

NUCLEAR REGULATORY COMMISSION

ORIGINAL

RETURN TO SECRETARIAT RECORDS

COMMISSION MEETING

In the Matter of: PUBLIC MEETING

PERIODIC STATUS REPORT ON PHASE II
OF SYSTEMATIC EVALUATION PROGRAM

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RETURN TO SECRETARIAT RECORDS

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1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION
3
4 PUBLIC MEETING
5 ON
6 PERIODIC STATUS REPORT ON PHASE II
7 OF SYSTEMATIC EVALUATION PROGRAM

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9 Room 1130
10 1717 H Street, N.W.
11 Washington, D.C.
12 Thursday, October 22, 1981

13 The meeting was convened, pursuant to notice, at
14 10:02 a.m.

15 BEFORE:

16 NUNZIO J. PALLADINO, Chairman
17 VICTOR GILINSKY, Commissioner
18 PETER A. BRADFORD, Commissioner
19 JOHN F. AHEARNE, Commissioner
20 THOMAS M. ROBERTS, Commissioner

21 PRESENT:

22 SAMUEL J. CHILK, Secretary
23 WILLIAM J. DIRCKS, Executive
24 Director for Operations
25 LEONARD BICKWIT, General Counsel
FORREST REMICK, Chief, Office of Policy Evaluations

26 ALSO PRESENT:

27 EDSON CASE
28 DARRELL EISENHUT
29 WILLIAM RUSSELL

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P R O C E E D I N G S

1
2 CHAIRMAN PALLADINO: Good morning, ladies and
3 gentlemen. The meeting will please come to order.

4 The subject of this morning's meeting is a
5 periodic status report of Phase II of SEP, the Systematic
6 Evaluation Program. This program involves the safety
7 evaluation of the oldest operating reactors against present
8 licensing criteria, starting with the 11 oldest plants under
9 Phase II.

10 Phase I, which was completed prior to the start of
11 Phase II in 1978, was concerned with identification of the
12 safety issues to be addressed.

13 This morning we will get a status report on Phase
14 II, the review of the 11 oldest plants. Unless there are
15 other comments the Commissioners have, I would suggest
16 turning the meeting over to Mr. Dircks, who will introduce
17 the presentations.

18 MR. DIRCKS: As you mentioned, Mr. Chairman, this
19 is another of the periodic briefings we have had on this
20 subject. We had a briefing about a year ago, and since then
21 we have had my memorandum to you in about February of this
22 year with an analysis of the program in conjunction with the
23 Bingham Amendment at that time.

24 Since that time there has been a good deal of
25 progress made, and Darrell Eisenhut will take us through the

1 various slides and will deal with the questions.

2 Did you want to --

3 MR. CASE: No.

4 MR. EISENHUT: Thank you.

5 Could I have the first slide.

6 (Slide.)

7 I propose walking through briefly a little bit of
8 background on the program; then discussing some of the
9 safety findings to date. That is, sort of where are we and
10 what have we found up to this point in the program; third,
11 going through an overall progress of how the program is
12 developing; and actually lastly discussing, now that we are
13 starting to get these difference pieces out of the program,
14 how are we going to integrate them together and come up with
15 the program, on what kind of a schedule.

16 (Slide.)

17 The next slide is just meant to be a little bit of
18 background of the program. Remember, the program was set up
19 as a program that was to review and document comparisons or
20 differences of these old plants with our current criteria.
21 The criteria here are used in the overall sense of the
22 regulations, the standard review plan, regulatory guides.
23 It is that umbrella, that envelope, that is made up of all
24 of the things that we do today for a new OL.

25 So it's a comparison of these old plants, really

1 how they stack up against those. That is, what are the
2 differences? You'll see here a little later on I use the
3 word "deviations." It's not really a deviation so much as
4 it's just the first phase of the program, comparing the
5 plant, how it compares with this envelope of criteria. The
6 program was to document that and provide a bases for coming
7 up with an integrated and overall balanced backfit
8 decision.

9 The scope of the program originally was 11
10 plants. We have dropped Dresden 1 from the program. A year
11 or so ago, Dresden 1 announced that it would be 1985, '86,
12 before they would propose restarting the plant, if in fact
13 then.

14 COMMISSIONER AHEARNE: Why would 1985, 1986 mean
15 it should be dropped from the SEP?

16 MR. EISENHUT: Well, it was to be dropped in about
17 the '79-'80 time frame, and at that time it was uncertain
18 whether or not Dresden would even come back at all with a
19 request for restarting the plant. It wasn't so much four or
20 five years, because of course, as you know, this program has
21 been going on since '78.

22 But if the plant restart was, let's say, six years
23 away, it was felt we could put it in the next group of
24 plants if in fact that should materialize. And hopefully
25 the next group would be more cost effective.

1 COMMISSIONER AHEARNE: And if the program slips
2 some more it will come back into the --

3 MR. EISENHUT: Well, yes. I hope that doesn't
4 happen. I think you'll get the feeling that that may not be
5 happening.

6 The program was aimed at reviewing 137 topics, 137
7 technical subjects. That list or that group was distilled
8 down out of an overall listing of technical subjects from
9 the ACRS, from within the staff. It started with something
10 like 1,000 topics. The staff's collective judgment was that
11 137 should be looked at on these older plants.

12 Other considerations in the program: You will
13 recall that seven of the plants, of the eleven plants, seven
14 of the eleven actually have provisional operating licenses.
15 They do not have full-term licenses. The regulations
16 provide for plants to continue with the provisional license
17 as long as there is a timely request for renewal.

18 Those seven plants requested conversion from a
19 provisional license to a full-term license, and this
20 program, the report that comes out at the end of the
21 program, was meant to suffice for going through the hearing
22 process, et cetera, with the document provided for
23 converting these licenses.

24 MR. CASE: That's an anachronism of our
25 regulations. It used to be in the regulations years ago a

1 POL, provisional operating license first, and then a
2 full-term operating license. It's no longer in the
3 regulations, so it doesn't apply to today's plants. But at
4 the time these plants were licensed, that was the system
5 used.

6 MR. DIRCKS: That's right.

7 MR. EISENHUT: Another piece we built into the program was
8 that if as you were going through the program you should
9 find a major safety question that required prompt action,
10 you would have to have that built into the system so that
11 those do flood up out of the program and do get prompt
12 attention. I'll discuss a couple of those in a minute.

13 The resources of the program: The program
14 actually actually started in February of '78 officially. It
15 took it a little bit longer to get it off the ground and it
16 was actually a year later before it actually got going.

17 To date, expended on the program has been about 93
18 staff years of effort and about \$5.8 million since 1978.
19 That is the actual expenditure number. We went, as we
20 termed them, the professional staff years, and for the
21 overhead factors, a certain amount of management is in
22 there. I think it's something on the order of 66
23 professional staff years, equating to about 93 total staff
24 years.

25 COMMISSIONER AHEARNE: So that, going back over

1 the previous years, if I dug out some of my older files,
2 including a briefing you gave us in May of last year, I
3 gather that there has been consistently expending less than
4 was budgeted in this item?

5 MR. EISENHUT: A couple of times that happened.
6 It happened noticeably following the Three Mile Island
7 accident.

8 COMMISSIONER AHEARNE: Well, according to the
9 chart you gave us a year ago, in '78 there was a budgeted
10 \$32 and expended \$18. Now as you pointed out, you hadn't
11 started yet. In '79 there was a budgeted \$32 and expended
12 \$25.

13 MR. EISENHUT: That's about right.

14 COMMISSIONER AHEARNE: In '80 there was a
15 budgeted \$32 and in '81 budgeted \$32. If I subtract what
16 was expended in '78 and '79, it means that you've averaged
17 about \$25 in '80 and '81 also.

18 MR. EISENHUT: I think that's right. Actually,
19 '81 has come up and, as I recall, '79 was a little lower and
20 '81 actually came up pretty close to the budgeted number.
21 So I think it is getting closer on track.

22 COMMISSIONER AHEARNE: So that you feel that '81
23 came close to the budgeted number?

24 MR. EISENHUT: I believe that's right. As I
25 recall the numbers are, the budgeted number in '81 was about

1 \$30.

2 COMMISSIONER AHEARNE: The budgeted number was \$32
3 in '81.

4 MR. EISENHUT: \$32?

5 COMMISSIONER AHEARNE: Yes.

6 MR. EISENHUT: And I think we actually expended
7 about \$31. That includes about four staff years of
8 overtime, but is still the budgeted number.

9 COMMISSIONER AHEARNE: So you are dropping from
10 what you expended in '81, because your next line in '82 is
11 \$23.

12 MR. EISENHUT: By this proposal, that's correct,
13 reflecting the fact that Phase II will be coming down,
14 that's right. The FY '82 budgeted number is 23 staff years
15 and \$1.25 million.

16 COMMISSIONER AHEARNE: That's reflecting that it's
17 coming down.

18 MR. EISENHUT: That's correct.

19 COMMISSIONER AHEARNE: But I guess as of about six
20 months ago it was still \$32.

21 MR. EISENHUT: That's correct.

22 COMMISSIONER AHEARNE: So that in the last six
23 months you've concluded that it is coming down?

24 MR. EISENHUT: No, I think what you see is a
25 switchover from the SEP to the other decision unit, which is

1 the NREP, which was the other piece of the memo that I think
2 Bill mentioned came down in February. You will see that
3 in-- I'll just skip to it right away.

4 Bob, could I go back to -- just use the last slide
5 on the schedule, slide 12.

6 (Slide.)

7 What you see here is the final decision dates for
8 the 11 SEP plants. You see that during FY '82 they start
9 becoming completed. So the program is tailing down, so to
10 speak. Towards the end of the program, and the integrated
11 staff years is in fact less in FY '82 than it is in FY '81,
12 and that is in fact -- these are the schedules that are in
13 the budget, what we are shooting for.

14 COMMISSIONER AHEARNE: I see.

15 CHAIRMAN PALLADINO: Your budget is going down as
16 Phase II goes down. Are there any other phases coming up?

17 MR. EISENHUT: Yes, there is.

18 CHAIRMAN PALLADINO: That is additional staff
19 years?

20 MR. EISENHUT: Yes. That is the Phase III that is
21 discussed in the budget package. There is another piece of
22 the overall program that is budgeted.

23 COMMISSIONER AHEARNE: But there is no money in
24 '82 for Phase III, at least I don't think there is.

25 MR. CASE: Yes, that is correct.

1 COMMISSIONER AHEARNE: That's what I thought.

2 CHAIRMAN PALLADINO: No staff years?

3 COMMISSIONER AHEARNE: No.

4 MR. EISENHUT: In FY '82. There is, however, two
5 staff years and \$400,000 called "initiate NREP," to lay out
6 that piece of the program. What we are trying to do -- as
7 you notice from the budget, there are really three pieces at
8 play in here. We are trying very much to keep the overall
9 budgeting in this effort pretty close to a constant. It
10 does come down in FY '82, it is fair to say that.

11 If I could go to the next slide. The next slide
12 is meant to highlight several of the issues.

13 (Slide.)

14 These are examples of issues that have come out of
15 the program that required prompt action. I will just
16 mention the top one. The staff issued an order on La Crosse
17 concerning liquefaction, which was the potential of soils to
18 liquefy following an earthquake. That issue is actually in
19 the hearing process. I'm not sure exactly where it is.

20 If I could skip on to a couple of the others. We
21 have actually issued 50.54(f) letters. 50.54(f) is that
22 section of the regulations that states that we command
23 utilities to give us information in order for us to decide
24 whether licenses should be suspended, modified or revoked.
25 We use that vehicle when we really feel we needed some

1 information in order to help us make some decisions on a
2 short time frame.

3 These are just examples of the kinds of things
4 that we're working on. I'll use one here as an example, the
5 San Onofre turbine building. San Onofre today is shut down,
6 and in fact we have a verbal hold on the plant until we
7 resolve this issue. We've been working with them and we
8 think it's actually expected pretty well to be resolved
9 based on the information of last week.

