

NUCLEAR REGULATORY COMMISSION

ORIGINAL

RETURN TO SECRETARIAT RECORDS

In the Matter of: EXEMPT SESSION

BRIEFING FOR COMMISSIONER BRADFORD

ON

SECY-81-486 - PETITION FOR EXTENSION OF
DEADLINE FOR ENVIRONMENTAL QUALIFICATION
CLASS IE ELECTRICAL EQUIPMENT

DATE: October 2, 1981 PAGES: 1 - 76

AT: Washington, D. C.

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BRIEFING FOR COMMISSIONER BRADFORD

ON

SECY-81-486 - PETITION FOR EXTENSION OF DEADLINE FOR
ENVIRONMENTAL QUALIFICATION CLASS IE ELECTRICAL EQUIPMENT

EXEMPT SESSION

Nuclear Regulatory Commission
Room 1167
1717 H Street, N. W.
Washington, D. C.

Friday, October 2, 1981

The briefing in the above-entitled matter
commenced at 10:15 a.m.

BEFORE:

COMMISSIONER PETER A. BRADFORD

STAFF PRESENT:

- T. MARSH
- T. GIBBON
- P. DiBENEDETTO
- E. CASE
- W. JOHNSTON
- D. VOLLMER
- R. PURPLE
- J. ROE
- E. ABBOTT

* * *

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

2 COMMISSIONER BRADFORD: I won't take a lot of time
3 with preliminaries. I am just curious, as a follow-up to
4 the meeting we had the other day, to probe a little further
5 into the specific situations and get a better understanding
6 than I had at least at the point when I had to break off as
7 to the basis for the staff's conclusion that continued
8 operation was justified at the plants that have problems in
9 equipment qualification in systems important to safety.

10 I understand you all are prepared to discuss that
11 in perhaps more detail than at the meeting.

12 MR. VOLLNER: If I may go back to when we did our
13 review of the November 1st submittals and put out our safety
14 evaluation reports, I would just like to say what our
15 conclusions were at that time and then bring us to where we
16 are now and what we have learned with respect to continued
17 operation between now and then.

18 When we went through the licensee submittals at
19 that point in time, the November 1st submittals, and issued
20 the safety evaluation reports we had in the conclusionary
21 section what our basis was for assurance of continued safe
22 operation and I think it sort of forms a basis that we can
23 build on.

24 There are three items.

25 The first was that there were no outstanding items

1 which would require immediate corrective action to ensure
2 safety of plant operation.

3 When the information went out for the licensees
4 they were supposed to look at their systems and if they
5 determined that there was something that was not qualified
6 to meet accident conditions they were to declare that system
7 inoperable under tech specs and they would take immediate
8 corrective action.

9 There were a number of those items that were found
10 by licensees and I think we asked for them to come in with
11 LERs on those. Those actions were all taken to the
12 satisfaction of the staff.

13 COMMISSIONER BRADFORD: This is with regard to
14 equipment that is not qualified or equipment that they don't
15 know whether it is qualified or not?

16 MR. VOLLMER: That would be with regard to the
17 things that they know would not be qualified.

18 Would that be a fair characterization?

19 MR. DiBENEDETTO: Yes.

20 COMMISSIONER BRADFORD: So if they don't know
21 whether it is qualified or not they don't have to declare
22 the system inoperable.

23 MR. VOLLMER: The two categories we are talking
24 about are one which they know is not qualified to meet
25 accident conditions, it flunks testing or something of that

1 nature, and the other is a broad gamut ranging old plants
2 which bought best grade equipment and they thought in their
3 licensing basis that they buying something that would meet
4 accident environments to those pieces of equipment that had
5 perhaps gone through some testing and qualification but
6 could not be shown to be qualified to meet all of the
7 individual items that we have in our newer guidelines or the
8 NUREG.

9 In many of those cases it is either a case of
10 documentation or the case where the equipment was qualified
11 to some extent but not to the extent that we are asking for
12 specifically in those documents. It was qualified to a
13 lesser extent in terms of radiation and perhaps temperature
14 but supposedly was qualified to what they had in the
15 licensing base when the plant was licensed.

16 COMMISSIONER BRADFORD: But with regard to those
17 oldest plants, it would be those oldest plants in which
18 aging, for example the greatest concern?

19 MR. VOLLMER: That would be one, but I think our
20 radiation levels that we require were short of what we are
21 requiring now.

22 MR. DiBENEDETTO: In the older plants the criteria
23 never addressed aging or margin. So they would be deficient
24 there. With innovations in technological methodologies
25 radiation levels have changed. For most of the equipment,
and I would say a majority of the equipment in the Appendix

1 B category it is strictly a documentation type problem where
2 they have some minimum level of qualification probably
3 established through tests or analysis but it just doesn't
4 meet the current level that we are looking for. So it
5 becomes a paper problem.

6 COMMISSIONER BRADFORD: When you say it doesn't
7 meet the current level we are looking for, isn't that the
8 same as saying it might not work?

9 MR. DiBENEDETTO: No. I think that it has been
10 demonstrated that there is probably a reasonable assurance
11 that the equipment will survive. For example, the pump
12 motor, an RHR pump motor sitting outside of containment may
13 have to see a ten to the seventh level of radiation before
14 its end of life. It needs to be qualified. Previous
15 testing and analysis has qualified it ten to the sixth, but
16 I can't turn around and say that that component is
17 completely unqualified.

18 There is a time margin there. It is good for a
19 certain period of time even after an accident until it
20 achieves that much and something can be done. In the
21 meantime licensees have come in and said, okay, we are going
22 to turn around and we are going to do more analysis and we
23 are even getting into more testing.

24 In some cases licensees have said I can't qualify
25 this to a higher level and I can't do it by analysis so I am

1 going to scrap the piece of equipment. It is probably more
2 economically viable for me to go out and test to new
3 criteria, category one criteria and when we reach that level
4 of qualification we will install that pump.

5 COMMISSIONER BRADFORD: But, Phil, in an old plant
6 now if the licensee has equipment that is best quality or
7 high industrial quality, or whatever the standard was it was
8 licensed to, under the program that Dick was describing
9 isn't he going to come in and say in my judgment this
10 equipment is qualified to your current standards but it is
11 going to take me some time to prove it, unless he knows that
12 it is clearly unqualified. That isn't necessarily going to
13 be an RHR pump that is qualified to ten to the sixth or ten
14 to the seventh. It may be a good deal more dubious than
15 that.

16 MR. DiBENEDETTO: The licensee basically has three
17 choices. He either determines that the equipment is not
18 qualified, and by virtue of making that statement he has got
19 probably an immediate action item that it should be replaced
20 because he has determined that it is a safety problem, or he
21 has determined that some level of qualification exists but
22 it doesn't meet our criteria so he is going to commit to
23 testing analysis, or he is going to say I probably can't get
24 out and develop the documentation and I am going to commit
25 to a new program. I am going to buy a new piece of

1 equipment, a replacement to the higher criteria.

2 In the meantime I have got a minimum level of
3 qualification that should provide justification for interim
4 operation. We know that it will tolerate some type of a
5 challenge. Whether or not it will tolerate the full-blown
6 theoretical challenge that we have today, it is hard to make
7 an assessment of that.

8 I think that you have got to look at our
9 experience with the equipment and develop the rationale that
10 there is reasonable assurance that it will work for some
11 time period.

12 COMMISSIONER BRADFORD: Let's not talk about the
13 full-blown theoretical challenge, although from a regulatory
14 standpoint that is important. Even a Three Mile Island
15 type environment I take it you could subject some of this
16 equipment to ---

17 MR. DiBENEDETTO: Well, the Three Mile Island type
18 environment is a lesser environment than what we would see
19 during the big break events, the LOCA and radiation,
20 although it will challenge equipment to some temperature,
21 maybe 212 degrees. We have got that minimum level of
22 qualification. The radiation levels are a lot lower than
23 the big break LOCAs.

24 COMMISSIONER BRADFORD: Right, but with regard to
25 equipment that was only purchased under a high industrial

1 quality standard do we know that that would withstand a TMI
2 type environment?

3 MR. DiBENEDETTO: I believe we do. I think that
4 when you talk about a high commercial quality standard,
5 there were reg guides that were IEEE standards that
6 pertained to qualification at the time. GDC-4, as vague as
7 it was, said you should qualify your equipment to these
8 break environments.

9 They specified in their orders, I need to operate
10 this at so many degrees, I need to operate this at so much
11 pressure, humidity, chem spray and some radiation. Those
12 are the FSAR commitments. They have bought equipment to
13 that.

14 Now I guess with our escalation criteria we are
15 saying we want some things better than the FSAR commitments,
16 but in the meantime that level of safety is still provided
17 and I think there is reasonable assurance that it still
18 exists again by virtue of the fact that the I&E bulletins
19 through our independent reviews we have developed or
20 identified all of the know bad actors out there and have
21 taken immediate action.. So that you can see in every one
22 of our safety evaluations that we don't have any outstanding.

23 When we filed them we fixed them. The rest, in my
24 belief, in my personal opinion, the equipment will work and
25 it is a documentation problem.

1 MR. VOLLMER: To answer the question on TMI, for
2 at least I think we might say the first six months following
3 the accident I can't recall anything that we found that
4 failed after that accident except for things that got
5 flooded in the bottom of the container. Of course, that
6 affected a lot of things because a lot of the electrical
7 pass-throughs were down in the lower part of the
8 containment.

9 Shortly after the accident we initiated a program
10 of checking electrical circuitry by measuring resistance,
11 the fact that the valve operators would work and the motors
12 would work and that the cables were retaining their
13 resistivity. We won't really know until we go in there how
14 well all those things work, but things really kept on
15 working. There was an in-core thermocouple that went out,
16 but that was ---

17 COMMISSIONER BRADFORD: Of course, that was a
18 newer plant, though, wasn't it, that at least met the '71
19 standard?

20 MR. VOLLMER: It should have met the '71 standard.

21 MR. DiBENEDETTO: Yes.

22 COMMISSIONER BRADFORD: And the equipment would
23 not have aged substantially in a year.

24 MR. VOLLMER: Yes.

25 MR. DiBENEDETTO: That is true.

1 MR. VOLLMER: As a reference point, for whatever
2 it is worth, things did hold up except things of course that
3 were submerged. That was the problem in going through this
4 exercise and there were a lot of things that needed to be
5 relocated because submersion would be a problem.

6 Let me just take another minute to finish the
7 three items.

8 The first one, as I said, is that there were no
9 outstanding items that we felt would require meeting
10 corrective action.

11 MR. GIBBON: Dick, does that mean that that
12 category is equivalent which you have determined is not
13 qualified? Is there anything else in that category?

