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OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission
Incident Investigation Team

Title: Nine Mile Point Nuclear Power Plant
Interview of: DAVID BROCKWELL

Docket No.

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DATE: Wednesday, August 21, 1991

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
INCIDENT INVESTIGATION TEAM

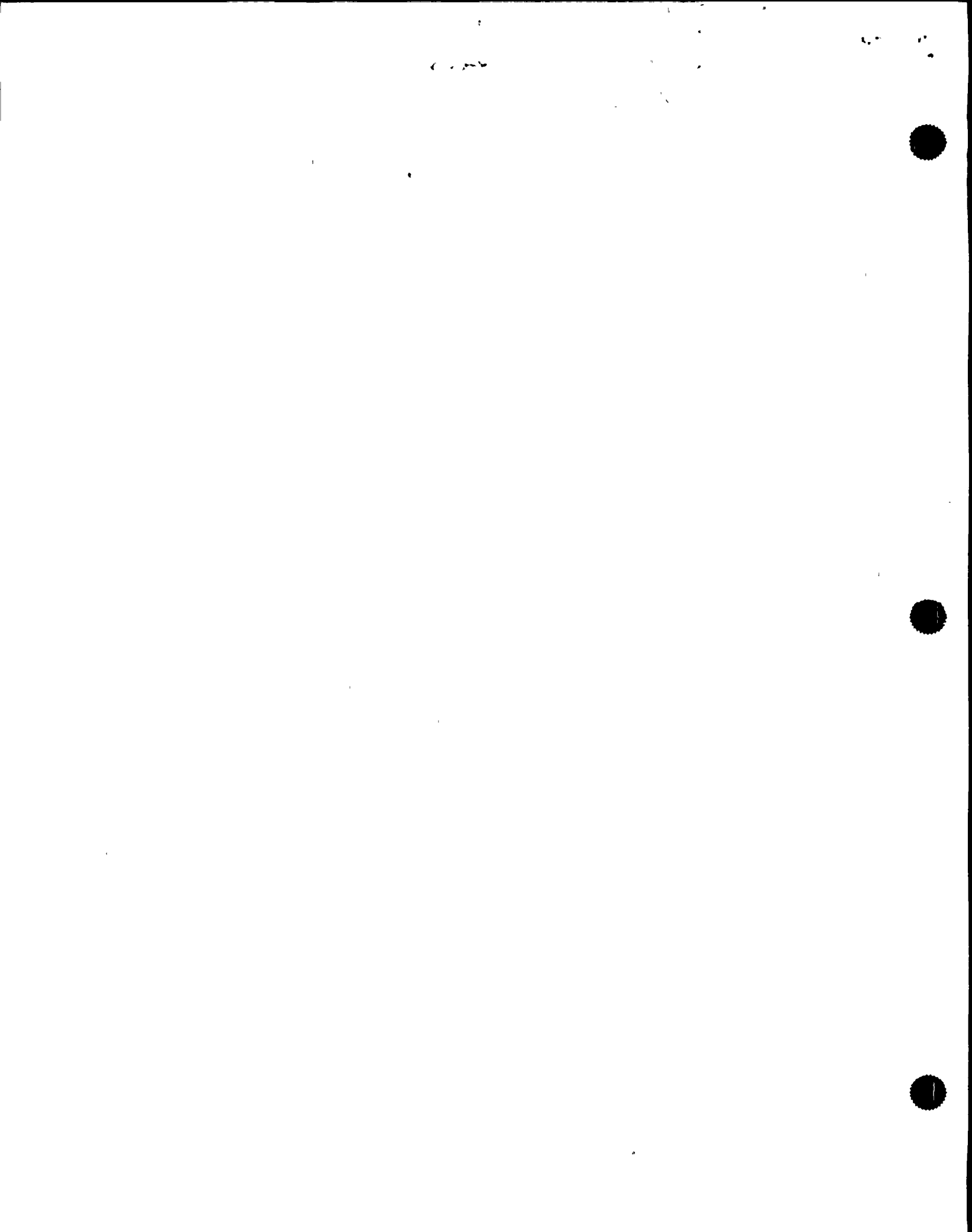
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Interview of :
DAVID BROCKWELL :
(Closed) :

Conference Room B
Administration Building
Nine Mile Point Nuclear
Power Plant, Unit Two
Lake Road
Scriba, New York 13093
Wednesday, August 21, 1991

The interview commenced, pursuant to notice,
at 11:14 a.m.

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



P R O C E E D I N G S

[11:14 a.m.]

1
2
3 MR. JORDAN: It's August 21st, 1991, it's about
4 ten minutes after 11. We are at the Nine Mile Point Unit
5 Two in the P Building, we're conducting interviews
6 concerning a transient that occurred on August the 13th,
7 1991.

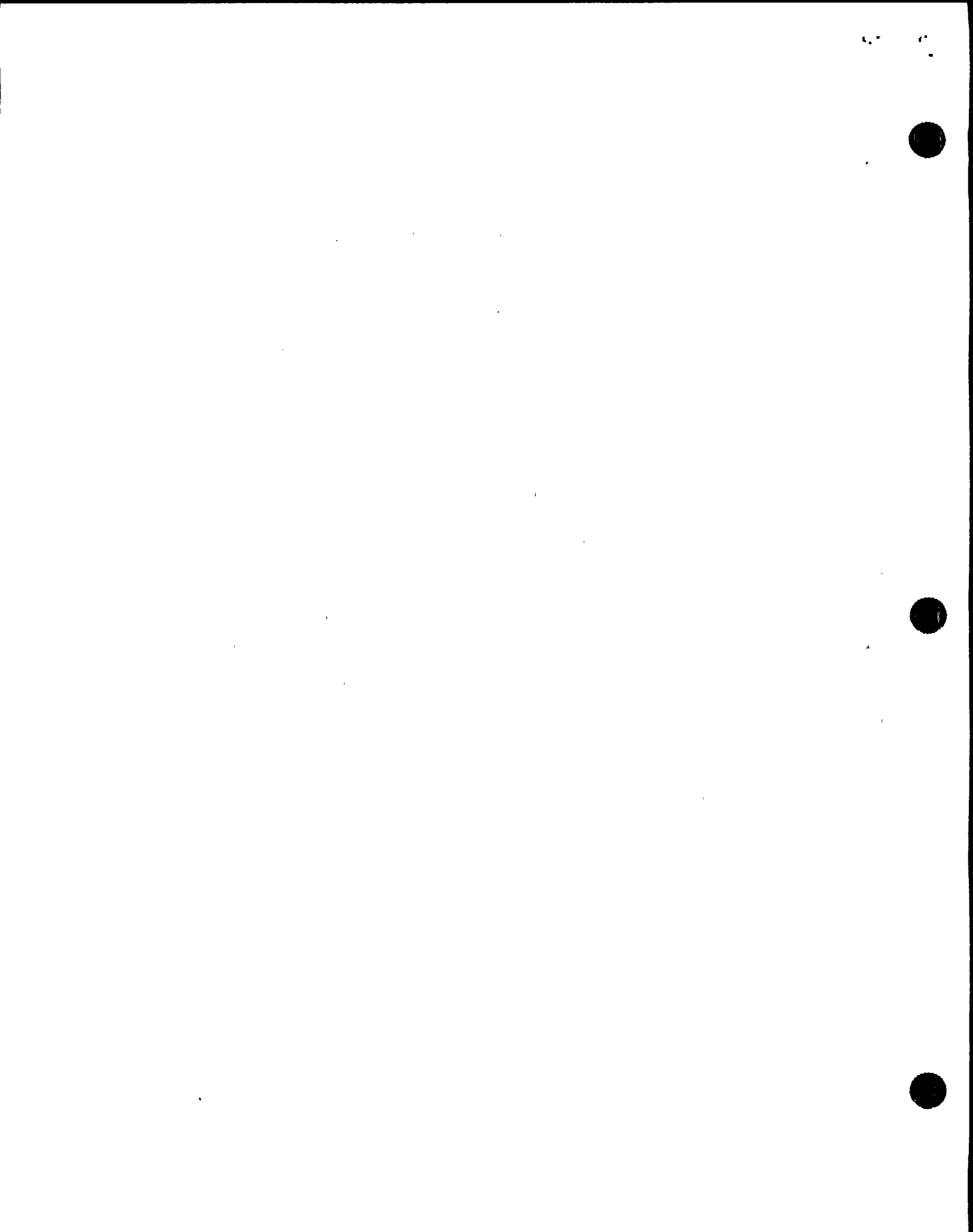
8 My name is Michael Jordan, I'm with U.S. NRC out
9 of Region III.

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

11 MR. BROCKWELL: I'm David Brockwell and I'm at
12 Plant Unit Two. I'm a nuclear auxiliary operator C.

13 MR. JORDAN: Okay, David, why don't you just give
14 us a background on your experience, as far as your nuclear
15 experience and your previous experience?

16 MR. BROCKWELL: In '86 I got out of college from
17 Allegheny with a degree in math and economics. I was hired
18 on here in September '86 as a utility mechanic for the
19 security department, more or less a janitor. Then I went
20 into the buildings and grounds department the following
21 year, in the fall of '87, and I was bumped out there
22 through our union bumping process and ended up in the plant.
23 Then in May '89 I came into operations; that was a big
24 change for me, going from pulling garbage to learning
25 something. I've been in the department since then; moved up



1 from an AOB to NAOC.

2 MR. JORDAN: Can you give us what they mean?

3 MR. BROCKWELL: Aux operator B to a nuclear
4 auxiliary operator C.

5 MR. JORDAN: Okay.

6 MR. BROCKWELL: To the time in training from the
7 department.

8 MR. CONTE: What's the typical progression here?
9 It's an aux operator A, B --

10 MR. BROCKWELL: There's no A --

11 MR. CONTE: Oh.

12 MR. BROCKWELL: -- aux operator.

13 MR. CONTE: It's just an aux operator?

14 MR. BROCKWELL: It starts out right at a B
15 operator which is more or -- that's what you process as
16 getting into the department and an interview.

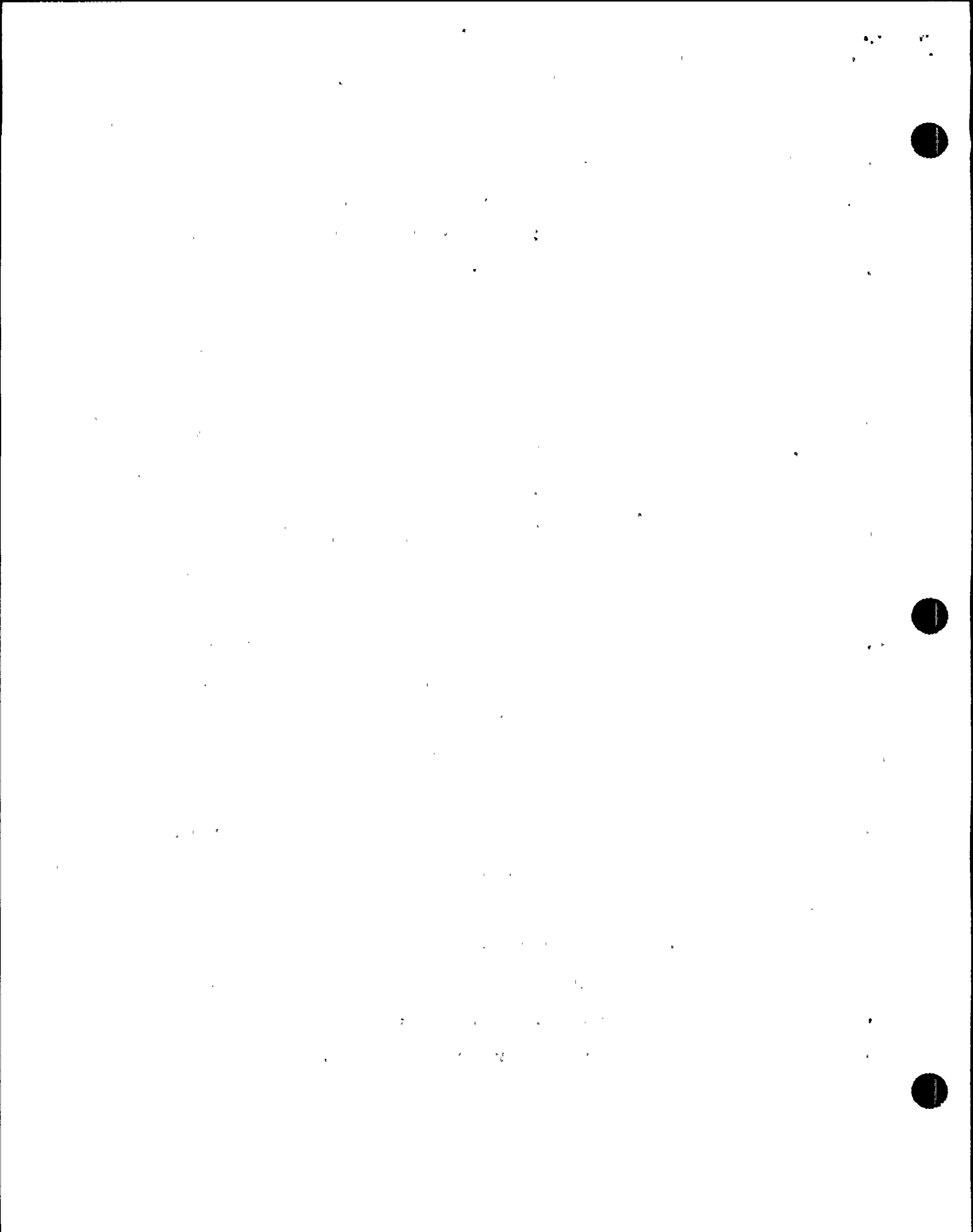
17 MR. CONTE: Okay. And then nuclear auxiliary
18 operator C?

19 MR. BROCKWELL: Yes. That's the next step. I
20 don't know why there's a nuclear aux operator B, but it's
21 just --

22 MR. CONTE: And then what, D?

23 MR. BROCKWELL: No, then the next step is an E
24 operator which is our licensed operator.

25 MR. CONTE: Licensed operators, okay. Thank you.



1 MR. JORDAN: You're currently non-licensed?

2 MR. BROCKWELL: Yes.

3 MR. JORDAN: Okay. David, why don't -- is there
4 anything else as far as your experience goes?

5 MR. BROCKWELL: No, not really.

6 MR. JORDAN: Okay. Why don't you, in your own
7 words tell us -- are you on day-shift? What shift are you
8 on?

9 MR. BROCKWELL: This week I'm on -- I'm on day
10 shift this week. I'll be going on to nights next week.

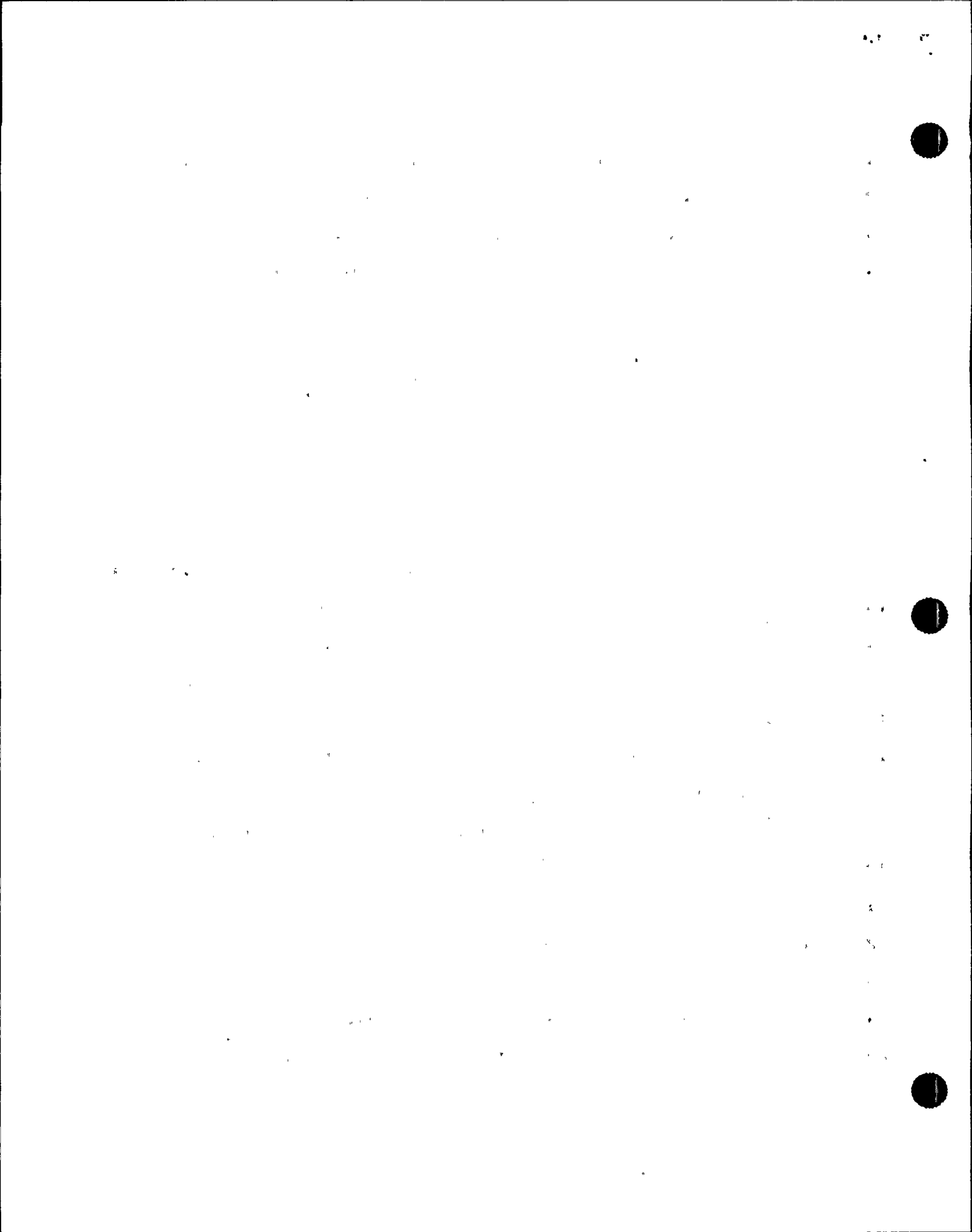
11 MR. JORDAN: The event, which shift were you on?

12 MR. BROCKWELL: I was on days. We were the shift
13 -- we would have been the shift of record coming in on days.
14 So we were expecting to take the turnover at 6 a.m.

15 MR. JORDAN: Okay. Why don't you just walk
16 through when you came to the gate that morning?

17 MR. BROCKWELL: Came through the gate that
18 morning, probably just before 6:00. It looked like there
19 wasn't a lot of steam coming out of the cooling tower, but
20 you can never tell, depending on the whether conditions;
21 walking into the yard -- walking towards the locker room I
22 run into a mechanic and he said "The sticks were up in the
23 yard." So that kind of cleared my mind that we must have
24 taken a scram or some kind of transient.

25 MR. JORDAN: What does sticks up in the yard mean?



1 MR. BROCKWELL: The output breakers -- output
2 stabs, if you want to call them -- from the transformers
3 were open. So we had no power going out, so something was
4 going on. So from there I proceeded just to grab my boots
5 and keys and hardhat and straight up to the control room
6 which is probably just before 5:00 -- just before 6:00,
7 excuse me, where I had noted that all the panels were kind
8 of dark. And from there it was just waiting instructions,
9 letting them know I was here, and awaiting instructions on
10 where they needed me. Just after --

11 MR. CONTE: What did you -- before you got to the
12 control room, did you see any lighting problems on the way
13 up?

14 MR. BROCKWELL: Yes. On my way up I noticed there
15 was -- I caught a couple operators going up the elevator and
16 it was dark -- with flashlight in hand.

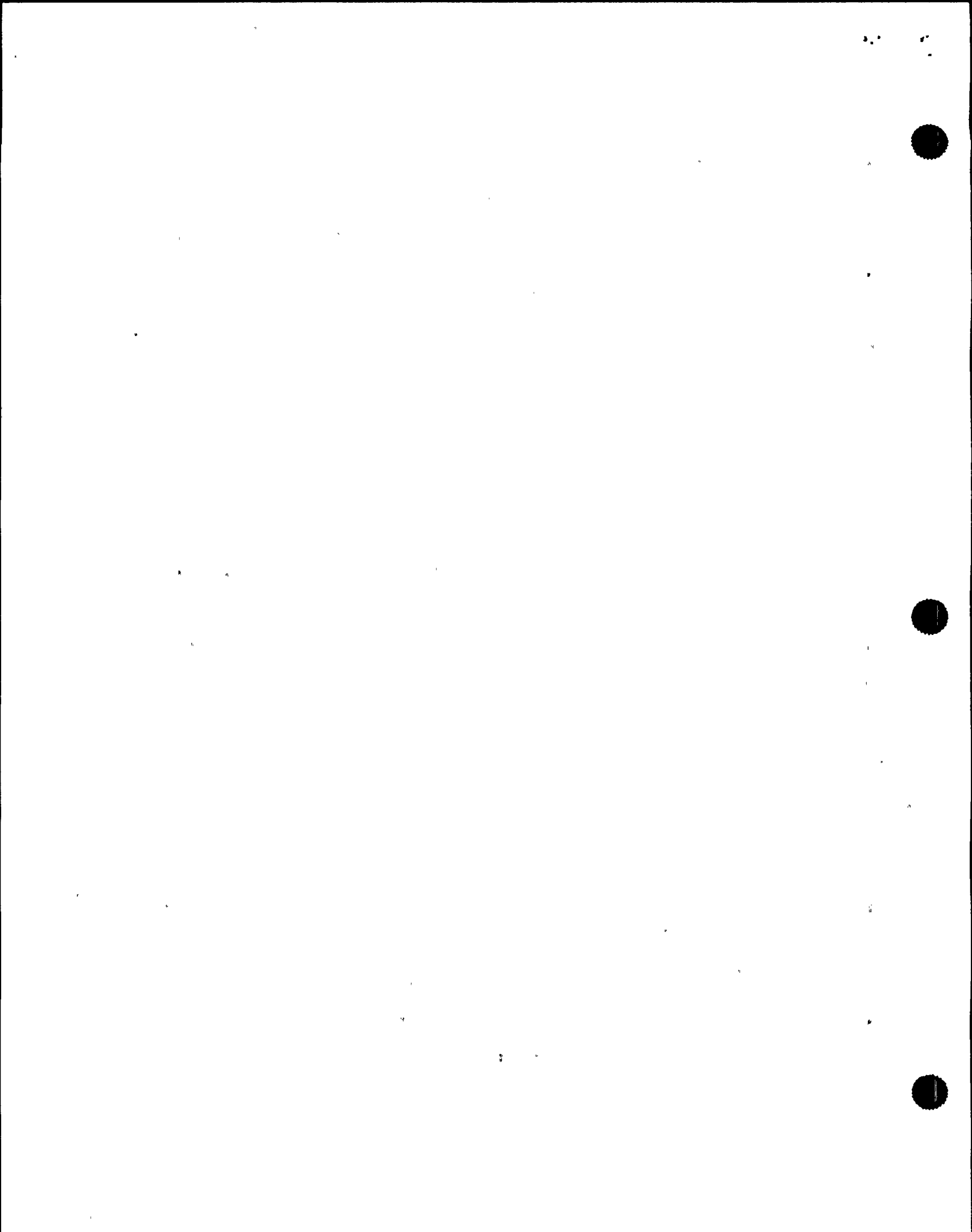
17 MR. CONTE: The elevator in the aux service
18 building --

19 MR. BROCKWELL: There was no light -- lighting in
20 the elevator in the aux service building.

21 MR. CONTE: No light except for that we understand
22 that the floor lights were on?

23 MR. BROCKWELL: Yes. The floor lights were lit.
24 And that was the only lighting in there.

25 MR. JORDAN: Is that how you got from the ground



1 floor to --

2 MR. BROCKWELL: Yes.

3 MR. CONTE: Where exactly is this locker room? Is
4 it in the control building or is it in the aux service
5 building?

6 MR. BROCKWELL: I guess it would be considered aux
7 service building. It's just across from our cardox tanks.
8 Just as you walk in the plant there.