10 But this is an example of where an issue out of
11 SEP -- and this issue clearly came out of SEP. The question
12 was: Is the turbine building capable of withstanding the
13 effects of an earthquake or will it fall down under an
14 earthquake and impact safety-related systems? We have been
15 working on this problem with a large amount of resources
16 over the last few weeks. We took the position that we
17 wanted this issue resolved before the plant restarts, and in
18 fact this is impacting plant restart.

19 So the only thing I want to mention is, some of
20 these issues have turned out to find some prompt action
21 required on certain issues and they are in fact being worked
22 in a rather significant way. There are other items where
23 licensees have felt, as the issues have been identified,
24 that they have gone in and made modifications to the plant.

25 Here are some examples of ones where licensees

1 have gone in themselves and said they clearly recognized
2 that this difference from today's requirements, today's
3 criteria, they feel is significant enough to go in and make
4 changes in the plant. You can see the first two relate to
5 batteries at Palisades where they have gone in --

6 COMMISSIONER GILINSKY: Is that connected with
7 that SEP?

8 MR. EISENHUT: Yes, it is. These issues are all
9 as a result of the SEP.

10 COMMISSIONER GILINSKY: I thought it was a problem
11 in misconnection of batteries at Palisades and it was that
12 that led to changes in procedures.

13 MR. EISENHUT: There were some changes in the
14 procedures. These are actually replacing, going with new
15 batteries.

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1 As it turns out the batteries -- and you'll see
2 this in a couple of minutes -- we focus, as it turns out, on
3 Palisades as a typical plant, there are a number of things
4 relating to the batteries, the DC power system we found at
5 Palisades.

6 And again, this is meant to be indicative of the
7 fact that there are changes that are being made in the
8 plants today to improve the safety levels in those plants
9 that licensees are doing themselves.

10 MR. CASE: As a direct result of this program.

11 MR. EISENHUT: As a direct result of this
12 program.

13 (Slide.)

14 If I could go to the next slide -- and I'll be
15 coming back to Palisades in just a moment -- we started with
16 137 topics at each of 10 plants, so that's about 1370
17 issues. We found that a number of the issues we looked at
18 -- this list was meant to be enveloping each plant, the
19 137. It had some BWR issues, some PWR issues. So when you
20 look at a particular plant you find that certain are not
21 applicable, so you delete them.

22 On Palisades, for example, I think there were
23 about 20 issues out of 137 we deleted as not applicable.
24 There are a number of other issues that relate to, for
25 example, USI's. They are still in the developmental phase.

1 We don't have a new requirement today. So for the purposes
2 of this program we assumed they were either deleted until
3 the time that, if they're resolved prior to us making a
4 decision on any of these plants, we'll incorporate it, but
5 if the USI completion date is beyond the end of the program
6 then we delete it from the program and it will have to be
7 handled as we would the USI resolution on any of the other
8 plants.

9 So it leaves us with a total number of topics in
10 the SEP that had to be evaluated as 904. As of September
11 30th we had completed 440 of those.

12 MR. CASE: Darrell, you might, or maybe you do
13 later on, discuss what "completion" means.

14 MR. EISENHUT: Yes. If I could, I'll discuss that
15 in just a couple of moments.

16 We tried to put together some general observations
17 of what we found out of 440 that have been completed. The
18 general observations down here, really the words themselves
19 on this slide are not as descriptive as they should be.

20 We are finding that clearly the most resource
21 intensive evaluations are external phenomenon: seismic
22 events, flooding events, tornado loadings, et cetera. Those
23 are taking a very large fraction of our resources.

24 We find that other siting topics -- "demographic"
25 topics would be a better word -- are not really coming into

1 play that much. Population distribution; it turns out these
2 plants are pretty remotely sited. Exclusionary authority
3 and control, gas pipe lines through the site, the
4 demographic type things are turning out are not that
5 significant.

6 The last item is the one that I will actually
7 dwell on a little bit. That is, we are finding that a
8 considerable number of differences in the design of these
9 older plants as they compare to the NRC's criteria--
10 criteria requirements, it says here-- is really meant to be
11 again the regulations, the standard review plan, the reg
12 guides, et cetera.

13 COMMISSIONER AHEARNE: You say you're finding a
14 considerable number of deviations. Are these deviations in
15 their design versus the requirements, et cetera, when they
16 were approved?

17 MR. EISENHUT: No. That's why I say "deviations"
18 is not really the best word. That is why I choose to use--
19 there are more differences, because "deviations" carries the
20 wrong connotation.

21 CHAIRMAN PALLADINO: Cross out "deviations" and
22 put "differences."

23 MR. EISENHUT: That is right. And the comparison
24 that is being made is we're comparing the plant as it exists
25 sitting there today against today's requirements, that is

1 the requirements that would be put in place, the criteria,
2 the overall design envelope that would be put in place on a
3 new OL today. It's not a comparison against what --

4 CHAIRMAN PALLADINO: Are these differences that
5 don't relate to the two above, or are they differences that
6 include the above?

7 MR. EISENHUT: They really include the above, I
8 guess. The last bullet was meant to focus more on the
9 hardware physical things in the plant.

10 (Slide.)

11 The next slide -- no, you skipped one. Could you
12 go to slide 5.

13 (Slide.)

14 The overall topic status, plant by plant: What
15 this is is Figure 1-9 from the SEP tracking-- No, make it a
16 180 degree flipflop (talking to projection booth). There
17 you go.

18 What this page is meant to be is a page out of
19 our overall tracking system. It is page 1-9 in a book we
20 handed out to you, which is an SEP status summary book that
21 we put into place here recently. Over the last few months
22 we've been using this. The report comes out monthly. It's
23 meant to be getting a little better handle on tracking
24 progress on the report.

25 This page, I will focus on the first column, which

1 is Palisades. Palisades, it just basically tracks the data
2 I gave you. There were 137 topics to start with. 44 were
3 deleted on Palisades. Again, it was about half because they
4 were not applicable to Palisades, about half because they
5 were USI's and other items that are still developmental,
6 leaving about 93 items to be completed on Palisades itself.

7 There's actually three divisions in NRR that are
8 tracking work here. We tracked completions versus their
9 assignments in each division.

10 The important part is that you see at the bottom
11 there are 77 complete out of 93 topics. The fine-tuning is
12 more for our own internal tracking.

13 COMMISSIONER AHEARNE: I notice, Darrell, if I
14 look at Table 1-9 in the book, it has a big stamp "draft" on
15 it.

16 MR. EISENHUT: That is correct.

17 COMMISSIONER AHEARNE: Does that mean that these
18 numbers are different than the ones in the book?

19 MR. EISENHUT: These numbers are the best we've
20 got. The draft is only indicative of the fact we've been
21 trying to develop better ways of tracking progress.

22 COMMISSIONER AHEARNE: The numbers are correct.

23 MR. EISENHUT: The numbers on the sheet I handed
24 out are correct and I think they're identical to the ones in
25 the book.

1 MR. CASE: With one difference.

2 MR. EISENHUT: The table we handed out is the most
3 up to date. Presumably, if we're making the progress we
4 hope to, the numbers on some plants change practically
5 daily.

6 So what I'll be doing is focusing on Palisades.
7 And there are really 77 out of 93 complete. The book may
8 have had 76.

9 CHAIRMAN PALLADINO: This is as of today?

10 MR. EISENHUT: Yes, this is as of today. In fact,
11 while we were preparing the briefing one item got
12 completed. It went from 76 to 77.

13 COMMISSIONER AHEARNE: Are all these people across
14 the top, is this an SEP branch?

15 MR. EISENHUT: The people across the top, you'll
16 see the name "Michaels," et cetera, across the top. These
17 are people in the SEP branch working directly for Bill
18 Russell, who's the branch chief. They have been designated
19 the integrated assessment project manager. Their job is not
20 only to help see that progress is being made on all the
21 numbers, but they are trying to distill this huge stack of
22 paper we're getting out of the program down to something
23 meaningful.

24 We are going to try to take Palisades and give you
25 a little feel of what's coming out of Palisades, the kinds

1 of things coming out and what it looks like. We will be
2 using it as an example. We could just as easily have used
3 the next plant today, but we have designated Palisades as
4 the plant that is our lead plant.

5 Now, could I have slide 5A. It's the one of
6 requirements as a function of time, plants as a function of
7 time, et cetera.

8 (Slide.)

9 This slide is actually a slide that I put together
10 about a year ago. A number of the boxes may not be
11 completely right on future plants, et cetera, but it
12 certainly indicates where we were heading.

13 Each plant in the United States is noted as a
14 little box here. This shows when they become operational.
15 You'll see -- you'll start seeing dotted boxes in 1981.
16 That's because this was developed, the slide was put
17 together about a year ago in the middle of '81. And
18 actually it's very difficult to tell, but the two little
19 boxes that are sort of half-dotted were the ones that had
20 low power licenses at the time.

21 But this was a -- we tried to look at how
22 requirements changed as a function of time, how plants
23 received OL's as a function of time, and how they were
24 projected to. The SEP plants are noted by the solid boxes.
25 You can see that the dates they got OL's varied from 1959 to

1 1971. The rest of the OL's, the years they became
2 operational are denoted by this clear box.

3 The line that goes up through the chart is the
4 number of regulatory guides that were issued as a function
5 of time. Up through 1980 there were about 150 division one
6 regulatory guides, that is those that directly related to
7 reactors.

8 You will see down at the bottom in the little
9 notes at the bottom the draft GDC came out, general design
10 criteria came out in '65. We came out with a safety
11 analysis report guidance document pointing out what has to
12 be in safety analyses in 1966. The first safety guides,
13 which later got changed to regulatory guides, came out, I
14 believe, in January of 1970. There was a batch of ten of
15 those.

16 The general design criteria as we know them today
17 came out in 1971. The standard format and guide for the
18 content of safety analysis reports came out originally in
19 '72 in complete form; the standard review plan and the
20 revised content document in '75.

21 Now, you will see up at the top of the chart some
22 little boxes. That shows from about 1975 through 1978 we
23 were using the original standard review plan. Then we
24 switched over to a current standard review plan, and this
25 actually was developed when our target was April '81 for the

1 revised SRP. As you now know, it's --

2 MR. CASE: It is out.

3 MR. EISENHUT: September. The new revised SRP is
4 out.

5 This chart was put together so that -- because I
6 felt in a snapshot it shows how the requirements changed in
7 time and it shows that the SEP plants particularly go way
8 back in time. That is -- now the plant we will focus on is
9 Palisades, which is the black box for 1971. It's the most
10 recent SEP plant.

11 We picked on Palisades, so to speak, and decided
12 to do it first because we thought and felt that the
13 differences from the current criteria would be minimal. We
14 wanted to pick, in other words, the easiest plant first.

15 MR. CASE: Minimal for that group of plants.

16 MR. EISENHUT: Minimal for that group.

17 COMMISSIONER GILINSKY: How does average power
18 vary over that period, say late 60's to early 70's? At what
19 point do you start getting 1,000 megawatt plants?

20 MR. EISENHUT: 1,000 megawatts probably came in
21 the mid to late 70's.

22 COMMISSIONER GILINSKY: What about say 900? What
23 were those plants in '73 and '74?

24 MR. EISENHUT: Mid-70's I reckon is when the
25 plants started going up.

1 COMMISSIONER GILINSKY: What about that peak in
2 '73 and '74? What was the average rating of those plants?

3 MR. EISENHUT: Let me give you the data point on
4 that.

5 MR. RUSSELL: Is that on back up slide 1,
6 Darrell?

7 MR. EISENHUT: Bob, could we have backup slide 1?

8 CHAIRMAN PALLADINO: Can I ask you, two of the
9 boxes have X's in them.

10 MR. EISENHUT: Those two plants I believe are
11 Indian Point and Humboldt Bay, as I recall, because those
12 plants are indefinitely shut down.