14 MR. CASE: I don't think it is "not qualified."
15 It is known not to work.

16 MR. DiBENEDETTO: Known not to work.

17 MR. VOLLMER: Known not to work, yes.

18 MR. CASE: That is the first category.

19 MR. DiBENEDETTO: Given the challenge it would
20 have failed in an adverse manner.

21 MR. VOLLMER: Isn't submergence one of those
22 particular items typically?

23 MR. DiBENEDETTO: Submergence may be one of those
24 items, but that is probably one of the easiest ones ---

25 MR. CASE: The point he is trying to make is that

1 those were all taken care of.

2 COMMISSIONER BRADFORD: Incidentally, was
3 submergence not part of the original qualification
4 requirements that would not have been required by the '71
5 standard?

6 MR. DiBENEDETTO: It would have been required.
7 All the licensees by the rules turn around and have to
8 address the environments produced by the high energy line
9 breaks, the feedwater line breaks, LOCAs and the submergence
10 level.

11 I believe back in 1975 we did an extensive review
12 on flooding inside and outside of the containment and
13 relocated a lot of equipment. It would have been part of
14 that original qualification package.

15 Very few people have qualified equipment to
16 submergence. What they have done is taken the option to
17 relocate it again above the water level which is fine with
18 us.

19 COMMISSIONER BRADFORD: Why wasn't it either
20 qualified to submergence or put above the water level all
21 along?

22 MR. JOHNSTON: The water level has changed I think
23 for one thing.

24 MR. DiBENEDETTO: The techniques were evaluating
25 the water level, what you consider for the flooding and how

1 you flood it.

2 MR. VOLLMER: The water levels in the bottom of
3 the containment would not get that high.

4 COMMISSIONER BRADFORD: So some of this equipment
5 in TMI may not have been qualified to submergence but it was
6 put at a level where they assumed submergence would not have
7 taken place.

8 MR. VOLLMER: Would not submerge, right. You may
9 recall that a few weeks after the accident the water level
10 was getting close, a foot or so, to some key valves.
11 Fortunately it was held at that low level, but these were
12 always considered to be well above any possible water level.

13 COMMISSIONER BRADFORD: You were starting to say
14 something.

15 MR. JOHNSTON: I was involved in the TMI
16 investigation group and one of my chores was to look into
17 that aspect of TMI-2. We showed that the equipment that was
18 needed, with the exception of final level detectors, that
19 virtually nothing failed. It took a month, you know, before
20 the level detectors, the third one, finally failed. One of
21 them failed in the first couple of days and the third one
22 was a month later. There was very little else that actually
23 failed in instruments at TMI. The thermocouples partly
24 failed but they were under extreme conditions. Other than
25 that, that was it.

1 COMMISSIONER BRADFORD: That is in instruments.

2 How about other equipment?

3 MR. JOHNSTON: Basically it was okay. Those
4 instruments, the level detectors and transducers were
5 literally under water for the month. The actual location
6 of the transducers were literally under water from the first
7 two hours of the accident. So they were under water for a
8 long time before they failed because they were basically in
9 sealed systems which gradually leaked or condensed.

10 COMMISSIONER BRADFORD: When are we likely to get
11 more of a look at TMI in terms of actually getting a look at
12 the equipment.

13 MR. VOLLMER: I have been in there a number of
14 times. I don't know what the program calls for as far as
15 taking out equipment and looking at it.

16 MR. JOHNSTON: Basically they have got to empty
17 that water out of the basement before they can get down in
18 there. They are doing all the work above the external level
19 and up in the top of it. Until they have done that water
20 removal they can't get down in there to do that.

21 MR. VOLLMER: We could take out the cables
22 certainly in other areas that are not at that level and get
23 some information.

24 COMMISSIONER BRADFORD: Do you know offhand when
25 they now expect to start cleaning that water?

1 MR. JOHNSTON: They are doing it now. It just
2 takes, what is it, nine months, six to nine months to do it.

3 MR. VOLLMER: Okay, the last two items that we
4 looked at very closely is if we felt the utility had a good
5 program underway for identifying deficiencies and
6 establishing other testing or relocation or replacement or
7 whatever was required to do the job. So that was a
8 programmatic aspect.

9 The third part of our conclusion was that it was
10 our judgment that much of the equipment that could not be
11 demonstrated to comply with the newer guidelines or the
12 NUREG would indeed survive less than the most harsh
13 environments that we characterize in more probable scenarios.

14 So those were the three reasons that we gave as
15 the safety basis in addition to the licensee's statement
16 that we felt continued operation was safe even in the event
17 of our findings.

18 MR. GIBBON: Dick, it doesn't say that you
19 accomplished that the equipment would work.

20 MR. VOLLMER: No.

21 MR. GIBBON: That is what I thought you said.

22 MR. VOLLMER: I think that is the judgment that
23 was made.

24 MR. GIBBON: I had thought that No. 3 was
25 primarily relying on probability. I think that is

1 important, the distinction that you can rely on probability
2 or you have gone through each item of equipment and, based
3 on your review of that item of equipment you do have
4 reasonable assurance that that piece of equipment will work.

5 MR. DiBENEDETTO: We have. The example that I
6 pointed out just a minute ago was on an RHR pump. We saw no
7 deficiencies on the component evaluation worksheets and we
8 listed them. There was a specified condition and there was
9 qualification condition. The specified condition was ten to
10 the seventh and the qualification was ten to the sixth.

11 Clearly by today's criteria it is not qualified.
12 It should bound the specified condition. Yet, reasonable
13 assurance is still there that there is some minimum level of
14 qualification and it will work given the challenge.

15 MR. GIBBON: But, Phil, isn't that the good case.
16 I mean, there must be cases of equipment where you have no
17 documentation at all, weren't there, in category two?

18 MR. DiBENEDETTO: No, I don't think there are any
19 cases where we have absolutely no documentation at all.
20 There are always pieces of documentation and there is always
21 some level. Whether you can interpret what is on that paper
22 and say that meets the level of the criteria, that is where
23 you end up with your deficiency.

24 MR. MARSH: Tom's question was did that some level
25 of qualification influence your judgment on acceptability

1 for the operation?

2 MR. DiBENEDETTO: Yes. I think in the last part
3 of the conclusion 3 it basically says the equipment will
4 survive a lesser environment than the great big postulated
5 events. That is based on us looking at these component
6 evaluation worksheets and saying, okay, you looked at
7 chemical spray and you didn't completely bound it but it was
8 defined and there was test data on it. You had a
9 containment profile, and maybe you need 20 more degrees, but
10 what is the chance of that happening and what is the chance
11 of those numbers really coming in? These are analytical
12 numbers out of the computer and how real is it? And you get
13 a warm feeling for the equipment.

14 We have seen a lot of plant challenges. You have
15 seen TMI and you have seen blow-downs at Dresden and we have
16 seen equipment work under these cases.

17 MR. GIBBON: Well, I guess I don't see why you
18 didn't say that, because that is not what it says for your
19 conclusion and I think that is rather important.

20 MR. DiBENEDETTO: Tom, when you make a conclusion
21 I think you make it on accumulating a bunch of facts and a
22 bunch of experience and it gives you warm feeling that it is
23 going to work but it is not tangible evidence of
24 qualification as cited by the memorandum and order.

25 The memorandum and order says provide tangible

1 evidence which means purebred documentation that, hey, if I
2 challenge it to 320 then I am going to have 320 there and it
3 is going to work at all times. I can't do that.

4 I can't come out and say positively with a 99.9
5 percent confidence that every piece of equipment that has
6 some minimum level of qualification is going to work. But
7 it is gut feeling generally on my experience with equipment
8 and looking at these things that there is a minimum level
9 and it probably will withstand that.

10 MR. VOLLMER: I think it does say it, Tom. It
11 says a harsh environmental condition for which this
12 equipment must be qualified as a result from low-probability
13 events. Events which might reasonably be anticipated during
14 this very limited period would lead to less demanding
15 service conditions for the equipment.

16 COMMISSIONER BRADFORD: And what you saying is
17 that the equipment will work in those less demanding service
18 conditions?

19 MR. DiBENEDETTO: Yes.

20 MR. VOLLMER: It is our feeling it will.

21 MR. GIBBON: I guess that is normal operation?

22 MR. JOHNSTON: No, that is not normal operation.

23 MR. VOLLMER: I can see where you can read it
24 either way, and you are right, it should read a little bit
25 better.

1 MR. DiBENEDETTO: We were thinking of some of the
2 lesser accidents. As a matter of fact, one of the exercises
3 we went through ---

4 MR. CASE: It is to some degree a probability
5 argument.

6 MR. GIBBON: Well, certainly the first phrase is
7 probability.

8 MR. CASE: They are not saying it will just
9 withstand normal operation and there is a low probability of
10 anything above that.

11 MR. GIBBON: That is way I read that.

12 MR. CASE: They are more saying that you can't
13 demonstrate that it will meet the low probability event, the
14 design basis accident in its extreme form, but it is likely
15 that it will meet a non-virulent design basis accident.

16 MR. DiBENEDETTO: One of the exercises that we
17 went through in this whole qualification program, especially
18 when TMI was in hearing, is we looked at the classic events,
19 the LOCA and the high energy line break and said, okay, here
20 is what is qualified and here is what needs more
21 documentation.

22 Then we renegotiated the environments by going to
23 a TMI event type thing. And low and behold you find that
24 the TMI event type of environments when you put the
25 equipment through it that it is qualified for it.

1 MR. CASE: Let me just ask you, Phil, does that
2 conclusion include a TMI event?

3 MR. DiBENEDETTO: Yes. We looked for lesser than
4 the big break events ---

5 MR. CASE: But you didn't go down to normal
6 operation.

7 MR. DiBENEDETTO: No. And just say normal
8 operation, no. We considered other accidents, other
9 transients and things like that which wouldn't produce the
10 big break environments. We did this specifically on TMI
11 with each of its pieces of equipment. We reviewed it
12 against the design basis events and then reviewed it against
13 the event that happened up there and found that the majority
14 of the equipment, a very high percentage of the equipment ---

15 MR. GIBBON: We are getting into an ex parte
16 element a little bit on that.

17 MR. DiBENEDETTO: Sorry about that. I don't know
18 those things.

19 (Laughter.)

20 MR. GIBBON: But, Phil, does that mean you can go
21 down the list of your Appendix B and say, yes, that piece of
22 equipment will meet a TMI type of accident, and I know it
23 because I have got evidence that shows that it will meet the
24 temperatures at TMI?

25 MR. CASE: Is your question is it an item-by-item

1 conclusion?

