

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: U.S. Nuclear Regulatory Commission
Incident Investigation Team

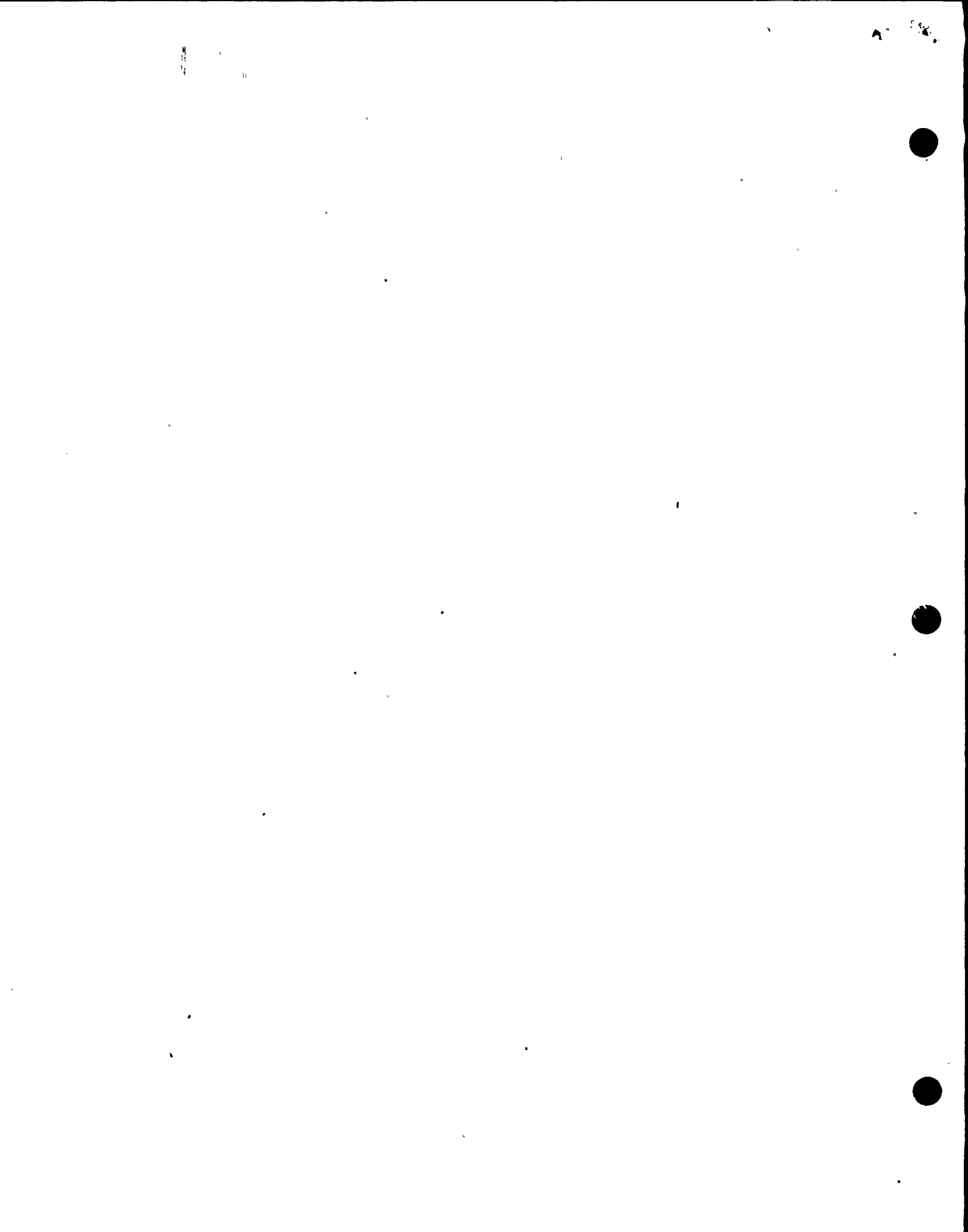
Title: Telephone Conference Call

Docket No.

LOCATION: Bethesda, Maryland

DATE: Wednesday, September 18, 1991 PAGES: 1 - 46

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

September 27, 1991

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

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

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

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

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

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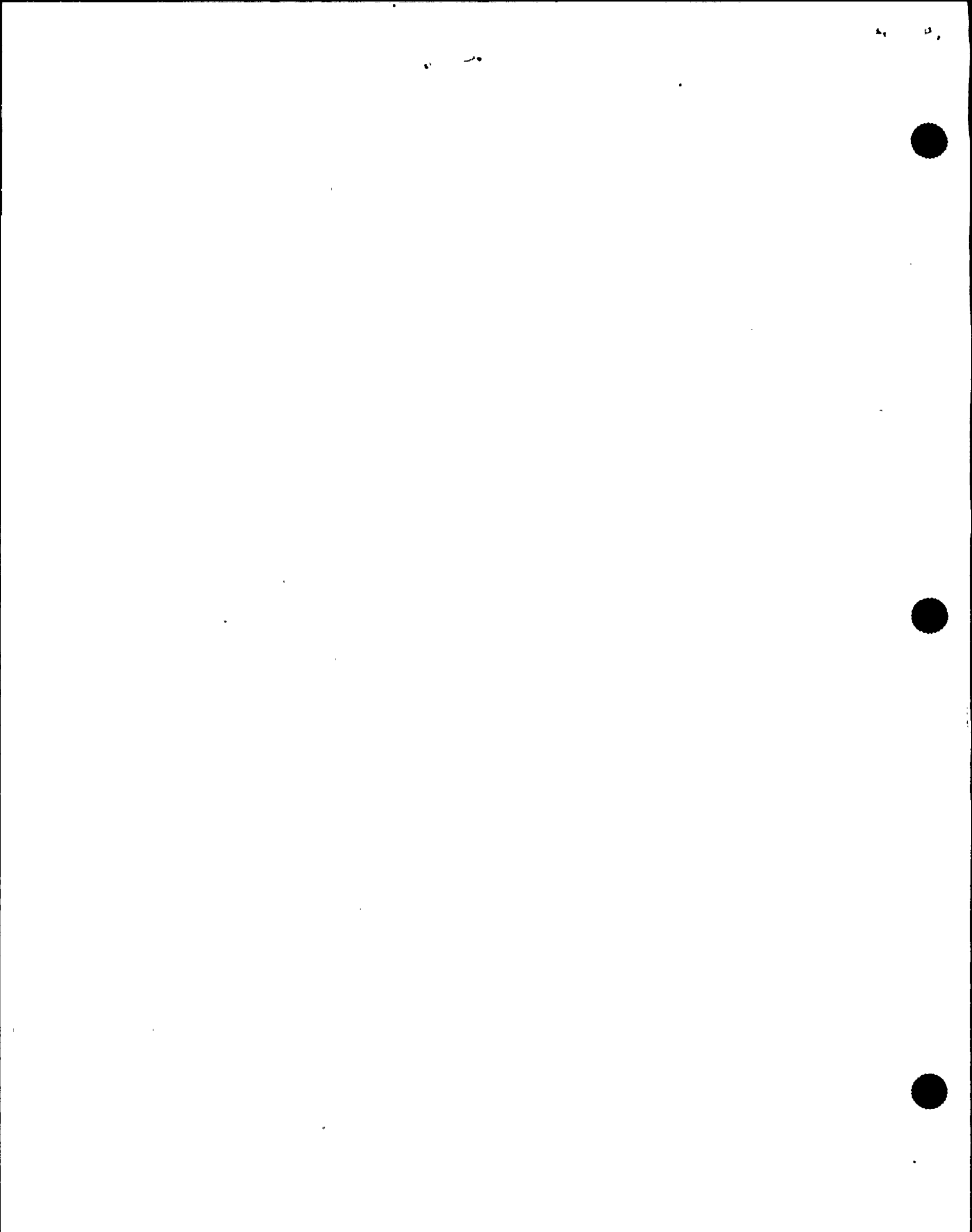
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1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION
3 INCIDENT INVESTIGATION TEAM
4
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6 Telephone Conference Call
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9 Nuclear Regulatory Commission
10 The Woodmont Building
11 Room W-100
12 8120 Woodmont Avenue
13 Bethesda, Maryland
14 Wednesday, September 18, 1991
15

16 The meeting in the above-entitled matter convened,
17 pursuant to notice, in closed session at 9:10 a.m.
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25



P R O C E E D I N G S

[9:10 a.m.]

1
2
3 MR. CONTE: Good morning. It is the 18th of
4 September at 9:10 in the morning. We are having a conference
5 call between selected members of the IIT and selected
6 members of the Operations and Training Department for the
7 Nine Mile II Event that occurred on August 13, 1991. The
8 IIT is located in Bethesda, Maryland at the Woodmont
9 Building. The Training and Operations representatives are
10 at the site near Oswego, New York.

11 We will first identify ourselves here at the IIT
12 room, and then we will turn it over to the site. I am Rich
13 Conte, Representative from Region I, member of the IIT.

14 MR. JENSEN: I am Walt Jensen from Headquarters,
15 member of the IIT.

16 MR. JORDAN: I am Mike Jordan, out of Region III.
17 I am a member of the IIT.

18 MR. KAUFFMAN: I am John Kauffman our of
19 Headquarters, IIT member.

20 MR. CONTE: I am speaking for Bill Vatter. He
21 just stepped out, but he will be in intermittently in this
22 conference call. Can I have the site identify themselves,
23 please?

24 MR. REID: My name is Jim Reid, Re-Qual Supervisor
25 for Unit II Operations and Training.



1 MR. WHITE: My name is Fred White, Initial
2 Training Supervisor, Operations Training Unit II.

3 MR. SLADE: I am Rick Slade, General Supervisor,
4 Operations Training Unit II.

5 MR. HENNIGAN: Bruce Hennigan, Unit II Re-Qual
6 Training Instructor.

7 MR. SMITH: Bob Smith, Training Manager.

8 MR. TOMLINSON: Tom Tomlinson, Supervisor of
9 Reactor Engineering and part of the Assessment Team.

10 MR. COLOMB: Mike Colomb, Operations Manager at
11 Nine Mile Point Unit II.

12 MR. CONTE: Thank you. For the record, the
13 licensee does have a list of questions that were prepared by
14 the IIT. We will go through them one by one. There are a
15 couple of new questions, and I will inject where those new
16 questions are.

17 The first question, with respect to the lesson
18 plan indices. The Re-Qual index has lesson plans for Reg
19 Guide 1.97 and SPDS and UPS, but the corresponding licensed
20 operator training index does not. The UPS lesson plan does
21 list lesson plan numbers for all three programs; non-
22 licensed, licensed operator training and Re-Qual.

23 Please explain, is the UPS lesson plan being
24 taught in the LOT program and why no applicability of RG
25 1.97 and the SPDS to the LOT. The SPDS is a new item. It



1 does not appear on your list. I ask you to respond, if
2 applicable or as appropriately.

3 MR. SLADE: A little history on the generation of
4 the UPS lesson plan. It was in response to SOER 83.03 from
5 INPO. Generally, what we will do when we create a new
6 lesson plan is that we will put three identification numbers
7 on that lesson plan so that they may be taught in either of
8 the three disciplines, either non-licensed, licensed and Re-
9 Qual. To date they have been taught in the non-licensed and
10 Re-Qual license training programs. They have not been
11 selected as part of the curriculum for license operator
12 training.

13 With the events of the site area emergency, it is
14 planned to teach that in a current license class that we
15 have running. Uninterruptable power supplies would be
16 covered in licensed operated training under normal AC
17 distribution. That's where the candidates would get their
18 information; the location of UPS', general operation, and
19 loads from the UPS.

20 Reg Guide 1.97, a recently developed lesson --
21 there was a TMR which was a training modification, a request
22 recommendation was generated back in 1987, 1988 to provide
23 training to operators and make them aware of Reg Guide 1.97.
24 That training request was only required for Re-qualification
25 only and not the licensed operator training program. Again,



1 our plans are to incorporate the concerns with Reg Guide
2 1.97 into the licensed operator training program in the
3 future.

4 MR. CONTE: Are you prepared to address SPDS at
5 this point?

6 MR. SLADE: We will have to get back on that. As
7 soon as we go down through here, Fred White will go ahead
8 and try to research that before we end this conference.

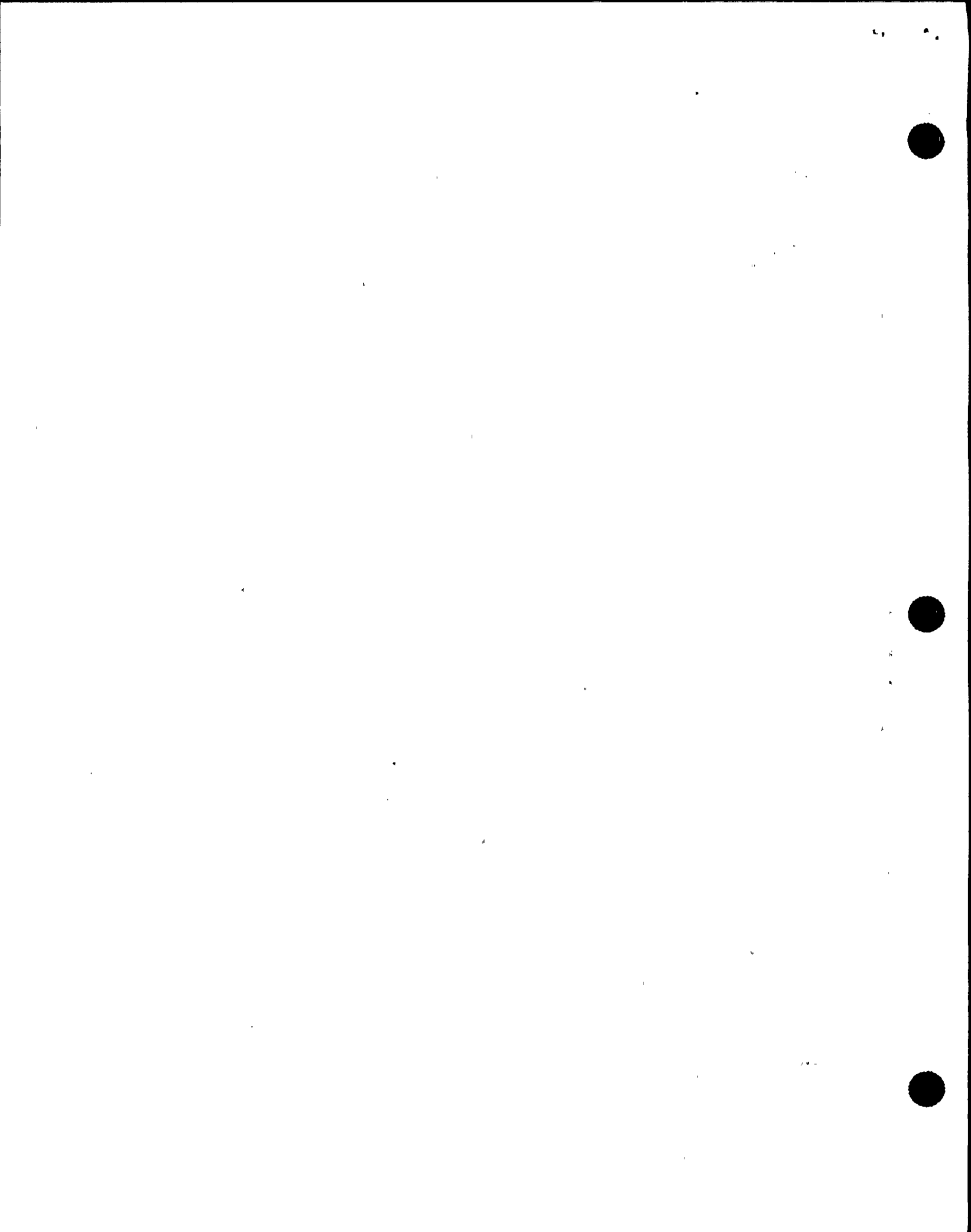
9 MR. CONTE: We have some additional, more specific
10 questions on those lesson plans. I am going to save them
11 for later.

12 MR. SLADE: All right.

13 MR. CONTE: Let's just continue with the game plan
14 here. Question 2A is referencing some LOT and Re-Qual
15 lesson plans dealing with administrative procedures two and
16 four. The enabling objective for AP-4 calls for the
17 operator to be able to give emergency procedural type
18 actions or the requirements for emergency procedural type
19 actions. There is no enabling objective for the AP-2.

20 When you go to AP-4, AP-4 references you to AP-2.
21 It appears that the enabling objectives is going to be met,
22 but it seems to be confusing. Could you explain why it
23 exists that way?

24 MR. WHITE: In May of 1991 our AP's were revised.
25 In August of 1991 before our site area emergency a training



1 change order was written to address revising those lesson
2 plans due to the revision of the AP's. Specifically, the
3 AP's used to read AP-2.0 covered everything that had to do
4 with procedures and now that has been broken down into AP-
5 2.0, 2.1 and 2.2 which address procedure use and control,
6 procedure preparation review and issue, and procedure change
7 evaluations respectively.

8 The issue you brought up is a valid issue, that we
9 should have enabling objective also for AP-2.0. We have
10 addended our training change order to specifically address
11 that that include addressing that training of that enabling
12 objective.

13 MR. CONTE: Thank you. Going on to question 2B.
14 Were there any 10 CFR 50.54 X/Y actions during the site
15 emergency of August 13, 1991 and, if so, were they properly
16 documented in accordance with AP-2?

17 MR. COLOMB: We discussed that issue in our SORC
18 meeting when we evaluated the LER that was submitted or will
19 be submitted. The SORC assessment was that we didn't feel
20 we had any 50.54 X/Y actions. However, we did assign an
21 open item to our licensing department to take another look
22 at that.

23 MR. CONTE: Okay, we are done with the questions
24 related to number 2. Let me go around the room and see if
25 there are any additional questions.



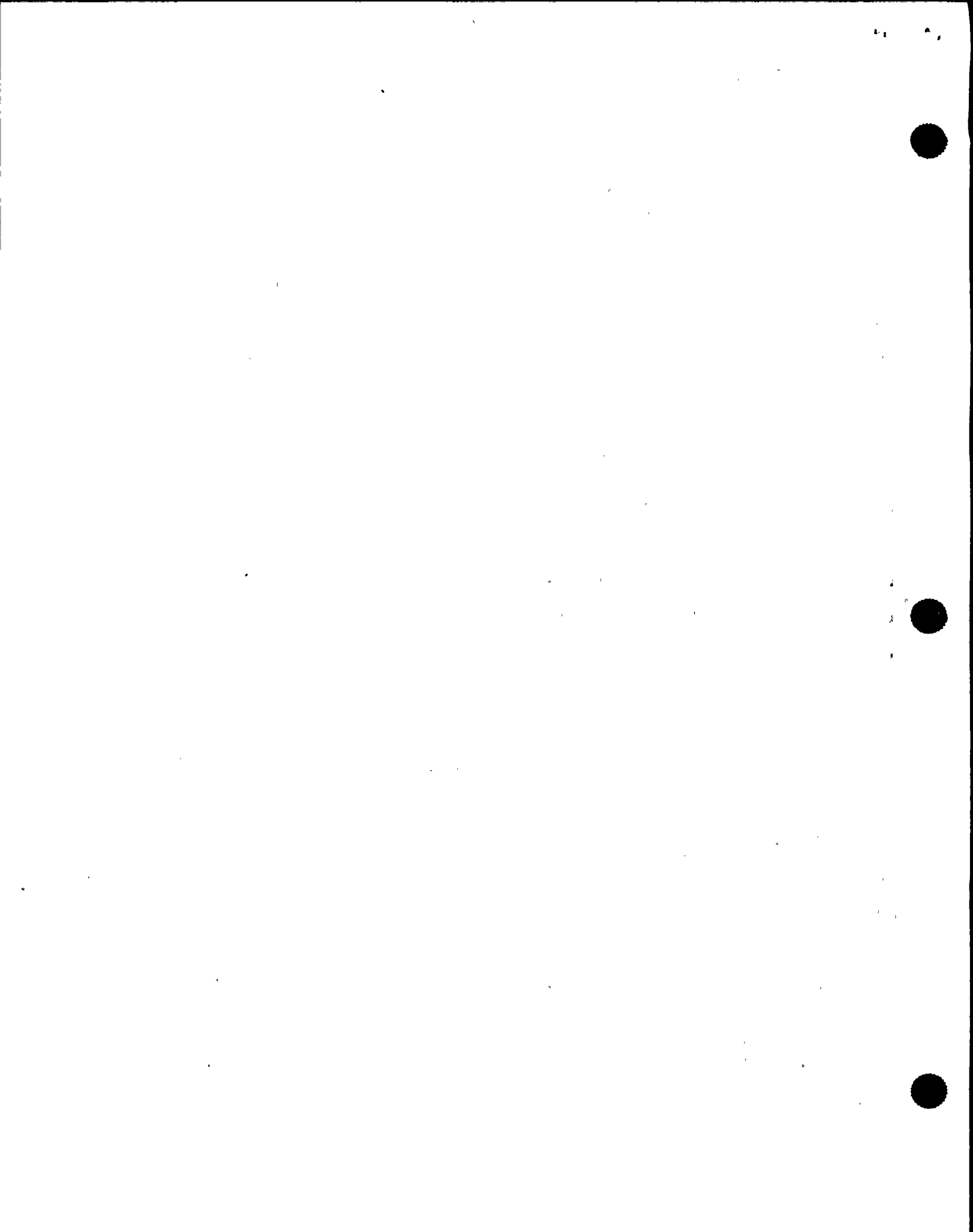
1 [No response.]

2 MR. CONTE: Moving on to Question 3A. Guidance is
3 not consistently given in all EOP LP's. The 03 in the
4 series on EOP does have some information on how the
5 operators implement "The reactor will remain shut down
6 without boron." In parenthesis, "under all conditions",
7 That terminology is used intermittently throughout the
8 lesson plan and in the EOP's.

9 The answer there is the reactor analyst will make
10 that determination. What is the significance of the
11 intermittent use of under all conditions. Both the EOP's
12 and the lesson plan uses it and doesn't use it. Is there
13 any significance to that, or is it just an oversight or
14 inconsistency, or what?

15 MR. HENNIGAN: Guidelines use the words "under all
16 conditions" in that statement when it is used. In our
17 implementation of EOP's the "under all conditions" was left
18 out on the flow charts just to bring the wording down so
19 that our blocks weren't confused with too much wording. It
20 was just trimmed down to the reactor will remain shut down
21 without boron.

22 In the lesson plans they go further to explain
23 that that is considered to be under all conditions; that
24 there are places where it doesn't bring that out. If
25 there's an inconsistency in our lesson plan that we will



1 need to make sure that all lesson plans always use the words
2 "under all conditions" to further explain that statement,
3 "will remain shut down under all conditions without boron."

4 MR. CONTE: The point here -- and this is more of
5 a comment for you -- in my review of those lesson plans if
6 you look at some of the other ones other than 03, where that
7 statement is used the lesson plan does not have a content or
8 delivery note that says that the reactor analyst will make
9 that determination.

10 Since that statement is so extensively used it
11 might be redundant for each lesson plan for that to have it.
12 It may well be an item for the introduction to EOP's, but
13 that's your decision. That is only a comment at this point.
14 Do you understand that, Bob?

15 MR. SMITH: I understand it, yes.

16 MR. HENNIGAN: Rich, was there anything else on 3A
17 that you had a concern with as to why we did not give the
18 definition of shut down under all conditions without boron
19 on all lesson plans?

20 MR. CONTE: No. I come away with the feeling that
21 the operators know how to implement that step in terms of,
22 they need to get a reactor analyst. I have that feeling.

23 MR. HENNIGAN: Okay.

24 MR. CONTE: It's just that some lesson plans that
25 deal with Legs that have that statement other than the 03



1 one do not have the explanation the reactor analyst will
2 make that. There may be a number of Legs that have that,
3 and there may be a number of lesson plans. In order to
4 avoid the repetition, a way of doing it might be to do it in
5 the introduction to the EOP's. That's it.

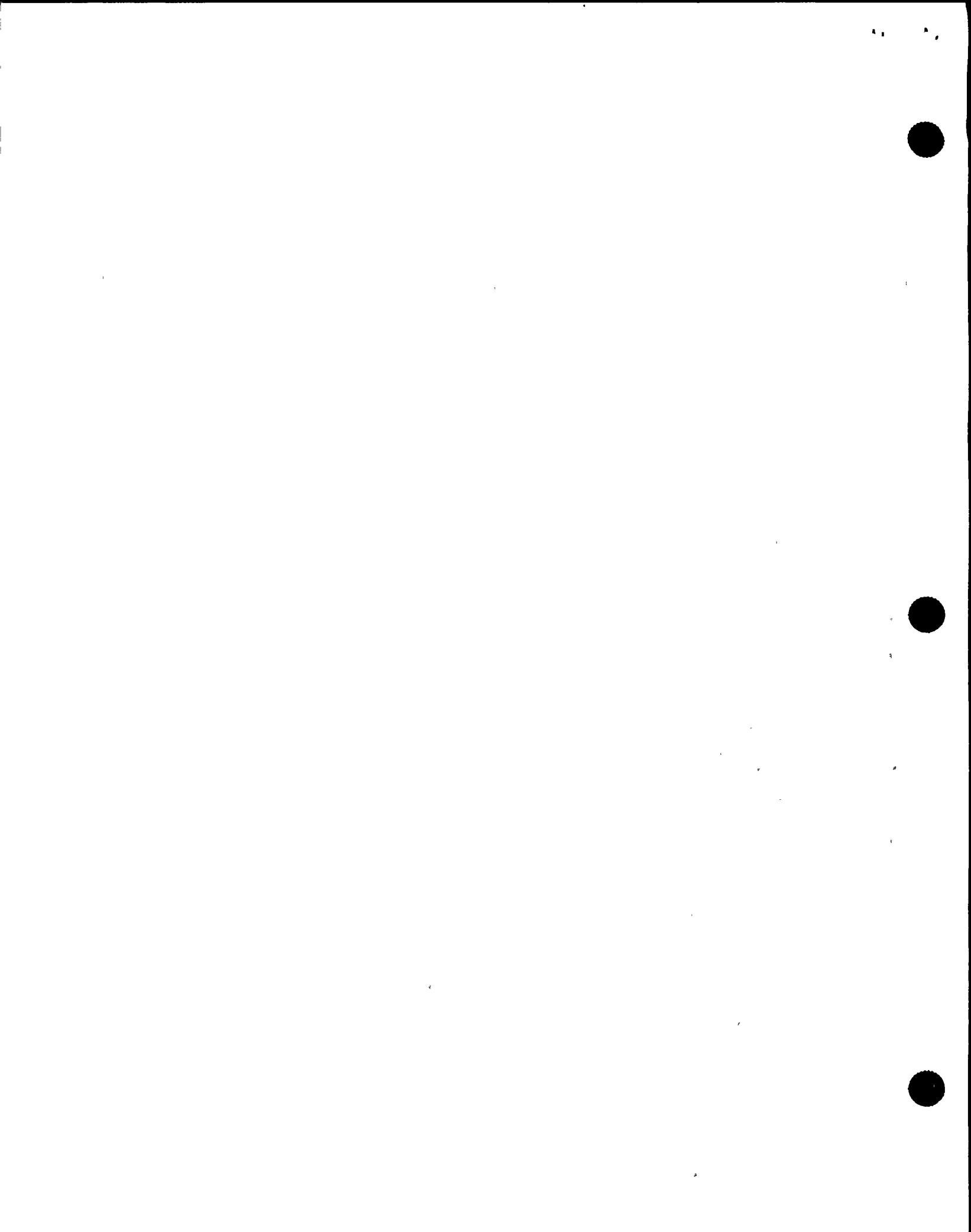
6 That's just a comment. We were just wondering the
7 significance, and I think you have addressed why the
8 terminology "under all conditions" is used intermittently.

