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ENGINEERING ASSURANCE PROGRAM

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1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION
3 MEETING OF NRC STAFF AND DUQUESNE LIGHT COMPANY
4 BEAVER VALLEY UNIT 2
5 ENGINEERING ASSURANCE PROGRAM

6 Nuclear Regulatory Commission
7 Room 550
8 4350 East-West Highway
9 Bethesda, Maryland

10 Friday, February 28, 1986

11 The meeting of NRC Staff and Duquesne Light Company
12 representatives convened at 9:10 a.m.

13 PRESENT:

14 PETER TAM, NRC - Beaver Valley Unit 2 Project Manager
15 TED DEL GAIZO, WESTEC Services/NRC Contractor
16 HAI-BOH WANG, NRC/IE
17 E. V. IMBRO, NRC/IE
18 TED ANKRUM, NRC/IE
19 BRIAN GRIMES, NRC/IE
20 GARY BEATTY, Duquesne Light Company
21 ROGER MARTIN, Duquesne Light Company
22 R. W. TWIGG, Stone & Webster Engineering, Inc.
23 JOHN THOMAS, Duquesne Light Company
24 P. K. EAPEN, NRC/Region I
25 L. E. TRIPP, NRC/Region I
W. M. EIFERT, SWEC, Chief Engineer, EA
HUBERT MILLER

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P R O C E E D I N G S

2 MR. TAM: Good morning. This is the Beaver
3 Valley Unit 2 meeting. I am Peter Tam, the Unit 2 Project
4 Manager.

5 The purpose of today's meeting is to talk about
6 Beaver Valley's engineering assurance program, and of
7 course, our IDVP program.

8 But before we go into the meeting, I would like,
9 for the benefit of our court reporter, to have each of us
10 introduce himself so he knows where he is seated.

11 I already introduced myself.

12 MR. TRIPP: I am Mr. Tripp. I am Chief of the
13 Project Section in Region 1. It has Beaver Valley Units in
14 it.

15 MR. DEL GAIZO: I am Ted Del Gaizo with WESTEC
16 Services. I am an NRC contactor for IDI/IDVP support.

17 MR. WANG: My name is Hai-Boh Wang, IE.

18 MR. EAPEN: My name is E. K. Eapen. I am Section
19 Chief for Quality Assurance in Region 1.

20 MR. IMBRO: My name is Gene Imbro. I am Acting
21 Section Chief of the Licensing Section in the Quality
22 Assurance Branch.

23 MR. ANKRUM: Ted Ankrum, IE.

24 MR. GRIMES: Brian Grimes. Director of QA,
25 Vendor and Technical Training Center, IE.

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1 MR. MILLER: Hubert Miller. I am Brian Grimes'
2 deputy.

3 MR. TWIGG: Dick Twigg. Stone & Webster
4 Engineering Corporation, Engineering Assurance Division.

5 MR. EIFERT: Bill Eifert. Bill Eifert, Stone &
6 Webster, Chief Engineer of Engineering Assurance.

7 MR. JOHN THOMAS: John Thomas, Duquesne Light
8 Company, manager of Project Engineering for Unit 2.

9 MR. MARTIN: Roger Martin, Duquesne Light
10 Company, Manager, Regulatory Affairs.

11 MR. BEATTY: Gary Beatty, Duquesne Light.

12 MR. TAM: Okay. Now we all know who we are.
13 Just a little bit of background.

14 On November 22, 1985, the Commission sent a
15 letter under the signature of Hugh Thompson to Duquesne
16 Light. And this is the letter, requesting that Duquesne
17 Light say something about IDVP or whatever they are
18 proposing. And this is as a result of a request from I&E
19 about a year ago to send such a letter. And Duquesne Light
20 responded by a letter dated January 17, 1986, basically
21 saying that we have a number of programs and activities
22 going on which we believe would be a good substitute.

23 The purpose of today's meeting is that we can get
24 together and hear some ideas about some of these programs,
25 especially the so-called "engineering assurance program."

3 LIVEbw 1 With this kind of opening, I would like to turn
2 this over to George Ankrum, who is the Branch Chief
3 responsible for this activity.