2 MR. GIBBON: Yes.

3 MR. DiBENEDETTO: I think we have scanned enough.
4 I mean, I don't think we looked at a hundred percent and
5 made that decision on a hundred percent. You know, we
6 looked at a million sheets. I had 21 volumes of information
7 from Browns Ferry alone. I had 72 plants to review. We did
8 review each and every sheet to come up with the
9 deficiencies, but I think the decision as to whether or not
10 it would meet a lesser environment was done on an odd
11 basis. You look at so many and you say, you know, there is
12 reasonable assurance. I have randomly picked them. You
13 say, yes, there is some level of qualification and it will
14 meet these things.

15 No, I can't say that I have looked at every sheet
16 and made that on every piece of component, but I did it by
17 generic items.

18 MR. CASE: They knew the ones that didn't because
19 of previous experience and they would always look for those.

20 MR. DiBENEDETTO: We always looked for the bad
21 actors.

22 MR. MARSH: Did you find pieces of equipment that
23 you felt would not meet the Three Mile Island environment
24 and require those to be fixed?

25 MR. DiBENEDETTO: We did not find any of those.

1 We did find some bad actors on the big pieces and we sat in
2 meetings with utilities and said, hey, this won't work, fix
3 it and fix it now. We have had several of those, plus the
4 I&E bulletins, we have cleaned a lot of those.

5 MR. ABBOTT: As the solenoid valves.

6 MR. DiBENEDETTO: Yes, as the solenoid valves.

7 They are all earmarked for replacement parts. Some of the
8 limit switches and air control circuits, which shouldn't
9 have been there in the first place, were there. They
10 perform a function. Before they even see an environment
11 they isolate containment.

12 On resetting your SI signal, the first thing that
13 happens is the limit switch now sees the bad environment, it
14 fails and all containment isolation valves go open. It is a
15 bad actor and replace it now or take an administrative
16 decision before you reset the SI signal to ensure that you
17 have locked power to these control circuits so that you have
18 made them a hard piece and they can't change state. In the
19 meantime get a qualified limit switch or redesign your
20 circuit.

21 Those types of things we did find and those types
22 of things we did fix. But we had a history before that
23 where I&E put out a bunch of bulletins saying, hey, did you
24 ask about solenoids and the exposed turn-up blocks? Those
25 are bad actors. Fix them now and they were. We have gone

1 through and have not found any of those.

2 MR. CASE: I think one of the things that concerns
3 you Peter is we said the same thing at the start of this
4 exercise that we know they are not there and things like
5 that and we were wrong.

6 COMMISSIONER BRADFORD: Well, that has been a
7 continuing statement. There comes a time when I wouldn't
8 want to hear it.

9 (Laughter.)

10 MR. CASE: What I am really trying to say is that
11 we have come a long way since that time. Although we have
12 given you the same judgment, I think there is much more
13 experience for the judgment than we had originally.

14 MR. DiBENEDETTO: Five years ago and even maybe
15 three years ago we didn't know what was out there. I can
16 tell you every piece of equipment in every plant right now
17 and where it stands and what is going to be done about it.
18 I think we have come a heck of a long way and I think we are
19 on the road to recovery.

20 Even these submittals, the licensees are taking
21 upon their own initiative saying, look, I may spend a million
22 dollars to try and develop documentation here. Chuck it.
23 Buy a new piece of equipment that is qualified and they are
24 doing that.

25 COMMISSIONER BRADFORD: When you say you can tell

1 every piece of equipment, that means you now have the
2 documentation in-house?

3 MR. DiBENEDETTO: I have the documentation from
4 the '79 OMB submittals, November 1, plus I have the 90-day
5 responses which lists every piece of class 1-E electrical
6 equipment in that plant, cable, relay, junction boxes,
7 everything and I have a sheet on it. I can tell you exactly
8 what is wrong with it, at least from a paperwork standpoint
9 and I can tell you what is going to be to be done about it.

10 We couldn't do that three or five years ago. I
11 recall when we were doing the connector problem we had to go
12 out and survey everybody, who has got connectors and who
13 doesn't, are they a part of it or are they not part of it,
14 and the same with terminal boxes, and now I can tell you who
15 has got them.

16 (Laughter.)

17 I don't think we were ever able to do that
18 before.

19 MR. CASE: It was below our level of review before.

20 MR. DiBENEDETTO: We are doing a very detailed
21 review. We have got 20 or so people doing this full time.
22 We are doing the interior welds and we are reviewing these.

23 MR. VOLLMER: This is a submittal in response to
24 our 90-day letter on Peach Bottom.

25 MR. GIBBON: Phil, I will tell you, from my own

1 perspective, I agree that the program has come a long way.
2 But I think the intrinsic problem is that we have figures
3 kicking around that 15 to 40 percent of the equipment is
4 going to be replaced inside of containment. I think if the
5 plants are going to be able to operate in the interim period
6 that there, you know, has to be a pretty good rationale for
7 that.

8 MR. DiBENEDETTO: I think the reason, Tom, that
9 you are seeing 50, or whether it be 40 or 50 percent of the
10 equipment being replaced is that some plants have committed
11 to replace a heck of a lot of equipment and I think it is a
12 commercial decision on their part. They didn't have to. We
13 didn't force them into it. We said here are deficiencies.
14 Come up with the documentation.

15 They went through their records and they went back
16 to some manufacturers who may not be in business any more
17 and they said I can't get the records. The only commitment
18 is go out and buy qualified equipment. I am qualifying to
19 the brand new standards, '71, for the replacement criteria.
20 It is going to cost them money, but they are going to have a
21 document behind it. I think that is the only reason you are
22 seeing this much.

23 MR. CASE: I think the purpose of the 90-day
24 submittals was to get the kind of detailed back-up that you
25 are looking for.

1 MR. DiBENEDETTO: That is correct.

2 MR. VOLLMER: And then make the judgment and the
3 decisions on what to do.

4 MR. CASE: And be specific.

5 COMMISSIONER BRADFORD: I didn't mean to stop
6 you. Do you have some more questions?

7 MR. GIBBON: No. Let's see, Dick, you were going
8 through a history and we had only gotten to the SER.

9 (Laughter.)

10 MR. VOLLMER: Well, all I was really going to say
11 is at this point in time we have responses from all but I
12 think eight licensees in response to our SER in which we
13 asked for a 90-day response. As I understand it, those
14 eight licensees who have not responded as yet, we have been
15 in contact with them or they have been in contact with us
16 and are asking for some extensions. I don't know how the
17 extensions are.

18 When we got these in we forwarded them immediately
19 to Franklin to do a screen process to try to evaluate the
20 goodness of the response, if you will, from a broad
21 perspective.

22 There were two items that we were looking for in
23 these 90-day responses. One key item was the licensee's
24 more detailed justification for continued operation and,
25 secondly, his response on what he is going to do

1 specifically about all the pieces that we found to be not
2 meeting our current qualification standards.

3 The goodness of the document through the Franklin
4 screening process, and we have screened, what, 29 of them so
5 far?

6 MR. DiBENEDETTO: Right.

7 MR. VOLLMER: They had quite a range of
8 responsiveness and we are trying to sit down now to digest
9 what we have and what we should do with those.

10 Secondly, we are taking a look on a high priority
11 basis of the responsiveness of the licensee in our request
12 for justification of continued operation, did he wave his
13 arms or did he get down to the nitty-gritty and look at
14 systems that might not operate and tell us how this
15 deficiency could be circumvented and so on and we had
16 inspection of those.

17 So I think what we are doing right now is trying
18 to establish where we stand. I think in some cases we would
19 say in conjunction with licensing that these people have not
20 given us adequate justification for continued operation and
21 we need to go back on a high priority basis to find out
22 where they really stand and what sort of a justification
23 they can really make.

24 In the second area we would have to go back with
25 them on a longer time scale and say the licensees have not

1 been responsive to our request in these areas and we need
2 these documents upgraded.

3 Again, as Phil said, we are getting large amounts
4 of information and we are trying to put it through the
5 screening process and some up with decisions on how to
6 handle this as quickly as possible.

7 Do you want to pick on that?

8 MR. CASE: Yes, let me pick up on that.

9 I applaud what they are doing. What they are
10 doing is on the assumption that the program will continue at
11 the pace that it has been carried out over the last couple
12 of years.

13 Given the Administration's cuts in all agencies,
14 including this one, in '82 and '82 we are going to have to
15 make some hard choices among programs that are currently on
16 the books on the pace at which they are going to be
17 pursued. Although I would like to be able to say that we
18 are going to spend enough money to do exactly as these
19 fellows would need to do to continue that pace, it is not at
20 all clear to me that it is going to come out that way. It
21 may or may not.

22 COMMISSIONER BRADFORD: By pace, Ed, you are
23 talking about the June 30, '82 pace/'83 pace?

24 MR. VOLLMER: He means the detail of the staff's
25 review, the level of effort and audit and the specific

1 review that we have been putting into it. I think that is
2 what he is referring to.

3 MR. DiBENEDETTO: We plan to continue, unless
4 somebody tells us otherwise, along the same lines that we
5 did for the November 1 submittals which is basically a
6 hundred percent review of the submittals. On the NTOLs we
7 get out and review 20 percent and audit in the field their
8 records. Then we come back to the office and review the
9 other 80 percent, the sheets, and identify deficiencies.

10 Then they come back with their response to those
11 deficiencies we review each and every one of them on a
12 component level. If there is a deficiency that says I am
13 going to replace this piece of equipment, we want to know
14 why it is okay for you to operate in the interim, and that
15 why should be based on some type of a circuit analysis
16 showing that the failure of the equipment subsequent to its
17 exposure to an adverse environment will not mislead the
18 operator and will not cause any other safety functions to be
19 lost.

20 It is a lot of detail. It is an extensive
21 review. Do we need it? My interpretation is the Commission
22 memorandum and order said do it. Do it for every piece of
23 equipment out there and provide that type of justification.
24 That is what we did with the '79 OMB submittals, that is
25 what we did with the SEPs and that is what we did with the

1 NTOL reviews and we are starting to do that on these 90-day
2 submittals.

3 In addition, what we don't see here when we do the
4 NTOLs we get in and review their files and look at all the
5 tangible evidence and qualifications and make a decision of
6 whether there is a shortcoming or not.

7 We don't have those reports for these, but we have
8 some 450 to 500 reports that are on our computer now that we
9 are using for cross-references. So when a utility comes in
10 and says, okay, I fixed my component and here is how I
11 upgraded the component evaluation worksheet and here are all
12 the references, I will go back to my computer and scan those
13 references. If we have reviewed them, I will let you know
14 what my decision is on that. If we have said, yes, it is an
15 acceptable document, fine, he has got a qualified piece of
16 equipment. If he is using as a base line a document that we
17 have problems with, we will get back to him and say we have
18 a problem here. It shows an additional deficiency and how
19 are you going to fix it. That is also being done.

20 So it is a multi-phased approach leading up to a
21 hundred percent review of each facility, each piece of
22 equipment and each item type.