9 Going on to question 3B. In the introduction of
10 EOP's it defines a shut down reactor as below the heating
11 range. Mr. Conway in his transcript referred to an ODI. We
12 really can't find that. We have all the ODI's. Could you
13 help us clarify that, defining shut down reactor?

14 MR. COLOMB: You are correct, that does appear in
15 the EOP basis document. Mike, if he made that statement,
16 let me explain. We used to have an ODI that we used to
17 identify these areas and give further definition for
18 training. With a revision for EOP's we took that ODI and
19 incorporated it into the basis document. He may have been
20 referring to what used to be in an ODI.

21 That ODI was cancelled after the revision for
22 EOP's came out. We took that information and, again,
23 incorporated it into a basis document which is controlled in
24 the control room.

25 MR. CONTE: That's fine. That's good for the



1 clarification. I would like to ask the question, what is
2 the heating range on the IRM's? Is it generally known what
3 that number is?

4 MR. COLOMB: It's range six or seven on the IRM's.

5 MR. CONTE: If it is on range six, is there a ball
6 park number?

7 MR. COLOMB: We don't get that specific. Just
8 below range six or seven.

9 MR. CONTE: How is that communicated? Is that in
10 some document? I didn't see that in training. I am not
11 sure if it is in the introduction in EOP's.

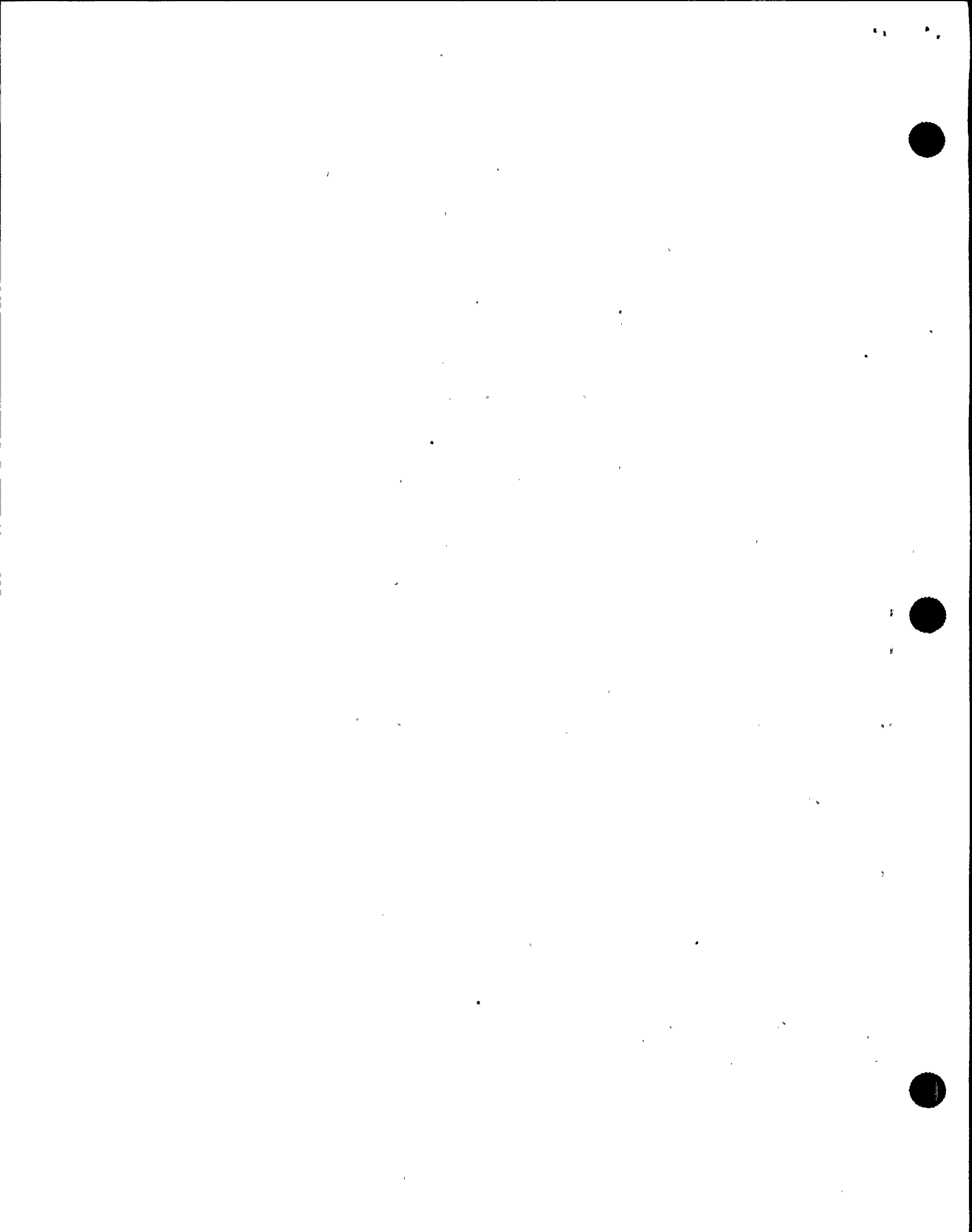
12 MR. COLOMB: I believe it is.

13 MR. CONTE: You say it is in the lesson plan?

14 MR. COLOMB: I have to look, Rich, to be sure.

15 MR. CONTE: That's okay. I can check on my own.
16 If I have a problem with that, I will get back with you.

17 I have a new question on questions three, I call
18 it 3C. Are the actions of OP-101C with respect to reactor
19 scram actions, exclusive of the EOP's? The training
20 material implies the implementation of important steps of
21 101-C such as inserting IRM's and SRM's. However, there is
22 a note at the beginning of Section H-1 for the reactor scram
23 that says if an entry condition in EOP occurs exit this
24 procedure. We are confused on the consistency of the EOP's
25 and that scram procedure.



1 MR. HENNIGAN: The direction and the note in 101-C
2 that directs you to exit 101-C for entry when you enter
3 EOP's you will be brought back to 101-C used as a guidance
4 by the control step when you initially enter each of the
5 legs of RDB control. For instance, when you get into RQ,
6 the reactor power leg, the first step is to monitor and
7 control reactor power. The guidelines in that using monitor
8 control would be utilize the normal operating procedure, in
9 this case the 101-C scram procedure, to take the appropriate
10 actions in there to allow you to monitor and control reactor
11 power.

12 MR. CONTE: The answer is, they are consistent
13 with one another? That's what I am hearing. I don't want
14 to put words in your mouth.

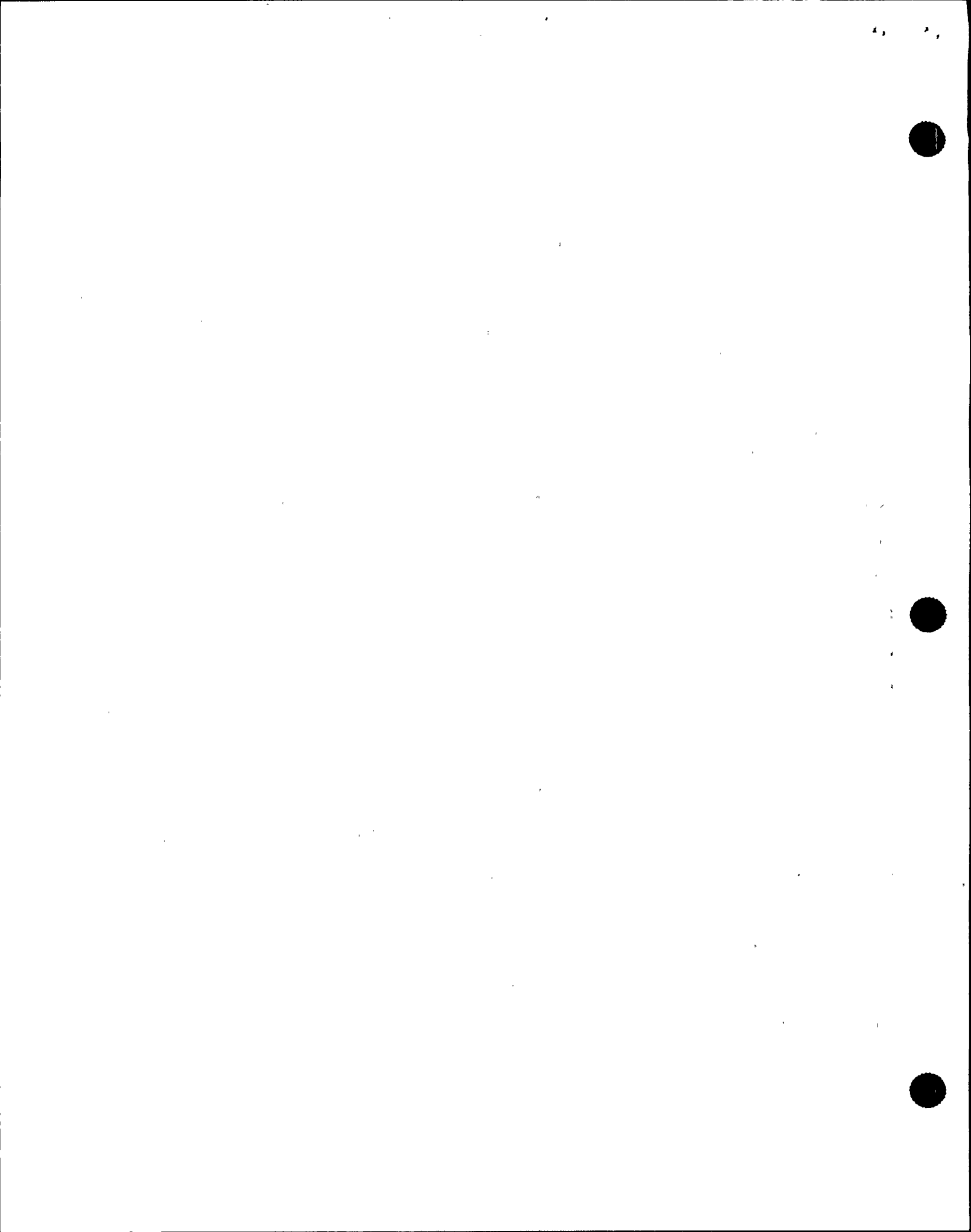
15 MR. HENNIGAN: That's what we believe it does.
16 You would not take actions in 101-C that would contradict
17 the EOP's. That's why you are not directed to remain in
18 101-C and complete all the steps.

19 MR. CONTE: Thank you. Going on to Question 4.

20 MR. VATTER: I wanted to ask a question.

21 MR. CONTE: I'm sorry. Before we leave the
22 Question 3 area we have another question.

23 MR. VATTER: I am just trying to understand the
24 relationship between training on the EOP's and the EOP's
25 themselves. There is obviously a lot more detail in the



1 training than there is in the EOP's. I want to know if the
2 training that is provided on EOP's, if that is 100 percent
3 based on the EOP basis document or whether it expands beyond
4 the EOP basis document?

5 MR. SLADE: We are thinking.

6 MR. VATTER: While you are thinking, Rich, do you
7 know if you have the EOP basis documents?

8 MR. CONTE: I don't know whether we have it or
9 not.

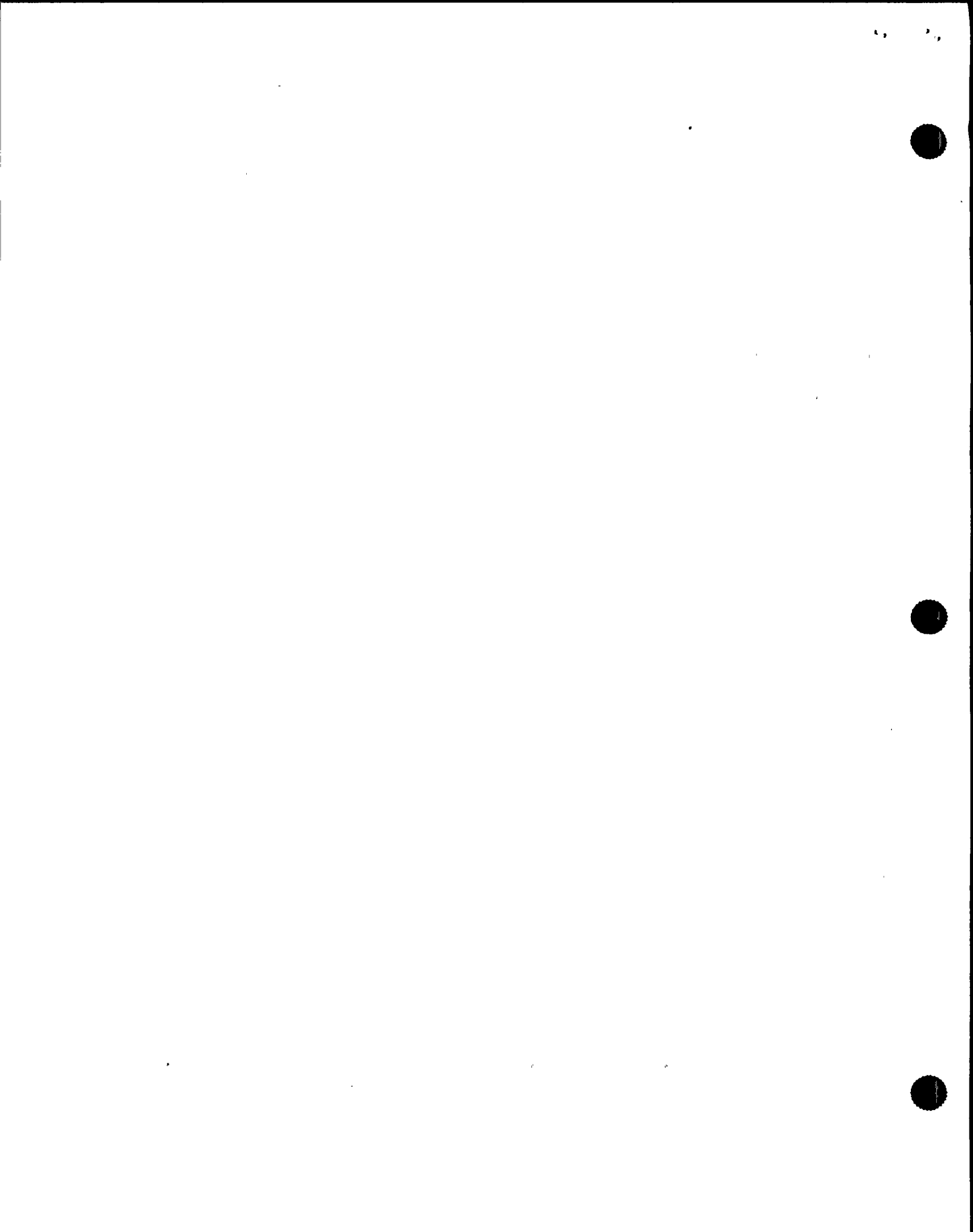
10 MR. VATTER: How big a book is that? Is that a
11 real fat thing?

12 MR. SLADE: Yes, fairly good size. I would
13 estimate a couple of inches. I guess in answer to your
14 question, our lesson plans are geared around the basis
15 document. Anything that goes above and beyond that would be
16 only from the critiquing that we do and other things that
17 may come out. I don't think we specifically go out and try
18 to train above and beyond, because we really want to
19 document and capture all of that so that we are consistent
20 from class to class and cycle to cycle in Re-Qual.

21 MR. VATTER: Is the EOP basis document available
22 in the control room?

23 MR. SLADE: Yes, it is. It's a controlled
24 document.

25 MR. VATTER: Is it something that you would expect



1 the operators could go to if they had some question about
2 what the EOP intent was?

3 MR. SLADE: Yes, that is true. We would expect
4 them to do that. They are trained to do that, it is
5 available to them in the simulator when they are in
6 training, so we would hope that they would go and do that if
7 they had a question. That's why we maintain it controlled.

8 MR. VATTER: I guess we need to look at that. I
9 am not really requesting to get it from you right now. We
10 need to find out if it is in our pile of stuff. I,
11 personally, would like to look at it.

12 MR. CONTE: Moving on to Question 4. Per ODI 5.10
13 there is an open items book on EOP issues. Is there
14 anything in it, and could we get a copy?

15 MR. COLOMB: Yes, there are things in it. We can
16 send you a copy of the book or we can send you a copy of the
17 index. The book, with all the supporting documentation that
18 goes along with these open items, it is quite thick. What I
19 can do is maybe send you a copy of the index and if you
20 would like a copy of the rest of it we will send it down.

21 MR. CONTE: I will tell you what, if you can fax
22 the index to us we will take a look at it. If we need
23 something more particular we can ask for it on a case-by-
24 case basis.

25 MR. COLOMB: The index is four pages. There are



1 several items listed as open items against EOP's.

2 MR. CONTE: If you fax it, will it be readable?

3 MR. COLOMB: I believe so, yes.

4 MR. CONTE: Why don't you go through Alex Pinter.

5 MR. COLOMB: Alex Pinter, I understand.

6 MR. CONTE: Number 5 is a little long winded, and
7 it proposes a scenario. We would like ops and training
8 views on how this would play out.

9 Let me start here by reading it. With respect to
10 the LP, lesson plan on introduction to EOP's and to the RP
11 leg of RPV control, stabilize is not defined but on page 24
12 of the appropriate lesson plan maintain below and above is
13 defined as take the necessary actions to prevent the
14 parameter from rising above/below the identified limit or
15 action level.

16 How do you implement this step for the following
17 conditions, and it is acknowledged that this is beyond a
18 design basis event. No feed and condensate for a long time,
19 partial ATWS, fuel rods partially out but in the source
20 range power, RCIC being used to depressurize/cool down since
21 the operator gets the okay to depressurize with reactor
22 shutdown indication. I might add, we don't have the scenario
23 here where there is lost instrumentation.

24 With a recrit occurring the RP leg directs a
25 return to stabilize pressure, provide operations and



1 training views on how will the operator handle it. For
2 example, will he trip RCIC to get to level drop in order to
3 stabilize pressure, or is there a prioritization of level
4 over pressure control?

5 MR. COLOMB: After reviewing the procedure this
6 morning, let me explain what I would expect to happen under
7 those conditions. The operator, based on guidance in the RP
8 section of RPV control of the EOP's would, once he
9 recognized the reactor was not shut down, i.e.,
10 recriticality, would be directed to stabilize pressure.
11 Stabilizing pressure would require him to shut down the RCIC
12 system and allow pressure to stabilize and control it with
13 another method at that or higher levels.

14 The level power control is giving him guidance to
15 maintain a level band. The level band at first is down to
16 minus 14 inches, so he has available to him a level that
17 low. I would expect he would increase or adjust his --
18 whatever his present guidance was for level -- to as low as
19 possible. I guess what I am telling you is that he would
20 allow pressure to stabilize at the expense of possibly lower
21 level, giving the guidance in EOP's.

22 MR. CONTE: Does training have a different view?

23 MR. REID: No, Rich. We concur with Mike's
24 assessment on that. After discussing it with several of the
25 instructors, that is in fact the way we would expect the



1 operators to react to that.

2 MR. CONTE: Do you think there is a mindset there
3 or concern amongst the operators that shutting down RCIC may
4 not get it back on, and would they really implement what
5 Mike is saying?

6 MR. REID: I can't say there wouldn't be a
7 concern, Rich.

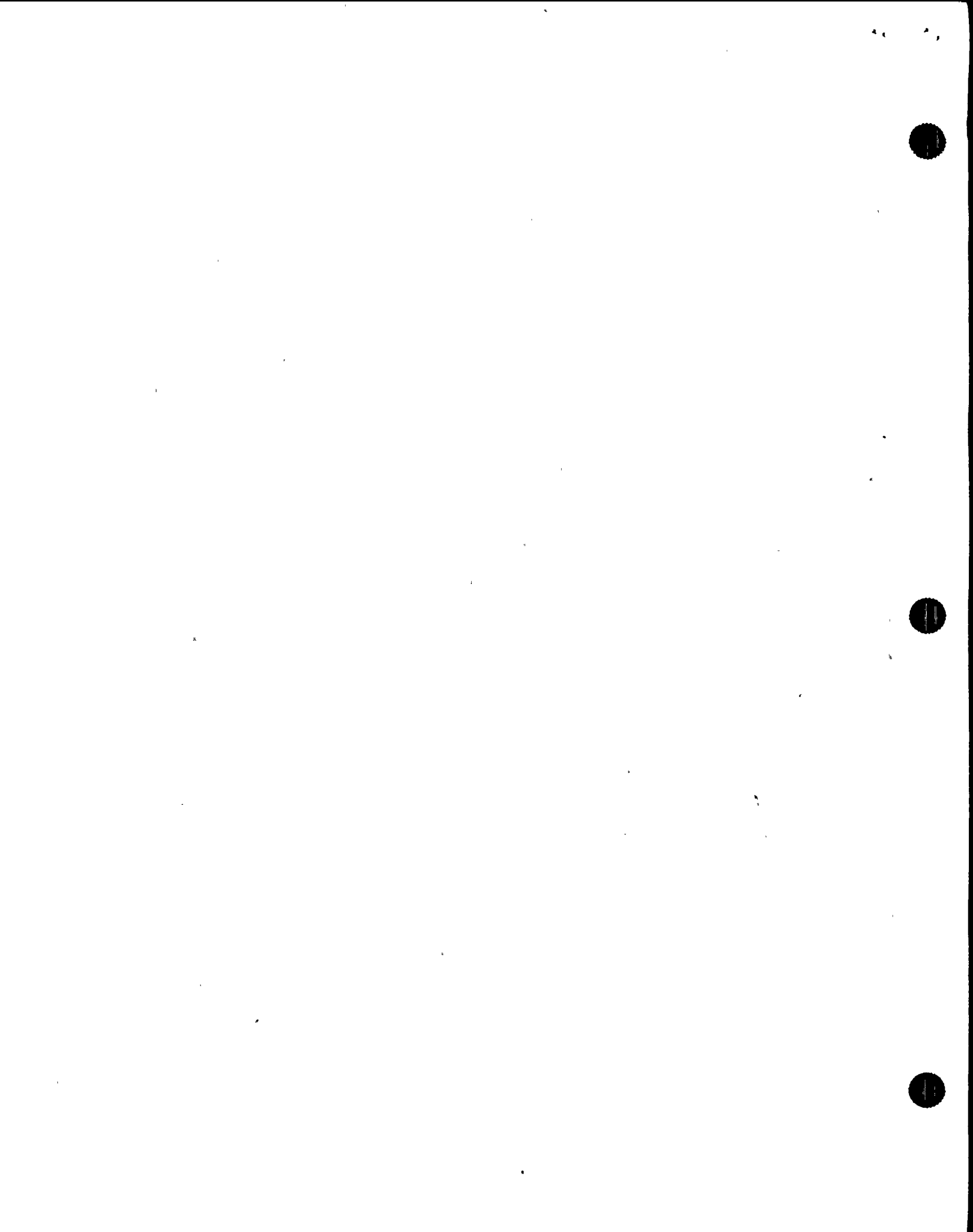
8 MR. CONTE: Is there a history of problems with
9 say shutting down RCIC and then trying to get it back up,
10 other than this flow oscillation?

11 MR. REID: No, I don't believe so. It's not
12 uncommon to have started RCIC and either shut it down or put
13 it in a recirc mode in accordance with EOP's. I don't
14 believe that there's that concern.

15 MR. CONTE: Is there, amongst the knowledgeable
16 people at the other end of this line, is there a concern
17 with that aspect of the operators getting the okay to cool
18 down and then seeing a recrit, and then going back up and
19 stabilize? The mere fact that you have a recrit, does that
20 give anybody concern at the other end of the line here?

21 MR. COLOMB: Maybe I don't understand it. What do
22 you mean by concern?

23 MR. CONTE: Just the mere fact that you get a
24 recrit. The situation that we are posing here is somewhat
25 similar to what happened in the time of the event,



1 obviously. We are talking about a few rods out, we are
2 talking about starting in the source range or perhaps the
3 heating range as you indicated, with range six and seven.
4 Let's say the operator doesn't have information that the
5 reactor will remain shut down but he has the indication that
6 the reactor is shut down and then he gets his recrit.

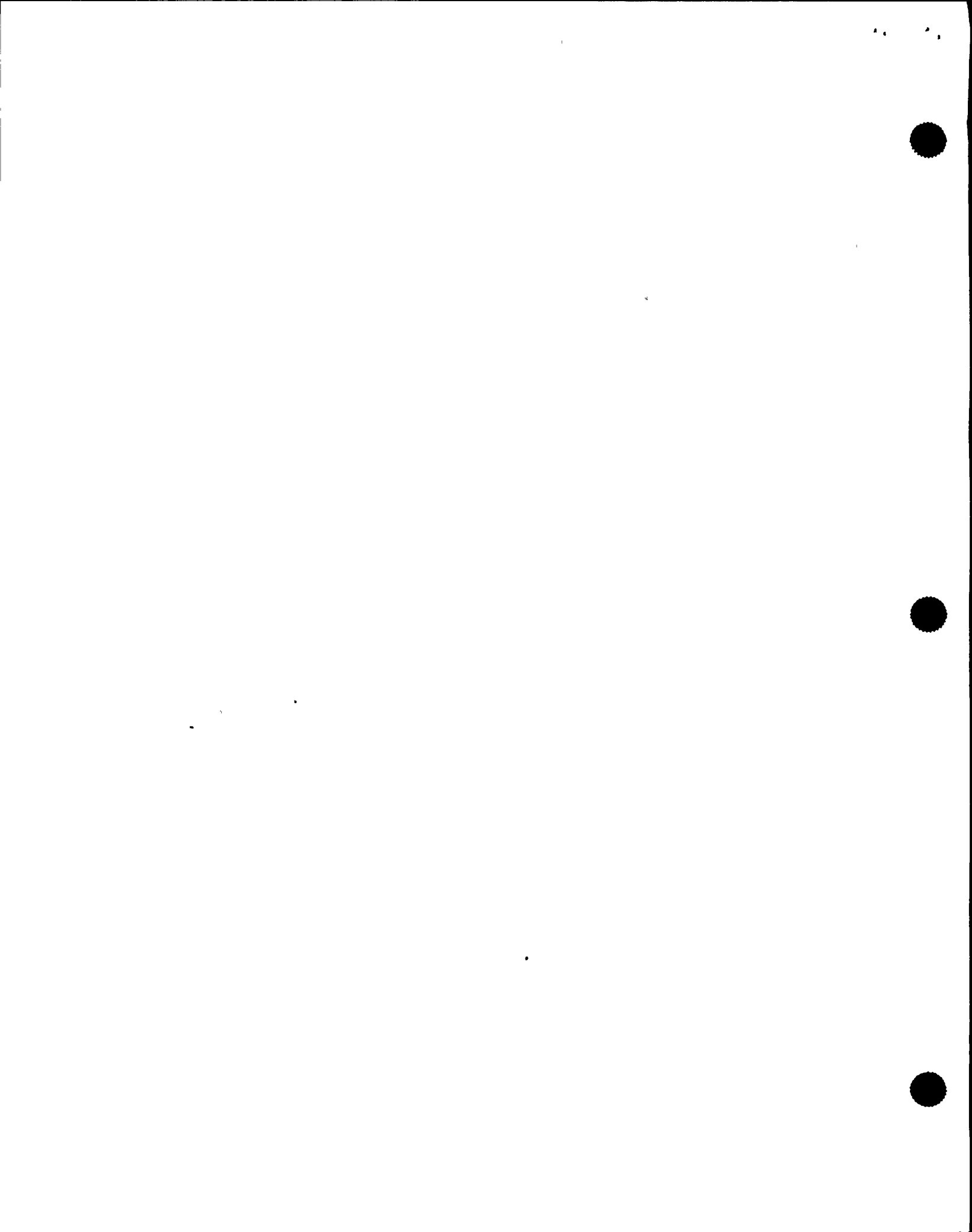
7 Is that a concern to you guys?

8 MR. COLOMB: I guess the fact that the reactor
9 went critical is a concern. It would always be a concern,
10 but I think it could be handled using the procedure guidance
11 we have. I mean, the procedures are designed to handle
12 that.