4 MR. ANKRUM: I would like to lay a foundation,
5 and in particular, address some of the points in the January
6 17, 1986 letter.

7 MR. MARTIN: First, may I ask, you will be
8 following up with a written response to our letter? Is that
9 the plan?

10 MR. ANKRUM: Why don't we cover that at the end.

11 MR. MARTIN: All right.

12 MR. ANKRUM: To give you the background of why
13 you received the original letter from the Division of
14 Licensing, following the Diablo Canyon mirror image design
15 problem, it became apparent to the NRC that the QA
16 programmatic audits that most licensees had undertaken were
17 not effective in detecting potential errors in design. And
18 it became apparent to us that what was needed were technical
19 audits, as contrasted to programmatic audits. The NRC at
20 that time was faced with a rather large number of plants
21 that were in the final stages of licensing, NTOLs, as we
22 call them, and the director of NRR determined that he would
23 ask each utility to provide whatever assurances they could
24 that they didn't have similar kinds of design errors as
25 those found at Diablo Canyon.

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1 A number of utilities performed then -- or
2 contracted, I should say for a third part to come in and do
3 a technical audit of the design of their plants and offered
4 that as a justification -- or perhaps justification is the
5 wrong word -- offered that as further evidence that the
6 designs were adequate and met NRC's regulatory
7 requirements.

8 Those adopted the name IDVP or Independent Design
9 Verification Program, and we reviewed and accepted those
10 undertakings for the purpose that they were intended.
11 Beginning in January 1 of '84, now, was it, I&E took over
12 responsibility for review of the design efforts, and the
13 program has expanded since that time to other things than
14 simply third party reviews of a utility's design. They have
15 taken the form of direct NRC inspections, the IDI or
16 Integrated Design Inspection. They have taken the form of a
17 readiness review, in which design was one aspect reviewed by
18 the utility in their readiness review. And it has taken the
19 form of an engineering assurance program which was a larger
20 and more comprehensive set of technical audits performed
21 in-house by the utility or its AE firm or sometimes a third
22 party AE firm, but did not have the degrees of independence
23 that the IDVPs had.

24 The I&E Staff has determined -- has reviewed all
25 of those different methodologies and found that we were able

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1 to come to useful conclusions about whether or not the
2 designs of plants met the NRC's requirements through any of
3 those methodologies.

4 In work where NRC did a direct inspection, we
5 performed the performed the inspection ourselves and issued
6 an inspection report which said, essentially, that we have
7 inspected the design, and we believe that the design
8 complies with requirements.

9 Where one of the other methodologies were used,
10 we provided a safety evaluation report to the Division of
11 Licensing, again, giving them our conclusions as to whether
12 or not the design met regulatory requirements.

13 With that background, a similar letter was sent
14 to Duquesne Light with regard to Beaver Valley Unit 2, and
15 that is what we are here to discuss today is what has
16 Duquesne Light done over and above the QA programmatic
17 audits to establish that the design meets NRC requirements.

18 Now I would like to address in particular in your
19 January 17 letter, you closed by noting that the Staff
20 should apply the backfit requirements, shouldn't we be
21 talking about and IDI or an IDVP.

22 I would like to say that the NRC Staff has never
23 required an IDVP, and to do so would clearly be a backfit.
24 We do not have any intention of requiring Duquesne Light to
25 do an IDVP. I might add that what we have asked is the

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1 question -- the question we have asked of each utility is,
2 what additional means beyond QA programmatic audits have you
3 done to assure yourselves that the design meets regulatory
4 requirements?

5 Some utilities have elected to do an IDVP, which
6 we have accepted. They have also offered other
7 alternatives which got to the same purpose, and we've
8 accepted those alternatives.

9 With respect to an IDI, that is a direct NRC
10 inspection, and it is not subject to any backfit
11 requirements, regulations, analyses, whatsoever. Should we
12 elected to do an IDI, that is within our regulatory
13 prerogatives, and we will undertake that particular endeavor
14 as the circumstances warrant.

