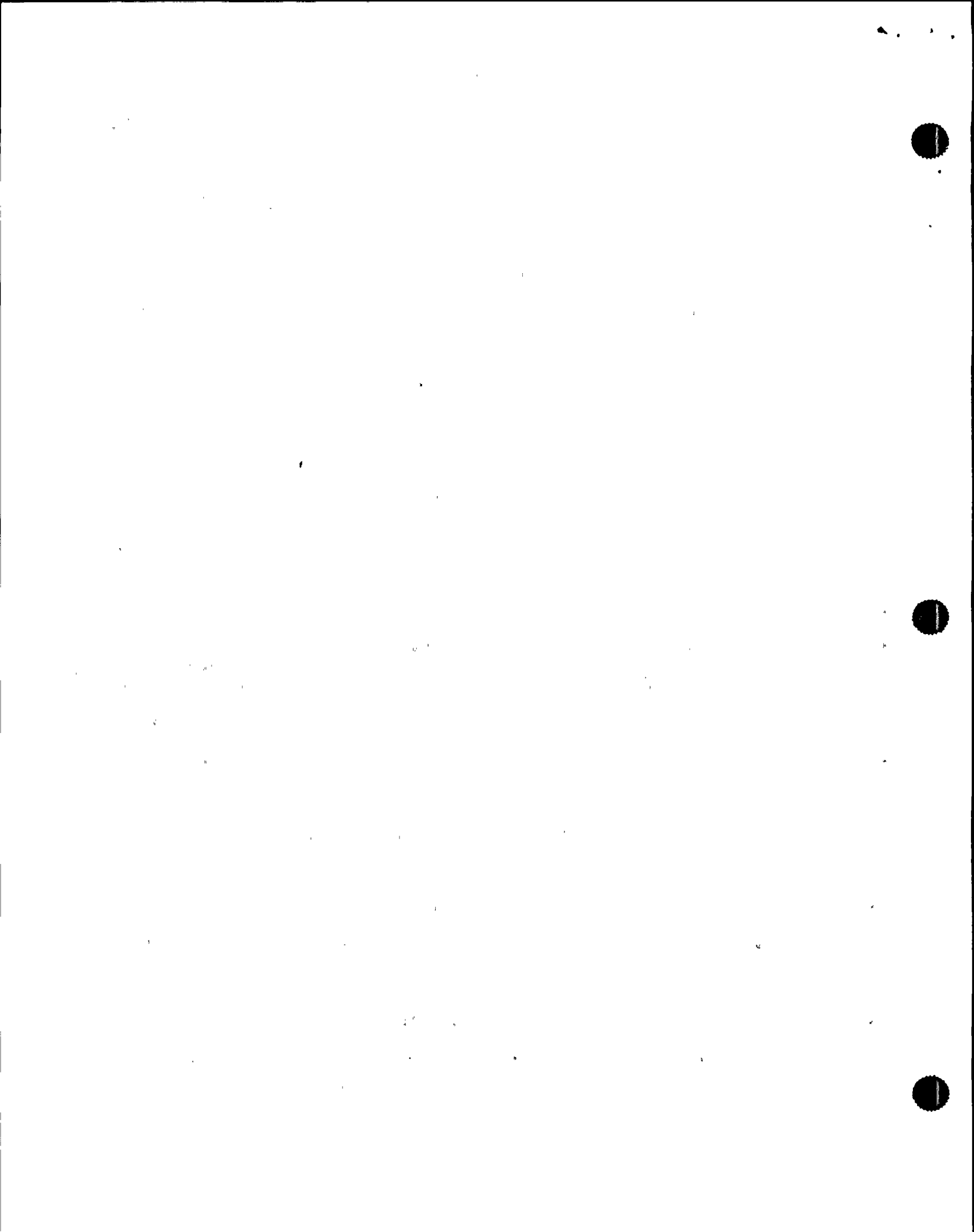
13 MR. JORDAN: -- stock?

14 MR. BERGENSTOCK: -- stock.

15 MR. JORDAN: Good and I am Mike Jordan. Okay, go
16 ahead. I think you were at the point where you said that
17 the CB1 breaker you engaged it. You had went to the panel
18 behind you to make sure that the input supply to the 1A UPS.
19 You found that breaker. You know what that breaker number
20 is?

21 MR. BERGENSTOCK: I can't remember. We looked in
22 the power supply section of the operating procedure and it
23 tells us which panel and which breaker.

24 MR. JORDAN: You found that breaker open. You
25 reclosed that breaker. At that point then the CB1 breaker



1 tripped or was it some time later?

2 MR. BERGENSTOCK: That I can't remember exactly
3 when it tripped again but during the course of events of
4 trying to power it up, the 1 breaker and the supply breaker
5 to the 1 breaker on Panel 300 tripped again, so we left both
6 breakers in the tripped condition and said there is
7 something wrong with the 1A internally, we're not going to
8 try this again.

9 MR. JORDAN: And left the bus powered by --

10 MR. BERGENSTOCK: The 4 breaker closed.

11 MR. JORDAN: Which is the maintenance?

12 MR. BERGENSTOCK: The bypass power.

13 MR. JORDAN: That took care of 1A?

14 Which one did you go to next?

15 MR. BERGENSTOCK: Boy! I can't remember the exact
16 order we'd done them in. The only thing I can remember is
17 alphabetically so I am going to go to the UPS 1-B next.

18 MR. CONTE: Okay. Can you pinpoint the time you
19 were at 1A in the morning? Is this 7:00 to 8:00, 8:00 to
20 9:00, 9:00 to 10:00? We don't know need exact times.

21 MR. BERGENSTOCK: I am going to say a little --
22 around 7:00.

23 Around 7-ish.

24 MR. CONTE: Okay. That's fair enough.

25 All right. 1B -- do you remember what you did



1 with 1B?

2 MR. BERGENSTOCK: Okay. We never powered 1B,
3 either.

4 MR. CONTE: Same symptoms?

5 MR. BERGENSTOCK: No. We got the one breaker
6 closed, and, when we tried to do a manual restart, the 3
7 breaker, which is the output breaker, for some strange
8 reason, every time we went to close it, just went to its
9 tripped condition. It would never fully close.

10 MR. CONTE: No symptoms of the upstream supply
11 breaker to CB-1 opening for the 1B power supply?

12 MR. BERGENSTOCK: Not that I can remember.

13 MR. CONTE: Did you check?

14 MR. BERGENSTOCK: We had 600 volts on the meter.

15 MR. CONTE: You had 600 volts, so that one didn't
16 trip.

17 MR. BERGENSTOCK: I don't believe it, no.

18 MR. JORDAN: You say that the CB-3 would not
19 engage or fully close. How about CB-4? Would CB-4 open?

20 [Pause.]

21 MR. BERGENSTOCK: I'm trying to remember
22 exactly --

23 MR. JORDAN: That's all right. Take your time.
24 It's no hurry.

25 MR. BERGENSTOCK: I didn't hear the question.



1 MR. CONTE: I didn't hear the question.

2 MR. JORDAN: The question is, he said that CB-3
3 would never fully close; would CB-4 open?

4 MR. BERGENSTOCK: I believe it did, on the first
5 attempt, because --

6 MR. JORDAN: Did you lose power to the --

7 MR. BERGENSTOCK: Well, what happens is, CB-3 is
8 supposed to fully close when CB-4 opens.

9 MR. JORDAN: Yes.

10 MR. BERGENSTOCK: But, for some strange reason,
11 CB-3 never fully closed. Bob Crandall informed it had a
12 weak spring in it -- or for some strange reason. It was an
13 internal problem with the CB-3 breaker itself. It wasn't
14 fully closing. And the CB-4 breaker popped open and
15 reclosed, with 1-Bravo.

16 So the final result was, 1-Bravo was left with the
17 CB-4 breaker closed.

18 I'm trying to remember. Somewhere on one of the
19 UPS's, the 3 breaker never closed, but the 4 -- oh, that's
20 what it was. Okay. When we closed the 1 breaker, CB-4
21 momentarily got an open-close signal, and I believe that
22 started with the -- oh, boy. I can't remember which UPS it
23 was, but I remember, when we were powering up the UPS's,
24 when we closed the 1 breaker on them, we removed connector
25 6, which was the power to the motor that operates the



1 breaker, solenoid or motor, whichever the case may be.

2 MR. CONTE: Which breaker, CB-4 or CB-3?

3 MR. BERGENSTOCK: CB-4. When we closed the 1
4 breaker, that way it wouldn't open and close on us. That
5 way we wouldn't momentarily dead-bust it for some strange
6 reason.

7 MR. JORDAN: To make sure the CB-4 would not open
8 and close, what did you remove?

9 MR. BERGENSTOCK: Connector 6, I believe the
10 number was.

11 MR. JORDAN: Is this in the procedure to do that?

12 MR. BERGENSTOCK: No.

13 MR. JORDAN: Okay.

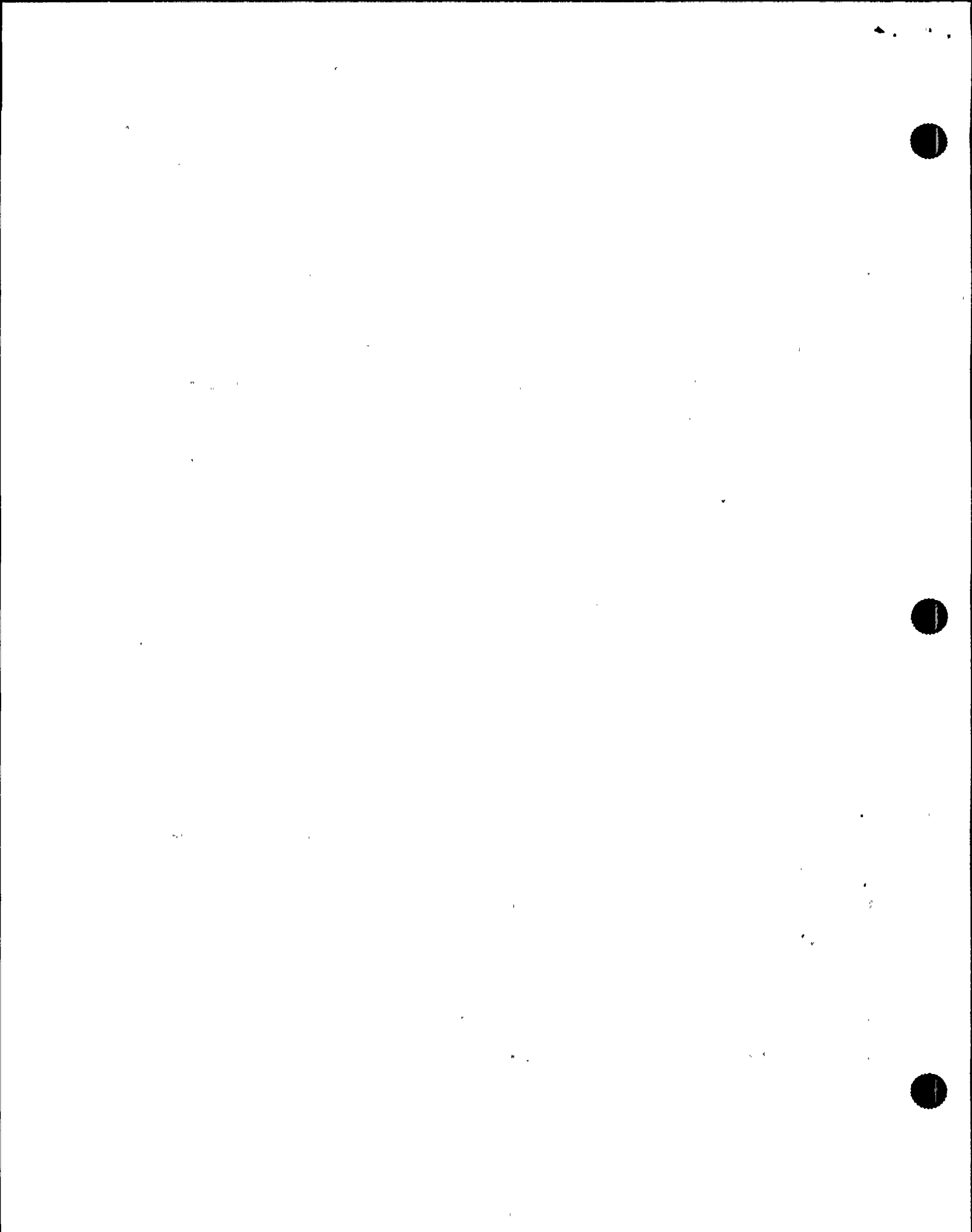
14 MR. BERGENSTOCK: That was on the recommendation
15 of Bob Crandall, which made perfectly good sense to me.

16 When we closed the 1 breaker, then we reconnected
17 the connector number 6.

18 MR. CONTE: When you were manipulating CB-3, you
19 got that symptom of a momentary open and close, so you
20 disconnected a lead that would prevent CB-4 from --

21 MR. BERGENSTOCK: No. It was when we were
22 operating -- when we closed CB-1, which is the input breaker
23 to the power supplies, UPS's.

24 MR. CONTE: You don't remember which UPS, but,
25 when you manipulated to close CB-1, you got a momentary open



1 and close on CB-4.

2 MR. BERGENSTOCK: Yes.

3 MR. CONTE: Is that correct?

4 MR. BERGENSTOCK: That's correct.

5 MR. CONTE: Okay.

6 And to prevent that from happening, you wanted to
7 keep CB-1 closed -- pulled the motor cable, or whatever.
8 Which plug did you call it?

9 MR. BERGENSTOCK: We wanted to keep the CB-4
10 breaker closed.

11 MR. CONTE: So which plug did you disconnect?

12 MR. BERGENSTOCK: Connector number 6, I believe.

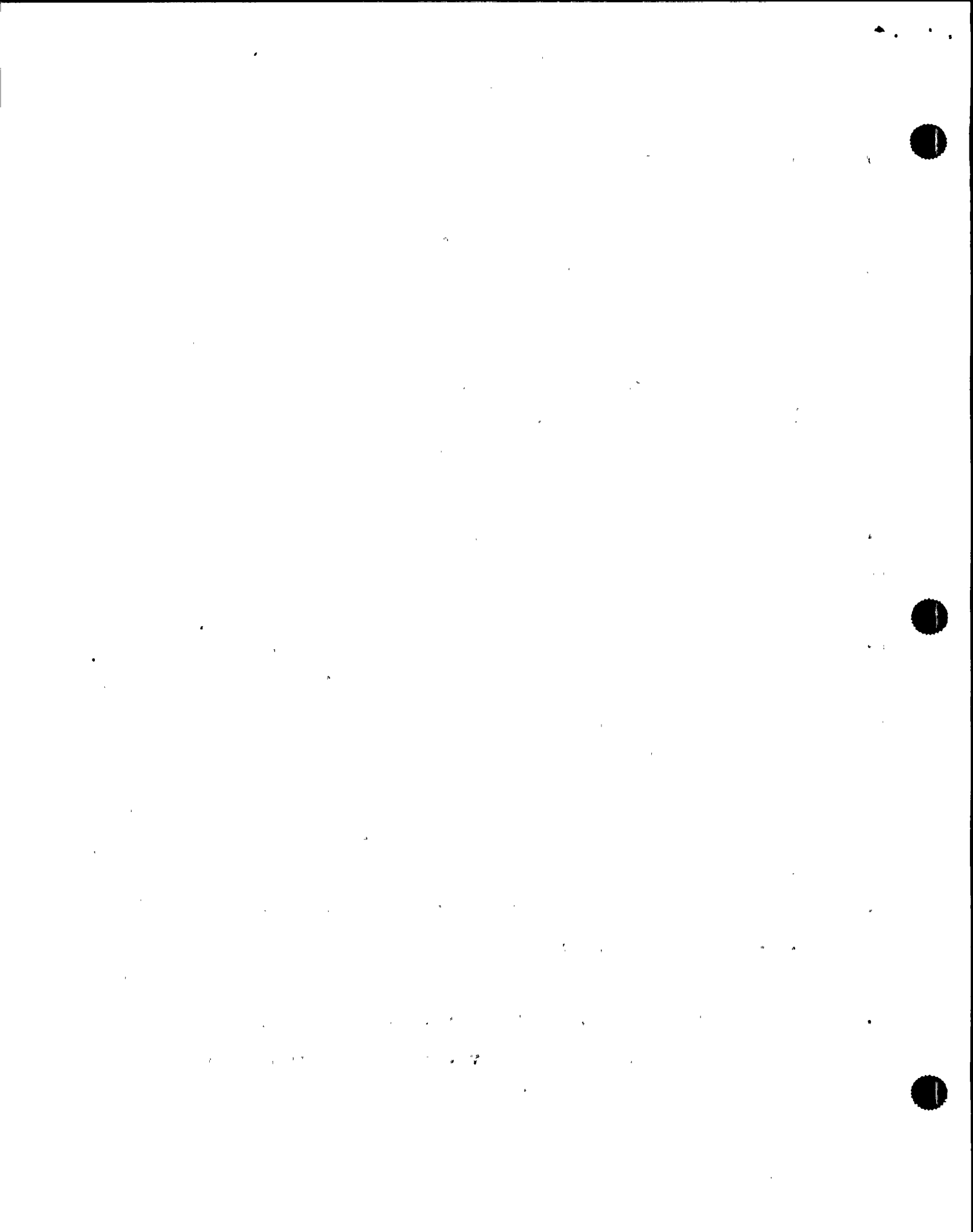
13 MR. CONTE: Number 6.

14 MR. JORDAN: Did you do this on all of them, or
15 did you just do this after this event, whichever breaker it
16 was and whichever UPS it was?

17 MR. BERGENSTOCK: No, we done them on all
18 subsequent UPS starts.

19 MR. JORDAN: When this occurred, when you got the
20 momentary CB-4 open and close, from then on, whichever UPS
21 it was, from then on you removed the connector 4 or
22 connector 6 before you connected CB-1, or after you
23 connected CB-1?

24 MR. BERGENSTOCK: Before we closed in CB-1,
25 because when you close CB-1 you power the logic up to the



1 UPS.

2 MR. JORDAN: Okay.

3 MR. BERGENSTOCK: UPS's 1-Charlie, 1-Delta -- they
4 were normal. I don't remember any problems with those.

5 MR. CONTE: You mean they were on the CB-1
6 breaker.

7 MR. BERGENSTOCK: No. They were on the CB-4
8 breaker, but powering them up, there was no problem.

9 MR. CONTE: And they were successfully shifted to
10 the normal supply.

11 MR. BERGENSTOCK: Yes.

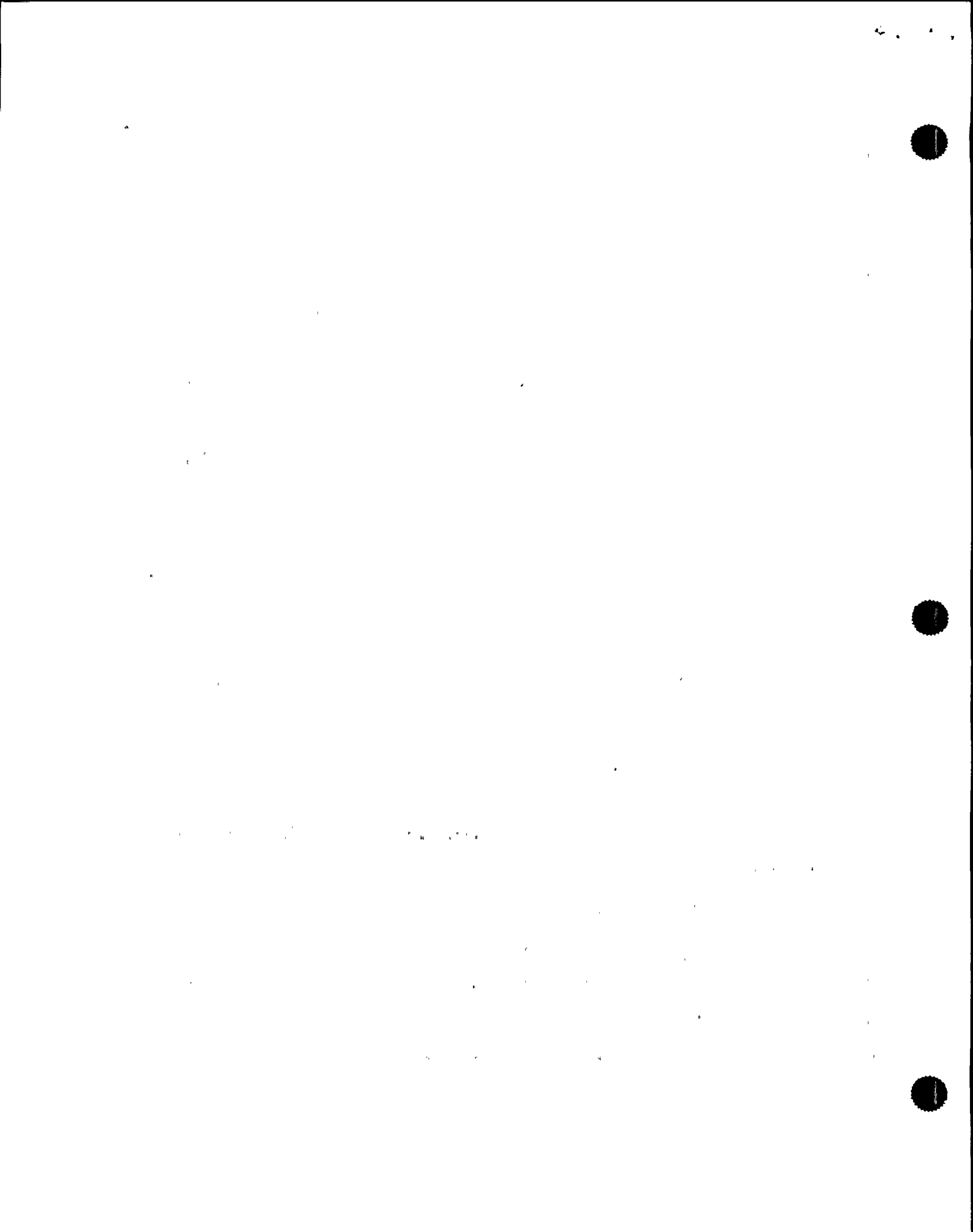
12 MR. JORDAN: When you say you manually reset, on
13 the ones that it worked -- on 1-C and 1-D -- can you walk us
14 slowly through the steps that you took to power them up?