13 COMMISSIONER AHEARNE: Indian Point 1.

14 MR. EISENHUT: I'm sorry. Indian Point 1 and
15 Humboldt Bay.

16 COMMISSIONER GILINSKY: You've got a couple of 800
17 megawatt plants there.

18 MR. EISENHUT: Palisades was the biggest thing at
19 the time.

20 COMMISSIONER GILINSKY: What were the plants in
21 '73 and '74?

22 MR. EISENHUT: I don't remember. I just don't
23 know. Well, they were typically in the ballparks of the 600
24 to 800 range, I believe.

25 MR. CASE: I just don't remember.

1 MR. EISENHUT: I just don't remember either. I
2 would have to go back and --

3 MR. CASE: It's easy to get that for you.

4 MR. EISENHUT: So you can see that what you have
5 over this period of time is you have these plants, which
6 goes back to Dresden 1, receiving their provisional license
7 in 1959, which predates all of the general design criteria,
8 all of the SAR guidance, all of the regulatory guide
9 criteria, all of the standard review plan discussion.

10 In fact, you will see that several of these go
11 back and predate a good bit of that. So they were designed
12 and built at a time when we did not have these definitive
13 criteria.

14 You can also see typically the very first ones are
15 lower in terms of megawatts. They turn out to be pretty
16 remotely sited. So the spectrum here is a 12-year spectrum
17 that we undertook in SEP.

18 Now, the reason we picked up plants at the bottom,
19 the bottom few plants, was because you will notice the
20 Dresden 2, Millstone, Palisades, et cetera, still have
21 provisional operating licenses. They were not converted to
22 full-term licenses, so that's why we added them in the
23 program.

24 COMMISSIONER AHEARNE: That's the difference, from
25 '69 on there are some that you didn't pick up.

1 MR. EISENHUT: That is correct.

2 COMMISSIONER AHEARNE: Is that the distinction?

3 MR. EISENHUT: That is correct.

4 Bob, could we go back to the slide we had there,

5 Slide 5A?

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1 (Slide.)

2 The other thing I want to point out is the date of
3 the plants on the right -- that is, the projected plants --
4 they don't correspond to the dates we have today, I don't
5 believe, in the latest bubble. Of course they change from
6 year to year; month to month they change. But, again, it is
7 indicative. There is a big hump on this slide.

8 COMMISSIONER BRADFORD: Darrell, I take it there
9 is no way to tell from that what part of the regulations
10 that are embodied by the black line actually apply to the
11 plants that fall on the line? That is, since regulations
12 tended to often be applied to plants only off into the
13 future, you would probably have to move the line forward?

14 MR. EISENHUT: That is right.

15 COMMISSIONER AHEARNE: The black line --

16 MR. EISENHUT: The black line is regulatory
17 "guides."

18 COMMISSIONER AHEARNE: It's not regulations.

19 MR. EISENHUT: It's not really regulations.

20 COMMISSIONER GILINSKY: They're probably more
21 important.

22 COMMISSIONER BRADFORD: But as far as the way in
23 which they fell on the plants, though, there is no reason to
24 think that a plant being completed at the moment that the
25 regulatory guide came out, say in 1973, would fall into

1 compliance with that guide.

2 MR. CASE: Well, there may be.

3 COMMISSIONER BRADFORD: They might; they might
4 not, but--

5 MR. CASE: They develop from staff licensing
6 positions that were then codified into draft guides that
7 then were made into final guides, so in general the staff
8 position preceded the guide by a couple of years, perhaps.
9 So there's that lag time or advance time involved.

10 COMMISSIONER BRADFORD: I see.

11 COMMISSIONER AHEARNE: But there's no automatic --

12 MR. CASE: There's no automatic, no.

13 MR. EISENHUT: But I think it does give one a
14 feeling for what we are really up against in terms of time.

15 MR. CASE: Qualitative.

16 MR. EISENHUT: As qualitative as it may be.

17 MR. CASE: And quantitative.

18 MR. EISENHUT: It is clearly not quantitative.

19 MR. EISENHUT: Now could we go back to slide 6,

20 Bob?

21 (Slide.)

22 Again, we'll focus on Palisades. It's our lead
23 plant. It's our lead plant because it was a --

24 COMMISSIONER BRADFORD: I'm sorry, one more
25 question on that last slide. What do the numbers on the

1 righthand side represent, the vertical line?

2 MR. EISENHUT: On this slide?

3 COMMISSIONER BRADFORD: No, the one before it, the
4 numbers zero to 150, whatever that was.

5 MR. EISENHUT: That's the number of Division I
6 regulatory guides.

7 MR. CASE: Approved.

8 MR. EISENHUT: Issued. It doesn't really show
9 that the line is correlated with the righthand side. That's
10 a good point.

11 Could we go to the next slide, slide 6?

12 (Slide.)

13 Focusing now on Palisades, it's broken down in a
14 slightly different way. This is, we are going to try to
15 convey what it means, what we have found to date on the
16 Palisades project.

17 Of the 137, again, the 44 was either deleted or
18 beyond the scope, they're in USIs, et cetera. Of the
19 remaining items we found that 51 of the topics reviewed, the
20 plant in essence meets our current criteria, that is, what
21 would be applied to an OL, or an equivalent.

22 So we found that 51 of the 93, 94 issues in fact
23 we can just in essence mark off and say the plant meets
24 those current criteria.

25 So we really focus on the remaining items. To

1 date we have looked at and completed our work of the
2 remaining, the 3 and the 23. Of the 3, there were 3 items
3 that were completed where the Licensee has gone in and
4 proposed to make modifications to these plants to make them
5 acceptable.

6 There is really sort of 3-1/2. If I could have
7 the next slide, we list those three topics, what they are
8 and what has been proposed.

9 (Slide.)

10 Very simply, the first one has to do with
11 monitoring the diesel generators in the control room so that
12 you know that they are basically the status. You have them
13 alarmed and indicated in the control room. The utility is
14 proposing to fix that.

15 The second one relates to the DC power system and
16 he has already implemented provisions to have better
17 indication and monitoring in the control room.

18 The third one related to seismic design
19 considerations. And there, actually it's a generic subject
20 that we've gone across the board to all the plants with by
21 information notices. They have implemented modifications to
22 have better anchorage and support of electrical equipment.

23 We actually found, I believe in the SEP we found--
24 and again it was a direct feedback out of the SEP -- it
25 started when we found the batteries sitting on the table,

1 the station batteries literally sitting on a table in the
2 plant, such that under an earthquake the batteries could be
3 off the table.

4 We found the same thing with electrical cabinets.
5 So, in fact, plants are making modifications to have better
6 hold-down to ensure that the batteries are there and will be
7 reliable following an earthquake event.

8 COMMISSIONER BRADFORD: What kind of a commitment
9 would those plants have made in the course of being licensed
10 regarding seismic qualification?

11 MR. EISENHUT: I don't think we really had a
12 requirement, per se. The ones that this originally really
13 came up on actually predated the point where we really had
14 the firm seismic requirements that we have in fact today.

15 COMMISSIONER BRADFORD: There was not even a
16 general design criterion?

17 MR. EISENHUT: I don't believe so.

18 So what we did there was, since this is a topic of
19 such importance, we went out to the entire operating
20 industry by information notice; that this is clearly
21 something you should look into. And those plants that have
22 found this problem are in fact fixing it, something as
23 simple as welding electrical cabinets to the floor,
24 fastening them down in some sense.

25 So this is a -- I personally happened to have felt

1 that this was one of the first major issues, when it came up
2 chronologically in time, when we really found something that
3 had to be fixed in plants and the plants went out to fix
4 it.

5 COMMISSIONER GILINSKY: What is the standard that
6 you apply when you discover a difference between what is
7 required today and what is in fact in place at the plant?

8 MR. EISENHUT: The standard in the sense of we
9 compare it against the current criteria.

10 COMMISSIONER GILINSKY: Right.

11 MR. EISENHUT: What we do then, it is almost a
12 qualitative look at what you really do with this collection
13 that you find and if I could hold off just for a couple of
14 seconds, we'll get to that in just about two slides.

15 A couple of other items were fixed under the
16 seismic design, and again this is Palisades-specific list of
17 what was done at Palisades. The diesel generator oil tank
18 was supported better, electrical panel anchorages were
19 upgraded.

20 One other item -- it's not a completed item yet;
21 it's only partially completed -- was the overall
22 reliability, dependability of the batteries. Palisades went
23 and put new batteries in, batteries that can go, I believe,
24 from 30-minute to a two-hour minimum capacity. So they
25 upgraded the batteries.

1 Now, Bob, could I go back to slide 6?

2 (Slide.)

3 This leaves us with 39 topics remaining on
4 Palisades. In 23 we have found differences between our
5 current requirements, current criteria, and what is there in
6 the plant.

7 Now we get faced with the question of: Well,
8 we've looked at 23 and we still have 16 to go, the 16 are --

9 COMMISSIONER BRADFORD: "Current criteria" means?

10 MR. EISENHUT: It's a little bit loose words, but
11 it is the regulations, standard review plan, and regulatory
12 guides, that package that we look at today against a new
13 OL.

14 COMMISSIONER BRADFORD: It's not the updated SRP?

15 MR. CASE: More or less.

16 MR. EISENHUT: More or less, because the new SRP
17 is supposed to be what the Staff is really doing, and it was
18 really documenting what the Staff was internally using. So
19 that level is what should implicitly be being used in this
20 process, even without a published "new SRP" on the streets.

21 So it raises the question of: Where are you?
22 What do you do as you go through the program? Remember, on
23 the one hand, you have the thought that the program was
24 meant to go through all 39, assess the differences, and look
25 at them in an integrated sense.

1 Now of the 16, I should say first, some of the big
2 issues are still remaining in 16. So there are some
3 significant issues that are not yet resolved.

4 COMMISSIONER GILINSKY: Could you go into that?

5 MR. EISENHUT: I will, again if I could wait just
6 one minute. I have a listing for you in a second.

7 (Laughter.)

8 MR. EISENHUT: I would like to focus first on the
9 23. Let me go to slide 8.

10 (Slide.)

11 This just happens to be a listing of the areas
12 where we found they did not meet today's approach. There's
13 no particular order here, no significance for the ordering,
14 except they go down numerically from the SEP listing.

15 I guess I should caution you on a couple of
16 things. First, this is a preliminary list. We are taking a
17 snapshot in the middle of the program. This list, for
18 example, went from 24 to 23 in the last week, and some other
19 items may drop off as we learn new information.

20 We tried to assess at this interim point to get a
21 characterization -- sort of a feeling -- of what do we
22 really have here. In doing that we have tried to group them
23 into several different groups. There are different ways you
24 can look at these.

25 The next page, the next slide, slide 9, please.

1 (Slide.)

2 We put them in four different groups: Those that
3 directly relate to increasing the likelihood of accidents,
4 that is, or relating to really the initiation of accidents.
5 There are two of those. What I propose to do in a minute,
6 we will discuss one typical example from each of the four
7 groups to give you a better characterization of what these
8 are.

9 The second group relates to safe shutdown, given
10 another event. And recognizing that that given event is of
11 some -- not a really super low probability but it's a pretty
12 reasonably low probability event, an external flood where
13 again our design criterias have been pretty remotely low
14 flood; given a tornado, and remember there are design
15 tornados, a pretty unique tornado. We picked the 360-mile
16 wind speed from Kansas. We picked the frequency from
17 Oklahoma. We put it together in a package and that's the
18 "design tornado". But these all relate to safe shutdown,
19 given some other event.

20 The third category relates to accident
21 mitigation.

22 CHAIRMAN PALLADINO: What do you mean, "given some
23 other event"? Do you mean given an event --

24 MR. CASE: Given a flood.

25 MR. EISENHUT: Given a flood, given a tornado,

1 given an accident where the "given" part has perhaps a
2 ⁻³ 10 on it.

3 CHAIRMAN PALLADINO: But you didn't mean something
4 given other than the external flood, for example?

5 MR. EISENHUT: No, that is right; I did not.

6 The third set are those that relate to accident
7 mitigation, assuming an accident occurs. So again you have
8 to have the accident and its associated probability before
9 these become of concern.