15 So with that foundation, I would like to turn
16 over the presentation then to Duquesne Light.

17 MR. MARTIN: All right. Duquesne Light
18 appreciates the opportunity to talk with you people about
19 some of the things that we have done. I think it is very
20 vital that we share the history of what has transpired.

21 One of the things that you mentioned is the
22 in-depth technical audit versus the programmatic type
23 audits.

24 We have performed on Beaver Valley 2 project, 21
25 programmatic audits, and we have performed to date, three

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1 with you. One would be our preliminary schedule for the
2 engineering assurance audit. We have a limited number of
3 copies. We could maybe make more available or discuss this
4 handout.

5 What is your pleasure?

6 MR. ANKRUM: The key people that need the
7 handout -- well, we'd need probably two copies over here, I
8 think.

9 MR. MARTIN: All right. We will provide a copy
10 for the record.

11 The other handout which we have is a document --
12 we have a documentation of the technical audits which have
13 been completed, and as I mentioned, those audits, the first
14 audit was held between November of '83 and February of '84.

15 Let me see if I am correcty here. Yes.

16 That utilized approximately 2000 man-hours, and
17 it was of the fuel pool cooling and clean-up system. There
18 were 16 individuals involved in that particular audit, and
19 they were Stone & Webster specialists and Duquesne Light
20 personnel. There were several Duquesne Light personnel that
21 participated in this particular audit.

22 The second audit was from August '84 to June of
23 '84. It required approximately 2000 man-hours, and here
24 again, it was of the engineering activities at the site, and
25 it included auditing of instrumentation, controls,

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1 engineering, mechanic, structural and electrical and power
2 disciplines. There were ten people involved in that
3 particular audit.

4 The most recent audit of the hazardous analysis
5 program, which dealt with the calculations to address the
6 potential for pipe failure, pipe width, internally generated
7 missiles. That was in a 1000 man-hour effort, and it took
8 place from November of '85 to January of '86. Here there
9 were six people, Stone & Webster and Duquesne Light
10 personnel involved.

11 I think what we would like to do would be -- we
12 also would like to call your attention to our own Duquesne
13 Light initiated internal auditing program. Our engineering
14 confirmation program and our design basis endorsement
15 program have been under way since March of 1983, and we have
16 dedicated approximately 11,000 man-hours. We have had 48
17 Duquesne Light corporate engineers involved in the review of
18 systems, and Stone & Webster has had 50 Stone & Webster
19 engineers following up on the items that have been
20 reviewed.

21 This was a four-part internally initiated and
22 administered auditing feature, where we took the criteria
23 documents and took the design information, the drawings, the
24 construction type details that came from those design
25 documents and followed it through some calculational

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1 review, particularly electrical and structural calculations
2 with considerable emphasis upon electrical and structural
3 calculations, and then verified in the field, so that the
4 engineer who was responsible for looking at the design
5 criteria initially -- as you are familiar with the two BBMs
6 and the engineering assurance procedures. You are all
7 familiar with those.

8 Those were reviewed for correctness,
9 completeness, up-to-date current value, and they were taken
10 and compared with the design documents, the drawings and the
11 calculations. Were they complete? Did they follow the
12 codes and standards?

13 Then those design documents were utilized to go
14 into the field and check wiring, to check piping runs, check
15 hangar designs, things of that order, to verify, from
16 beginning to end, that the controls were satisfactory, not
17 only the controls but calculations.

18 We recognized the programmatic, checking that the
19 right signatures appear in the right places and the detailed
20 design, the reviewing the calculations.

21 We have identified some discrepancies,
22 particularly in some voltage drops on electrical cable. 4
23 kV. I think Lowell is familiar with some of those things
24 that we have identified, and necessary corrections have
25 been made to update those calculations and, if necessary,

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1 actually replace a portion of cable in one particular
2 location, as I recall.

3 The engineering assurance program which Stone &
4 Webster has carried on -- and we participated in that. I
5 mentioned that previously. The Duquesne quality assurance
6 program, which is another parallel program. In addition, in
7 our letter we mentioned the fluid system design
8 finalization. Maybe we could touch on that a little bit.
9 That began -- early in '78, we had an outside contractor
10 review the fluid systems and review flow calculations,
11 review the pressure drops, the drops across the valves, the
12 pump, the discharge pressures. Things of that order. Heat
13 balance through the heater drain system.