23 MR. GIBBON: Phil, I guess what I didn't see in
24 the 90-day responses that I looked at was the type of
25 analysis that you said that you were looking for, which is

1 if they have said they are going to replace a piece of
2 equipment with some type of analysis, circuit analysis, to
3 show that it won't hurt if the equipment fails. I guess I
4 didn't see any of that.

5 MR. DiBENEDETTO: We have not completed our
6 preliminary review on all of these. I was under the
7 impression that the plant I sent down to you lacked that
8 information, but, believe me, what had happened was there
9 were 17 pages missing in their submittal in error. I got it
10 yesterday. It has earmarks of that type of stuff.

11 MR. GIBBON: Well, actually, before you dig
12 yourself in, I have got the 17 pages from the PDR.

13 MR. DiBENEDETTO: Good, you have got it.

14 (Laughter.)

15 MR. GIBBON: Yes, it is better than what I had
16 thought it was going to be, but there is still not that type
17 of analysis for equipment that they are planning to replace.

18 MR. DiBENEDETTO: You are right. But we feel now
19 that at least this plant in its submittal has got sufficient
20 information that we can start a review and we can start
21 asking the questions of how did you make this decision.
22 With nothing at all we would probably just end up throwing
23 it back to them and saying, hey, you didn't do what you were
24 asked to do.

25 We asked in our safety evaluations under Section

1 4.2 I believe, we said provide us justification and show us
2 that a failure of this piece of equipment won't interfere
3 with anything else, any other safety function and mislead an
4 operator. That level of detail in some submittals is
5 there. In others it is not.

6 We have got to sit down and take an approach and
7 say, okay, guys, get on the stick. Here it is. This is
8 what we want. We cannot make a decision unless you provide
9 it.

10 I can always come out and tell you, look, I think
11 it is a paper chase, but you want something more tangible
12 and I think the tangibility exists in them coming up with a
13 circuit analysis or reasonable facsimile thereof. I don't
14 have it. We will get it.

15 MR. MARSH: You have acquired it for other plants,
16 this type of analysis?

17 MR. DiBENEDETTO: We have required it for all
18 plants. In the NTOLs we have a story. It is probably a two
19 or three-page story of how they did their job in their
20 submittal and when we look into their files their detailed
21 analysis is there. Now, they won't do it for 200 pieces of
22 equipment of the same type, like a solenoid valve. They
23 will assure themselves that that solenoid valve was plugged
24 into that system electrically the same in each case. They
25 will run through the circuit analysis and show worst case

1 failure and will it basically fail safe. If the answer
2 comes out yes, then they put that story together and they
3 list all the valves under that component file. If the
4 answer is no, then there has got to be a corrective action
5 and we have seen this.

6 MR. MARSH: When they do this type of analysis do
7 they assume that a single individual component fails
8 independently, or do they assume that all the stuff on which
9 they have questions all fails in some type of direction?

10 MR. DiBENEDETTO: In the qualification you are
11 looking at a component-by-component basis. One component can
12 probably render a whole system inoperable. You look at
13 that. Can you tolerate that failure? Can you tolerate the
14 loss of that function? Then you make your story on that.
15 If the answer is yes, I can tolerate it, it means that I
16 have got another system some place else, another component
17 which is adequately qualified to replace that function.

18 MR. MARSH: Well, suppose the answer to an
19 independent failure is yes, you can stand that and then you
20 would go on to the next piece of equipment and the answer to
21 that is yes, but in fact both of those pieces of equipment
22 can fail?

23 MR. DiBENEDETTO: I have seen in one of the
24 analysis, and I am not sure that I can answer your question,
25 Tad, but in one of the recent NTOLs which I will leave

1 nameless because it may end up as one of these ex parte
2 things ---

3 (Laughter.)

4 MR. DiBENEDETTO: --- I saw a hundred solenoid
5 valves that they can tolerate a failure all at once. Their
6 electrical system is designed like a christmas tree with the
7 ornaments and bulbs on the outside. You lose the whole
8 string on the outside and nothing affects the inside. That
9 type of interaction was considered. They looked at the
10 functions they were going to lose, the functions they were
11 going to gain, what happened, and it washed. They said,
12 yes, it is acceptable and I can live with this. Other
13 people have. This is what we have requested.

14 You have got to know what your failure is and know
15 how it affects everything else. You are asking if I have 10
16 or 12 pieces or 100 pieces of equipment, not all generic but
17 different, if they all fail at once what is going to
18 happen. That is a magnanimous job. I don't know if it has
19 been done. We look for the interaction, Tad.

20 MR. MARSH: In your judgment should it be done?

21 MR. DiBENEDETTO: I think that basically you go
22 back to saying that there is still some type of reasonable
23 assurance that it is going to meet some challenge, at least
24 now until they meet some qualification.

25 MR. CASE: Does it make sense to do that kind of

1 detail in this area and not other areas? That is really the
2 gut question that somehow somebody has got to answer.

3 MR. DiBENEDETTO: I can't answer that question.

4 MR. GIBBON: But isn't the question more basic,
5 Ed, which is that if you really do, and I mean let's stop
6 kidding around, but if you really do have a LOCA and you do
7 have these accident conditions, and if all the equipment
8 does fail, I mean, are you going to be in trouble.

9 MR. MARSH: It doesn't even have to be all. It
10 can just be a couple of pieces of equipment.

11 MR. GIBBON: The question is do we have, you know,
12 confidence that in fact the equipment is not going to fail
13 on a, you know, large basis?

14 MR. MARSH: Or even the two key pieces on
15 unrelated systems.

16 MR. CASE: You can ask that same question from a
17 seismic standpoint. Do we know that they used all the right
18 inputs? No. Should we gear our review to assure that? I
19 think the answer is probably no because its frequency is
20 probably small enough that it is not cost beneficial.

21 I think in general, Peter, the staff has the view
22 that we are pushing farther in this area than we should as
23 compared to the depth in other areas.

24 MR. DiBENEDETTO: One of the other reasons that I
25 think, or perhaps you want to stay away from this level,

1 Tad, is that we are very conservative in our application of
2 these environments. We have sold the uniform distribution
3 of temperatures and radiation and everything knowing well
4 that if you are in the break area you have got a localized
5 area where you assume that just all the equipment fails.

6 But, nevertheless, in reality you have got
7 stratification, you have got shielding and you have got
8 different levels. They don't all see that same exposure to
9 any of those parameters unless you are in a very small room
10 and then you are right, it does distribute itself. But
11 inside of containment, that is not really the real world.

12 You have got to factor a little bit of that and
13 common sense into these reviews. I think that is what we
14 tried to do. I don't know how to do the review that you are
15 asking for, if you are asking for that.

16 COMMISSIONER BRADFORD: Ed, when you say that you
17 have gone too far in this area relative to others, at what
18 point would you cut it off?

19 MR. CASE: Gee, I don't know.

20 COMMISSIONER BRADFORD: Each layer up to this one
21 has produced the equipment that we actually decided we
22 wanted replaced. You may well be right that on a cost
23 benefit basis we would do more for safety by going in more
24 detail in other areas that the rest of the way into this
25 area, but I think what I would really take from what you are

1 saying, at least up to the level we have gone so far, is
2 that it would be a whole lot better if we went this far into
3 seismic, for example.

4 (Laughter.)

5 MR. CASE: I think you used the wrong example.

6 (Laughter.)

7 MR. JOHNSTON: Try human factors.

8 MR. CASE: Yes, try human factors.

9 (Laughter.)

10 COMMISSIONER BRADFORD: Human factors turns to
11 mush every time I try to go into that.

12 (Laughter.)

13 MR. CASE: That is one of the problems in human
14 factors. You should get it out of the mush into more
15 specifics like this so you can do better measurement of how
16 good things are.

17 MR. VOLLMER: Whether we have gone too far or not,
18 I think that we are, in my personal view, are a point where
19 the actual qualification of plants is on an upward slope and
20 we are probably at about the maximum slope that can be
21 achieved at this point in time. We do know, as Phil said,
22 where things are and I think we have seen a significant
23 upgrading in plants and hopefully we will have a
24 well-defined end date.

25 I think if the licensees would come in and give us

1 most importantly a good solid story that they have looked at
2 their plant and can justify continued operation given these
3 failures and showing that they have knowledge of what is out
4 there in the plant and how to cope with it and then do more
5 of an audit type basis of the details that they are
6 submitting, knowing that they have to achieve qualification
7 by a certain date, then I think that we have achieved an
8 awful lot.

9 MR. GIBBON: How are we going to achieve that? I
10 mean, we have been asking for information through bulletins
11 and letters, you know, for about two or three years now. I
12 think the Commission order said, look, we are getting a
13 little tired of this and you guys have powers and please use
14 them. It looks like the 90-day responses that you have
15 gotten back, that while they are more detailed than what you
16 have gotten before, it is still what you were after.

17 MR. CASE: I don't know. Maybe Dick knows the
18 answer to that.

19 MR. VOLLMER: I don't know. Again, just like
20 anything else, some licensees have been very responsive and
21 some licensees are going to drag their feet and sort of ride
22 the coattails of others both in terms of getting equipment
23 qualified and ---

24 MR. GIBBON: But if you don't make distinctions,
25 you know, among those licensees there is no reason why they

1 aren't going to continue to do that.

2 MR. PURPLE: I think that may be one of the
3 natural outfalls of the screening process where we go
4 through and see how good or how bad in general all of these
5 submittals were. I am sure there are going to be a few that
6 stick out as being very horrible submittals and for those we
7 may have to bring out the artillery.

8 COMMISSIONER BRADFORD: When will you know that?

9 MR. PURPLE: I don't know when the screening will
10 all be completed.

11 MR. DiBENEDETTO: We have basically 29 complete
12 and within the next week or two we should have them all
13 complete on a preliminary basis. Now all that means is has
14 enough information been supplied that we can get into a good
15 review.

16 MR. CASE: It is more of a completeness review.

17 MR. DiBENEDETTO: Yes, it is more of a
18 completeness review than anything else. Because of the time
19 involved nobody is looking into the technical details. If
20 there is a story on justificatin for continuing operation,
21 we will say, okay, fine, at least they have provided that
22 much. If they haven't, we are going to have to get back to
23 them, whether we call them in for meetings or send them out
24 a quick order.

25 MR. VOLLMER: As I said in the beginning, I think

1 we have to focus now on how reasonable and how well thought
2 out their story is for continued operation. I think that is
3 the first focus we need. If they done nothing but arm
4 waving, I think, as Bob had indicated, we have to think
5 about other measures to get them to react properly. I think
6 that is the first focus we should take. The rest of the
7 details, you know, we are going to have to sit down and
8 figure out what to do with them after we have screened them.