9 MR. CONTE: 261 elevation?

10 MR. BROCKWELL: Right. Right when you walk in.

11 MR. CONTE: Okay.

12 MR. BROCKWELL: From the aux -- aux service
13 building -- auxiliary service building.

14 MR. CONTE: Okay. So you got to the control room
15 you reported in that you're here?

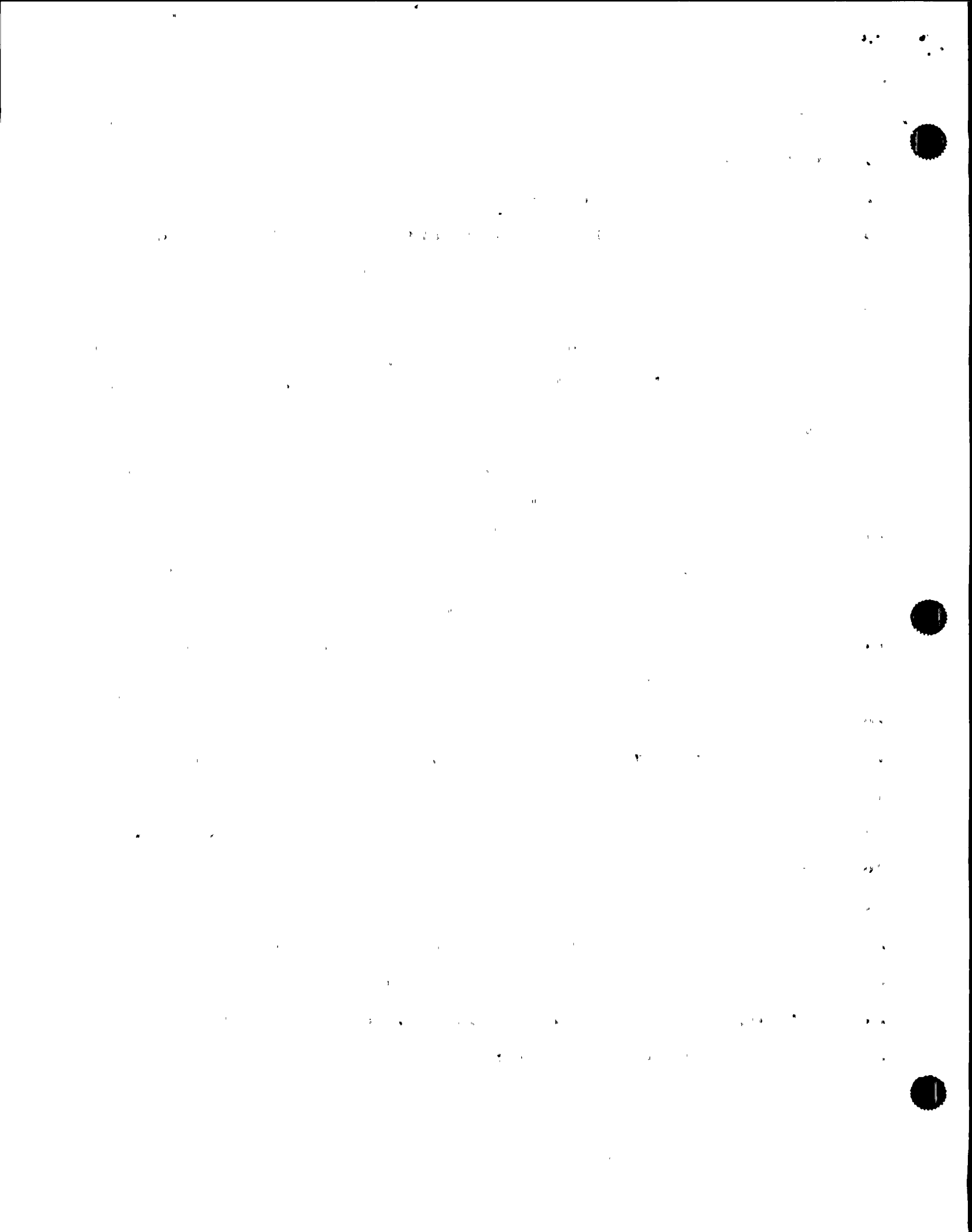
16 MR. BROCKWELL: Yes.

17 MR. CONTE: Were you in the Beehive or in the
18 control room?

19 MR. BROCKWELL: No, right in the control room.

20 MR. CONTE: Okay. Why did you go to the control
21 room instead of the Beehive?

22 MR. BROCKWELL: Because they're not going to call
23 it -- just continually call people over there; at that point
24 it's easiest just to go straight in and stay in the back
25 just so that -- or at least out of the way of everything.



1 All the commotion so they can see, right off the bat, who
2 they have who they can send and where to go.

3 MR. CONTE: Did you know a site emergency had been
4 declared?

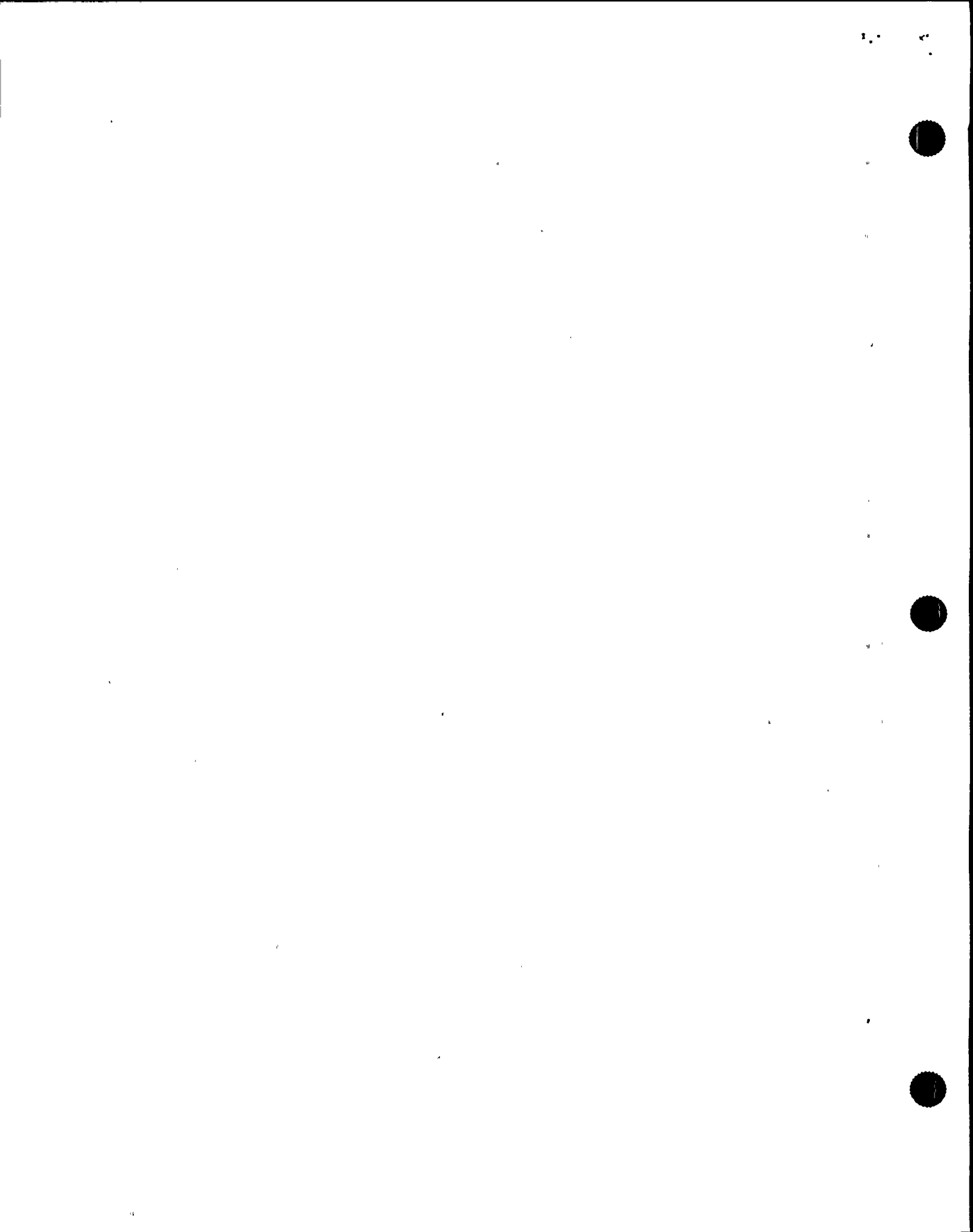
5 MR. BROCKWELL: No. Not at that point because
6 there was no -- we didn't any -- I found out at that point
7 that we had no gaitronic systems, we had power for calling
8 you, but I found that on the way up the elevator, people
9 were telling me that UPS's were down.

10 MR. CONTE: Okay. All right. So what was the
11 first assignment when you were waiting?

12 MR. BROCKWELL: A little bit after six, probably
13 five after or so. My CSO, which would be David Rathbun,
14 asked me to verify that the scram air discharge -- the
15 scram air header was discharged. So our biggest problem was
16 finding local indications -- we went right to the prints,
17 looking just downstream of our ARI valves to find a gauge
18 that would show me exactly that it didn't rely on any kind
19 of power or anything, just an air pressure gauge itself.
20 That the air header was bled off.

21 MR. CONTE: Okay.

22 MR. BROCKWELL: So after a little bit of
23 discussion I Xeroxed a copy and went out and found it -- a
24 little discussion between people of where it possibly could
25 be because nobody was exactly sure.



1 MR. CONTE: Okay. Do you remember the pressure
2 gauge number?

3 MR. BROCKWELL: In fact, I just looked at it. PI-
4 139. I don't remember the prefix, probably RDS or --

5 MR. CONTE: RDS, rod drive system?

6 MR. BROCKWELL: Yeah.

7 MR. CONTE: Okay. Okay, could you tell us your
8 path from the control room down to this valve and what did
9 you observe from the point of view of lighting? Any
10 problems?

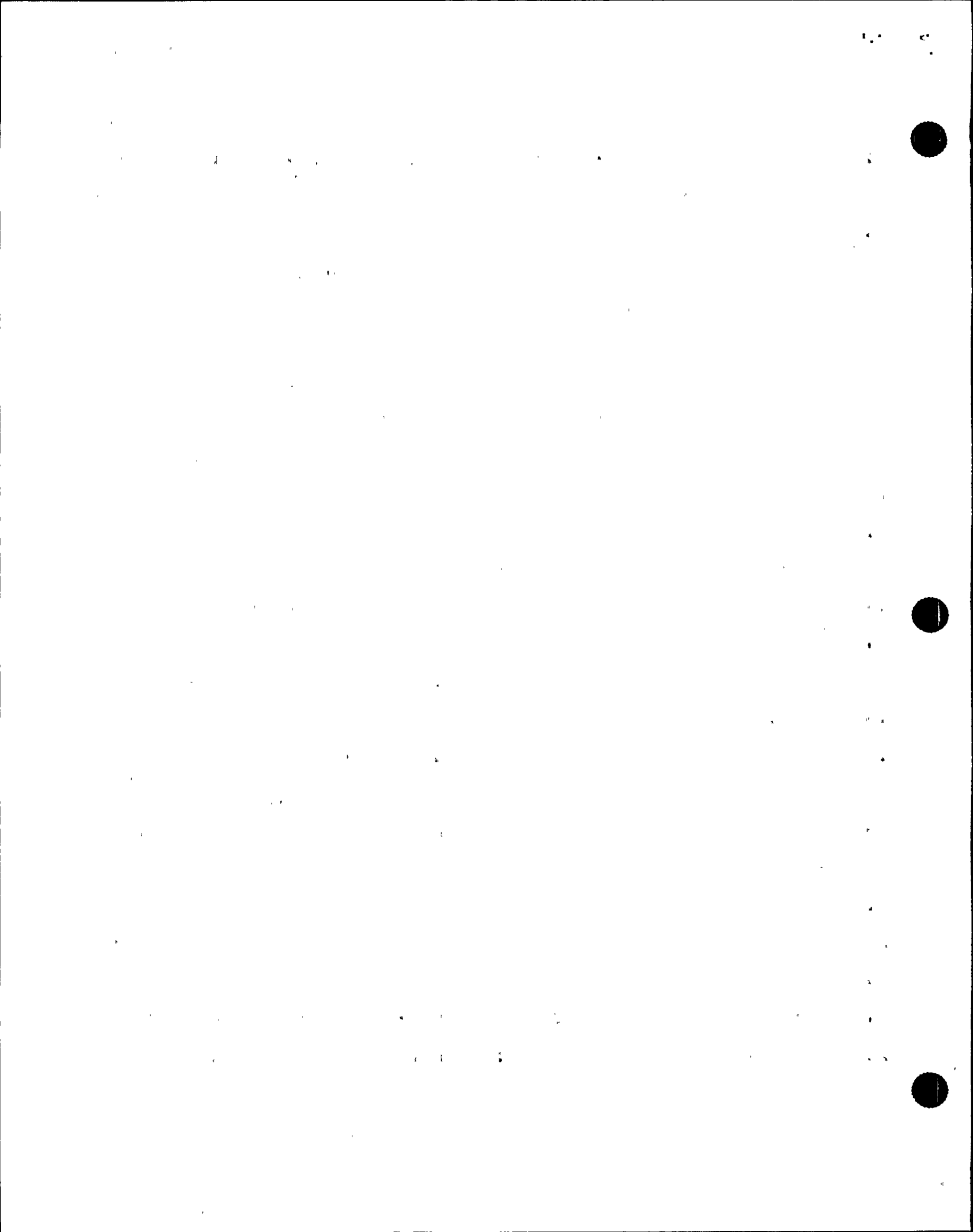
11 MR. BROCKWELL: Um, I took the quickest way down,
12 I took the stairs next to the elevator; it's easier than
13 waiting for the elevator. I can fly down the stairs
14 quicker.

15 MR. CONTE: This was that same elevator in the aux
16 service building?

17 MR. BROCKWELL: Yes, in the aux service building,
18 so I took the aux service building stairs.

19 MR. CONTE: How was the stairwell there? That had
20 lights?

21 MR. BROCKWELL: Um, I don't remember off hand. It
22 was not something I was concerned with. Just hold on to the
23 railings and get down. From there over to the reactor
24 building air lock to get into the reactor building on 261
25 all the way around, got into the reactor building, just



1 walking through, you just peak around to see if anything was
2 out of the ordinary, but all the way around on the north
3 side --

4 MR. JORDAN: No lighting problems?

5 MR. BROCKWELL: No. Not that I noticed.

6 MR. JORDAN: Okay.

7 MR. CONTE: Help me a little here. When you're
8 looking at the reactor building from the security -- from
9 the Unit Two security building you see a -- a large -- it
10 looks like a stack, I understand that's a stairway going up
11 the building --

12 MR. BROCKWELL: Yes.

13 MR. CONTE: -- that kind of protrudes out?

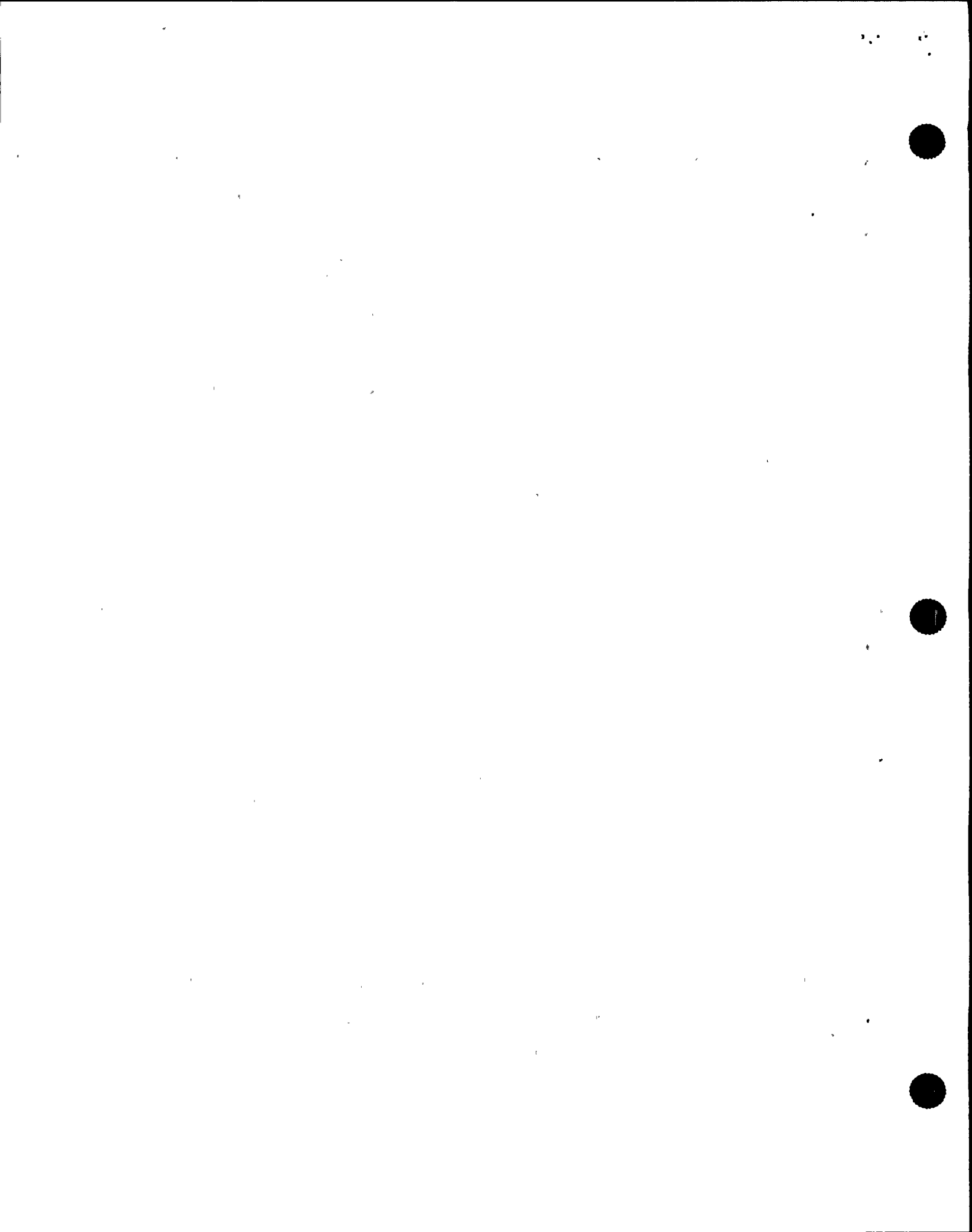
14 MR. BROCKWELL: Right.

15 MR. CONTE: The air lock -- some people have
16 mentioned coming down that stairway, exiting and coming out
17 into the yard, going by the trailers --

18 MR. BROCKWELL: Right.

19 MR. CONTE: -- and then going back into cardox
20 room. Is that the path you used, or is this a different
21 path to get into the reactor building?

22 MR. BROCKWELL: Oh. Okay. There's two entrances
23 to the reactor building that we mainly use, which one
24 through the trailer access which -- I've got to think, I
25 loose my bearing when I'm in a round building. The trailer



1 is probably a southwest entrance or a west entrance they're
2 calling it, I think, and I think the other airlock is
3 considered an east entrance or a southeast entrance.

4 MR. CONTE: You used the east entrance?

5 MR. BROCKWELL: Yes.

6 MR. CONTE: Okay.

7 MR. BROCKWELL: So I had to pass, more or less,
8 inside pass by that other stairway; go all the way around
9 past the northside of the reactor track bay around past that
10 all the way over into the rod flow control area or filter
11 area over in that area was where the gauge was found.

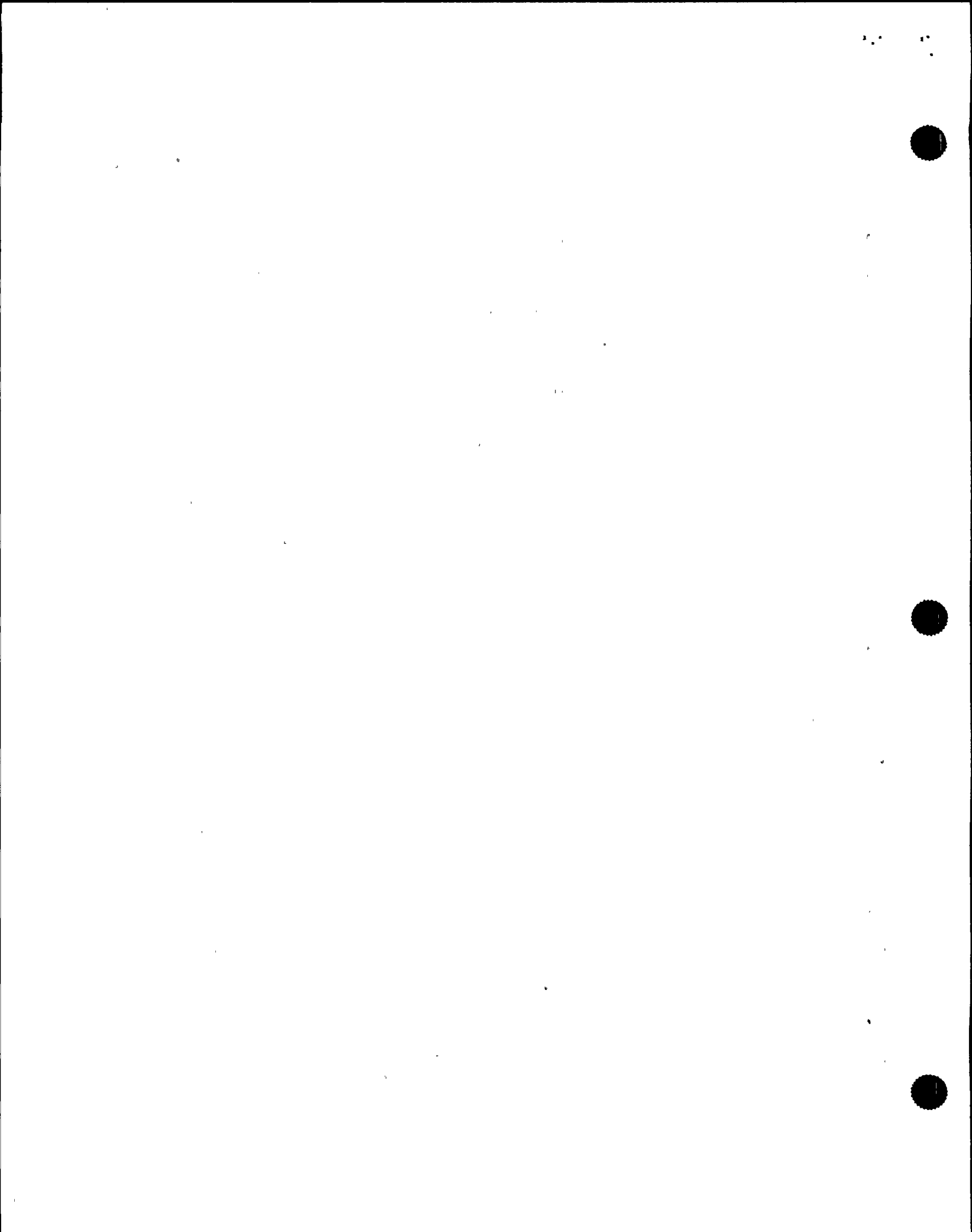
12 MR. CONTE: Do you have to suit up to get into the
13 reactor building?

14 MR. BROCKWELL: No.

15 MR. CONTE: Okay. So you enter into the building
16 and you're looking around and you didn't see anything
17 unusual?

18 MR. BROCKWELL: Not at that point, no. I was
19 mainly concerned on getting over and finding this pressure
20 indicator and I wasn't sure exactly where it was so I knew
21 where the ARI valves I was looking for was and I had a
22 little Xerox of the print, so mainly it was tracing it back
23 -- just tracing lines back to the gauge, which was real
24 close by so it didn't take me too long.

25 MR. CONTE: Did you find it?



1 MR. BROCKWELL: As soon as I found it I verified
2 that it was zero, called the control room back and I think
3 it was exactly at the point where they re-energize their
4 power.

5 MR. JORDAN: How did you call the control room?

6 MR. BROCKWELL: With the land line, if you want to
7 call it or dial telephone.

8 MR. JORDAN: There's one close by?

9 MR. BROCKWELL: Dial telephone close by.

10 MR. JORDAN: Now you know, loss of power came back
11 when you were in your --

12 MR. BROCKWELL: When I called the control room,
13 they said they had it back and so they -- my information was
14 -- it was helpful, but they already had it, apparently on
15 indication from the control room.