14 And then in addition to that, we recognized that
15 we needed to finalize the flow diagrams, so that we could
16 incorporate the requirements of the testing program and also
17 the requirements of the interface with the nuclear steam
18 supplier and the AE. There we identified some
19 discontinuities which we called to the attention of the
20 designers and addressed those.

21 We also have some items which are peripheal
22 type. We have used the NUS Corporation for review of the
23 equipment qualification program. We have had a considerable
24 amount of effort in PQ, particularly getting one of these
25 hydrogen recombiners to be qualified. We have had other

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1 people work with us on our ASME program, the soil structure
2 interaction, and other independent design reviews have been
3 undertaken.

4 I think that the message we bring that we would
5 like to present, the fact that by doing system audits, by
6 doing site activity audits, by doing a hazard program audit,
7 by actually having our Duquesne Light people who are
8 specialists in their areas, some of these people from our
9 corporate offices have a number of years of experience on
10 Beaver 1, so they were familiar with the type of design
11 controls.

12 At the time we were reviewing Beaver 2, we were
13 establishing our in-house, independent design capability,
14 and we have divorced ourselves from the AE on the Beaver 1
15 in doing in-house design to you. So we felt that those
16 people were qualified personnel to do, as you have
17 indicated, the very important detailed design review,
18 actually going through the calculations and checking the
19 adequacy.

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1 OMT/bc

1 MR. MARTIN: I think that we would, with this
2 introduction, if John Thomas, would want to add any comments
3 from the engineering end. Have I overlooked some items
4 there?

5 MR. THOMAS: I don't think so. I think our
6 letter we intend to be very complete, what routine line is
7 done in the way of assuring the design, completion design
8 wholeness, to use that term.

9 Also, on Donald Webster plan and approved by
10 Duquesne Light includes for it indepth technical audit
11 performed by engineering people in Donald Webster's home
12 office. So that they are not part of the project staff.

13 I'd like to turn it over to Mr. Eifert now, who,
14 our plan is to discuss this next upcoming audit, and get any
15 comments that you might have or whatever, and just really
16 review our plan. And we have the schedule tentatively laid
17 out here. It shows sort of the...I guess you'd call it a
18 plan for a plan.

19 But, also, as you can see, the detail work of
20 getting the audit plan together has not come in.

21 MR. MARTIN: That's on page 3 of the handout.
22 It's Donald Webster, Engineering Assurance Technical
23 Audits. The first two pages describe past audits; page 3
24 describes the upcoming audit.

25 MR. EIFERT: Okay. Thank you, John. That's in

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1 the second handout that we gave you. Why don't I just walk
2 through the remainder of that handout.

3 The third page describes the planned scope of the
4 upcoming audit. And I'd like to skip over that, just leave
5 it for a minute, and look at the remainder of that package,
6 go over briefly what's in that package.

7 The next page is kind of an overview of our
8 auditing activities since 1981. And again identifies the
9 tech audits that we have done and the one that we're
10 planning.

11 Following that is a brief description of the
12 evaluation process we go through when we complete the last
13 audit in the series, where we look at the results of all the
14 indepth technical audits and draw our overall conclusions
15 with respect to the adequacy of the design and the design
16 process.

17 And that is an activity that we plan to complete
18 on Beaver Valley II after completing the fourth technical
19 audit.

20 The next page is a overview of the indepth
21 technologic bar chart Webster has. Beaver Valley is right
22 on the top of that table, indicating when and where we
23 perform these audits of this nature.

24 Following that bar chart is a typical auto-
25 chronology in some detail that basically identifies the

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1 normal duration and the activities, the details of it.

2 Attributes in the planning area are performance
3 activities and reporting of followup activities. This is
4 presented as a demonstration of the depth that's...and the
5 timing of these audits.