13 MR. CONTE: Okay, I think that answers my
14 question. Does anybody else have any comments on this
15 scenario, proposed situation?

16 [No response.]

17 MR. CONTE: Thank you. Question 6. In reference
18 to the lesson plan on normal leg of C5 there is a caution
19 about rapid increase in injection flow that warns the
20 operator of potential response if injection of cold
21 unborated water into the cooler is too rapid under
22 conditions where little or no shut down margin may exist.
23 This may result in a large increase in positive reactivity
24 with a subsequent reactor power excursion large enough to
25 substantially damage the core.



1 This is very qualitative. Is there any more
2 definitive guidance for the operators in terms of this flow
3 rate is bad, this flow rate is safe?

4 MR. REID: That statement came right out of the
5 EPG's, and is almost a reiteration from the EPG's to our
6 EOP's. We don't have anything, other than that, to add to
7 that statement.

8 MR. CONTE: Thank you. That answers that
9 question. Do you have any other comments here?

10 [No response.]

11 MR. CONTE: In reference to simulator malfunction
12 RD01, rod position information system failure. It wasn't
13 clear what all is involved there and how often are operators
14 exposed to it.

15 MR. REID: RD01 is an RPIS system failure. I will
16 read off to you the effects of that failure as our cause and
17 effects simulator manual has. All RPIS is lost. If a rod
18 is being driven, it will slowly drift to its next outward
19 even notch position. This is due to the insert withdraw
20 solenoid valves getting closed. The operator will not be
21 able to move the control rods using RMCS.

22 Normal scram capability will exist. The following
23 annunciator is expected to actuate as a direct result of
24 this malfunction; RPIS inop. The last part of it is, how
25 often are operators exposed to it. We have not used this



1 malfunction in any of our training.

2 MR. CONTE: Okay. Number 8, I have independently
3 answered. That scenario, dynamic scenario, I call it a
4 training scenario in the question. I will give the tail end
5 of it for the record. 1DY-2-20 which involves a failure of
6 RPS, eight stuck rods following ARI. The question is, was
7 it done for the crew on shift at the time of the emergency.
8 I independently answer that as yes.

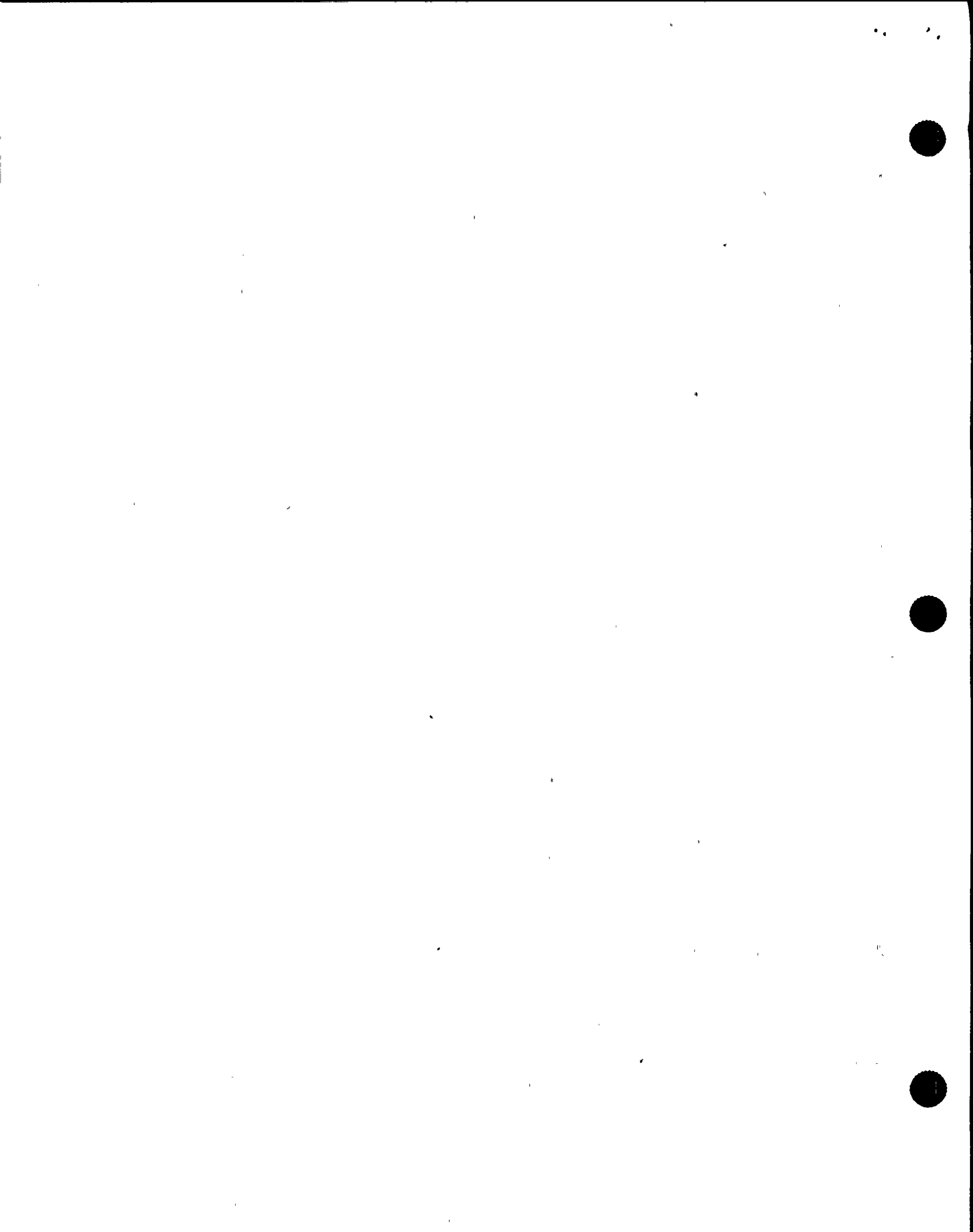
9 MR. REID: Rich, I agree with that. I have a
10 printout of our train report. In fact, it was trained upon
11 by those five shift individuals.

12 MR. CONTE: While we are talking about the
13 training report and the training records, I want to clarify
14 this. What you have given the team is training records
15 dating back for two years. That is not the complete history
16 on everybody; is that correct?

17 MR. SLADE: Rich, that is correct. We have just
18 implemented this computerized system. Any records prior to
19 that have all been manually tracked in personnel files in
20 our training record room.

21 MR. CONTE: You have given me what is available in
22 this new tracking system.

23 MR. SLADE: That's correct. It's just a tracking
24 system. These identify training, where to pull the training
25 records and from there we would go to a site to pull out a



1 permanent file.

2 MR. CONTE: Question 9. That needs clarification
3 based on my discussion with Mr. Reid yesterday. We settled
4 on checking the use of that particular JPM which deals with
5 the transfer of an UPS 2A to an alternate maintenance
6 supply.

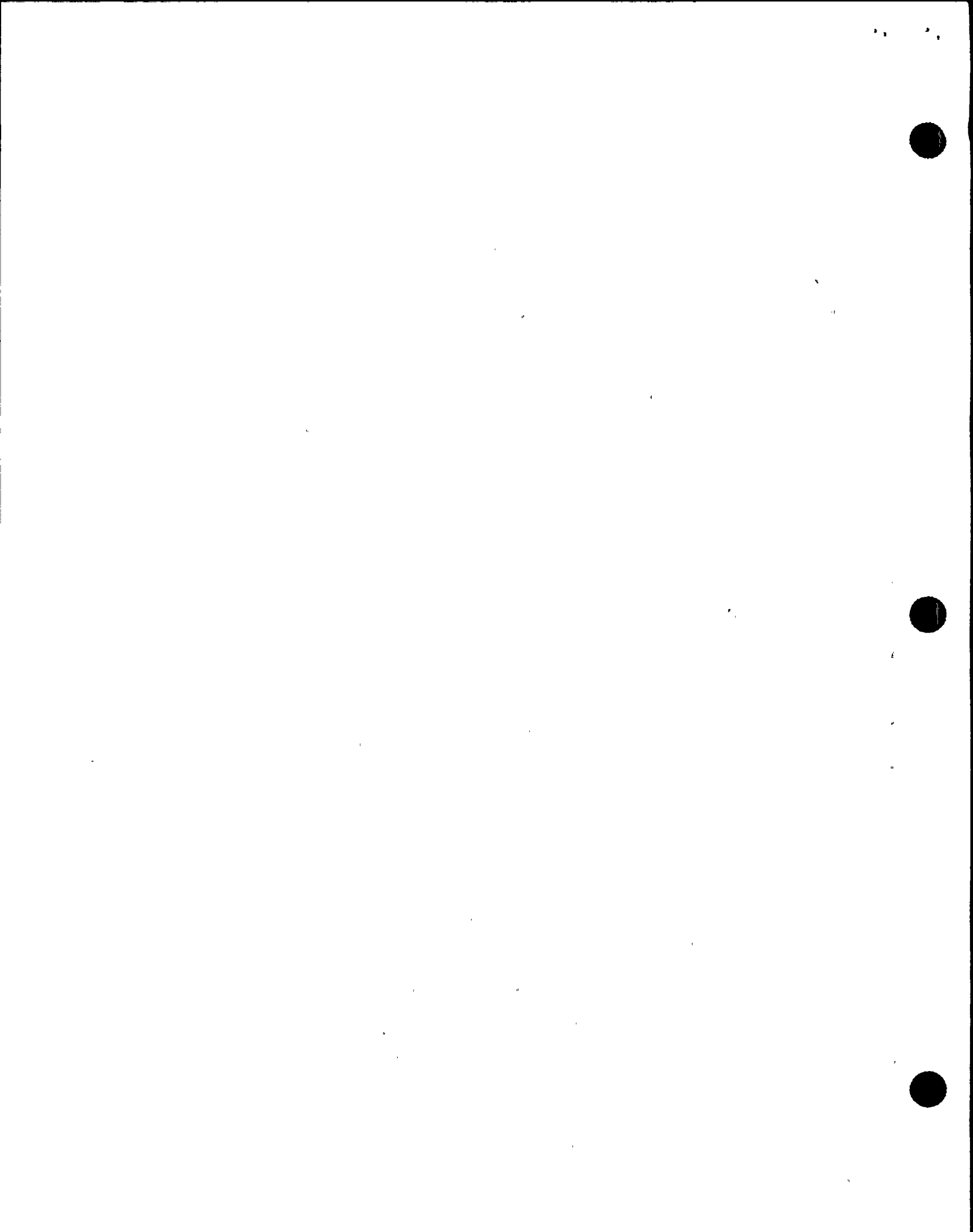
7 The question was refined to, was this JPM used on
8 past Re-Qual exams.

9 MR. REID: Rich, what I had done is researched
10 when that JPM was used, and it was used in cycles three and
11 nine of last year which occurred in August and December of
12 1990. All the licensed operators had gone and received
13 training on that particular JPM.

14 MR. CONTE: Let me ask a follow up question to
15 that. Is that recorded in their training records, about
16 what JPM's they get or don't get?

17 MR. SLADE: In their training records, yes. I am
18 holding a copy of it in front of me right now, and it does
19 indicate who has gone to it, that particular JPM 66, the
20 title of it. You have a similar copy of a training report
21 where it shows different codes and the dates and record
22 numbers. Yes, I have that for that particular JPM.

23 MR. CONTE: Thank you. Question 10 and 11 are
24 related. Let me handle question 11 first. The Reg Guide
25 1.91 lesson plan doesn't really help operators in training



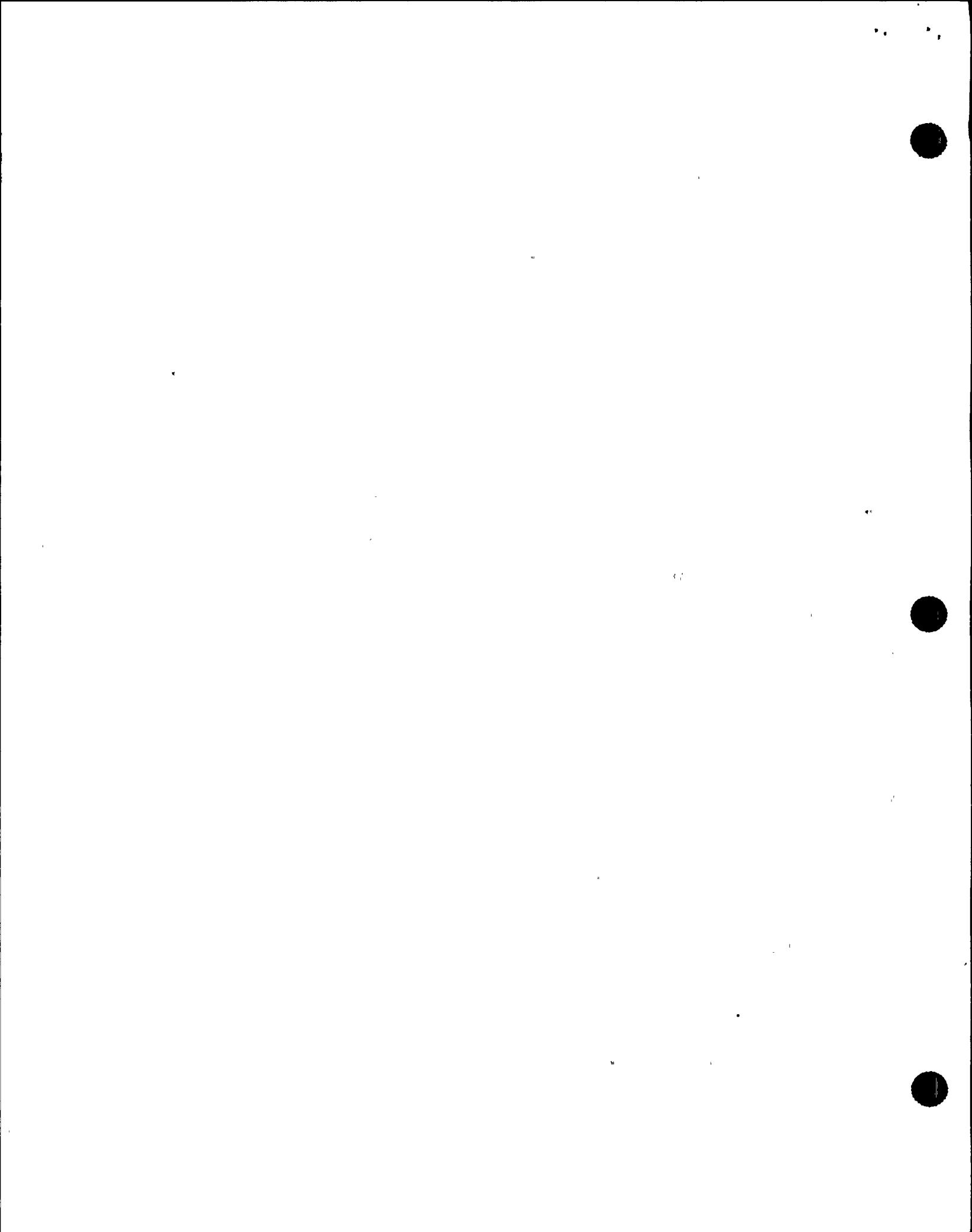
1 them on the availability of safety-related instrumentation
2 or even the red labeled Reg Guide 1.97 instrumentations.
3 How is this presented to the operators?

4 MR. REID: Rich, I pulled out that lesson plan
5 that you are referring to, and I agree that there is some
6 need for improvement on how that material is presented. We
7 went ahead yesterday and wrote an addendum to that procedure
8 and included in there the red background to assist in
9 locating those instruments as part of our training.

10 MR. CONTE: Let's go to question 10. I think I am
11 going to generate another follow up question. Question 10
12 says emergency tasks in Section 200 of the reactor
13 operator's on the job training manual and 344 of the SRO
14 manual do not include such things as use of Reg Guide 1.97
15 equipment only or the use of safety-related equipment only
16 on loss of SPDS process computer during the implementation
17 of EOP's.

18 Is there any response to that? I guess the real
19 question I am wondering is, how are the operators -- they
20 seem to know it, but how are the operators given the
21 information that here's the safety related instrumentation
22 and here's the Reg Guide 1.97 information.

23 MR. WHITE: For the original question or statement
24 that it is not in the OJT manual, that is correct. I had
25 told you before that was the old OJT manual that was used to



1 qualify the people who are now licensed. Each license
2 class, prior to issuing them their qualification or OJT
3 manual, we review the latest analysis that have been done on
4 various tasks, et cetera, and come up with a new revised
5 more or less to make sure it is up to date as best we can
6 be.

7 Even that one does not contain the tasks that you
8 have addressed in comment number 10. We have issued a
9 training change order to address that issue, to evaluate
10 those three areas and incorporate it, if that's what we wind
11 up having to do.

12 The second part of your question, where is it
13 addressed, in the lesson plans -- I am not prepared to give
14 you any numbers or specifically tell you what areas they are
15 addressed in. For instance SPDS lesson plan, one of the
16 objectives in that plan requires the trainee to be able to
17 identify and use operating procedures. Specifically in that
18 operating procedure there is reference made that if you lose
19 indication on SPDS that you check the control room other
20 indication.

21 Also, in our design comments in that operating
22 procedure we specifically address Reg Guide 1.97, in that it
23 was referenced to come up with the parameters that we use in
24 there. A lot of those things are addressed in other areas
25 throughout the training program but not specifically



1 addressing or pointing to Reg Guide 1.97. In all the
2 different other areas where it is probably applicable, it's
3 a thing that a good instructor, we expect him to add as he
4 goes along. It's not necessarily a baseline design of the
5 lesson plan but what he includes in it.

6 MR. SLADE: Rich, to add to that, in our industry
7 event training, lessons learned from Three Mile Island,
8 Mitigation of Core Damage -- again, we are stressing
9 redundant instrumentation. That is the whole purpose why we
10 add all these extra instrumentations. In addition to that,
11 I think earlier in the year Cycle 8 which was around -- it
12 was actually October of 1990 -- we ran a training scenario
13 which included a loss of -- we went in without SPDS and we
14 ran a scenario on them in which they were required to use
15 Reg Guide 1.97 indications.

16 So, you get them used to it.

17 MR. CONTE: It sounds to me like the whole process
18 evolved. Maybe it was so obvious in the simulator that
19 maybe the need for it to be written down wasn't there. I
20 don't know, but it sounded to me as going through various
21 exercises in the simulator -- and we are asking where
22 redundant equipment is in instrumentation -- the obvious is
23 there. The instructor would be asked the question or the
24 operators would seek it out, and just by word of mouth or
25 tradition it came to be known that here's the safety related



1 instrumentation and here's the Reg Guide 1.97
2 instrumentation.

3 Do you argue with that statement?

4 MR. SLADE: I don't argue with that. In fact, I
5 think our control room layout tends to help us out in that,
6 being where the SSS is and where 601 is. I don't know, it
7 just seems kind of natural to go and look at those
8 indications.

9 MR. CONTE: What I am hearing is that you hear the
10 comment from us or you hear the observation from us about
11 the training material not having this in there, and it
12 sounds to me like you are taking action to incorporate that
13 formally.

14 MR. SLADE: Rich, that is correct. We are going
15 to put some stuff in writing so that we continue on training
16 our operators in that way.

17 MR. CONTE: Okay, good. Thank you. Question 12,
18 the Re-Qual lesson plan on plant communications tells of
19 sound powered sound system, a channel of maintenance and
20 calibration communication system as back up to be used in
21 case of a loss of electrical power, but the LO is not
22 specific on power supplies.

23 Why wasn't this used during the event instead of
24 people running up and down steps?

25 MR. COLOMB: Let me try to answer that. The sound



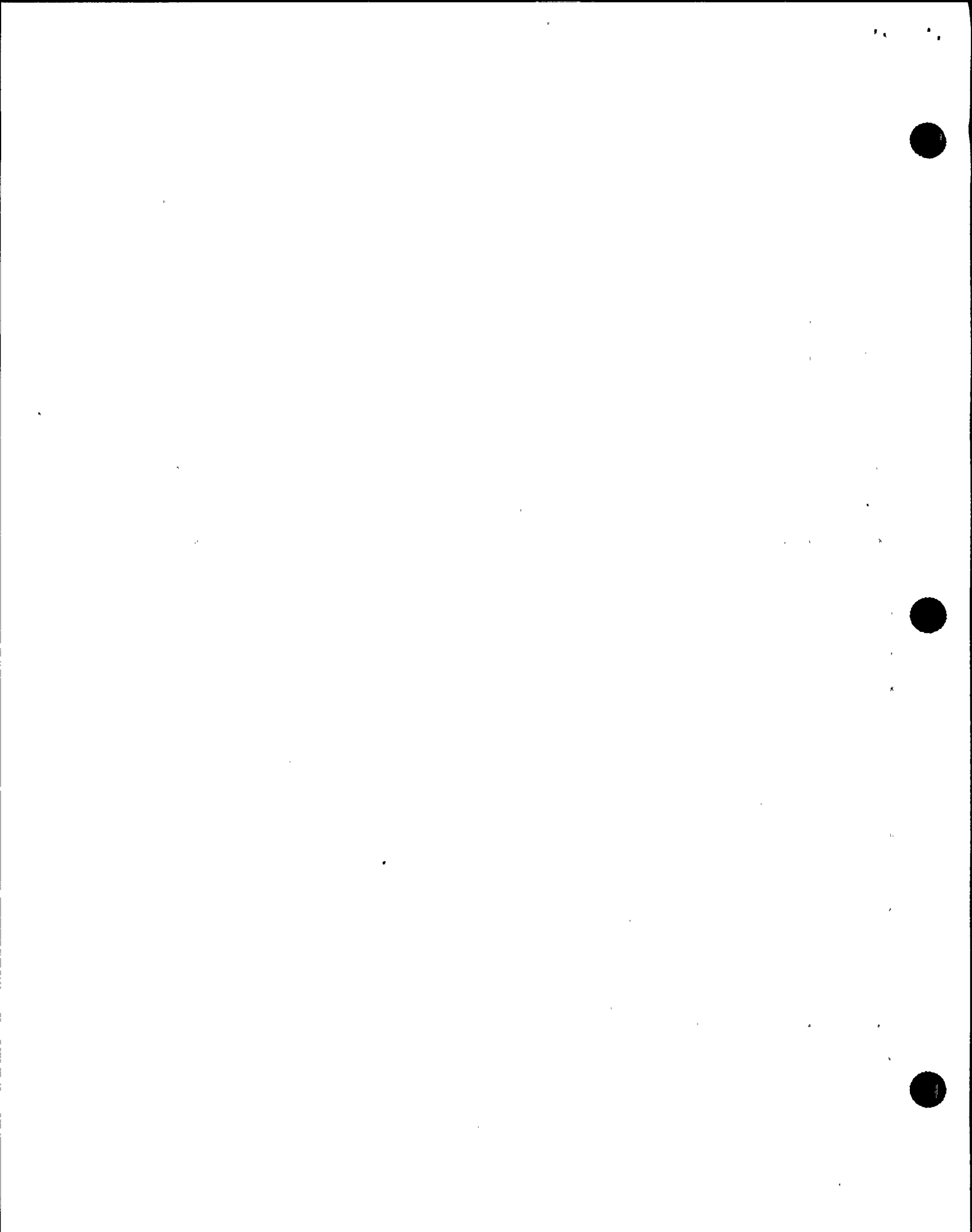
1 powered capability of the maintenance and calibration
2 communication system is available hardware-wise in the
3 plant. Sound powered phones don't require a power supply.
4 That's just that they are headsets that are sound powered
5 and just connected between two points with electrical wires
6 and work.

7 Why it wasn't used in the event, a couple of
8 reasons. First, it requires a patch be done in the relay
9 room that would probably take as long as it took us to
10 restore power. Secondly, we don't do a good job of and are
11 looking to do this now, of staging sound powered headsets
12 for use if we do lose power. I guess that's about it.

13 MR. CONTE: Okay, thank you. Right after that
14 question is a comment that there is a number of lesson plans
15 where power supplies are not specific, for example, the APRM
16 reactor vessel instrumentation. You don't walk away from
17 that lesson plan -- once again, this is what is in writing
18 in the lesson plan -- of what we learned from this event.
19 Namely, that there is non-safety power on the up front panel
20 recorders, on many of those instrumentations.

21 It's just a comment. You can respond for the
22 record, if you like. It's an observation that we are making
23 on the lesson plans, that they are not specific in relation
24 to what was learned on this event.

25 MR. REID: Rich, you are right. All of our lesson



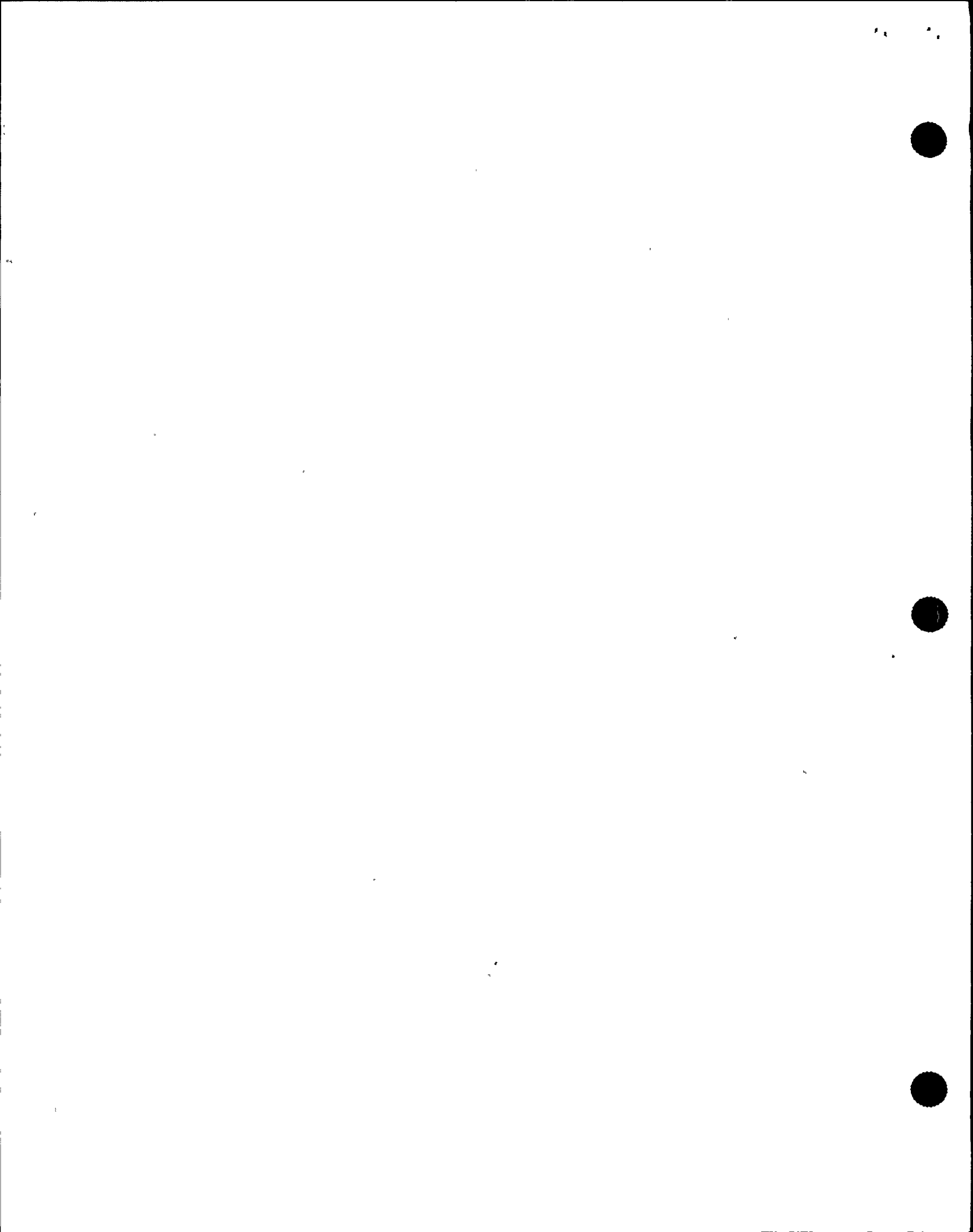
1 plans will not contain specific power supplies for
2 everything that is being instructed. However, the lesson
3 plans do include a review of the procedure. In the
4 procedures themselves are power supplies for the particular
5 items that the topic is discussing. So, it is incumbent
6 upon the instructor to get that message across to the
7 trainees.