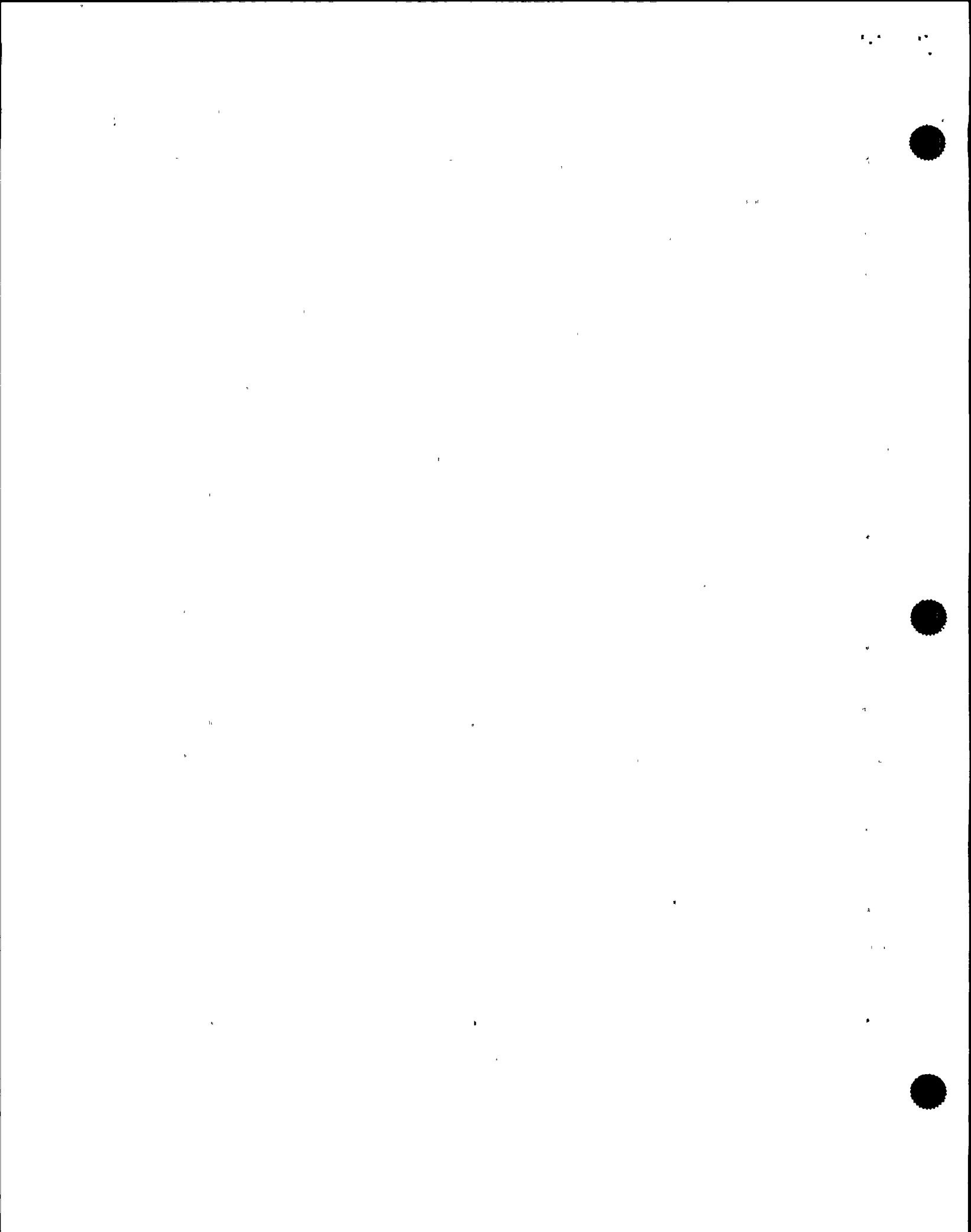
16 MR. JORDAN: Verification that this gauge read
17 zero, that it was -- the discharge header, how did you do
18 that?

19 MR. BROCKWELL: What do you mean by that?

20 MR. JORDAN: Did you check by the print -- by the
21 gauge number versus the gauge, or did you walk the air
22 header back --

23 MR. BROCKWELL: I walked both ways. In order to
24 find the gauge, I had to walk the air header back.

25 MR. JORDAN: So it was tagged with --



1 MR. BROCKWELL: And plus it was tagged with the
2 instrument number.

3 MR. CONTE: 139?

4 MR. BROCKWELL: Right. Because just beside that I
5 think there's a pressure transmitter so I can verify the PT-
6 139 versus the PI-139. It comes off of the same -- right at
7 the same point. There's a transmitter and a local
8 indicator.

9 MR. JORDAN: So there wasn't any overhead that was
10 actually low enough that you could see it. Then you called
11 the control room and told them that it was --

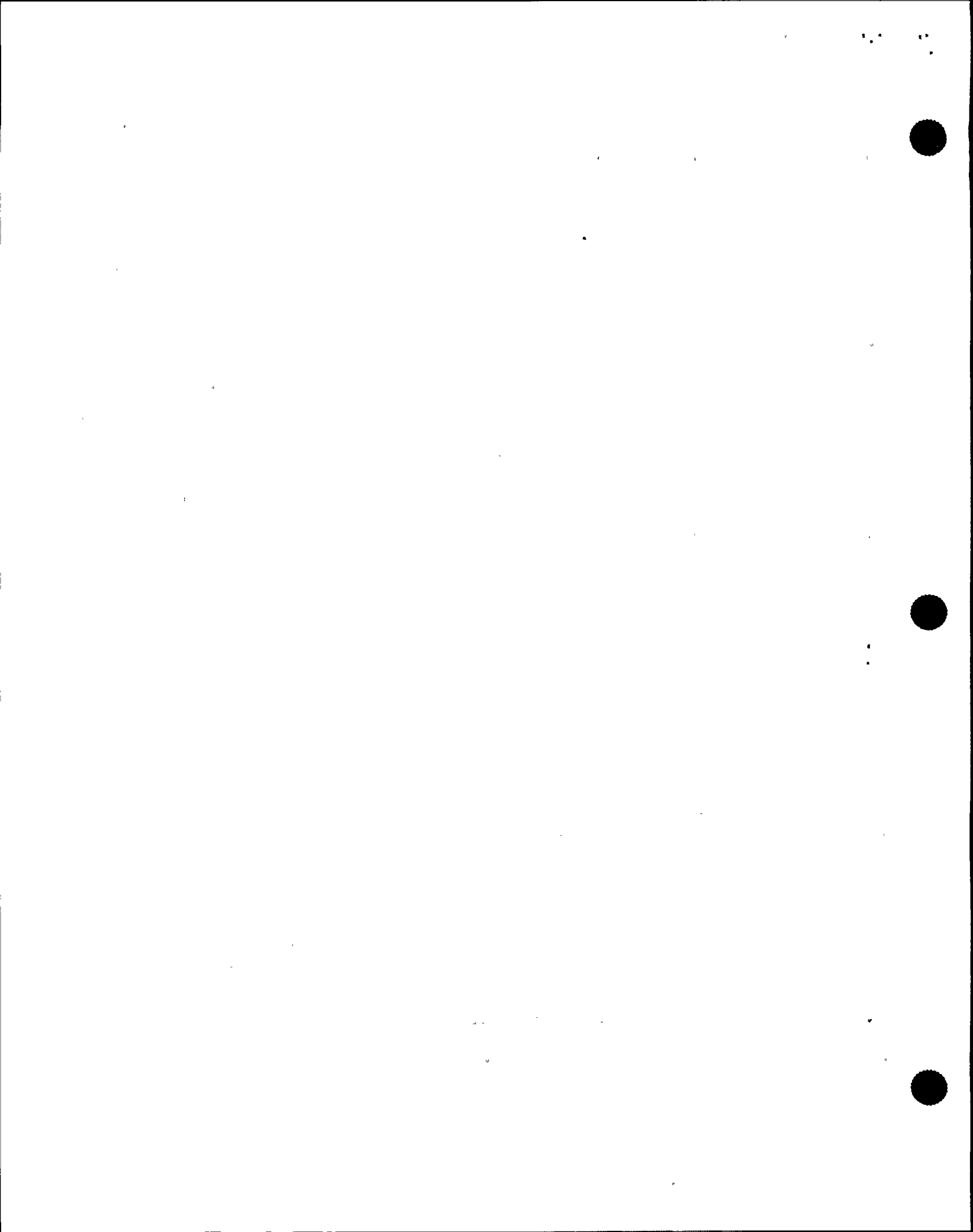
12 MR. BROCKWELL: I told them that the air header
13 PA-139 -- I tried telling the exact person that sent me out
14 so he could refer it, to make it as short as possible what I
15 was saying.

16 MR. JORDAN: And it was zero, did you say?

17 MR. BROCKWELL: Yes, that the air header was zero.
18 From there, I just proceeded back up to the
19 control room, to await further instructions.

20 MR. JORDAN: And your transition back to the
21 control room -- did you go back the same way? Of course
22 power is back now, so I guess there was no problem with
23 lighting or anything else that you saw.

24 MR. BROCKWELL: No. I don't even know at that
25 point which way I went back.



1 MR. JORDAN: Okay.

2 But as far as going to and from -- in and out of
3 the plant, lighting, as far as you know, was not a problem.

4 MR. BROCKWELL: I didn't notice anything at that
5 point.

6 MR. JORDAN: You're back in the control room.

7 MR. BROCKWELL: I just sat around a little bit,
8 until they sent me a couple minutes later -- they asked
9 myself and one other person, Jim Stevens, to respond to the
10 aux boilers and get them started up, so we could start
11 supplying steam.

12 MR. CONTE: I was in an interview with, I think,
13 Jim Stevens. I think he mentioned that -- he's an NAOC.

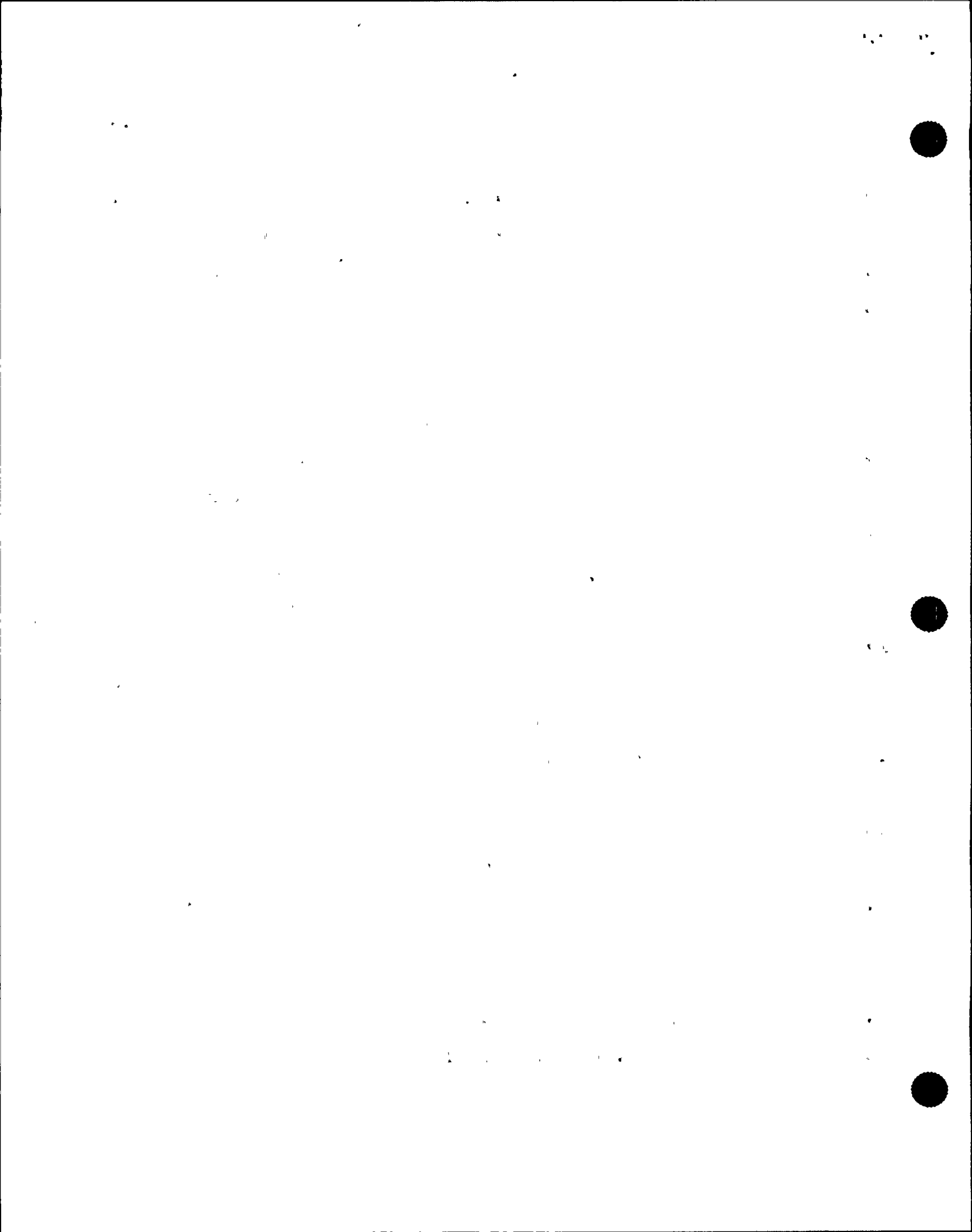
14 MR. BROCKWELL: Yes.

15 MR. CONTE: Was he involved with the aux boilers,
16 too? He gave me the impression the aux boilers came up real
17 smooth. He said he never saw aux boilers come up so --

18 MR. BROCKWELL: No. I've never got an aux --
19 Between the two of us, we were really surprised, because
20 normally it takes at least two people to get a boiler fired
21 up quick and get it going, and it was super-easy. It was
22 the first time we had -- that's only the Bravo boiler.

23 MR. CONTE: There are two, A and B?

24 MR. BROCKWELL: There are two boilers, A and B.
25 Our Alpha one was in nitrogen layup, so it took us a little



1 while.

2 MR. CONTE: How would you describe the effort,
3 between you and Jim? You were helping one another? Who was
4 really responsible for getting the boiler up all by himself,
5 or what?

6 MR. BROCKWELL: I don't think either of us took
7 total responsibility or the other, because it depended on
8 where we were at. We both knew exactly what had to be done,
9 so I think he took the first effort of firing the boiler up,
10 and I was supporting him at that point, doing miscellaneous
11 things in the startup of it.

12 MR. CONTE: Was either one of you using a
13 procedure?

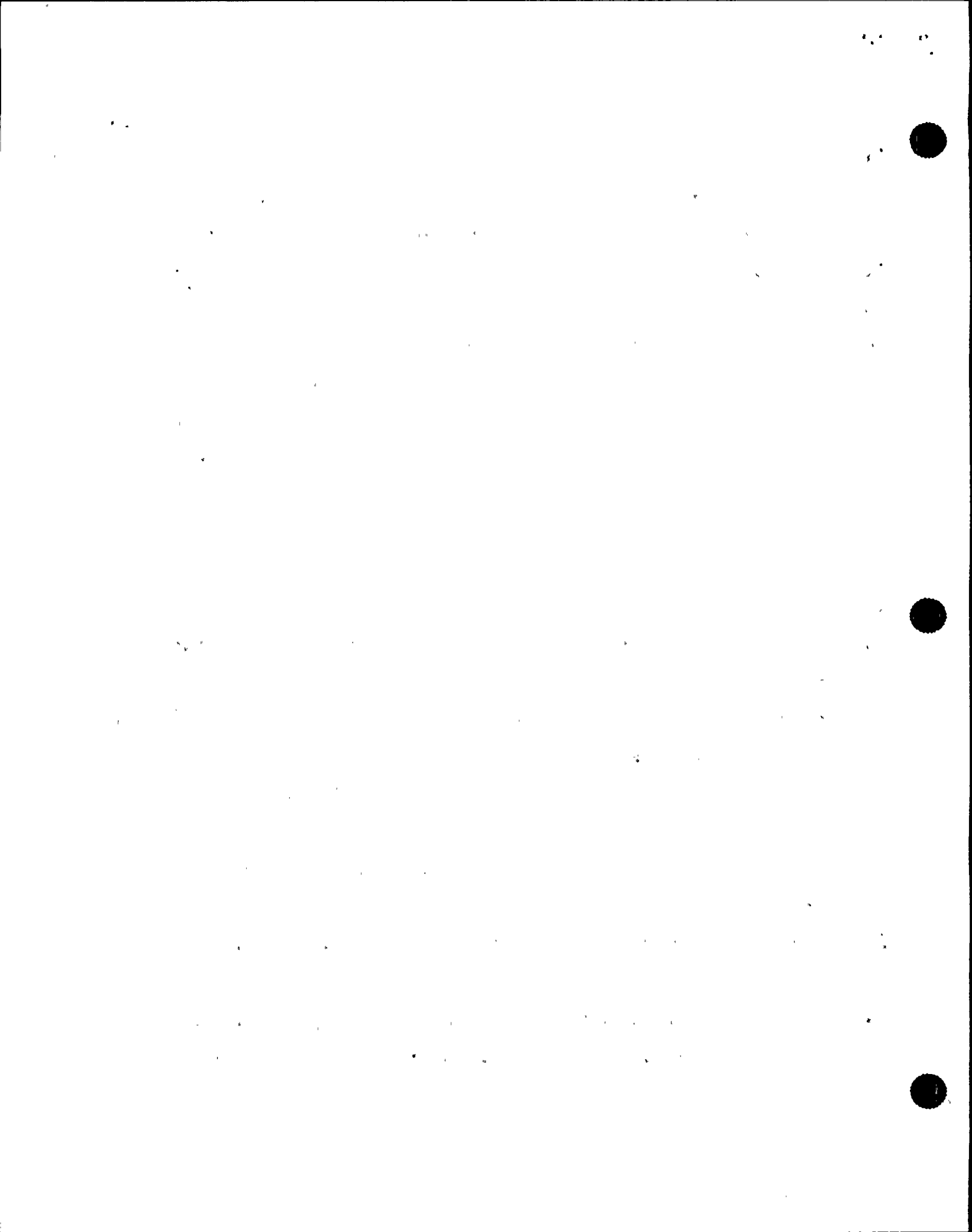
14 MR. BROCKWELL: Yes. The procedure is right
15 there, and through a lot of times firing them up, just
16 background stuff -- along with the procedure, you can think
17 of little things to check.

18 MR. CONTE: Based on your experience.

19 MR. BROCKWELL: Based on experience. A lot of it
20 down there is, you check things through experience that
21 aren't in the procedure, but we didn't have any problems,
22 which was something very different down there, for the
23 first time.

24 MR. CONTE: Do you have anything else, Mike?

25 MR. JORDAN: No, I don't have anything else.



1 MR. CONTE: I do have another question. I'm
2 trying to formulate it in my mind. You mentioned the aspect
3 that there are a lot of things you do based on your
4 experience. Wouldn't it be nice to get that into the
5 procedure for the new guy or the next guy to --

6 MR. BROCKWELL: I know what you're saying,
7 experience-related things in the procedure, maybe
8 precautions. I don't think a lot of it can be, because it
9 comes with just a feel, some of it. Some things -- well --

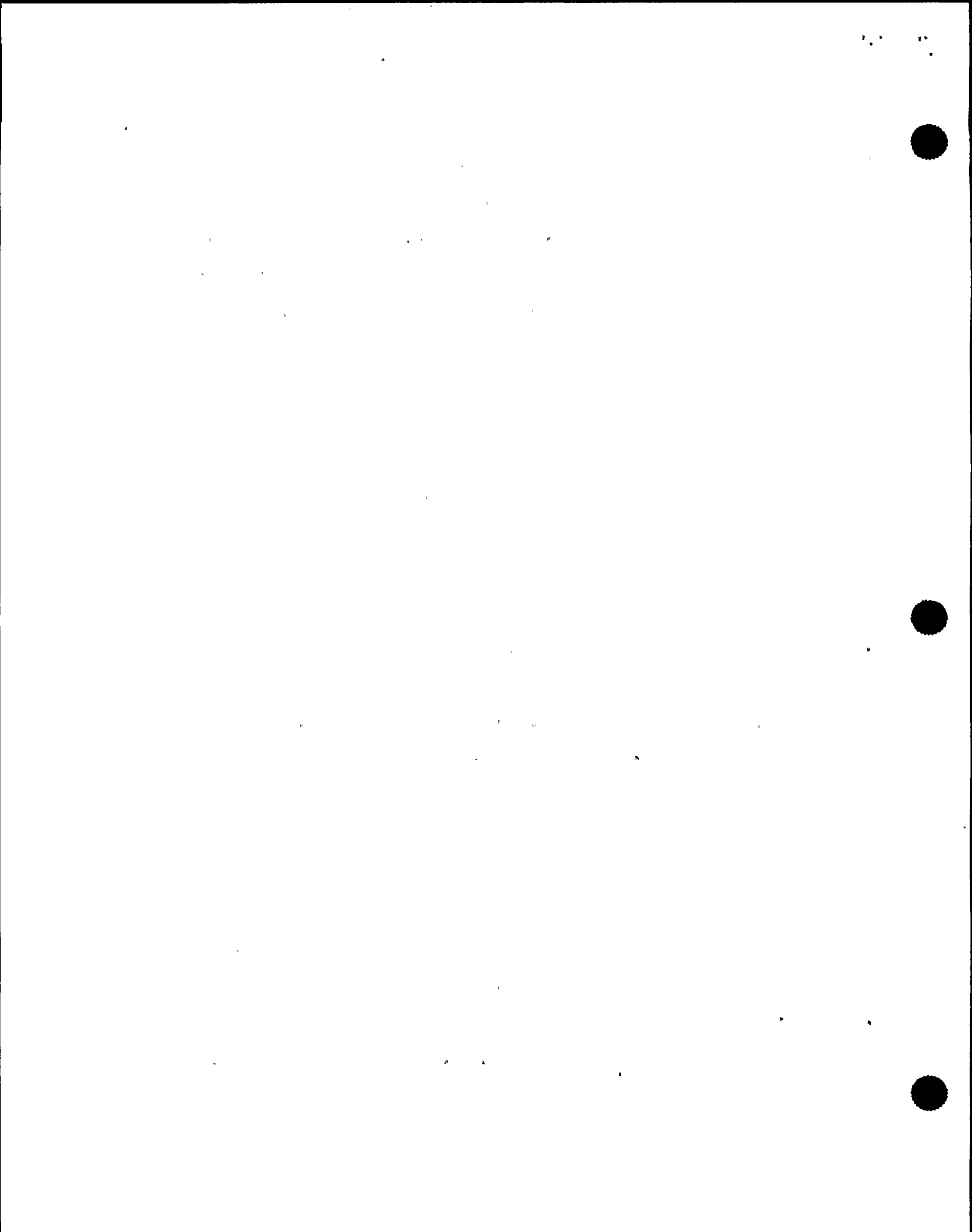
10 MR. CONTE: Just an innate skill?

11 MR. BROCKWELL: Yes.

12 MR. CONTE: A skill within you.

13 MR. JORDAN: What about training? You took over
14 as an operator in '89, and you went out there to start the
15 boilers for the first time. Is there a training process
16 that says, Okay, fine, we're going to sit you down in a
17 classroom and teach you how to start and operate this thing
18 and then take you out and show you how to operate it and
19 then let you operate it?

20 MR. BROCKWELL: The way it's set up now, yes.
21 They pretty much go to training first. Or I spent a lot of
22 time on shift before I went to the formal training -- in
23 other words all the system. I spent a lot of time on shift,
24 tagging along with people. I found shift time like that to
25 be more helpful. Just hands-on you can learn, I feel, a lot



1 more than you can out of a book.

2 MR. JORDAN: Okay.

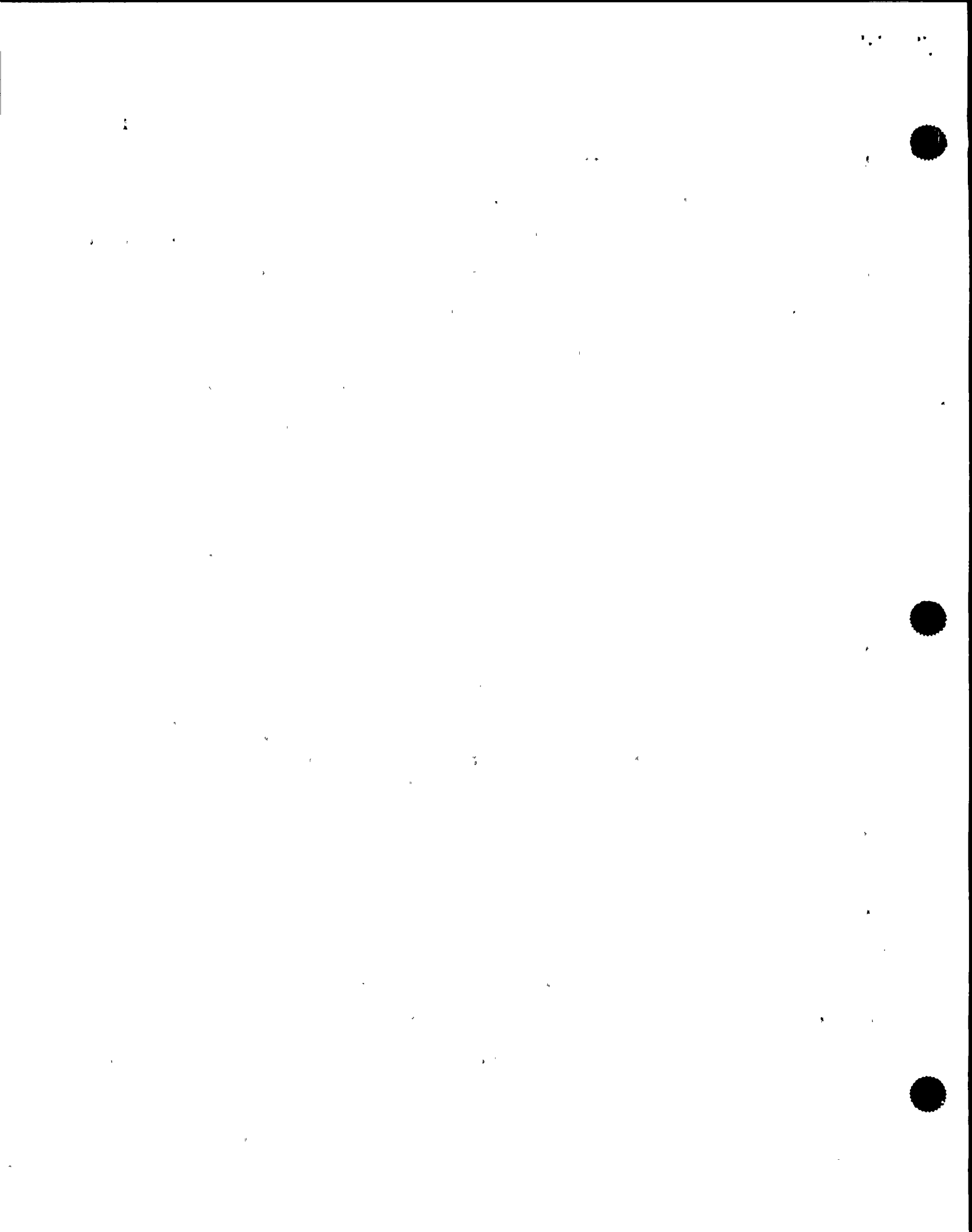
3 MR. BROCKWELL: The book explains how it works,
4 but to actually work it you need the time in the systems.
5 This past year, I purposely didn't put my name in for
6 license class because I felt I wanted another year in the
7 plant. I feel you can learn more in the plant, hands-on,
8 than you can right out of a book. I feel it's a lot more
9 helpful.