15 MR. BERGENSTOCK: Okay. To power up the UPS's, we
16 disconnected connector 6, which is not in the procedure; we
17 then verified -- I believe we put the toggle switch in
18 manual start; we then closed the CB-1 breaker, which is the
19 input to the UPS, AC power; we then done a lamp check to
20 ensure that all lamps are lit for the alarms. There are
21 three button you have to press for lamp check, because there
22 are three different circuits.

23 MR. CONTE: Any logic lights in? Do you remember?

24 MR. BERGENSTOCK: Not that I recall.

25 MR. CONTE: So what happened when CB-1 went



1 closed?

2 MR. JORDAN: Wait a minute. Let's go real slow.

3 MR. BERGENSTOCK: This is in general.

4 MR. JORDAN: Right. You close the CB-1; you do a
5 lamp check --

6 MR. BERGENSTOCK: Then you hit toggle switch for
7 CB-4, which closes CB-4 -- I'm sorry. You hit the toggle
8 switch for CB-3. This closes --

9 MR. JORDAN: When you say toggle switch, you put
10 it open?

11 MR. BERGENSTOCK: It's just a little toggle
12 switch. You go to the closed position to close the breaker.

13 MR. JORDAN: Okay. CB-3 toggle closed.

14 MR. BERGENSTOCK: This shuts CB-3, which is the
15 output breaker of the UPS. Automatically CB-4 opens. Then
16 you close CB-2, which is your DC input power.

17 MR. JORDAN: Is that a toggle switch, also, or is
18 that a big manual?

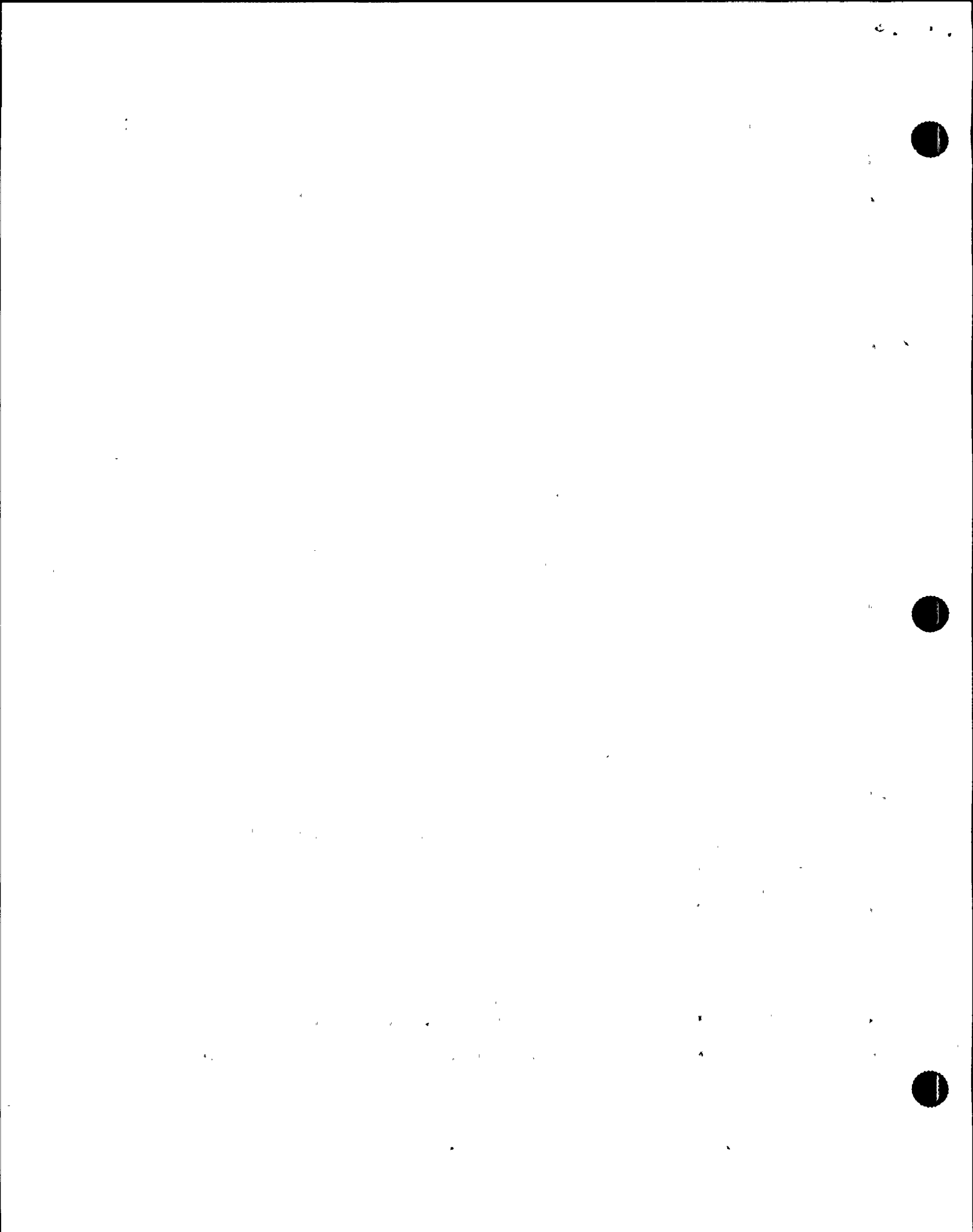
19 MR. BERGENSTOCK: No, that's a manual breaker.
20 You manually close.

21 I believe those are the steps to it.

22 MR. JORDAN: Do you leave it in manual start?

23 MR. BERGENSTOCK: I believe we went to auto on the
24 toggle switch, but I'm not sure of that step.

25 MR. JORDAN: Do you know when you do that?



1 MR. BERGENSTOCK: At the end.

2 MR. JORDAN: That's generally the sequence of
3 doing it?

4 Do you have a question?

5 MR. CONTE: What did you do next, after you got
6 done with C and D -- unless you want to pursue C and D a
7 little more.

8 MR. JORDAN: No. C and D, you say, went pretty
9 much -- by walking through these steps, C and D, you powered
10 them up.

11 MR. BERGENSTOCK: Yes.

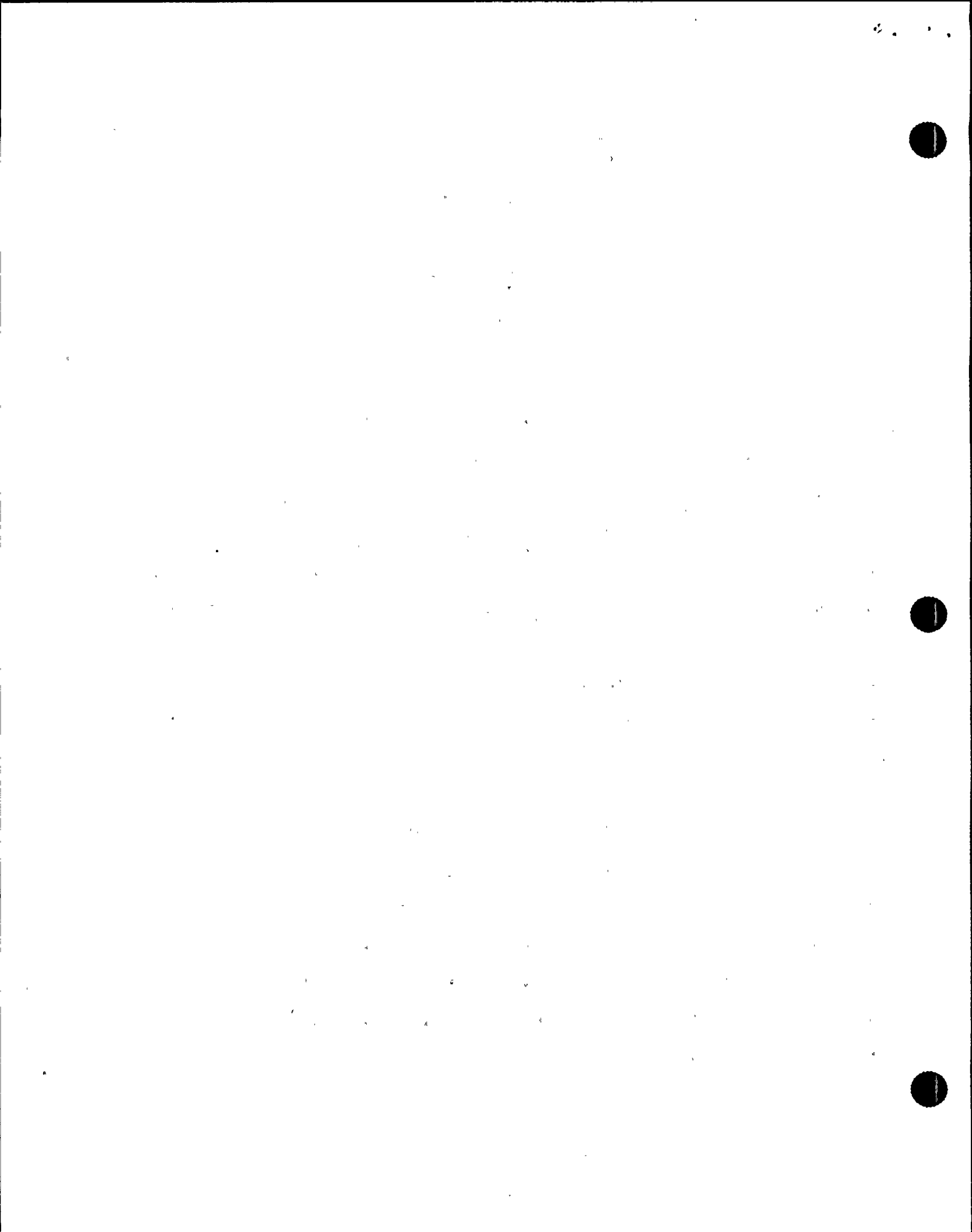
12 MR. JORDAN: Okay. And there were no problems
13 that you were aware of, anyway, in C and D, or did you have
14 any other problems?

15 MR. BERGENSTOCK: Not with C and D.

16 Going back to the Bravo one -- I'm remembering
17 things as I go through these UPS's --

18 MR. JORDAN: Okay.

19 MR. BERGENSTOCK: For some reason, we had to down-
20 power the logic in it. We had to open two doors, and there
21 are two internal toggle switches that I opened, because that
22 was one of the reasons we were removing the connector 6 from
23 CB-4. For some reason, when CB-3 didn't fully close, UPS
24 Bravo never told CB-4 to reclose, so Bob Crandall thought
25 there might be a problem with the logic, so we down-powered



1 the logic, and then we just turned the toggle switches back
2 on, and it just repowers it back up. I remember doing that.

3 After we had done those four UPS's, we went back
4 down to elevation 214 to power up UPS 1G. We had a problem
5 powering up UPS 1G. Sometime after we closed the 1 breaker,
6 the power supply in panel 300, I believe it was, Dave
7 Hanczyk went and closed the breaker.

8 MR. JORDAN: So that means there wasn't power to
9 the UPS?

10 MR. BERGENSTOCK: There was power to 1G when I got
11 there. I closed in the 1 breaker. I believe we tried to
12 close the 3 breaker; that's when the input in panel 300
13 tripped. Dave Hanczyk went and reset and closed the breaker
14 for 1G. He called me on the here-here and said he was clear
15 of the panel, and I could try to power up UPS 1G again.

16 MR. CONTE: You're saying that Dave Hanczyk had
17 to reset panel 300 at the supply breaker twice -- once when
18 you first went down there to power up 1G and then, second,
19 because it tripped when you closed CB-1?

20 MR. BERGENSTOCK: No. He only powered it up once.

21 MR. CONTE: Okay. When you got there, the power
22 supply on panel 300 was already closed.

23 MR. BERGENSTOCK: Yes.

24 MR. CONTE: You had voltage. All you had to do
25 was shut CB-3.



1 MR. JORDAN: CB-1.

2 MR. CONTE: CB-1. I'm sorry.

3 MR. BERGENSTOCK: If you want, I can use input and
4 output breakers --

5 MR. CONTE: No. We understand.

6 MR. JORDAN: We'd better stick with the CB-1s and
7 3s, if that's what they are. If you've got the numbers
8 down, use the numbers.

9 MR. CONTE: We know they are.

10 MR. BERGENSTOCK: Okay.

11 MR. CONTE: Then what happened?

12 MR. BERGENSTOCK: He reset --

13 MR. JORDAN: Did that require you to reset 1B?
14 Did 1B trip when you lost input power?

15 MR. BERGENSTOCK: CB-1 or 1B? What are you
16 talking about?

17 MR. JORDAN: No, 1B.

18 MR. BERGENSTOCK: We're back on UPS 1B?

19 MR. JORDAN: No. I'm sorry, CB-1. Did CB-1 trip,
20 then, when you lost input power?

21 MR. BERGENSTOCK: I really can't remember that.

22 MR. JORDAN: Okay. Go ahead.

23 MR. CONTE: After Dave went and reset the breaker
24 on 300 panel, do you remember manipulating CB-1?

25 MR. BERGENSTOCK: I remember looking at the meter



1 and saying, He closed the breaker on panel 300, because we
2 have 600 volts again, input power.

3 MR. CONTE: It's quite possible that CB-1 did not
4 trip, and all you had to do was reset the supply breaker.
5 It's possible; you don't know for sure, though.

6 MR. BERGENSTOCK: I don't know. We have selective
7 tripping, so it should have opened, but I can't remember one
8 way or the other.

9 MR. CONTE: Okay. What did you do after that?

10 MR. BERGENSTOCK: Then we powered UPS 1G up, and
11 it powered up properly. By this time --

12 MR. CONTE: Once again, you did that using the
13 normal sequence of hitting the toggle switch on CB-3 to
14 close --

15 MR. BERGENSTOCK: Yes.

16 MR. CONTE: -- and the automatic action and
17 interlock of CB-3 and -4 worked.

18 MR. BERGENSTOCK: Yes.

19 MR. CONTE: Okay.

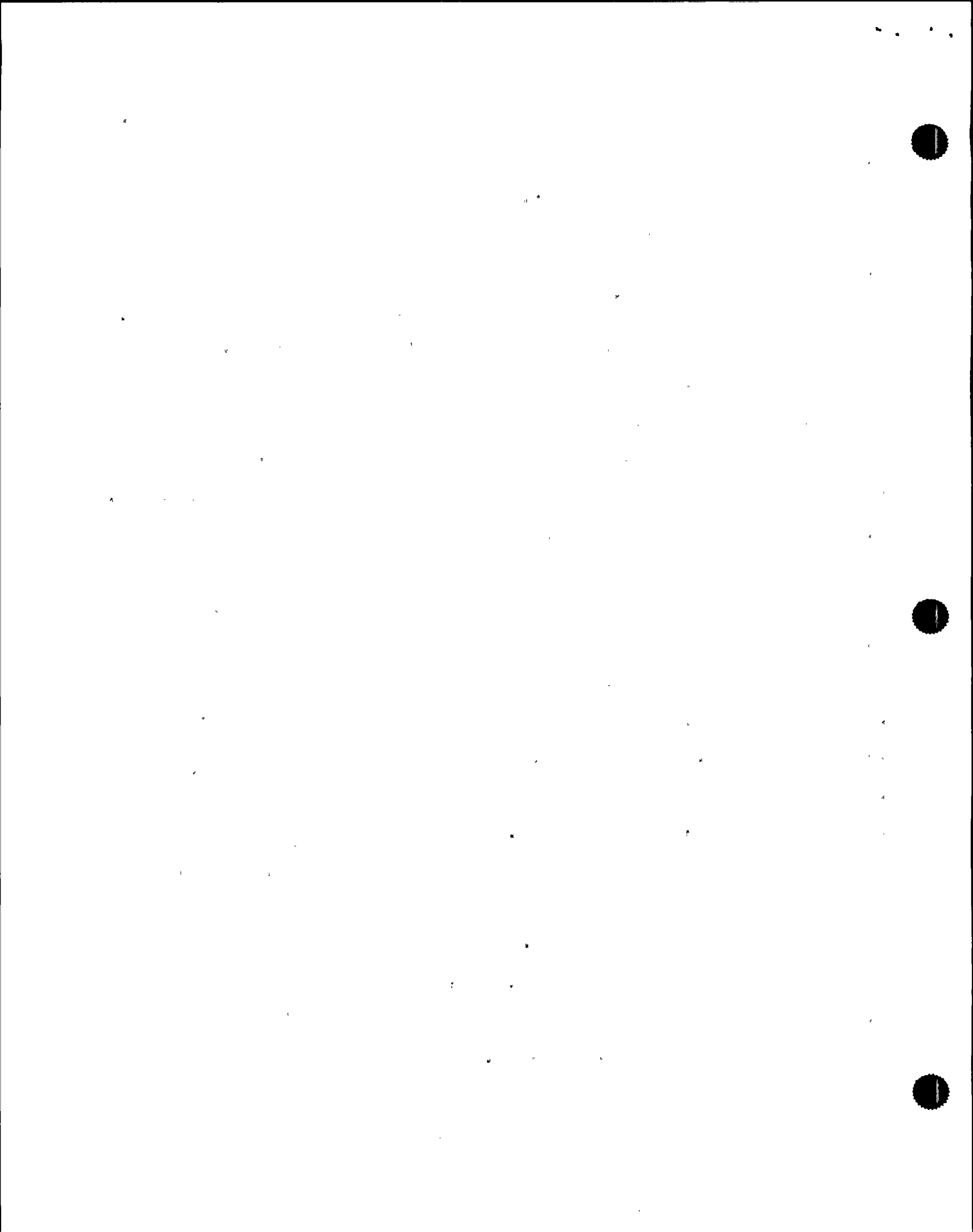
20 MR. BERGENSTOCK: By this time, an NRC inspector
21 showed up.

22 MR. CONTE: Rob Temps.

23 MR. BERGENSTOCK: Yes.

24 MR. CONTE: He missed all the action, I guess.

25 You had just gotten done with all the UPS's. He wasn't with



1 you in any of the other UPS power supply.

2 MR. BERGENSTOCK: I don't believe so. I believe
3 that's the first conscious time that I remember seeing him
4 there.

5 MR. CONTE: That was 1G. Okay.

6 MR. BERGENSTOCK: And then Bob Crandall said, Our
7 job is done here. The ones that are powered up are powered
8 up, and the ones that can't be are going to take WRs to fix
9 -- work requests.

10 Then Dave and I went back to the ops support, and
11 we had a discussion with the leader there. Then we went
12 back to the control room.