6 Following that we have a statement about
7 guidelines about how we select a system for a system audit.
8 We picked this one to give us a real good representation of
9 the design process and interfaces. I won't go into that in
10 detail. We've been looking at the potential system for the
11 upcoming audit. And I'll have Dick Twigg in a few minutes
12 here go through what our thoughts are at this point. We
13 haven't finalized the system selection, but that will show
14 how we've applied this kind of criteria.

15 Generation of an action item is the next page in
16 this handout. This demonstrates the technique we use in
17 conducting these audits. The more traditional quality
18 auditing effort is where you have a planned audit period to
19 prepare a report, issue findings and then get the responses
20 to those findings.

21 We have used an action item actually in
22 progress. In the process of performing the audits, we give
23 this a quicker turnaround of information with respect to any
24 concerns or questions we have or need for information during
25 the audit; it makes for a much more efficient, timely

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1 process during the audit.

2 And then the last three pages of this handout is
3 the guideline that we've written to give to our audit team
4 as a guideline in how to make the judgments and when to
5 write an observation, how to determine the significance and
6 guidance on how to handle potential concerns during the
7 audit. That's presented here for your information.

8 MR. MARTIN: I think I'd like to make a comment
9 about the need that we felt for guidelines. I think we all
10 agree that there is a question in the mind of a reviewer and
11 auditor if he has a question about the significance of an
12 audit, a discrepancy, let's say, or an incomplete
13 information.

14 We recognize that those are important items that
15 need to be addressed and that the guidance is given here to
16 help that reviewer put in that information so others can
17 understand what he was doing and the basis for his
18 determination, whether it was significant or not.

19 This is very important. We recognize that.

20 MR. EIFERT: That is a very brief overview of our
21 process. We are planning work now for the fourth and final
22 technical audit. The planning has identified that we want
23 to use a system and also cover site activities, so a
24 combined audit in that sense.

25 The first handout that we gave you is our

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1 schedule for conducting that audit. And with that
2 introduction, I think what I would like to do is turn it
3 over to Dick, and let's talk first about where we stand with
4 respect to selecting a system. And we've identified
5 candidate systems and we're narrowing in on that.

6 I'll let Dick brief you on that, and then Dick
7 can walk us through the schedule, the first handout that we
8 passed out this morning.

9 MR. TWIG: My name is Dick Twig. As Bill had
10 indicated, we are in the process of selecting the system, as
11 we've done on other technical audits. The criteria that we
12 have indicated, or some of the criteria, is just, first of
13 all, the system must perform a safety-related function.

14 We're looking for a system that is representative
15 where we can look to see the Webster design effort, and also
16 a strong interface with the -- functions that.

17 The sort Webster performs is such in a lot of
18 cases of taking some basic criteria that may be established
19 by the intern list, suppliers, locating it, hyping it,
20 instrumenting it.

21 We're looking for systems and multiple functions,
22 that there is a certain amount of depth to it. These
23 systems may perform in two or three different modes and we
24 feel that looking at the different modes is better insight
25 into the design process.

1 OMT/bc

1 Another key feature in selecting a system is the
2 state of obstruction of the system and also the state of the
3 reconciliation program...the as built reconciliation
4 program.

5 Duquesne Light has instituted its confirmation
6 programs, which are extensive. And we want to be able to
7 take advantage or to evaluate how effective those systems
8 have been. So we're looking at a system that's gone through
9 various stages of the confirmation program.

10 We have, in looking, prior to doing these indepth
11 technical audits, Stone and Webster has done smaller, many
12 indepth technical audits, many technical audits on various
13 systems within the PB-2 unit.

14 In reviewing those that we have looked at and
15 reviewing other systems that have been reviewed by other
16 organizations, like INPO, three systems came to my potential
17 for review.

18 The first one is the service water system. It
19 has got a very high level of Stone and Webster involvement
20 in it and very little interface with the interface
21 supplier. But we are supplying a certain amount of levels
22 to the various heat exchangers.

23 And also the service water system was reviewed, I
24 believe, by INPO. So that we dropped that from our
25 consideration.

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The second one was the auxilliary feed system, which has always been a problem with a number of different plants. That is a system that has both Stone and Webster involvement and also some Interbles involvement as a potential candidate.