10 MR. JORDAN: Is there a continuous training
11 program, as far as you know?

12 MR. BROCKWELL: Yes, there is. Our
13 non-licensed --

14 MR. JORDAN: Besides the operating licensing area,
15 how about yourself, in the non-licensed area? If you stayed
16 in the non-licensed are, is there a continuous training
17 program that you keep going back to, to make sure that you
18 keep trained on the areas that you have responsibility on?

19 MR. BROCKWELL: Yes. It seems like every cycle,
20 the way we rotate our six-week cycle right now, when you go
21 into training, right now they're prepping us a little bit
22 for reactor theory. One day, probably two days, out of each
23 five-day training cycle, we're learning -- they're trying to
24 prepare for license class, also, to give you a basic
25 knowledge, so you're familiar with the terminologies used,



1 so you don't want into a theory course and have no idea what
2 they're talking about at all.

3 But we also do system training. A lot of it is
4 review -- you've had it before -- but sometimes you'll catch
5 something different. Each time they might go a little bit
6 deeper.

7 MR. JORDAN: Is there a test or an evaluation that
8 goes along with that?

9 MR. BROCKWELL: There's a test every cycle on
10 whatever you were trained on.

11 MR. JORDAN: Written test, or performance test?

12 MR. BROCKWELL: Written test.

13 MR. JORDAN: You rotate with the shift in the
14 training?

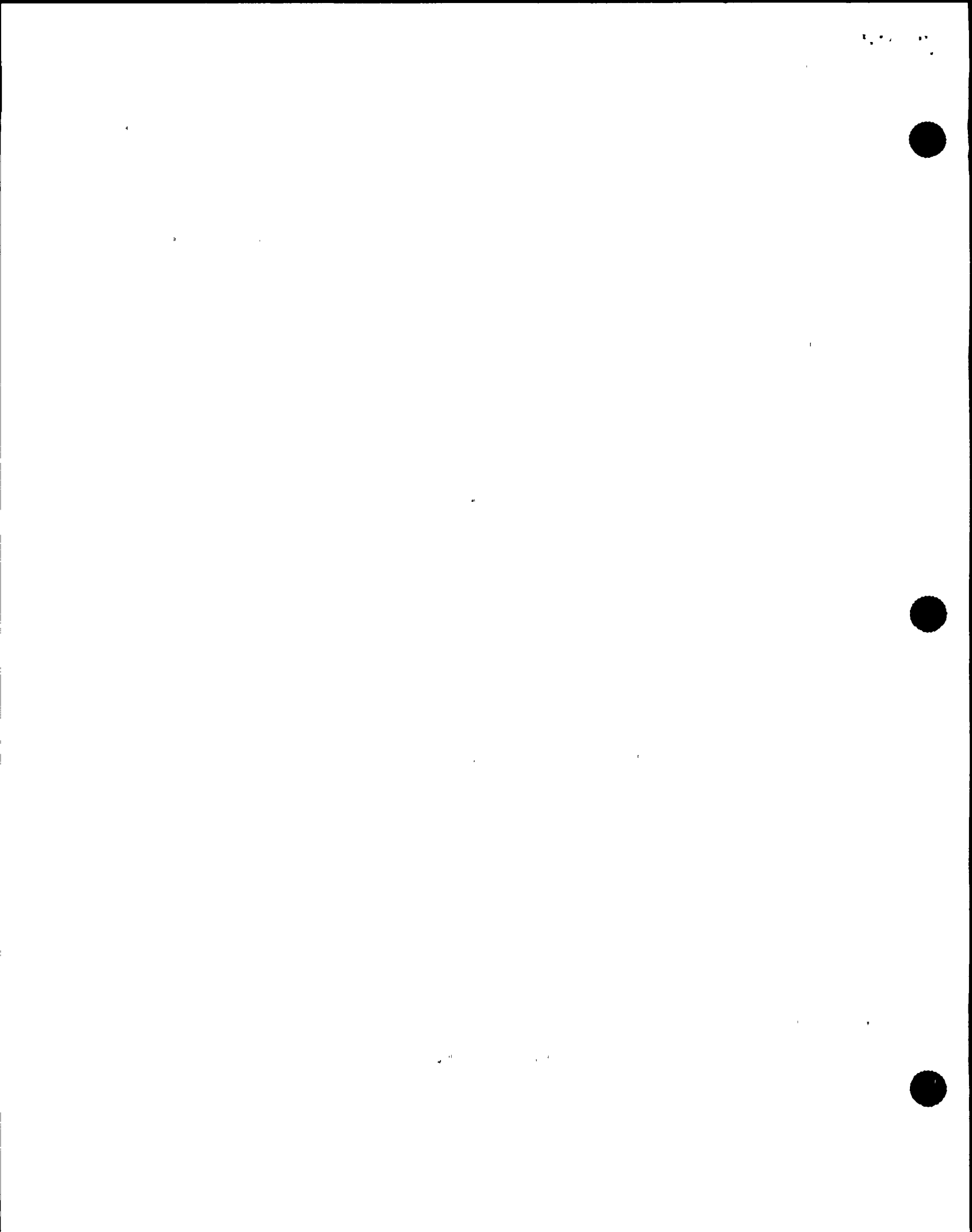
15 MR. BROCKWELL: Yes.

16 MR. CONTE: Can you give us an example -- you said
17 that you check things that are not really in a procedure,
18 and to a certain extent you can't put everything in a
19 procedure. I think I understand that, but could you give us
20 an example of one of those things, when you were starting
21 the aux boiler?

22 MR. BROCKWELL: Oh, on this one?

23 MR. CONTE: Is there some unique control aspect of
24 some point -- getting the fuel into the --

25 MR. BROCKWELL: No, the boiler -- One aspect



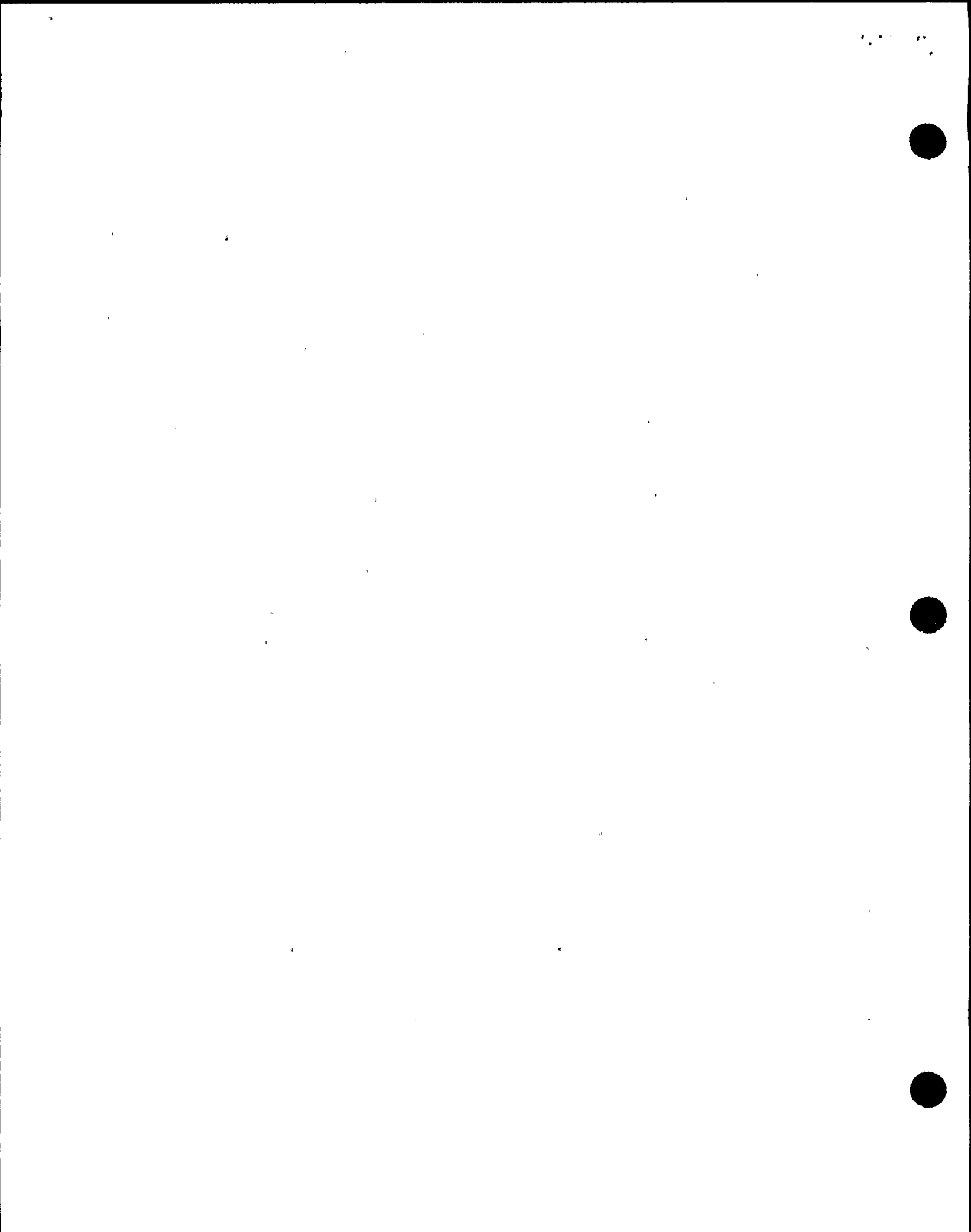
1 would be starting it up, for the conductivity of the boiler
2 itself. They give you a range, probably starting out at
3 maybe 900 or 1,000 micromoles, once you get the thing fully
4 operating and supplying everything you need at 1800
5 micromoles, but where along the line you need it tells you,
6 but if you started a boiler at that much, at a high level of
7 conductivity, you would have problems controlling it right
8 in the beginning, because it would heat up too quick; you'd
9 pressurize it too quick and probably lose it on high
10 pressure a lot. I guess at that point it's a feel on where
11 the conductivity level is a good place to start it and how
12 far you're opening your valves at once.

13 Once you get the boiler pressurized, it says to
14 slowly pressurize the header going out to -- in this case
15 they're reboilers, the first thing we were supplying. We
16 don't want to just wing that valve open; it's slowly opening
17 it while one person's watching pressure down below, so we
18 don't lose the boiler to trip due to low level, supplying
19 all your steam at once, just giving it an outlet and just
20 letting it go.

21 MR. CONTE: Isn't there a precaution in the
22 procedure that tells you about slowly opening that valve?

23 MR. BROCKWELL: Yes. It's slowly opening up to
24 pressurize it, but I guess at that point how slow is slow?

25 MR. CONTE: Yes. Some people could be very heavy-



1 handed.

2 MR. BROCKWELL: Right. It's just a feel, between
3 the person at the boilers recognizing, whoa, slow down.

4 MR. CONTE: I've got a better feel for what you're
5 talking about now, now that you say that.

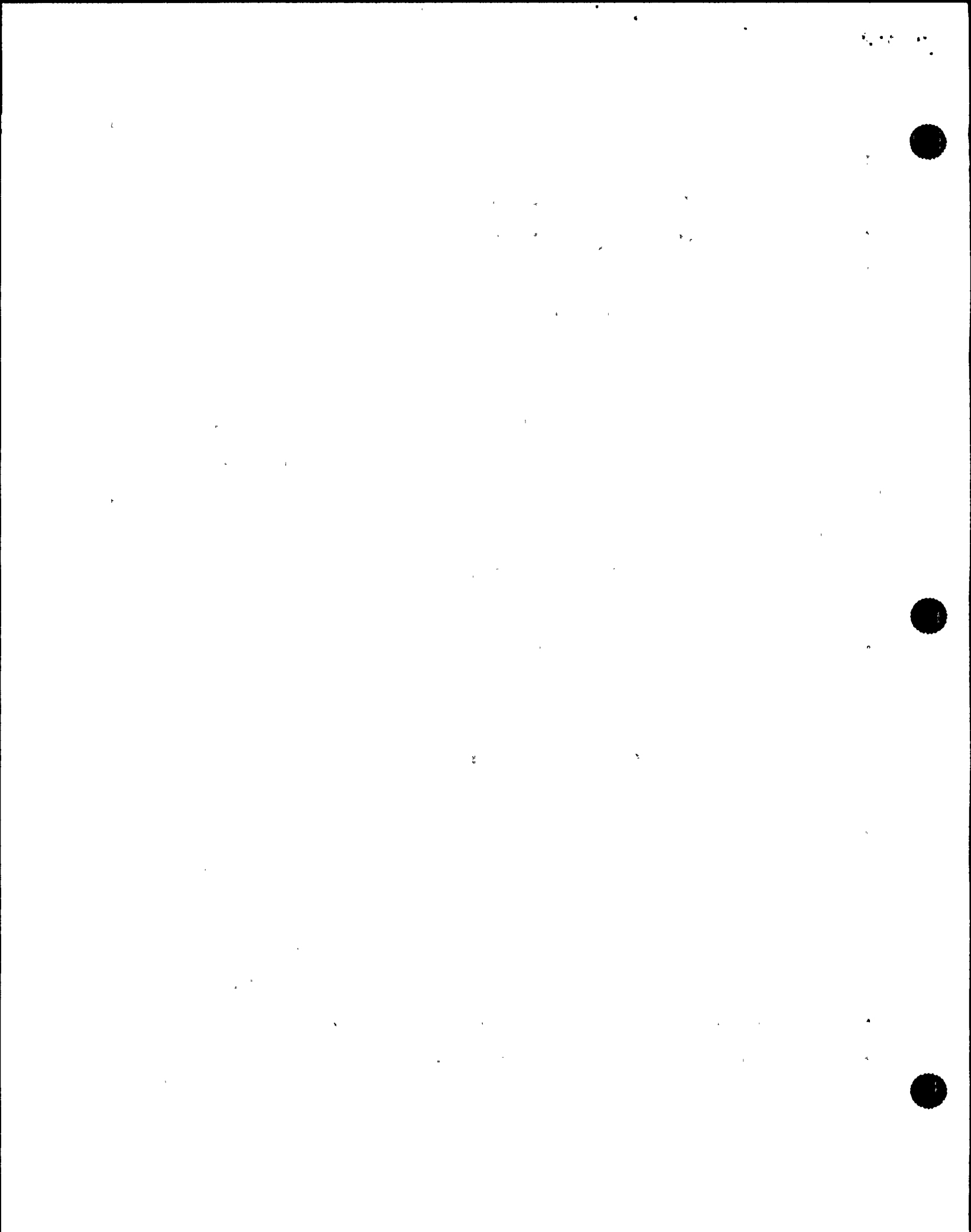
6 MR. BROCKWELL: Right.

7 MR. CONTE: How do you control this conductivity,
8 for example? You say you'd rather start out at the low end.
9 How do you control the conductivity of the water?

10 MR. BROCKWELL: We have the two chemicals, DSP and
11 TSP, which are di- and tri-phosphates, some type of
12 phosphates, and the other is sulfuric, so we have two
13 different things. Chemistry more or less samples the
14 boilers daily or every other day, on a surveillance, just to
15 tell us what we have in it, what they recommend we add to
16 the boiler.

17 MR. JORDAN: Even if it's in wet layup like this,
18 when it's just sitting there waiting to go?

19 MR. BROCKWELL: When a boiler's sitting in
20 standby, it's more or less in hot standby. It's heated up
21 and pressurized, but only to 60 pounds pressure, and you try
22 to keep -- the conductivity's kept in it, circulating. The
23 boiler is bottled up, more or less, just with an immersion
24 heater in it. It just keeps it warm enough where it will
25 start a lot easier than from cold.



1 MR. CONTE: That's normal, full-power: you keep
2 one of the boilers in hot standby.

3 MR. BROCKWELL: We try to keep one in hot standby
4 for that purpose.

5 MR. CONTE: So there is some circulation -- I
6 guess there's not much feedwater circulation, since there's
7 no demand for it.

8 MR. BROCKWELL: No. Everything is pretty much
9 right there. A little bit of the steam comes off of it to
10 keep in the deaerator, which is on the suction side of the
11 feed pumps.

12 MR. CONTE: So in hot standby, if you're going to
13 add chemicals, somehow you've got to get the water up and
14 then drain it down, I guess, when you're adding chemicals.
15 Is that how you do it when it's in standby?

16 MR. BROCKWELL: When it's in standby, there's a
17 recirculation pump inside the boiler itself that now we try
18 to keep running --

19 MR. CONTE: Oh, I see.

20 MR. BROCKWELL: -- so it will keep it circulating
21 throughout the boiler.

22 MR. CONTE: So you just add chemicals.

23 MR. BROCKWELL: So you're adding chemicals right
24 through the circulation system. It injects right into the
25 feed line of the boiler, because there is always a little



1 bit of feed going onto it.

2 MR. CONTE: On a routine basis, are there
3 instructions in the procedure for injecting chemicals?

4 MR. BROCKWELL: Yes.

5 MR. CONTE: Do you use them, generally?

6 MR. BROCKWELL: Yes.

7 MR. CONTE: Okay. I think that's it.

8 MR. JORDAN: I've got one more question. It's a
9 combined question, or you can consider it separate
10 questions.

11 MR. BROCKWELL: Okay.

12 MR. JORDAN: That is, of the actions that you did
13 for verifying the scram discharge header low pressure in the
14 aux boiler, were there either things that were available to
15 you or you had that you thought were extremely important to
16 have -- and in fact you had them -- and were there any
17 things out there that you didn't have that you wish you had,
18 to assist you in accomplishing your mission? Examples are
19 procedures for the aux boiler, or training, or a wrench --
20 gee, you wish that you had a wrench hanging at this location
21 in order to accomplish this thing quickly, and it's not
22 there, and as a result you had to run back and get it. You
23 know, was there something that you felt that -- Gee, I'm
24 glad that wrench was there, or, No, I'm glad it wasn't
25 there, or, I wished I had one -- those types of things. Was



1 there anything that you either wished you had or you're glad
2 that you didn't have?

3 And the answer to the question could be that not
4 everything went spectacular.

5 MR. BROCKWELL: I didn't find myself looking for
6 anything in particular or having any problems finding the
7 material in the area that I needed; procedure references
8 were there. So when anything I went out and did, I felt
9 very comfortable with. I didn't feel lost with anything. I
10 knew what I was looking for. So I had prints to verify what
11 I was looking for. So in that case I had all the material I
12 needed; training aspect, there isn't much you -- you can't
13 train somebody where every pressure indicator is in the
14 plant because there's too many local indications that come
15 off of pressure transmitters themselves. Most of the time
16 you would rely on the transmitter so you would have to find
17 the transmitter and hopefully just by going around you would
18 know a little bit or an idea -- you can at least be able to
19 trace the line back. So, I don't think they feel I was
20 missing anything or anything else could have helped me more.

21 MR. JORDAN:

22 Because everybody's trying to -- you actually knew where the
23 scram discharge air header pressure was? Is everybody
24 trained on that or is that something that you uniquely had
25 that information?



1 MR. BROCKWELL: No. That's a general training, at
2 least in the area, yes.

3 MR. JORDAN: A book that exists but then taking
4 you out and showing you where at?

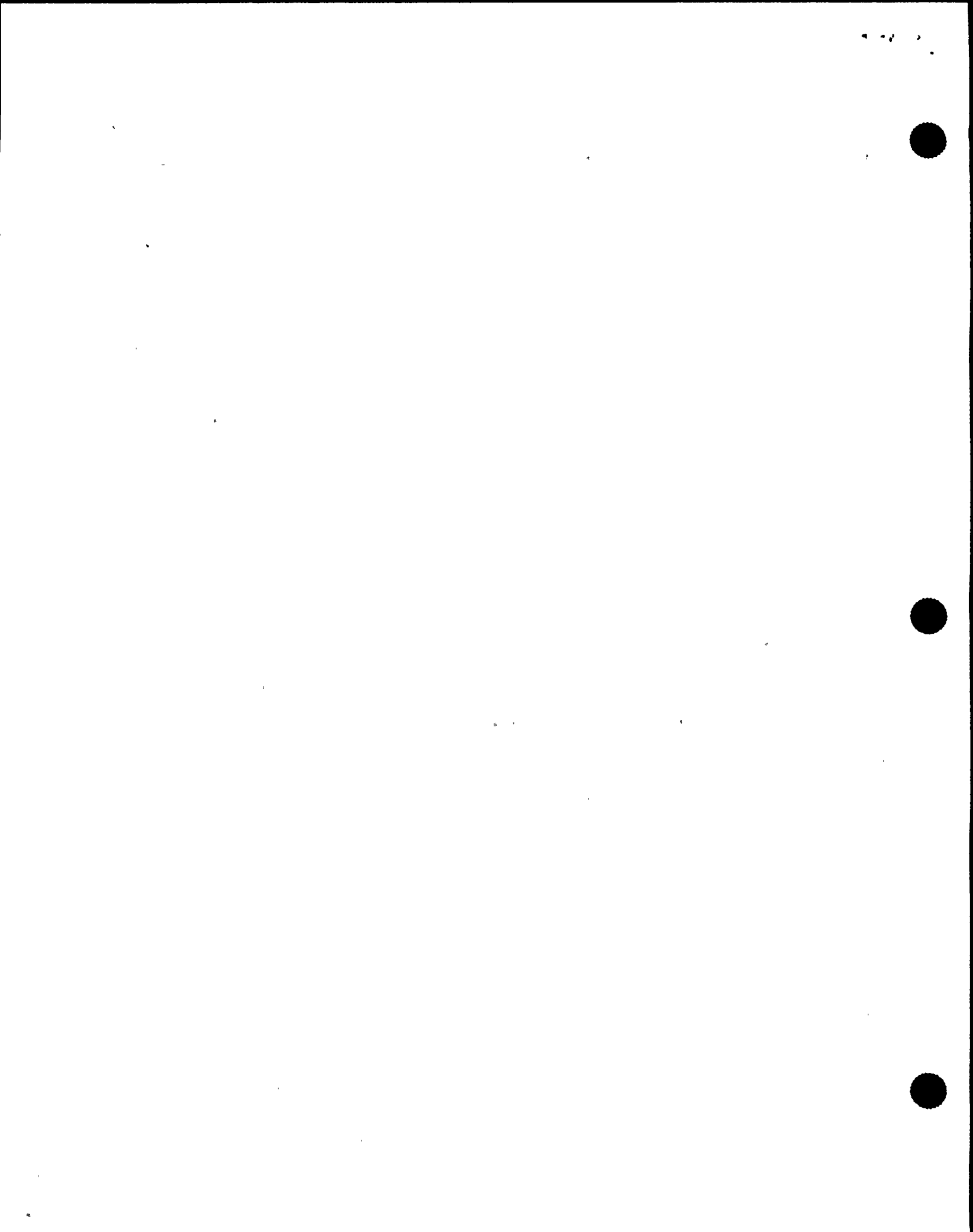
5 MR. BROCKWELL: Yeah. Because there's walk
6 throughs on all the systems and now I guess with the way
7 they're training out new operators they'll do the system --
8 they'll learn about the system and then later in the week
9 they'll walk -- try to walk down the systems a little bit
10 more and through our round sheets, anyway, you're checking
11 right in that area so, you see it enough times you kind of
12 get to know what it is.

13 So you did not know that you had any unique
14 information that probably nobody else would have had.

15 MR. CONTE: Did you know why you were verifying
16 that air header? What's the air header pressure being zero
17 mean to you?

18 MR. BROCKWELL: I knew that the scrammer header
19 had to be vented. Well, the way -- the ARI valves would
20 only open up if they had a high pressure or alternate rod
21 insertion.

22 I was trying to figure this out this morning,
23 talking with somebody, exactly why I was out verifying this,
24 or if it normally would be zero after a normal scram. I
25 don't really understand the system totally enough to -- on



1 why I looked at or what I was looking for or when it would
2 bleed off.

3 So, I have a basic knowledge of the system, but to
4 describe it, I couldn't do it.

5 MR. CONTE: Okay. Do you know why you're getting
6 aux boiler on the line?

7 MR. BROCKWELL: Pardon?

8 MR. CONTE: Do you know why you were getting the
9 aux boiler on the line?

10 MR. BROCKWELL: Yes. I knew we had to supply
11 steam seals to the turbine because they were trying to keep
12 a vacuum, I guess, at that point in the condenser which that
13 helps.

14 MR. CONTE: Okay.

15 MR. JORDAN: That's it David.

16 MR. CONTE: We're off the record.

17 [Whereupon, at 11:41 a.m., the taking of the
18 interview was concluded.]