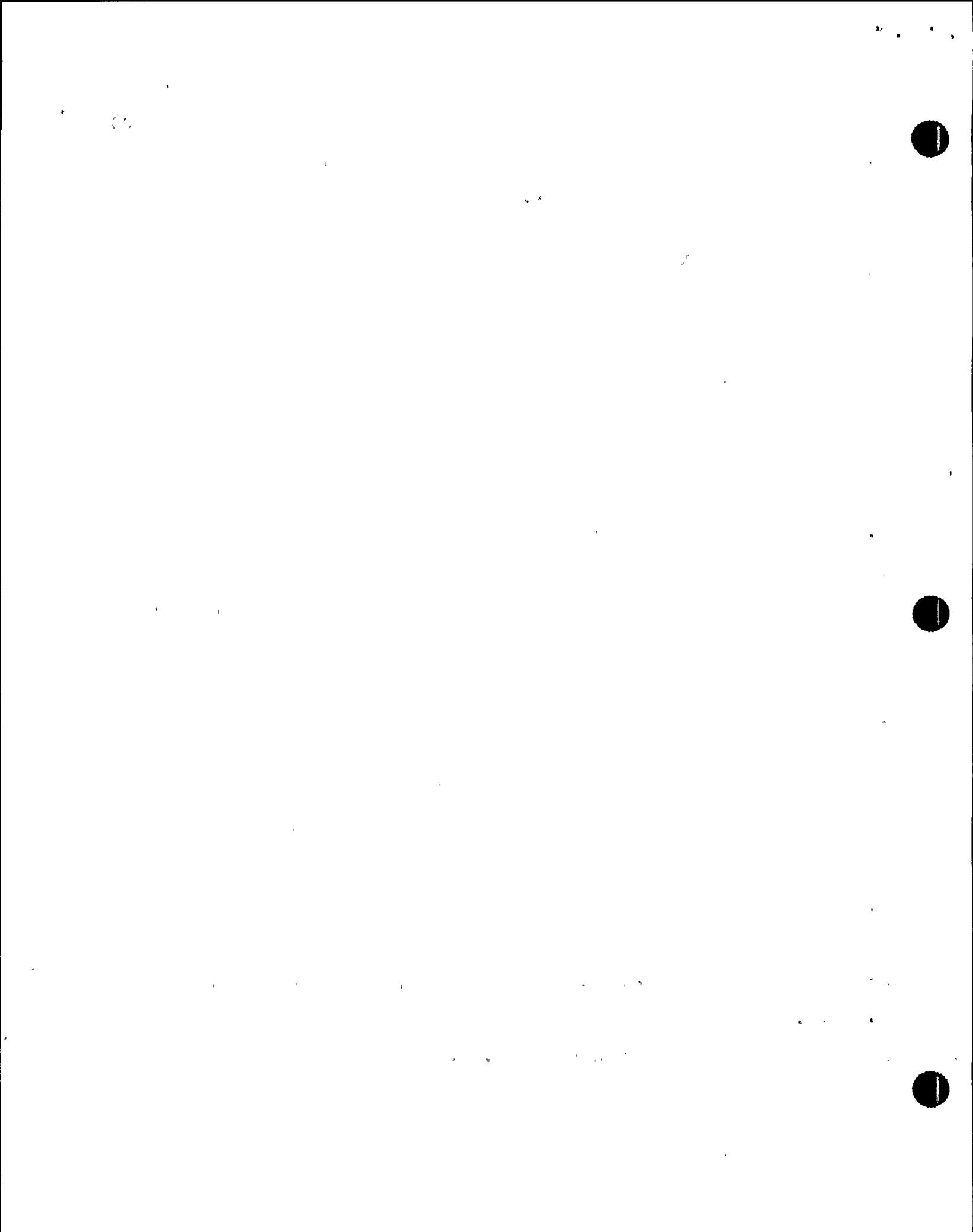
13 MR. CONTE: About what time was all this done?
14 Seven, 8 -- it had to be after 7.

15 MR. BERGENSTOCK: I'm going to say around 8
16 o'clock by now.

17 MR. JORDAN: You went back to ops support, you're
18 saying, and had a discussion with the leader there?

19 MR. BERGENSTOCK: Yes. Apparently we were
20 supposed to sign in for accountability, because we were out
21 in the field, and he said, Well, sign out so we know you
22 left. Dave and I said, We didn't know we were supposed to
23 sign in. So, during all this time, we weren't accounted
24 for.

25 MR. JORDAN: Okay.



1 MR. CONTE: By the time you got to G, did you
2 still have -- Well, I guess 1A through D are in one room,
3 and G is in another room. As you went through each of the
4 A, B, C, D -- whatever sequence you went -- did you always
5 initially try to start it using the startup procedure, or
6 did you abandon using the procedure after the first
7 inverter?

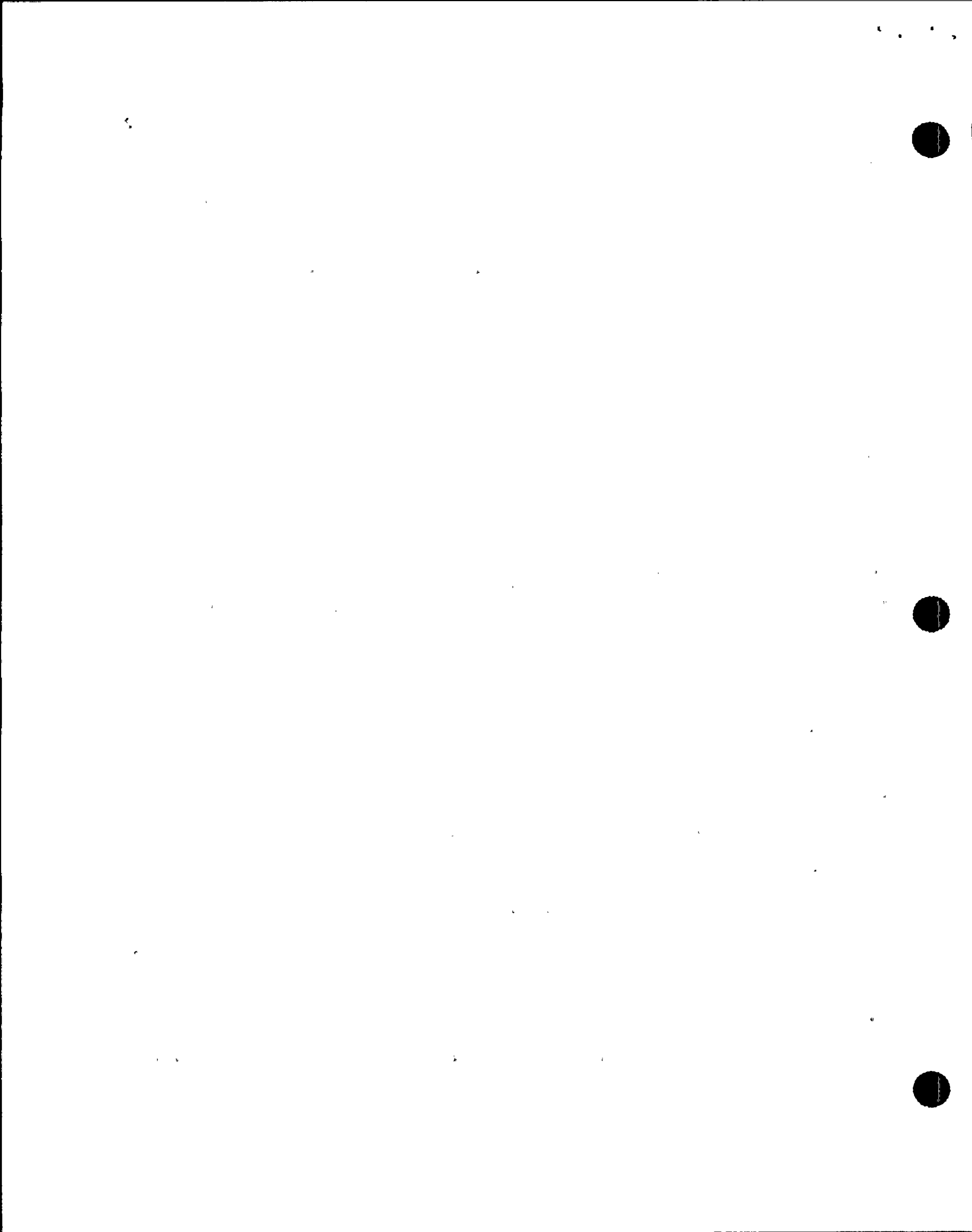
8 MR. BERGENSTOCK: We started them up in accordance
9 with the procedure, our then opening the one connector No.
10 6.

11 MR. JORDAN: You reconnected connector No. 6 when?
12 Or did you just leave them disconnected?

13 MR. BERGENSTOCK: No, we closed -- reconnected
14 connector No. 6 after we closed in the 1 breaker because you
15 have to have power for the 4 breaker to automatically open.

16 MR. CONTE: Connector No. 6 was only manipulated
17 for one of the inverters but you can't remember which? You
18 suspect it was --

19 MR. BERGENSTOCK: No. That's incorrect. We
20 opened -- after we had this problem with the 1 UPS, I can't
21 remember which one it was, it was decided, well, Bob
22 Crandall made the recommendation that we open connector No.
23 6 prior to closing the 1 breaker on each UPS so we didn't
24 get that momentarily cycling of the 4 breaker and I
25 concurred with it since I am the operator that opened the



1 connector.

2 MR. JORDAN: Again, you opened it. You put the
3 toggle switch in manual start. Then you closed the CB1.
4 Then you reconnected the 6 -- stop me when I'm wrong,
5 please.

6 MR. BERGENSTOCK: Okay.

7 MR. JORDAN: Is that correct? I don't want to put
8 words in your mouth.

9 MR. BERGENSTOCK: No, I believe that's the
10 sequence of events that happened.

11 MR. JORDAN: Then CB3?

12 MR. BERGENSTOCK: Because in order for CB4 to
13 automatically open, when you take the toggle switch for CB3
14 to close if Connector 6 was not connected, CB4 would remain
15 closed so the connector had to be reconnected prior to
16 closing CB3.

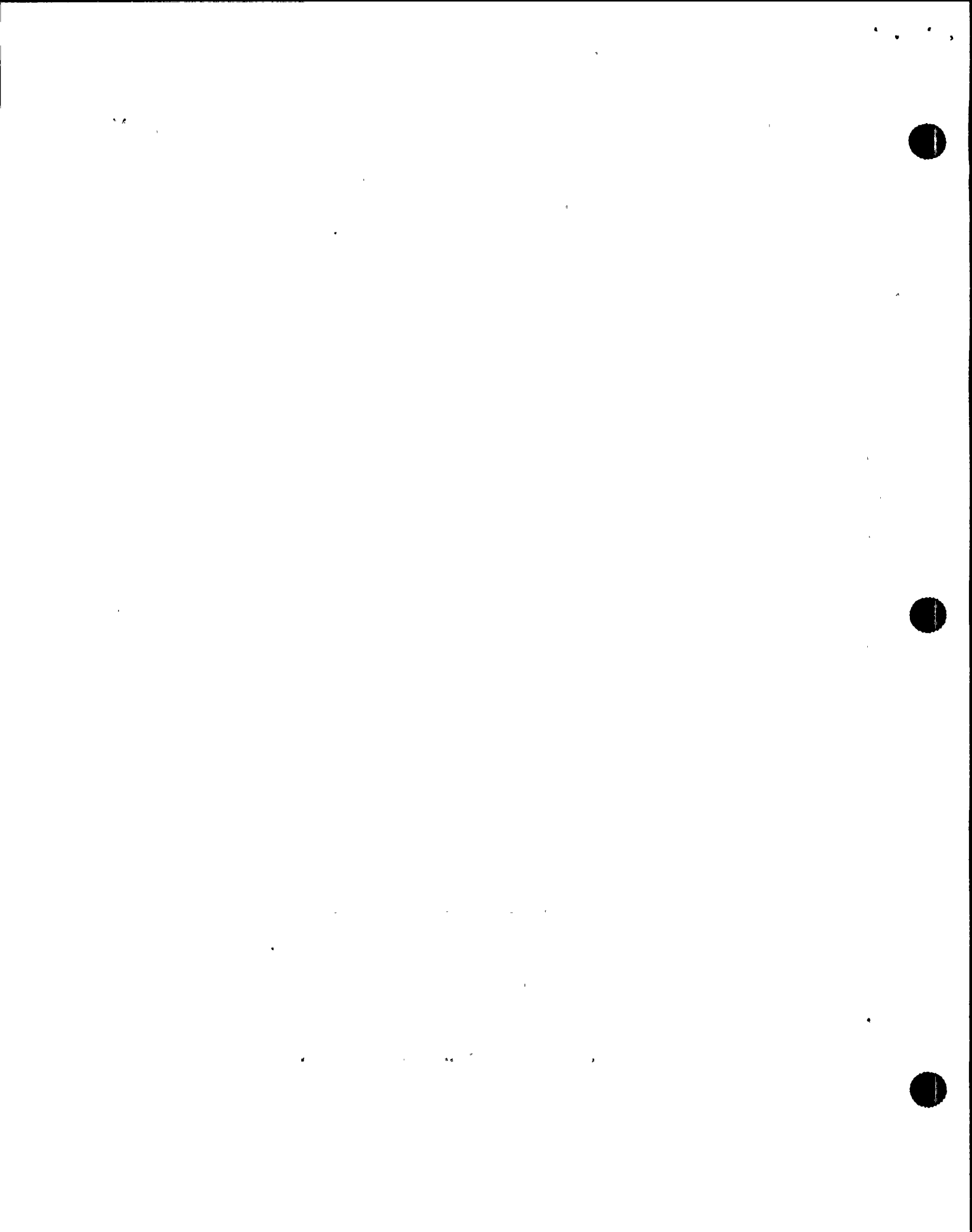
17 MR. CONTE: These deviations from the startup
18 procedure, did you perceive that you were in the 50.54(x)
19 situation where you are dealing from the procedure on an
20 emergency situation.

21 Did you think about that at that time?

22 MR. BERGENSTOCK: Well, 50.54 is to protect the
23 public health and general welfare.

24 [Pause.]

25 MR. CONTE: Did you perceive that these actions on



1 these breakers were in the interest of public health and
2 safety?

3 MR. BERGENSTOCK: They were in the best interest
4 in supplying power back to the instrumentation and
5 components that are served by the UPS's.

6 MR. CONTE: Anything else you want to say on that?

7 MR. BERGENSTOCK: No.

8 MR. CONTE: When you were in the OSC before you
9 went out to do the repowering on the UPS's who is the most
10 senior person who is in charge at the OSC?

11 MR. BERGENSTOCK: I went over to the electrical
12 maintenance. I can't remember the person I spoke to.

13 MR. CONTE: I assume Bob Crandall was there also?

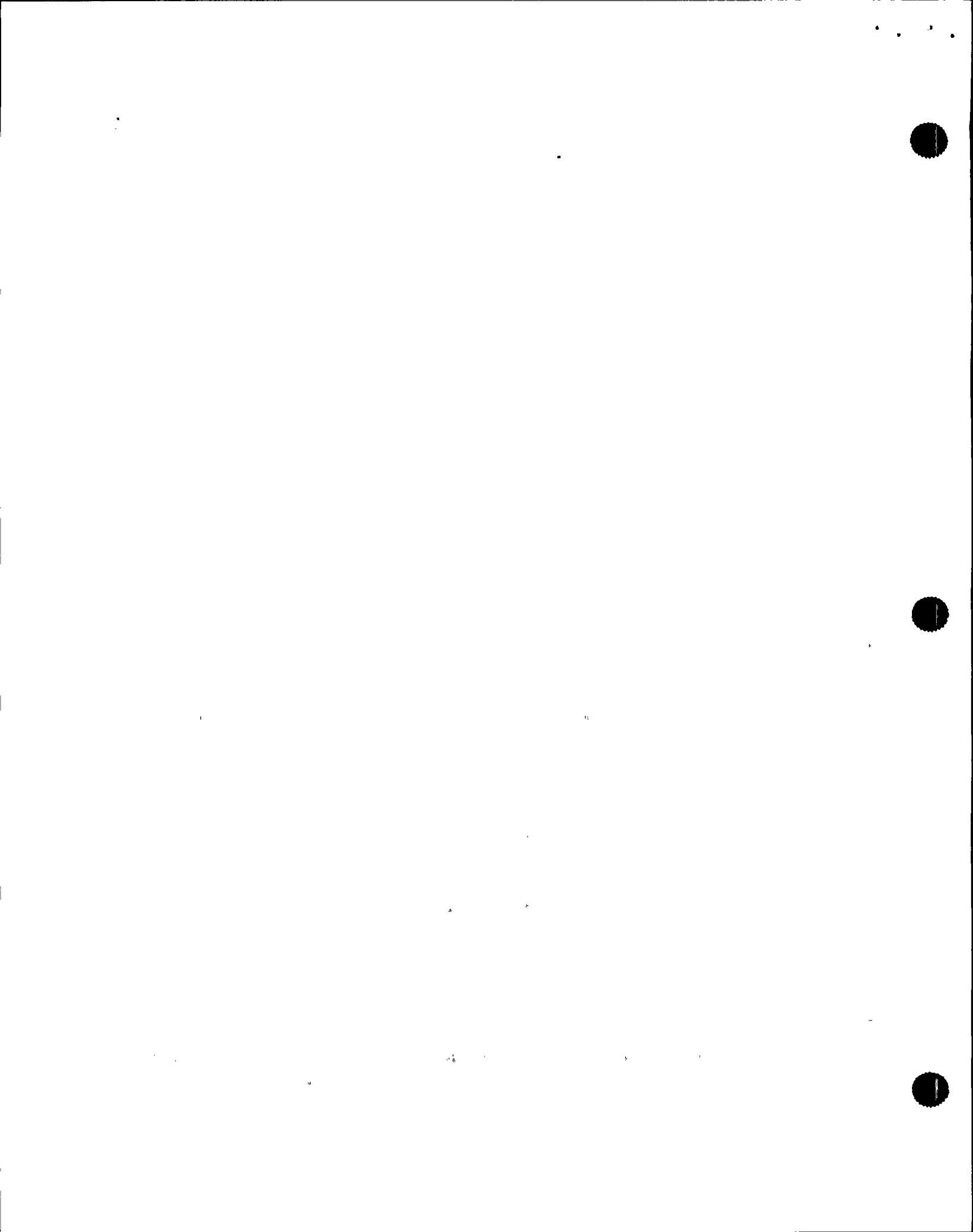
14 MR. BERGENSTOCK: No, Bob Crandall was already
15 down at 214, waiting for us.

16 MR. CONTE: I see, so you went over to electrical
17 maintenance and electrical maintenance told you Bob Crandall
18 is waiting for you at --

19 MR. BERGENSTOCK: Yes. Down at 214.

20 MR. CONTE: Bob didn't have a handwritten game
21 plan, if you will, or a handwritten temporary procedure of
22 some sort on repairing these UPS's, did he? It sounded to me
23 like he did and all you were using was the startup
24 procedure.

25 You don't know what he had and what he didn't



1 have?

2 MR. BERGENSTOCK: He had some paperwork with him
3 and I know he had a notepad. He was taking notes on it as we
4 were powering each UPS up.

5 I am not sure what his train of thought was.

6 MR. CONTE: Do you know who normally is in charge
7 at the OSC? Is there a particular manager that goes to the
8 operations support center that becomes in charge?

9 MR. BERGENSTOCK: Yes, there is.

10 MR. CONTE: Who is it, do you know?

11 MR. BERGENSTOCK: Off the top of my head, no.

12 MR. JORDAN: What kind of communications were
13 being done when you were at UPS's between yourself and the
14 control room or between your groups and the control room?

15 MR. BERGENSTOCK: We were using radios.

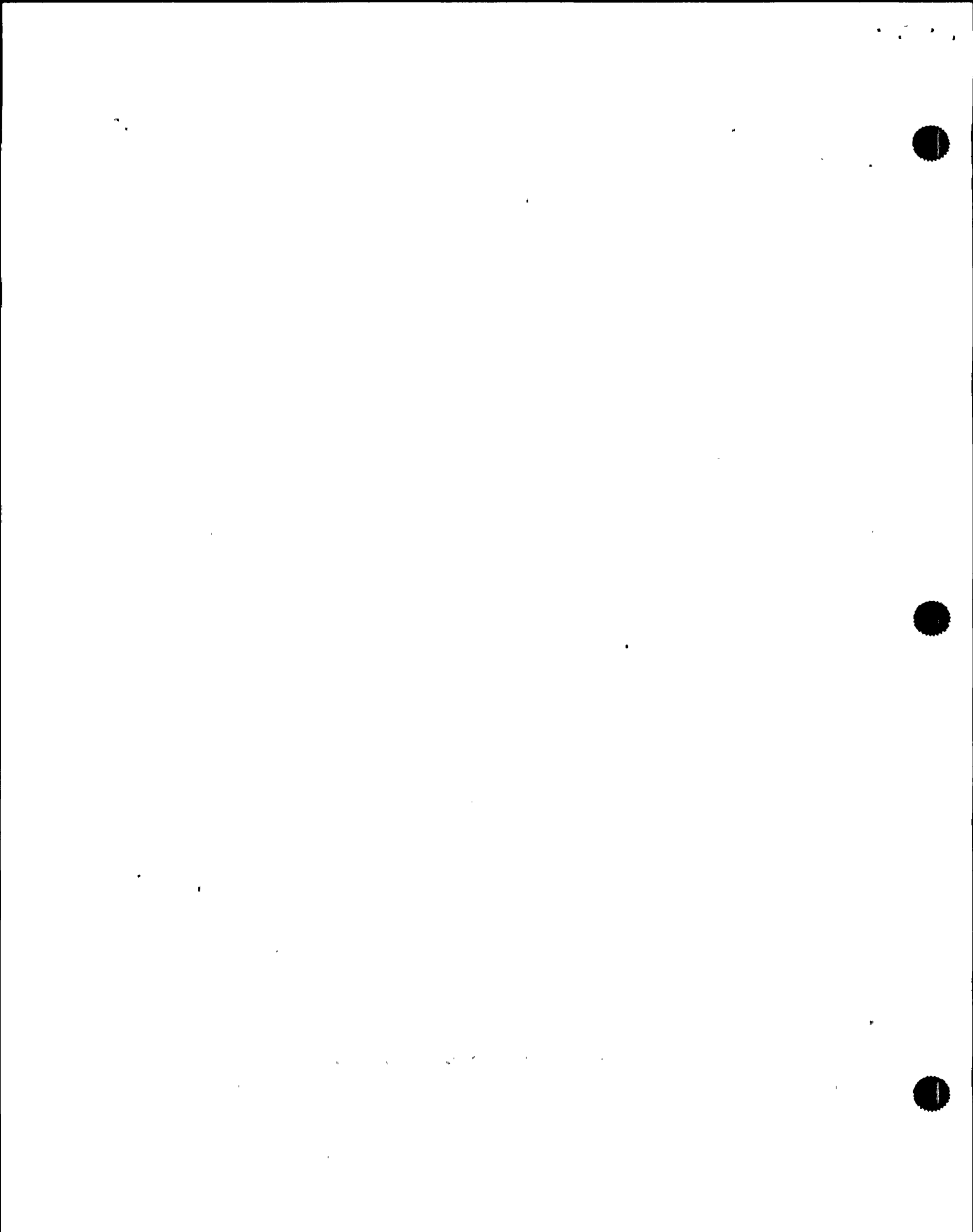
16 MR. JORDAN: Radios. What kind of information
17 were you transmitting to them?