8 MR. CONTE: Thank you. Question 13. Provide
9 details on the UPS event on the full core display when the
10 plant remained at power and all lights came on, the full
11 core display in the early part of 1991. At least that's
12 what we can figure out at this point.

13 Are there any logs or subsequent actions or review
14 done? The information has come from the shift supervisor,
15 George Moyer and Mr. Bodoh in remembering that, but the
16 plant did not scram. Is there anything in writing on that,
17 and if there isn't anything in writing what can you tell us
18 at least today?

19 MR. COLOMB: I can tell you that we are putting
20 together information and giving it to Al Pinter to send down
21 to you, Rich. We did look back. We believe the event did
22 take place in February of 1990. There is information to be
23 had, and we are putting that together. We will send it down
24 to you as well.

25 MR. CONTE: Thank you. We will review it when it



1 comes in. Question 14. An operator claimed that he was
2 following reactor power during the event using IRM's and
3 SRM's. We thought the availability of instrumentation in
4 the front panel wasn't there. Is there an explanation for
5 this? Is there IRM indication in the back panels?

6 MR. COLOMB: There is IRM instrumentation on the
7 back panels that would have been working. We talked to the
8 operator involved, Mr. Mark Bodoh. He said that he really
9 didn't do too much of following power down until he restored
10 power.

11 What he did see was that the IRM's had down scales
12 on them on range ten. He did insert the IRM's and SRM's but
13 he wasn't actually able to follow it down by our normal
14 means which would be the recorders, until we had restored
15 power.

16 MR. JORDAN: Where did he read the down scale on
17 the IRM's before restored power?

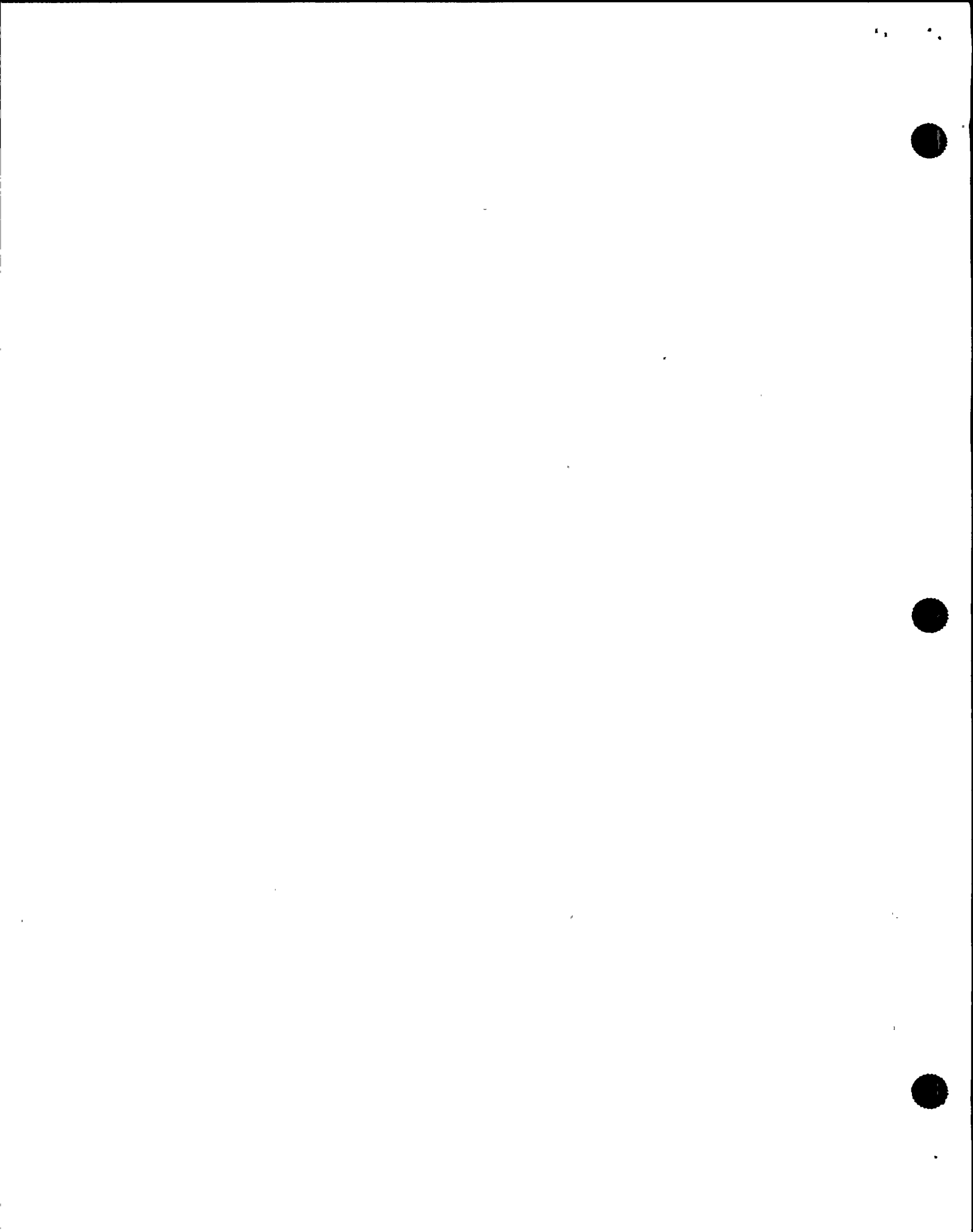
18 MR. COLOMB: That is on panel 603, there is a
19 little indicating light.

20 MR. JORDAN: An indicating light.

21 MR. COLOMB: Yes.

22 MR. JORDAN: Down scale indicating light on the
23 LPRM's?

24 MR. CONTE: They are not associated with UPS
25 power?



1 MR. COLOMB: That's correct, on the IRM's.

2 MR. JORDAN: I thought you said he followed down
3 scale on the LPRM's.

4 MR. COLOMB: No. I am sorry. He saw the
5 indicating lights on the APRM's that were down scale. He
6 also saw indicating lights on the IRM's. These are just
7 little indicating lights on the section of the panel that
8 indicated down scale where the IRM's on range ten.

9 MR. JORDAN: As he ranged down, then the lights --
10 he keeps ranging down; is that what you are saying, Mike?

11 MR. COLOMB: He drove the IRM's in and the SRM's
12 in, but he really didn't start ranging down until power was
13 restored. Nobody knew that the IRM's were down scale on the
14 range that they were on, which we believe was range ten.

15 MR. CONTE: Thank you, Mike.

16 MR. SLADE: Rich, back to Question 1 on SPDS. Fred
17 White returned and pulled up the training records. We do
18 train on that in the license operator trainings.

19 MR. WHITE: Typically it's a lesson plan.

20 MR. SLADE: It's 02-LOT-001-226-2-02. Going back,
21 there is various revisions dating back to January of 1990.
22 Currently, that lesson plan is at revision five.

23 MR. CONTE: Thank you.

24 MR. SLADE: You are welcome.

25 MR. CONTE: That concludes the list of questions



1 that we have sent you. We have two additional here, and I
2 am going to turn it over to Walt Jensen, who has some
3 questions on his own here.

4 MR. JENSEN: First, with the EOP's, that you went
5 into the level EOP's right away when you got down below
6 559.5 inches into the C-5 attachment when you lost rod
7 position indication. It wasn't real clear when you got out
8 the EOP's. Could you help me with that.

9 MR. COLOMB: We will have to get back to you on
10 that one. I think that we identified that in our sequence,
11 but I need to go back and look. I can't answer that right
12 off the top of my head.

13 MR. JENSEN: What is in the sequence is, before
14 you got the 137 low flow/low pressure condensate valve open,
15 that the level dropped down low. You said you went back
16 into the level EOP's which infers at some time that you got
17 out.

18 MR. COLOMB: That is a re-entry it's called. That
19 doesn't mean that you have left at all. Any reoccurrence of
20 an entry condition causes you to re-enter all of the
21 procedures.

22 MR. JENSEN: So, you can re-enter without getting
23 out?

24 MR. COLOMB: Yes.

25 MR. JENSEN: Okay. The next question involves



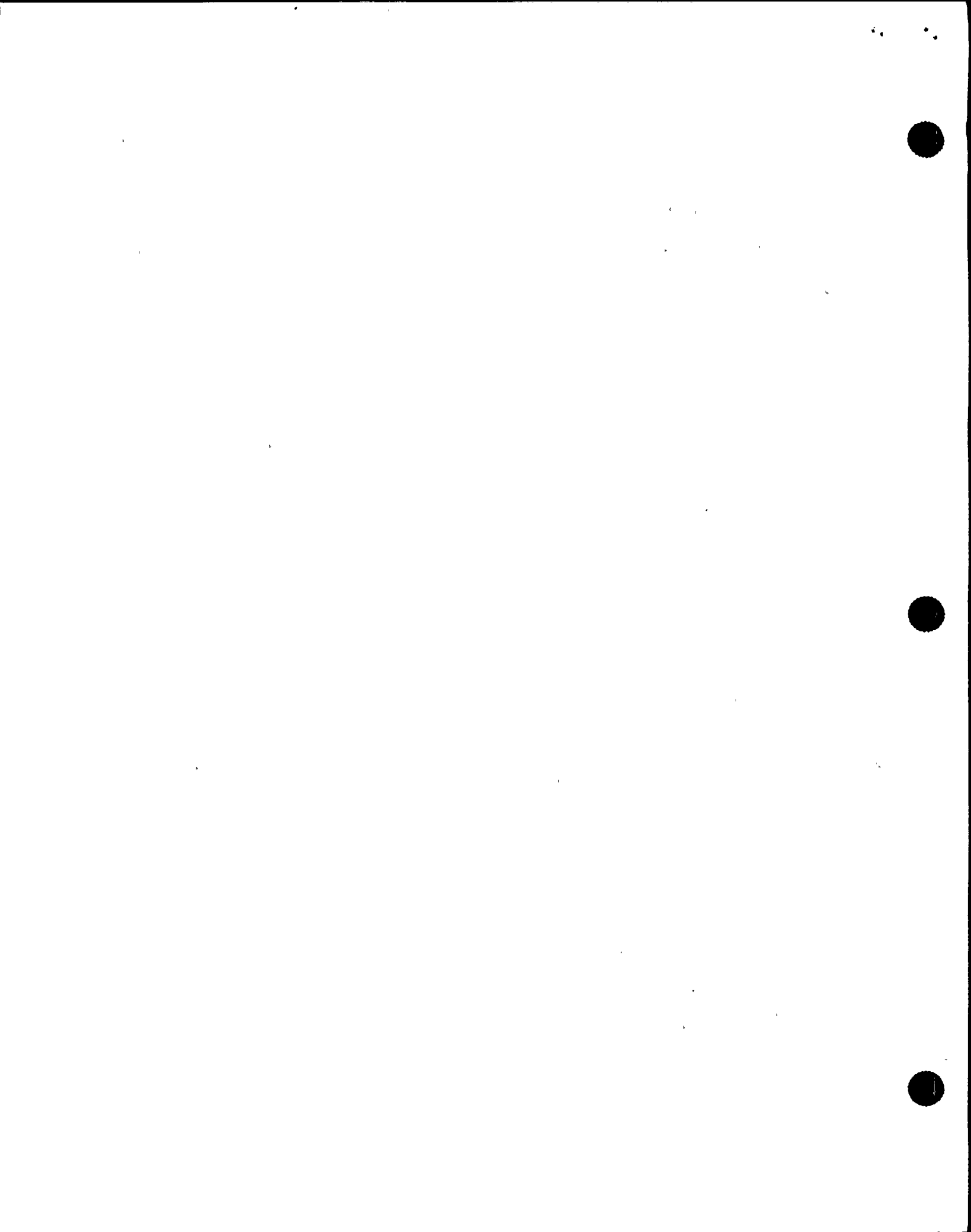
1 what was going on with the RHR or the RHS. When you got the
2 alarm printer restored in the control room there was a
3 printed 749 which refers to an overload on MOV 67B which is
4 the bypass valves going around the RHS heat exchangers.
5 That was fairly early.

6 Later, I understand that MOV's 142 and 149 were
7 open and it was thought there was a water hammer. At 13:50
8 the system was walked down. Later, at 15:08, the RHR 1B
9 pump was started. Then, there's a note in your sequence of
10 events that there was difficulty controlling level because
11 of difficulties controlling this MOV 142 and it had to be
12 controlled locally.

13 I can't coordinate this sequence with the
14 instructions and the operating procedures which is OP-31 for
15 the RHS which indicates that the 142 valves should be opened
16 before the 67 heat exchanger bypass is opened.

17 MR. COLOMB: I think I can answer that question.
18 Those are two separate evolutions that are you looking at.
19 The first evolution where we had the overload alarm on MOV
20 67B was related to the warmup of shutdown cooling. That's
21 covered in a section in the OP-31.

22 The second event where they had a level control
23 using the line to rad waste and that was, again, a problem
24 with MOV 142 is after they had put shutdown cooling in
25 service and were controlling reactor water level with it.



1 It had nothing to do with lining up shut down cooling. It
2 is an alternate method provided for an OP-31, the control
3 reactor water level would be RHR in service and shut down
4 cooling.

5 MR. JENSEN: There's a step in the warmup
6 procedure where it says to open the 142 and 147.

7 MR. COLOMB: That was done.

8 MR. JENSEN: And then to close them again.

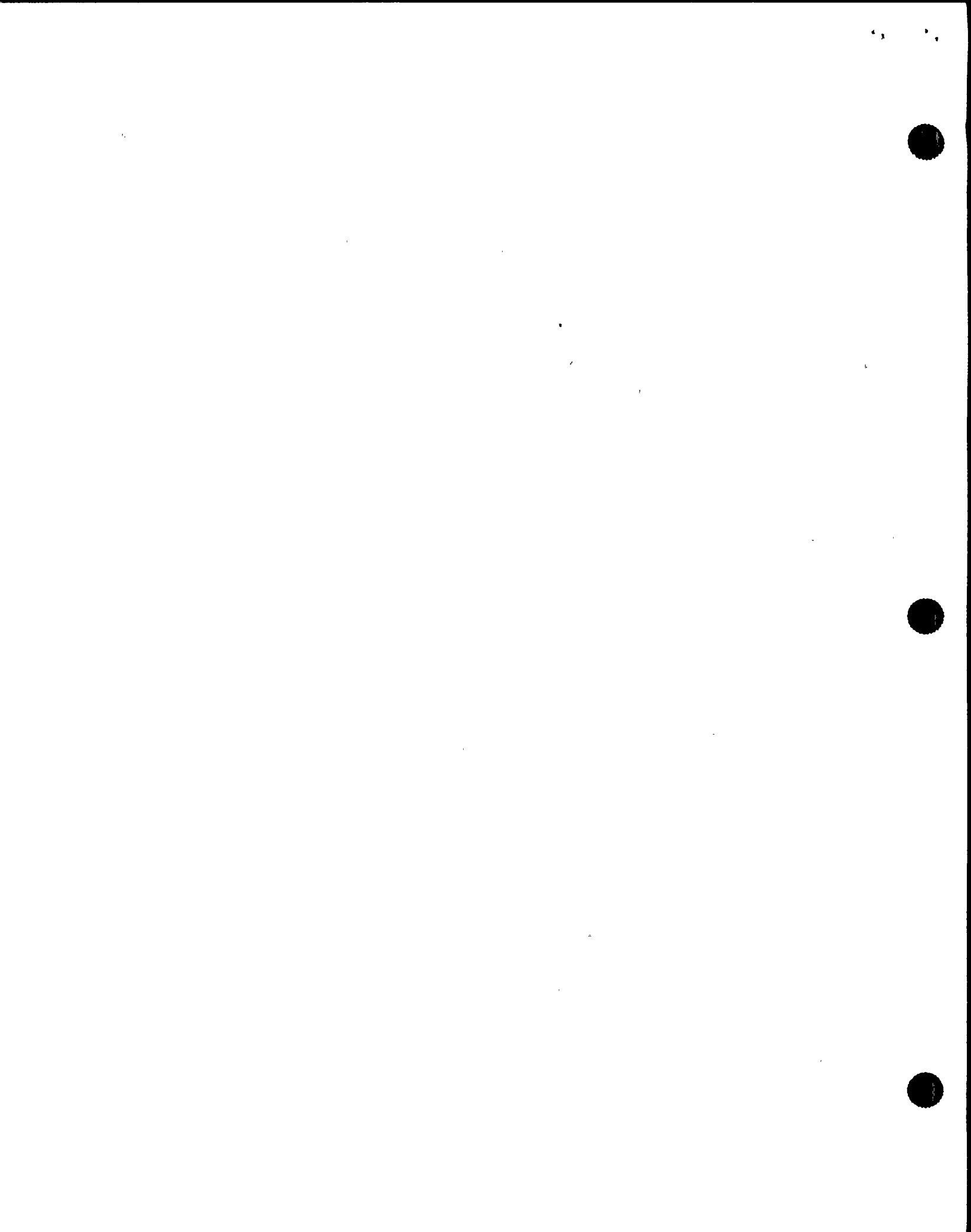
9 MR. COLOMB: That is correct, and that was done.

10 MR. JENSEN: That's when the water hammer
11 occurred.

12 MR. COLOMB: The first incident involved the
13 opening of the 67 and motor overload and the water hammer
14 and positioning of 142, all of that occurred during the
15 warmup of RHR for shutdown cooling. Then the step where you
16 see we started the RHR pump, we placed RHR shutdown cooling
17 in service. After that, the water level control to RHR
18 using the line to rad waste which is, again, the MOV 142 and
19 49.

20 That MOV 142 and 149 line serves a couple of
21 functions. One of them is a flow path. That's the first
22 incident. The second one is a flow path for water level
23 control. That's the second one.

24 MR. JENSEN: The second one, when the MOV 142 was
25 opened, I guess the 149 was also opened then. Is that



1 according to what your procedures -- written procedures that
2 are discussed at operation?

3 MR. COLOMB: Would you repeat that question?

4 MR. JENSEN: Are there written procedures on
5 controlling reactor vessel water level with the RHS B pump
6 running using the MOV 142 and 149?

7 MR. COLOMB: Yes.

8 MR. JORDAN: Do you know what the number is of
9 that procedure?

10 MR. COLOMB: I believe it's covered in OP-31,
11 Mike.

12 MR. JORDAN: Okay, thank you.

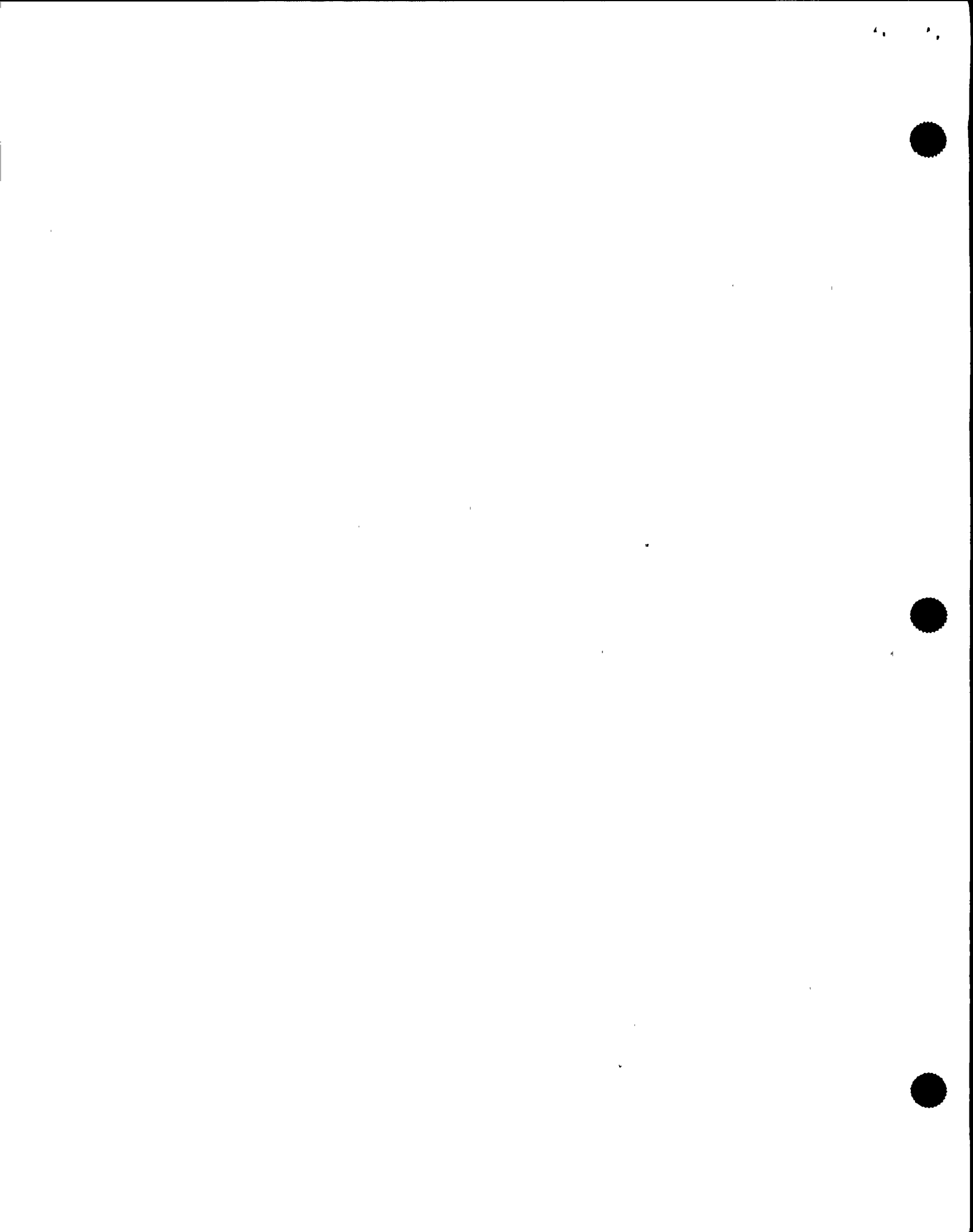
13 MR. JENSEN: Do you know which part it is?

14 MR. COLOMB: No, I would have to look at that.

15 This is another question involving the sequence of events.
16 It refers to when the recirculation pumps ran back on low
17 level. We note in your sequence that it says that 155, that
18 the recirc pumps ran back on L-4 and 178.3 inches.

19 We were wondering how well you know that time. It
20 looks like from the early chart traces that in a few seconds
21 after the reactor tripped that the level went down to 145.
22 Of course, it went down later before the RCIC was one. We
23 were wondering how well you know that time.

24 MR. COLOMB: We don't know that time very well. I
25 think that was just our best estimate.



1 MR. JENSEN: Was there any reason that it couldn't
2 have ran back at a few seconds after the trip when the level
3 went down to 145, or is there some kind of delay perhaps?
4 It was a very brief time that the level was down at 145. Is
5 there any reason why it couldn't have run down right away, a
6 few seconds after the trip?

7 MR. TOMLINSON: If you remember the scenario that
8 we built was the fact that the feed pumps tripped on low
9 function pressure due to the flow valves opening. Those
10 pumps took a while to trip, probably something on the order
11 of 20 seconds to trip. That run back requires that -- we
12 only had one feed pump running. At the time of the initial
13 event two feed pumps were running if we hit that low level.
14 You had to have a low level and less than two feed pumps
15 running to get that run back.

16 MR. JENSEN: Okay, good.

17 MR. TOMLINSON: I would like to go back -- I don't
18 think you heard us when we tried to answer our original
19 question about when do we get out of EOP's. We believe that
20 we finally exited the EOP's late in the day, about the time
21 we tried to put shut down cooling on. If you need to know
22 something more specific than that, it may be difficult for
23 us to pin that down.

24 MR. JENSEN: You didn't have a specific time when
25 the supervisor said we are leaving the EOP's?



1 MR. TOMLINSON: I was not able to find that on the
2 first go-through.

3 MR. JENSEN: Thank you, Tom.

4 MR. CONTE: Do we need to do anything more on that
5 in terms of -- in other words, you have looked through the
6 control logs the day of the event and you can't find a
7 statement that they exited EOP's?

8 MR. TOMLINSON: Correct.

9 MR. JENSEN: Okay, Rich.

10 MR. CONTE: I didn't hear any commitments to Walt
11 at this point, did I?

12 MR. JENSEN: I believe they were going to look
13 into the RHS procedure 31 and find the specific instruction
14 to open the MOV 142 and 149 to control reactor vessel level.

15 MR. CONTE: Is that your understanding, gentlemen?

16 MR. COLOMB: I am sorry, I missed that question.
17 Would you repeat that?

18 MR. CONTE: Walt is thinking that you are going to
19 do something at OP-31 to check the section -- explain it
20 again, Walt.

21 MR. JENSEN: Check the section describing how
22 level was controlled with the B loop running using the 149
23 and 142 valves.

24 MR. COLOMB: I think Tom just went to get a copy
25 of OP-31. We will look for that section.



1 MR. JENSEN: Thank you.

2 MR. VATTER: Could I ask a question relating to
3 the sequence of events. You said in your sequence of events
4 that at the time the power supplies were lost that the Group
5 9 isolation capability was lost. I am not sure that I
6 understood exactly what you meant by saying that. I
7 interpreted that to mean that not all of the Group 9
8 isolation capability was lost but only those initiators that
9 came from the rad monitoring system. Did I interpret that
10 correctly?

11 MR. COLOMB: That is a correct interpretation. It
12 was the capability for the Group 9 isolation was only lost
13 from the rad monitors.

14 MR. VATTER: If you had something else like a
15 level two on reactor water level, you would have still had
16 the Group 9 during that period of time that the UPS' were
17 not operating?