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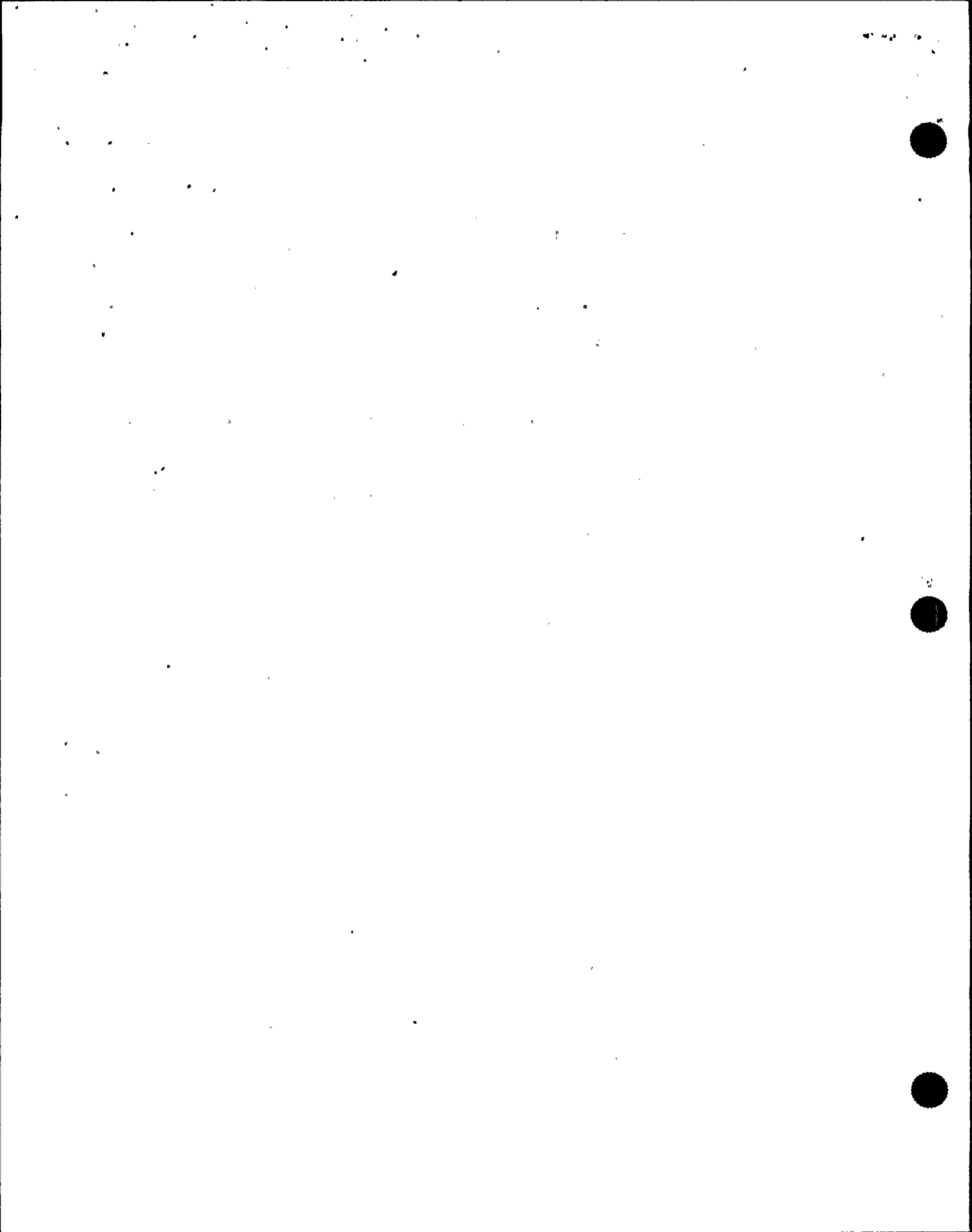
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REPORTER'S CERTIFICATE

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

in the matter of:

NAME OF PROCEEDING: Int. Of DAVID BROCKWELL

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.



IAN ROTHROCK

Official Reporter
Ann Riley & Associates, Ltd.



MEMORANDUM FOR THE RECORD

DATE: 10-10-70

BY: [Signature]



OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission
Incident Investigation Team

Title: Nine Mile Point Nuclear Power Plant
Interview of: DAVID BROCKWELL

Docket No.

LOCATION: Scriba, New York

DATE: Wednesday, August 21, 1991

PAGES: 1 - 24

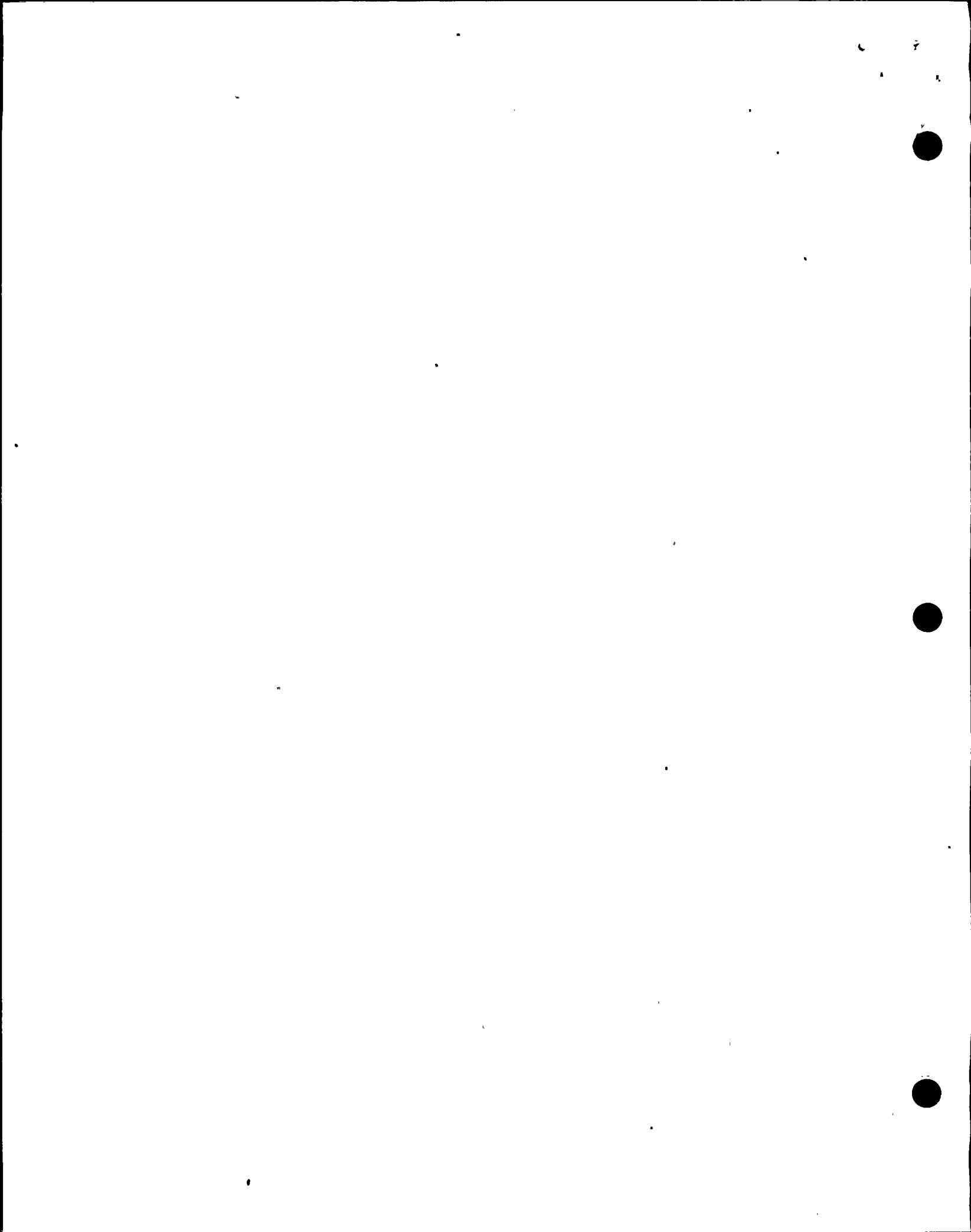
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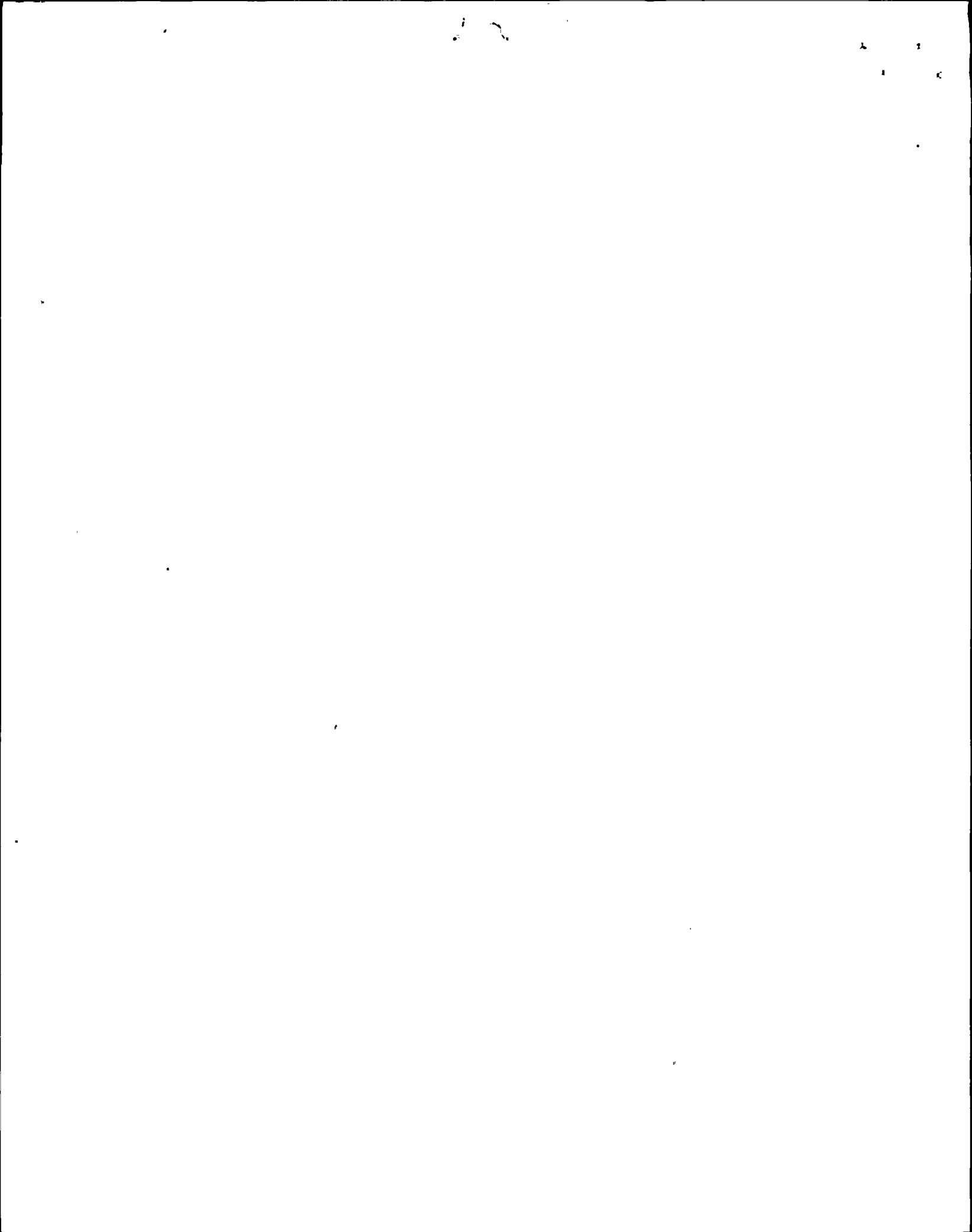
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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
INCIDENT INVESTIGATION TEAM

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Interview of :
DAVID BROCKWELL :
(Closed) :

Conference Room B
Administration Building
Nine Mile Point Nuclear
Power Plant, Unit Two
Lake Road
Scriba, New York 13093
Wednesday, August 21, 1991

The interview commenced, pursuant to notice,
at 11:14 a.m.

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

J. A.

5 1
1 2



P R O C E E D I N G S

[11:14 a.m.]

1
2
3 MR. JORDAN: It's August 21st, 1991, it's about
4 ten minutes after 11. We are at the Nine Mile Point Unit
5 Two in the P Building, we're conducting interviews
6 concerning a transient that occurred on August the 13th,
7 1991.

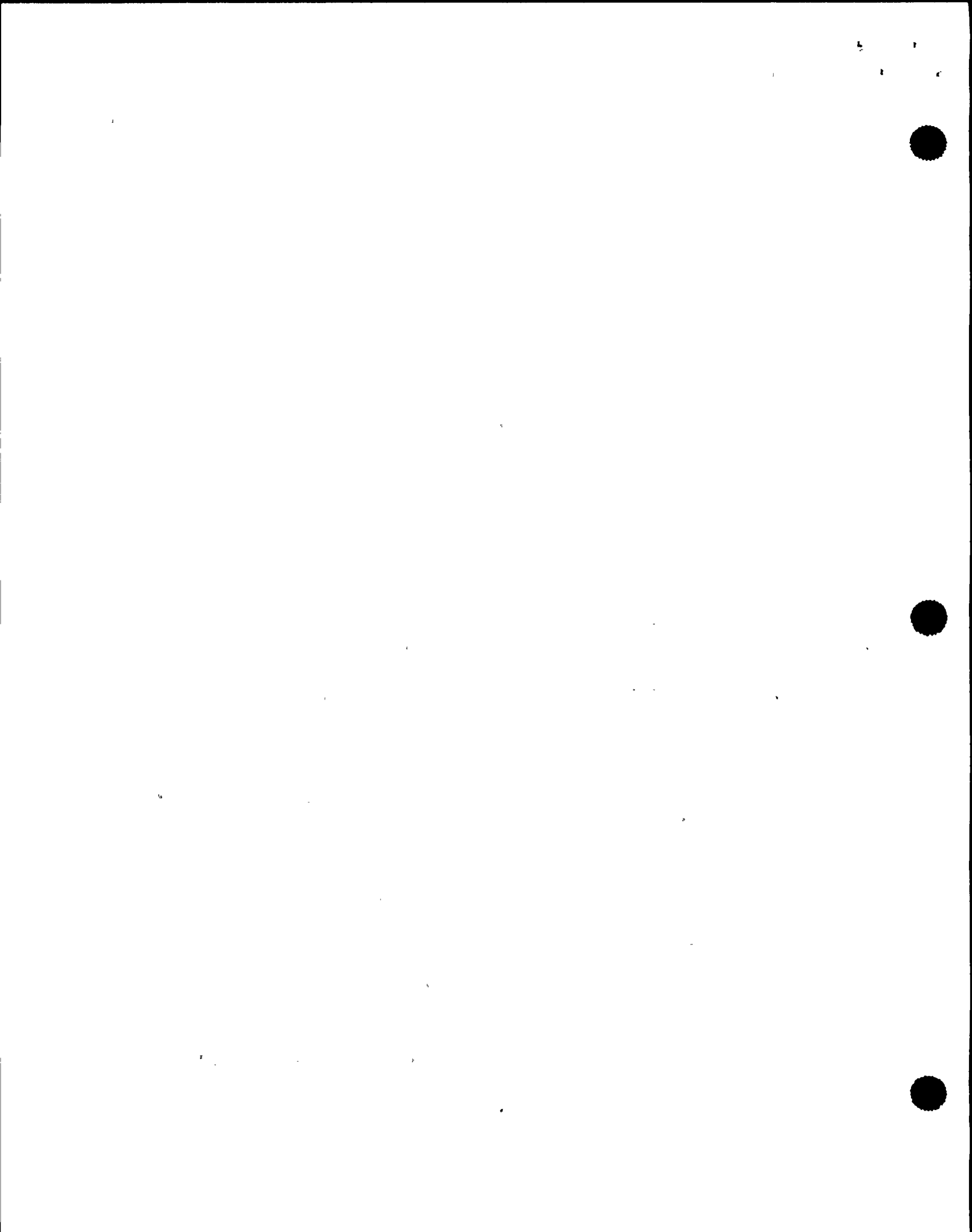
8 My name is Michael Jordan, I'm with U.S. NRC out
9 of Region III.

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

11 MR. BROCKWELL: I'm David Brockwell and I'm at
12 Plant Unit Two. I'm a nuclear auxiliary operator C.

13 MR. JORDAN: Okay, David, why don't you just give
14 us a background on your experience, as far as your nuclear
15 experience and your previous experience?

16 MR. BROCKWELL: In '86 I got out of college from
17 Allegheny with a degree in math and economics. I was hired
18 on here in September '86 as a utility mechanic for the
19 security department, more or less a janitor. Then I went
20 into the buildings and grounds department the following
21 year, in the fall of '87, and I was bumped out there
22 through our union bumping process and ended up in the plant.
23 Then in May '89 I came into operations; that was a big
24 change for me, going from pulling garbage to learning
25 something. I've been in the department since then; moved up



1 from an AOB to NAOC.

2 MR. JORDAN: Can you give us what they mean?

3 MR. BROCKWELL: Aux operator B to a nuclear
4 auxiliary operator C.

5 MR. JORDAN: Okay.

6 MR. BROCKWELL: To the time in training from the
7 department.

8 MR. CONTE: What's the typical progression here?
9 It's an aux operator A, B --

10 MR. BROCKWELL: There's no A --

11 MR. CONTE: Oh.

12 MR. BROCKWELL: -- aux operator.

13 MR. CONTE: It's just an aux operator?

14 MR. BROCKWELL: It starts out right at a B
15 operator which is more or -- that's what you process as
16 getting into the department and an interview.

17 MR. CONTE: Okay. And then nuclear auxiliary
18 operator C?

19 MR. BROCKWELL: Yes. That's the next step. I
20 don't know why there's a nuclear aux operator B, but it's
21 just --

22 MR. CONTE: And then what, D?

23 MR. BROCKWELL: No, then the next step is an E
24 operator which is our licensed operator.

25 MR. CONTE: Licensed operators, okay. Thank you.



1 MR. JORDAN: You're currently non-licensed?

2 MR. BROCKWELL: Yes.

3 MR. JORDAN: Okay. David, why don't -- is there
4 anything else as far as your experience goes?

5 MR. BROCKWELL: No, not really.

6 MR. JORDAN: Okay. Why don't you, in your own
7 words tell us -- are you on day-shift? What shift are you
8 on?

9 MR. BROCKWELL: This week I'm on -- I'm on day
10 shift this week. I'll be going on to nights next week.

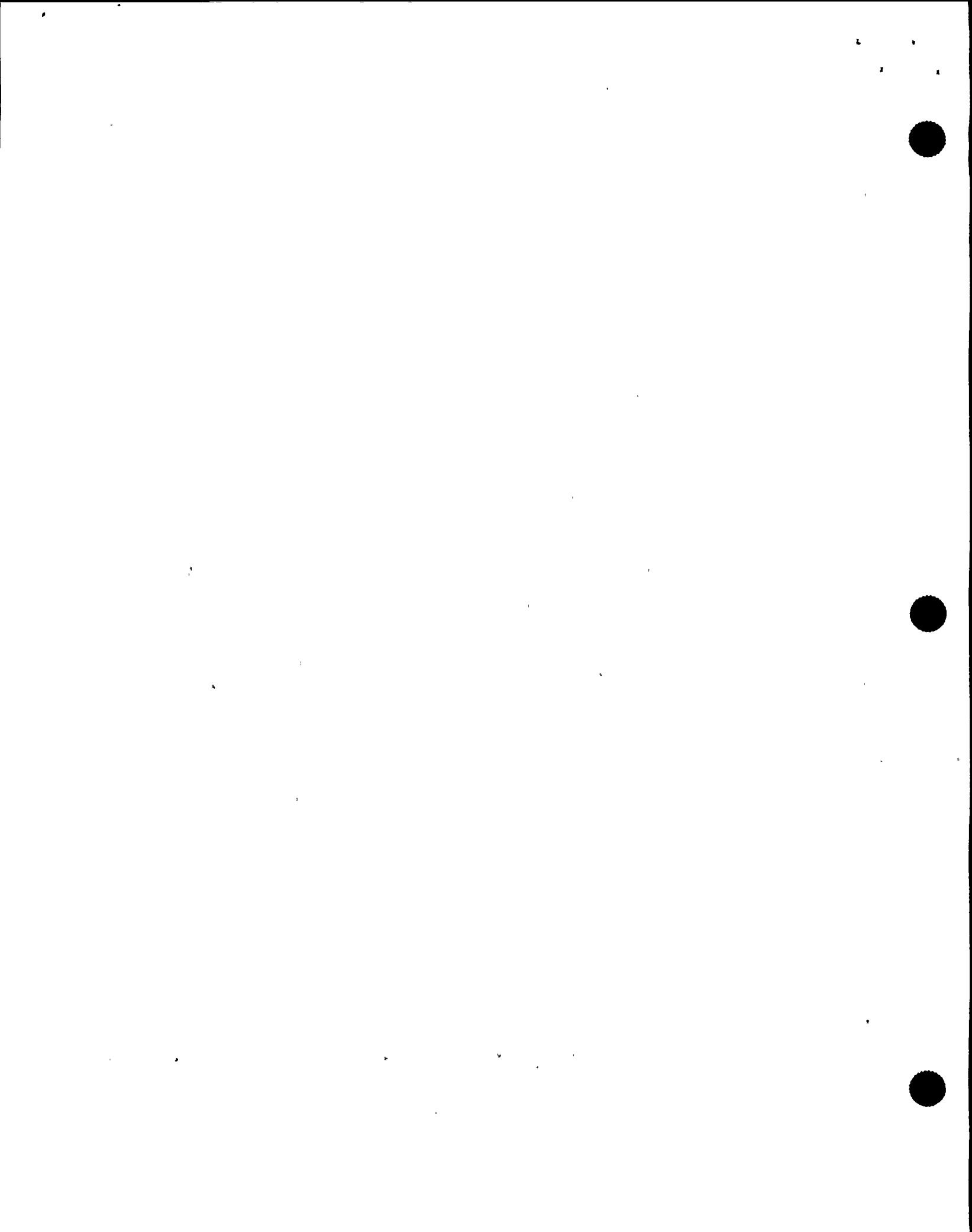
11 MR. JORDAN: The event, which shift were you on?

12 MR. BROCKWELL: I was on days. We were the shift
13 -- we would have been the shift of record coming in on days.
14 So we were expecting to take the turnover at 6 a.m.

15 MR. JORDAN: Okay. Why don't you just walk
16 through when you came to the gate that morning?

17 MR. BROCKWELL: Came through the gate that
18 morning, probably just before 6:00. It looked like there
19 wasn't a lot of steam coming out of the cooling tower, but
20 you can never tell, depending on the whether conditions;
21 walking into the yard -- walking towards the locker room I
22 run into a mechanic and he said "The sticks were up in the
23 yard." So that kind of cleared my mind that we must have
24 taken a scram or some kind of transient.

25 MR. JORDAN: What does sticks up in the yard mean?



1 MR. BROCKWELL: The output breakers -- output
2 stabs, if you want to call them -- from the transformers
3 were open. So we had no power going out, so something was
4 going on. So from there I proceeded just to grab my boots
5 and keys and hardhat and straight up to the control room
6 which is probably just before 5:00 -- just before 6:00,
7 excuse me, where I had noted that all the panels were kind
8 of dark. And from there it was just waiting instructions,
9 letting them know I was here, and awaiting instructions on
10 where they needed me. Just after --

11 MR. CONTE: What did you -- before you got to the
12 control room, did you see any lighting problems on the way
13 up?

14 MR. BROCKWELL: Yes. On my way up I noticed there
15 was -- I caught a couple operators going up the elevator and
16 it was dark -- with flashlight in hand.