10 And the last one is "other," literally other.
11 It's sort of what's left if they don't fall into these
12 events.

13 To give you a better idea of what some of these
14 look like will be Bill Russell, who as I mentioned earlier
15 is the Branch Chief of the program. We picked a typical one
16 from each to give you a short discussion of what the topic
17 looks like.

18 CHAIRMAN PALLADINO: What do those parentheses
19 mean?

20 MR. EISENHUT: The parentheses are the number of
21 topics from the previous page --

22 MR. CASE: In that bin.

23 MR. EISENHUT: -- in that bin.

24 For example, if you look at the second set, there
25 are 3 topics out of the 23 that relate to floods. There are

1 2 that relate to tornados. We tried to group them somehow
2 to really get a characterization of what have we found up to
3 this point in time.

4 Bill?

5 (Slide.)

6 MR. RUSSELL: There was a second handout that was
7 given which has the previous slide on it as a cover list.
8 Within that is the topic identification and identification
9 of what the difference is and what the portion of the
10 regulation standard review plan is that establishes what we
11 would currently require on a new plant today.

12 In the first category, those related to accident
13 initiation, it's covered on page four in that handout,
14 associated with the RHR system.

15 MR. EISENHUT: Bill, if I could, while they're
16 checking the paper, one thing I should point out is as we
17 have gone through the program and completed a topic our
18 writeup on the topic gets issued to the licensee by letter
19 and he gets asked to correct any factual technical
20 mistakes. It goes into PDR.

21 If you look, there is a backup on many topics, on
22 each of these 23. This notebook actually contains those 23
23 SERs which were issued over the last year (indicating).
24 There is a detailed writeup that's been issued to the
25 utility. It goes into the PDR. It's publicly available on

1 each of these topics.

2 In addition, the characterization of what the real
3 difference is, to be sure we characterize it and be sure we
4 have agreement on it, we meet with the utility. We meet
5 with them with our draft writeup and say, do we all clearly
6 understand that this is really how this plant differs from
7 today's requirements?

8 The thing that Bill is referring to, the paragraph
9 writeups, are in fact the set of writeups that we went
10 through with the utility to be sure that we understood
11 exactly what's in the plant, because the documentation
12 record is not always as good as it should be on these old
13 plants, because the requirement wasn't there for
14 documentation.

15 MR. RUSSELL: The example of the first type that
16 relates to potential initiation of accidents is a situation
17 where you have two valves on the low pressure portion of the
18 shutdown cooling system which can be lined up to the reactor
19 coolant system and the valves have a single interlock to
20 control both valves.

21 Currently we would require independent interlocks,
22 one interlock for each valve, so that with failure of an
23 interlock area you would not have a result where you
24 overpressurize or shutdown the reactor coolant system.

25 An example in the second area relates to wind and

1 tornado loadings. The one I used is on page one, where
2 we've identified areas in the plant. It is the last one on
3 page one. There are areas in the plant which do not have
4 protection for wind and tornado loadings.

5 The first one is the --

6 MR. CASE: Those are 360-mile winds.

7 MR. RUSSELL: In this case it's a 360-mile wind.

8 CHAIRMAN PALLADINO: Do you know what the loading
9 capabilities of these items might be?

10 MR. RUSSELL: On some of the older plants we are
11 looking at the capacity as built and then judging what the
12 ability is to withstand wind speeds of various probability.
13 We have not done that on this plant because this plant was
14 designed to a higher wind speed.

15 The review of that, the 360-mile-an-hour wind, was
16 what was used on Palisades.

17 CHAIRMAN PALLADINO: But it wasn't used on these
18 items?

19 MR. RUSSELL: For example, the safety rejection
20 refueling water tank is on top of the building. It's
21 elevated. It would only be needed in the event that you had
22 a compounding accident, in this case a loss of coolant
23 accident. They do have the ability to safely shut down
24 without that tank.

25 MR. EISENHUT: Mr. Chairman, you are right. They

1 were not used on these components. That is the key. In
2 fact, if you look at the second item there, the supply and
3 exhaust duct work for the diesels, you will remember this
4 happened to be a topic we discussed on Sequoyah where the
5 diesels were unprotected from the top of the roof.

6 This is the very same kind of issue we found at
7 Sequoyah that we required to fix in Sequoyah. I think it
8 came up on Sequoyah 2, actually. We found the same kind of
9 problem at Palisades.

10 Now these writeups also, we tie them back to both
11 the regulations, the reg guides, the standard review plans
12 and this kind of a document. That's the other thing you
13 should note in the writeup. So the track record is clear.
14 There is a requirement that these things be protected on a
15 new plant.

16 The issue then becomes, on a plant like Palisades,
17 do you require them to be updated and how fast do you
18 require them to be updated.

19 CHAIRMAN PALLADINO: Still, my question applies.
20 We could find out what wind speeds these components would
21 withstand?

22 MR. EISENHUT: That's absolutely right. That's
23 the job in front of us.

24 CHAIRMAN PALLADINO: To get a feel for how close
25 or how far away?

1 MR. RUSSELL: That is in fact being done and
2 that's the status we have right now, where we have evaluated
3 the capacity of the building and structures.

4 CHAIRMAN PALLADINO: But you haven't done it yet
5 on Palisades?

6 MR. RUSSELL: On Palisades we have not yet done
7 that for these components.

8 MR. EISENHUT: But you are certainly right. That
9 is the key question we are asking on each one of these
10 topics. That's sort of where we are in this program.

11 MR. CASE: In other words, you have to decide what
12 information you need.

13 COMMISSIONER AHEARNE: Could you walk through them
14 a little bit further? You are saying that you are now doing
15 that evaluation. Let's suppose you have completed that
16 evaluation and you find that it can withstand 250.

17 MR. EISENHUT: If I could wait until the next
18 slide.

19 (Laughter.)

20 MR. EISENHUT: The obvious question you have to
21 ask is, we clearly are telling you we have a menu. We have
22 a menu -- this motley array of 23 things -- that we have
23 found so far. We have to ask you a question every time you
24 put another one on the plate. It may be 39 before we are
25 done.

1 The question really is how do we digest this
2 39-course menu.

3 COMMISSIONER AHEARNE: And then what do you do?

4 MR. EISENHUT: Right.

5 CHAIRMAN PALLADINO: You hope you can get a few of
6 them off the plate.

7 MR. EISENHUT: Right.

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1 MR. RUSSELL: If I could go into an example of the
2 third grouping, the one I have selected as a high/low
3 pressure interface in the ECCS system, which is discussed on
4 page 5 of your handout. In this situation upon normal
5 actuation of the emergency core cooling systems, the high
6 and low pressure ECCS systems are separated by a single
7 check valve such as the interface between the high and low
8 pressure system is not the typical two valves the current
9 regulations would require.

10 The failure of that valve could result in
11 overpressurization of the lower pressure ECCS system and
12 would divert high pressure ECCS flow from the reactor into
13 the low pressure system. This is what we are looking at.
14 During the present outage they are replacing that valve and
15 they're implementing testing on the valve to verify the
16 adequacy of valve position indication. That is what's going
17 on now.

18 And example of the last category is on the last
19 page. This is one that falls into the category where we
20 find that the analysis that is performed for accidents and
21 transients is not consistent with the assumptions that are
22 made for current accident and transient analysis. In this
23 case, it is steam line breaks and their effects on the core,
24 and various single failures were not evaluated in the
25 analysis to demonstrate the worst events on the core and

1 that it had adequate protection.

2 The single failure of this main steam isolation
3 valve, the failure of a diesel generator with a loss of
4 offsite power, and the failure of main feedwater to isolate
5 such that you continue to put cold water into the steam
6 generator. We have not had that evaluated by the staff.
7 The licensee has recently submitted those analyses to the
8 staff and has gone back and redone them. We have not yet
9 completed our review.

10 There are more examples which are contained in the
11 handout, but those are representative of the groupings that
12 we used.

13 CHAIRMAN PALLADINO: Do we have any feel, or do
14 you have any plans to get a feel, for what risks we have
15 added or what risk there is because they don't meet specific
16 criteria? Not all of them present an equal risk and some of
17 them you may very definitely want to take care of, and some
18 of them you conceivably might say that is close enough, the
19 risk is so small.

20 MR. EISENHUT: If I could, you are two slides
21 away.

22 COMMISSIONER AHEARNE: Let me ask about the
23 package. Let's just take Palisades as an example. You have
24 they do not meet the current criteria, the equivalent. I
25 noticed at least two of the ones that Bill just talked

1 about, the lack of meeting the criteria was that they have
2 not done an analysis. Can you make a rough estimate of the
3 percentage of the topics that are in the category of not
4 meeting current criteria equivalent where the not meeting is
5 there is not available an analysis?

6 MR. RUSSELL: That was the only one that fell into
7 that category for Palisades thus far. There are some still
8 pending in the ones we are reviewing, but in the group of 23
9 that's the only one that fell into that category.

10 We do have some where we found that the
11 administrative procedures of the plant do not meet what we
12 would require currently, so there are some administrative
13 procedural items on the list as well as hardware backfits.
14 The administrative procedural is probably three or four on
15 the list of 23.

16 MR. EISENHUT: All right, if I can go to the next
17 slide.

18 (Slide.)

19 This again is -- I apologize that the slide is
20 hard to read. It is, again, a page out of the book of our
21 tracking system. This happens to be questions asked earlier
22 about the remaining 16 of what it is that we have to do on
23 Palisades. This happens to be the sheet from our book of
24 what remains yet to be analyzed at Palisades.

25 COMMISSIONER AHEARNE: I remind you that you said

1 the next slide was going to cover --

2 MR. EISENHUT: I know, and it's the second slide,
3 I apologize.

4 (Laughter.)

5 MR. EISENHUT: In fact, I think it's even three
6 slides away because I'm going to insert one that you didn't
7 know about.

8 (Laughter.)

9 MR. EISENHUT: Let me give you just a couple of
10 examples and then I'll just briefly summarize.

11 There are some key issues here. The first topic
12 is the seismic design of the plant. I point out that
13 several of these plants that go back very early in time do
14 not have a special seismic design. They were built to the
15 unified building code. The NRC did not have seismic design
16 requirements at that time.

17 COMMISSIONER GILINSKY: But that wouldn't apply
18 for Palisades.

19 MR. EISENHUT: It would not apply to Palisades.

20 COMMISSIONER GILINSKY: I mean, that would apply
21 to the first couple of plants.

22 MR. EISENHUT: That's right, so this is
23 classification of structures, components and systems,
24 seismic and quality groups. Palisades, as it turns out, the
25 overall seismic design is working out to be pretty much not

1 a big issue. They do have a seismic design of the
2 structures, et cetera, in the plant. The only point I'm
3 making is that that first topic is a big topic on some
4 plants.

5 The second --

6 CHAIRMAN PALLADINO: My memory may be faulty, but
7 it seems to me that seismicity was the issue that was
8 paramount in 1964 when it entered the ACRS.

9 MR. EISENHUT: Yes, it was.

10 CHAIRMAN PALLADINO: And it never left the scene.
11 Now, whether or not we had the specific criteria that we
12 have today, whether or not they were to the same magnitude I
13 say my memory is not good enough to tell you that. But it
14 seems to me that there were seismic criteria --

15 MR. EISENHUT: You're absolutely right. If I
16 could use slide 5(a), it's clearly on slide 5(a). Could I
17 go back to that for a second?

18 There are three plants that were operating in
19 1959, '60 and '62. They were operating already, which means
20 they were built prior to that. Those plants have no real
21 seismic design bases. They were three plants that became
22 operational in 1967 and they have some seismic design, and
23 then the plants that became operational in 1969, '70 and '71
24 are tending to turn out to be all right. Palisades is,
25 therefore, turning out to be all right.