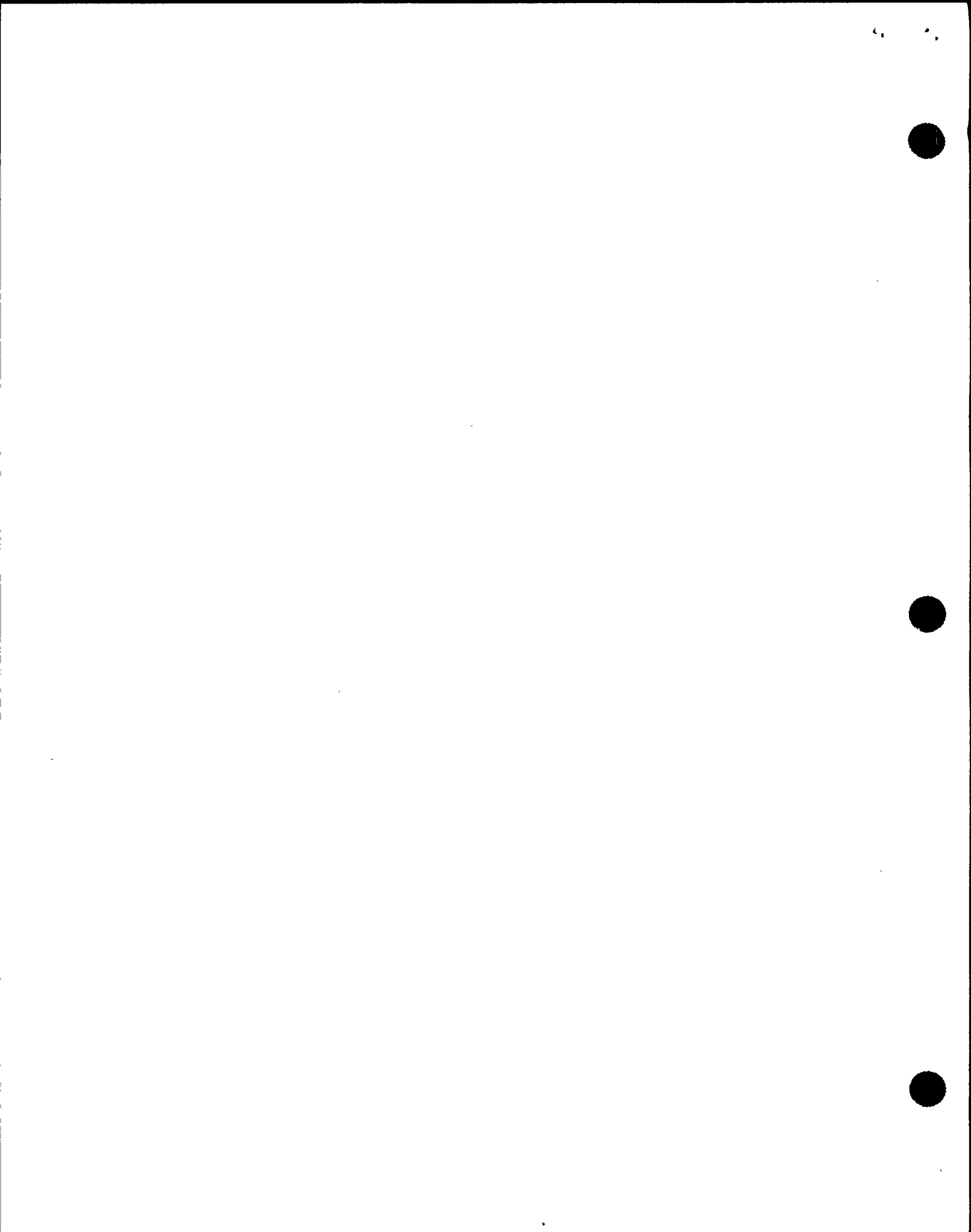
18 MR. COLOMB: That is correct.

19 MR. VATTER: The only initiator that you had on
20 the Group 9 isolation was the spike on the rad monitors when
21 power was restored?

22 MR. COLOMB: That's correct. The re-energization
23 of the circuit is what caused that isolation.

24 MR. VATTER: Thank you for that clarification.

25 MR. JENSEN: I have another one on the RHS. Back



1 at 7:49 when they got the alarm printout on the 67 valve and
2 you said about that same time though on the warm up
3 operations on the system using MOV 149 and 142, wasn't the
4 reactor system pressure at that time about 400 psi, and
5 wasn't that too high a pressure to be opening up the 149 and
6 142; and, wouldn't that have led to perhaps the water
7 hammer?

8 MR. COLOMB: Let me see if I can answer that,
9 Walt. I think very early in the scenario the shift was
10 taking preliminary actions to a hold out that is on some of
11 the shut down cooling valves in order to get it lined up.
12 Some of the breakers are required to be normally de-
13 energized for Appendix R reasons.

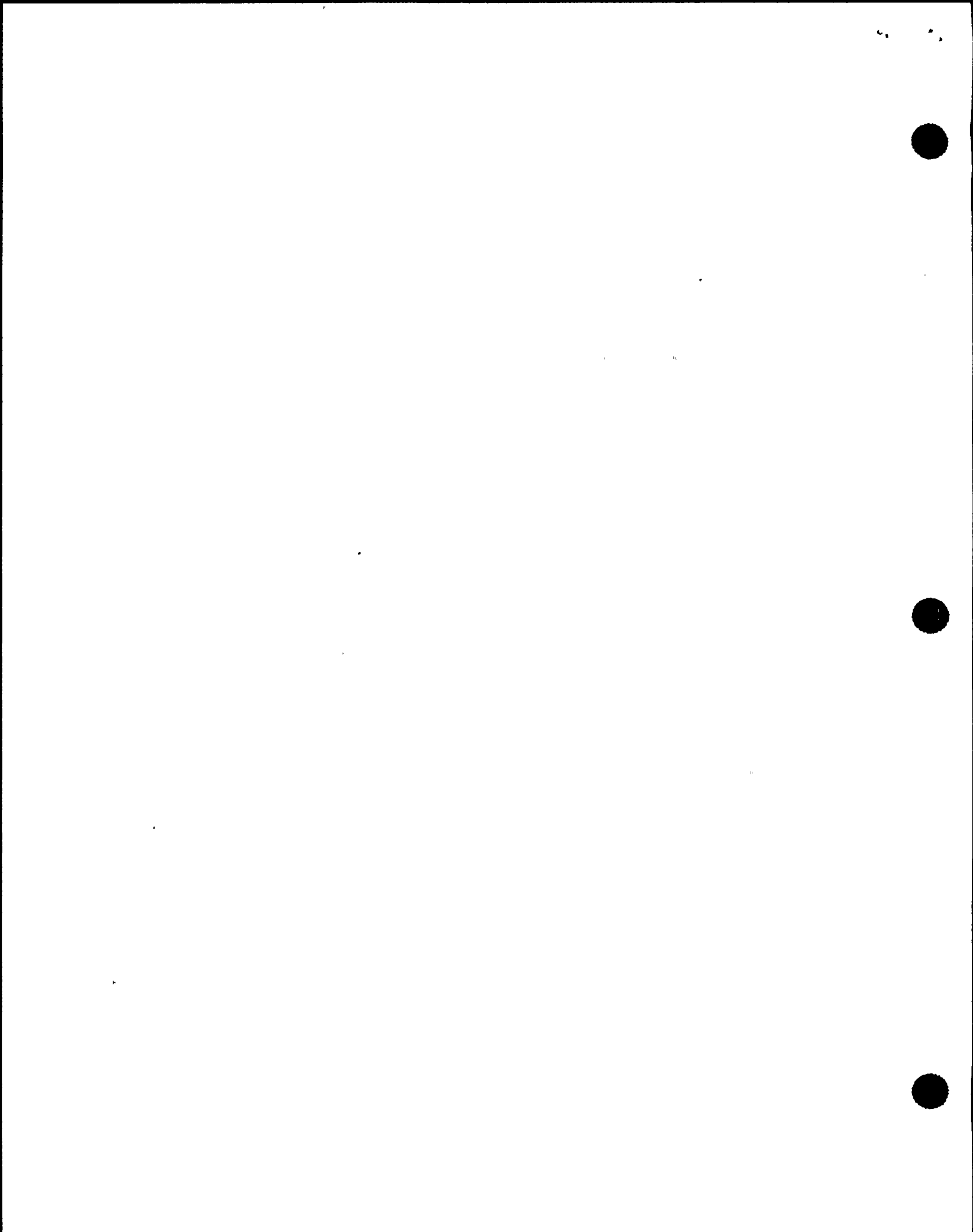
14 The motor overload alarm came when we were turning
15 the breaker on for that 67 MOV. That preceded the actual
16 warm up procedure by quite a while.

17 MR. TOMLINSON: If you remember at the beginning,
18 RHR loops B and C were out of service for maintenance and
19 there mark ups on them. Very early on in the event they
20 started restoring those loops to operable status.

21 MR. JENSEN: What is your best estimate on the
22 time of the water hammer?

23 MR. TOMLINSON: That would have been after noon,
24 best guess.

25 MR. JENSEN: The system was walked down at 13:50.



1 MR. TOMLINSON: Right. That was soon after that
2 water hammer was identified.

3 MR. JENSEN: So, you don't know the exact time.

4 MR. TOMLINSON: Not at this time, no.

5 MR. JENSEN: Okay. Done.

6 MR. CONTE: We have one last question.

7 MR. COLOMB: Before you ask your question Rich,
8 Tom went and looked at N-2 OP-31 and the section that talks
9 about water level control is Section H-11.

10 MR. CONTE: Thank you, Mike. One last question.
11 Once again, it's not on the list. We reviewed your UPS
12 lesson plan, and we found at the end of that lesson plan the
13 methodology for manually overriding the CB-4 breaker. The
14 delivery notes indicate that procedures did not cover the
15 situation. It also indicates will point out how to operate
16 these breakers in the plant.

17 That review of the lesson plan sets in our minds
18 some confusion. The message that we got from the operators
19 was along the lines of they either did not get it in
20 training or they don't remember getting that operation or
21 that practical factor in training. It was more towards, I
22 learned it from experience in the start up dates.

23 I confirmed for the people who were on shift, the
24 mid-shift -- I have confirmed based on the training records
25 that you have given that all of those people had the UPS

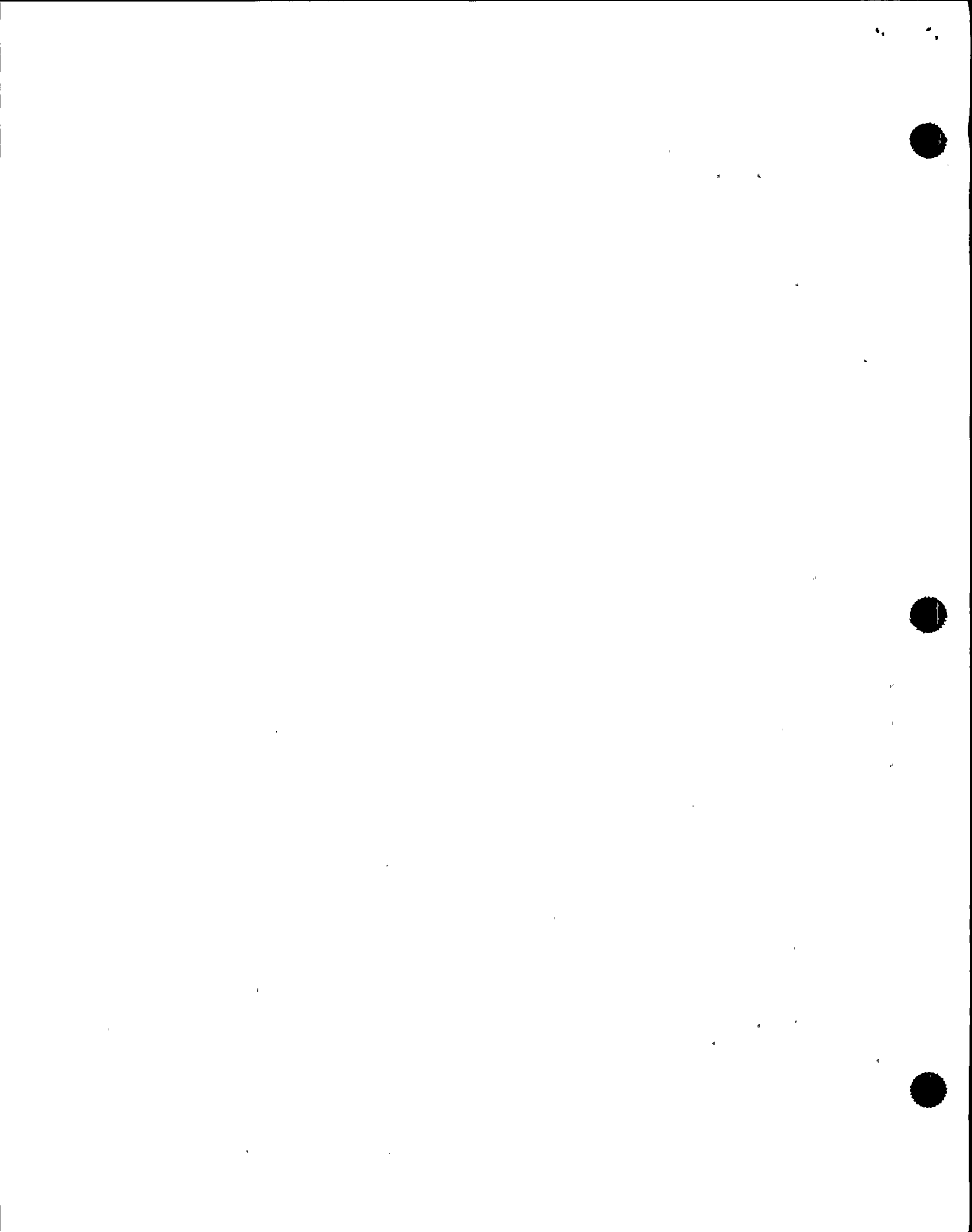


1 lesson plan except for Mr. Conway and Mr. Eron, the shift
2 supervisor and assistant shift supervisor. Of the initial
3 team who went down to UPS, Mr. Hancyzk, Armstrong, Nichols,
4 MacEwen, Spooner -- I didn't have the training records on
5 Nichols, MacEwen, Spooner and Garbus, I didn't have the
6 training records on that individual.

7 Mr. Hancyzk and Armstrong did get the training on
8 the UPS lesson plan. We are a little confused. Some of the
9 people who were directly involved apparently had the
10 training or at least they had the lesson plan covering that
11 information but yet, they claim they had this knowledge
12 based on past experience. I think we need to resolve this
13 conflict somehow or try to get some more information on that
14 issue.

15 Is there the possibility that something went awry
16 in the delivery of the lesson plan in terms of inability to
17 complete it or perhaps not going out in the plant as
18 indicated in the lesson plan? What are your thoughts,
19 gentlemen?

20 MR. SLADE: I was involved I think early on in
21 writing that lesson plan, and I specifically know of the
22 delivery note that you are talking about. When that lesson
23 plan was developed, it was a lot of walking down the system
24 with Bob Crandall and opening up the UPS'. There is a OJT
25 task that is covered in the non-license on the job training

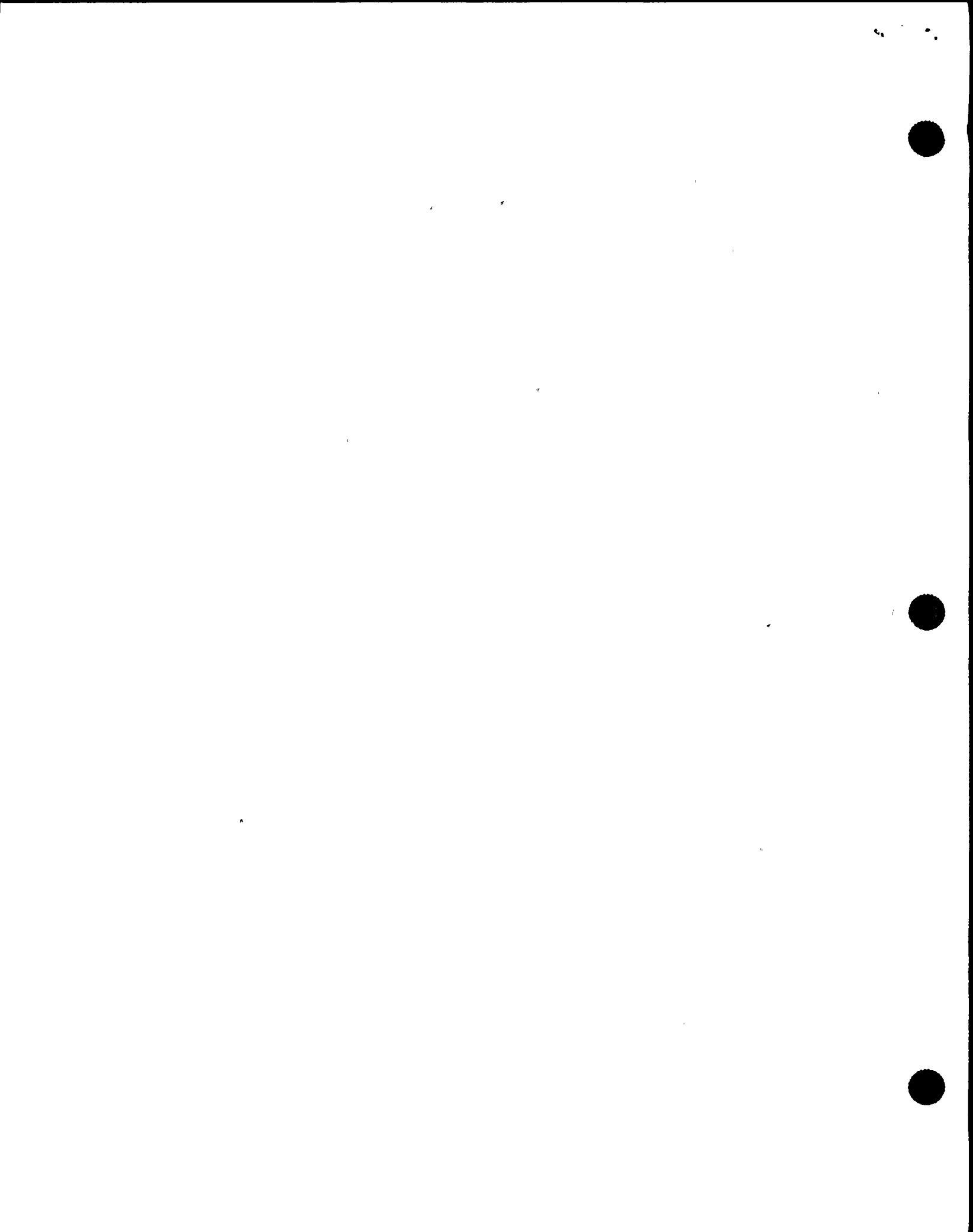


1 to actually do that manipulation.

2 Mr. Armstrong is a non-licensed operator. He
3 would have received the classroom training and would have
4 received a walk down in the plant. However, sometimes our
5 walk downs are limited based on plant operation. If we are
6 up at power we may be limited to just opening it up and not
7 touching anything inside. The problem, if I recall from my
8 interviews on training effectiveness after the event was,
9 Mr. Hanczyk had prior knowledge from start up.

10 The problem they were having was actually
11 manipulating the roller bar with the bar that is underneath
12 to unlatch that cover. The training that I can tell you we
13 went into was to point out those breakers, to point out that
14 this cover will lift up and not an actual hands-on
15 manipulation. That is probably a weakness on our part, and
16 we can look into actually writing a JPM where they can
17 actually do that if the plant can support that.

18 One of the things that are on the table that we
19 discussed at our last operations training is that upon
20 replacement of the UPS' we are going to upgrade two of the
21 models. We may actually try to mock up one of these. We
22 are not committing to that now, but we are going to scope
23 out the feasibility of actually having one of these units
24 for hands on, being that the loads downstream are so
25 critical.



1 To be real short and sweet on that, I think the
2 training presented in the classroom was in accordance with
3 the lesson plan. The delivery notes, I can't say for sure
4 that it is covered. That is not a requirement. The content
5 section is required. The delivery notes are there to aid
6 the operator in making things consistent, so it may be in
7 his best interest to cover that or not. The walk down in
8 the plant wouldn't have covered the showing him the covers -
9 - that's probably where that may have cropped up, where
10 these guys were a little bit confused.

11 MR. WHITE: Off the top of my head I think the RO
12 OJT manual has one specific task that forces the operators
13 to operate the UPS'. A number that I am not really familiar
14 with, three or four or five, there are that many specific
15 tasks for non-license operators; that, once they receive the
16 training before they are qualified they have to actually
17 perform those tasks. That's probably where those things are
18 covered.

19 MR. CONTE: I am aware of what you are talking
20 about, Fred. Thank you.

21 MR. SLADE: Also, Rich, on the non-licensed OJT,
22 just to familiarize you with how the process goes, we put
23 them through a six month program. When we send them back to
24 the plant they do on the job training to make them rounds
25 qualified. At that point then, we turn over another manual



1 to them which is more detailed, qualifying them on
2 individual systems and get more detailed on individual
3 system operations.

4 It may have been that Mr. Armstrong hadn't
5 performed that task yet, and that's why he may not have
6 known how to do that.

7 MR. CONTE: Let me repeat back what I hear you
8 telling me, to make sure that I have an understanding. You
9 have the non-licensed, on the job training manual general
10 manual to get them qualified on doing rounds. Once they are
11 qualified you have more specific system qualification
12 manuals, and it's possible for example that Mr. Armstrong
13 hadn't gotten to the UPS system.

14 MR. SLADE: That is correct. It's just a two-fold
15 process. We give it to them in classroom and then we have
16 the on the job training which you get actually the hands on
17 part of that. He may not have completed that phase.

18 MR. CONTE: Let me see if I can focus this area
19 that we are talking about. Number one, is there any
20 significance to the shift supervisor and the assistant shift
21 supervisor not having this UPS training?

22 MR. SLADE: They were in license class at the
23 time, and that was delivered in a requalification cycle.
24 That's why they would not have had that particular lesson
25 plan as I previously addressed how it wasn't in the license



1 operator training program yet.

2 MR. CONTE: When you say licensed class, was this
3 for RO or SRO.

4 MR. SLADE: That's SRO. They were in license
5 class to be SRO upgrades.

6 MR. CONTE: Upgrades, okay. When they are
7 upgrades it is assumed that they had the practical factors
8 of RO training?

9 MR. SLADE: Could you repeat that again, Rich?

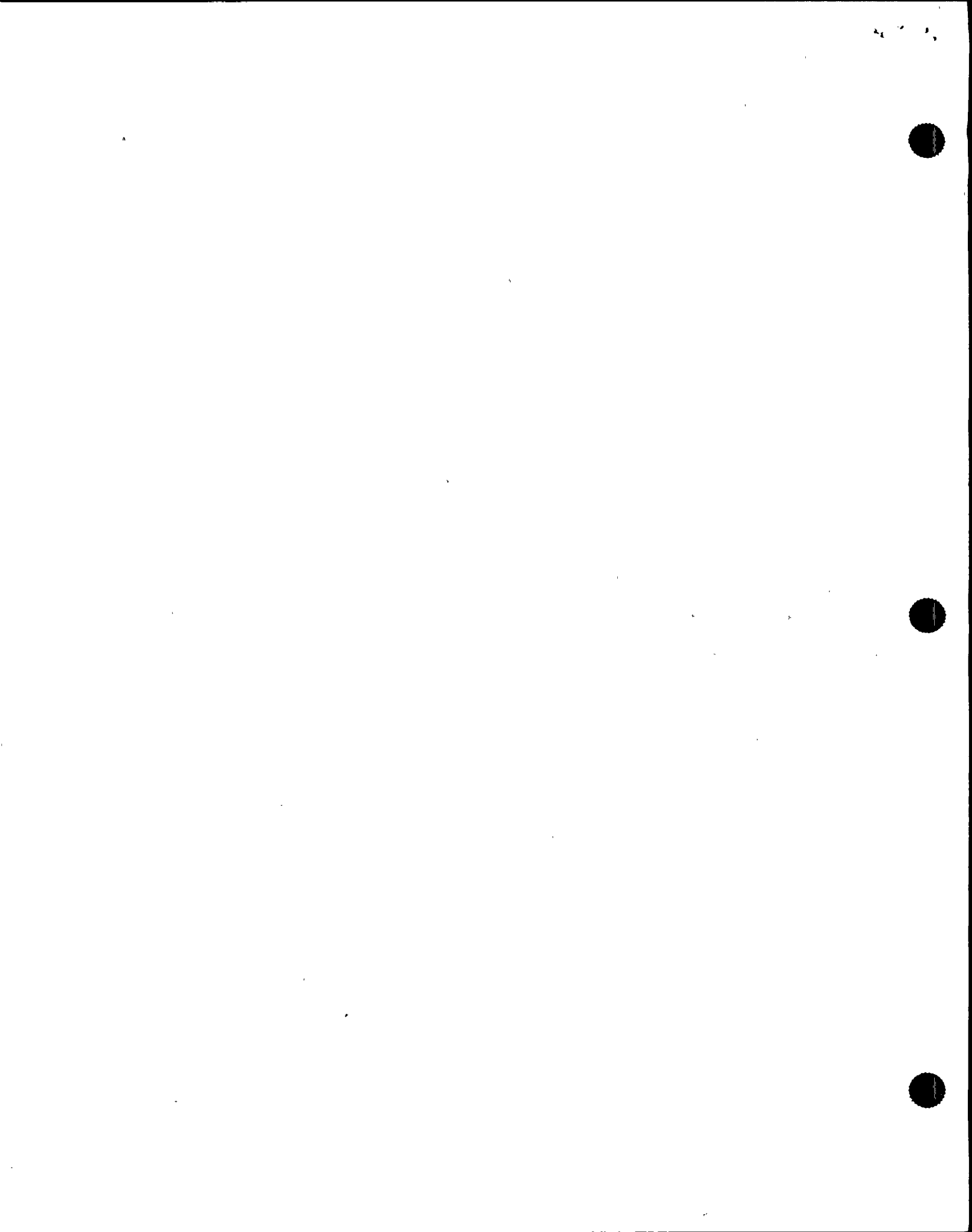
10 MR. CONTE: When there are SRO upgrades, it is
11 assumed they use the SRO OJT manual but that manual assumes
12 that they have already completed RO training and associated
13 practical factors which do get you into either perform or
14 simulating various functions in the plant?

15 MR. SLADE: That is correct.

16 MR. CONTE: Here is a specific request. Could you
17 confirm or deny Mr. Nichols, Mr. MacEwen, Mr. Spooner and
18 Garbus in terms of whether or not they had this UPS
19 training? You can give me a call on that later in the day.

20 MR. SLADE: Yes. Let me repeat that. It would be
21 Nichols, Mr. Garbus, MacEwen and Spooner.

22 MR. CONTE: I would just like to be able to say
23 whether those individuals in the report -- not by name but
24 make a statement as to whether those individuals had the
25 previous training or not.



1 MR. SLADE: Okay. The classroom training?

2 MR. CONTE: Yes.

3 MR. SLADE: I am looking at some of the tasks. I
4 pulled out on the job training manual for the non-licensed
5 operators. One of the tasks that they do is shift
6 uninterruptable power supply to alternate power source.
7 Another one is perform individual, uninterruptable power
8 supply periodic checks. They have to shut down a UPS and
9 have to have the ability to energize the UPS. Those are the
10 tasks that are covered.

11 MR. CONTE: All I am asking is to confirm that
12 besides those practical factors, I am asking to confirm that
13 the lesson plan material was given to those individuals. I
14 don't have the training records.

15 MR. SLADE: That can be easily done. I can get
16 right back to you on that. I would also like to clarify --
17 I said that Eron and Conway were upgrades. Mike Conway was
18 an upgrade and Mike Eron was an SRO.

19 MR. CONTE: Thank you. I think I am almost done
20 here. Let me turn around the room here. Are there any
21 other questions or comments? Gentlemen, do you have
22 anything -- hold on for a minute.

23 MR. VATTER: While we were talking we researched a
24 documents that you have provided us before, and we don't
25 have a copy of your EOP basis document. I would like to



1 know if you could send us that.

2 MR. CONTE: I am going to revisit some of the
3 commitments as a result of this conference call, so I will
4 discuss that. That's probably going to be a request. Let
5 me ask Nine Mile II if you have any additional comments or
6 questions?

7 MR. SLADE: No, not at this time.

8 MR. CONTE: Bob and Mike, I would like to revisit
9 some of the commitments made, and I think we will probably
10 follow this up to Alex Pinter for a request for documents.
11 That was one of the first items on the list that Bill Vatter
12 just talked about. We checked our bibliography and
13 apparently we did not ask for this basis document.

14 We are going to ask for not only the index but
15 also the -- we are going to be asking for the basis document
16 for the EOP's, and we will follow that up with a specific
17 request.

18 As we agreed for the EOP open issues book, you are
19 going to send us a fax today and we will decide what else we
20 need; is that correct?

21 MR. SLADE: Correct.

22 MR. CONTE: Alex Pinter is getting information
23 together for us for the February 1990 event where there was
24 an UPS event and loss of full core display, or there was
25 full lights on full core display; is that correct?



1 MR. SLADE: Correct.

2 MR. CONTE: You are going to get back to me later
3 in the day to confirm whether or not Mr. Nichols, Mr.
4 MacEwen, Mr. Spooner, Mr. Garbus had the UPS lesson plan
5 training.