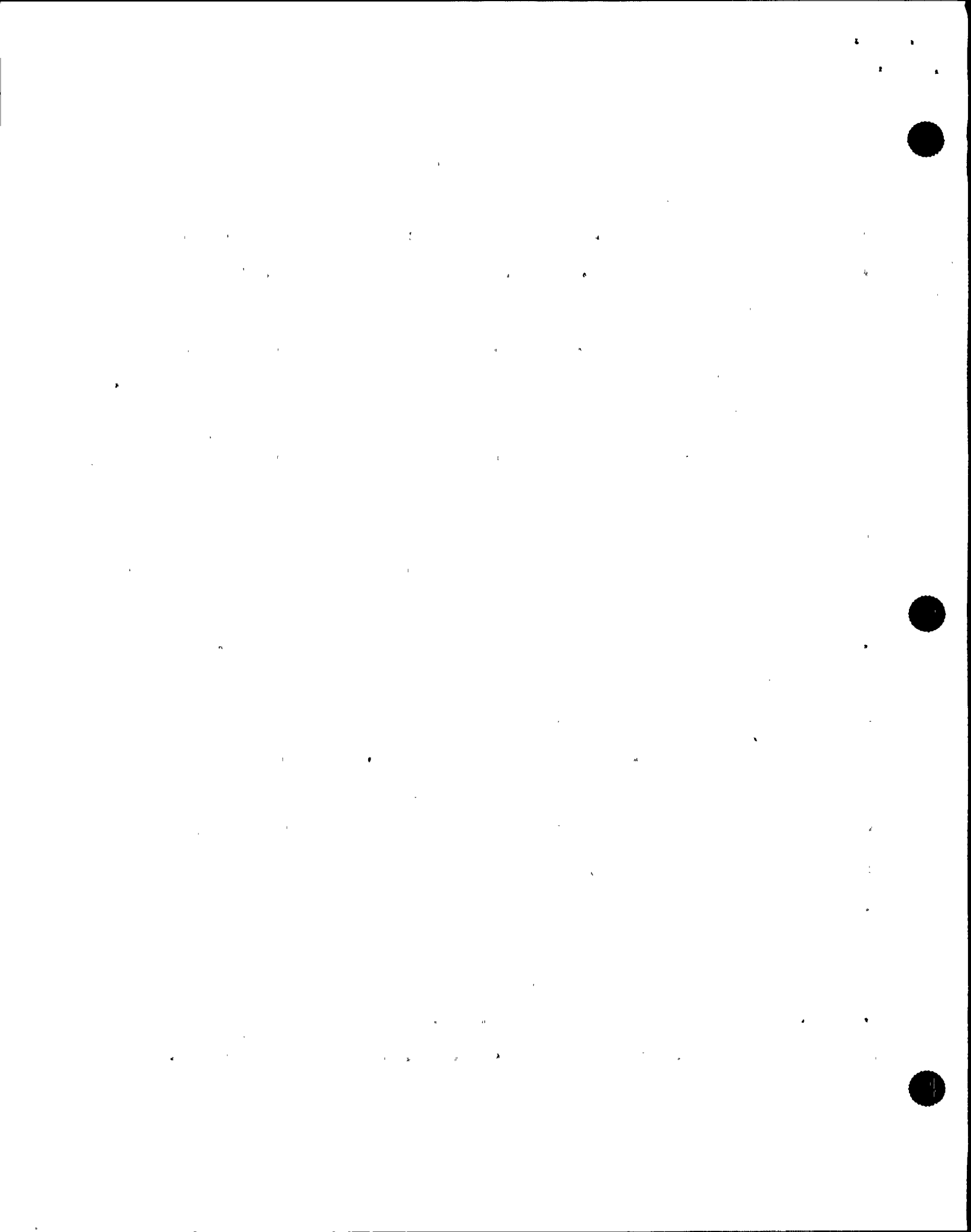
17 MR. CONTE: The elevator in the aux service
18 building --

19 MR. BROCKWELL: There was no light -- lighting in
20 the elevator in the aux service building.

21 MR. CONTE: No light except for that we understand
22 that the floor lights were on?

23 MR. BROCKWELL: Yes. The floor lights were lit.
24 And that was the only lighting in there.

25 MR. JORDAN: Is that how you got from the ground



1 floor to --

2 MR. BROCKWELL: Yes.

3 MR. CONTE: Where exactly is this locker room? Is
4 it in the control building or is it in the aux service
5 building?

6 MR. BROCKWELL: I guess it would be considered aux
7 service building. It's just across from our cardox tanks.
8 Just as you walk in the plant there.

9 MR. CONTE: 261 elevation?

10 MR. BROCKWELL: Right. Right when you walk in.

11 MR. CONTE: Okay.

12 MR. BROCKWELL: From the aux -- aux service
13 building -- auxiliary service building.

14 MR. CONTE: Okay. So you got to the control room
15 you reported in that you're here?

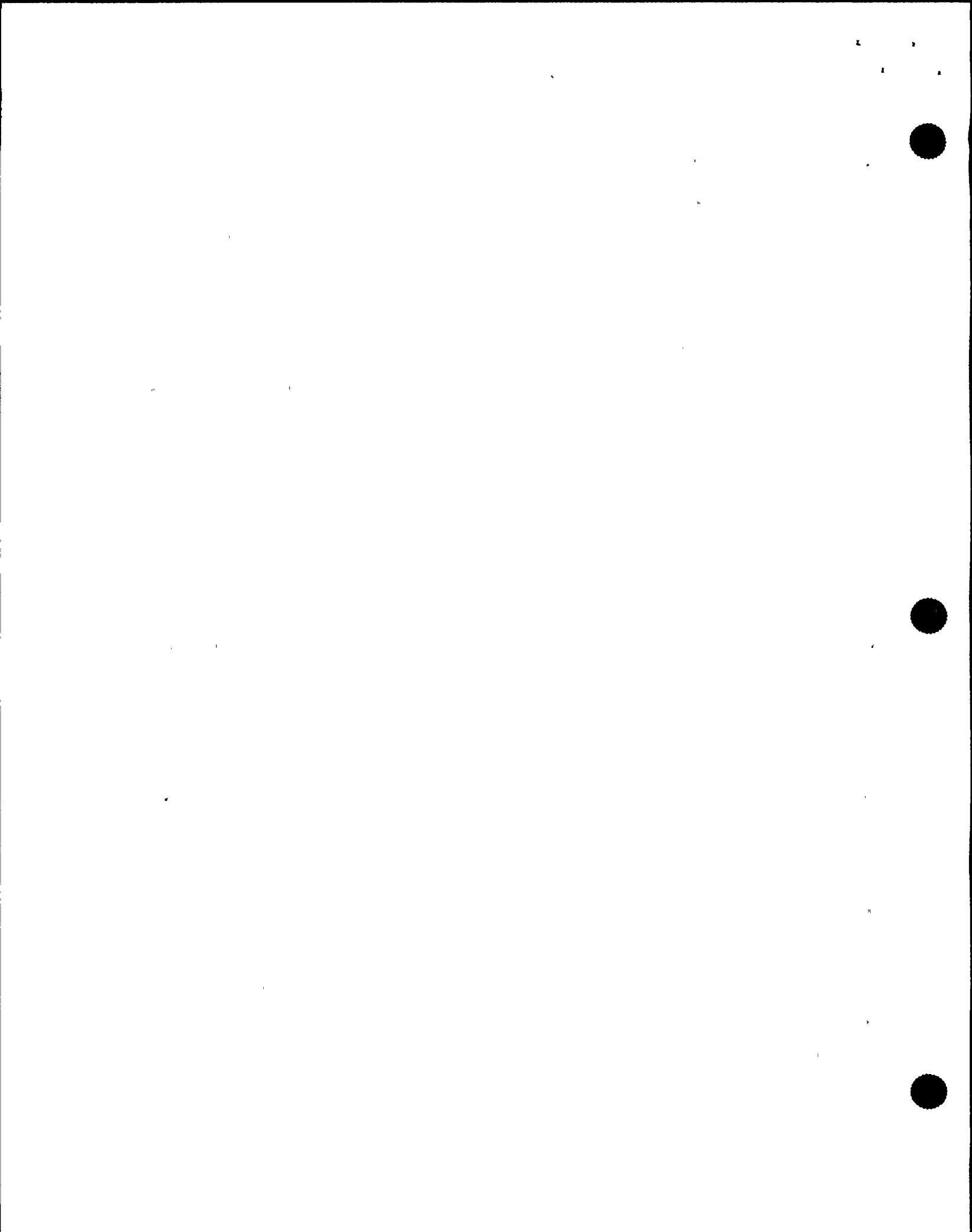
16 MR. BROCKWELL: Yes.

17 MR. CONTE: Were you in the Beehive or in the
18 control room?

19 MR. BROCKWELL: No, right in the control room.

20 MR. CONTE: Okay. Why did you go to the control
21 room instead of the Beehive?

22 MR. BROCKWELL: Because they're not going to call
23 it -- just continually call people over there; at that point
24 it's easiest just to go straight in and stay in the back
25 just so that -- or at least out of the way of everything.



1 All the commotion so they can see, right off the bat, who
2 they have who they can send and where to go.

3 MR. CONTE: Did you know a site emergency had been
4 declared?

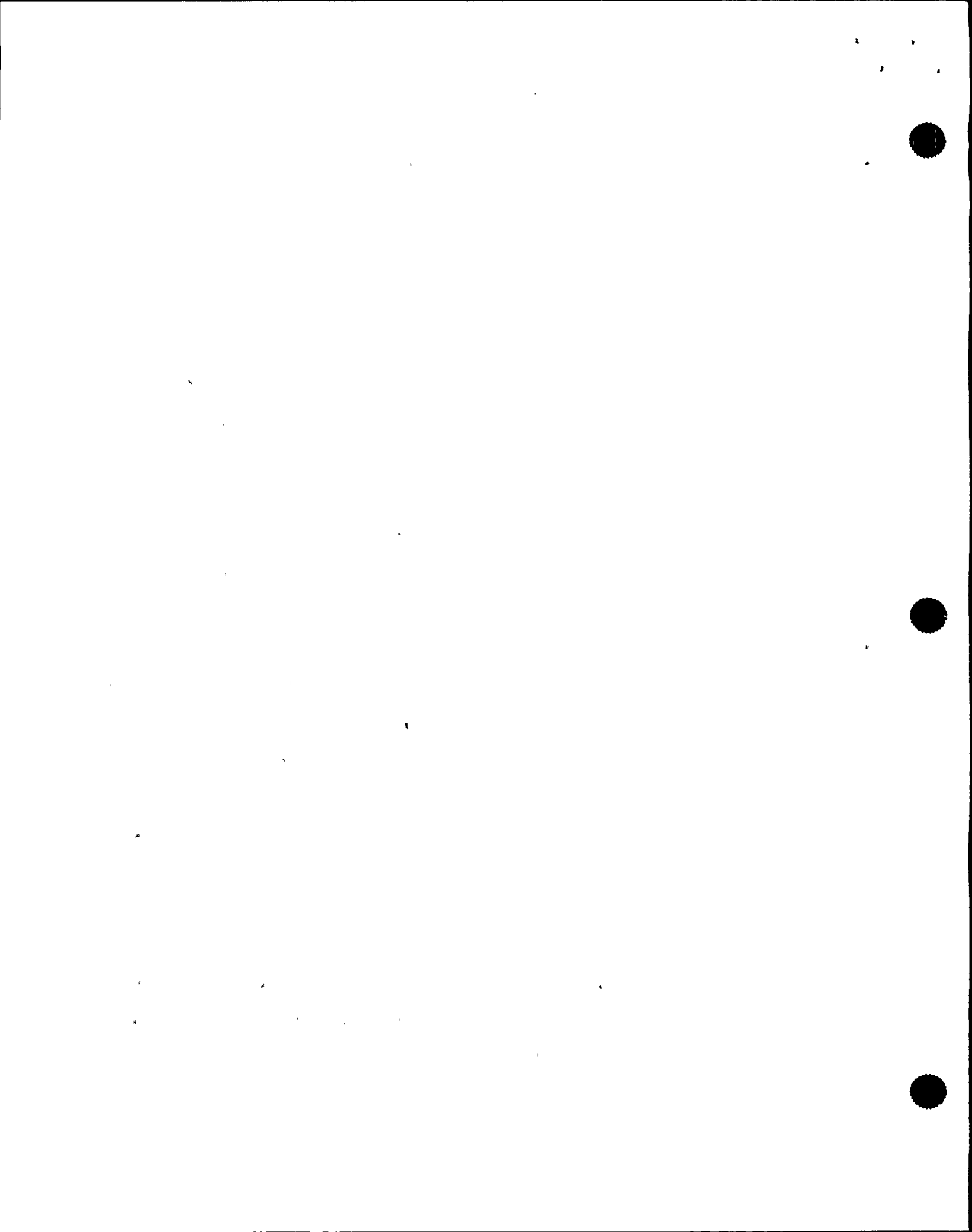
5 MR. BROCKWELL: No. Not at that point because
6 there was no -- we didn't any -- I found out at that point
7 that we had no gaitronic systems, we had power for calling
8 you, but I found that on the way up the elevator, people
9 were telling me that UPS's were down.

10 MR. CONTE: Okay. All right. So what was the
11 first assignment when you were waiting?

12 MR. BROCKWELL: A little bit after six, probably
13 five after or so. My CSO, which would be David Rathbun,
14 asked me to verify that the scram air discharge -- the
15 scram air header was discharged. So our biggest problem was
16 finding local indications -- we went right to the prints,
17 looking just downstream of our ARI valves to find a gauge
18 that would show me exactly that it didn't rely on any kind
19 of power or anything, just an air pressure gauge itself.
20 That the air header was bled off.

21 MR. CONTE: Okay.

22 MR. BROCKWELL: So after a little bit of
23 discussion I Xeroxed a copy and went out and found it -- a
24 little discussion between people of where it possibly could
25 be because nobody was exactly sure.



1 MR. CONTE: Okay. Do you remember the pressure
2 gauge number?

3 MR. BROCKWELL: In fact, I just looked at it. PI-
4 139. I don't remember the prefix, probably RDS or --

5 MR. CONTE: RDS, rod drive system?

6 MR. BROCKWELL: Yeah.

7 MR. CONTE: Okay. Okay, could you tell us your
8 path from the control room down to this valve and what did
9 you observe from the point of view of lighting? Any
10 problems?

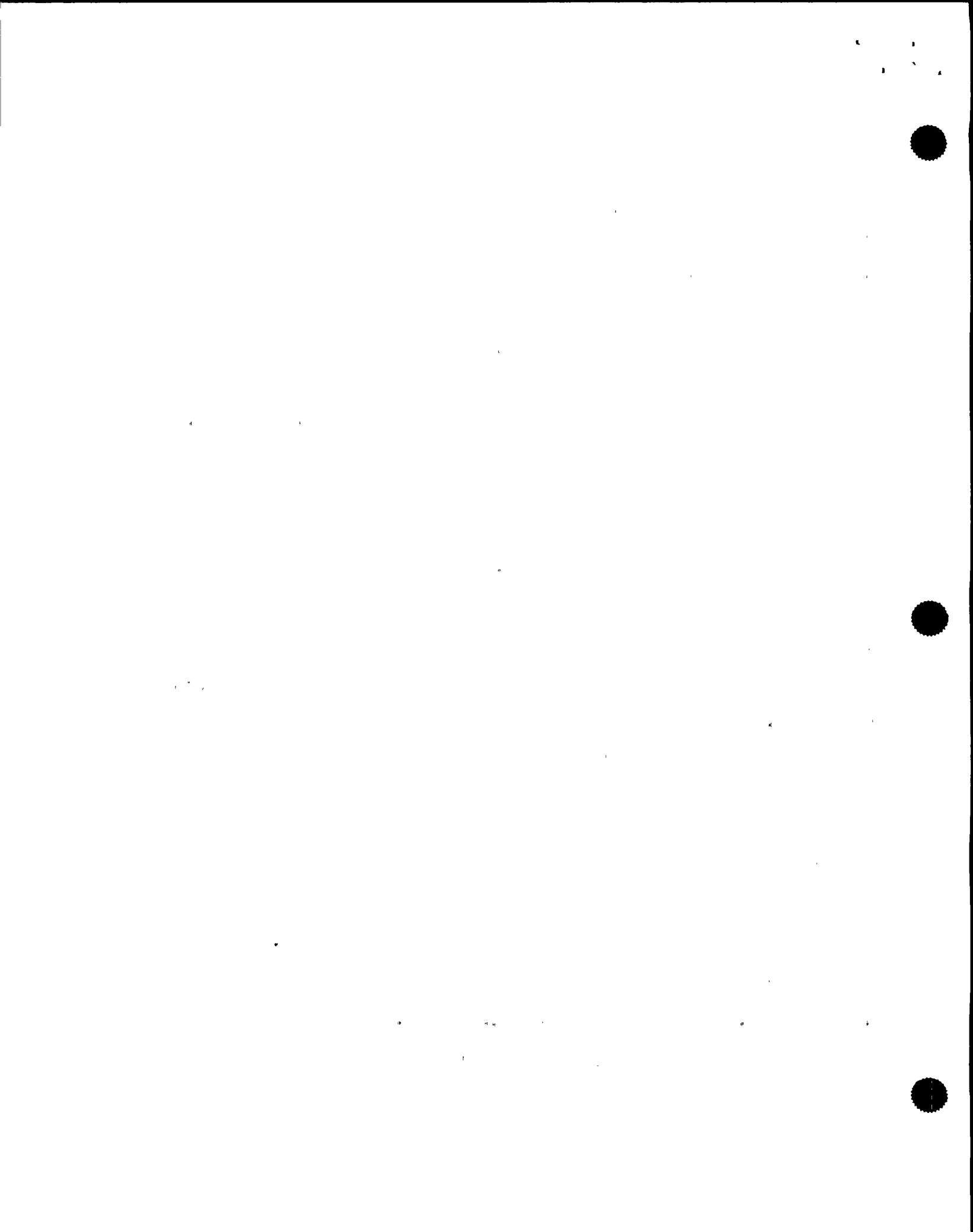
11 MR. BROCKWELL: Um, I took the quickest way down,
12 I took the stairs next to the elevator; it's easier than
13 waiting for the elevator. I can fly down the stairs
14 quicker.

15 MR. CONTE: This was that same elevator in the aux
16 service building?

17 MR. BROCKWELL: Yes, in the aux service building,
18 so I took the aux service building stairs.

19 MR. CONTE: How was the stairwell there? That had
20 lights?

21 MR. BROCKWELL: Um, I don't remember off hand. It
22 was not something I was concerned with. Just hold on to the
23 railings and get down. From there over to the reactor
24 building air lock to get into the reactor building on 261
25 all the way around, got into the reactor building, just



1 walking through, you just peak around to see if anything was
2 out of the ordinary, but all the way around on the north
3 side --

4 MR. JORDAN: No lighting problems?

5 MR. BROCKWELL: No. Not that I noticed.

6 MR. JORDAN: Okay.

7 MR. CONTE: Help me a little here. When you're
8 looking at the reactor building from the security -- from
9 the Unit Two security building you see a -- a large -- it
10 looks like a stack, I understand that's a stairway going up
11 the building --

12 MR. BROCKWELL: Yes.

13 MR. CONTE: -- that kind of protrudes out?

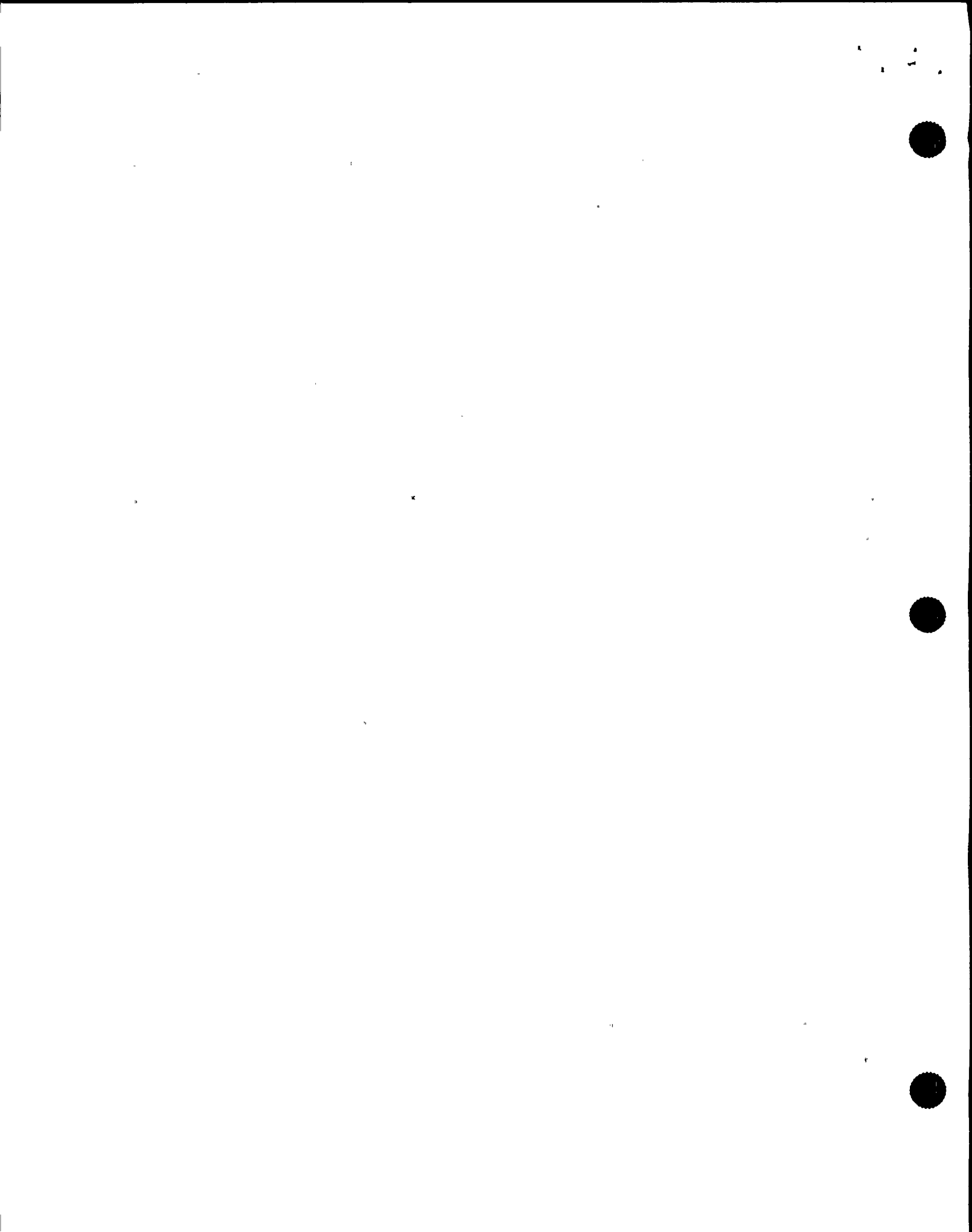
14 MR. BROCKWELL: Right.

15 MR. CONTE: The air lock -- some people have
16 mentioned coming down that stairway, exiting and coming out
17 into the yard, going by the trailers --

18 MR. BROCKWELL: Right.

19 MR. CONTE: -- and then going back into cardox
20 room. Is that the path you used, or is this a different
21 path to get into the reactor building?

22 MR. BROCKWELL: Oh. Okay. There's two entrances
23 to the reactor building that we mainly use, which one
24 through the trailer access which -- I've got to think, I
25 lose my bearing when I'm in a round building. The trailer



1 is probably a southwest entrance or a west entrance they're
2 calling it, I think, and I think the other airlock is
3 considered an east entrance or a southeast entrance.

4 MR. CONTE: You used the east entrance?

5 MR. BROCKWELL: Yes.

6 MR. CONTE: Okay.

7 MR. BROCKWELL: So I had to pass, more or less,
8 inside pass by that other stairway; go all the way around
9 past the northside of the reactor track bay around past that
10 all the way over into the rod flow control area or filter
11 area over in that area was where the gauge was found.

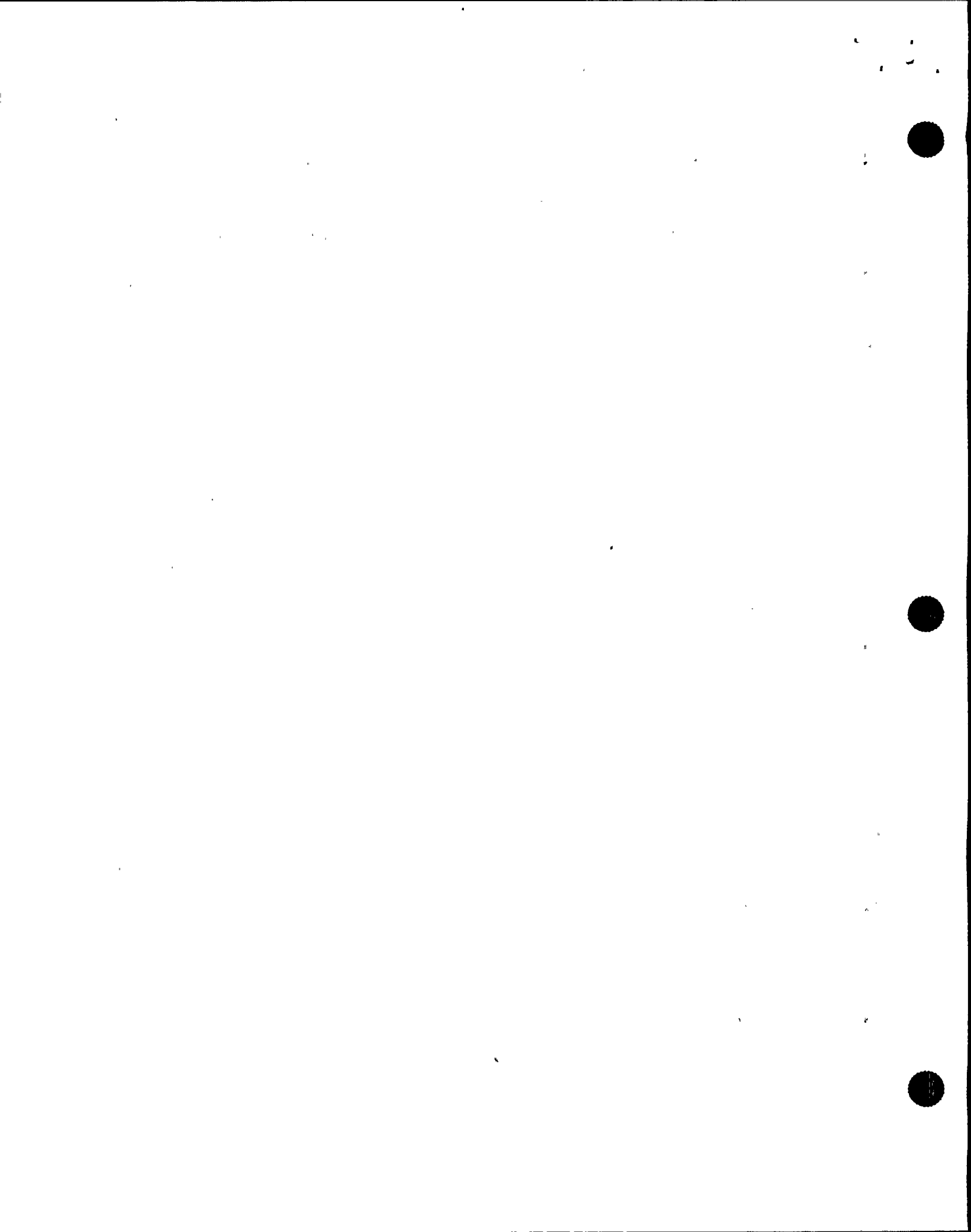
12 MR. CONTE: Do you have to suit up to get into the
13 reactor building?