1 The point I was making is that there is clearly
2 that transition. It became a significant issue in the
3 mid-sixties. You can clearly see this here. Look at the
4 point of the mid-sixties; 67 plants you'd expect to be sort
5 of on the edge, where they are -- the later plants you would
6 expect to be all right, which they are.

7 (Slide.)

8 The second topic here, if I could go back to slide
9 10, the second topic happens to be pipe break inside
10 containment, the effects of pipe break -- "effects" being
11 in terms of pipe whip, jet impingement, et cetera. There is
12 one that was not an issue in the mid-sixties and is turning
13 out to be a problem for all ten of these plants. Because
14 while you worried about steam effects, temperature, pressure
15 inside containment, the pipe whipping effects were not
16 specifically taken into consideration.

17 Jet impingement -- that is, is the jet going to
18 destroy some other equipment?

19 CHAIRMAN PALLADINO: Pipe whip came in about 1970,
20 perhaps 1969?

21 MR. EISENHUT: I think that's where it was. I
22 think it picked it up on Dresden 3 but not Dresden 2, as I
23 recall.

24 CHAIRMAN PALLADINO: Palisades didn't have any
25 pipe whip?

1 MR. EISENHUT: Palisades, to the best of my
2 knowledge -- Bill?

3 MR. RUSSELL: That's a very difficult topic for
4 the staff. There are many, in round numbers about 200 break
5 locations where we may have difficulties in resolving them
6 where we have not completed our review. The effect may
7 involve safety-related equipment. The plant was not
8 designed to accommodate those effects, so it is not
9 surprising that we have many more locations on these older
10 plants than we would even for a new OL today to evaluate for
11 pipe break inside containment.

12 MR. EISENHUT: I would only mention one more on
13 this slide. If you go over to the middle of the righthand
14 side, you see a topic called "containment leak testing."
15 The little writing underneath says "multi-plant A-04."
16 That's the re-evaluation of containment leak testing per
17 Appendix J. The multi-plant issue just means that that's an
18 issue we are working on on all the operating plants. It's
19 an issue that is sort of independent.

20 It started off as being an issue that we are
21 backfitting all plants, or we are relooking at. It's one
22 of the backlog issues on operating reactors. But since that
23 issue is very close to SEP topics, we sweep our review of
24 A-04 into this program.

25 CHAIRMAN PALLADINO: What do you mean by

1 "containment leak testing"? They didn't do it? What is
2 that issue?

3 MR. EISENHUT: Do you want to characterize it,
4 Bill?

5 MR. RUSSELL: The issue, what's being looked at,
6 is a request for exemptions from requirements of Appendix J
7 for various types of leak testing where the design of the
8 facility did not accommodate that kind of testing when it
9 was originally built.

10 MR. EISENHUT: Appendix J came out when? Sometime
11 in the seventies?

12 MR. RUSSELL: Early to mid-seventies.

13 MR. EISENHUT: I should point out we are still
14 having -- this is the same discussion we have had for all
15 the OL's. The new OL's even today do not meet Appendix J
16 explicitly and have been given exemptions.

17 CHAIRMAN PALLADINO: It doesn't necessarily mean
18 that the plant is unsafe.

19 MR. EISENHUT: Oh no, clearly not.

20 COMMISSIONER AHEARNE: Does it mean something more
21 than that you're examining it to see whether, like the new
22 OL's, it has to have a waiver?

23 MR. EISENHUT: Pretty much that's the issue, yes.
24 Familiar sounding ring.

25 COMMISSIONER AHEARNE: Oh, that sounds very

1 significant.

2 (Laughter.)

3 CHAIRMAN PALLADINO: Are we discovering that with
4 some maybe the fault is not so much with the fact that they
5 don't meet it, but maybe that it should be changed?

6 MR. EISENHUT: That happens to be my opinion. A
7 piece of it has been changed.

8 COMMISSIONER AHEARNE: In fact, they've come up
9 every time when they have to grant that on a new one and
10 they say: Oh, yes, we have to change that. And it's
11 working its way up through the staff.

12 MR. EISENHUT: A piece of Appendix J has been
13 changed. I think one of the last plants did not have to
14 have an exemption. We are making progress.

15 CHAIRMAN PALLADINO: That question that I asked
16 that we were going to come back to later, I just want to get
17 a feel for how unsafe the plant is if it is unsafe.

18 MR. EISENHUT: Right. This issue as it turns out,
19 that's the same question with the entire listing of items,
20 what we call our outstanding issues on operating reactors.
21 Maybe I could have the backup slide, 10(a). Just take a
22 one-minute diversion on that question.

23 (Slide.)

24 I handed this out because I know you cannot read
25 it from up. I know what it says and I can't even read it.

1 What we are trying to do is we have recently put together to
2 get a better handle and to assess where we are better, on
3 all the operating reactors multi-plant issues. There are
4 about 3000 topics on operating reactors.

5 What we have done, we have listed them by their
6 nomenclature. You will notice A-04 happens to be the fourth
7 line on here. That says that 43 plants out of all the
8 operating plants, not just the SEP, 43 of those are still
9 outstanding. The same issue -- and this shows that we
10 expect to resolve your very question -- on all 43 plants in
11 FY '82. This is the first time that I think we have put
12 together an overall master listing of all actions that are
13 outstanding on operating reactors. This is sort of a
14 blueprint of where we are going in the agency, of which ones
15 can we resolve, what kind of schedule and who can do them.

16 I guess there are a couple of points to make on
17 that one. You'll see right behind "containment leak
18 testing" a little footnote 5. That footnote 5 corresponds
19 to the recent question that was asked: how many of these
20 actions are five years old or older? That's what the little
21 footnote 5 signifies; that that is one of the items.

22 If you go to the far right of the page, there is
23 columns for whether or not these are being resolved under
24 contract, and if so, -- this is only one page out of a whole
25 book of these, but there is a note that this issue is being

1 resolved by contractor. We hope to wrestle with it this
2 year.

3 In regards to safety, we have looked at each of
4 these items as they go down. You look at when the item was
5 issued, you look at them in some collective sense.
6 Obviously, we don't feel this is an item that requires or is
7 a majority safety issue or we would have been doing
8 something along the line sooner. But it is an item that we
9 have to resolve the request for exemption from Appendix J in
10 one of several ways. Either to correct Appendix J or issue
11 exemptions on the other pieces. The answer is both. We're
12 going to change some of Appendix J; however, the design does
13 not facilitate certain things in checking containment leak
14 testing and therefore may not meet the liberal
15 interpretation of things in Appendix J, so we have to look
16 at this plant by plant, how significant are they.

17 COMMISSIONER AHEARNE: This goes beyond SEP's?

18 MR. EISENHUT: Yes, this happens to be my master
19 plan on operating reactors.

20 COMMISSIONER AHEARNE: Do I gather then by the
21 right two columns, that everything is going to be completed
22 in 1982?

23 MR. EISENHUT: On Appendix J?

24 COMMISSIONER AHEARNE: No, I'm just looking down.
25 I'm assuming this is an illustrative table.

1 MR. EISENHUT: No. All we've worked on at this
2 point is FY '82. You'll see there are columns for FY '83,
3 FY '84.

4 MR. CASE: They haven't been filled out yet.

5 MR. EISENHUT: I've given this table to the
6 technical division. I've asked I&E to help with it. I've
7 asked a number of groups. I've been given clear license to
8 figure out how to get these topics completed faster.

9 COMMISSIONER AHEARNE: But 1983 and 1984 -- the
10 last question on that on the far righthand column, I would
11 have concluded, looking at this, that all the work that is
12 going to be done is going to be done under contract. Is
13 that because the rest of the tables haven't been filled in
14 yet?

15 MR. EISENHUT: Yes. In fact, I've asked the other
16 divisions -- this was my proposal to try to get a better --
17 I guess a better handle and better progress toward getting
18 the backlog of actions out of the NRR. For example, I've
19 asked I&E to complete something on the order of 500 of these
20 and my proposal is still before I&E.

21 I've asked the technical division to fill in what
22 they can do and what they can't do. I am going to go to
23 some other contractors if they can do it, the whole thought
24 being following the guidance of the Commission is that we
25 are really trying to develop a game plan to get a lot of

1 this wrapped up earlier than the 1986 timeframe that I think
2 is in the budget.

3 It is only indicative that some of the items are
4 tied to the SEP is really the only way this is tied in, but
5 the bookkeeping system is really the first thing we had to
6 develop to get a better handle on where we are.

7 MR. CASE: Now get back to SEP.

8 MR. EISENHUT: And multi-plant A-04. Now, the
9 question would be if you have this array today of 23 items
10 that we have completed on Palisades and we found various
11 things and we found we needed more analysis, needed more
12 evaluation, ideally I guess what you would like to do is you
13 would like to be able to turn over -- design you a cookbook
14 on, let's say, a risk assessment of each plant to help give
15 you a handle on how much are these things worth. Are they
16 really significant contributors to the risk or not?

17 We really don't have a PRA on each of these
18 plants. However, I do point out that I think three of the
19 SEP plants are doing probabilistic risk assessment on their
20 plant in parallel with SEP.

21 CHAIRMAN PALLADINO: Three of these 11?

22 MR. EISENHUT: Yes.

23 CHAIRMAN PALLADINO: Is Palisades one?

24 MR. EISENHUT: No. Consumer's Power, however, is
25 doing it on their other plant, Big Rock Point. Big Rock

1 Point is one of the early plants.

2 COMMISSIONER BRADFORD: That's 1972, if I recall.

3 CHAIRMAN PALLADINO: I would almost yield on that
4 on grandfathering.

5 COMMISSIONER AHEARNE: As I recall, they were
6 doing it because they wanted an exemption from some of the
7 requirements that were being laid on them. So they did the
8 assessment to argue why they need not meet --

9 MR. EISENHUT: That's correct, and on some of the
10 TMI items we have given them relief on some of the items.
11 But as I said, it would be nice if you had a PRA to lay down
12 beside the SEP. You could then have a relative importance,
13 a relative risk-savings, of what these items would buy you
14 if you fixed them up.

15 You also have to do the other piece. You have to
16 continue to look into each of these items, just like
17 tornadoes. You say fine, do they not meet today's
18 requirement for tornadoes? But is it that they meet
19 280-mile winds rather than 360? So you have to go through
20 and continue to have a better assessment of the capability
21 of the facility. You would then marry these two together.

22 Now, the PRA's I think somewhat fortunately are
23 being done on Big Rock Point, which was one of the earlier
24 plants; Yankee Row which was one of the early plants, and
25 Millstone 1.

1 COMMISSIONER GILINSKY: Which is one of the what?

2 MR. CASE: One of the earliest.

3 MR. EISENHUT: I'm sorry, I meant one of the
4 earliest, not one of the biggest. It is a small number.

5 CHAIRMAN PALLADINO: Yes, I thought it was a small
6 number. How much is it?

7 MR. RUSSELL: 175.

8 MR. EISENHUT: Millstone 1 is 690, and that's an
9 earlier vintage plant. That's a 1970 OL.

10 You also have some internally that have been done
11 over the last four years, WASH-1400's, that assessed later
12 finished plants, Surry and Peach Bottom. We also have
13 collectively a number of ongoing risk assessments. We have
14 design PRA which has been completed and submitted to the
15 staff about a month ago. We have ongoing assessments at
16 Limerick, Indian Point, Millstone 3. We also have the
17 RSSMAP studies which are comparisons against WASH-1400. You
18 recall Sequoyah was in that group. Browns Ferry is in that
19 group, I believe. And we have an IREP study on Crystal
20 River.

21 COMMISSIONER AHEARNE: Yes.

22 MR. EISENHUT: So all of this collectively is
23 telling us something about the relative importance of these
24 various topics.

25

1 We now are developing a proposal of how to go
2 about integrating all of this together, working with our PRA
3 staff both internal and NRR. And we have been consulting
4 with the research folks to come out with is there a generic
5 understanding of what perceptions do we have, what insights
6 have we gained to the relative importance of several
7 issues.