6 MR. SLADE: That is correct.

7 MR. CONTE: Let me ask the room here; did I miss
8 anything?

9 [No response.]

10 MR. CONTE: Is anybody else expecting something.
11 Walt, are you okay?

12 MR. JENSEN: I'm okay.

13 MR. CONTE: Walt's okay. Is there anything that
14 perhaps you were taking notes and I missed?

15 MR. SLADE: I don't believe so. Just throughout a
16 lot of our responses we had mentioned that we had either
17 changed the lesson plan, like yesterday we made an amendment
18 or we had written a training change order; do you request
19 further documentation on that, or the hard copy of the
20 training change order?

21 MR. CONTE: At this time, no. We don't need it at
22 this point. If we do need it, I will ask you for it. Thank
23 you.

24 Gentlemen, I think you were well prepared for
25 these questions. I guess it was helpful to have prescribed



1 questions to ask you. I appreciate your cooperation this
2 morning.

3 MR. SLADE: Okay.

4 MR. CONTE: We are ready to go off the record and
5 sign off the phone. Are there any comments from Nine Mile
6 II?

7 MR. SLADE: No.

8 MR. CONTE: Thank you, gentlemen.

9 MR. SLADE: Thank you, Rich.

10 [Whereupon, at 10:22 a.m., the meeting concluded.]

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REPORTER'S CERTIFICATE

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

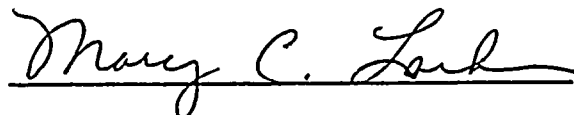
in the matter of:

NAME OF PROCEEDING: Telephone Conference Call

DOCKET NUMBER:

PLACE OF PROCEEDING: Bethesda, Maryland

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.



Official Reporter
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Agency: U.S. Nuclear Regulatory Commission
Incident Investigation Team

Title: Telephone Conference Call

Docket No.

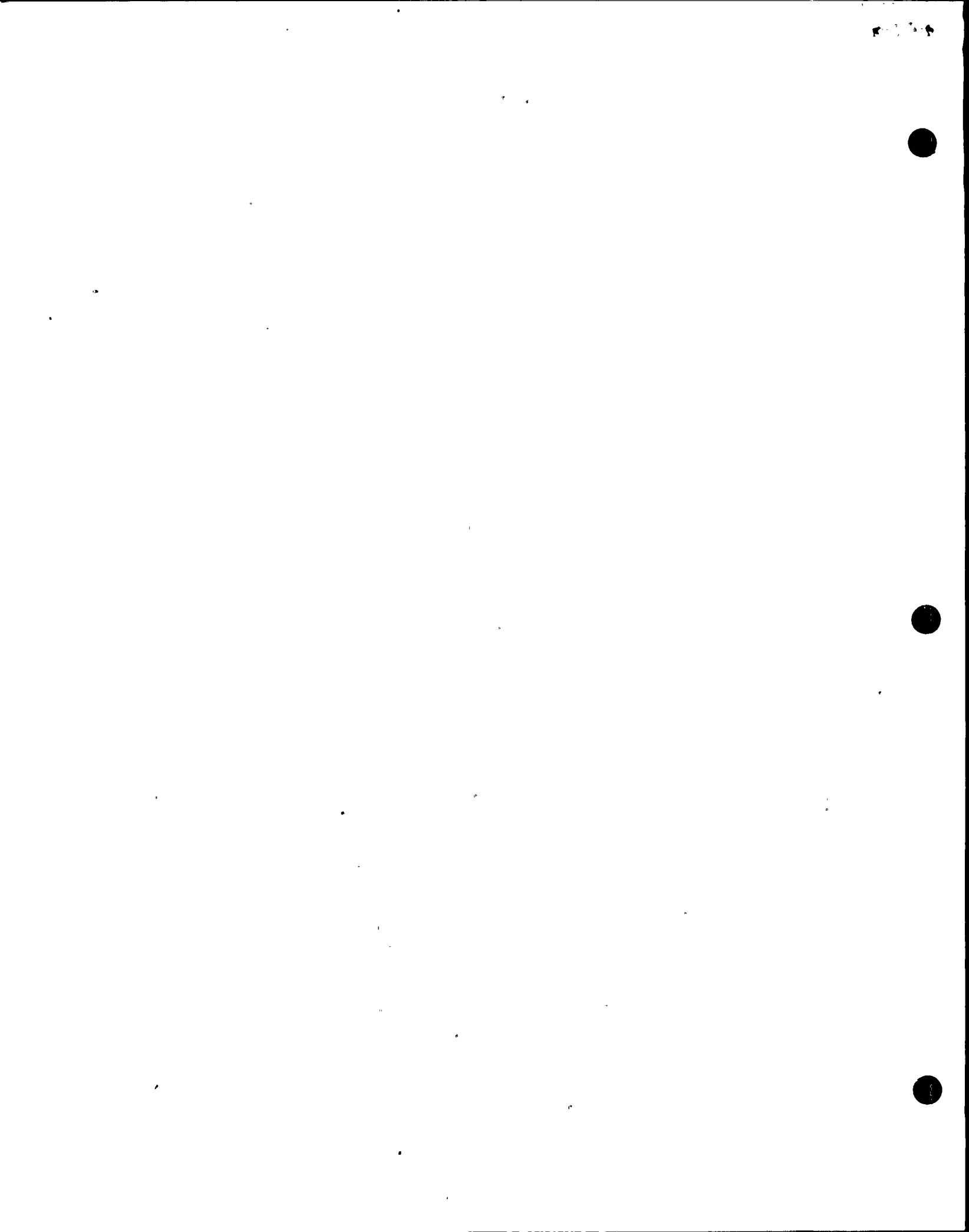
LOCATION: Bethesda, Maryland

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

September 27, 1991

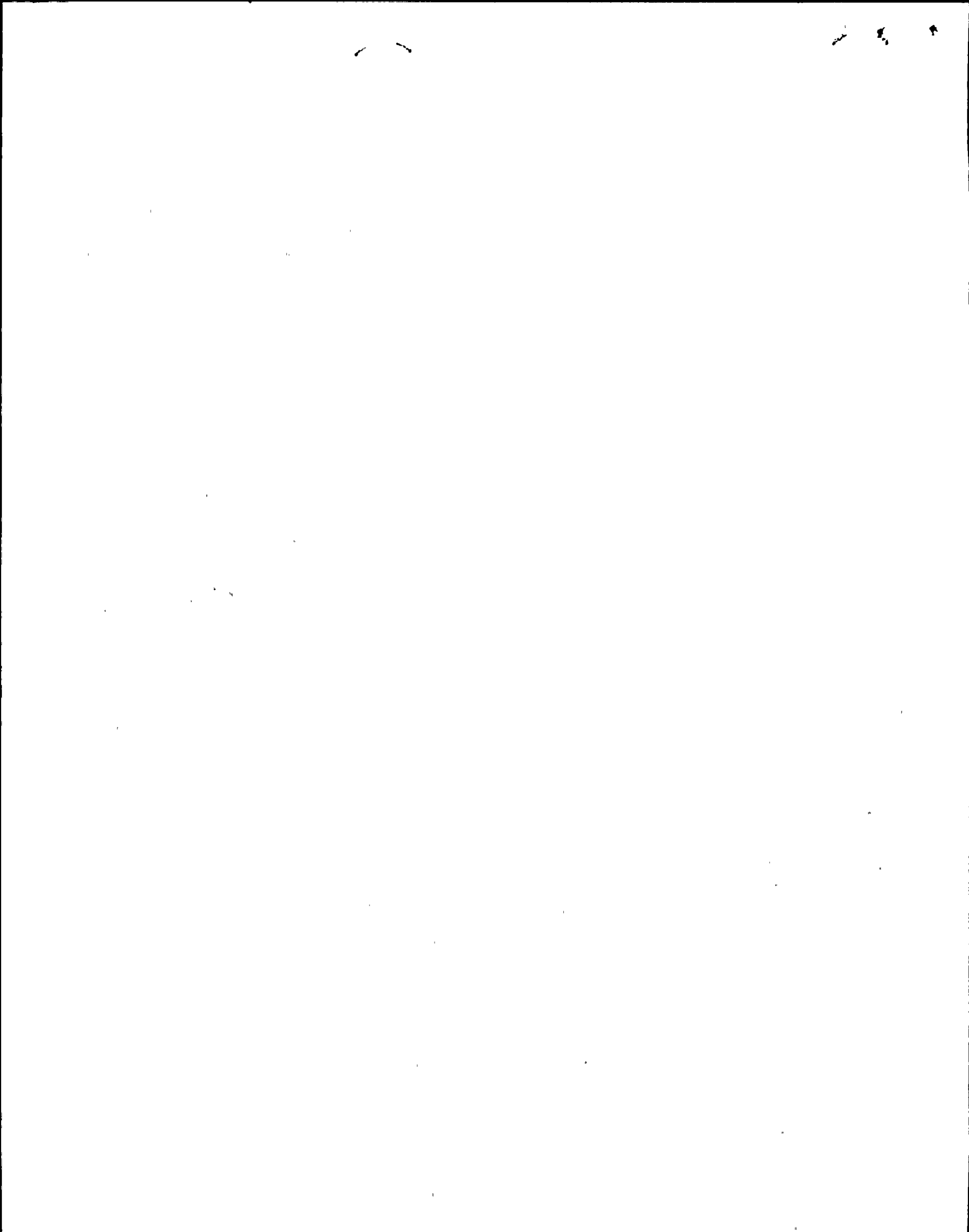
MEMORANDUM FOR: Martin J. McCormick, Plant Manager, Nine Mile Point Unit 2
FROM: Wayne L. Schmidt, Senior Resident Inspector, Nine Mile Point
SUBJECT: Review of IIT Interview Transcripts

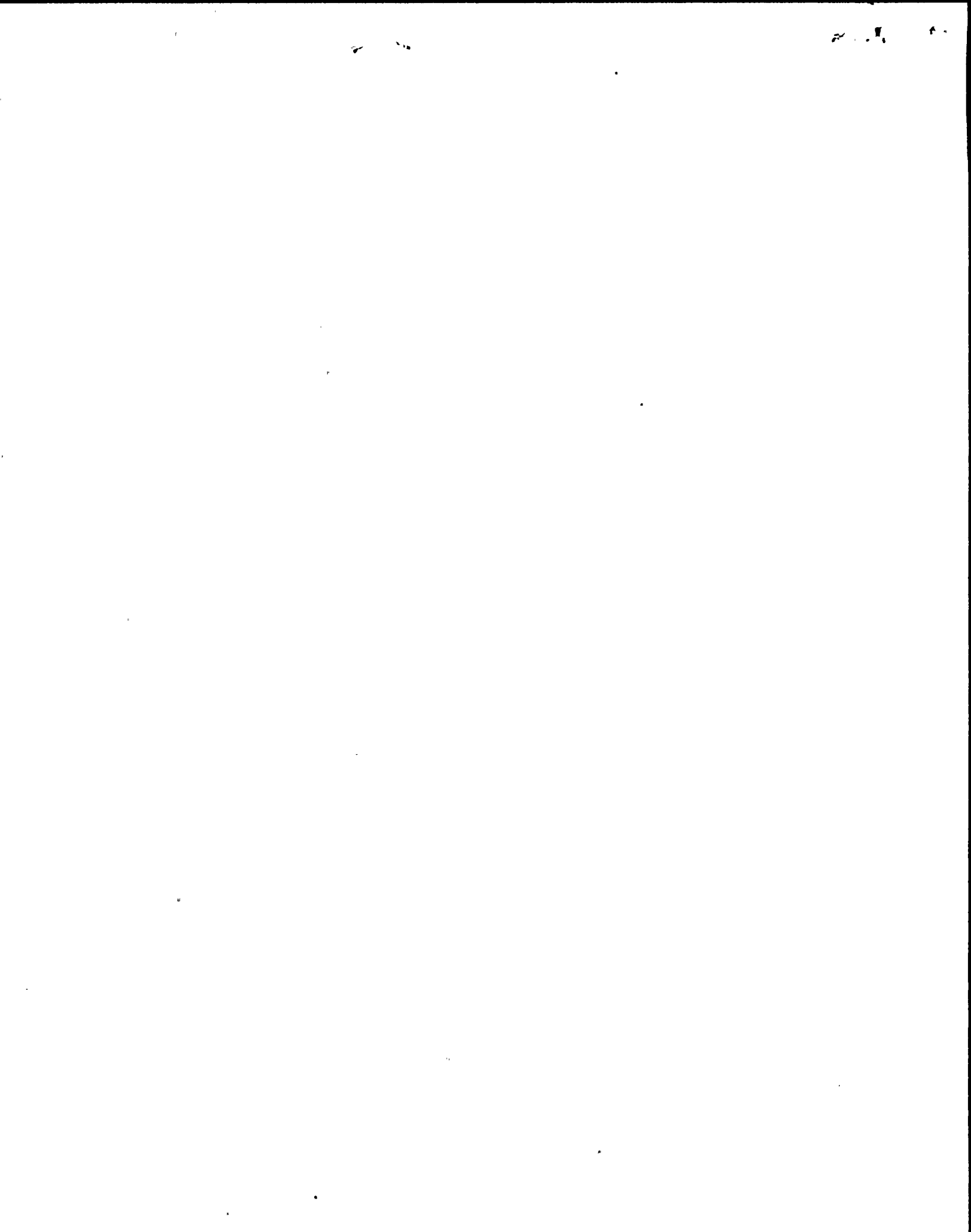
The IIT has sent the transcripts of interviews conducted with the personnel listed below to the resident inspector's office. If any of the listed individuals wish to review the transcripts they should do so at the resident inspector's office by October 4, 1991. Guidelines for the review of transcripts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

Alan DeGarcia, Steve Doty, Dave Barrett, Jerry Helker, Jim Burr, Bob Crandall, Robert Brown, AM11 Julka, Perry Bertsch, James Spadafore, Joe Savoca, Mike Colomb, James Kinsley, Marty McCormick, Chris Kolod, Irineo Ferrer, Fred Gerardine, Anthony Petrelli, Jim Reid, Fred White, Rick Slade, Bruce Hennigan, and Tom Tomlinson.

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

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





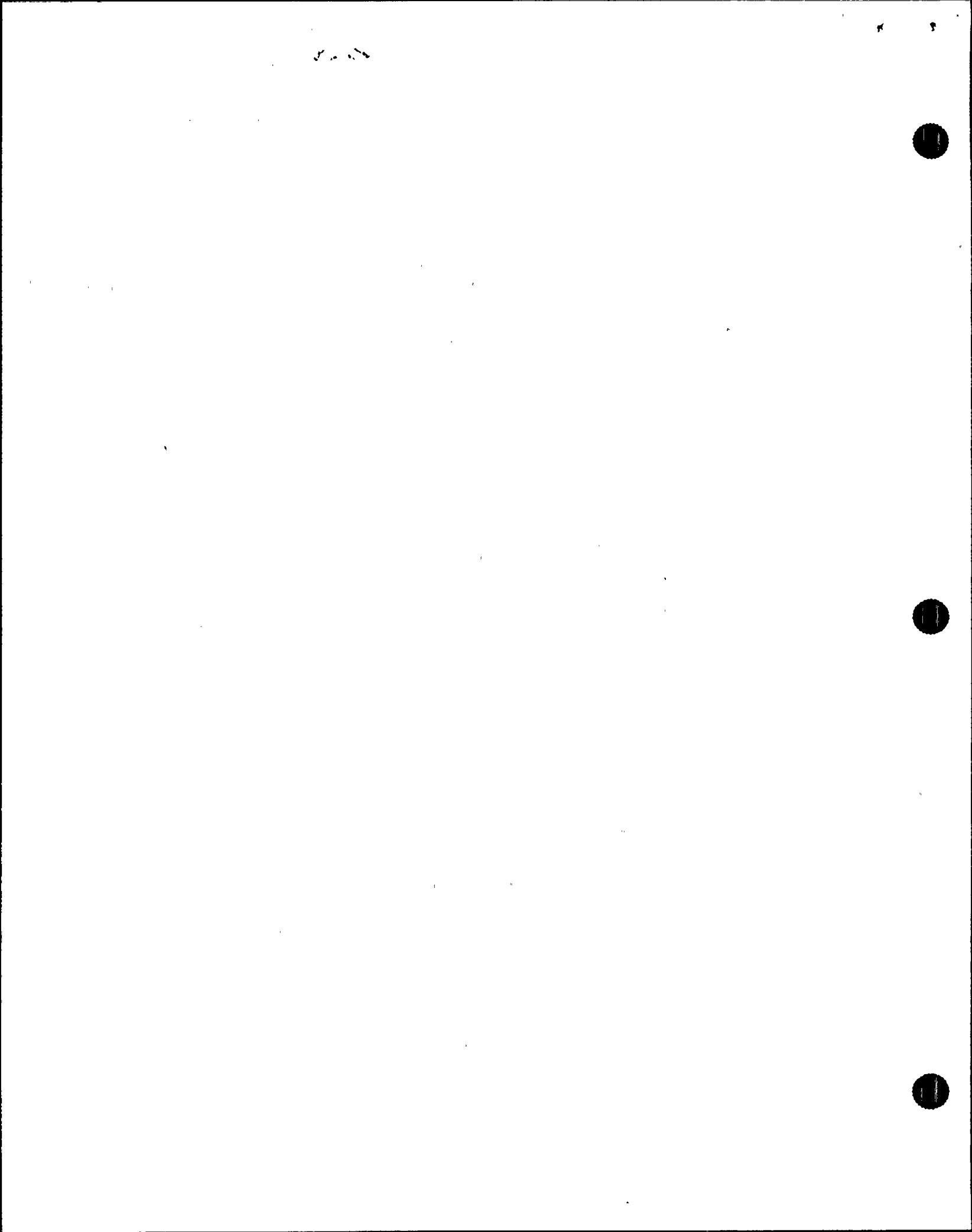
1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION
3 INCIDENT INVESTIGATION TEAM
4
5

6 Telephone Conference Call
7
8

9 Nuclear Regulatory Commission
10 The Woodmont Building
11 Room W-100
12 8120 Woodmont Avenue
13 Bethesda, Maryland

14 Wednesday, September 18, 1991
15

16 The meeting in the above-entitled matter convened,
17 pursuant to notice, in closed session at 9:10 a.m.
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P R O C E E D I N G S

[9:10 a.m.]

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3 MR. CONTE: Good morning. It is the 18th of
4 September at 9:10 in the morning. We are having a conference
5 call between selected members of the IIT and selected
6 members of the Operations and Training Department for the
7 Nine Mile II Event that occurred on August 13, 1991. The
8 IIT is located in Bethesda, Maryland at the Woodmont
9 Building. The Training and Operations representatives are
10 at the site near Oswego, New York.

11 We will first identify ourselves here at the IIT
12 room, and then we will turn it over to the site. I am Rich
13 Conte, Representative from Region I, member of the IIT.

14 MR. JENSEN: I am Walt Jensen from Headquarters,
15 member of the IIT.

16 MR. JORDAN: I am Mike Jordan, out of Region III.
17 I am a member of the IIT.

18 MR. KAUFFMAN: I am John Kauffman our of
19 Headquarters, IIT member.

20 MR. CONTE: I am speaking for Bill Vatter. He
21 just stepped out, but he will be in intermittently in this
22 conference call. Can I have the site identify themselves,
23 please?

24 MR. REID: My name is Jim Reid, Re-Qual Supervisor
25 for Unit II Operations and Training.



1 MR. WHITE: My name is Fred White, Initial
2 Training Supervisor, Operations Training Unit II.

3 MR. SLADE: I am Rick Slade, General Supervisor,
4 Operations Training Unit II.

5 MR. HENNIGAN: Bruce Hennigan, Unit II Re-Qual
6 Training Instructor.

7 MR. SMITH: Bob Smith, Training Manager.

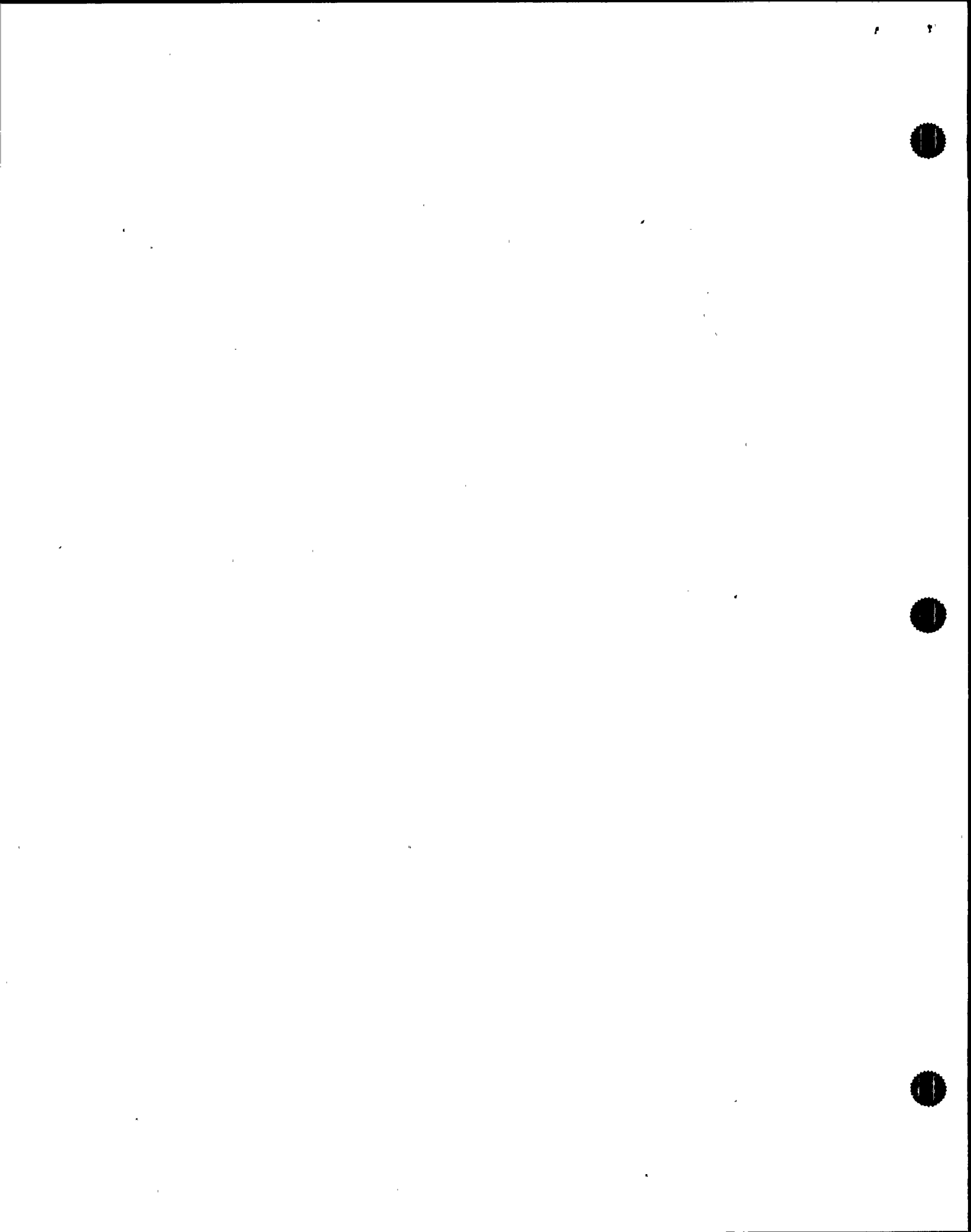
8 MR. TOMLINSON: Tom Tomlinson, Supervisor of
9 Reactor Engineering and part of the Assessment Team.

10 MR. COLOMB: Mike Colomb, Operations Manager at
11 Nine Mile Point Unit II.

12 MR. CONTE: Thank you. For the record, the
13 licensee does have a list of questions that were prepared by
14 the IIT. We will go through them one by one. There are a
15 couple of new questions, and I will inject where those new
16 questions are.

17 The first question, with respect to the lesson
18 plan indices. The Re-Qual index has lesson plans for Reg
19 Guide 1.97 and SPDS and UPS, but the corresponding licensed
20 operator training index does not. The UPS lesson plan does
21 list lesson plan numbers for all three programs; non-
22 licensed, licensed operator training and Re-Qual.

23 Please explain, is the UPS lesson plan being
24 taught in the LOT program and why no applicability of RG
25 1.97 and the SPDS to the LOT. The SPDS is a new item. It



1 does not appear on your list. I ask you to respond, if
2 applicable or as appropriately.

3 MR. SLADE: A little history on the generation of
4 the UPS lesson plan. It was in response to SOER 83.03 from
5 INPO. Generally, what we will do when we create a new
6 lesson plan is that we will put three identification numbers
7 on that lesson plan so that they may be taught in either of
8 the three disciplines, either non-licensed, licensed and Re-
9 Qual. To date they have been taught in the non-licensed and
10 Re-Qual license training programs. They have not been
11 selected as part of the curriculum for license operator
12 training.

13 With the events of the site area emergency, it is
14 planned to teach that in a current license class that we
15 have running. Uninterruptable power supplies would be
16 covered in licensed operated training under normal AC
17 distribution. That's where the candidates would get their
18 information; the location of UPS', general operation, and
19 loads from the UPS.

20 Reg Guide 1.97, a recently developed lesson --
21 there was a TMR which was a training modification, a request
22 recommendation was generated back in 1987, 1988 to provide
23 training to operators and make them aware of Reg Guide 1.97.
24 That training request was only required for Re-qualification
25 only and not the licensed operator training program. Again,



1 our plans are to incorporate the concerns with Reg Guide
2 1.97 into the licensed operator training program in the
3 future.

4 MR. CONTE: Are you prepared to address SPDS at
5 this point?

6 MR. SLADE: We will have to get back on that. As
7 soon as we go down through here, Fred White will go ahead
8 and try to research that before we end this conference.

9 MR. CONTE: We have some additional, more specific
10 questions on those lesson plans. I am going to save them
11 for later.

12 MR. SLADE: All right.

13 MR. CONTE: Let's just continue with the game plan
14 here. Question 2A is referencing some LOT and Re-Qual
15 lesson plans dealing with administrative procedures two and
16 four. The enabling objective for AP-4 calls for the
17 operator to be able to give emergency procedural type
18 actions or the requirements for emergency procedural type
19 actions. There is no enabling objective for the AP-2.

20 When you go to AP-4, AP-4 references you to AP-2.
21 It appears that the enabling objectives is going to be met,
22 but it seems to be confusing. Could you explain why it
23 exists that way?

24 MR. WHITE: In May of 1991 our AP's were revised.
25 In August of 1991 before our site area emergency a training



1 change order was written to address revising those lesson
2 plans due to the revision of the AP's. Specifically, the
3 AP's used to read AP-2.0 covered everything that had to do
4 with procedures and now that has been broken down into AP-
5 2.0, 2.1 and 2.2 which address procedure use and control,
6 procedure preparation review and issue, and procedure change
7 evaluations respectively.

8 The issue you brought up is a valid issue, that we
9 should have enabling objective also for AP-2.0. We have
10 addended our training change order to specifically address
11 that that include addressing that training of that enabling
12 objective.

13 MR. CONTE: Thank you. Going on to question 2B.
14 Were there any 10 CFR 50.54 X/Y actions during the site
15 emergency of August 13, 1991 and, if so, were they properly
16 documented in accordance with AP-2?

17 MR. COLOMB: We discussed that issue in our SORC
18 meeting when we evaluated the LER that was submitted or will
19 be submitted. The SORC assessment was that we didn't feel
20 we had any 50.54 X/Y actions. However, we did assign an
21 open item to our licensing department to take another look
22 at that.

23 MR. CONTE: Okay, we are done with the questions
24 related to number 2. Let me go around the room and see if
25 there are any additional questions.



1 [No response.]