9 MR. MARSH: Will you allow arguments to talk about
10 the probability of accident scenarios as the basis for
11 acceptance for a licensing approach?

12 MR. VOLLMER: I don't think we have made that
13 judgment yet. I don't know if we have seen any of that
14 argument except the general argument that you are talking
15 about in probable events.

16 Have we seen that?

17 MR. DiBENEDETTO: I haven't seen any.

18 MR. VOLLMER: I think that is part of the staff
19 judgment. I interpreted Tad's question to be has the
20 licensee come in and made that type of a pitch.

21 COMMISSIONER BRADFORD: As a practical matter if
22 we accept it in the staff's argument we can hardly say but
23 no licensee is allowed to mention it.

24 MR. JOHNSTON: But I understood Tad to be saying
25 not just the general statement of the worst accident. I

1 thought you were asking perhaps had they gone through a
2 series of scenarios.

3 MR. MARSH: That is right.

4 MR. JOHNSTON: A series of less or small break and
5 various things, we have not seen that.

6 MR. DiBENEDETTO: We have not seen it and I don't
7 expect to see it.

8 MR. VOLLMER: If you look at the good licensees I
9 think they are trying to qualify to our standards.

10 MR. MARSH: I gather they are not doing
11 simultaneous failures either of systems since it is a common
12 mode failure but they are still assessing independent
13 component failures.

14 MR. DiBENEDETTO: They are not looking at gross
15 system-by-system failures.

16 MR. MARSH: What types of equipment is it
17 generally that is in question. Is it transmitters?

18 MR. DiBENEDETTO: Transmitters, some pump motors,
19 transducers, solenoids.

20 MR. MARSH: Is it transmitters for indications?

21 MR. DiBENEDETTO: Well, when you start talking
22 about long-term qualification, yes, it is for indication.
23 Short-term qualification hasn't been a problem for
24 transmitters for actuating functions. We see that they all
25 perform a function within a specified period of time and

1 that is all they are needed for. Then what they do after,
2 how they fail afterwards has to be evaluated again to show
3 that it is not going to upset the function just completed or
4 to mislead an operator. We are seeing problems on the
5 long-term qualification.

6 MR. MARSH: What are the weak spots in delivering
7 emergency core cooling water to the reactor since a lot of
8 that stuff comes from the Aux Building and outside? Where
9 are the weak spots in somethink like that?

10 MR. DiBENEDETTO: We haven't seen any of those.
11 We have been looking.

12 MR. MARSH: The actuation transmitters are all
13 functioning?

14 MR. DiBENEDETTO: They are functioning.

15 MR. ABBOTT: Do you see any problems in long-term
16 cooling after the accident?

17 MR. DiBENEDETTO: When you starting talking a year
18 or two years you may because now you have maybe reached the
19 radiation level that could be degrading equipment. But when
20 you are talking that long there is time to have taken
21 alternative action also. But in the meantime they try and
22 qualify it to these things.

23 I have a guy up there trying to qualify a pump
24 bearing grease for 40 years.

25 (Laughter.)

1 MR. DiBENEDETTO: I would rather see it be changed
2 every two years.

3 MR. VOLLMER: Some of our basic criteria were, you
4 know, safe shutdown, being able to deliver core coolant to
5 the core and containment isolation. I would assume shutdown
6 is not a weak point because that happens fairly early in the
7 accident.

8 MR. DiBENEDETTO: That is right.

9 MR. VOLLMER: You say the delivery of water to the
10 core, the main problem there is ---

11 MR. MARSH: Long-term cooling?

12 MR. VOLLMER: I was asking short-term to start
13 with. I think with the right valves open, without a valve
14 opening problem, the delivery of water comes from Aux
15 Building ---

16 MR. DiBENEDETTO: Outside, it has got a lesser
17 environment. Where we see the equipment problems are in the
18 isolation systems to maintain that containment integrity.

19 MR. VOLLMER: It is containment isolation.

20 MR. DiBENEDETTO: Now, I think we have resolved
21 all of those. I can't say that tomorrow at noon it won't
22 come up, but as far as the ones we know they have been
23 resolved.

24 MR. VOLLMER: So they can maintain it.

25 MR. DiBENEDETTO: They can maintain it.

1 MR. VOLLMER: That is one of those key areas that
2 had been focused on.

3 MR. DiBENEDETTO: I recognize that there is a weak
4 point there and they have had to take an administrative
5 action between the time they go from inject to recirc
6 locking out power eventually. Once it is requalified to new
7 criteria they will have it replaced with qualified devices.
8 So that then there won't even be a need for an
9 administrative procedure.

10 MR. MARSH: Knowing what you know about the types
11 of equipments involved if you did think about common mode
12 failures, a couple of systems being failed, how bad an
13 impact is that, not in terms of review but just in terms of
14 the systems? You would not be able to obtain long-term
15 cooling?

16 MR. DiBENEDETTO: No. I think that there is enough
17 diversity and redundancy in these plants that one can always
18 attain the long-term cooling and safe shutdown.

19 MR. MARSH: And this does not affect those
20 redundant techniques?

21 MR. DiBENEDETTO: No, it doesn't.

22 MR. MARSH: So you may lose some instrumentation
23 and you may lose one flow path.

24 MR. DiBENEDETTO: Yes.

25 MR. ABBOTT: Well, I don't understand why

1 containment isolation would be a problem since the
2 instrumentation and controls for that actuate immediately.

3 MR. DiBENEDETTO: Well, the example we found is a
4 limit switch in the control circuit. Upon the accident
5 initiating containment isolated beautifully. It went
6 through an inject phase, however long it lasts, the RWST
7 dumps out and you have to get into recirc mode. You have
8 got to reset an SI signal which now uses that control
9 circuit and that control circuit had subsequently been
10 exposed to an environment for which it was unqualified. So
11 we assume a failure. It is when you reset.

12 MR. MARSH: The containment isolation valves.

13 MR. DiBENEDETTO: It is an example we found and we
14 got corrected right away. We have seen a lot of places
15 where equipment had to be replaced, but I can't give you the
16 complete repertoire on every place we have seen it.

17 MR. GIBBON: Do you suppose we could go through
18 some of your Appendix B items in the Peach Bottom SER and
19 you just give us your rationale for why you feel comfortable.

20 MR. CASE: Can I just make a point. Now that we
21 have gotten these 17 pages or 18 or whatever, we don't think
22 Peach Bottom is as bad as we originally thought it was. One
23 of the criteria was to choose a bad one. If we had to start
24 all over again we probably wouldn't have had Peach Bottom.

25 MR. GIBBON: I understand.

1 MR. CASE: I just want to make sure you understand
2 that. I am not sure whether that is going to help us or
3 hurt us.

4 (Laughter.)

5 MR. GIBBON: You can pick an item or I can pick an
6 item.

7 MR. DiBENEDETTO: I have got them all memorized.
8 Pick an item.

9 (Laughter.)

10 MR. MARSH: How about some pressure switches.

11 MR. DiBENEDETTO: Okay. What page of your SER.

12 MR. MARSH: B-2.

13 MR. DiBENEDETTO: Basically what these things had,
14 they were the deficiencies we identified from the original
15 component evaluation worksheets. It was radiation,
16 temperature, pressure and aging. The utility has now come
17 back in a new submittal and has said ---

18 MR. MARSH: Which pressure switches are they?

19 MR. DiBENEDETTO: You have got to get into the
20 submittal and that is the new submittal.

21 (Pause while Mr. DiBenedetto looks through
22 document.)

23 MR. DiBENEDETTO: Okay, that one is the mainsteam
24 and feedwater low pressure indicating switch. Basically
25 what they have said here in this new update is that it is

1 qualified. They have gone through and gave the
2 specification.

3 MR. ABBOTT: It is a reactor pressure switch which
4 allows the core spray RHR injection valves to come open.

5 MR. MARSH: On the low level?

6 MR. ABBOTT: The pressure in the reactor gets down
7 to 350 ---

8 MR. MARSH: So you can't spray into the core until
9 the pressure gets down to ---

10 MR. ABBOTT: It is an interlock.

11 MR. MARSH: It did not meet radiation,
12 temperature, pressure and age?

13 MR. DiBENEDETTO: On the original sheets it didn't
14 meet radiation. We couldn't demonstrate that.

15 MR. ABBOTT: The pressure switch is outside of
16 containment, isn't it? It is a BWR. All that stuff is
17 outside of the containment.

18 MR. DiBENEDETTO: They had specified a value like
19 two times ten to the two for radiation. Now they are saying
20 it has been better qualified to two time ten to the fifth.

21 MR. ABBOTT: I guess that is taking into account
22 the ---

23 MR. DiBENEDETTO: The recirculatory, the shielding
24 and everything else.

25 MR. ABBOTT: The thickness of the wall and

1 probably assumed some dose rate inside the containment.

2 MR. MARSH: From the implications of this system
3 not being operational, of these three pressure switches from
4 not being operational, you would not be able to spray in
5 either flow paths?

6 MR. DiBENEDETTO: That is one switch.

7 MR. MARSH: There are four of them.

8 MR. DiBENEDETTO: But they are all located in
9 different areas and they all come on from different sensing
10 devices. We picked this up on one of the other NTOLs.

11 MR. ABBOTT: There are two in one instrument rack
12 and two in another.

13 MR. DiBENEDETTO: These instrument racks are
14 outside of containment and don't see all of that. So if it
15 sees it in one it is probably in a lesser environment than
16 the other. They are now turning around and saying it is
17 qualified. They have developed the documentation on aging,
18 on radiation, on temperature and on pressure.

19 MR. MARSH: How about the motors they are going to
20 replace.

21 MR. DiBENEDETTO: Well, that is a little
22 misleading if we are going to talk about motors they are
23 replacing. What they are basically doing is replacing the
24 brakes in the motor which were the bad actor parts of it.

25 MR. MARSH: Wait a minute. There are two items.

1 The first item is common OAV20, OBV20 and OCV20. These
2 motors will be replaced. The next item is brakes on valve
3 actuators.

4 MR. DiBENEDETTO: You are looking at the submittal?

5 MR. ROE: Page 15, Table 2.

6 MR. DiBENEDETTO: Do you have a motor description
7 there? I would like to relate it back to the safety
8 evaluation.

9 MR. MARSH: The plant ID is OAV20, OBV20 and
10 OCV20, Note 14.

11 (Pause while Mr. DiBenedetto looks through
12 document.)

13 MR. MARSH: Do you want to pick another if you
14 can't find that?

15 MR. DiBENEDETTO: Well, I would like to be able to
16 relate it back here, Tad.

17 MR. MARSH: What is it you are trying to relate it
18 to?

19 MR. DiBENEDETTO: The safety evaluation.

20 (Pause.)