8 We are actually going to be discussing this with
9 the ACRS committee next week. There is a meeting, I think,
10 the 29th. We have also been talking to a number of
11 consultants to help sort of work with us and give us some
12 insights into this overall balancing.

13 (Slide)

14 The next slide -- I said that in preparation for
15 seeing this slide. The words were a little misleading. We
16 are trying to, when we are developing a mechanism for coming
17 up to make a balanced and integrated assessment of these
18 issues, it clearly looks at the safety significance of these
19 issues: Looking at the type of issue you are addressing,
20 are you addressing something that mitigates accidents and
21 puts it in some probability realm already, looking at also
22 things like the cost of implementing it, the personnel
23 radiation exposure, to come up with that item.

24 We have developed a draft internal approach. We
25 are trying to develop some sort of a point system to

1 facilitate going through and doing this using the insights
2 and perspectives gained out of PRA. If you have a PRA
3 directly, you would use it, because if you have got one that
4 is directly applicable or parts of one, you would use it.

5 Then we have to document the basis for coming up
6 with this. I give you an example. When we took the 23-item
7 list and discussed it with our staff working doing PRA work,
8 they had a pretty speedy reaction. Their reaction would
9 be: Those items are worth a lot more in terms of risk than
10 are the other ones. So they are clearly developing that
11 kind of a perspective. It likely will not be strictly
12 qualitative down the lines --

13 MR. CASE: Quantitative.

14 MR. EISENHUT: I am sorry, quantitative.

15 MR. CASE: Perhaps that is a better use of risk
16 assessment, making it --

17 MR. EISENHUT: I think that is right.

18 COMMISSIONER AHEARNE: Earlier this year, I guess
19 it was in May, you had said, Darrell, that you had already
20 developed a priority ranking system but that you were going
21 to look at safety technology with developing a priority
22 ranking system for safety issues and integrate the two.

23 MR. EISENHUT: Yes.

24 COMMISSIONER AHEARNE: Is that still something you
25 are using?

1 MR. EISENHUT: That is still something we are
2 doing. There have been a number of comments on our priority
3 ranking scheme. I think you have seen the prioritization
4 scheme, the generic issue approach.

5 COMMISSIONER AHEARNE: Right.

6 MR. EISENHUT: So we are trying to develop that
7 back into one approach. There was a little bit of
8 difference. That is where we are. We are trying to develop
9 that into the same system.

10 COMMISSIONER AHEARNE: So the one you had in May
11 you are modifying?

12 MR. EISENHUT: Yes. We have been using it a
13 little bit in discussions with some of the utilities. I do
14 not know what this means, but a couple of utilities have
15 written us a letter saying they thought it was a great way
16 to go. I do not know whether that means it is good or
17 whether it is too lax.

18 (Laughter.)

19 MR. EISENHUT: We are continuing to work with a
20 couple of utilities. We are going to try it out on
21 Palisades. We have had a number of discussions with them to
22 try to come up with a better handle on --

23 COMMISSIONER GILINSKY: Is this being done on a
24 voluntary basis?

25 MR. EISENHUT: Which?

1 COMMISSIONER GILINSKY: Imposition of new
2 requirements.

3 MR. EISENHUT: We had a meeting -- I do not even
4 remember when -- back several months ago with the EDO, with
5 office directors, where we had the executives of each of the
6 eleven plants. And I think that was -- some of us think at
7 least that was a turning point in the SEP, because we made
8 the determination that utilities were going to have to
9 continue to move forth on the SEP evaluations promptly or we
10 were just going to turn around and do our own evaluation
11 with what we had, do an assessment and come up with the
12 bottom line evaluation, and they would have to devote more
13 effort and resources to getting the job done and
14 participating in it, or we were going to go ahead and reach
15 the bottom line ourselves with whatever limited information
16 we had.

17 So even though it is voluntary, it is not
18 voluntary.

19 COMMISSIONER AHEARNE: Now, that, I think I am
20 still not yet clear. Is this chart going to answer what you
21 next are going to do?

22 MR. EISENHUT: This chart, with the qualifiers
23 that I added that preceded the chart.

24 COMMISSIONER AHEARNE: Okay, now would you go back
25 and you find you analyze the buildings at Palisades, and

1 they can be 250-mile-an-hour tornado. What do you then do?

2 MR. EISENHUT: You have to take a look at it and
3 make a safety determination whether or not that is good
4 enough. Tornadoes happen to be one of the easier ones, I
5 think, because you are likely going to have to look at what
6 the likelihood of the tornado is at the site.

7 CHAIRMAN PALLADINO: Looking at that size tornado
8 at that site?

9 MR. EISENHUT: That is what I meant. It is sort
10 of site-specific. It may well turn out that a 250-mile per
11 hour protection at Palisades is just as good as the
12 protection of 360 at other sites.

13 COMMISSIONER AHEARNE: So you are saying that
14 after you evaluate, or the licensee evaluates what level of
15 protection is provided by the current structure, you will
16 then do a comparison? Or you will ask the licensee to do a
17 comparison of the so-called design-basis tornado to what
18 would actually be expended at the size?

19 COMMISSIONER AHEARNE: Okay, so you --

20 MR. EISENHUT: It may well turn out that a
21 250-mile per hour protection at Palisades is just as good as
22 the protection of 360 at other sites.

23 COMMISSIONER AHEARNE: So you are saying that
24 after you evaluate, or the Licensee evaluates what level of
25

1 protection is provided by the current structure, you will
2 then do a comparison, or you will ask the Licensee to do a
3 comparison of the so-called design-basis tornado to what
4 would actually be expected at the site?

5 MR. EISENHUT: You look at what the inherent
6 capabilities are. It depends on what the answer is. If the
7 answer comes out that instead of 360 they are protected at
8 300, we might just dismiss it as not significant enough.

9 Suppose it turns out they are only protected to
10 150-mile-an-hour wind, and if they feel that that is the
11 capability, we may well have to go back and decide on some
12 of these areas to be protected.

13 COMMISSIONER AHEARNE: I am getting the sense,
14 Darrell, that you do not have any specific approach that you
15 are going to use sort of automatically.

16 MR. EISENHUT: You have to put it in certain bins,
17 depending on where you come out.

18 COMMISSIONER AHEARNE: I am trying to get a feel
19 for it. You come out in a place where it is not so close
20 that you can say, well, that's close enough. And it is not
21 so low that you automatically know that something must be
22 done.

23 CHAIRMAN PALLADINO: But should you not be asking
24 either the Applicant -- just to follow this example -- it
25 may turn out that the 100-mile-an-hour-wind tornado at this

1 site, you might expect one in every 25 years, but 150 or 20
2 you might not expect one in 500 years?

3 I think you need to get data. I am still
4 following this only as an example.

5 MR. EISENHUT: I think you are right.,

6 CHAIRMAN PALLADINO: You will have to get some
7 data against which you can make some judgments.

8 COMMISSIONER AHEARNE: Yes.

9 MR. EISENHUT: That's right.

10 CHAIRMAN PALLADINO: And if it turns out that a
11 200 mile-an-hour tornado at a particular site is one every
12 500 years, you might say, "Well, that is a risk" --

13 MR. EISENHUT: You are absolutely right. And that
14 is generally the approach we are going to take.

15 MR. RUSSELL: If I might comment. We have done
16 exactly that study, and we have issued it to Licensees on
17 all those sites. We call it "Extreme External Phenomena."
18 We determined as a function of recurrence interval or
19 probability with 95 percent confidence levels what the
20 various wind speeds meant in the way of risk, based upon
21 looking at weather data. This was done for us by Research
22 through contract, and those reports have been issued to the
23 Licensee, and commented upon back and forth.

24 So we have an understanding of what the
25 probability is associated with various winds. We are now

1 assessing structural capacity.

2 COMMISSIONER AHEARNE: Right. So then what would
3 you specifically do in this particular case after they have
4 assessed the structural capacity? Then what? Do they
5 compare it against that study?

6 MR. RUSSELL: Right now it is both--

7 COMMISSIONER AHEARNE: They do it and you do it?

8 MR. RUSSELL: Because the staff is looking at it
9 and the Licensee is looking at it. We have kind of a mixed
10 bag, depending on which plant you are talking about.

11 COMMISSIONER AHEARNE: Okay, let's just follow the
12 Palisades as an example.

13 MR. RUSSELL: Some we are doing the review on, and
14 there are others that the licensees are doing the review and
15 submitting them for our audit review.

16 COMMISSIONER AHEARNE: And if the conclusion comes
17 up, do you have some numerical criteria? Or is it intuitive
18 feel, or is it a committee that concludes, "Yes, this is
19 acceptable," "No, it is not"?

20 MR. RUSSELL: The current standard in the Standard
21 Review Plan is a 10-7 probability with a 95 percent --

22 MR. EISENHUT: No, no, no. The answer is: We are
23 right where you are. That is where we are. We have not yet
24 decided on the approach.

25 CHAIRMAN PALLADINO: I am not sure you want such a

1 general statement. After all, what you are doing is you are
2 looking at a grandfathering situation.

3 MR. EISENHUT: That is right.

4 CHAIRMAN PALLADINO: And the answer is going to be
5 different for each condition. So you might decide on a
6 philosophy that if they --

7 COMMISSIONER AHEARNE: Well, I'm not sure they
8 should, either. I am trying to understand the process.

9 MR. EISENHUT: Let us follow your example.
10 Suppose you went down and you find out. at both ends of it,
11 you find out the ultimate capability of the facility as it
12 presently exists, you do the research piece. That is where
13 we are today. We have not yet decided how to go from that
14 piece to the --

15 MR. CASE: John says: How are we going to
16 decide?

17 MR. DIRCKS: I think you have laid out --

18 MR. EISENHUT: We have laid out a general
19 approach.

20 MR. CASE: Is it going to be an individual like a
21 branch chief, or is going to be a considered committee
22 approach with lots of division directors?

23 MR. EISENHUT: It is going to be a considered
24 approach. Let me tell you the other pieces. It is going to
25 incorporate the ACRS' views on it. It will be the

1 collective judgment of the senior staff.

2 COMMISSIONER AHEARNE: Now, I gather by the fact
3 that these people, the titles you have given them on this
4 chart, they are the integrated assessment project managers.
5 And back in May also, you were going to issue a draft
6 integrated assessment report.

7 MR. EISENHUT: Which we did. We had a point
8 system, and using that as a draft approach --

9 COMMISSIONER AHEARNE: Wait. I would have thought
10 -- and maybe I am wrong -- I would have thought you would
11 have gotten all of these weaknesses or differences.

12 MR. EISENHUT: Differences identified.

13 CHAIRMAN PALLADINO: And then integration to me, I
14 thought you were integrating the assesement.

15 MR. EISENHUT: Let me correct a misnomer. We had
16 to make a basic decision. It turns out Sunday afternoon we
17 had to decide do we come down and say, "Here is where we are
18 on 23," and try to give you a flavor of what is really
19 coming out of the SEP? Or we could say, "We are not there
20 yet, we haven't finished the last 16."

21 It is clearly our intent to finish all 39 and put
22 them together; and to do an integrated assessment; and to
23 integrate it with anything else that is going on on, let us
24 say, fire protection, which happens to be an issue, but let
25 us say any of the issues that is going on, such as TMI or

1 USI work.

2 COMMISSIONER AHEARNE: Now, would you intend to go
3 back to the Licensee and say, "Here is an area you must
4 change," as a result of the review of, let us say, the
5 tornado structure, or would you wait until all 39 are done?

6 MR. EISENHUT: All 39. But you have to look at it
7 as you go along. Have you found a hot rock, so to speak,
8 that you cannot wait on?

9 COMMISSIONER AHEARNE: Certainly.

10 MR. EISENHUT: It is our program to wait for the
11 integrated assessment.

12 COMMISSIONER GILINSKY: You have not at this point
13 imposed any requirements?

14 MR. EISENHUT: That is absolutely correct, except
15 that those few items I identified on the chart where we said
16 we have required prompt action.

17 COMMISSIONER GILINSKY: I thought there were some
18 additional items? And those, I take it, were simply taken
19 at the initiative of the utility?