18 MR. BERGENSTOCK: We would get permission, we were
19 saying we'd like permission to power up what UPS it was at
20 the time and they'd say wait. They would have to talk to
21 the SSS and then we'd have to also wait and get permission
22 from I believe it was TSC wanted to get involved.

23 MR. JORDAN: You contacted TSC or --

24 MR. BERGENSTOCK: I was not operating the radio.

25 MR. JORDAN: The authorization from the TSC came



1 directly from the TSC through the control room? Do you know
2 how the communications were set up?

3 MR. BERGENSTOCK: I am unclear on that.

4 MR. JORDAN: Okay. You are unclear on what the
5 question is or unclear on how the communications were set
6 up?

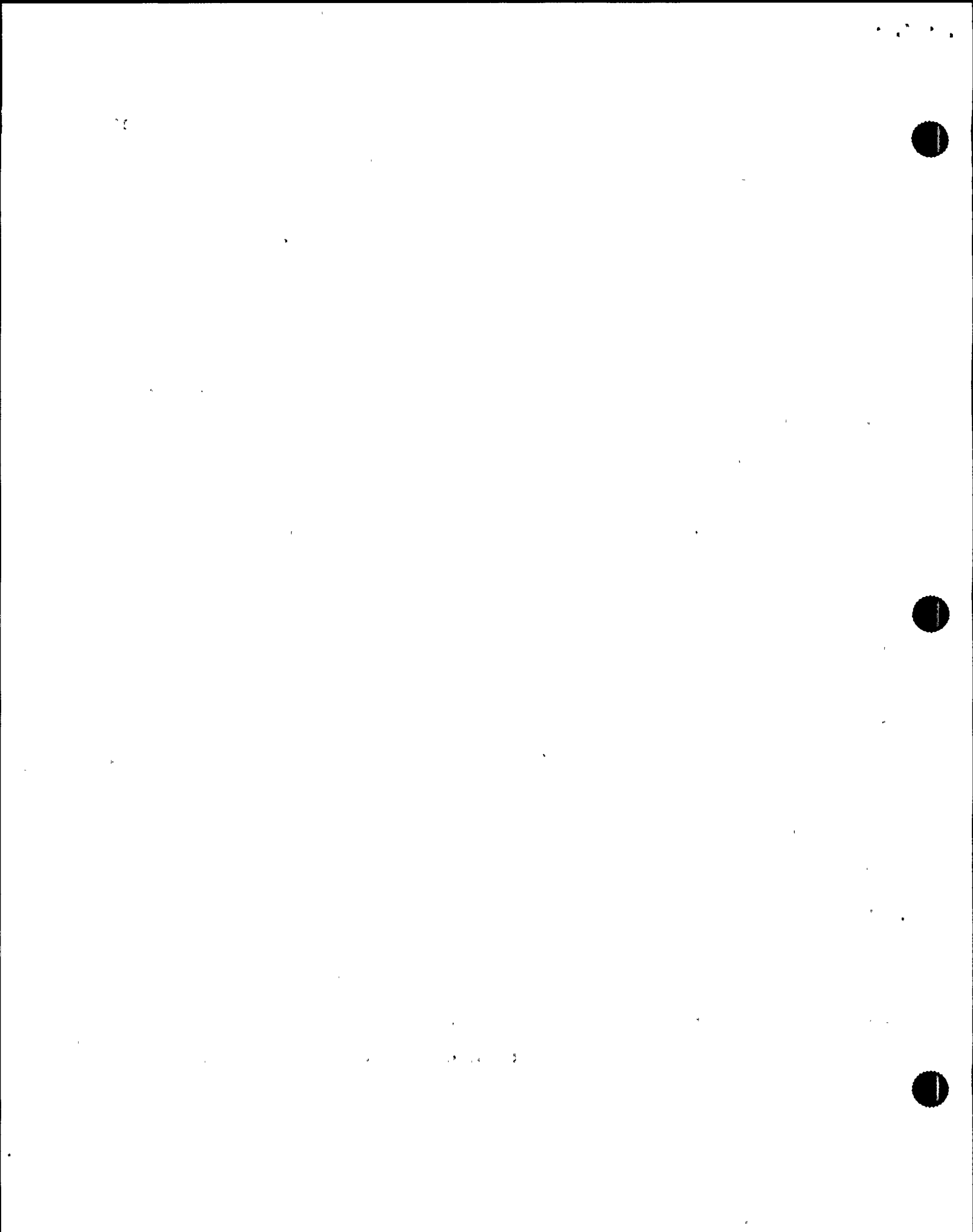
7 MR. BERGENSTOCK: Well, okay. They timed it. It
8 looked like we had two bosses. We were getting permission
9 from the TSC and the control room.

10 The way it's supposed to work is TSC is in charge
11 now. That's the way it goes in an emergency. But just out
12 of habit we always got permission from the control room to
13 do everything.

14 MR. JORDAN: I was just curious how much the
15 control room knew -- did you tell them what UPS you were on
16 so he had an idea where you were or you just communicated to
17 the -- I am just trying to figure out how much information
18 the control room had when you guys were doing this, this
19 transfer.

20 MR. BERGENSTOCK: Dave would call the control
21 room, Dave Hanczyk, and he would get permission to power up
22 the UPS. He would say we are at UPS whatever, we'd like
23 permission to re-energize it, wait one while we clear it.

24 I can't remember if we gave them detailed steps as
25 to when we were closing CB1 and CB2, CB3. I can't remember



1 if we gave them that much detailed information.

2 MR. CONTE: When you got back to the OSC what
3 happened?

4 MR. BERGENSTOCK: We went over to the electrical
5 coordinator and told them they were complete. He signed --
6 he had our names on a form. He told us to sign out and we
7 said, well, we never signed in. He said all right, well,
8 then go back to the control room.

9 MR. CONTE: And you went back to the control room?

10 MR. BERGENSTOCK: I went back to the control room.

11 MR. CONTE: Dave went where?

12 MR. BERGENSTOCK: I believe he came back to the
13 control room with me.

14 MR. CONTE: What did you do in the control room?
15 New job?

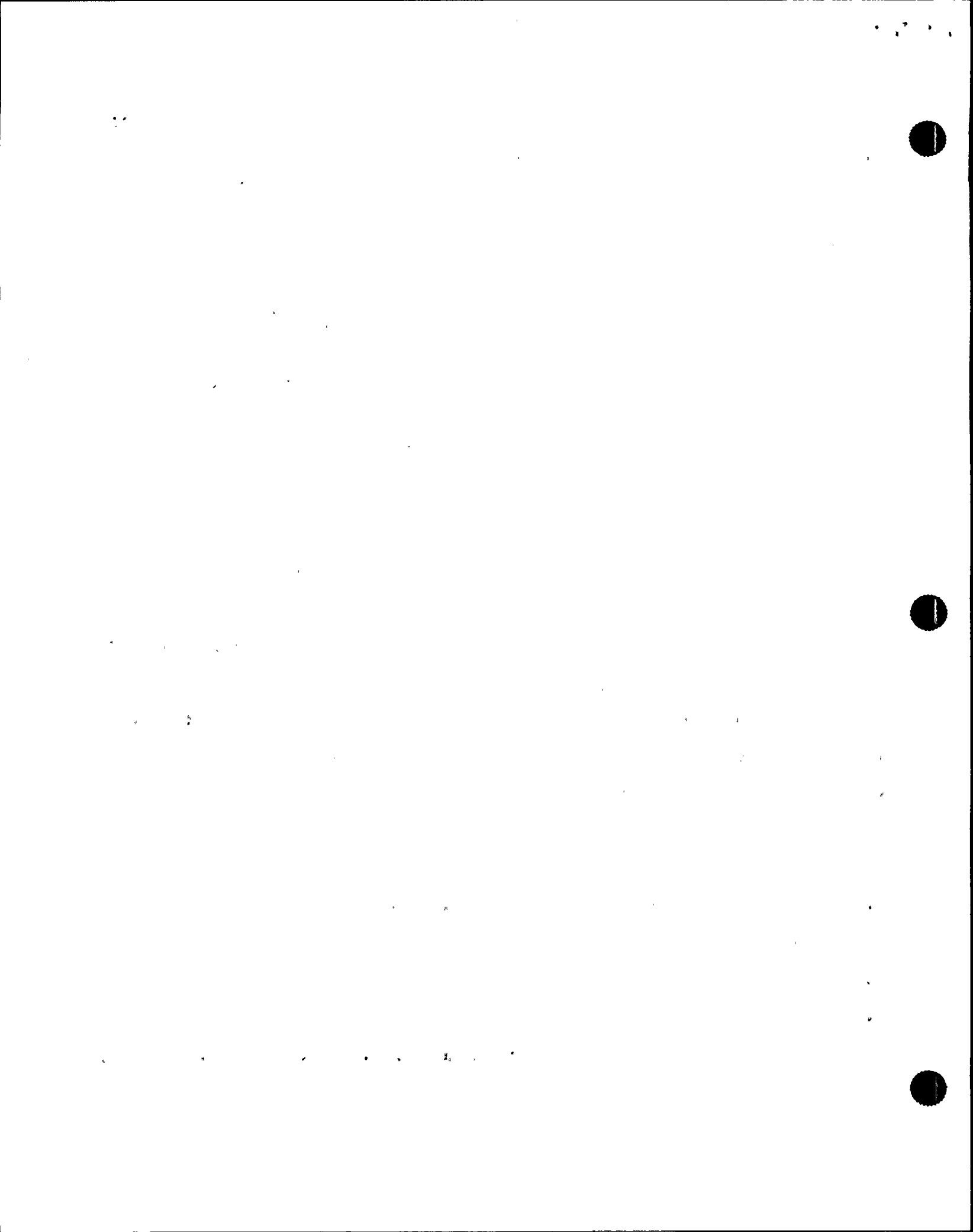
16 MR. BERGENSTOCK: Then I was assigned -- I was
17 assigned to power, to restart the hydraulic power units for
18 the reactor recirc control valves.

19 MR. CONTE: About what time was that?

20 MR. BERGENSTOCK: Eight o'clock.

21 MR. CONTE: Okay. And then how long did that
22 take? Did you have to leave the control room to do this
23 job?

24 MR. BERGENSTOCK: No. I was in the control room
25 operating the electrical part of it and Bob Pellegrino went



1 out to the individual hydraulic power units in the reactor
2 building to check local indication.

3 MR. CONTE: Any problems in starting them up?

4 MR. BERGENSTOCK: No.

5 MR. CONTE: How long did that job take? When did
6 you complete it, approximately?

7 MR. BERGENSTOCK: Well, by the time I got those
8 started up and the recirc control valves reopened, hm --
9 maybe 45 minutes. It's around 9 o'clock now, maybe.

10 MR. CONTE: What was so important about this job
11 in relation to the plant cooldown, or it didn't have much to
12 do with it?

13 MR. BERGENSTOCK: The hydraulic power units
14 supplied hydraulic oil pressure to your recirc flow control
15 valves and when the recirc pumps are on slow speed your
16 recirc valves are supposed to be open. And they were not.

17 MR. CONTE: When they're in full speed?

18 MR. BERGENSTOCK: Slow speed.

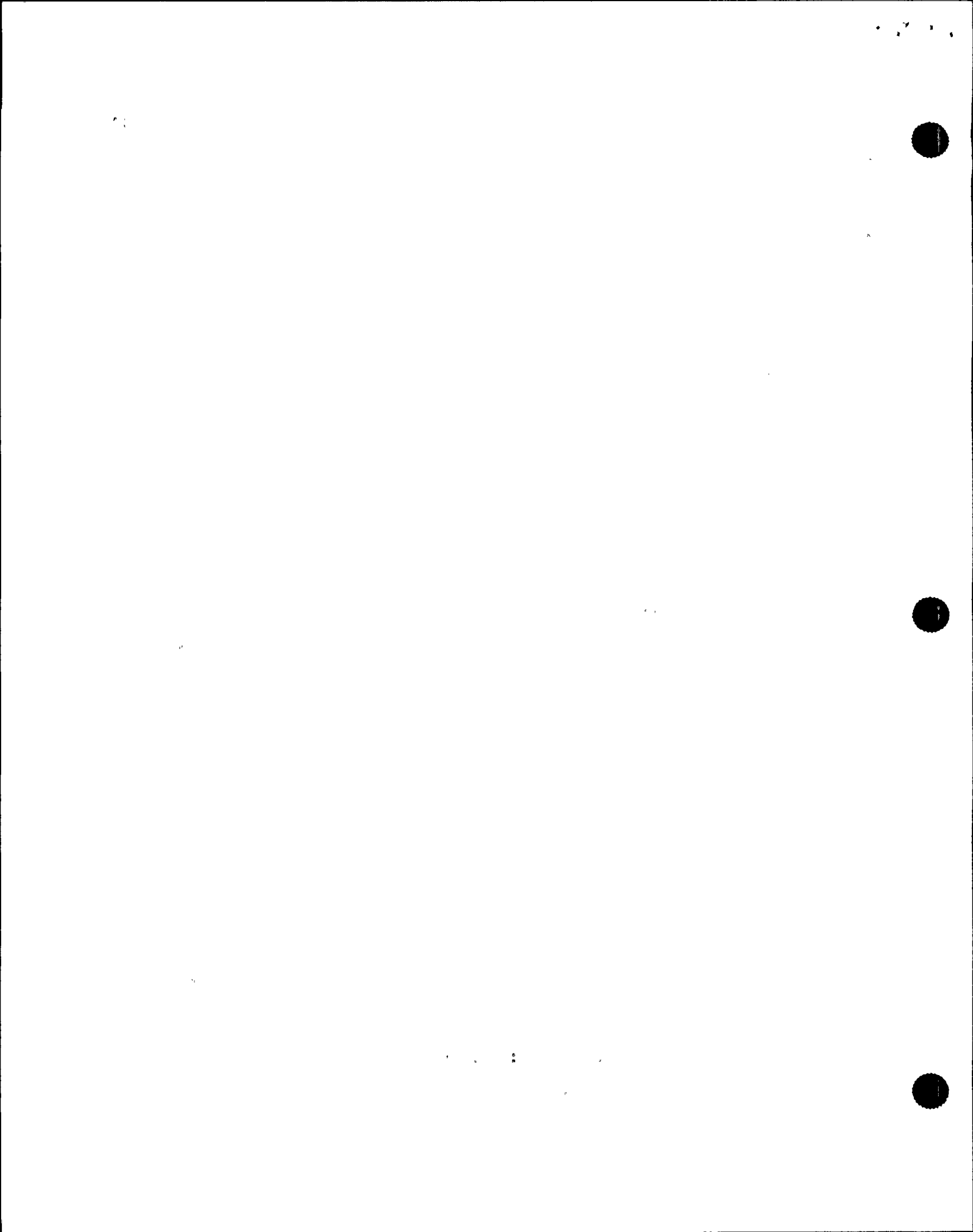
19 MR. CONTE: Oh, slow speed.

20 MR. CONTE: Recirc pumps were in slow speed?

21 MR. BERGENSTOCK: Yes.

22 MR. JORDAN: And the recirc pumps were -- or
23 recirc suction discharge valve -- which valve did you say
24 were -- oh, the flow --

25 MR. BERGENSTOCK: The flow control valve.



1 MR. JORDAN: Were to be open?

2 MR. BERGENSTOCK: Yes.

3 MR. JORDAN: And they were not?

4 MR. BERGENSTOCK: No.

5 MR. JORDAN: Were they closed and locked up? Do
6 you have any idea where they were?

7 MR. BERGENSTOCK: They -- they got a flow control
8 valve runback on a level 3 -- reactor water level. They
9 were -- let's see -- I don't remember their exact positions.
10 They were somewhere around -- Alpha was around 20 percent
11 which is the runback position. Bravo was -- I remember was
12 open a little bit further than Alpha was, so it was 25 to 30
13 percent open, I believe.

14 MR. CONTE: Why did you have to restart the
15 hydraulic power units? Did they get tripped because of the
16 event? Or is that an operator action on post-trip?

17 MR. BERGENSTOCK: It's not an operator action to
18 trip those. Under normal conditions they stay running. Off
19 the top of my head I have no idea why they tripped.

20 MR. CONTE: Okay.

21 MR. BERGENSTOCK: I would have to -- it would take
22 some thinking on it as to why they tripped.

23 MR. CONTE: Okay. So you got done with that and
24 where did you go from there? Which was the next job?

25 MR. BERGENSTOCK: Those were my two important jobs

80



1 I remember doing the rest of the day -- by now it's 9, 9:30,
2 maybe, as I said. And we're still on site emergency
3 because we can't get out of it until we're in cold shutdown
4 condition. I don't really remember doing any other major
5 jobs other than Mike Garbus was keeping a running log of
6 things that was going on and he asked me to relieve him
7 while he -- done something, I can't remember, went to the
8 bathroom or something or other. And I relieved him for
9 about five minutes and then I wrote a few things down on the
10 make -- it was a make-shift log at this time and then it
11 would be transcribed over the CSO log.

12 Other than that, I don't remember doing much.

13 MR. CONTE: Miscellaneous jobs in the control room
14 to support the cooldown, is that correct?

15 MR. BERGENSTOCK: That's -- I don't remember doing
16 anything to support the cooldown.

17 MR. CONTE: Okay.

18 MR. BERGENSTOCK: My -- I'm trying to think of the
19 term -- evacuation assembly area is in the control room.
20 So, I spent the day in the control room.

21 MR. JORDAN: They didn't send you back to
22 training?

23 MR. BERGENSTOCK: No.

24 MR. CONTE: I hate to do this to you, but back on
25 the inverters I have one follow-up question.

11



1 2 3

1 MR. BERGENSTOCK: Okay.

2 MR. CONTE: I think this will be easy for you.

3 The function of auto restart toggle switch versus -- or
4 there's a toggle switch that takes you to auto restart or
5 manual restart -- why the different position functions?

6 What does auto restart -- what does it do in auto
7 restart versus manual restart?

8 MR. BERGENSTOCK: Auto restart -- I'm not sure of
9 its function. It's --

10 MR. CONTE: How did you know to go to manual
11 restart when you were operating -- when you were doing this
12 evolution with Crandall?