21 MR. DiBENEDETTO: It is a fan motor and they are
22 replacing it.

23 MR. MARSH: What page?

24 MR. DiBENEDETTO: It is on page B-7. It is the
25 exhaust fan used during a LOCA. What they said is they

1 didn't have any long-term qualification on it. It is not
2 rated temperature-wise and there is no aging. What they are
3 going to do is replace it.

4 (Pause.)

5 MR. DiBENEDETTO: Okay, these are the deficiencies
6 we called out originally. They are basically in agreement
7 with them saying they are going to replace it. Now, you
8 really have to go through the sheet to see if they are in
9 agreement with all of the deficiencies or just enough of
10 them to say, hey, why bother, and let's just replace the
11 thing.

12 MR. MARSH: And when they replace it you ask for
13 the qualification?

14 MR. DiBENEDETTO: Yes, and it has got to be put in
15 the qualification file. We will be asking for new component
16 evaluation worksheets to be updated to all of the
17 qualification with all of its references. If some day we
18 get out and audit the operating plants, either through I&E
19 or through EQB we will be looking at that file or whatever
20 files to show all that evidence of qualification.

21 MR. GIBBON: So, Phil, the justification for not
22 doing anything about it is what?

23 MR. DiBENEDETTO: Without knowing this particular
24 piece of equipment I would look at location and look at what
25 does it have on it. I would go back into the file and find

1 on the computer is there is any level of qualification.

2 MR. GIBBON: I guess what I am trying to find out
3 is did you or somebody do that type of analysis when you
4 wrote the SER, not you, but I mean when the SER was written?

5 MR. DiBENEDETTO: It is not specifically on this
6 piece of equipment. On an odd basis, yes, on pieces of
7 equipment you look outside. This particular motor is
8 outside of containment. When you start looking at the big
9 LOCAs inside it is not going to see that environment. It is
10 going to see a lesser environment. They don't have the
11 paperwork to support qualification to that lesser
12 environment but it was still and designed to an FSAR
13 commitment which says, hey, here are the curves I have got
14 to meet whether it is inside or outside.

15 MR. GIBBON: Well, are you sure of that? I mean,
16 there are a lot of FSAR commitments that don't get those
17 curves.

18 MR. CASE: I don't think we are sure. In general
19 what he is saying is you look at equipment outside of
20 containment this is the rationale.

21 MR. DiBENEDETTO: I don't think you can make that
22 statement for everything out there. I think in generalities
23 I feel comfortable with it. I have seen enough of it. I
24 have seen enough of the equipment, I have seen enough of
25 what has been done on it and I have seen enough testing in

1 durability of equipment to say in general, yes, it will
2 survive one of these events. The pedigree isn't there. It
3 will get there.

4 MR. GIBBON: But you feel comfortable about this
5 piece of equipment you mean because you have had experience
6 with this particular piece of equipment?

7 MR. DiBENEDETTO: Not this particular piece of
8 equipment.

9 MR. CASE: In general for equipment outside of
10 containment you have this warm feeling without looking at
11 specifics, is that what you are saying?.

12 MR. DiBENEDETTO: Sure. Yes.

13 MR. GIBBON: The level transmitters are outside of
14 containment.

15 How about the MO, the brakes and the valve
16 actuators.

17 MR. DiBENEDETTO: Those are outside.

18 MR. GIBBON: Those are outside as well?

19 MR. VOLLMER: No, some of them are inside.

20 MR. MARSH: How about the MO-23-25, the drive
21 motor will be replaced; a purchase order is expected to be
22 issued by 11/2/81, Unit 2.

23 MR. JOHNSTON: This thing is going to be replaced,
24 Phil, but the thing is qualified to 100 degrees F, relative
25 humidity of 100 percent and radiation of four time ten to

1 the sixth. They are still going to replace it. These are
2 the specifications they will have to meet.

3 MR. DiBENEDETTO: Those are the specs they have to
4 meet and the qualification and the other problem. They have
5 given you a note saying that they are replace with a
6 qualified device.

7 MR. MARSH: That is for this component?

8 MR. DiBENEDETTO: That was for the fan motor.
9 Give me your number again.

10 MR. MARSH: MO-23.

11 MR. DiBENEDETTO: The valve actuators, okay. They
12 are now saying that one is qualified. There was an
13 outstanding item on it?

14 MR. MARSH: I thought they were saying they were
15 going to replace this.

16 MR. DiBENEDETTO: They are replacing the 23-19 to
17 23-20.

18 MR. MARSH: All we see is this. The plant ID is
19 MO-23-25. Is that the one?

20 MR. DiBENEDETTO: All right, 25 is being
21 replaced. It is a valve actuator.

22 MR. MARSH: The turbine exhause valve, that is
23 inside?

24 MR. DiBENEDETTO: It is a HIPSI pump main recirc
25 flow valve. It opens valve on low flow and closes valve on

1 high flow.

2 (At this point the reporter interrupted since many
3 members were speaking simultaneously.)

4 COMMISSIONER BRADFORD: Whenever you have three
5 people talking at once just ignore it. If it rises to the
6 level that it seems important to me I will ask them to speak
7 one at a time.

8 (Laughter.)

9 MR. DiBENEDETTO: What was your question on this?

10 MR. MARSH: What is the component? Is it the
11 recirc valve?

12 MR. DiBENEDETTO: It is a recirc flow valve, yes.

13 MR. MARSH: On the HIPSI?

14 MR. DiBENEDETTO: On the HIPSI.

15 MR. MARSH: And it is being replaced and it is
16 supposed to open up on low flow?

17 MR. ABBOTT: It opens up with the turbine starts.

18 MR. DiBENEDETTO: Right and closes on high flow.

19 MR. ABBOTT: It takes water from the condensate
20 storage tank.

21 MR. MARSH: And the justification for nothing in
22 the meantime is that the pump can stand it?

23 MR. DiBENEDETTO: Let me go back to the old sheet
24 and see what they had before and what they have now.

25 (Pause by Mr. DiBenedetto goes through document.)

1 MR. DiBENEDETTO: Okay. The first sheet we had
2 there before had zero qualification information. What they
3 have said is that they can't develop that information and
4 they are going to go out and replace it.

5 MR. GIBBON: Wait a minute, Phil. I thought you
6 told me that there was some equipment like that where we had
7 zero qualification.

8 MR. DiBENEDETTO: They said they couldn't
9 determine qualification on it. So they said the heck with
10 it, rather than trying to develop it by analysis or anything
11 else we will replace it. This may be one of the exceptions,
12 Tom. Most of the ones I saw weren't like that.

13 You picked a good one, Tad.

14 (Laughter.)

15 MR. MARSH: So you are saying there was no
16 documentation on this?

17 MR. DiBENEDETTO: They apparently said they had no
18 documentation. All we have is this evaluation worksheet
19 that had no blanks filled in. Now, they may have had some
20 things that we don't know what it is.

21 MR. GIBBON: So as I understand it, we still don't
22 have documentation?

23 MR. DiBENEDETTO: That is correct. What we have
24 got is a commitment here to replace it.

25 MR. GIBBON: So what is the rationale for saying

1 that it is okay to do nothing in the meantime?

2 MR. DiBENEDETTO: I have got to look at location
3 6, but I believe it is outside containment. It is
4 responding to a LOCA environment. It responds to the big
5 break LOCA. It doesn't see the full blown LOCA
6 environment. It sees probably a radiation profile. That is
7 what most of the problem has been with these motors of being
8 able to see an elevated recirculatory fluid dose.

9 MR. GIBBON: So we are relying on the fact that it
10 is good industrial quality?

11 MR. DiBENEDETTO: They say they need to qualify
12 to ten to the six rads and they probably don't have that.
13 They probably have ten to the fourth or ten to the fifth.
14 What you are relying on basically is that it takes some time
15 to build up that total integrated dose. It is going to work.

16 What happens once it exceeds that dose, it could
17 break down or maybe it won't break down. They are going to
18 go out and develop that information or replace the critical
19 parts that are susceptible to degradation from radiation.
20 It is not seeing a steam pressure from the environment. It
21 is only seeing radiation. It is at 113 degrees.

22 MR. ROE: This is the recirc isolation valve?

23 MR. DiBENEDETTO: It is needed to function for 15
24 minutes after the accident.

25 MR. ROE: The first 15 minutes to be sure that

1 you ---

2 MR. DiBENEDETTO: The first 15 minutes to make
3 sure it did its cycle. It won't see ten to the sixth rads
4 at that time.

5 MR. MARSH: It could function later on if the pump
6 goes into a low flow condition, could it not? I mean, if
7 the pump is in low flow with high radiation or whatever
8 else, it has to open up. It is certainly the first 15, but
9 it may also be later on at any time the pump is in low flow.

10 MR. ABBOTT: Well, it is going to remain at a
11 given flow rate.

12 MR. MARSH: Does it ever have to open again?

13 MR. ABBOTT: No. When it comes on it stays on
14 until the operator does something about it. The way I
15 remember the system the valve is normally open and when the
16 pump starts it just shuts down after the flow rate gets
17 above a certain point and it stays shut for the rest of the
18 time that the turbine is running.

19 MR. DiBENEDETTO: What they are basically saying
20 is that its function has to be performed within 15 minutes.
21 They still don't have radiation qualification on it. It
22 doesn't see any other adverse environment and it takes more
23 than 15 minutes to get to ten to the sixth but they don't
24 have that radiation documentation.

25 COMMISSIONER BRADFORD: Let's see, have they

1 provided that explanation or is that something that you ---

2 MR. DiBENEDETTO: Well, they have provided it by
3 their tables here showing what the specification is for
4 operability. They are saying it is needed during the first
5 15 minutes. They are saying they need the specified
6 radiation condition the valve will see which is ten to the
7 sixth. What they have basically said is that they are going
8 to replace it with a qualified device.

9 MR. CASE: The question is have you synthesized
10 that argument why it is okay in the meantime or is that
11 written down some place in there?

12 MR. DiBENEDETTO: I read it into it. It is not
13 written down somewhere.

14 COMMISSIONER BRADFORD: Is that true then for all
15 of the material that they have provided that you all have to
16 in the end reach your own conclusion as to why it would be
17 all right in an accident environment, or is it in some areas
18 that they have provided some sort of detailed justification?

19 MR. DiBENEDETTO: Let me answer that in two
20 parts. In the November 1 submittals the majority of the
21 conclusions had to be drawn by the reviewers looking at the
22 time requirements and the levels of adversities they were
23 going to see. We drew them. In these submittals we
24 requested the licensees to do that type of thinking and do
25 that type of justifying.

1 COMMISSIONER BRADFORD: Why isn't it there then
2 for this piece of equipment?

3 MR. DiBENEDETTO: It may be in the general text.
4 We did a very preliminary review on these. We expect to go
5 through those details in more depth and pull out and
6 identify to these people where they have been deficient in
7 making the story and ask them to either come in and tell us
8 what their story is on a component-by-component basis is
9 necessary. We have not gotten into that level of review
10 here.