20 MR. EISENHUT: Yes, taken at the initiative of the
21 utility. And that is why they are in two distinct bins.

22 COMMISSIONER BRADFORD: There must be some cases
23 where you run into a difficulty with areas that are being
24 reviewed in the context of the SEP but requirements have
25 been imposed on a different track, like fire protection.

1 MR. EISENHUT: Yes, sir. Now, I guess, let me
2 sort of give you a generic blue-sky approach. There may
3 well be a plant out there -- and we have talked to a couple
4 of them about it -- where the utility comes back and says,
5 "I do not want to do that plant-specific fire protection
6 fix-up, a little seismic fix-up here, a little pipe break
7 fix-up there, some extra environmental review work there. I
8 will give you a separate bunkered system. I will hook up a
9 place for water to go in and water to go out. My super
10 system will meet every one of your requirements." It may be
11 a trade-off. That system we may be happier with, completely
12 independent, all the right requirements, and we may trade
13 that off as opposed to fixing XYZ down the line.

14 CHAIRMAN PALLADINO: On a philosophical vein, have
15 you looked to other industries -- I am thinking particularly
16 of the aircraft industry -- to see what they did when they
17 had to grandfather planes, I guess it was with the FAA?

18 For example, the DC3, even a number of years ago
19 would not meet the requirements then in effect for safe
20 flight. And I gather they made an evaluation. They may
21 have even asked that certain things on the DC3 be fixed up,
22 and then they said, "Okay, let it operate until its natural
23 life has ended."

24 I was wondering whether you had explored with any
25 of those people what sort of criteria they used.

1 MR. EISENHUT: We have not approached FAA and
2 groups such as that. Because this is a little bit of a
3 philosophically different way of getting some new thinking,
4 we have contacted three different consultants that we have
5 asked to come in with a different look on it. I guess it is
6 no secret. I can tell you who they are.

7

8 The first we asked to work on the program was Joe
9 Hendrie. He is not sure that he does not have a conflict of
10 interest because of other arrangements, but we are still
11 continuing to try to get him to work on it, since he is
12 familiar with the history, the philosophy, and the
13 technology.

14 The second person we contacted was Spence Bush,
15 who we certainly all know -- he used to be on the ACRS -- at
16 Battelle Northwest. The third person was Zenon Zudans, who
17 is an ACRS consultant, who works at Franklin. And he in
18 fact -- I guess all three have expressed interest.

19 So what we are trying to do is get some other look
20 at this. We are not quite there that today on being faced
21 with putting it all together. But another month from now,
22 as we get the last few issues resolved, that is where we are
23 going to be. It is going to be down to decision time on
24 Palisades.

25 COMMISSIONER GILINSKY: I think the Chairman's

1 suggestion is a very good one.

2 CHAIRMAN PALLADINO: I think I would be inclined
3 to -- go ahead.

4 COMMISSIONER GILINSKY: The FAA is the one agency
5 which is faced with similar problems to ours. I think their
6 experience would be interesting.

7 MR. EISENHUT: I will be happy to --

8 CHAIRMAN PALLADINO: They face similar kinds of
9 questions.

10 COMMISSIONER GILINSKY: They certainly did. And
11 it would be interesting to know how they dealt with them.
12 There may be something we can learn from them.

13 COMMISSIONER BRADFORD: They and EPA both.

14 CHAIRMAN PALLADINO: Who?

15 COMMISSIONER BRADFORD: EPA.

16 MR. EISENHUT: Yes. As it turns out --

17 COMMISSIONER BRADFORD: I do not want to
18 discourage you from consulting former Commissioners.

19 MR. EISENHUT: That was not a primary
20 qualification.

21 COMMISSIONER BRADFORD: Who knows who else you may
22 want to talk to someday.

23 (Laughter.)

24 COMMISSIONER AHEARNE: Given the pace of the SEP
25 program.

1 COMMISSIONER BRADFORD: You, too.

2 (Laughter.)

3 MR. CASE: John, this is a complicated program,
4 and I have got to respond to these digs you have been giving
5 me. I think it is a well-worthile program. It has suffered
6 over the years --

7 COMMISSIONER AHEARNE: Ed, I think it is a very
8 worthwhile program.

9 MR. CASE: -- from a lack of Commission
10 appreciation, but it has been maintained. I am saying that
11 in all honesty. I am not saying that particularly about
12 you, but there have been a number of Commissioners involved
13 in this program over the years, given its length.

14 COMMISSIONER AHEARNE: Wait. Wait. One of the
15 ways I think we show our appreciation is to keep pushing NRR
16 to keep people on this program. So the lack of support for
17 the program, it may have been somewhat on this side of the
18 table, but my friend, it has been somewhat on the other side
19 of the table also.

20 COMMISSIONER GILINSKY: Let me ask, since we have
21 raised some philosophical questions here, about which plants
22 one really ought to be concerend about. It occurred to me
23 as you were describing the early batch that there were small
24 plants relatively remotely sited and so on. And if we go to
25 the other end of the spectrum, we have got the current

1 plants which meet all the current requirements, and so at
2 least they are up to date.

3 We were talking yesterday about the problem being
4 somewhere in between. I wonder if the plants of most
5 concern are not the ones that are more or less the first
6 generation of large plants, larger plants which may have
7 been sited more closely to populated areas and which at
8 least some people think were qualitatively different in
9 terms of complexity.

10 COMMISSIONER AHEARNE: Is that not Phase III?

11 COMMISSIONER GILINSKY: From --

12 MR. CASE: We do intend to go on in this program.

13 CHAIRMAN PALLADINO: I think another point of
14 Vic's statement is, we have a plant that is remotely sited.
15 It is low-power. Maybe you should not put a lot of your
16 resources on that and put your resources where the risk is
17 or at least appears to be, obviously there. I have a little
18 bit of the same feeling.

19 MR. EISENHUT: Let me give you one quantitative
20 data point. There was a PRA done at Big Rock Point, a very
21 remote site. It is a low power level. The probability of
22 core melt in the study was -- what was it, Bill?

23 MR. RUSSELL: 10⁻³.

24 MR. EISENHUT: 10⁻³. So that is considerably
25 higher than in fact the probability of core melt elsewhere.

1 So you really have to look at the risk, et cetera, at the
2 plant.

3 COMMISSIONER AHEARNE: Let me give you --

4 MR. EISENHUT: You may find they balance out.

5 COMMISSIONER AHEARNE: Let me give you another
6 argument.

7 COMMISSIONER GILINSKY: It's a small plant with a
8 large containment.

9 MR. EISENHUT: And quite simple.

10 COMMISSIONER GILINSKY: Yes.

11 CHAIRMAN PALLADINO: ECCS?

12 COMMISSIONER GILINSKY: It does not meet the
13 requirement, the Part 50 requirement. They got an
14 exemption, as I remember.

15 COMMISSIONER AHEARNE: But part of the underlying
16 philosophy of the whole SEP program was, A, look at the
17 plants that were very early, that clearly were before the
18 regulations began to get so detailed; but second, to try to
19 develop the ability to weed through what are likely to be
20 the important issues and the unimportant issues, understand
21 what the important issues are likely to be, and get an
22 ability on the part of the staff as well as on the part of
23 the industry on how to analyze those.

24 Throughout, if you go back through the development
25 of the SEP program, the concept was constantly there: Let

1 us first learn how to do this set, and then we are going to
2 turn and apply it to just those ones you guys have been
3 talking about.

4 One of the reasons why we are not there yet is the
5 program has stretched out. On the original basis they would
6 have been looking at those right now.

7 COMMISSIONER GILINSKY: In retrospect, I wonder if
8 one might have done better with a simpler program for the
9 earlier plants and quickly gone on to the others.

10 COMMISSIONER AHEARNE: We are now four-fifths of
11 the way through this Phase II, and I think we ought to
12 finish the Phase II and get started with the Phase III.

13 MR. CASE: Exactly. You've got to look behind
14 everything you find. It does not meet the tornado criteria,
15 but what does it meet in terms of wind blowing? What is the
16 probability of that the wind blowing? Every one requires
17 digging, digging, digging.

18 COMMISSIONER GILINSKY: I am not suggesting these
19 are not important questions. I am just saying that in
20 answering them we are not answering questions for other
21 plants. Everytime you look at Big Rock or La Crosse, you
22 are spending time that could be spent on a larger plant and
23 since we do not have infinite staff and an infinite amount
24 of money, we have just constantly got to make these
25 choices.

1 MR. DIRCKS: The other point, too, the basis for
2 the program was the conversion of some of these provisional
3 operating licenses which are out there, and the Commission
4 wanted to get rid of these provisional operating licenses.

5 MR. CASE: Two birds with one stone.

6 MR. DIRCKS: That was one of the reasons.

7 COMMISSIONER BRADFORD: With regard to Phase III
8 and catching up with these plants, I had understood at least
9 through the budget briefing that Harold gave us this summer,
10 that Phase III still contemplated as many as nine plants.
11 Now, I gather you are talking about five, instead. It is
12 going to be a while before the plants Commissioner Gilinsky
13 is concerned with get picked up if we only move at five
14 plants per phase.

15 MR. CASE: Let me define some terms. By "phase"
16 you should mean "Phase III." And then there are groups
17 within that phase.

18 COMMISSIONER BRADFORD: Okay.

19 MR. CASE: The plans were -- and correct me if I
20 am wrong, Bill -- to do all of the remaining, at the time,
21 plants which was a total of, what, 59, in seven --

22 MR. RUSSELL: It is on the sheet that I just wrote
23 out.

24 MR. CASE: In seven years. So there are 57 plants
25 in eight years. It averages eight a year. Our conception

1 of the program is there will be more differences in the
2 first group of plants. And, therefore, to keep an even
3 staff level, the first group is small, i.e., five, while the
4 last group in Phase III is high, that is, 16.

5 But the effort was to have a constant manpower
6 working on the program and to vary the number of plants to
7 make the workload essentially uniform.

8 CHAIRMAN PALLADINO: Where are these various
9 groups indentified?

10 COMMISSIONER GILINSKY: Are you going in
11 chronological order in choosing these plants?

12 MR. EISENHUT: We really have not sat down and
13 looked at those subjects.

14 MR. CASE: We have not decided how we will
15 choose. One of the things being the power level, would
16 probably be one of the considerations.

17 COMMISSIONER GILINSKY: In '73 and '74 a lot of
18 plants went through this place very fast. And frankly, if I
19 were to look at any of them, I would look at those.

20 MR. CASE: I do not think I agree with you. I
21 think it was more the lack of thinking through and knowing
22 what the requirements are that is the more vulnerable error
23 than the error you mentioned. I think there were fairly
24 thorough reviews done.

25 CHAIRMAN PALLADINO: And there were new concepts

1 developed in that period that I think have stayed with us.

2 MR. CASE: It is very judgmental.

3 CHAIRMAN PALLADINO: Do you have written down what
4 the various groups are?

5 MR. CASE: No.

6 CHAIRMAN PALLADINO: I have a list of the eleven.
7 What is your next phase?

8 MR. CASE: We just picked the numbers.

9 MR. DIRCKS: I do not think we have the plant, but
10 I think the numbers were the ones we discussed back in May.

11 MR. CASE: Bill Dircks' memorandum.

12 MR. DIRCKS: I think we can dig that out.

13 COMMISSIONER BRADFORD: Bill, were you talking
14 about the first group of five or the first group of nine?
15 There was a time when the first group was even more than
16 nine.

17 MR. DIRCKS: In the budget briefing we gave you, I
18 think we mentioned five, because I have the Blue Book here.
19 We do mention five in fiscal '83.

20 COMMISSIONER BRADFORD: Harold in the budget
21 briefing said nine.

22 MR. DIRCKS: September --

23 COMMISSIONER AHEARNE: September '81 Blue Book may
24 not track the budget.

25 MR. DIRCKS: I think we can only talk about the

1 budget briefings we gave you in connection with the fiscal
2 '83 budget. It was given in the summer that Peter referred
3 to, and that is reflected in the Blue Book that was
4 submitted in September.