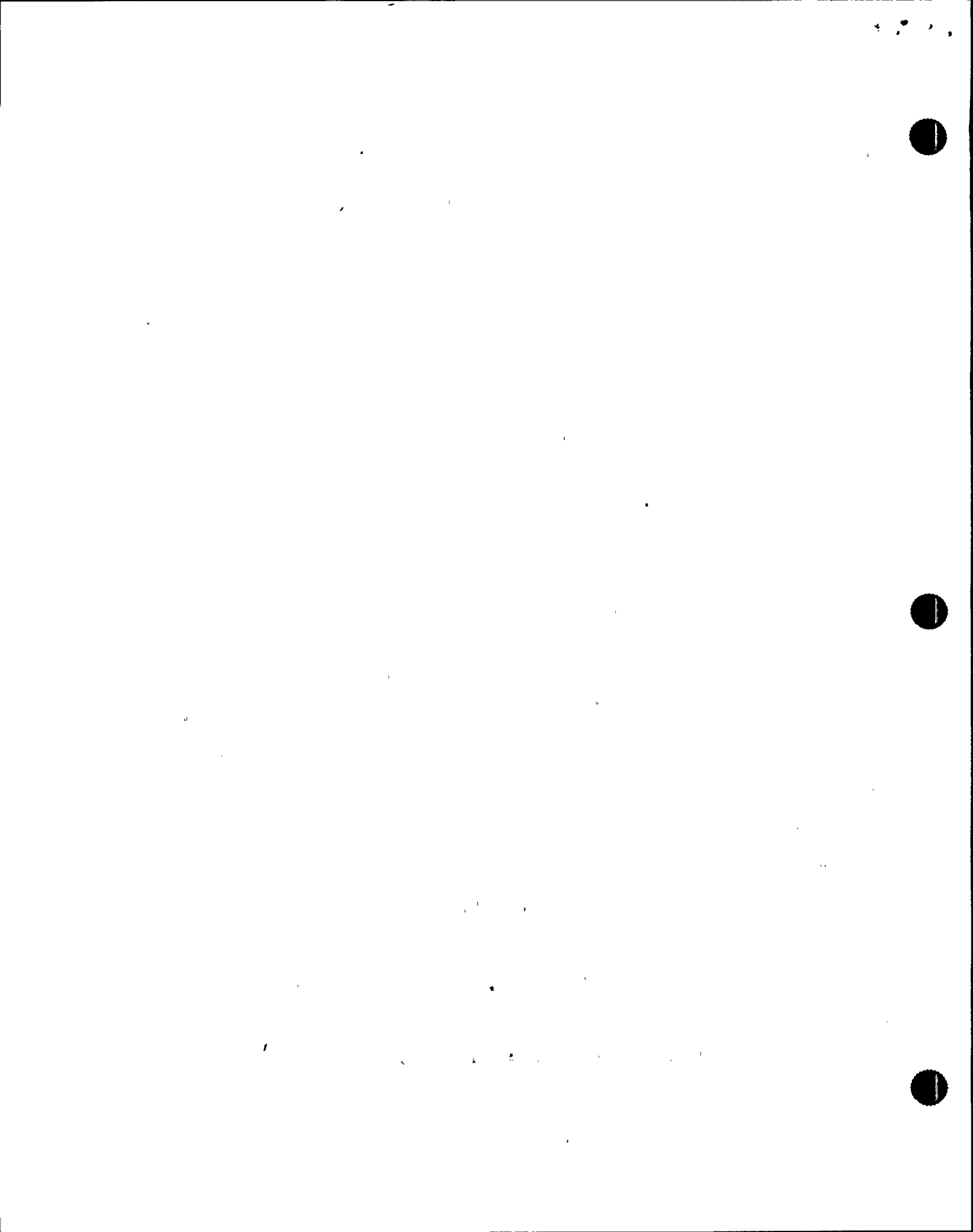
13 MR. BERGENSTOCK: Procedure. Procedure told you
14 to.

15 MR. CONTE: Okay. I think I saw a portion of that
16 procedure and I don't remember the exact portion, but I
17 thought it said something about record existing data or
18 record relay logics, do you recall any recording of
19 information of as found information or was Crandall doing
20 most of that?

21 MR. BERGENSTOCK: Crandall was doing the
22 recording.

23 MR. CONTE: Okay. You were manipulating switches
24 and breakers?

25 MR. BERGENSTOCK: Yes.



1 MR. CONTE: Okay. All right. Let me see -- I
2 don't -- do you have anything else?

3 MR. JORDAN: I don't think so.

4 MR. CONTE: You must be aware of the event -- of
5 what the event was with the loss of annunciators and the
6 loss of the full cord display and loss of a lot of balance
7 of plant instrumentation. I'm just recounting what the
8 operators saw in the control room at the time of the event.

9 MR. BERGENSTOCK: I wasn't there.

10 MR. CONTE: This isn't a question.

11 MR. BERGENSTOCK: Okay.

12 MR. CONTE: Have you ever seen something like that
13 before in your training in the simulator where all the
14 annunciators were lost, or maybe just the full cord display
15 was lost?

16 MR. BERGENSTOCK: In training we've had -- I'm
17 trying to think of how to word this properly. We've never
18 seen training where all five UPS's have gone away that I can
19 remember doing. We've had various sections go away and
20 things like that --

21 MR. CONTE: Annunciator panels?

22 MR. BERGENSTOCK: Annunciator panels.

23 MR. CONTE: How about loss of all annunciators?
24 Just that aspect?

25 MR. BERGENSTOCK: I don't remember loss of



1 annunciators.

2 MR. CONTE: Okay. I guess one last area is, is
3 there something during this event that you saw that was
4 really good and valuable for the things that you did or
5 something that you wish you had and you didn't have in
6 support of the -- whatever you did to support this event?

7 Equipment, training, tools, positive or negative
8 that you wish to share --

9 MR. BERGENSTOCK: Oh, this is an all inclusive
10 question so it's a big sphere.

11 MR. JORDAN: Big sphere type thing, you know what
12 --

13 MR. BERGENSTOCK: The training we got, I felt was
14 quite -- quite good, because, you know, when I call over and
15 they tell me they're in a site area emergency, I didn't go,
16 oh, my god, you know, what happened? I was calm about the
17 whole situation and I came over and when I walked into the
18 control room it was busy, but it wasn't -- people weren't
19 pulling their hair out or anything like that. And from the
20 -- just the people that I had come in contact with we were
21 quite calm about the whole situation.

22 MR. CONTE: What gave you that calmness,
23 confidence?

24 MR. BERGENSTOCK: Confidence in the training that
25 we had.



1 MR. JORDAN: You're used to implementing EOP's?

2 MR. BERGENSTOCK: Yes. We always get -- every
3 training cycle we get EOP training.

4 MR. CONTE: Anything you can think of negative?
5 Something you wish you had? Loss of five UPS's,
6 simultaneously?

7 MR. BERGENSTOCK: If we would have had five UPS's.

8 MR. CONTE: Besides that, as a lesson learned from
9 the event, in doing your job is there something else you saw
10 out there that --

11 MR. BERGENSTOCK: Well, the biggest irritation I
12 had was waiting in the security building. I mean, we're
13 trained to -- if you want to say jump in the middle of a
14 fire, that's fine, just as a fireman is trained to go to a
15 burning building, but it really upsets you, you've got to
16 set there at a roadblock while the building burns down and
17 then go fight it.

18 That was, I guess, the biggest torn in my side;
19 was having to wait to get in there. We got these green
20 cards issued to us that said we can go through military and
21 civilian road blocks to get here and we get here and we
22 wait.

23 MR. CONTE: Do you realize that the shift
24 supervisor ordered that in accordance with the emergency
25 plan, the shift supervisor ordered the gates closed?



1 MR. BERGENSTOCK: No.

2 MR. CONTE: That's what we were told. I don't
3 know if that's true or not. Does that sound strange to you?

4 MR. BERGENSTOCK: I have never heard that rule.

5 MR. CONTE: Really?

6 MR. BERGENSTOCK: But I'm not a station shift
7 supervisor, I'm a licensed reactor operator, not a senior
8 operator.

9 MR. CONTE: Okay.

10 MR. BERGENSTOCK: I know we have to do an
11 accountability of everybody and it would probably hinder as
12 people were going through, you were trying to account for
13 them and they're in transition.

14 MR. JORDAN: Anything that we haven't covered that
15 you would like to cover to put on the record? Information
16 that you think would be valuable to us that we haven't
17 already covered?

18 MR. BERGENSTOCK: I can't think of anything. I --
19 like I stated before I got here a half hour after
20 everything had gone down -- well, if you read the newspapers
21 and the official transcript, it happened at 05:48, I
22 believe, so it was a while before I got there and the
23 lighting had already been restored because we had lights and
24 elevators and control room annunciators when I got there.

25 MR. JORDAN: Okay. I'm done.



1 MR. CONTE: I'm done. Let's go off the record.

2 MR. JORDAN: Go off the record.

3 MR. BERGENSTOCK: Thank you.

4 [Whereupon, at 4:50 p.m., the taking of the
5 interview was concluded.]

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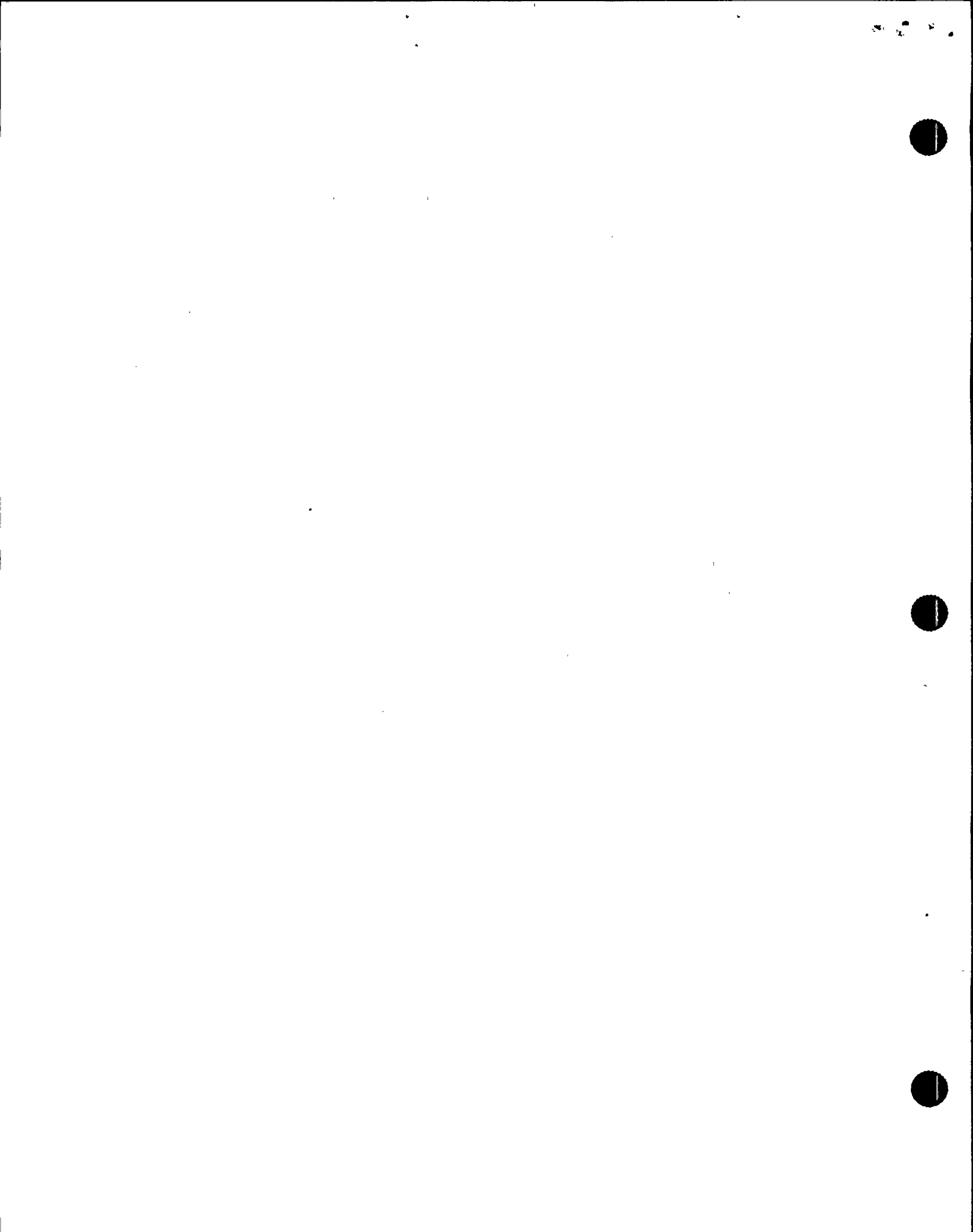
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REPORTER'S CERTIFICATE

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

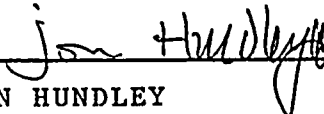
in the matter of:

NAME OF PROCEEDING: Int. of BOB BERGENSTOCK

DOCKET NUMBER:

PLACE OF PROCEEDING: Scriba, N.Y.

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.



JON HUNDLEY

Official Reporter
Ann Riley & Associates, Ltd.

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OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission
Incident Investigation Team

Title: Nine Mile Point Nuclear Power Plant
Interview of: BOB BERGENSTOCK

Docket No.

LOCATION: Scriba, New York

DATE: Thursday, August 22, 1991

PAGES: 1 - 39

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Exhibit 3-1 (continued)

-3-

ADDENDUM TO INTERVIEW OF ROBERT BERGENSTOCK
(Name/Position)

Page Line Correction and Reason for Correction

NO CHANGES REQUESTED

Page ___ of ___ Signature [Signature] Date 8/23/91

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
INCIDENT INVESTIGATION TEAM

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Interview of :
BOB BERGENSTOCK :
(Closed) :

Conference Room B
Administration Building
Nine Mile Point Nuclear
Power Plant, Unit Two
Lake Road
Scriba, New York 13093
Thursday, August 22, 1991

The interview commenced, pursuant to notice,
at 3:45 p.m.

PRESENT FOR THE IIT:
Michael Jordan, NRC
Rich Conte, NRC

100



P R O C E E D I N G S

[3:45 p.m.]

1
2
3 MR. JORDAN: Okay, it's August the 22nd, 1991.
4 It's about 10 -- excuse me, it's about 3:45 p.m. We are at
5 the Nine Mile Point Unit Two in the P Building. We're
6 conducting interviews concerning a transient that occurred
7 on August 13th, 1991.

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

10 MR. CONTE: I'm Rich Conte, Region I.

11 MR. BERGENSTOCK: I'm Bob Bergenstock, licensed
12 operator.

13 MR. JORDAN: Okay, Bob. First, why don't you just
14 give us some background what your background experience is?

15 MR. BERGENSTOCK: Okay. Let's see. Navy nuke,
16 first ship was 1976 and that's my only ship. Let's see, I
17 qualified engineering watch supervisor, engineering duty
18 petty officer, and I was discharged in September 1982.

19 MR. JORDAN: And after your discharge then --

20 MR. BERGENSTOCK: I immediately started working
21 here. I licensed on Unit One in '83 and then I was -- I was
22 hired for Unit Two, but I had to get my license on Unit One,
23 first. Then I was transferred over to Unit Two and I
24 received my license at Unit Two on '85.

25 MR. JORDAN: That's an RO license, SRO license?



1 MR. BERGENSTOCK: Yes, RO license.

2 MR. JORDAN: RO license. Okay. What position do
3 you hold on the shift?

4 MR. BERGENSTOCK: On this shift I'm a licensed
5 reactor operator, NAOE.

6 MR. JORDAN: A -- NAOE?

7 MR. CONTE: The shift -- this is the day shift or
8 the mid-shift at the time of the event?

9 MR. BERGENSTOCK: I was working surveillance shift
10 this week, assigned to training.

11 MR. JORDAN: So you were coming on -- coming into
12 the plant when the event occurred?

13 MR. BERGENSTOCK: Not exactly.

14 MR. JORDAN: Okay, why don't you --

15 MR. BERGENSTOCK: Can I tell you what happened?

16 MR. JORDAN: Sure.

17 MR. CONTE: Sure. Just start your run down.

18 MR. BERGENSTOCK: Okay. I was driving by the
19 cooling tower since I had to go over to the training center
20 and I noticed that the plume was rather small. So, when I
21 got over to the training center I phoned over to the
22 control room --

23 MR. CONTE: About what time was this?

24 MR. BERGENSTOCK: Six ten.

25 MR. CONTE: Okay.



1 MR. BERGENSTOCK: 06:10. And I phoned over and
2 Mark Davis was CSO at the time, I believe, answered the
3 phone and said we had a -- exact words I can't remember. It
4 was reactor scram, we're in site area emergency. Then I
5 said, "Okay. I assume you want me right over there?" And
6 they said, "Yes, get over here."

7 So, then I left training center, came over and
8 parked.

9 MR. JORDAN: You didn't have any problems getting
10 into the plant?

11 MR. BERGENSTOCK: Yes. I got to the --

12 MR. JORDAN: How about the driving in?

13 MR. BERGENSTOCK: No. No road blocks had been set
14 up yet or anything like that.

15 MR. JORDAN: Okay. Go ahead.

16 MR. BERGENSTOCK: So then I came -- started going
17 towards security building and I seen everybody outside and I
18 said, "This isn't looking good," to myself. So I got up
19 there to the entrance and they weren't letting anybody in;
20 green card, no green card or whatever, so I waited until
21 they allowed people to come in.

22 MR. CONTE: How many people do you think were at
23 that gate outside waiting, approximately? Ten, 20, 30, 40,
24 50?

25 MR. BERGENSTOCK: I would have to guess beginning



1 at day shift with all the electrical maintenance,
2 secretaries were there, I would estimate over 100 at that
3 time.

4 MR. CONTE: Okay.

5 MR. BERGENSTOCK: And then when I was allowed to
6 enter I went to my locker --

7 MR. CONTE: About what time were you able to
8 enter; do you remember seeing a clock?

9 MR. BERGENSTOCK: I want to say 06:27. It was
10 just a few minutes before 6:30, I believe.

11 MR. CONTE: How do you know that with pin point
12 accuracy?

13 MR. BERGENSTOCK: Because I remember looking at
14 the clock and it was just a little before 6:30, I believe.

15 MR. CONTE: Okay.

16 MR. JORDAN: Okay.

17 MR. BERGENSTOCK: I went to my locker, picked up
18 my keys, because I knew I would need them to get into
19 various locations and operate valves and whatever needed to
20 be done; my hardhat and I proceeded to the control room.

21 MR. JORDAN: Any problem with lighting to and from
22 the -- or to the control room?

23 MR. BERGENSTOCK: No. No problem.

24 MR. JORDAN: No problem with lighting? Did you
25 ride the elevator up?



1 MR. BERGENSTOCK: Yes.

2 MR. JORDAN: Elevator lighting was okay?

3 MR. BERGENSTOCK: Yes.

4 MR. JORDAN: Okay. I guess you traversed to the
5 control room?

6 MR. BERGENSTOCK: I went in the control room and
7 somebody tried to give me a job to do. And then I said,
8 "No. I see the SSS eyeballing me, I think he has a job for
9 me." And following the chain of command I have to do his
10 job first. And he said, "I want you and Dave Hanczyk to go
11 to Op Support and re-" -- I'm trying to think of the words.
12 "Repower up the UPS's." So I said, "Okay."

13 So, Dave and I went to the OPS support and we got
14 there and they said well, Dave Crandall is waiting for you
15 down on 214 of the control building. So then we went down
16 to the control building, 214 --

17 MR. JORDAN: Any problem with lighting traversing
18 to the --

19 MR. BERGENSTOCK: No, every -- at this time -- by
20 the time I had gotten there everything had been put on
21 bypass power. The four breakers were closed in the UPS's.

22 MR. JORDAN: Okay. Thank you.

23 MR. CONTE: You said Dave Crandall was at 214 --

24 MR. BERGENSTOCK: I'm sorry. His name is Bob
25 Crandall.



1 MR. CONTE: Bob Crandall was at elevation 214,
2 what building?

3 MR. BERGENSTOCK: That's the control building.

4 MR. CONTE: Okay. Go ahead.

5 MR. BERGENSTOCK: And then we phoned the control
6 room and told them we were down at UPS 1G and we would like
7 permission to power up UPS 1G.

8 MR. JORDAN: When you say power up, does it
9 already have power on?

10 MR. BERGENSTOCK: Okay. When I say power up the
11 UPS, the UPS -- all UPS's at this time are on bypass which
12 means that the four breakers are closed, but the UPS itself
13 is not energized.

14 MR. JORDAN: Okay. Thank you. It's on the --
15 what, the four breaker?

16 MR. BERGENSTOCK: Yes, the four breaker is the
17 bypass from what we call the dirty power, it comes straight
18 from your bus and goes to the loads.

19 MR. JORDAN: Okay. Go ahead.

20 MR. BERGENSTOCK: And we phoned the control room
21 and asked permission to energize 1G -- Gulf -- and it came
22 back and said, "No, they want us to start with 1A, B, C and
23 D." So then -- let's see, I'm trying to remember. There
24 was -- at this time there was more than us three there. I'm
25 trying to remember everybody else that was there at the



1 time. There's myself, Dave Hanczyk, Bob Crandall, an
2 electrician, but I can't remember the electrician's name.

3 So, we went over to 237 in the switchgear building
4 and we got permission to energize those UPS's. Oh, boy.

5 MR. CONTE: Were you successful in energizing
6 those UPS's in the switchgear room?

7 MR. BERGENSTOCK: Not all of them. That's what
8 I'm trying to remember -- which ones we had problems with.
9 1-Alpha, A, I believe we left -- we tried energizing it and
10 for some reason we couldn't get it to power up so it was
11 left on with the four breaker closed.

12 MR. CONTE: Are you using a procedure to power
13 this up?

14 MR. BERGENSTOCK: Yes. Dave Hanczyk had the
15 procedure.

16 MR. CONTE: Is it a normal operating procedure?
17 Was it a special procedure?

18 MR. BERGENSTOCK: Startup procedure.

19 MR. CONTE: You don't remember the particular
20 section of that startup procedure, do you?

21 MR. BERGENSTOCK: No.

22 MR. CONTE: Is it obvious when you are looking at
23 this procedure that this is the startup section?

24 MR. BERGENSTOCK: Yes. The way our procedures are
25 written it's written up in the start off-normal operating



1 shutdown. Off-normals.