11 COMMISSIONER BRADFORD: Right, but weren't they
12 originally supposed to do that in the first round of
13 submittals?

14 MR. DiBENEDETTO: They were supposed to do that in
15 the first I&E bulletins that came out and it has been a
16 point that has been remissed for a long time from these
17 utilities. We had a meeting in July with 500
18 representatives of the utilities and we have on this point
19 time and time again told them we need your justification.
20 Whether they don't hear or they turn a deaf ear, I don't
21 know what the excuse is.

22 COMMISSIONER BRADFORD: Let's see, what does the
23 argument against taking some type of enforcement action
24 mean? One doesn't necessarily have to shut them down, but
25 at some point failure to provide information by the fourth

1 and fifth or sixth request ought to be ---

2 MR. CASE: That is a good question. We generally
3 feel, rightly or wrongly, that the sanction we have is to
4 shut the gaddamn thing down. The civil penalty sanction is
5 more I&E's province rather than ours. I don't know in any
6 case where we have ever taken the position that this was
7 half-way compliance and it was okay to continue operation
8 but they ought to be fined or something like that from our
9 aspect. Maybe it is something that ought to be done
10 differently.

11 COMMISSIONER BRADFORD: Yes, it makes your life
12 and ours a lot harder.

13 MR. CASE: It sure does because you are either
14 black or your white.

15 COMMISSIONER BRADFORD: The fact is you are never
16 going to shut anybody down for failure to provide
17 information. Instead you wind up sort of chewing up
18 resources in trying to go through and put something together.

19 MR. CASE: It is kind of a generic deficiency in
20 this business.

21 COMMISSIONER BRADFORD: Can somebody tell me a
22 little more on the history of these 18 pages.

23 MR. CASE: I will bet you, Commissioner Bradford,
24 if you went to a lawyer and said, okay, enforce, whatever
25 the hell the words were you said before, on the basis they

1 haven't complied and give them a civil penalty, he would
2 say, my God, you haven't got a case I would guess but I
3 don't know.

4 COMMISSIONER BRADFORD: Maybe we have to structure
5 the format for extracting this kind of information such that
6 it does give you ---

7 MR. CASE: Well, you know, that is one of the
8 things you have been trying to have us do is have some
9 enforceable conditions in what we do.

10 COMMISSIONER BRADFORD: About these 18 pages. We
11 have sort of been drifting through them. I realize I don't
12 really know their history. Are they a supplement to the
13 submission or are they something that somehow got lost?

14 MR. DiBENEDETTO: No, sir. At least in the
15 submittal I received they weren't there. We contacted the
16 utility and they put them in the mail to us. It didn't make
17 it in time. I finally got it on telecopy last night at
18 5:30. It is throughout these sheets that they reference
19 different portions of their 92 pages.

20 COMMISSIONER BRADFORD: I see. So it clearly did
21 exist.

22 MR. DiBENEDETTO: The 18 pages is the text that
23 defines how they addressed our safety evaluation supposedly
24 on a point-by-point basis. I read it through kind of
25 quickly and I didn't go through it point by point to see if

1 it has.

2 MR. CASE: It looks like they just inadvertently
3 didn't give it to us.

4 MR. DiBENEDETTO: It is a part of the submittal.
5 My copy didn't have it.

6 MR. ROE: The PDER copy didn't have it?

7 MR. GIBBON: The PDER copy did have it.

8 MR. DiBENEDETTO: So it is probably the bad copy I
9 got.

10 MR. GIBBON: But I don't think the 18 pages are a
11 help as far as justification for continued operation.

12 MR. DiBENEDETTO: There is some help. You are
13 right, it doesn't go component by component. Again, it
14 would have to come back to me and I would look and say,
15 look, I have got a requirement for 15 minutes on this
16 thing. The only climate that is going to threaten it is
17 radiation, ten to the sixth, and I know that it takes a
18 little bit longer than that, a lot longer than that to build
19 it up.

20 COMMISSIONER BRADFORD: Phil, did some licensees
21 give you submittals that did go component by component and
22 provide justification?

23 MR. DiBENEDETTO: I have seen some that provided
24 more detailed justification than is provided here. I can't
25 make a statement saying that there is a licensee there that

1 gave me component by component. I don't know at this time.

2 We have asked for it.

3 MR. CASE: But you think not.

4 MR. DiBENEDETTO: I think not. Some of the NTOLS
5 did for our audits.

6 MR. GIBBON: Even Ginna, which gave more detailed
7 analyses for why they disagreed with the staff, when they
8 threw in the towel and said this thing is going to be
9 replaced, even they didn't say and in the meantime it is
10 okay to operate the plant because. They just said, you are
11 right, the thing needs to be replaced period.

12 COMMISSIONER BRADFORD: When the licensee commits
13 to replacement, at the moment they have until June '82?

14 MR. DiBENEDETTO: That is correct.

15 COMMISSIONER BRADFORD: And if given an extension
16 they would have until whenever we extend it to regardless of
17 whether or not there was any problem with replacing it?

18 MR. JOHNSTON: They may not be able to buy one.

19 COMMISSIONER BRADFORD: No, I am assuming that
20 they can. What I am asking is whether if we give the
21 extension as is recommended, are we granting it so that it
22 then falls across all equipment whether or not there is any
23 problem in replacing.

24 MR. CASE: Probably.

25 MR. DiBENEDETTO: You are probably going to give

1 them that leeway, but I think that responsible utilities
2 will be replacing the equipment.

3 COMMISSIONER BRADFORD: Does it make sense to say
4 that the extension is granted to such and such a date but
5 that we expect all licensees to replace equipment that is
6 going to be replaced as soon as possible in the interim?

7 MR. CASE: It sounds good, but I don't think it is
8 very enforcible.

9 MR. ROE: It is sort of when it is available you
10 have to replace it. How would you ever prove it?

11 MR. CASE: Yes.

12 MR. DiBENEDETTO: I think the frame of mind of the
13 utilities, at least the ones I have spoken to, is that when
14 the opportunity arises and if the equipment is on hand, they
15 will replace it. They are not going to wait until the last
16 day. If they have to wait for the last day they have a heck
17 of a long outage and obviously they don't want that either.

18 People have replaced equipment already. We have
19 had November 1 submittals in saying that we are going to be
20 replacing equipment. The 90-day submittal came in and said
21 we have already replaced that equipment. Some utilities
22 have replaced prior to the November 1 submittals. So they
23 are being responsive in that nature. If it is available
24 they replace it.

25 MR. JOHNSTON: They have told us in informal

1 meetings I think that they will expect to have somewhere
2 between 80 and 85 percent of the stuff all qualified whether
3 it is by replacement or whatever by June of '83.

4 COMMISSIONER BRADFORD: June '83?

5 MR. JOHNSTON: '83.

6 COMMISSIONER BRADFORD: Wait a minute. I thought
7 that was the proposed extension for final compliance.

8 MR. JOHNSTON: It varies, depending on the
9 communication we have with the Commission. There are some
10 items that you will not be able to meet by that time such as
11 long-lead items and things still under test. Their point
12 was that whatever selection we pick they expect to have
13 about 85 percent of the job done by '83 anyway.

14 MR. GIBBON: Why don't you do one more.

15 MR. MARSH: The safety relief valve.

16 MR. DiBENEDETTO: Do you have a number?

17 MR. MARSH: SV2671-A through G.

18 MR. JOHNSTON: Do you have an Appendix B page
19 reference.

20 MR. MARSH: Page 13.

21 MR. ROE: No, he does not have a reference.

22 MR. MARSH: They are solenoid valves. Atcomatic.

23 MR. DiBENEDETTO: Which numbers?

24 MR. MARSH: SV2671-A through G.

25 MR. DiBENEDETTO: Okay, I have got it.

1 MR. MARSH: What page?

2 MR. DiBENEDETTO: B-12, the seventh one down.

3 These were identified back then as committed for replacement.

4 MR. GIBBON: What is QT, Phil, quality test?

5 MR. DiBENEDETTO: Qualification time. In other
6 words, they may have specified a year to provide
7 qualification to us. As a matter of fact, they specify one
8 minute as the operating time.

9 MR. ROE: What is it, Phil?

10 MR. DiBENEDETTO: I am sorry. It is part of the
11 primary containment isolation system. It is a solenoid
12 valve. It goes to the oxygen analyzer isolation.

13 MR. JOHNSTON: How much diameter is that, one
14 inch, or something like that, that little line?

15 MR. DiBENEDETTO: It is probably a very small
16 valve. They specified one minute for operability time, 183
17 degrees temperature and ten to the sixth radiation.

18 COMMISSIONER BRADFORD: What valve do you want, Ed?

19 MR. MARSH: The solenoid valves and the safety
20 relief valves. There should be one for each valve.

21 MR. GIBBON: Wait a minute. Let me understand
22 what is going on there. That is what they specify. Is that
23 what it is qualified to or is that what it will be qualified
24 to?

25 MR. DiBENEDETTO: That is what it will be

1 qualified to or above that. Again, what it looks like is a
2 radiation type problem and that has been a problem with most
3 of the solenoid valves because of the internals.

4 MR. MARSH: The deficiencies list all of them, QT,
5 TH, P, R.

6 MR. DiBENEDETTO: Because they probably didn't
7 envelope in your original submittal. Right, in the original
8 submittal they basically just said we are going to replace
9 it so they didn't bother listing any of the parameters.

10 MR. JOHNSTON: That sounds like a little solenoid
11 valve. They don't cost much and it costs no money to try
12 and get the paperwork I suspect from a company that makes
13 these things and it is easy to get a new one and get it
14 qualified and stick it in.

15 COMMISSIONER BRADFORD: So you are saying the
16 reason that the deficiencies are listed as being across the
17 board is that they don't have it?

18 MR. DiBENEDETTO: Well, that may not be the case.
19 When we did our reviews a lot of utilities came in and said,
20 look, we are strictly going to replace this. So they didn't
21 even bother filling out qual sheets on it. They may or may
22 not have that information.

23 In our detailed review if we saw a blank we listed
24 it as a deficiency. It doesn't necessarily mean it existed
25 or didn't exist. It doesn't mean a deficiency. We just

1 assumed it was. We didn't make any other assumptions.

2 MR. GIBBON: Well, wait, they didn't furnish us
3 any information as to its qualifications.

4 MR. DiBENEDETTO: Because they said to hell with
5 it. I am going to replace it.

6 MR. GIBBON: All right. I understand.

7 MR. DiBENEDETTO: You are correct, they didn't
8 furnish us anything else.

9 MR. JOHNSTON: If they are going to change out the
10 light bulbs they are going to spend 150 bucks to pedigree
11 the light bulb that costs a quarter that they are going to
12 replace.