14 MR. BROCKWELL: No.

15 MR. CONTE: Okay. So you enter into the building
16 and you're looking around and you didn't see anything
17 unusual?

18 MR. BROCKWELL: Not at that point, no. I was
19 mainly concerned on getting over and finding this pressure
20 indicator and I wasn't sure exactly where it was so I knew
21 where the ARI valves I was looking for was and I had a
22 little Xerox of the print, so mainly it was tracing it back
23 -- just tracing lines back to the gauge, which was real
24 close by so it didn't take me too long.

25 MR. CONTE: Did you find it?



1 MR. BROCKWELL: As soon as I found it I verified
2 that it was zero, called the control room back and I think
3 it was exactly at the point where they re-energize their
4 power.

5 MR. JORDAN: How did you call the control room?

6 MR. BROCKWELL: With the land line, if you want to
7 call it or dial telephone.

8 MR. JORDAN: There's one close by?

9 MR. BROCKWELL: Dial telephone close by.

10 MR. JORDAN: Now you know, loss of power came back
11 when you were in your --

12 MR. BROCKWELL: When I called the control room,
13 they said they had it back and so they -- my information was
14 -- it was helpful, but they already had it, apparently on
15 indication from the control room.

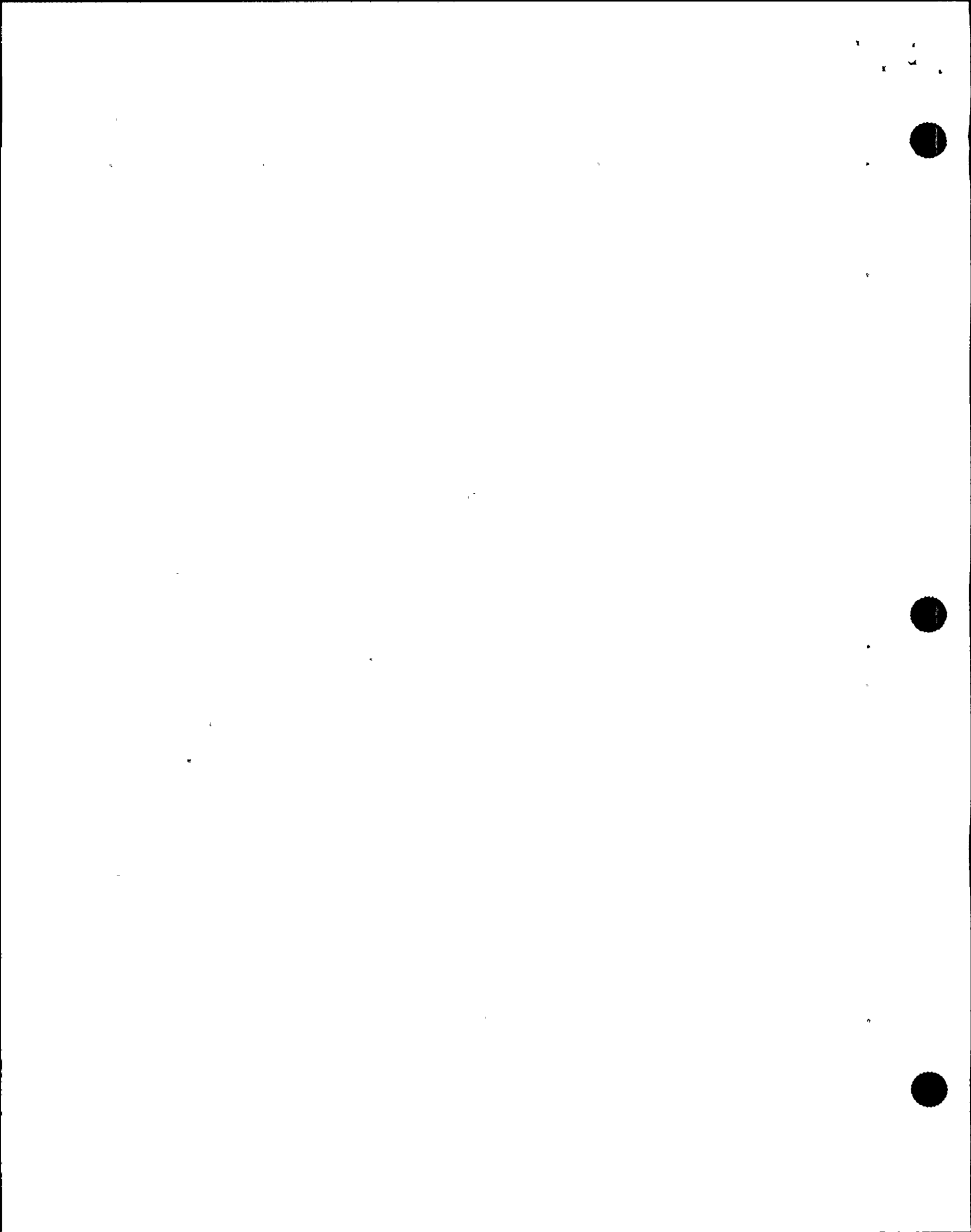
16 MR. JORDAN: Verification that this gauge read
17 zero, that it was -- the discharge header, how did you do
18 that?

19 MR. BROCKWELL: What do you mean by that?

20 MR. JORDAN: Did you check by the print -- by the
21 gauge number versus the gauge, or did you walk the air
22 header back --

23 MR. BROCKWELL: I walked both ways. In order to
24 find the gauge, I had to walk the air header back.

25 MR. JORDAN: So it was tagged with --



1 MR. BROCKWELL: And plus it was tagged with the
2 instrument number.

3 MR. CONTE: 139?

4 MR. BROCKWELL: Right. Because just beside that I
5 think there's a pressure transmitter so I can verify the PT-
6 139 versus the PI-139. It comes off of the same -- right at
7 the same point. There's a transmitter and a local
8 indicator.

9 MR. JORDAN: So there wasn't any overhead that was
10 actually low enough that you could see it. Then you called
11 the control room and told them that it was --

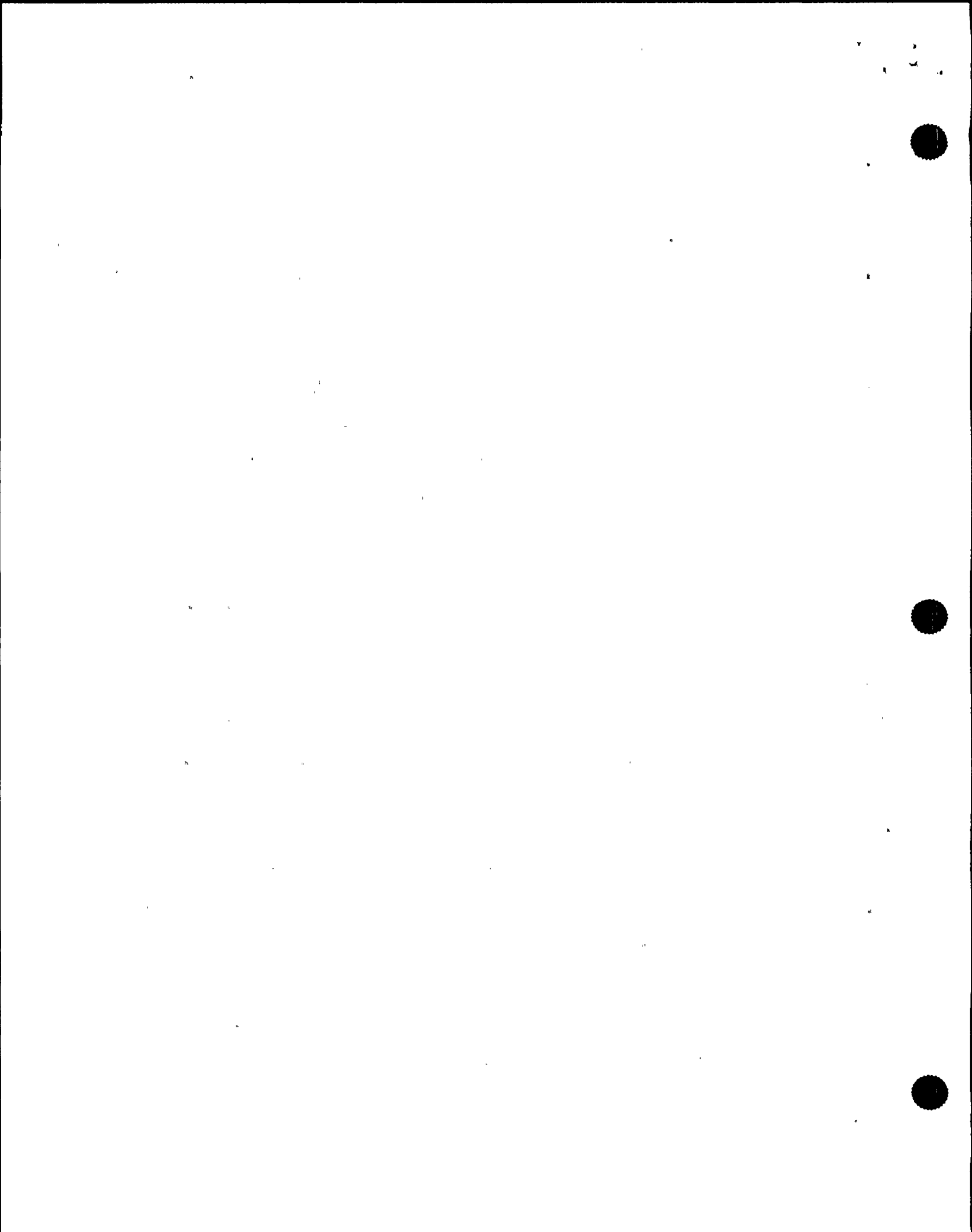
12 MR. BROCKWELL: I told them that the air header
13 PA-139 -- I tried telling the exact person that sent me out
14 so he could refer it, to make it as short as possible what I
15 was saying.

16 MR. JORDAN: And it was zero, did you say?

17 MR. BROCKWELL: Yes, that the air header was zero.
18 From there, I just proceeded back up to the
19 control room, to await further instructions.

20 MR. JORDAN: And your transition back to the
21 control room -- did you go back the same way? Of course
22 power is back now, so I guess there was no problem with
23 lighting or anything else that you saw.

24 MR. BROCKWELL: No. I don't even know at that
25 point which way I went back.



1 MR. JORDAN: Okay.

2 But as far as going to and from -- in and out of
3 the plant, lighting, as far as you know, was not a problem.

4 MR. BROCKWELL: I didn't notice anything at that
5 point.

6 MR. JORDAN: You're back in the control room.

7 MR. BROCKWELL: I just sat around a little bit,
8 until they sent me a couple minutes later -- they asked
9 myself and one other person, Jim Stevens, to respond to the
10 aux boilers and get them started up, so we could start
11 supplying steam.

12 MR. CONTE: I was in an interview with, I think,
13 Jim Stevens. I think he mentioned that -- he's an NAOC.

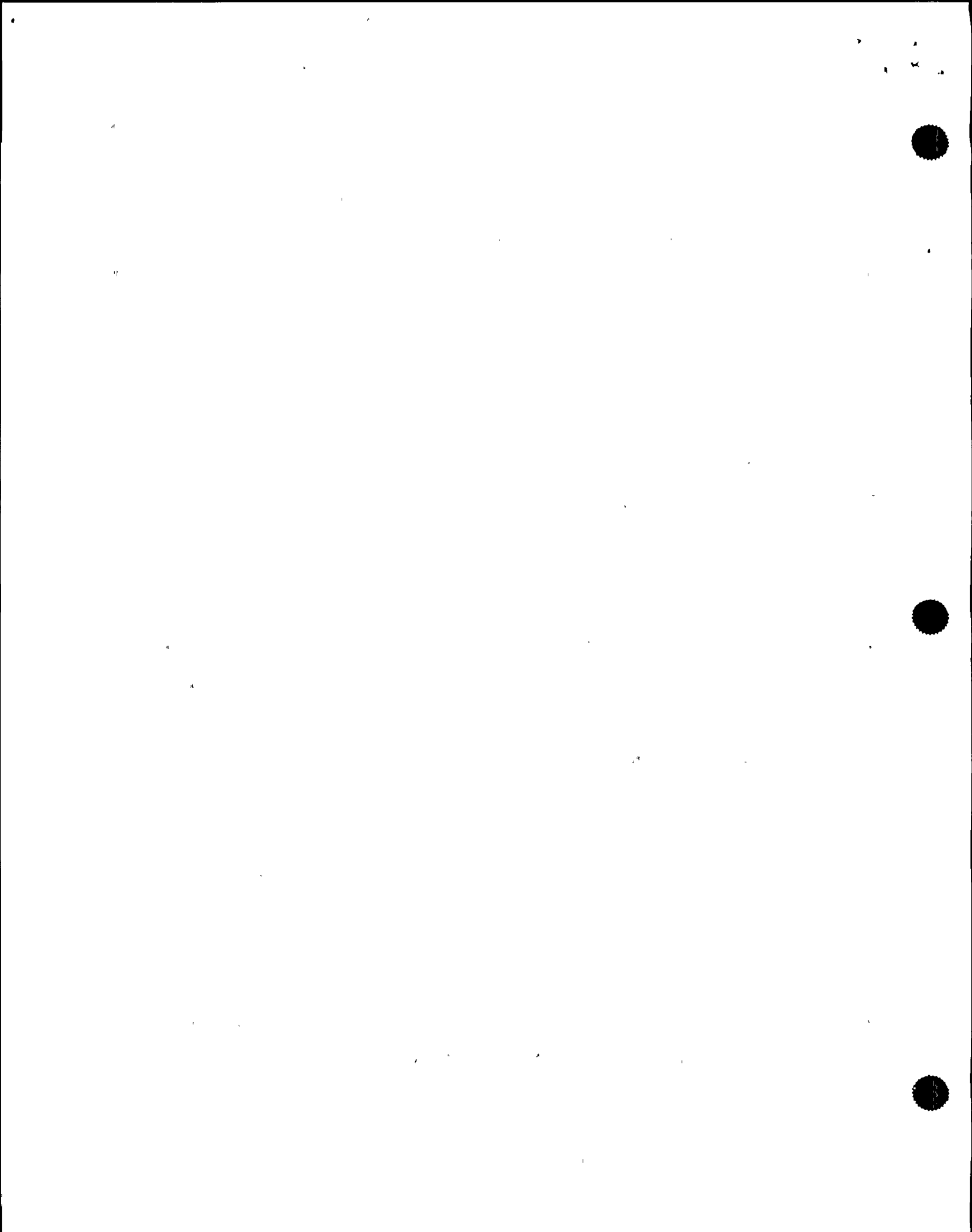
14 MR. BROCKWELL: Yes.

15 MR. CONTE: Was he involved with the aux boilers,
16 too? He gave me the impression the aux boilers came up real
17 smooth. He said he never saw aux boilers come up so --

18 MR. BROCKWELL: No. I've never got an aux --
19 Between the two of us, we were really surprised, because
20 normally it takes at least two people to get a boiler fired
21 up quick and get it going, and it was super-easy. It was
22 the first time we had -- that's only the Bravo boiler.

23 MR. CONTE: There are two, A and B?

24 MR. BROCKWELL: There are two boilers, A and B.
25 Our Alpha one was in nitrogen layup, so it took us a little



1 while.

2 MR. CONTE: How would you describe the effort,
3 between you and Jim? You were helping one another? Who was
4 really responsible for getting the boiler up all by himself,
5 or what?

6 MR. BROCKWELL: I don't think either of us took
7 total responsibility or the other, because it depended on
8 where we were at. We both knew exactly what had to be done,
9 so I think he took the first effort of firing the boiler up,
10 and I was supporting him at that point, doing miscellaneous
11 things in the startup of it.

12 MR. CONTE: Was either one of you using a
13 procedure?

14 MR. BROCKWELL: Yes. The procedure is right
15 there, and through a lot of times firing them up, just
16 background stuff -- along with the procedure, you can think
17 of little things to check.

18 MR. CONTE: Based on your experience.

19 MR. BROCKWELL: Based on experience. A lot of it
20 down there is, you check things through experience that
21 aren't in the procedure, but we didn't have any problems,
22 which was something very different down there, for the
23 first time.

24 MR. CONTE: Do you have anything else, Mike?

25 MR. JORDAN: No, I don't have anything else.



1 MR. CONTE: I do have another question. I'm
2 trying to formulate it in my mind. You mentioned the aspect
3 that there are a lot of things you do based on your
4 experience. Wouldn't it be nice to get that into the
5 procedure for the new guy or the next guy to --

6 MR. BROCKWELL: I know what you're saying,
7 experience-related things in the procedure, maybe
8 precautions. I don't think a lot of it can be, because it
9 comes with just a feel, some of it. Some things -- well --

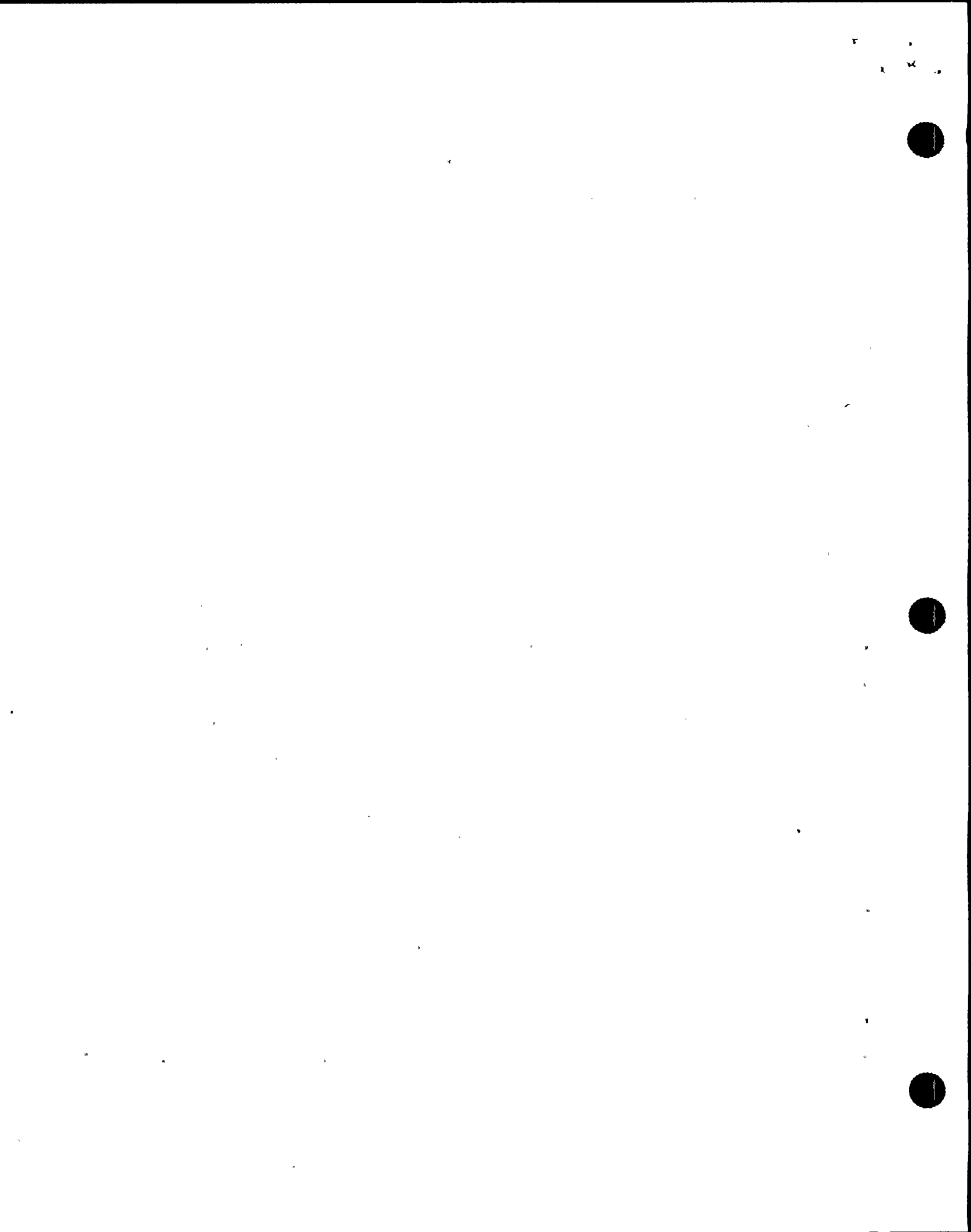
10 MR. CONTE: Just an innate skill?

11 MR. BROCKWELL: Yes.

12 MR. CONTE: A skill within you.

13 MR. JORDAN: What about training? You took over
14 as an operator in '89, and you went out there to start the
15 boilers for the first time. Is there a training process
16 that says, Okay, fine, we're going to sit you down in a
17 classroom and teach you how to start and operate this thing
18 and then take you out and show you how to operate it and
19 then let you operate it?

20 MR. BROCKWELL: The way it's set up now, yes.
21 They pretty much go to training first. Or I spent a lot of
22 time on shift before I went to the formal training -- in
23 other words all the system. I spent a lot of time on shift,
24 tagging along with people. I found shift time like that to
25 be more helpful. Just hands-on you can learn, I feel, a lot



1 more than you can out of a book.

2 MR. JORDAN: Okay.

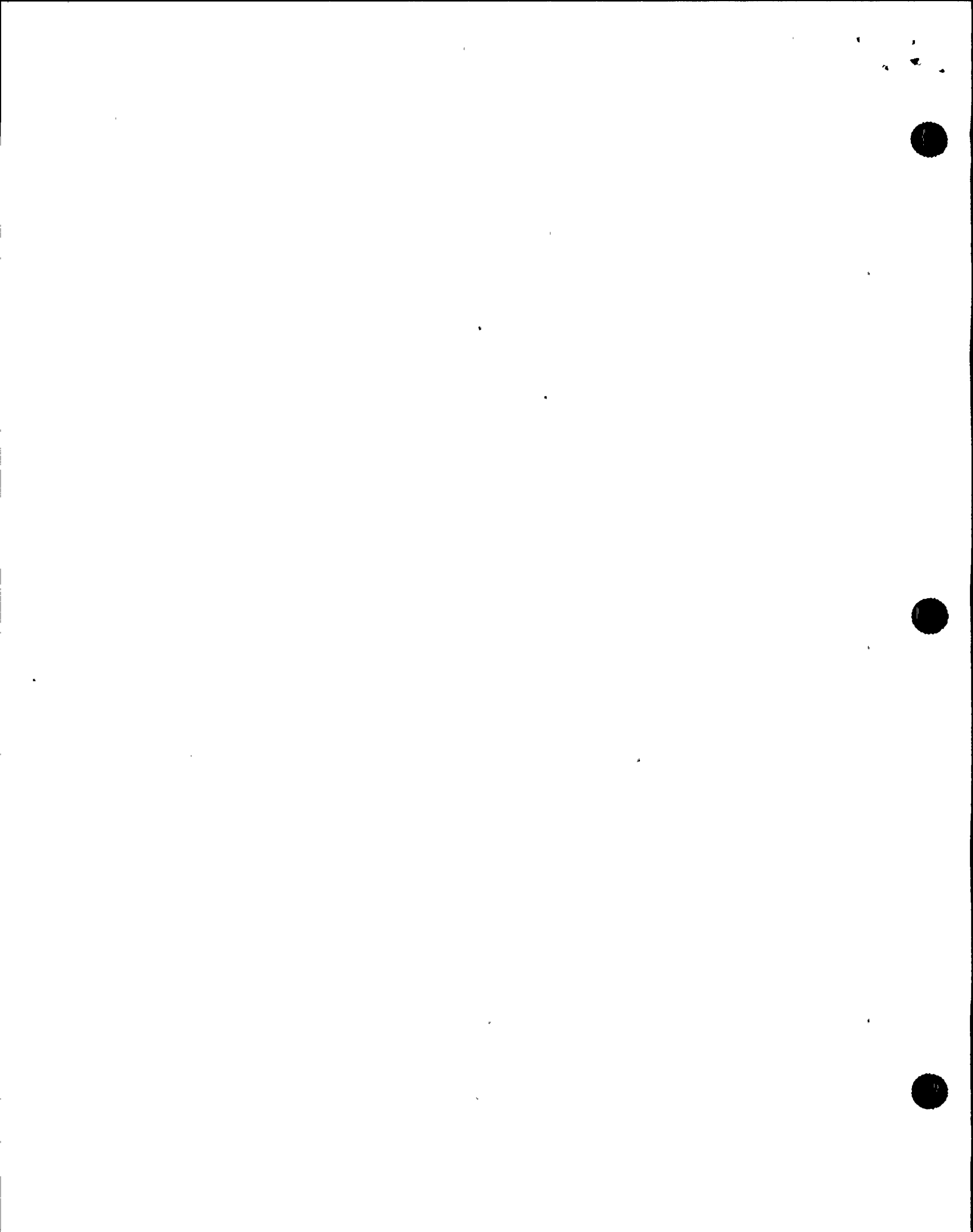
3 MR. BROCKWELL: The book explains how it works,
4 but to actually work it you need the time in the systems.
5 This past year, I purposely didn't put my name in for
6 license class because I felt I wanted another year in the
7 plant. I feel you can learn more in the plant, hands-on,
8 than you can right out of a book. I feel it's a lot more
9 helpful.