2 MR. CONTE: Okay, continue. So you got the 1A
3 powered up?

4 MR. BERGENSTOCK: No.

5 MR. CONTE: Oh, it couldn't be powered up?

6 MR. BERGENSTOCK: We couldn't power it up.

7 MR. CONTE: I'm sorry, go ahead.

8 MR. BERGENSTOCK: We went to -- with the 1A, when
9 we were trying to power it up, for some reason the 4 breaker
10 kept getting an open signal and at 3 breaker the output
11 breaker never closed in.

12 The way I remember energizing these was we closed
13 the input power first, your 1 breaker.

14 MR. CONTE: Did it close, or did it already trip,
15 go to neutral?

16 MR. BERGENSTOCK: Okay, I'm starting to remember
17 more now about that one, the 1A. That's -- we closed it in.
18 They closed --

19 MR. CONTE: Now, wait. Before you started this,
20 were there any logic alarm lights in and did you have to
21 reset any?

22 MR. BERGENSTOCK: When I got down there previous
23 to myself going down there, other operators had been down
24 there and closed in the four breakers and repositioned the
25 breakers so as far as alarms and initial conditions after



1 the incident, I don't have first-hand knowledge of that.

2 MR. CONTE: When you were getting ready to close
3 CB1 at the time you closed CB1 did you have to reset any
4 logics or did --

5 MR. BERGENSTOCK: I don't remember -- I personally
6 did not reset any logic and I don't remember seeing any
7 alarms in.

8 MR. CONTE: Okay. So you closed CB1. It closed.
9 But what happened to CB3?

10 MR. BERGENSTOCK: Okay, well, we doing a manual
11 restart. There is a little toggle switch. You have auto
12 restart, manual restart and I believe there is a third
13 position, manual, I believe.

14 Closed in the 1 breaker and in the course of
15 events, of discussions, whatever, somehow I -- you have
16 numerous meters up on this panel, I said we don't have any
17 input voltage here, something is not right.

18 MR. CONTE: With the CB1 closed?

19 MR. BERGENSTOCK: With the CB1 closed, so then we
20 said hmmm -- so then we discussed it and we said, well, we
21 don't have any supply power even with CB1 closed, no voltage
22 so then we checked the supply breaker and the panel, I can't
23 remember -- it was Panel 300, just behind it, and its
24 breaker was tripped, so we reset the breaker and then we
25 read 600 volts.



1 MR. CONTE: Did CB1 remain closed?

2 MR. BERGENSTOCK: That's what I am trying to
3 remember. I remember it did trip open. I am not sure
4 whether it was instantaneous or not, but what I remember
5 distinctly about it was that the 1 breaker did trip open
6 again and we checked the 300 panel and its breaker had
7 tripped again also, so we said that's it. Something is
8 wrong internally. We are not going any further with 1A. We
9 are leaving it on bypass power before breaker closed.

10 MR. JORDAN: When you close in the CB1 breaker, do
11 you have to open the CB4 breaker before you close in the CB1
12 or just leave the CB4 closed in and then you close in the
13 other? In other words do you do a dead bus transfer --

14 MR. BERGENSTOCK: No. There's more, there's more
15 breakers involved here. You have a breaker 2, which is a DC
16 power supply, and you have a breaker 3 which is the output
17 breaker and what happens on a manual start is you take the
18 toggle switch, you close in your 1 breaker to power up the
19 UPS, and your 4 breaker is still closed, powering loads.

20 So what you do then is you toggle closed -- the
21 little toggle switch -- for your 3 breaker and when the 3
22 breaker closes the 4 breaker is supposed to automatically
23 open. It's a make before break.

24 MR. JORDAN: So you never got to that point before
25 the 1 breaker tripped back off again?



1 MR. BERGENSTOCK: No. I don't believe we did.

2 Dave Crandall was keeping -- he had a notepad
3 like you have and he was keeping a running tally of
4 everything that was going on at the time, so his notes or
5 when you talked to him he has a document of what happened at
6 each UPS ongoing from ten days ago.

7 THE REPORTER: Did you say Dave Crandall?

8 MR. BERGENSTOCK: I'm terrible with names. His
9 name is Bob Crandall.

10 MR. CONTE: Dave Hanczyk, Bob Crandall -- and
11 you're Bob what?

12 MR. BERGENSTOCK: Bob Bergenstock!

13 MR. JORDAN: -- stock?

14 MR. BERGENSTOCK: -- stock.

15 MR. JORDAN: Good and I am Mike Jordan. Okay, go
16 ahead. I think you were at the point where you said that
17 the CB1 breaker you engaged it. You had went to the panel
18 behind you to make sure that the input supply to the 1A UPS.
19 You found that breaker. You know what that breaker number
20 is?

21 MR. BERGENSTOCK: I can't remember. We looked in
22 the power supply section of the operating procedure and it
23 tells us which panel and which breaker.

24 MR. JORDAN: You found that breaker open. You
25 reclosed that breaker. At that point then the CB1 breaker



1 tripped or was it some time later?

2 MR. BERGENSTOCK: That I can't remember exactly
3 when it tripped again but during the course of events of
4 trying to power it up, the 1 breaker and the supply breaker
5 to the 1 breaker on Panel 300 tripped again, so we left both
6 breakers in the tripped condition and said there is
7 something wrong with the 1A internally, we're not going to
8 try this again.

9 MR. JORDAN: And left the bus powered by --

10 MR. BERGENSTOCK: The 4 breaker closed.

11 MR. JORDAN: Which is the maintenance?

12 MR. BERGENSTOCK: The bypass power.

13 MR. JORDAN: That took care of 1A?

14 Which one did you go to next?

15 MR. BERGENSTOCK: Boy! I can't remember the exact
16 order we'd done them in. The only thing I can remember is
17 alphabetically so I am going to go to the UPS 1-B next.

18 MR. CONTE: Okay. Can you pinpoint the time you
19 were at 1A in the morning? Is this 7:00 to 8:00, 8:00 to
20 9:00, 9:00 to 10:00? We don't know need exact times.

21 MR. BERGENSTOCK: I am going to say a little --
22 around 7:00.

23 Around 7-ish.

24 MR. CONTE: Okay. That's fair enough.

25 All right. 1B -- do you remember what you did

64



1 with 1B?

2 MR. BERGENSTOCK: Okay. We never powered 1B,
3 either.

4 MR. CONTE: Same symptoms?

5 MR. BERGENSTOCK: No. We got the one breaker
6 closed, and, when we tried to do a manual restart, the 3
7 breaker, which is the output breaker, for some strange
8 reason, every time we went to close it, just went to its
9 tripped condition. It would never fully close.

10 MR. CONTE: No symptoms of the upstream supply
11 breaker to CB-1 opening for the 1B power supply?

12 MR. BERGENSTOCK: Not that I can remember.

13 MR. CONTE: Did you check?

14 MR. BERGENSTOCK: We had 600 volts on the meter.

15 MR. CONTE: You had 600 volts, so that one didn't
16 trip.

17 MR. BERGENSTOCK: I don't believe it, no.

18 MR. JORDAN: You say that the CB-3 would not
19 engage or fully close. How about CB-4? Would CB-4 open?

20 [Pause.]

21 MR. BERGENSTOCK: I'm trying to remember
22 exactly --

23 MR. JORDAN: That's all right. Take your time.
24 It's no hurry.

25 MR. BERGENSTOCK: I didn't hear the question.



1 MR. CONTE: I didn't hear the question.

2 MR. JORDAN: The question is, he said that CB-3
3 would never fully close; would CB-4 open?

4 MR. BERGENSTOCK: I believe it did, on the first
5 attempt, because --

6 MR. JORDAN: Did you lose power to the --

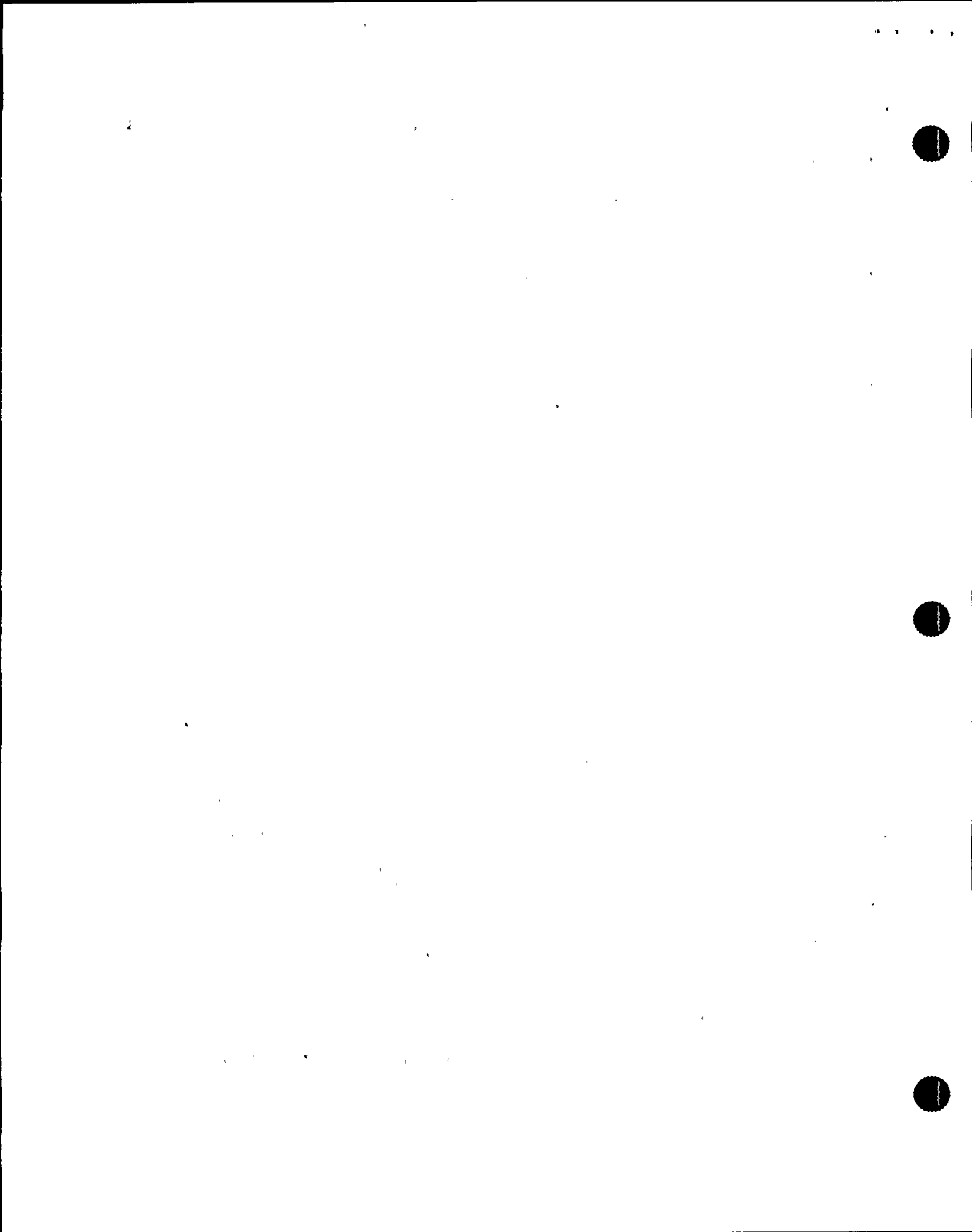
7 MR. BERGENSTOCK: Well, what happens is, CB-3 is
8 supposed to fully close when CB-4 opens.

9 MR. JORDAN: Yes.

10 MR. BERGENSTOCK: But, for some strange reason,
11 CB-3 never fully closed. Bob Crandall informed it had a
12 weak spring in it -- or for some strange reason. It was an
13 internal problem with the CB-3 breaker itself. It wasn't
14 fully closing. And the CB-4 breaker popped open and
15 reclosed, with 1-Bravo.

16 So the final result was, 1-Bravo was left with the
17 CB-4 breaker closed.

18 I'm trying to remember. Somewhere on one of the
19 UPS's, the 3 breaker never closed, but the 4 -- oh, that's
20 what it was. Okay. When we closed the 1 breaker, CB-4
21 momentarily got an open-close signal, and I believe that
22 started with the -- oh, boy. I can't remember which UPS it
23 was, but I remember, when we were powering up the UPS's,
24 when we closed the 1 breaker on them, we removed connector
25 6, which was the power to the motor that operates the



1 breaker, solenoid or motor, whichever the case may be.

2 MR. CONTE: Which breaker, CB-4 or CB-3?

3 MR. BERGENSTOCK: CB-4. When we closed the 1
4 breaker, that way it wouldn't open and close on us. That
5 way we wouldn't momentarily dead-bust it for some strange
6 reason.

7 MR. JORDAN: To make sure the CB-4 would not open
8 and close, what did you remove?

9 MR. BERGENSTOCK: Connector 6, I believe the
10 number was.

11 MR. JORDAN: Is this in the procedure to do that?

12 MR. BERGENSTOCK: No.

13 MR. JORDAN: Okay.

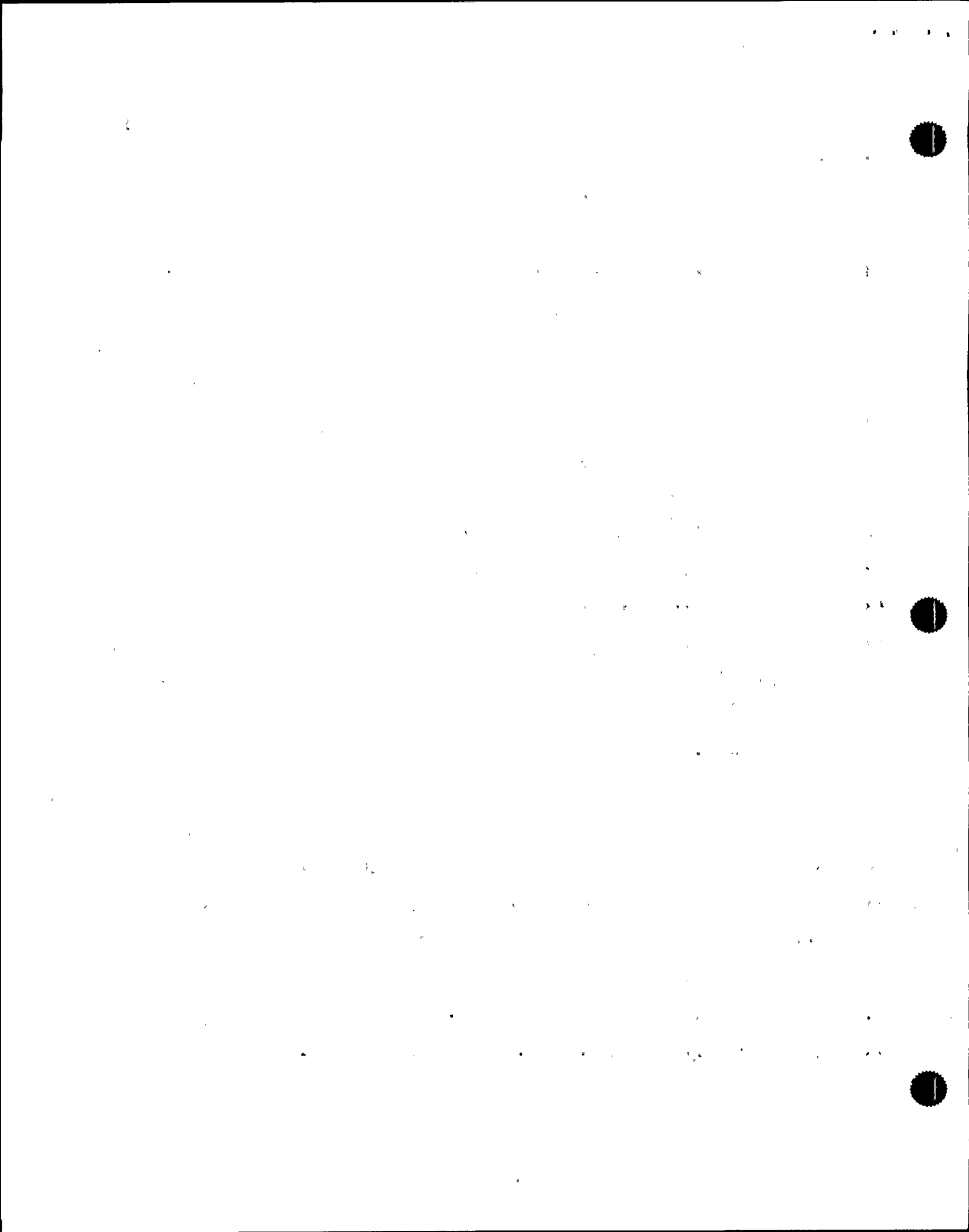
14 MR. BERGENSTOCK: That was on the recommendation
15 of Bob Crandall, which made perfectly good sense to me.

16 When we closed the 1 breaker, then we reconnected
17 the connector number 6.

18 MR. CONTE: When you were manipulating CB-3, you
19 got that symptom of a momentary open and close, so you
20 disconnected a lead that would prevent CB-4 from --

21 MR. BERGENSTOCK: No. It was when we were
22 operating -- when we closed CB-1, which is the input breaker
23 to the power supplies, UPS's.

24 MR. CONTE: You don't remember which UPS, but,
25 when you manipulated to close CB-1, you got a momentary open



1 and close on CB-4.

2 MR. BERGENSTOCK: Yes.

3 MR. CONTE: Is that correct?

4 MR. BERGENSTOCK: That's correct.

5 MR. CONTE: Okay.

6 And to prevent that from happening, you wanted to
7 keep CB-1 closed -- pulled the motor cable, or whatever.

8 Which plug did you call it?

9 MR. BERGENSTOCK: We wanted to keep the CB-4
10 breaker closed.

11 MR. CONTE: So which plug did you disconnect?

12 MR. BERGENSTOCK: Connector number 6, I believe.

13 MR. CONTE: Number 6.

14 MR. JORDAN: Did you do this on all of them, or
15 did you just do this after this event, whichever breaker it
16 was and whichever UPS it was?

17 MR. BERGENSTOCK: No, we done them on all
18 subsequent UPS starts.

19 MR. JORDAN: When this occurred, when you got the
20 momentary CB-4 open and close, from then on, whichever UPS
21 it was, from then on you removed the connector 4 or
22 connector 6 before you connected CB-1, or after you
23 connected CB-1?

24 MR. BERGENSTOCK: Before we closed in CB-1,
25 because when you close CB-1 you power the logic up to the

36



1 UPS.

2 MR. JORDAN: Okay.

3 MR. BERGENSTOCK: UPS's 1-Charlie, 1-Delta -- they
4 were normal. I don't remember any problems with those.

5 MR. CONTE: You mean they were on the CB-1
6 breaker.

7 MR. BERGENSTOCK: No. They were on the CB-4
8 breaker, but powering them up, there was no problem.

9 MR. CONTE: And they were successfully shifted to
10 the normal supply.

11 MR. BERGENSTOCK: Yes.

12 MR. JORDAN: When you say you manually reset, on
13 the ones that it worked -- on 1-C and 1-D -- can you walk us
14 slowly through the steps that you took to power them up?

15 MR. BERGENSTOCK: Okay. To power up the UPS's, we
16 disconnected connector 6, which is not in the procedure; we
17 then verified -- I believe we put the toggle switch in
18 manual start; we then closed the CB-1 breaker, which is the
19 input to the UPS, AC power; we then done a lamp check to
20 ensure that all lamps are lit for the alarms. There are
21 three button you have to press for lamp check, because there
22 are three different circuits.

23 MR. CONTE: Any logic lights in? Do you remember?

24 MR. BERGENSTOCK: Not that I recall.

25 MR. CONTE: So what happened when CB-1 went



1 closed?

2 MR. JORDAN: Wait a minute. Let's go real slow.

3 MR. BERGENSTOCK: This is in general.

4 MR. JORDAN: Right. You close the CB-1; you do a
5 lamp check --

6 MR. BERGENSTOCK: Then you hit toggle switch for
7 CB-4, which closes CB-4 -- I'm sorry. You hit the toggle
8 switch for CB-3. This closes --

9 MR. JORDAN: When you say toggle switch, you put
10 it open?

11 MR. BERGENSTOCK: It's just a little toggle
12 switch. You go to the closed position to close the breaker.

13 MR. JORDAN: Okay. CB-3 toggle closed.

14 MR. BERGENSTOCK: This shuts CB-3, which is the
15 output breaker of the UPS. Automatically CB-4 opens. Then
16 you close CB-2, which is your DC input power.