2 MR. CONTE: Moving on to Question 3A. Guidance is
3 not consistently given in all EOP LP's. The 03 in the
4 series on EOP does have some information on how the
5 operators implement "The reactor will remain shut down
6 without boron." In parenthesis, "under all conditions",
7 That terminology is used intermittently throughout the
8 lesson plan and in the EOP's.

9 The answer there is the reactor analyst will make
10 that determination. What is the significance of the
11 intermittent use of under all conditions. Both the EOP's
12 and the lesson plan uses it and doesn't use it. Is there
13 any significance to that, or is it just an oversight or
14 inconsistency, or what?

15 MR. HENNIGAN: Guidelines use the words "under all
16 conditions" in that statement when it is used. In our
17 implementation of EOP's the "under all conditions" was left
18 out on the flow charts just to bring the wording down so
19 that our blocks weren't confused with too much wording. It
20 was just trimmed down to the reactor will remain shut down
21 without boron.

22 In the lesson plans they go further to explain
23 that that is considered to be under all conditions; that
24 there are places where it doesn't bring that out. If
25 there's an inconsistency in our lesson plan that we will



1 need to make sure that all lesson plans always use the words
2 "under all conditions" to further explain that statement,
3 "will remain shut down under all conditions without boron."

4 MR. CONTE: The point here -- and this is more of
5 a comment for you -- in my review of those lesson plans if
6 you look at some of the other ones other than 03, where that
7 statement is used the lesson plan does not have a content or
8 delivery note that says that the reactor analyst will make
9 that determination.

10 Since that statement is so extensively used it
11 might be redundant for each lesson plan for that to have it.
12 It may well be an item for the introduction to EOP's, but
13 that's your decision. That is only a comment at this point.
14 Do you understand that, Bob?

15 MR. SMITH: I understand it, yes.

16 MR. HENNIGAN: Rich, was there anything else on 3A
17 that you had a concern with as to why we did not give the
18 definition of shut down under all conditions without boron
19 on all lesson plans?

20 MR. CONTE: No. I come away with the feeling that
21 the operators know how to implement that step in terms of,
22 they need to get a reactor analyst. I have that feeling.

23 MR. HENNIGAN: Okay.

24 MR. CONTE: It's just that some lesson plans that
25 deal with Legs that have that statement other than the 03



1 one do not have the explanation the reactor analyst will
2 make that. There may be a number of Legs that have that,
3 and there may be a number of lesson plans. In order to
4 avoid the repetition, a way of doing it might be to do it in
5 the introduction to the EOP's. That's it.

6 That's just a comment. We were just wondering the
7 significance, and I think you have addressed why the
8 terminology "under all conditions" is used intermittently.

9 Going on to question 3B. In the introduction of
10 EOP's it defines a shut down reactor as below the heating
11 range. Mr. Conway in his transcript referred to an ODI. We
12 really can't find that. We have all the ODI's. Could you
13 help us clarify that, defining shut down reactor?

14 MR. COLOMB: You are correct, that does appear in
15 the EOP basis document. Mike, if he made that statement,
16 let me explain. We used to have an ODI that we used to
17 identify these areas and give further definition for
18 training. With a revision for EOP's we took that ODI and
19 incorporated it into the basis document. He may have been
20 referring to what used to be in an ODI.

21 That ODI was cancelled after the revision for
22 EOP's came out. We took that information and, again,
23 incorporated it into a basis document which is controlled in
24 the control room.

25 MR. CONTE: That's fine. That's good for the



1 clarification. I would like to ask the question, what is
2 the heating range on the IRM's? Is it generally known what
3 that number is?

4 MR. COLOMB: It's range six or seven on the IRM's.

5 MR. CONTE: If it is on range six, is there a ball
6 park number?

7 MR. COLOMB: We don't get that specific. Just
8 below range six or seven.

9 MR. CONTE: How is that communicated? Is that in
10 some document? I didn't see that in training. I am not
11 sure if it is in the introduction in EOP's.

12 MR. COLOMB: I believe it is.

13 MR. CONTE: You say it is in the lesson plan?

14 MR. COLOMB: I have to look, Rich, to be sure.

15 MR. CONTE: That's okay. I can check on my own.
16 If I have a problem with that, I will get back with you.

17 I have a new question on questions three, I call
18 it 3C. Are the actions of OP-101C with respect to reactor
19 scram actions, exclusive of the EOP's? The training
20 material implies the implementation of important steps of
21 101-C such as inserting IRM's and SRM's. However, there is
22 a note at the beginning of Section H-1 for the reactor scram
23 that says if an entry condition in EOP occurs exit this
24 procedure. We are confused on the consistency of the EOP's
25 and that scram procedure.



1 MR. HENNIGAN: The direction and the note in 101-C
2 that directs you to exit 101-C for entry when you enter
3 EOP's you will be brought back to 101-C used as a guidance
4 by the control step when you initially enter each of the
5 legs of RDB control. For instance, when you get into RQ,
6 the reactor power leg, the first step is to monitor and
7 control reactor power. The guidelines in that using monitor
8 control would be utilize the normal operating procedure, in
9 this case the 101-C scram procedure, to take the appropriate
10 actions in there to allow you to monitor and control reactor
11 power.

12 MR. CONTE: The answer is, they are consistent
13 with one another? That's what I am hearing. I don't want
14 to put words in your mouth.

15 MR. HENNIGAN: That's what we believe it does.
16 You would not take actions in 101-C that would contradict
17 the EOP's. That's why you are not directed to remain in
18 101-C and complete all the steps.

19 MR. CONTE: Thank you. Going on to Question 4.

20 MR. VATTER: I wanted to ask a question.

21 MR. CONTE: I'm sorry. Before we leave the
22 Question 3 area we have another question.

23 MR. VATTER: I am just trying to understand the
24 relationship between training on the EOP's and the EOP's
25 themselves. There is obviously a lot more detail in the



1 training than there is in the EOP's. I want to know if the
2 training that is provided on EOP's, if that is 100 percent
3 based on the EOP basis document or whether it expands beyond
4 the EOP basis document?

5 MR. SLADE: We are thinking.

6 MR. VATTER: While you are thinking, Rich, do you
7 know if you have the EOP basis documents?

8 MR. CONTE: I don't know whether we have it or
9 not.

10 MR. VATTER: How big a book is that? Is that a
11 real fat thing?

12 MR. SLADE: Yes, fairly good size. I would
13 estimate a couple of inches. I guess in answer to your
14 question, our lesson plans are geared around the basis
15 document. Anything that goes above and beyond that would be
16 only from the critiquing that we do and other things that
17 may come out. I don't think we specifically go out and try
18 to train above and beyond, because we really want to
19 document and capture all of that so that we are consistent
20 from class to class and cycle to cycle in Re-Qual.

21 MR. VATTER: Is the EOP basis document available
22 in the control room?

23 MR. SLADE: Yes, it is. It's a controlled
24 document.

25 MR. VATTER: Is it something that you would expect



1 the operators could go to if they had some question about
2 what the EOP intent was?

3 MR. SLADE: Yes, that is true. We would expect
4 them to do that. They are trained to do that, it is
5 available to them in the simulator when they are in
6 training, so we would hope that they would go and do that if
7 they had a question. That's why we maintain it controlled.

8 MR. VATTER: I guess we need to look at that. I
9 am not really requesting to get it from you right now. We
10 need to find out if it is in our pile of stuff. I,
11 personally, would like to look at it.

12 MR. CONTE: Moving on to Question 4. Per ODI 5.10
13 there is an open items book on EOP issues. Is there
14 anything in it, and could we get a copy?

15 MR. COLOMB: Yes, there are things in it. We can
16 send you a copy of the book or we can send you a copy of the
17 index. The book, with all the supporting documentation that
18 goes along with these open items, it is quite thick. What I
19 can do is maybe send you a copy of the index and if you
20 would like a copy of the rest of it we will send it down.

21 MR. CONTE: I will tell you what, if you can fax
22 the index to us we will take a look at it. If we need
23 something more particular we can ask for it on a case-by-
24 case basis.

25 MR. COLOMB: The index is four pages. There are



1 several items listed as open items against EOP's.

2 MR. CONTE: If you fax it, will it be readable?

3 MR. COLOMB: I believe so, yes.

4 MR. CONTE: Why don't you go through Alex Pinter.

5 MR. COLOMB: Alex Pinter, I understand.

6 MR. CONTE: Number 5 is a little long winded, and
7 it proposes a scenario. We would like ops and training
8 views on how this would play out.

9 Let me start here by reading it. With respect to
10 the LP, lesson plan on introduction to EOP's and to the RP
11 leg of RPV control, stabilize is not defined but on page 24
12 of the appropriate lesson plan maintain below and above is
13 defined as take the necessary actions to prevent the
14 parameter from rising above/below the identified limit or
15 action level.

16 How do you implement this step for the following
17 conditions, and it is acknowledged that this is beyond a
18 design basis event. No feed and condensate for a long time,
19 partial ATWS, fuel rods partially out but in the source
20 range power, RCIC being used to depressurize/cool down since
21 the operator gets the okay to depressurize with reactor
22 shutdown indication. I might add, we don't have the scenario
23 here where there is lost instrumentation.

24 With a recrit occurring the RP leg directs a
25 return to stabilize pressure, provide operations and



1 training views on how will the operator handle it. For
2 example, will he trip RCIC to get to level drop in order to
3 stabilize pressure, or is there a prioritization of level
4 over pressure control?

5 MR. COLOMB: After reviewing the procedure this
6 morning, let me explain what I would expect to happen under
7 those conditions. The operator, based on guidance in the RP
8 section of RPV control of the EOP's would, once he
9 recognized the reactor was not shut down, i.e.,
10 recriticality, would be directed to stabilize pressure.
11 Stabilizing pressure would require him to shut down the RCIC
12 system and allow pressure to stabilize and control it with
13 another method at that or higher levels.

14 The level power control is giving him guidance to
15 maintain a level band. The level band at first is down to
16 minus 14 inches, so he has available to him a level that
17 low. I would expect he would increase or adjust his --
18 whatever his present guidance was for level -- to as low as
19 possible. I guess what I am telling you is that he would
20 allow pressure to stabilize at the expense of possibly lower
21 level, giving the guidance in EOP's.

22 MR. CONTE: Does training have a different view?

23 MR. REID: No, Rich. We concur with Mike's
24 assessment on that. After discussing it with several of the
25 instructors, that is in fact the way we would expect the



1 operators to react to that.

2 MR. CONTE: Do you think there is a mindset there
3 or concern amongst the operators that shutting down RCIC may
4 not get it back on, and would they really implement what
5 Mike is saying?

6 MR. REID: I can't say there wouldn't be a
7 concern, Rich.

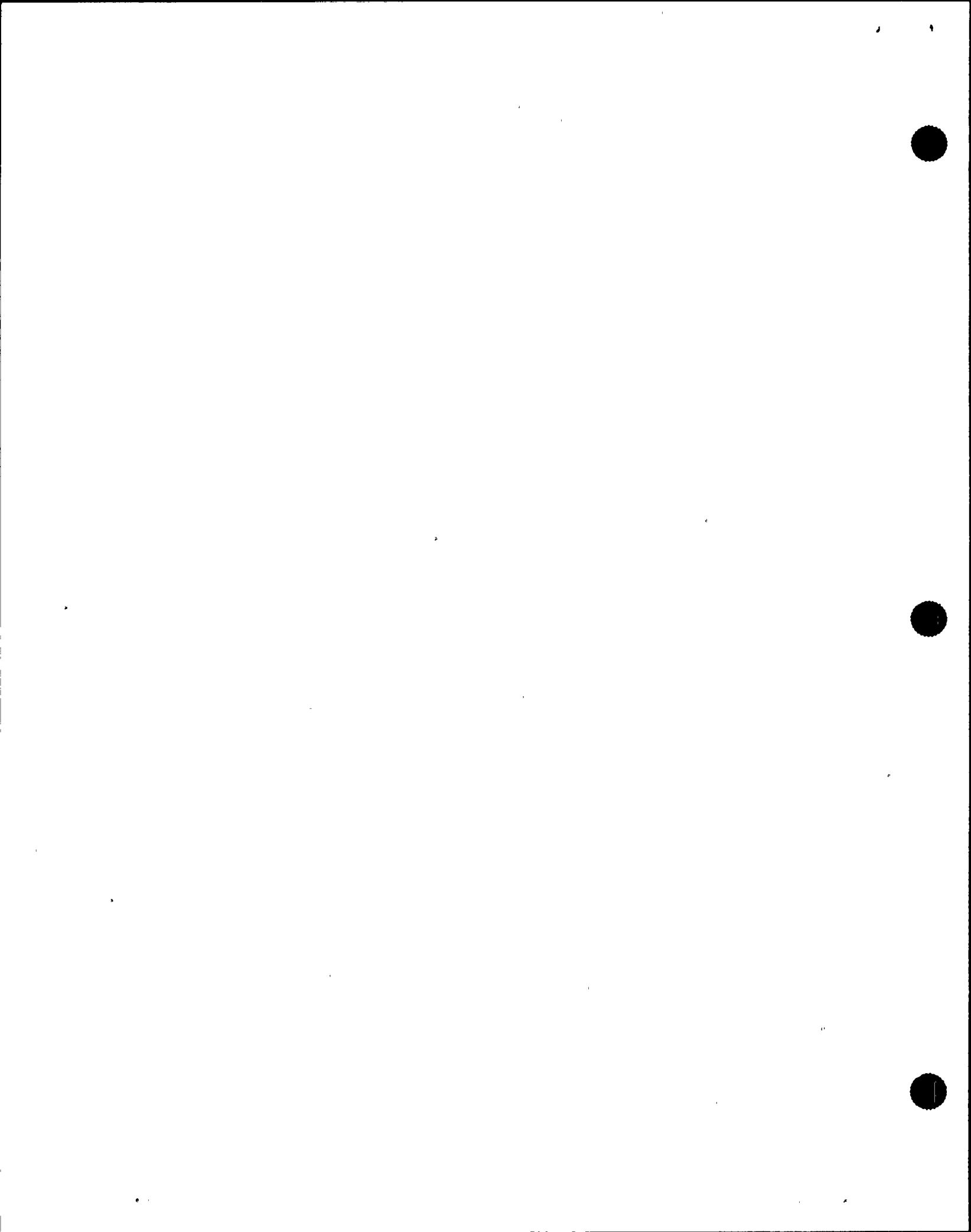
8 MR. CONTE: Is there a history of problems with
9 say shutting down RCIC and then trying to get it back up,
10 other than this flow oscillation?

11 MR. REID: No, I don't believe so. It's not
12 uncommon to have started RCIC and either shut it down or put
13 it in a recirc mode in accordance with EOP's. I don't
14 believe that there's that concern.

15 MR. CONTE: Is there, amongst the knowledgeable
16 people at the other end of this line, is there a concern
17 with that aspect of the operators getting the okay to cool
18 down and then seeing a recrit, and then going back up and
19 stabilize? The mere fact that you have a recrit, does that
20 give anybody concern at the other end of the line here?

21 MR. COLOMB: Maybe I don't understand it. What do
22 you mean by concern?

23 MR. CONTE: Just the mere fact that you get a
24 recrit. The situation that we are posing here is somewhat
25 similar to what happened in the time of the event,



1 obviously. We are talking about a few rods out, we are
2 talking about starting in the source range or perhaps the
3 heating range as you indicated, with range six and seven.
4 Let's say the operator doesn't have information that the
5 reactor will remain shut down but he has the indication that
6 the reactor is shut down and then he gets his recrit.

7 Is that a concern to you guys?

8 MR. COLOMB: I guess the fact that the reactor
9 went critical is a concern. It would always be a concern,
10 but I think it could be handled using the procedure guidance
11 we have. I mean, the procedures are designed to handle
12 that.

13 MR. CONTE: Okay, I think that answers my
14 question. Does anybody else have any comments on this
15 scenario, proposed situation?

16 [No response.]

17 MR. CONTE: Thank you. Question 6. In reference
18 to the lesson plan on normal leg of C5 there is a caution
19 about rapid increase in injection flow that warns the
20 operator of potential response if injection of cold
21 unborated water into the cooler is too rapid under
22 conditions where little or no shut down margin may exist.
23 This may result in a large increase in positive reactivity
24 with a subsequent reactor power excursion large enough to
25 substantially damage the core.



1 This is very qualitative. Is there any more
2 definitive guidance for the operators in terms of this flow
3 rate is bad, this flow rate is safe?

4 MR. REID: That statement came right out of the
5 EPG's, and is almost a reiteration from the EPG's to our
6 EOP's. We don't have anything, other than that, to add to
7 that statement.

8 MR. CONTE: Thank you. That answers that
9 question. Do you have any other comments here?

10 [No response.]

11 MR. CONTE: In reference to simulator malfunction
12 RD01, rod position information system failure. It wasn't
13 clear what all is involved there and how often are operators
14 exposed to it.

15 MR. REID: RD01 is an RPIS system failure. I will
16 read off to you the effects of that failure as our cause and
17 effects simulator manual has. All RPIS is lost. If a rod
18 is being driven, it will slowly drift to its next outward
19 even notch position. This is due to the insert withdraw
20 solenoid valves getting closed. The operator will not be
21 able to move the control rods using RMCS.

22 Normal scram capability will exist. The following
23 annunciator is expected to actuate as a direct result of
24 this malfunction; RPIS inop. The last part of it is, how
25 often are operators exposed to it. We have not used this



1 malfunction in any of our training.

2 MR. CONTE: Okay. Number 8, I have independently
3 answered. That scenario, dynamic scenario, I call it a
4 training scenario in the question. I will give the tail end
5 of it for the record. 1DY-2-20 which involves a failure of
6 RPS, eight stuck rods following ARI. The question is, was
7 it done for the crew on shift at the time of the emergency.
8 I independently answer that as yes.

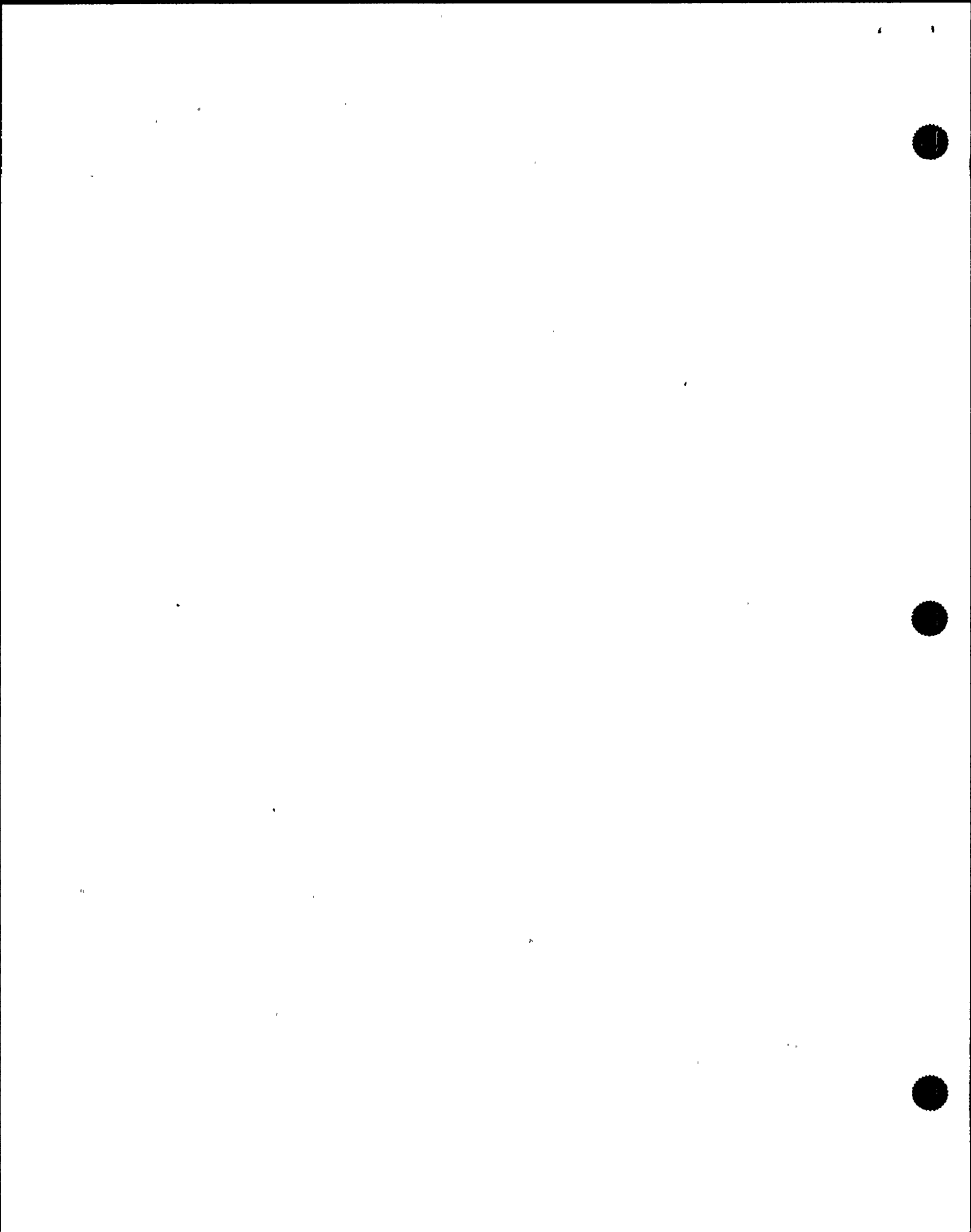
9 MR. REID: Rich, I agree with that. I have a
10 printout of our train report. In fact, it was trained upon
11 by those five shift individuals.

12 MR. CONTE: While we are talking about the
13 training report and the training records, I want to clarify
14 this. What you have given the team is training records
15 dating back for two years. That is not the complete history
16 on everybody; is that correct?

17 MR. SLADE: Rich, that is correct. We have just
18 implemented this computerized system. Any records prior to
19 that have all been manually tracked in personnel files in
20 our training record room.

21 MR. CONTE: You have given me what is available in
22 this new tracking system.

23 MR. SLADE: That's correct. It's just a tracking
24 system. These identify training, where to pull the training
25 records and from there we would go to a site to pull out a



1 permanent file.

2 MR. CONTE: Question 9. That needs clarification
3 based on my discussion with Mr. Reid yesterday. We settled
4 on checking the use of that particular JPM which deals with
5 the transfer of an UPS 2A to an alternate maintenance
6 supply.

7 The question was refined to, was this JPM used on
8 past Re-Qual exams.

9 MR. REID: Rich, what I had done is researched
10 when that JPM was used, and it was used in cycles three and
11 nine of last year which occurred in August and December of
12 1990. All the licensed operators had gone and received
13 training on that particular JPM.

14 MR. CONTE: Let me ask a follow up question to
15 that. Is that recorded in their training records, about
16 what JPM's they get or don't get?

17 MR. SLADE: In their training records, yes. I am
18 holding a copy of it in front of me right now, and it does
19 indicate who has gone to it, that particular JPM 66, the
20 title of it. You have a similar copy of a training report
21 where it shows different codes and the dates and record
22 numbers. Yes, I have that for that particular JPM.

23 MR. CONTE: Thank you. Question 10 and 11 are
24 related. Let me handle question 11 first. The Reg Guide
25 1.91 lesson plan doesn't really help operators in training



1 them on the availability of safety-related instrumentation
2 or even the red labeled Reg Guide 1.97 instrumentations.
3 How is this presented to the operators?

4 MR. REID: Rich, I pulled out that lesson plan
5 that you are referring to, and I agree that there is some
6 need for improvement on how that material is presented. We
7 went ahead yesterday and wrote an addendum to that procedure
8 and included in there the red background to assist in
9 locating those instruments as part of our training.

10 MR. CONTE: Let's go to question 10. I think I am
11 going to generate another follow up question. Question 10
12 says emergency tasks in Section 200 of the reactor
13 operator's on the job training manual and 344 of the SRO
14 manual do not include such things as use of Reg Guide 1.97
15 equipment only or the use of safety-related equipment only
16 on loss of SPDS process computer during the implementation
17 of EOP's.

18 Is there any response to that? I guess the real
19 question I am wondering is, how are the operators -- they
20 seem to know it, but how are the operators given the
21 information that here's the safety related instrumentation
22 and here's the Reg Guide 1.97 information.

23 MR. WHITE: For the original question or statement
24 that it is not in the OJT manual, that is correct. I had
25 told you before that was the old OJT manual that was used to



1 qualify the people who are now licensed. Each license
2 class, prior to issuing them their qualification or OJT
3 manual, we review the latest analysis that have been done on
4 various tasks, et cetera, and come up with a new revised
5 more or less to make sure it is up to date as best we can
6 be.

7 Even that one does not contain the tasks that you
8 have addressed in comment number 10. We have issued a
9 training change order to address that issue, to evaluate
10 those three areas and incorporate it, if that's what we wind
11 up having to do.

12 The second part of your question, where is it
13 addressed, in the lesson plans -- I am not prepared to give
14 you any numbers or specifically tell you what areas they are
15 addressed in. For instance SPDS lesson plan, one of the
16 objectives in that plan requires the trainee to be able to
17 identify and use operating procedures. Specifically in that
18 operating procedure there is reference made that if you lose
19 indication on SPDS that you check the control room other
20 indication.

21 Also, in our design comments in that operating
22 procedure we specifically address Reg Guide 1.97, in that it
23 was referenced to come up with the parameters that we use in
24 there. A lot of those things are addressed in other areas
25 throughout the training program but not specifically



1 addressing or pointing to Reg Guide 1.97. In all the
2 different other areas where it is probably applicable, it's
3 a thing that a good instructor, we expect him to add as he
4 goes along. It's not necessarily a baseline design of the
5 lesson plan but what he includes in it.

6 MR. SLADE: Rich, to add to that, in our industry
7 event training, lessons learned from Three Mile Island,
8 Mitigation of Core Damage -- again, we are stressing
9 redundant instrumentation. That is the whole purpose why we
10 add all these extra instrumentations. In addition to that,
11 I think earlier in the year Cycle 8 which was around -- it
12 was actually October of 1990 -- we ran a training scenario
13 which included a loss of -- we went in without SPDS and we
14 ran a scenario on them in which they were required to use
15 Reg Guide 1.97 indications.

16 So, you get them used to it.

17 MR. CONTE: It sounds to me like the whole process
18 evolved. Maybe it was so obvious in the simulator that
19 maybe the need for it to be written down wasn't there. I
20 don't know, but it sounded to me as going through various
21 exercises in the simulator -- and we are asking where
22 redundant equipment is in instrumentation -- the obvious is
23 there. The instructor would be asked the question or the
24 operators would seek it out, and just by word of mouth or
25 tradition it came to be known that here's the safety related



1 instrumentation and here's the Reg Guide 1.97
2 instrumentation.

3 Do you argue with that statement?

4 MR. SLADE: I don't argue with that. In fact, I
5 think our control room layout tends to help us out in that,
6 being where the SSS is and where 601 is. I don't know, it
7 just seems kind of natural to go and look at those
8 indications.

9 MR. CONTE: What I am hearing is that you hear the
10 comment from us or you hear the observation from us about
11 the training material not having this in there, and it
12 sounds to me like you are taking action to incorporate that
13 formally.

14 MR. SLADE: Rich, that is correct. We are going
15 to put some stuff in writing so that we continue on training
16 our operators in that way.

17 MR. CONTE: Okay, good. Thank you. Question 12,
18 the Re-Qual lesson plan on plant communications tells of
19 sound powered sound system, a channel of maintenance and
20 calibration communication system as back up to be used in
21 case of a loss of electrical power, but the LO is not
22 specific on power supplies.

23 Why wasn't this used during the event instead of
24 people running up and down steps?

25 MR. COLOMB: Let me try to answer that. The sound



1 powered capability of the maintenance and calibration
2 communication system is available hardware-wise in the
3 plant. Sound powered phones don't require a power supply.
4 That's just that they are headsets that are sound powered
5 and just connected between two points with electrical wires
6 and work.