13 MR. ROE: What is the justification for continuing
14 operation?

15 MR. DiBENEDETTO: They probably don't have one.
16 Again, I will make the justification for them. It is a
17 one-minute operability time. It is ten to the sixth rads ---

18 MR. MARSH: They are saying it only has to work
19 for one minute?

20 MR. DiBENEDETTO: That is right, within a minute
21 it has to close off.

22 MR. MARSH: Is there a chance it will open back up
23 again if it is not qualified after one minute?

24 MR. DiBENEDETTO: Not after one minute. The only
25 environment it has seen that is threatening it ---

1 MR. ABBOTT: It is de-energizing.

2 MR. DiBENEDETTO: Right, it is de-energizing. It
3 is ten to the sixth rads.

4 Now, I can come up and say, okay, a year and a
5 half later I am going to see ten to the seventh, it has
6 degraded and what is it going to do to my circuit? I don't
7 know the answer to that. We have asked those questions. It
8 could short out and cause something to open.

9 Normally what happens is the solenoid valve, the
10 containment isolation valve or the isolation valve itself
11 will stay closed. The fault will feed back to the bus
12 somehow and hopefully be tripped out by a proper fuse and
13 breaker and coordination. That is basically what a circuit
14 analysis is showing. They are adequately sized so that a
15 fault is not promoted back to any other bus or wipe out any
16 other piece of safety equipment.

17 We have seen enough of these reviews to give us
18 some sort of long feeling for these things.

19 MR. ROE: So what you have done is really the
20 staff has accepted the burden for justification for
21 continuing operation based on your analysis, experience and
22 then overall your engineering judgment?

23 MR. DiBENEDETTO: We accepted it from the November
24 1 submittal until our safety evaluations get out and
25 allowing for them to respond back. We had expected, had

1 requested, had required them to do this.

2 MR. ROE: So we are still waiting to shift the
3 burden of proof back on them.

4 MR. DiBENEDETTO: That is right, the burden of
5 proof should be back on them. These submittals were
6 supposed to do that. They are remiss in this area. I can
7 probably still make the same finding I did back then, but
8 that shouldn't be my responsibility or the staff's
9 responsibility.

10 MR. ROE: You have asked them to accept that
11 responsibility.

12 MR. DiBENEDETTO: We will probably go back to
13 these people and say, hey, you had a responsibility to do
14 this and come in and show us on a generic nature equipment
15 type by equipment type. You have got a deficiency here, it
16 is till deficient and you have got to replace it. That is
17 fine, it shows good intent but now why is it okay? I don't
18 have that answer from them.

19 MR. JOHNSTON: Phil, let me ask you something.
20 Maybe this is a bad example, but that is a small valve that
21 is on a sampling line. It is part of the containment
22 isolation and I believe it is normally closed by definition
23 which means if you have a loss of power it is normally to
24 close. You have got to put power on to open it. We are
25 concerned about this thing failing. What that means is that

1 if they tried to open it they probably couldn't. You don't
2 want to open it after an accident and it won't open,
3 incidentally, after an accident because it is a normally
4 closed system.

5 MR. DiBENEDETTO: I understand that and I can make
6 that argument for a lot of pieces of equipment but that is
7 not my responsibility. That is theirs. They should be
8 telling us that.

9 MR. JOHNSTON: Common sense says they shouldn't
10 waste their time telling us about things that are as obvious
11 as that.

12 MR. DiBENEDETTO: But then somebody always asks
13 you a question, where is your tangible evidence that
14 everything is okay, and I come back and say it is a gut
15 feeling.

16 MR. JOHNSTON: Some things are more important than
17 others.

18 MR. DiBENEDETTO: I understand that.

19 MR. JOHNSTON: And the most important things they
20 dang well need to, but to get nit-pickey and say that every
21 little one of these lines that comes out, which are normally
22 closed by definition, they ought to be able to say but you
23 ought to know that.

24 MR. DiBENEDETTO: They can make a generic
25 statement on that type of equipment.

1 MR. ROE: Phil, is it true that each licensee has
2 made a statement that they have analyzed and found that
3 continued operation is satisfactory?

4 MR. DiBENEDETTO: That is correct, each utility
5 has done that.

6 MR. GIBBON: I am not sure it says analyzed.

7 MR. DiBENEDETTO: Well, they have evaluated it and
8 reviewed it.

9 MR. GIBBON: Well, whatever.

10 MR. DiBENEDETTO: They have alluded to the fact
11 that they can safely operate the facility.

12 MR. ROE: We can pursue how they did that.

13 MR. DiBENEDETTO: Yes.

14 MR. VOLLMER: We required that as a part of our
15 original TERS before the SERs were issued and we went out
16 for a ten-day response. In other words, we were giving them
17 information they hadn't seen before theoretically and we
18 were asking them to judge with the new information we were
19 providing them and they still made that same statement.

20 MR. ROE: Were those 10-day responses, some of
21 them fairly brief?

22 MR. VOLLMER: Yes.

23 MR. DiBENEDETTO: Yes.

24 MR. CASE: They were unsupported statements.

25 MR. ROE: That is what we asked for then.

1 COMMISSIONER BRADFORD: So far the equipment that
2 we have checked has been outside containment and required to
3 function for a short time. Can anybody put their hands on a
4 piece of equipment that is inside containment and would have
5 to function for a number of days?

6 MR. ABBOTT: I looked through the list and I don't
7 see anything.

8 MR. ROE: It would be much better if we had a PWR.

9 MR. ABBOTT: The only thing that could possibly be
10 inside the containment were those SV valves but they are not
11 the SVs that I thought they were. Everything else looks to
12 me like it is outside.

13 MR. DiBENEDETTO: On a BWR there is not that much
14 inside.

15 MR. ABBOTT: Well, the stuff that is inside are
16 the MSIV limit switches, the solenoid valves on the safety
17 relief valves for ADS and the inboard isolation valves for
18 high pressure coolant injection and reactor core isolation
19 cooling.

20 MR. DiBENEDETTO: Which I also expect would have
21 to perform a function for a very short time.

22 MR. ABBOTT: Those two valves are normally open
23 and if you get an isolation signal they would have to drive
24 shut. So I am not sure what you would say about them. They
25 shut if the steamline break is outside of the containment.

1 MR. MARSH: There are some differential pressure
2 switches here.

3 MR. ABBOTT: They are all outside.

4 MR. MARSH: These are just pressure transmitters
5 that you are talking about?

6 MR. ABBOTT: Well, the transmitter and the DP cell
7 are all outside. The whole shootinmatch is outside. It is
8 all brought through the containment wall through isolation
9 valves. It is a spring-loaded shut valve.

10 MR. MARSH: I thought you said there were some of
11 them inside, some pressure switches that were inside.

12 MR. ABBOTT: The only switches that I can think of
13 are -- well, there aren't any switches inside except the
14 limit switches on the inboard MSIVs.

15 MR. MARSH: Just the limit switches?

16 MR. ABBOTT: Yes.

17 MR. CASE: On this question of how can we make the
18 licensees do better on justifying continued operation, I
19 sort of like the approach that Palladino has suggested at
20 least in that area where one of the things would be in a
21 rule, extending the date to whatever, would be a requirement
22 that the licensee justify operation given lack of
23 qualification and proof of qualification on I gather some
24 rather specific bases that they would have to identify.

25 If that were adopted by the Commission I could see

1 us listing a number of possible bases, criteria for
2 continued operation, and then another one saying anything
3 else that you think is reasonable, and them having to
4 identify for each piece of equipment that wasn't qualified,
5 choosing from that list or providing some other
6 justification. You know, that is a much better enforceable
7 basis than we have now.

8 COMMISSIONER BRADFORD: I understand what you are
9 saying. I am not sure that a component-by-component
10 justification is as burdensome as it sounds. There is no
11 reason by the licensee can't get it done on the first
12 go-round and just set up a classic justification and running
13 down his list just say see ---

14 MR. ROE: But they haven't provided that to us.

15 COMMISSIONER BRADFORD: That is right.

16 MR. ROE: We have asked them several times because
17 I have seen the criteria that we have asked for and maybe
18 they have it and maybe they don't.

19 MR. DiBENEDETTO: Some have but the majority have
20 not. I think you are right, it is not that difficult a job
21 for them on a generic basis by zone. In other words, if it
22 is inside containment they are using as ASCO MP series. A
23 solenoid valve they can define generically why it is okay if
24 it is not qualified for all applications inside containment
25 or all applications outside of the containment. We have

1 asked for that.

2 It is a matter of listing all those components of
3 a generic nature and doing an analysis one time and seeing
4 does it relate.

5 COMMISSIONER BRADFORD: Once they have gone to the
6 trouble of setting up these matrices in the first place it
7 would mean having one more box that you just haven't put a
8 number in keyed to a set of justifications.

9 MR. DiBENEDETTO: We have done this and pursued
10 this line of questioning and requirements with the NTOLs and
11 in our audits we are seeing this and we are accepting it.
12 In some places we are challenging the arguments.

13 MR. ROE: Are you seeing problems with their
14 justifications?

15 MR. DiBENEDETTO: No, sir. We are finding that
16 some of them are really detailed justifications and they are
17 engineering sound.

18 MR. CASE: But not all of them. We have some
19 problems.

20 MR. DiBENEDETTO: Some problems we have, but they
21 are resolvable and they can be fixed and we fix them before
22 we conclude our audit.

23 COMMISSIONER BRADFORD: It just sounds as though
24 it makes a big difference when the licensee feels there is
25 something at stake on the other side.

1 MR. CASE: We have got the leverage.

2 MR. ROE: Especially if it is in a rule.

3 MR. CASE: Yes.

4 COMMISSIONER BRADFORD: I have to go, but I don't
5 mean to cut short your pursuit of this problem.

6 (Laughter.)

7 MR. ABBOTT: Most of the numbers that are used are
8 typical for GE and just on my memory I don't see anything in
9 there that is inside the containment. It is all outside.

10 COMMISSIONER BRADFORD: Does anybody have anything
11 more?

12 (No response.)

13 COMMISSIONER BRADFORD: Thank you very much.

14 (Whereupon, at 11:55 p.m., the briefing concluded.)

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NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the

in the matter of: Briefing for Commissioner Bradford on SECY-81-486 -
Petition for Extension of Deadline for Environmental Qualification Class IE
Electrical Equipment · Date of Proceeding: October 2, 1981

Docket Number:

Place of Proceeding: Washington, D. C.

were held as herein appears, and that this is the original transcript thereof for the file of the Commission.

Mary C. Simons

Official Reporter (Typed)

Mary C Simons

Official Reporter (Signature)