17 MR. JORDAN: Is that a toggle switch, also, or is
18 that a big manual?

19 MR. BERGENSTOCK: No, that's a manual breaker.
20 You manually close.

21 I believe those are the steps to it.

22 MR. JORDAN: Do you leave it in manual start?

23 MR. BERGENSTOCK: I believe we went to auto on the
24 toggle switch, but I'm not sure of that step.

25 MR. JORDAN: Do you know when you do that?



1 MR. BERGENSTOCK: At the end.

2 MR. JORDAN: That's generally the sequence of
3 doing it?

4 Do you have a question?

5 MR. CONTE: What did you do next, after you got
6 done with C and D -- unless you want to pursue C and D a
7 little more.

8 MR. JORDAN: No. C and D, you say, went pretty
9 much -- by walking through these steps, C and D, you powered
10 them up.

11 MR. BERGENSTOCK: Yes.

12 MR. JORDAN: Okay. And there were no problems
13 that you were aware of, anyway, in C and D, or did you have
14 any other problems?

15 MR. BERGENSTOCK: Not with C and D.

16 Going back to the Bravo one -- I'm remembering
17 things as I go through these UPS's --

18 MR. JORDAN: Okay.

19 MR. BERGENSTOCK: For some reason, we had to down-
20 power the logic in it. We had to open two doors, and there
21 are two internal toggle switches that I opened, because that
22 was one of the reasons we were removing the connector 6 from
23 CB-4. For some reason, when CB-3 didn't fully close, UPS
24 Bravo never told CB-4 to reclose, so Bob Crandall thought
25 there might be a problem with the logic, so we down-powered



1 the logic, and then we just turned the toggle switches back
2 on, and it just repowers it back up. I remember doing that.

3 After we had done those four UPS's, we went back
4 down to elevation 214 to power up UPS 1G. We had a problem
5 powering up UPS 1G. Sometime after we closed the 1 breaker,
6 the power supply in panel 300, I believe it was, Dave
7 Hanczyk went and closed the breaker.

8 MR. JORDAN: So that means there wasn't power to
9 the UPS?

10 MR. BERGENSTOCK: There was power to 1G when I got
11 there. I closed in the 1 breaker. I believe we tried to
12 close the 3 breaker; that's when the input in panel 300
13 tripped. Dave Hanczyk went and reset and closed the breaker
14 for 1G. He called me on the here-here and said he was clear
15 of the panel, and I could try to power up UPS 1G again.

16 MR. CONTE: You're saying that Dave Hanczyk had
17 to reset panel 300 at the supply breaker twice -- once when
18 you first went down there to power up 1G and then, second,
19 because it tripped when you closed CB-1?

20 MR. BERGENSTOCK: No. He only powered it up once.

21 MR. CONTE: Okay. When you got there, the power
22 supply on panel 300 was already closed.

23 MR. BERGENSTOCK: Yes.

24 MR. CONTE: You had voltage. All you had to do
25 was shut CB-3.

12



1 MR. JORDAN: CB-1.

2 MR. CONTE: CB-1. I'm sorry.

3 MR. BERGENSTOCK: If you want, I can use input and
4 output breakers --

5 MR. CONTE: No. We understand.

6 MR. JORDAN: We'd better stick with the CB-1s and
7 3s, if that's what they are. If you've got the numbers
8 down, use the numbers.

9 MR. CONTE: We know they are.

10 MR. BERGENSTOCK: Okay.

11 MR. CONTE: Then what happened?

12 MR. BERGENSTOCK: He reset --

13 MR. JORDAN: Did that require you to reset 1B?
14 Did 1B trip when you lost input power?

15 MR. BERGENSTOCK: CB-1 or 1B? What are you
16 talking about?

17 MR. JORDAN: No, 1B.

18 MR. BERGENSTOCK: We're back on UPS 1B?

19 MR. JORDAN: No. I'm sorry, CB-1. Did CB-1 trip,
20 then, when you lost input power?

21 MR. BERGENSTOCK: I really can't remember that.

22 MR. JORDAN: Okay. Go ahead.

23 MR. CONTE: After Dave went and reset the breaker
24 on 300 panel, do you remember manipulating CB-1?

25 MR. BERGENSTOCK: I remember looking at the meter



1 and saying, He closed the breaker on panel 300, because we
2 have 600 volts again, input power.

3 MR. CONTE: It's quite possible that CB-1 did not
4 trip, and all you had to do was reset the supply breaker.
5 It's possible; you don't know for sure, though.

6 MR. BERGENSTOCK: I don't know. We have selective
7 tripping, so it should have opened, but I can't remember one
8 way or the other.

9 MR. CONTE: Okay. What did you do after that?

10 MR. BERGENSTOCK: Then we powered UPS 1G up, and
11 it powered up properly. By this time --

12 MR. CONTE: Once again, you did that using the
13 normal sequence of hitting the toggle switch on CB-3 to
14 close --

15 MR. BERGENSTOCK: Yes.

16 MR. CONTE: -- and the automatic action and
17 interlock of CB-3 and -4 worked.

18 MR. BERGENSTOCK: Yes.

19 MR. CONTE: Okay.

20 MR. BERGENSTOCK: By this time, an NRC inspector
21 showed up.

22 MR. CONTE: Rob Temps.

23 MR. BERGENSTOCK: Yes.

24 MR. CONTE: He missed all the action, I guess.

25 You had just gotten done with all the UPS's. He wasn't with

25



1 you in any of the other UPS power supply.

2 MR. BERGENSTOCK: I don't believe so. I believe
3 that's the first conscious time that I remember seeing him
4 there.

5 MR. CONTE: That was 1G. Okay.

6 MR. BERGENSTOCK: And then Bob Crandall said, Our
7 job is done here. The ones that are powered up are powered
8 up, and the ones that can't be are going to take WRs to fix
9 -- work requests.

10 Then Dave and I went back to the ops support, and
11 we had a discussion with the leader there. Then we went
12 back to the control room.

13 MR. CONTE: About what time was all this done?
14 Seven, 8 -- it had to be after 7.

15 MR. BERGENSTOCK: I'm going to say around 8
16 o'clock by now.

17 MR. JORDAN: You went back to ops support, you're
18 saying, and had a discussion with the leader there?

19 MR. BERGENSTOCK: Yes. Apparently we were
20 supposed to sign in for accountability, because we were out
21 in the field, and he said, Well, sign out so we know you
22 left. Dave and I said, We didn't know we were supposed to
23 sign in. So, during all this time, we weren't accounted
24 for.

25 MR. JORDAN: Okay.



1 MR. CONTE: By the time you got to G, did you
2 still have -- Well, I guess 1A through D are in one room,
3 and G is in another room. As you went through each of the
4 A, B, C, D -- whatever sequence you went -- did you always
5 initially try to start it using the startup procedure, or
6 did you abandon using the procedure after the first
7 inverter?

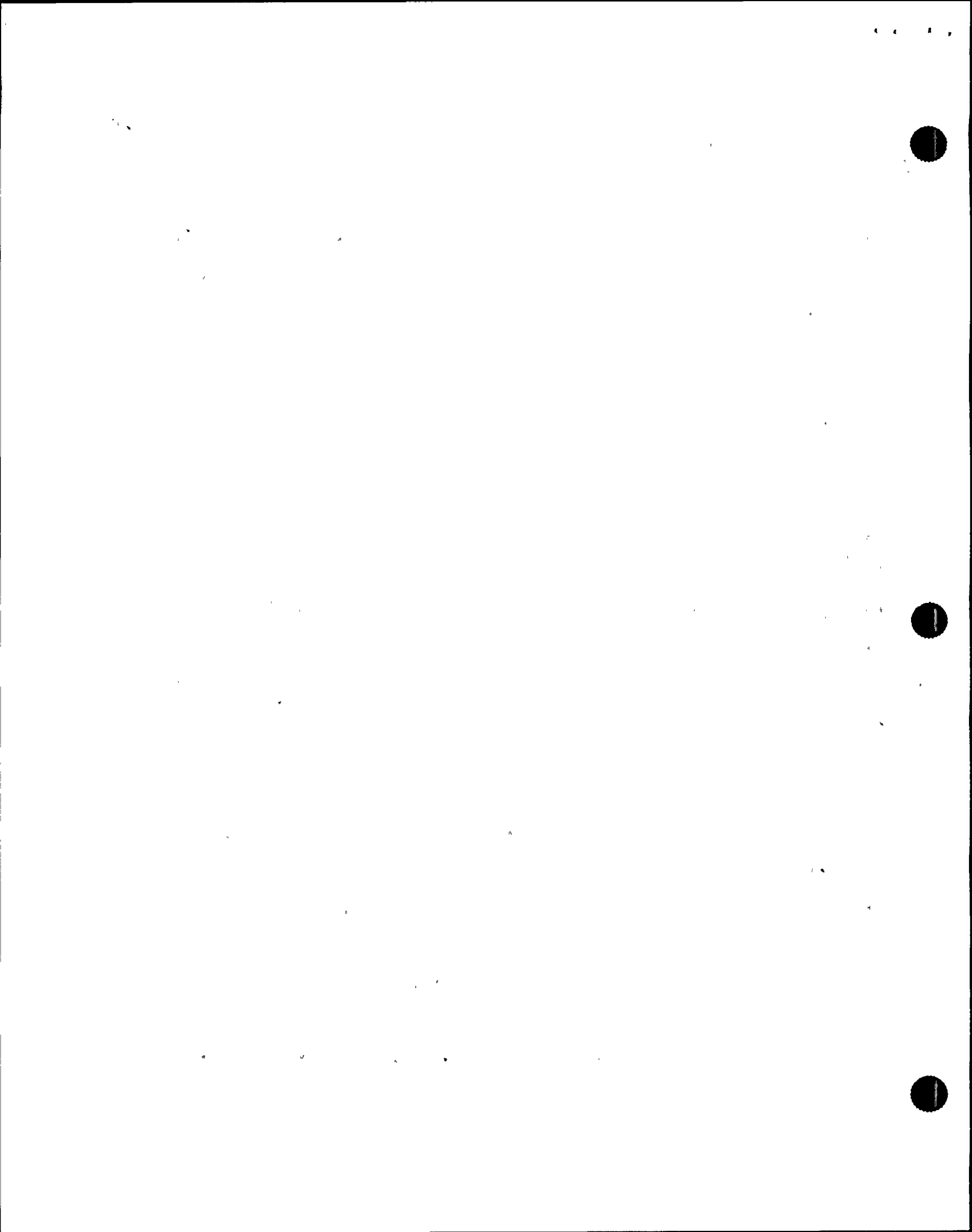
8 MR. BERGENSTOCK: We started them up in accordance
9 with the procedure, our then opening the one connector No.
10 6.

11 MR. JORDAN: You reconnected connector No. 6 when?
12 Or did you just leave them disconnected?

13 MR. BERGENSTOCK: No, we closed -- reconnected
14 connector No. 6 after we closed in the 1 breaker because you
15 have to have power for the 4 breaker to automatically open.

16 MR. CONTE: Connector No. 6 was only manipulated
17 for one of the inverters but you can't remember which? You
18 suspect it was --

19 MR. BERGENSTOCK: No. That's incorrect. We
20 opened -- after we had this problem with the 1 UPS, I can't
21 remember which one it was, it was decided, well, Bob
22 Crandall made the recommendation that we open connector No.
23 6 prior to closing the 1 breaker on each UPS so we didn't
24 get that momentarily cycling of the 4 breaker and I
25 concurred with it since I am the operator that opened the



1 connector.

2 MR. JORDAN: Again, you opened it. You put the
3 toggle switch in manual start. Then you closed the CB1.
4 Then you reconnected the 6 -- stop me when I'm wrong,
5 please.

6 MR. BERGENSTOCK: Okay.

7 MR. JORDAN: Is that correct? I don't want to put
8 words in your mouth.

9 MR. BERGENSTOCK: No, I believe that's the
10 sequence of events that happened.

11 MR. JORDAN: Then CB3?

12 MR. BERGENSTOCK: Because in order for CB4 to
13 automatically open, when you take the toggle switch for CB3
14 to close if Connector 6 was not connected, CB4 would remain
15 closed so the connector had to be reconnected prior to
16 closing CB3.

17 MR. CONTE: These deviations from the startup
18 procedure, did you perceive that you were in the 50.54(x)
19 situation where you are dealing from the procedure on an
20 emergency situation.

21 Did you think about that at that time?

22 MR. BERGENSTOCK: Well, 50.54 is to protect the
23 public health and general welfare.

24 [Pause.]

25 MR. CONTE: Did you perceive that these actions on



1 these breakers were in the interest of public health and
2 safety?

3 MR. BERGENSTOCK: They were in the best interest
4 in supplying power back to the instrumentation and
5 components that are served by the UPS's.

6 MR. CONTE: Anything else you want to say on that?

7 MR. BERGENSTOCK: No.

8 MR. CONTE: When you were in the OSC before you
9 went out to do the repowering on the UPS's who is the most
10 senior person who is in charge at the OSC?

11 MR. BERGENSTOCK: I went over to the electrical
12 maintenance. I can't remember the person I spoke to.

13 MR. CONTE: I assume Bob Crandall was there also?

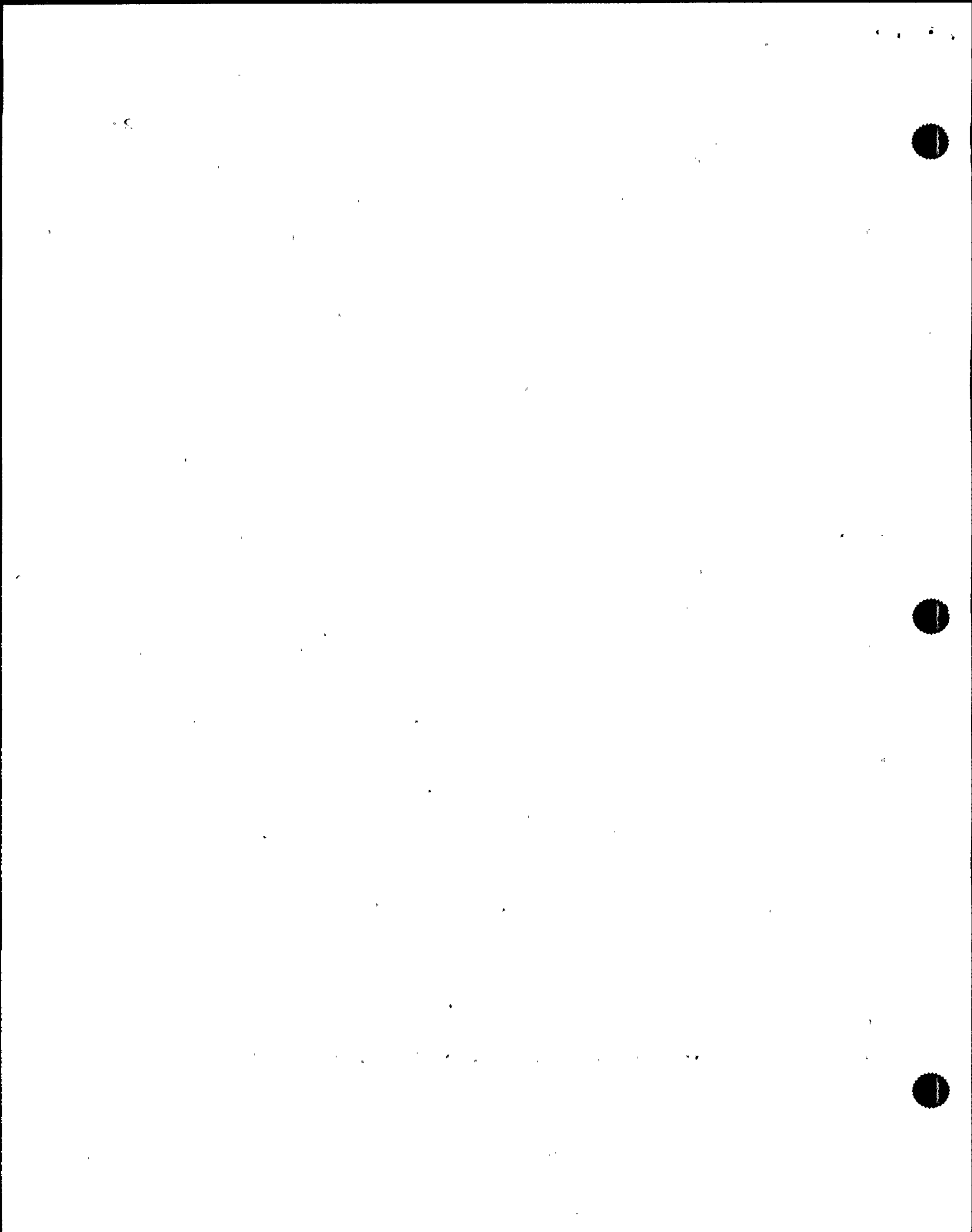
14 MR. BERGENSTOCK: No, Bob Crandall was already
15 down at 214, waiting for us.

16 MR. CONTE: I see, so you went over to electrical
17 maintenance and electrical maintenance told you Bob Crandall
18 is waiting for you at --

19 MR. BERGENSTOCK: Yes. Down at 214.

20 MR. CONTE: Bob didn't have a handwritten game
21 plan, if you will, or a handwritten temporary procedure of
22 some sort on repairing these UPS's, did he? It sounded to me
23 like he did and all you were using was the startup
24 procedure.

25 You don't know what he had and what he didn't



1 have?

2 MR. BERGENSTOCK: He had some paperwork with him
3 and I know he had a notepad. He was taking notes on it as we
4 were powering each UPS up.

5 I am not sure what his train of thought was.

6 MR. CONTE: Do you know who normally is in charge
7 at the OSC? Is there a particular manager that goes to the
8 operations support center that becomes in charge?

9 MR. BERGENSTOCK: Yes, there is.

10 MR. CONTE: Who is it, do you know?

11 MR. BERGENSTOCK: Off the top of my head, no.

12 MR. JORDAN: What kind of communications were
13 being done when you were at UPS's between yourself and the
14 control room or between your groups and the control room?

15 MR. BERGENSTOCK: We were using radios.

16 MR. JORDAN: Radios. What kind of information
17 were you transmitting to them?

18 MR. BERGENSTOCK: We would get permission, we were
19 saying we'd like permission to power up what UPS it was at
20 the time and they'd say wait. They would have to talk to
21 the SSS and then we'd have to also wait and get permission
22 from I believe it was TSC wanted to get involved.

23 MR. JORDAN: You contacted TSC or --

24 MR. BERGENSTOCK: I was not operating the radio.

25 MR. JORDAN: The authorization from the TSC came



1 directly from the TSC through the control room? Do you know
2 how the communications were set up?

3 MR. BERGENSTOCK: I am unclear on that.

4 MR. JORDAN: Okay. You are unclear on what the
5 question is or unclear on how the communications were set
6 up?

7 MR. BERGENSTOCK: Well, okay. They timed it. It
8 looked like we had two bosses. We were getting permission
9 from the TSC and the control room.

10 The way it's supposed to work is TSC is in charge
11 now. That's the way it goes in an emergency. But just out
12 of habit we always got permission from the control room to
13 do everything.

14 MR. JORDAN: I was just curious how much the
15 control room knew -- did you tell them what UPS you were on
16 so he had an idea where you were or you just communicated to
17 the -- I am just trying to figure out how much information
18 the control room had when you guys were doing this, this
19 transfer.

20 MR. BERGENSTOCK: Dave would call the control
21 room, Dave Hanczyk, and he would get permission to power up
22 the UPS. He would say we are at UPS whatever, we'd like
23 permission to re-energize it, wait one while we clear it.

24 I can't remember if we gave them detailed steps as
25 to when we were closing CB1 and CB2, CB3. I can't remember



1 if we gave them that much detailed information.

2 MR. CONTE: When you got back to the OSC what
3 happened?

4 MR. BERGENSTOCK: We went over to the electrical
5 coordinator and told them they were complete. He signed --
6 he had our names on a form. He told us to sign out and we
7 said, well, we never signed in. He said all right, well,
8 then go back to the control room.