The third one, which is the safety injection system, is a dual train system. It has got -- the majority of the basic design is done by the Intrablus supplier. However, we feel that it still is a good example of taking their criteria, installing it, piping it, which is a large amount of work, as far as Stone and Webster is concerned, and doing the electrical systems that support it, that right now we're leaning towards the safety injection system.

We have looked to both Gain Light and also the project in looking for particular areas that may be of concern to them or that have not been looked at, and we're open to comment on those selections.

MR. TRIPP: In the auxilliary feedwater system, Roger, your folks looked at that in my confirmation program, didn't they?

MR. MARTIN: Yes.

MR. EMBRO: I guess my only comment, this is Jim Embro, as you point out, the safety injection system is primarily designed by Westinghouse.

I guess that we agree, you know, Stone and

1 OMT/bc

1 Webster, goes from the piping. And they have to, you know,
2 examine Westinghouse...and make sure that it all operates.
3 But I guess that the basic design is really, you know,
4 Westinghouse.

5 So I guess you have to think about how adequately
6 that's going to be evaluated across the Stone and Webster
7 design process.

8 Would you also be looking, if you did that
9 system, at the modes of operation, like RHR?

10 Well, let me say this. When you were talking
11 about safety injection, I told you about both high pressure
12 and low pressure?

13 MR. TWIGG: Yes.

14 MR. EMBRO: And the RHR modes of operation, in
15 addition. The actual safeguards function?

16 MR. TWIGG: Well, again, we're in the process of
17 seeing how far we're going to go. We don't deal with it
18 into the spray loads or the tying of the spray system. But
19 the safety injection system, with both the high pressure and
20 the low pressure aspect of it. And we do have a lot of
21 interfaces there. You have a lot of high and low pressure
22 interfaces involved which are important to look at.

23 And we have a tie-in to the primary system
24 directly.

25 MR. EMBRO: Let me ask another question.

1 OMT/bc

1 Scope of supply in terms of components, is that a
2 Westinghouse scope of supply in terms of turbine sink pumps,
3 heat exchangers, or others?

4 MR. TWIGG: Those are supplied by the Interbles
5 supplier, those are Westinghouse. The amount of equipment
6 that is specified and ordered by Stone and Webster is
7 limited on system. There is a limitation for the system
8 that is supplied by Stone and Webster.

9 Some of the instrumentation also is supplied by
10 Westinghouse. But we felt that because of the nature of the
11 system that it was a credible system and were able to look
12 at the total interface in that regard.

13 MR. IMBRO: You know, certainly, we agree it's a
14 critical system, but since it's predominantly a Westinghouse
15 design system; whereas they supply the IND's, plus they also
16 develop the logics to determine how the system operates,
17 basically, you're taking Westinghouse criteria and
18 implementing it.

19 You know, which it's a very good example of the
20 system we have having an Interplus interface.

21 But it seemed like in this system the majority of
22 the Stone and Webster effort would be geared pretty much
23 toward piping, running piping, piping supports.

24 MR. TWIGG: Piping, instrumentation and
25 electrical, yes. What Stone and Webster does is they take

1 OMT/bc

1 the elementaries that are furnished by Westinghouse and then
2 Stone and Webster develops the logic, diagrams and follow-
3 through of design.

4 But I understand. That's why I mentioned that it
5 does have very heavy interbles involvement in it.

6 MR. IMBRO: Okay. I guess we'll go back and look
7 at your system selection criteria. And one of the primary
8 ones is, you know, extensive Stone and Webster design
9 responsibilities, with interbles involvement.

10 It seems like the intrables involvement is the
11 more heavily predominant factor in this system, and not as
12 much the select design responsibility. I guess, from our
13 point of view, we'd probably like to see you review a system
14 that's more, you know, select original design system.

15 MR. TWIGG: Well, as I say, we're open for
16 comment in that regard. The first technical audit we
17 performed was on the...cooling system. And that has gotten
18 much heavier involvement of Stone and Webster.

19 MR. ANKRUM: That would have been my comment, is
20 that we needed to look at some of the earlier audits and
21 see if this particular question had been resolved in one of
22 the first three.