5 COMMISSIONER AHEARNE: That is right, because it
6 was '83 start, anyway. I take that back.

7 COMMISSIONER BRADFORD: But what Harold said was,
8 I think we envision biting into nine more plants based on
9 what we know today from the first group within Phase III.
10 Perhaps he misspoke.

11 MR. CASE: I think he misspoke and was thinking on
12 the average, and used an average term rather than a specific
13 term.

14 MR. RUSSELL: The concept was not to bite off a
15 bigger group than you could do in one year and to look
16 specifically at the next group which would be in the '72-'73
17 time frame. We wanted to group them to make the maximum
18 efficiency of generic review in that area. And we are
19 working on that paper now.

20 We have to come back to the Commission with our
21 proposal, how we selected the plants and what the basis for
22 that proposal was. But we wanted to complete more of Phase
23 II so we know what issues are significant from Phase II. We
24 are not at that point yet.

25

1 COMMISSIONER AHEARNE: Even back in January
2 '58-'59, over that period, it has always been that way.

3 MR. RUSSELL: Yes.

4 CHAIRMAN PALLADINO: There is another
5 philosophical question. As we add more plants on and we
6 make more changes, we will be want to be looking back at the
7 plants we now consider meeting our requirements. I would
8 think somewhere along the line you would want to consider
9 where is the profitable breakoff point on these kinds of
10 studies, or otherwise you could make a career --

11 MR. CASE: One attempt of providing a definition
12 for that was discussed with the previous Commission sometime
13 ago, which was a thought of requiring at some point in time
14 new plants to document the deviations from the then-Standard
15 Review Plan so that you would compile the kind of
16 information we got on these old plants as the licensing
17 process went on so you clearly did know what they did need.
18 And then if there were additional requirements --

19 CHAIRMAN PALLADINO: That seems a little strange
20 or different from what is done in other industries. You
21 come to a point and you say, "Okay, we build the next one."
22 You do not necessarily go back and pick up a small -- if the
23 requirements is small, you do not apply it backward all the
24 time. I can see if the increment is big, such as with the
25 DC-3.

1 MR. CASE: We are not applying it backward. We
2 are looking to see the difference; then we will decide on
3 how much to go back.

4 MR. DIRCKS: Your point, Mr. Chairman, is very
5 much apropos, because of this new reorganization scheme
6 that you laid down. We would hope that as new requirements
7 come along there would be some conscious decision as to what
8 plants to apply to and that a consistent record be
9 maintained so that we will have a history compiled and we
10 will not have to deal with a massive attempt to go back and
11 rewrite history.

12 COMMISSIONER AHEARNE: I gather that where you
13 come out finally on this integrated assessment, what I
14 conclude that the schedule you have, that is the production
15 of this integrated assessment?

16 MR. EISENHUT: Yes. The last slide shows that. I
17 think it is March of '82. It shows that the Palisades
18 schedule, that is, the integrated assessment --

19 (Slide)

20 -- that is why you do not see it sooner, so we can
21 finish the last item and digest it.

22 COMMISSIONER AHEARNE: Do you envision in that
23 integrated assesement reaching conclusions as to what, if
24 any, changes should be made for backfit?

25 MR. EISENHUT: Yes.

1 COMMISSIONER AHEARNE: Then this would go through
2 the new DEDO, is that correct, before that?

3 MR. DIRCKS: I think that is something that will
4 probably have to be looked at.

5 COMMISSIONER AHEARNE: It has not been folded in
6 yet?

7 MR. DIRCKS: It has not been folded in yet, but it
8 is something that I am sure we will be taking a look at.

9 MR. EISENHUT: I would like to point out that I
10 think, as the previous Commission requested, the Commission
11 should focus on it before we make the backfit decisions.

12 COMMISSIONER AHEARNE: If I look at the schedule,
13 you have four of those that will be completed in FY '83. Is
14 that correct?

15 MR. EISENHUT: That is correct.

16 COMMISSIONER AHEARNE: But you do not have any
17 funds. I guess you just shift from the Phase III to come
18 back?

19 MR. CASE: Yes.

20 CHAIRMAN PALLADINO: Do you have any more to
21 present?

22 MR. EISENHUT: No. That was the last slide.

23 CHAIRMAN PALLADINO: Are there any other
24 questions?

25 COMMISSIONER AHEARNE: I have one last question.

1 To what extent does your integrated assessment, is it paced
2 by successful completion of IREP and NREP?

3 MR. EISENHUT: None whatsoever. It is not being
4 held back or --

5 COMMISSIONER AHEARNE: So that you do not really
6 need either in order to do these risk assessments?

7 MR. CASE: It would be nice to have, but we do not
8 plan to wait.

9 MR. EISENHUT: A long time ago, after many, many
10 discussions, I said I was not waiting for the first IREP
11 report.

12 CHAIRMAN PALLADINO: To show appreciation, I dig
13 this report.

14 (Laughter.)

15 COMMISSIONER BRADFORD: May I ask a couple of
16 questions?

17 CHAIRMAN PALLADINO: Sure.

18 COMMISSIONER BRADFORD: Darrell, with regard to
19 the table that sets the status of the Palisades review, is
20 that a roughly typical breakout of numbers? If you had the
21 status of any of the other plant's reviews, would you expect
22 the numbers to fall out about similarly on those items?

23 MR. EISENHUT: In terms of the progress or the
24 results?

25 COMMISSIONER BRADFORD: In terms of results. I

1 mean, for example, do not meet current criteria or
2 equivalent, roughly?

3 MR. EISENHUT: I expect them to be typical for the
4 first couple of plants, and I expect the numbers to increase
5 as you go across the table in terms of age.

6 MR. CASE: They will increase with age.

7 MR. EISENHUT: Universally proportional to age.
8 As you get older, the numbers will get bigger.

9 The other thing I should point out, this has been
10 first coming together over the last couple of weeks. This
11 is the first time I can really say to myself that I have
12 gotten a real appreciation of what is coming out of the
13 SEP.

14 I have asked the staff to -- Bob, if you could use
15 slide 5 for a second, I think it shows it. I asked him to
16 tell me where we are on all the other plants also, to really
17 get the answer to that question, because it was not clear
18 that --

19 (No slide is shown.)

20 Hello, slide 5?

21 (Laughter.)

22 MR. EISENHUT: It is Progress Table --

23 COMMISSIONER BRADFORD: They went to lunch, I
24 think.

25 (Laughter.)

1 MR. EISENHUT: It is page 1.9 of the report.

2 It is this table that had a graph on it. If you
3 look at the completion column, it says basically 76 out of
4 93 on Palisades, and it says something on the order of
5 seventy -- --

6 (Reversed slide shown.)

7 MR. EISENHUT: No, turn it around.

8 COMMISSIONER BRADFORD: This guy used to do
9 blueprints at Diablo Canyon.

10 (Laughter.)

11 MR. EISENHUT: If you look at the completion
12 column, you see 76 out of 95 at Ginna. So we are very close
13 to the same point in terms of progress. We got 42 out of 90
14 at Dresden-2, et cetera, completing it across the page. I
15 think I have asked to go up through the first six plants. I
16 have asked the staff to give me the same kind of distilled
17 writeup in terms of what does all this big pile of paper
18 mean to us, going back paragraph by paragraph, working
19 through the utilities and coming back to me with the
20 differences.

21 But it looks so far like it is coming out
22 typically the same on Ginna, at least.

23 COMMISSIONER AHEARNE: But does "completion" mean
24 the same way as "completion" does on Palisades, in the sense
25 that those are items, primarily ones where you have found

1 that there is no fundamental difference? Or that the
2 licensee has now made a change?

3 MR. EISENHUT: All "completion" means is we have
4 completed the individual topic assessment and put it in one
5 of the bins on this table. Because before we can get to how
6 they integrate together, we are tracking here the actual
7 detailed Topic 1, 2, 3, 4. Completion just means it goes
8 into one of the many bins.

9 CHAIRMAN PALLADINO: It does mean resolution of
10 them?

11 MR. CASE: No.

12 MR. EISENHUT: It does not mean resolution of the
13 program.

14 MR. CASE: It is accurate portrayal of the
15 differences is what it amounts to. The licensee looks at it
16 and it has no technical requirement that this portrays.

17 COMMISSIONER AHEARNE: Your completion date then
18 is for that level?

19 MR. EISENHUT: The completion of the last slide is
20 the completion of the program.

21 COMMISSIONER AHEARNE: No, no, I mean at the
22 bottom here.

23 MR. EISENHUT: Yes. You are absolutely right.

24 COMMISSIONER BRADFORD: Just one other. Ed, you
25 had mentioned the rule requiring new OLs to document

1 deviations from the Standard Review Plan. Where is it?

2 MR. DIRCKS: I have got it.

3 COMMISSIONER BRADFORD: Okay, where is it?

4 (Laughter.)

5 MR. DIRCKS: I am trying to read it and understand
6 it.

7 COMMISSIONER AHEARNE: Could I ask --

8 COMMISSIONER BRADFORD: When are we likely to see
9 it?

10 MR. DIRCKS: I think in a week or so, as soon as
11 I--

12 COMMISSIONER AHEARNE: -- finish understanding it?

13 COMMISSIONER BRADFORD: Once you understand it?

14 (Laughter.)

15 MR. DIRCKS: I'll see if I can understand it.

16 COMMISSIONER AHEARNE: I am not sure, Ed, I guess
17 you as senior representative of NRR: Do you intend to keep
18 Bill as the head of the SEP program until the completion of
19 these?

20 MR. CASE: I do, yes.

21 COMMISSIONER AHEARNE: I only ask that because as
22 I recall there had been a rotating list of people running
23 the SEP program.

24 MR. EISENHUT: I do, yes, if I have anything to
25 say about it.

1 MR. CASE: I think Bill has done an outstanding
2 job on this since he came.

3 COMMISSIONER AHEARNE: Yes.

4 MR. EISENHUT: I happen to think that has been one
5 of the real problems. Bill is the third branch chief to run
6 the program for me, and in fact there have been a couple of
7 lapses of where we have had periods of over six months with
8 no branch chief running the program.

9 COMMISSIONER AHEARNE: Right.

10 MR. CASE: Let me answer your question: Yes,
11 John.

12 COMMISSIONER AHEARNE: Just to clarify something.
13 I always try to give my support for this program.

14 MR. CASE: For that particular issue, with your
15 support, I hope we can have, because it is not that Bill
16 Russell's services are not coveted by others.

17 COMMISSIONER AHEARNE: Yes.

18 (Laughter.)

19 COMMISSIONER BRADFORD: Just a last point, Joe.
20 As a bystander by and large to this byplay, I do want to
21 weigh in in terms of expressing appreciation for your having
22 brought the program to the point where it really is
23 beginning to show something tangible, because I think it
24 really is an important effort both in terms of these plants
25 and the ones you are going to be following up on in the next

1 few years.

2 COMMISSIONER GILINSKY: I want to say I think so,
3 too.

4 CHAIRMAN PALLADINO: Good. Well, thank you very
5 much.

6 We will stand adjourned.

7 (Whereupon, at 11:50 a.m., the meeting of the
8 Commissioners was adjourned.)

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NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the
COMMISSION MEETING

in the matter of: PUBLIC MEETING - PERIODIC STATUS REPORT ON PHASE II
OF SYSTEMATIC EVALUATION PROGRAM

Date of Proceeding: October 22, 1981

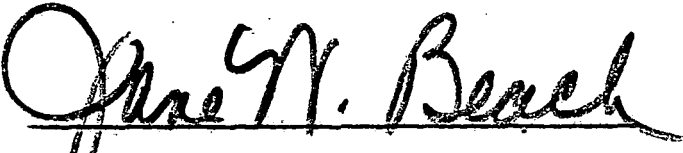
Docket Number: _____

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.

Jane W. Beach

Official Reporter (Typed)


Official Reporter (Signature)