9 MR. CONTE: And you went back to the control room?

10 MR. BERGENSTOCK: I went back to the control room.

11 MR. CONTE: Dave went where?

12 MR. BERGENSTOCK: I believe he came back to the
13 control room with me.

14 MR. CONTE: What did you do in the control room?
15 New job?

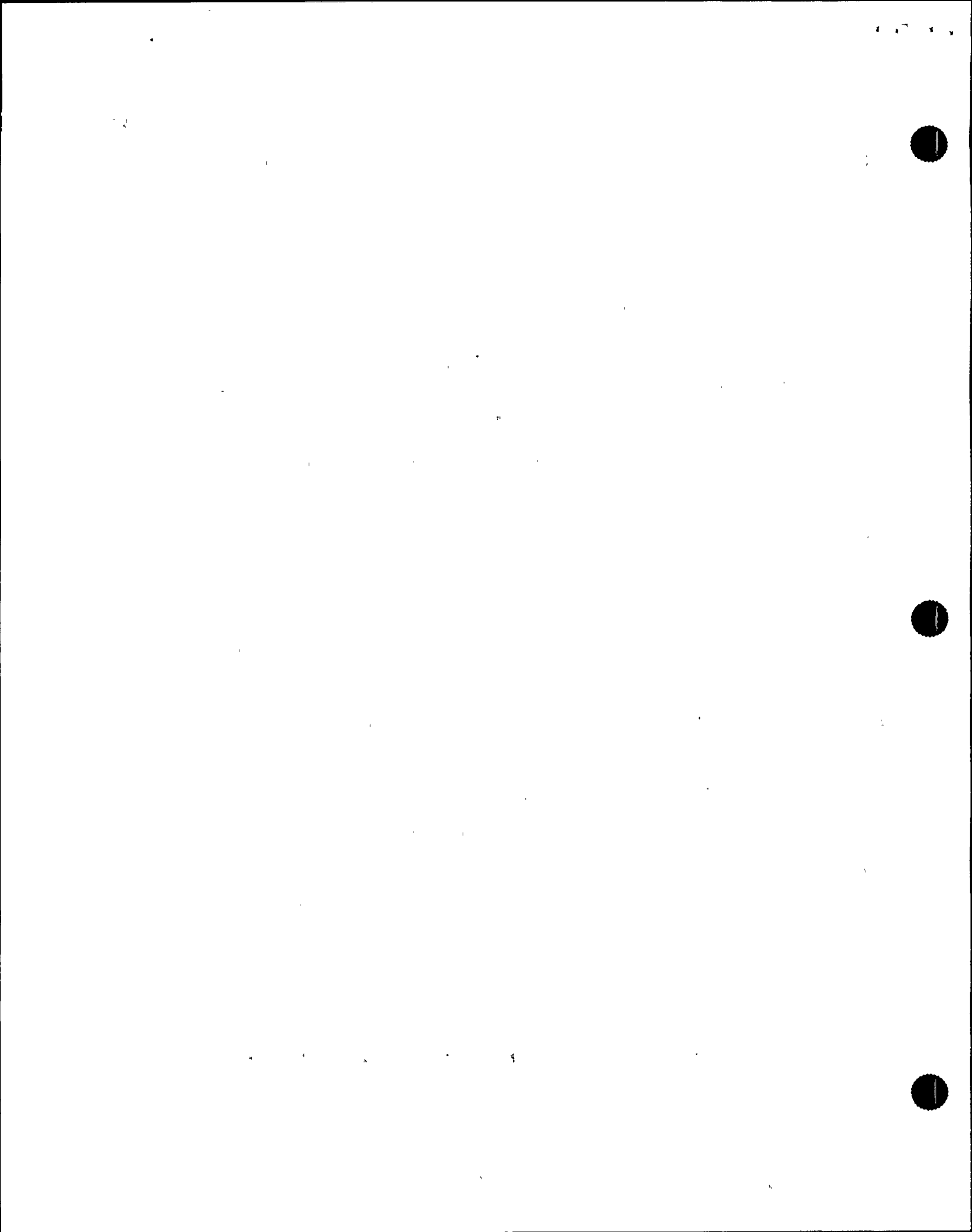
16 MR. BERGENSTOCK: Then I was assigned -- I was
17 assigned to power, to restart the hydraulic power units for
18 the reactor recirc control valves.

19 MR. CONTE: About what time was that?

20 MR. BERGENSTOCK: Eight o'clock.

21 MR. CONTE: Okay. And then how long did that
22 take? Did you have to leave the control room to do this
23 job?

24 MR. BERGENSTOCK: No. I was in the control room
25 operating the electrical part of it and Bob Pellegrino went



1 out to the individual hydraulic power units in the reactor
2 building to check local indication.

3 MR. CONTE: Any problems in starting them up?

4 MR. BERGENSTOCK: No.

5 MR. CONTE: How long did that job take? When did
6 you complete it, approximately?

7 MR. BERGENSTOCK: Well, by the time I got those
8 started up and the recirc control valves reopened, hm --
9 maybe 45 minutes. It's around 9 o'clock now, maybe.

10 MR. CONTE: What was so important about this job
11 in relation to the plant cooldown, or it didn't have much to
12 do with it?

13 MR. BERGENSTOCK: The hydraulic power units
14 supplied hydraulic oil pressure to your recirc flow control
15 valves and when the recirc pumps are on slow speed your
16 recirc valves are supposed to be open. And they were not.

17 MR. CONTE: When they're in full speed?

18 MR. BERGENSTOCK: Slow speed.

19 MR. CONTE: Oh, slow speed.

20 MR. CONTE: Recirc pumps were in slow speed?

21 MR. BERGENSTOCK: Yes.

22 MR. JORDAN: And the recirc pumps were -- or
23 recirc suction discharge valve -- which valve did you say
24 were -- oh, the flow --

25 MR. BERGENSTOCK: The flow control valve.



1 MR. JORDAN: Were to be open?

2 MR. BERGENSTOCK: Yes.

3 MR. JORDAN: And they were not?

4 MR. BERGENSTOCK: No.

5 MR. JORDAN: Were they closed and locked up? Do
6 you have any idea where they were?

7 MR. BERGENSTOCK: They -- they got a flow control
8 valve runback on a level 3 -- reactor water level. They
9 were -- let's see -- I don't remember their exact positions.
10 They were somewhere around -- Alpha was around 20 percent
11 which is the runback position. Bravo was -- I remember was
12 open a little bit further than Alpha was, so it was 25 to 30
13 percent open, I believe.

14 MR. CONTE: Why did you have to restart the
15 hydraulic power units? Did they get tripped because of the
16 event? Or is that an operator action on post-trip?

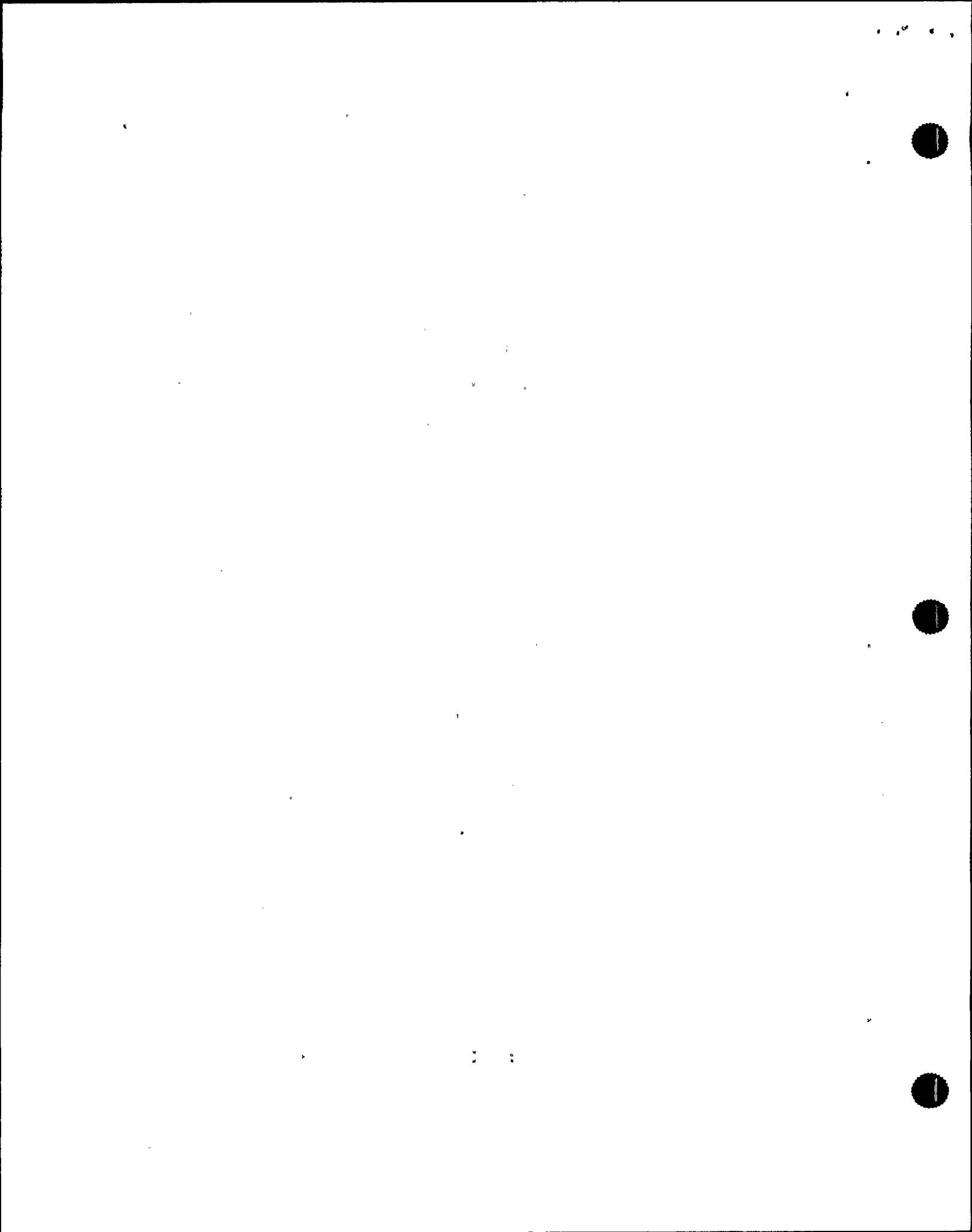
17 MR. BERGENSTOCK: It's not an operator action to
18 trip those. Under normal conditions they stay running. Off
19 the top of my head I have no idea why they tripped.

20 MR. CONTE: Okay.

21 MR. BERGENSTOCK: I would have to -- it would take
22 some thinking on it as to why they tripped.

23 MR. CONTE: Okay. So you got done with that and
24 where did you go from there? Which was the next job?

25 MR. BERGENSTOCK: Those were my two important jobs



1 I remember doing the rest of the day -- by now it's 9, 9:30,
2 maybe, as I said. And we're still on site emergency
3 because we can't get out of it until we're in cold shutdown
4 condition. I don't really remember doing any other major
5 jobs other than Mike Garbus was keeping a running log of
6 things that was going on and he asked me to relieve him
7 while he -- done something, I can't remember, went to the
8 bathroom or something or other. And I relieved him for
9 about five minutes and then I wrote a few things down on the
10 make -- it was a make-shift log at this time and then it
11 would be transcribed over the CSO log.

12 Other than that, I don't remember doing much.

13 MR. CONTE: Miscellaneous jobs in the control room
14 to support the cooldown, is that correct?

15 MR. BERGENSTOCK: That's -- I don't remember doing
16 anything to support the cooldown.

17 MR. CONTE: Okay.

18 MR. BERGENSTOCK: My -- I'm trying to think of the
19 term -- evacuation assembly area is in the control room.
20 So, I spent the day in the control room.

21 MR. JORDAN: They didn't send you back to
22 training?

23 MR. BERGENSTOCK: No.

24 MR. CONTE: I hate to do this to you, but back on
25 the inverters I have one follow-up question.



1 MR. BERGENSTOCK: Okay.

2 MR. CONTE: I think this will be easy for you.
3 The function of auto restart toggle switch versus -- or
4 there's a toggle switch that takes you to auto restart or
5 manual restart -- why the different position functions?

6 What does auto restart -- what does it do in auto
7 restart versus manual restart?

8 MR. BERGENSTOCK: Auto restart -- I'm not sure of
9 its function. It's --

10 MR. CONTE: How did you know to go to manual
11 restart when you were operating -- when you were doing this
12 evolution with Crandall?

13 MR. BERGENSTOCK: Procedure. Procedure told you
14 to.

15 MR. CONTE: Okay. I think I saw a portion of that
16 procedure and I don't remember the exact portion, but I
17 thought it said something about record existing data or
18 record relay logics, do you recall any recording of
19 information of as found information or was Crandall doing
20 most of that?

21 MR. BERGENSTOCK: Crandall was doing the
22 recording.

23 MR. CONTE: Okay. You were manipulating switches
24 and breakers?

25 MR. BERGENSTOCK: Yes.



1 MR. CONTE: Okay. All right. Let me see -- I
2 don't -- do you have anything else?

3 MR. JORDAN: I don't think so.

4 MR. CONTE: You must be aware of the event -- of
5 what the event was with the loss of annunciators and the
6 loss of the full cord display and loss of a lot of balance
7 of plant instrumentation. I'm just recounting what the
8 operators saw in the control room at the time of the event.

9 MR. BERGENSTOCK: I wasn't there.

10 MR. CONTE: This isn't a question.

11 MR. BERGENSTOCK: Okay.

12 MR. CONTE: Have you ever seen something like that
13 before in your training in the simulator where all the
14 annunciators were lost, or maybe just the full cord display
15 was lost?

16 MR. BERGENSTOCK: In training we've had -- I'm
17 trying to think of how to word this properly. We've never
18 seen training where all five UPS's have gone away that I can
19 remember doing. We've had various sections go away and
20 things like that --

21 MR. CONTE: Annunciator panels?

22 MR. BERGENSTOCK: Annunciator panels.

23 MR. CONTE: How about loss of all annunciators?
24 Just that aspect?

25 MR. BERGENSTOCK: I don't remember loss of



1 annunciators.

2 MR. CONTE: Okay. I guess one last area is, is
3 there something during this event that you saw that was
4 really good and valuable for the things that you did or
5 something that you wish you had and you didn't have in
6 support of the -- whatever you did to support this event?

7 Equipment, training, tools, positive or negative
8 that you wish to share --

9 MR. BERGENSTOCK: Oh, this is an all inclusive
10 question so it's a big sphere.

11 MR. JORDAN: Big sphere type thing, you know what
12 --

13 MR. BERGENSTOCK: The training we got, I felt was
14 quite -- quite good, because, you know, when I call over and
15 they tell me they're in a site area emergency, I didn't go,
16 oh, my god, you know, what happened? I was calm about the
17 whole situation and I came over and when I walked into the
18 control room it was busy, but it wasn't -- people weren't
19 pulling their hair out or anything like that. And from the
20 -- just the people that I had come in contact with we were
21 quite calm about the whole situation.

22 MR. CONTE: What gave you that calmness,
23 confidence?

24 MR. BERGENSTOCK: Confidence in the training that
25 we had.



1 MR. JORDAN: You're used to implementing EOP's?

2 MR. BERGENSTOCK: Yes. We always get -- every
3 training cycle we get EOP training.

4 MR. CONTE: Anything you can think of negative?
5 Something you wish you had? Loss of five UPS's,
6 simultaneously?

7 MR. BERGENSTOCK: If we would have had five UPS's.

8 MR. CONTE: Besides that, as a lesson learned from
9 the event, in doing your job is there something else you saw
10 out there that --

11 MR. BERGENSTOCK: Well, the biggest irritation I
12 had was waiting in the security building. I mean, we're
13 trained to -- if you want to say jump in the middle of a
14 fire, that's fine, just as a fireman is trained to go to a
15 burning building, but it really upsets you, you've got to
16 set there at a roadblock while the building burns down and
17 then go fight it.

18 That was, I guess, the biggest torn in my side;
19 was having to wait to get in there. We got these green
20 cards issued to us that said we can go through military and
21 civilian road blocks to get here and we get here and we
22 wait.

23 MR. CONTE: Do you realize that the shift
24 supervisor ordered that in accordance with the emergency
25 plan, the shift supervisor ordered the gates closed?



1 MR. BERGENSTOCK: No.

2 MR. CONTE: That's what we were told. I don't
3 know if that's true or not. Does that sound strange to you?

4 MR. BERGENSTOCK: I have never heard that rule.

5 MR. CONTE: Really?

6 MR. BERGENSTOCK: But I'm not a station shift
7 supervisor, I'm a licensed reactor operator, not a senior
8 operator.

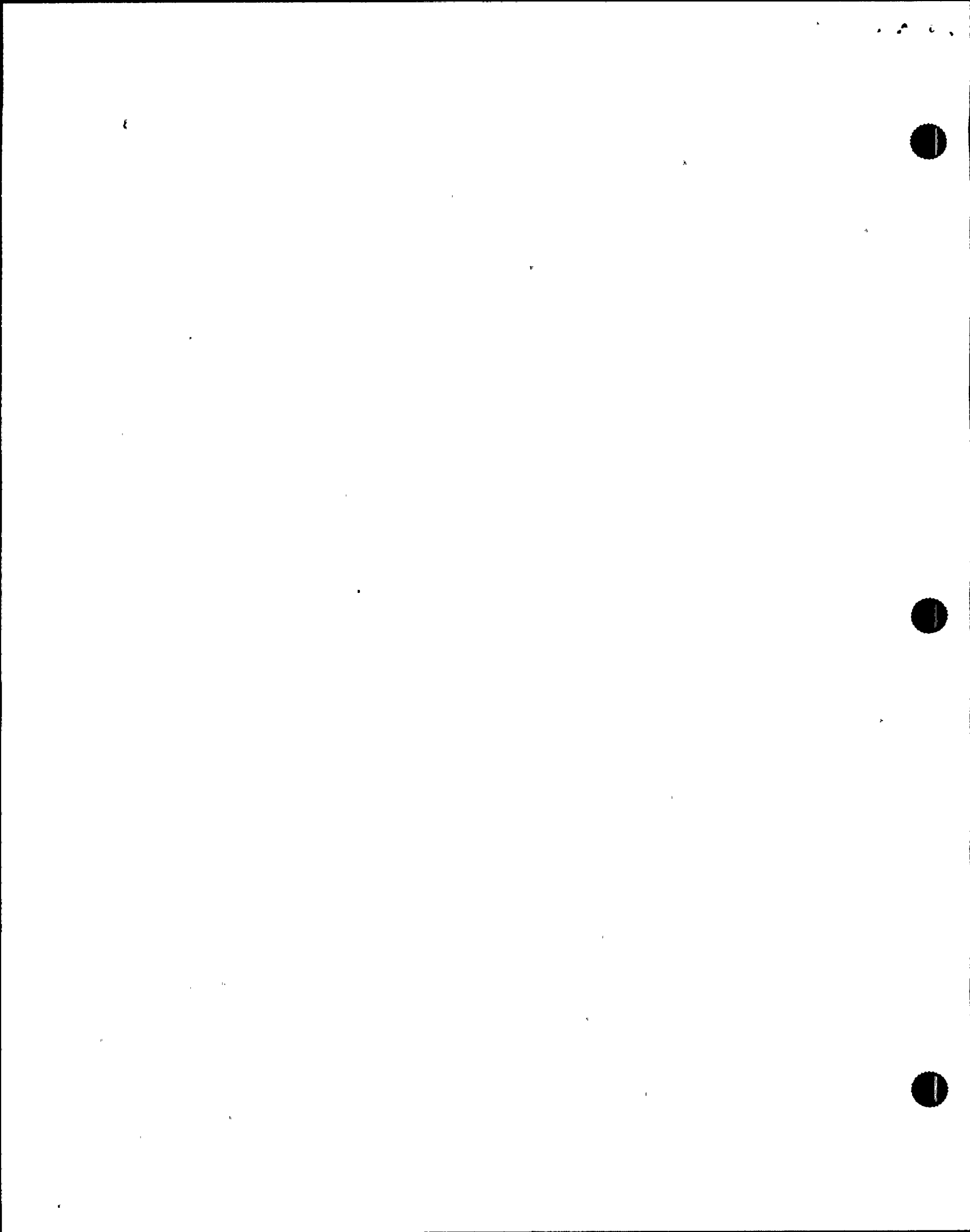
9 MR. CONTE: Okay.

10 MR. BERGENSTOCK: I know we have to do an
11 accountability of everybody and it would probably hinder as
12 people were going through, you were trying to account for
13 them and they're in transition.

14 MR. JORDAN: Anything that we haven't covered that
15 you would like to cover to put on the record? Information
16 that you think would be valuable to us that we haven't
17 already covered?

18 MR. BERGENSTOCK: I can't think of anything. I --
19 like I stated before I got here a half hour after
20 everything had gone down -- well, if you read the newspapers
21 and the official transcript, it happened at 05:48, I
22 believe, so it was a while before I got there and the
23 lighting had already been restored because we had lights and
24 elevators and control room annunciators when I got there.

25 MR. JORDAN: Okay. I'm done.



1 MR. CONTE: I'm done. Let's go off the record.

2 MR. JORDAN: Go off the record.

3 MR. BERGENSTOCK: Thank you.

4 [Whereupon, at 4:50 p.m., the taking of the
5 interview was concluded.]

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1. The first part of the report is a general introduction to the project.

2. The second part of the report is a detailed description of the methodology used.

3. The third part of the report is a discussion of the results.

4. The fourth part of the report is a conclusion.



REPORTER'S CERTIFICATE

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

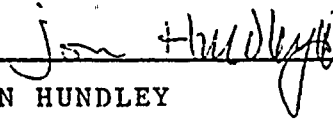
in the matter of:

NAME OF PROCEEDING: Int. of BOB BERGENSTOCK

DOCKET NUMBER:

PLACE OF PROCEEDING: Scriba, N.Y.

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.



JON HUNDLEY

Official Reporter
Ann Riley & Associates, Ltd.