7 Why it wasn't used in the event, a couple of
8 reasons. First, it requires a patch be done in the relay
9 room that would probably take as long as it took us to
10 restore power. Secondly, we don't do a good job of and are
11 looking to do this now, of staging sound powered headsets
12 for use if we do lose power. I guess that's about it.

13 MR. CONTE: Okay, thank you. Right after that
14 question is a comment that there is a number of lesson plans
15 where power supplies are not specific, for example, the APRM
16 reactor vessel instrumentation. You don't walk away from
17 that lesson plan -- once again, this is what is in writing
18 in the lesson plan -- of what we learned from this event.
19 Namely, that there is non-safety power on the up front panel
20 recorders, on many of those instrumentations.

21 It's just a comment. You can respond for the
22 record, if you like. It's an observation that we are making
23 on the lesson plans, that they are not specific in relation
24 to what was learned on this event.

25 MR. REID: Rich, you are right. All of our lesson



1 plans will not contain specific power supplies for
2 everything that is being instructed. However, the lesson
3 plans do include a review of the procedure. In the
4 procedures themselves are power supplies for the particular
5 items that the topic is discussing. So, it is incumbent
6 upon the instructor to get that message across to the
7 trainees.

8 MR. CONTE: Thank you. Question 13. Provide
9 details on the UPS event on the full core display when the
10 plant remained at power and all lights came on, the full
11 core display in the early part of 1991. At least that's
12 what we can figure out at this point.

13 Are there any logs or subsequent actions or review
14 done? The information has come from the shift supervisor,
15 George Moyer and Mr. Bodoh in remembering that, but the
16 plant did not scram. Is there anything in writing on that,
17 and if there isn't anything in writing what can you tell us
18 at least today?

19 MR. COLOMB: I can tell you that we are putting
20 together information and giving it to Al Pinter to send down
21 to you, Rich. We did look back. We believe the event did
22 take place in February of 1990. There is information to be
23 had, and we are putting that together. We will send it down
24 to you as well.

25 MR. CONTE: Thank you. We will review it when it



1 comes in. Question 14. An operator claimed that he was
2 following reactor power during the event using IRM's and
3 SRM's. We thought the availability of instrumentation in
4 the front panel wasn't there. Is there an explanation for
5 this? Is there IRM indication in the back panels?

6 MR. COLOMB: There is IRM instrumentation on the
7 back panels that would have been working. We talked to the
8 operator involved, Mr. Mark Bodoh. He said that he really
9 didn't do too much of following power down until he restored
10 power.

11 What he did see was that the IRM's had down scales
12 on them on range ten. He did insert the IRM's and SRM's but
13 he wasn't actually able to follow it down by our normal
14 means which would be the recorders, until we had restored
15 power.

16 MR. JORDAN: Where did he read the down scale on
17 the IRM's before restored power?

18 MR. COLOMB: That is on panel 603, there is a
19 little indicating light.

20 MR. JORDAN: An indicating light.

21 MR. COLOMB: Yes.

22 MR. JORDAN: Down scale indicating light on the
23 LPRM's?

24 MR. CONTE: They are not associated with UPS
25 power?



1 MR. COLOMB: That's correct, on the IRM's.

2 MR. JORDAN: I thought you said he followed down
3 scale on the LPRM's.

4 MR. COLOMB: No. I am sorry. He saw the
5 indicating lights on the APRM's that were down scale. He
6 also saw indicating lights on the IRM's. These are just
7 little indicating lights on the section of the panel that
8 indicated down scale where the IRM's on range ten.

9 MR. JORDAN: As he ranged down, then the lights --
10 he keeps ranging down; is that what you are saying, Mike?

11 MR. COLOMB: He drove the IRM's in and the SRM's
12 in, but he really didn't start ranging down until power was
13 restored. Nobody knew that the IRM's were down scale on the
14 range that they were on, which we believe was range ten.

15 MR. CONTE: Thank you, Mike.

16 MR. SLADE: Rich, back to Question 1 on SPDS. Fred
17 White returned and pulled up the training records. We do
18 train on that in the license operator trainings.

19 MR. WHITE: Typically it's a lesson plan.

20 MR. SLADE: It's 02-LOT-001-226-2-02. Going back,
21 there is various revisions dating back to January of 1990.
22 Currently, that lesson plan is at revision five.

23 MR. CONTE: Thank you.

24 MR. SLADE: You are welcome.

25 MR. CONTE: That concludes the list of questions



1 that we have sent you. We have two additional here, and I
2 am going to turn it over to Walt Jensen, who has some
3 questions on his own here.

4 MR. JENSEN: First, with the EOP's, that you went
5 into the level EOP's right away when you got down below
6 559.5 inches into the C-5 attachment when you lost rod
7 position indication. It wasn't real clear when you got out
8 the EOP's. Could you help me with that.

9 MR. COLOMB: We will have to get back to you on
10 that one. I think that we identified that in our sequence,
11 but I need to go back and look. I can't answer that right
12 off the top of my head.

13 MR. JENSEN: What is in the sequence is, before
14 you got the 137 low flow/low pressure condensate valve open,
15 that the level dropped down low. You said you went back
16 into the level EOP's which infers at some time that you got
17 out.

18 MR. COLOMB: That is a re-entry it's called. That
19 doesn't mean that you have left at all. Any reoccurrence of
20 an entry condition causes you to re-enter all of the
21 procedures.

22 MR. JENSEN: So, you can re-enter without getting
23 out?

24 MR. COLOMB: Yes.

25 MR. JENSEN: Okay. The next question involves



1 what was going on with the RHR or the RHS. When you got the
2 alarm printer restored in the control room there was a
3 printed 749 which refers to an overload on MOV 67B which is
4 the bypass valves going around the RHS heat exchangers.
5 That was fairly early.

6 Later, I understand that MOV's 142 and 149 were
7 open and it was thought there was a water hammer. At 13:50
8 the system was walked down. Later, at 15:08, the RHR 1B
9 pump was started. Then, there's a note in your sequence of
10 events that there was difficulty controlling level because
11 of difficulties controlling this MOV 142 and it had to be
12 controlled locally.

13 I can't coordinate this sequence with the
14 instructions and the operating procedures which is OP-31 for
15 the RHS which indicates that the 142 valves should be opened
16 before the 67 heat exchanger bypass is opened.

17 MR. COLOMB: I think I can answer that question.
18 Those are two separate evolutions that are you looking at.
19 The first evolution where we had the overload alarm on MOV
20 67B was related to the warmup of shutdown cooling. That's
21 covered in a section in the OP-31.

22 The second event where they had a level control
23 using the line to rad waste and that was, again, a problem
24 with MOV 142 is after they had put shutdown cooling in
25 service and were controlling reactor water level with it.



1 It had nothing to do with lining up shut down cooling. It
2 is an alternate method provided for an OP-31, the control
3 reactor water level would be RHR in service and shut down
4 cooling.

5 MR. JENSEN: There's a step in the warmup
6 procedure where it says to open the 142 and 147.

7 MR. COLOMB: That was done.

8 MR. JENSEN: And then to close them again.

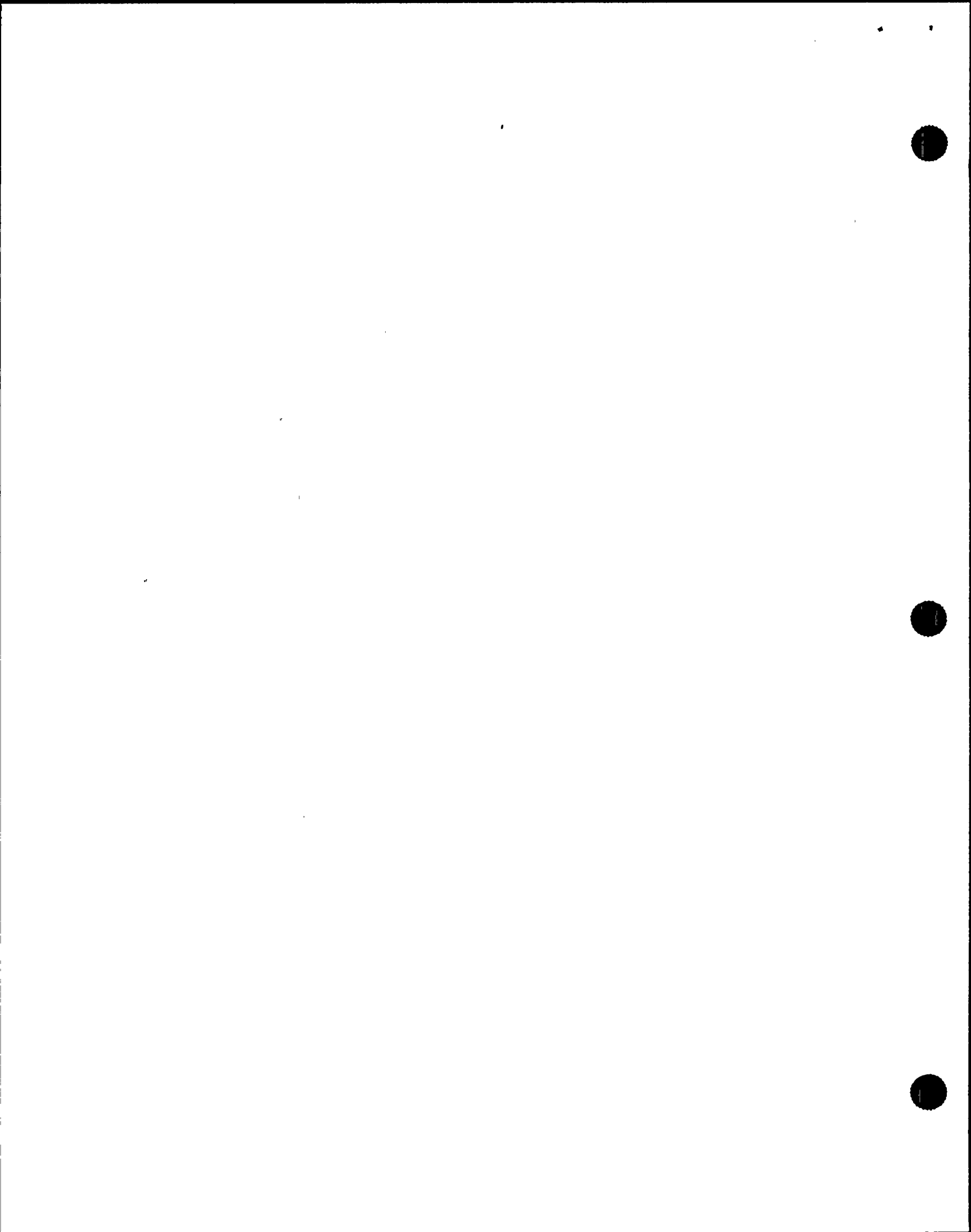
9 MR. COLOMB: That is correct, and that was done.

10 MR. JENSEN: That's when the water hammer
11 occurred.

12 MR. COLOMB: The first incident involved the
13 opening of the 67 and motor overload and the water hammer
14 and positioning of 142, all of that occurred during the
15 warmup of RHR for shutdown cooling. Then the step where you
16 see we started the RHR pump, we placed RHR shutdown cooling
17 in service. After that, the water level control to RHR
18 using the line to rad waste which is, again, the MOV 142 and
19 49.

20 That MOV 142 and 149 line serves a couple of
21 functions. One of them is a flow path. That's the first
22 incident. The second one is a flow path for water level
23 control. That's the second one.

24 MR. JENSEN: The second one, when the MOV 142 was
25 opened, I guess the 149 was also opened then. Is that



1 according to what your procedures -- written procedures that
2 are discussed at operation?

3 MR. COLOMB: Would you repeat that question?

4 MR. JENSEN: Are there written procedures on
5 controlling reactor vessel water level with the RHS B pump
6 running using the MOV 142 and 149?

7 MR. COLOMB: Yes.

8 MR. JORDAN: Do you know what the number is of
9 that procedure?

10 MR. COLOMB: I believe it's covered in OP-31,
11 Mike.

12 MR. JORDAN: Okay, thank you.

13 MR. JENSEN: Do you know which part it is?

14 MR. COLOMB: No, I would have to look at that.

15 This is another question involving the sequence of events.
16 It refers to when the recirculation pumps ran back on low
17 level. We note in your sequence that it says that 155, that
18 the recirc pumps ran back on L-4 and 178.3 inches.

19 We were wondering how well you know that time. It
20 looks like from the early chart traces that in a few seconds
21 after the reactor tripped that the level went down to 145.
22 Of course, it went down later before the RCIC was one. We
23 were wondering how well you know that time.

24 MR. COLOMB: We don't know that time very well. I
25 think that was just our best estimate.



1 MR. JENSEN: Was there any reason that it couldn't
2 have ran back at a few seconds after the trip when the level
3 went down to 145, or is there some kind of delay perhaps?
4 It was a very brief time that the level was down at 145. Is
5 there any reason why it couldn't have run down right away, a
6 few seconds after the trip?

7 MR. TOMLINSON: If you remember the scenario that
8 we built was the fact that the feed pumps tripped on low
9 function pressure due to the flow valves opening. Those
10 pumps took a while to trip, probably something on the order
11 of 20 seconds to trip. That run back requires that -- we
12 only had one feed pump running. At the time of the initial
13 event two feed pumps were running if we hit that low level.
14 You had to have a low level and less than two feed pumps
15 running to get that run back.

16 MR. JENSEN: Okay, good.

17 MR. TOMLINSON: I would like to go back -- I don't
18 think you heard us when we tried to answer our original
19 question about when do we get out of EOP's. We believe that
20 we finally exited the EOP's late in the day, about the time
21 we tried to put shut down cooling on. If you need to know
22 something more specific than that, it may be difficult for
23 us to pin that down.

24 MR. JENSEN: You didn't have a specific time when
25 the supervisor said we are leaving the EOP's?



1 MR. TOMLINSON: I was not able to find that on the
2 first go-through.

3 MR. JENSEN: Thank you, Tom.

4 MR. CONTE: Do we need to do anything more on that
5 in terms of -- in other words, you have looked through the
6 control logs the day of the event and you can't find a
7 statement that they exited EOP's?

8 MR. TOMLINSON: Correct.

9 MR. JENSEN: Okay, Rich.

10 MR. CONTE: I didn't hear any commitments to Walt
11 at this point, did I?

12 MR. JENSEN: I believe they were going to look
13 into the RHS procedure 31 and find the specific instruction
14 to open the MOV 142 and 149 to control reactor vessel level.

15 MR. CONTE: Is that your understanding, gentlemen?

16 MR. COLOMB: I am sorry, I missed that question.
17 Would you repeat that?

18 MR. CONTE: Walt is thinking that you are going to
19 do something at OP-31 to check the section -- explain it
20 again, Walt.

21 MR. JENSEN: Check the section describing how
22 level was controlled with the B loop running using the 149
23 and 142 valves.

24 MR. COLOMB: I think Tom just went to get a copy
25 of OP-31. We will look for that section.



1 MR. JENSEN: Thank you.

2 MR. VATTER: Could I ask a question relating to
3 the sequence of events. You said in your sequence of events
4 that at the time the power supplies were lost that the Group
5 9 isolation capability was lost. I am not sure that I
6 understood exactly what you meant by saying that. I
7 interpreted that to mean that not all of the Group 9
8 isolation capability was lost but only those initiators that
9 came from the rad monitoring system. Did I interpret that
10 correctly?

11 MR. COLOMB: That is a correct interpretation. It
12 was the capability for the Group 9 isolation was only lost
13 from the rad monitors.

14 MR. VATTER: If you had something else like a
15 level two on reactor water level, you would have still had
16 the Group 9 during that period of time that the UPS' were
17 not operating?

18 MR. COLOMB: That is correct.

19 MR. VATTER: The only initiator that you had on
20 the Group 9 isolation was the spike on the rad monitors when
21 power was restored?

22 MR. COLOMB: That's correct. The re-energization
23 of the circuit is what caused that isolation.

24 MR. VATTER: Thank you for that clarification.

25 MR. JENSEN: I have another one on the RHS. Back



1 at 7:49 when they got the alarm printout on the 67 valve and
2 you said about that same time though on the warm up
3 operations on the system using MOV 149 and 142, wasn't the
4 reactor system pressure at that time about 400 psi, and
5 wasn't that too high a pressure to be opening up the 149 and
6 142; and, wouldn't that have led to perhaps the water
7 hammer?

8 MR. COLOMB: Let me see if I can answer that,
9 Walt. I think very early in the scenario the shift was
10 taking preliminary actions to a hold out that is on some of
11 the shut down cooling valves in order to get it lined up.
12 Some of the breakers are required to be normally de-
13 energized for Appendix R reasons.

14 The motor overload alarm came when we were turning
15 the breaker on for that 67 MOV. That preceded the actual
16 warm up procedure by quite a while.

17 MR. TOMLINSON: If you remember at the beginning,
18 RHR loops B and C were out of service for maintenance and
19 there mark ups on them. Very early on in the event they
20 started restoring those loops to operable status.

21 MR. JENSEN: What is your best estimate on the
22 time of the water hammer?

23 MR. TOMLINSON: That would have been after noon,
24 best guess.

25 MR. JENSEN: The system was walked down at 13:50.



1 MR. TOMLINSON: Right. That was soon after that
2 water hammer was identified.

3 MR. JENSEN: So, you don't know the exact time.

4 MR. TOMLINSON: Not at this time, no.

5 MR. JENSEN: Okay. Done.

6 MR. CONTE: We have one last question.

7 MR. COLOMB: Before you ask your question Rich,
8 Tom went and looked at N-2 OP-31 and the section that talks
9 about water level control is Section H-11.

10 MR. CONTE: Thank you, Mike. One last question.
11 Once again, it's not on the list. We reviewed your UPS
12 lesson plan, and we found at the end of that lesson plan the
13 methodology for manually overriding the CB-4 breaker. The
14 delivery notes indicate that procedures did not cover the
15 situation. It also indicates will point out how to operate
16 these breakers in the plant.

17 That review of the lesson plan sets in our minds
18 some confusion. The message that we got from the operators
19 was along the lines of they either did not get it in
20 training or they don't remember getting that operation or
21 that practical factor in training. It was more towards, I
22 learned it from experience in the start up dates.

23 I confirmed for the people who were on shift, the
24 mid-shift -- I have confirmed based on the training records
25 that you have given that all of those people had the UPS



1 lesson plan except for Mr. Conway and Mr. Eron, the shift
2 supervisor and assistant shift supervisor. Of the initial
3 team who went down to UPS, Mr. Hanczyk, Armstrong, Nichols,
4 MacEwen, Spooner -- I didn't have the training records on
5 Nichols, MacEwen, Spooner and Garbus, I didn't have the
6 training records on that individual.

7 Mr. Hanczyk and Armstrong did get the training on
8 the UPS lesson plan. We are a little confused. Some of the
9 people who were directly involved apparently had the
10 training or at least they had the lesson plan covering that
11 information but yet, they claim they had this knowledge
12 based on past experience. I think we need to resolve this
13 conflict somehow or try to get some more information on that
14 issue.

15 Is there the possibility that something went awry
16 in the delivery of the lesson plan in terms of inability to
17 complete it or perhaps not going out in the plant as
18 indicated in the lesson plan? What are your thoughts,
19 gentlemen?

20 MR. SLADE: I was involved I think early on in
21 writing that lesson plan, and I specifically know of the
22 delivery note that you are talking about. When that lesson
23 plan was developed, it was a lot of walking down the system
24 with Bob Crandall and opening up the UPS'. There is a OJT
25 task that is covered in the non-license on the job training



1 to actually do that manipulation.

2 Mr. Armstrong is a non-licensed operator. He
3 would have received the classroom training and would have
4 received a walk down in the plant. However, sometimes our
5 walk downs are limited based on plant operation. If we are
6 up at power we may be limited to just opening it up and not
7 touching anything inside. The problem, if I recall from my
8 interviews on training effectiveness after the event was,
9 Mr. Hanczyk had prior knowledge from start up.

10 The problem they were having was actually
11 manipulating the roller bar with the bar that is underneath
12 to unlatch that cover. The training that I can tell you we
13 went into was to point out those breakers, to point out that
14 this cover will lift up and not an actual hands-on
15 manipulation. That is probably a weakness on our part, and
16 we can look into actually writing a JPM where they can
17 actually do that if the plant can support that.

18 One of the things that are on the table that we
19 discussed at our last operations training is that upon
20 replacement of the UPS' we are going to upgrade two of the
21 models. We may actually try to mock up one of these. We
22 are not committing to that now, but we are going to scope
23 out the feasibility of actually having one of these units
24 for hands on, being that the loads downstream are so
25 critical.



1 To be real short and sweet on that, I think the
2 training presented in the classroom was in accordance with
3 the lesson plan. The delivery notes, I can't say for sure
4 that it is covered. That is not a requirement. The content
5 section is required. The delivery notes are there to aid
6 the operator in making things consistent, so it may be in
7 his best interest to cover that or not. The walk down in
8 the plant wouldn't have covered the showing him the covers -
9 - that's probably where that may have cropped up, where
10 these guys were a little bit confused.

11 MR. WHITE: Off the top of my head I think the RO
12 OJT manual has one specific task that forces the operators
13 to operate the UPS'. A number that I am not really familiar
14 with, three or four or five, there are that many specific
15 tasks for non-license operators; that, once they receive the
16 training before they are qualified they have to actually
17 perform those tasks. That's probably where those things are
18 covered.

19 MR. CONTE: I am aware of what you are talking
20 about, Fred. Thank you.

21 MR. SLADE: Also, Rich, on the non-licensed OJT,
22 just to familiarize you with how the process goes, we put
23 them through a six month program. When we send them back to
24 the plant they do on the job training to make them rounds
25 qualified. At that point then, we turn over another manual



1 to them which is more detailed, qualifying them on
2 individual systems and get more detailed on individual
3 system operations.

4 It may have been that Mr. Armstrong hadn't
5 performed that task yet, and that's why he may not have
6 known how to do that.

7 MR. CONTE: Let me repeat back what I hear you
8 telling me, to make sure that I have an understanding. You
9 have the non-licensed, on the job training manual general
10 manual to get them qualified on doing rounds. Once they are
11 qualified you have more specific system qualification
12 manuals, and it's possible for example that Mr. Armstrong
13 hadn't gotten to the UPS system.

14 MR. SLADE: That is correct. It's just a two-fold
15 process. We give it to them in classroom and then we have
16 the on the job training which you get actually the hands on
17 part of that. He may not have completed that phase.

18 MR. CONTE: Let me see if I can focus this area
19 that we are talking about. Number one, is there any
20 significance to the shift supervisor and the assistant shift
21 supervisor not having this UPS training?

22 MR. SLADE: They were in license class at the
23 time, and that was delivered in a requalification cycle.
24 That's why they would not have had that particular lesson
25 plan as I previously addressed how it wasn't in the license



1 operator training program yet.

2 MR. CONTE: When you say licensed class, was this
3 for RO or SRO.

4 MR. SLADE: That's SRO. They were in license
5 class to be SRO upgrades.

6 MR. CONTE: Upgrades, okay. When they are
7 upgrades it is assumed that they had the practical factors
8 of RO training?

9 MR. SLADE: Could you repeat that again, Rich?

10 MR. CONTE: When there are SRO upgrades, it is
11 assumed they use the SRO OJT manual but that manual assumes
12 that they have already completed RO training and associated
13 practical factors which do get you into either perform or
14 simulating various functions in the plant?

15 MR. SLADE: That is correct.

16 MR. CONTE: Here is a specific request. Could you
17 confirm or deny Mr. Nichols, Mr. MacEwen, Mr. Spooner and
18 Garbus in terms of whether or not they had this UPS
19 training? You can give me a call on that later in the day.

20 MR. SLADE: Yes. Let me repeat that. It would be
21 Nichols, Mr. Garbus, MacEwen and Spooner.

22 MR. CONTE: I would just like to be able to say
23 whether those individuals in the report -- not by name but
24 make a statement as to whether those individuals had the
25 previous training or not.



1 MR. SLADE: Okay. The classroom training?

2 MR. CONTE: Yes.

3 MR. SLADE: I am looking at some of the tasks. I
4 pulled out on the job training manual for the non-licensed
5 operators. One of the tasks that they do is shift
6 uninterruptable power supply to alternate power source.
7 Another one is perform individual, uninterruptable power
8 supply periodic checks. They have to shut down a UPS and
9 have to have the ability to energize the UPS. Those are the
10 tasks that are covered.

11 MR. CONTE: All I am asking is to confirm that
12 besides those practical factors, I am asking to confirm that
13 the lesson plan material was given to those individuals. I
14 don't have the training records.

15 MR. SLADE: That can be easily done. I can get
16 right back to you on that. I would also like to clarify --
17 I said that Eron and Conway were upgrades. Mike Conway was
18 an upgrade and Mike Eron was an SRO.

19 MR. CONTE: Thank you. I think I am almost done
20 here. Let me turn around the room here. Are there any
21 other questions or comments? Gentlemen, do you have
22 anything -- hold on for a minute.

23 MR. VATTER: While we were talking we researched a
24 documents that you have provided us before, and we don't
25 have a copy of your EOP basis document. I would like to



1 know if you could send us that.

2 MR. CONTE: I am going to revisit some of the
3 commitments as a result of this conference call, so I will
4 discuss that. That's probably going to be a request. Let
5 me ask Nine Mile II if you have any additional comments or
6 questions?

7 MR. SLADE: No, not at this time.

8 MR. CONTE: Bob and Mike, I would like to revisit
9 some of the commitments made, and I think we will probably
10 follow this up to Alex Pinter for a request for documents.
11 That was one of the first items on the list that Bill Vatter
12 just talked about. We checked our bibliography and
13 apparently we did not ask for this basis document.

14 We are going to ask for not only the index but
15 also the -- we are going to be asking for the basis document
16 for the EOP's, and we will follow that up with a specific
17 request.

18 As we agreed for the EOP open issues book, you are
19 going to send us a fax today and we will decide what else we
20 need; is that correct?

21 MR. SLADE: Correct.

22 MR. CONTE: Alex Pinter is getting information
23 together for us for the February 1990 event where there was
24 an UPS event and loss of full core display, or there was
25 full lights on full core display; is that correct?



1 MR. SLADE: Correct.

2 MR. CONTE: You are going to get back to me later
3 in the day to confirm whether or not Mr. Nichols, Mr.
4 MacEwen, Mr. Spooner, Mr. Garbus had the UPS lesson plan
5 training.

6 MR. SLADE: That is correct.

7 MR. CONTE: Let me ask the room here; did I miss
8 anything?

9 [No response.]

10 MR. CONTE: Is anybody else expecting something.
11 Walt, are you okay?

12 MR. JENSEN: I'm okay.

13 MR. CONTE: Walt's okay. Is there anything that
14 perhaps you were taking notes and I missed?

15 MR. SLADE: I don't believe so. Just throughout a
16 lot of our responses we had mentioned that we had either
17 changed the lesson plan, like yesterday we made an amendment
18 or we had written a training change order; do you request
19 further documentation on that, or the hard copy of the
20 training change order?

21 MR. CONTE: At this time, no. We don't need it at
22 this point. If we do need it, I will ask you for it. Thank
23 you.

24 Gentlemen, I think you were well prepared for
25 these questions. I guess it was helpful to have prescribed



1 questions to ask you. I appreciate your cooperation this
2 morning.

3 MR. SLADE: Okay.

4 MR. CONTE: We are ready to go off the record and
5 sign off the phone. Are there any comments from Nine Mile
6 II?

7 MR. SLADE: No.

8 MR. CONTE: Thank you, gentlemen.

9 MR. SLADE: Thank you, Rich.

10 [Whereupon, at 10:22 a.m., the meeting concluded.]

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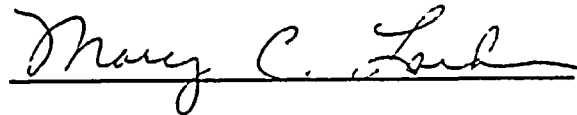
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