10 MR. JORDAN: Is there a continuous training
11 program, as far as you know?

12 MR. BROCKWELL: Yes, there is. Our
13 non-licensed --

14 MR. JORDAN: Besides the operating licensing area,
15 how about yourself, in the non-licensed area? If you stayed
16 in the non-licensed are, is there a continuous training
17 program that you keep going back to, to make sure that you
18 keep trained on the areas that you have responsibility on?

19 MR. BROCKWELL: Yes. It seems like every cycle,
20 the way we rotate our six-week cycle right now, when you go
21 into training, right now they're prepping us a little bit
22 for reactor theory. One day, probably two days, out of each
23 five-day training cycle, we're learning -- they're trying to
24 prepare for license class, also, to give you a basic
25 knowledge, so you're familiar with the terminologies used,



1 so you don't want into a theory course and have no idea what
2 they're talking about at all.

3 But we also do system training. A lot of it is
4 review -- you've had it before -- but sometimes you'll catch
5 something different. Each time they might go a little bit
6 deeper.

7 MR. JORDAN: Is there a test or an evaluation that
8 goes along with that?

9 MR. BROCKWELL: There's a test every cycle on
10 whatever you were trained on.

11 MR. JORDAN: Written test, or performance test?

12 MR. BROCKWELL: Written test.

13 MR. JORDAN: You rotate with the shift in the
14 training?

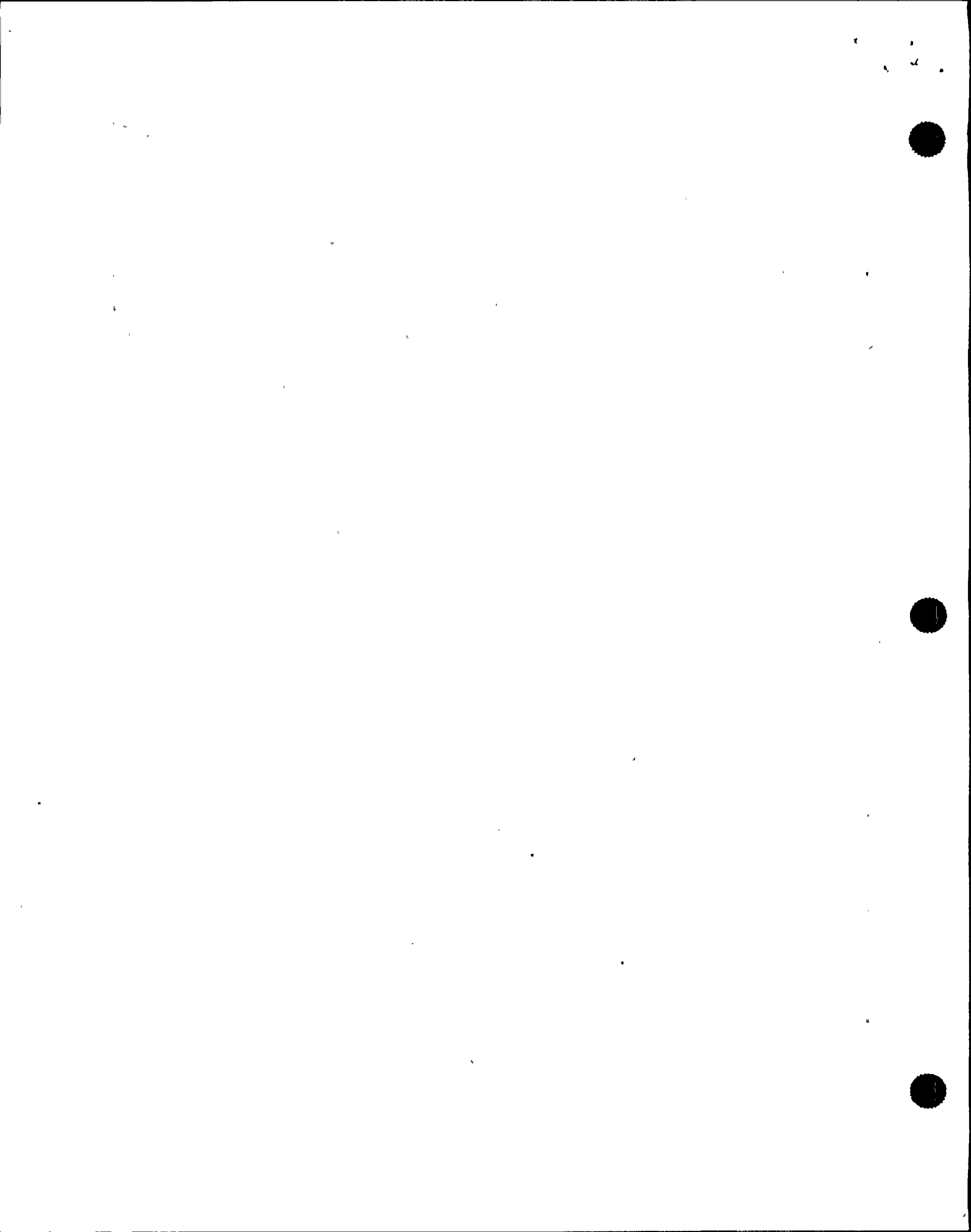
15 MR. BROCKWELL: Yes.

16 MR. CONTE: Can you give us an example -- you said
17 that you check things that are not really in a procedure,
18 and to a certain extent you can't put everything in a
19 procedure. I think I understand that, but could you give us
20 an example of one of those things, when you were starting
21 the aux boiler?

22 MR. BROCKWELL: Oh, on this one?

23 MR. CONTE: Is there some unique control aspect of
24 some point -- getting the fuel into the --

25 MR. BROCKWELL: No, the boiler -- One aspect



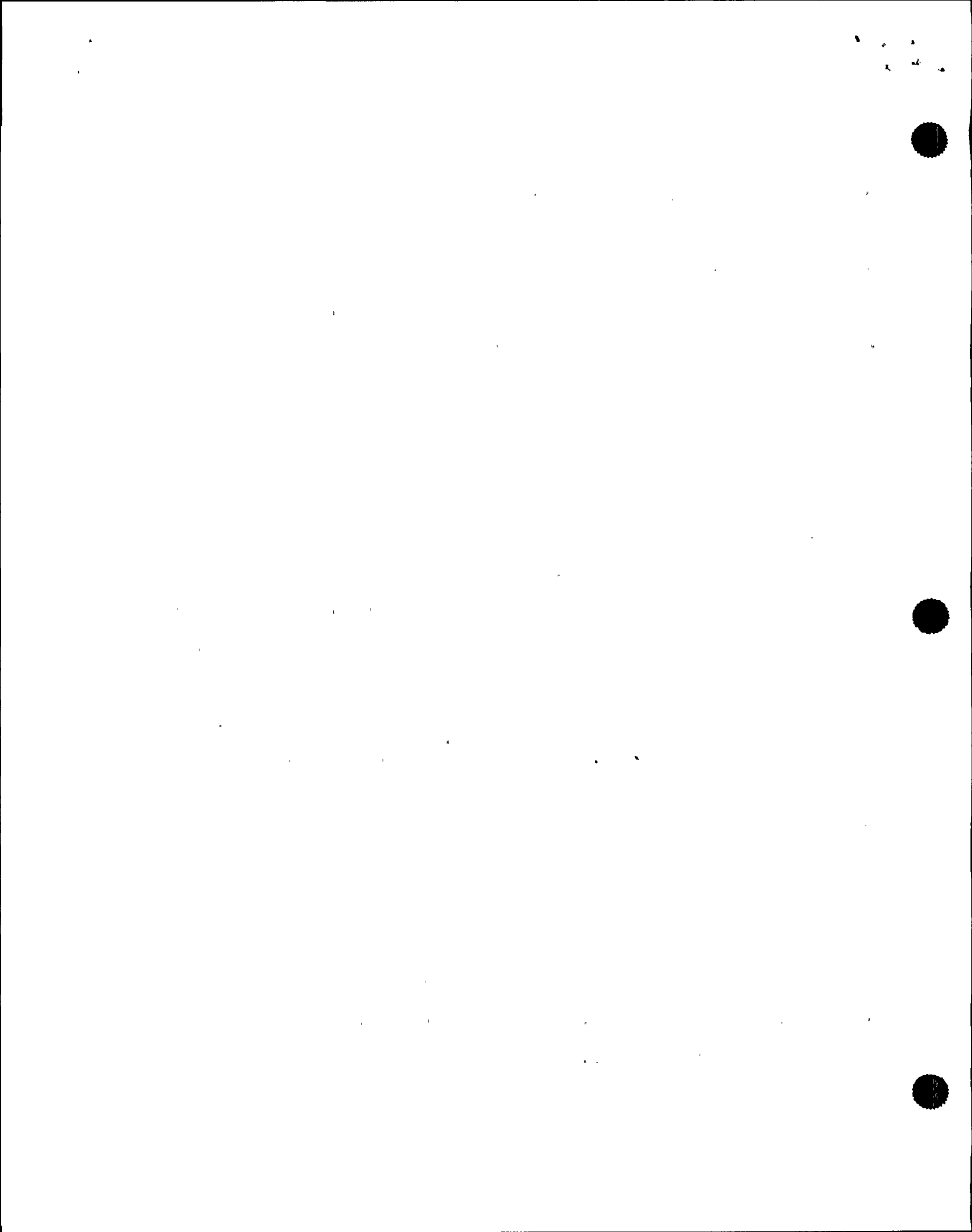
1 would be starting it up, for the conductivity of the boiler
2 itself. They give you a range, probably starting out at
3 maybe 900 or 1,000 micromoles, once you get the thing fully
4 operating and supplying everything you need at 1800
5 micromoles, but where along the line you need it tells you,
6 but if you started a boiler at that much, at a high level of
7 conductivity, you would have problems controlling it right
8 in the beginning, because it would heat up too quick; you'd
9 pressurize it too quick and probably lose it on high
10 pressure a lot. I guess at that point it's a feel on where
11 the conductivity level is a good place to start it and how
12 far you're opening your valves at once.

13 Once you get the boiler pressurized, it says to
14 slowly pressurize the header going out to -- in this case
15 they're reboilers, the first thing we were supplying. We
16 don't want to just wing that valve open; it's slowly opening
17 it while one person's watching pressure down below, so we
18 don't lose the boiler to trip due to low level, supplying
19 all your steam at once, just giving it an outlet and just
20 letting it go.

21 MR. CONTE: Isn't there a precaution in the
22 procedure that tells you about slowly opening that valve?

23 MR. BROCKWELL: Yes. It's slowly opening up to
24 pressurize it, but I guess at that point how slow is slow?

25 MR. CONTE: Yes. Some people could be very heavy-



1 handed.

2 MR. BROCKWELL: Right. It's just a feel, between
3 the person at the boilers recognizing, whoa, slow down.

4 MR. CONTE: I've got a better feel for what you're
5 talking about now, now that you say that.

6 MR. BROCKWELL: Right.

7 MR. CONTE: How do you control this conductivity,
8 for example? You say you'd rather start out at the low end.
9 How do you control the conductivity of the water?

10 MR. BROCKWELL: We have the two chemicals, DSP and
11 TSP, which are di- and tri-phosphates, some type of
12 phosphates, and the other is sulfuric, so we have two
13 different things. Chemistry more or less samples the
14 boilers daily or every other day, on a surveillance, just to
15 tell us what we have in it, what they recommend we add to
16 the boiler.

17 MR. JORDAN: Even if it's in wet layup like this,
18 when it's just sitting there waiting to go?

19 MR. BROCKWELL: When a boiler's sitting in
20 standby, it's more or less in hot standby. It's heated up
21 and pressurized, but only to 60 pounds pressure, and you try
22 to keep -- the conductivity's kept in it, circulating. The
23 boiler is bottled up, more or less, just with an immersion
24 heater in it. It just keeps it warm enough where it will
25 start a lot easier then from cold.

1 MR. CONTE: That's normal, full-power: you keep
2 one of the boilers in hot standby.

3 MR. BROCKWELL: We try to keep one in hot standby
4 for that purpose.

5 MR. CONTE: So there is some circulation -- I
6 guess there's not much feedwater circulation, since there's
7 no demand for it.

8 MR. BROCKWELL: No. Everything is pretty much
9 right there. A little bit of the steam comes off of it to
10 keep in the deaerator, which is on the suction side of the
11 feed pumps.

12 MR. CONTE: So in hot standby, if you're going to
13 add chemicals, somehow you've got to get the water up and
14 then drain it down, I guess, when you're adding chemicals.
15 Is that how you do it when it's in standby?

16 MR. BROCKWELL: When it's in standby, there's a
17 recirculation pump inside the boiler itself that now we try
18 to keep running --

19 MR. CONTE: Oh, I see.

20 MR. BROCKWELL: -- so it will keep it circulating
21 throughout the boiler.

22 MR. CONTE: So you just add chemicals.

23 MR. BROCKWELL: So you're adding chemicals right
24 through the circulation system. It injects right into the
25 feed line of the boiler, because there is always a little

7 8 2
4 12 2



1 bit of feed going onto it.

2 MR. CONTE: On a routine basis, are there
3 instructions in the procedure for injecting chemicals?

4 MR. BROCKWELL: Yes.

5 MR. CONTE: Do you use them, generally?

6 MR. BROCKWELL: Yes.

7 MR. CONTE: Okay. I think that's it.

8 MR. JORDAN: I've got one more question. It's a
9 combined question, or you can consider it separate
10 questions.

11 MR. BROCKWELL: Okay.

12 MR. JORDAN: That is, of the actions that you did
13 for verifying the scram discharge header low pressure in the
14 aux boiler, were there either things that were available to
15 you or you had that you thought were extremely important to
16 have -- and in fact you had them -- and were there any
17 things out there that you didn't have that you wish you had,
18 to assist you in accomplishing your mission? Examples are
19 procedures for the aux boiler, or training, or a wrench --
20 gee, you wish that you had a wrench hanging at this location
21 in order to accomplish this thing quickly, and it's not
22 there, and as a result you had to run back and get it. You
23 know, was there something that you felt that -- Gee, I'm
24 glad that wrench was there, or, No, I'm glad it wasn't
25 there, or, I wished I had one -- those types of things. Was

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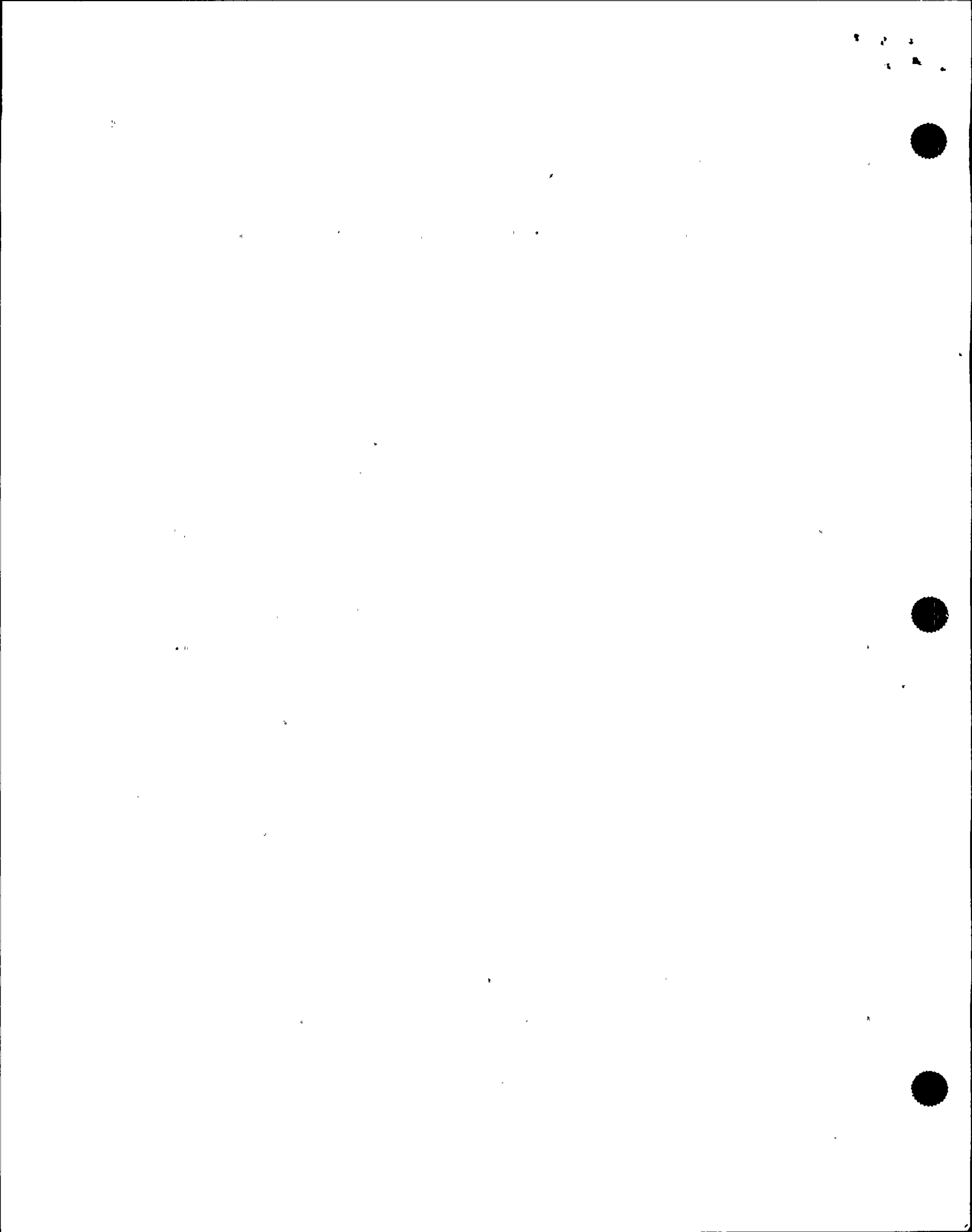


1 there anything that you either wished you had or you're glad
2 that you didn't have?

3 And the answer to the question could be that not
4 everything went spectacular.

5 MR. BROCKWELL: I didn't find myself looking for
6 anything in particular or having any problems finding the
7 material in the area that I needed; procedure references
8 were there. So when anything I went out and did, I felt
9 very comfortable with. I didn't feel lost with anything. I
10 knew what I was looking for. So I had prints to verify what
11 I was looking for. So in that case I had all the material I
12 needed; training aspect, there isn't much you -- you can't
13 train somebody where every pressure indicator is in the
14 plant because there's too many local indications that come
15 off of pressure transmitters themselves. Most of the time
16 you would rely on the transmitter so you would have to find
17 the transmitter and hopefully just by going around you would
18 know a little bit or an idea -- you can at least be able to
19 trace the line back. So, I don't think they feel I was
20 missing anything or anything else could have helped me more.

21 MR. JORDAN:
22 Because everybody's trying to -- you actually knew where the
23 scram discharge air header pressure was? Is everybody
24 trained on that or is that something that you uniquely had
25 that information?



1 MR. BROCKWELL: No. That's a general training, at
2 least in the area, yes.

3 MR. JORDAN: A book that exists but then taking
4 you out and showing you where at?

5 MR. BROCKWELL: Yeah. Because there's walk
6 throughs on all the systems and now I guess with the way
7 they're training out new operators they'll do the system --
8 they'll learn about the system and then later in the week
9 they'll walk -- try to walk down the systems a little bit
10 more and through our round sheets, anyway, you're checking
11 right in that area so, you see it enough times you kind of
12 get to know what it is.

13 So you did not know that you had any unique
14 information that probably nobody else would have had.

15 MR. CONTE: Did you know why you were verifying
16 that air header? What's the air header pressure being zero
17 mean to you?

18 MR. BROCKWELL: I knew that the scrammer header
19 had to be vented. Well, the way -- the ARI valves would
20 only open up if they had a high pressure or alternate rod
21 insertion.

22 I was trying to figure this out this morning,
23 talking with somebody, exactly why I was out verifying this,
24 or if it normally would be zero after a normal scram. I
25 don't really understand the system totally enough to -- on

2 2 2
2 4 2 2

2



1 why I looked at or what I was looking for or when it would
2 bleed off.

3 So, I have a basic knowledge of the system, but to
4 describe it, I couldn't do it.

5 MR. CONTE: Okay. Do you know why you're getting
6 aux boiler on the line?

7 MR. BROCKWELL: Pardon?

8 MR. CONTE: Do you know why you were getting the
9 aux boiler on the line?

10 MR. BROCKWELL: Yes. I knew we had to supply
11 steam seals to the turbine because they were trying to keep
12 a vacuum, I guess, at that point in the condenser which that
13 helps.

14 MR. CONTE: Okay.

15 MR. JORDAN: That's it David.

16 MR. CONTE: We're off the record.

17 [Whereupon, at 11:41 a.m., the taking of the
18 interview was concluded.]

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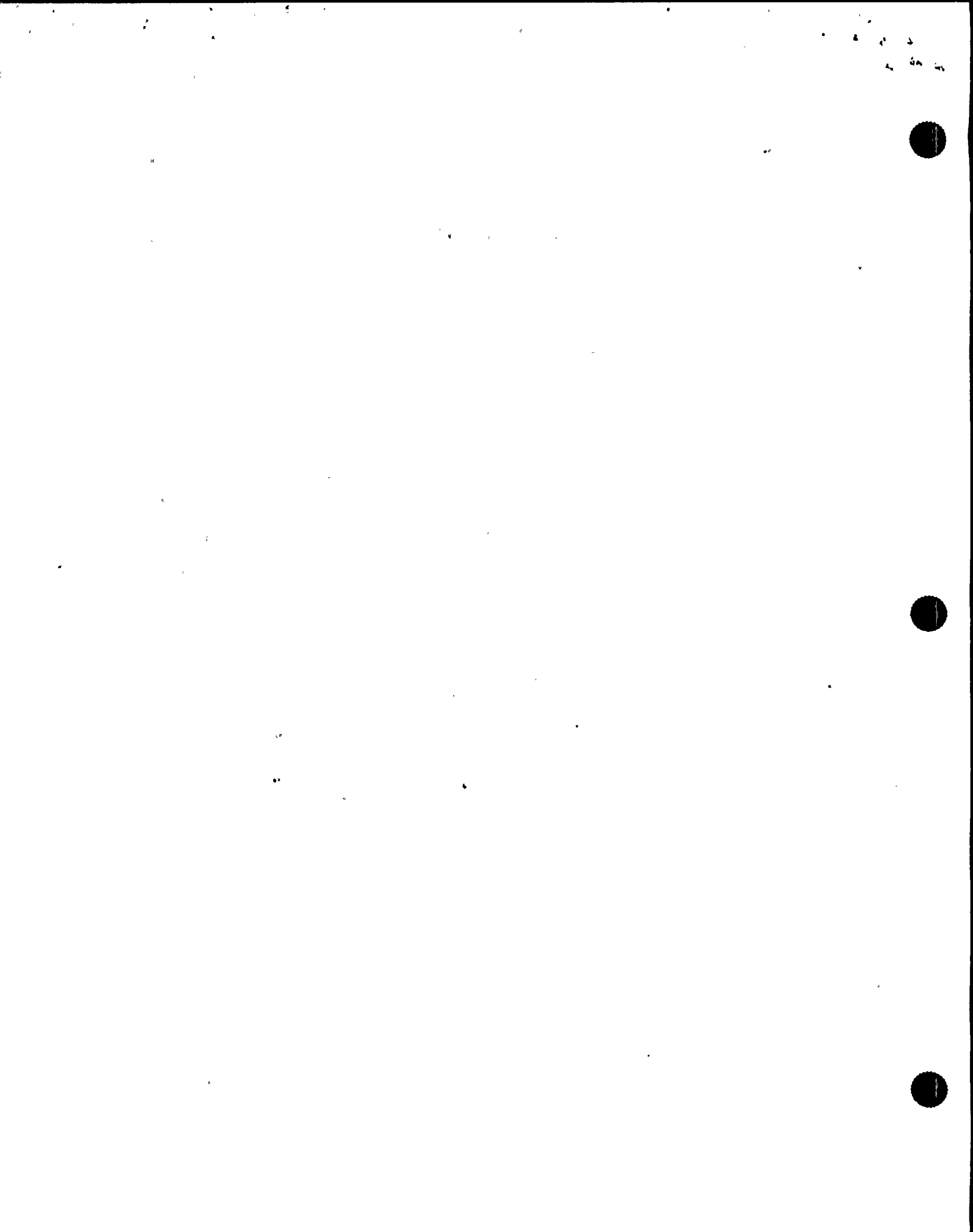
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REPORTER'S CERTIFICATE

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

in the matter of:

NAME OF PROCEEDING: Int. of DAVID BROCKWELL

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.



IAN ROTHROCK

Official Reporter
Ann Riley & Associates, Ltd.