23 But you've received our first-cut comments on
24 this and I think we've made our point, so...

25 MR. THOMAS: May I ask a question? Roger Martin.

1 OMT/bc

1 For clarification, the desire for a system which has more
2 Stone and Webster involvement than the venicular steam
3 supplier is that it might be unique, that the NSS's
4 supplier's input might be more standardized or more
5 uniform. And you're directing your interest for the system
6 that would be...

7 MR. TWIGG: That's correct.

8 MR. ANKRUM: One of a kind, maybe.

9 MR. TWIGG: Not necessarily one of a kind, but
10 something which tests, which fully tests the capabilities of
11 the Stone and Webster design capability.

12 MR. THOMAS: I think Mr. Twigg is making the
13 point that we've done that once or twice now. ...is how
14 well you can take someone else's...and really make it work,
15 recognize it's a little bit the other side of the coin, so
16 to speak.

17 And it's a real important attribute sometimes,
18 that interface maagement is more difficult than when you're
19 trying to do the whole thing yourself.

20 MR. ANKRUM: We agree completely. Interface
21 management is probably the most difficult thing to do. And
22 it's the area that is most susceptible to problems. That's
23 been our experience in previous design reviews, that many of
24 the problems occur either in interfaces between disciplines
25 or interfaces between organizations.

1 OMT/bc 1

2 So we agree that that's a very important thing to
3 test. And it's important, I believe, for you to look and
4 for us to also look and agree with your across-the-board
5 reviews. You've done a lot of things here.

6

7 And somewhere in that should have been a good
8 test of the capabilities of the Stone and Webster design
9 organization itself.

10

11 And somewhere else should be a good test of the
12 interfaces. So it's necessary to look at the whole picture.

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2 So I don't want to focus on just this fourth
3 audit and whether or not it covers the Stone & Webster
4 original design effort.

5 I think we have made our point, and it is
6 necessary to look at the total program. Somewhere in there
7 this should have been covered, not necessarily in the fourth
8 audit, and somewhere the interface should be covered, which
9 sounds -- your proposal certainly does that in the fourth
10 audit.

11 I think I would just like to say our comments --
12 we have given you our input on this, and I don't think we
13 can add any more to that at this point in time.

14 MR. THOMAS: Yes, we are not really here to just
15 pick the system to death.

16 MR. ANKRUM: No. Exactly.

17 MR. THOMAS: Nothing like that. You know, kick
18 it around a little bit. And I do appreciate the point that
19 it is intended to be a total thing, including all four
20 audits.

21 MR. ANKRUM: Yes.

22 MR. THOMAS: And it is a good point that we
23 should consider that when we are doing this other design.

24 MR. ANKRUM: Yes, I would like to concentrate
25 today's discussion on how do we go forward from here to the
eventual licensing decision on this plant.

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2 MR. TWIGG: As we have indicated in our
3 preliminary schedule here, the timing of the schedule is
4 critical with a number of respects.

5 One, as I have indicated before, you want to look
6 at a system that has gone through the as-built
7 reconciliation process, confirmation programs, and so that
8 we can't have it too early because some of those systems may
9 not be totally available or sufficient samples within those
10 areas.

11 The second thing is that these audits are a lot
12 and difficult and that we don't want to get to the point
13 where we are impacting fuel load.

14 The other impact or potential impact we would see
15 on the project would be as far as the scheduling of the
16 CAT. It is our understanding that the CAT was originally
17 scheduled for April, but there was some indication that it
18 may be delayed.

19 So again that is an interface that we would be
20 concerned about and should be factored into the overall
21 schedule.

22 The plan --

23 MR. MARTIN: May I clarify? The source of our
24 information was Mr. Taylor had given an indication that
25 because of the TVA activities there might be some effect on
schedules such as the CAT, and these are two which were

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identified.

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MR. TWIGG: As affected the schedules --

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MR. MARTIN: I think that is very obvious.

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MR. EIFERT: Including TVA.

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(Laughter.)

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MR. THOMAS: I guess our question on that would be: does anyone here have any information on what is occurring?

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MR. EIFERT: Not specifically, no.

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MR. THOMAS: Well, do you think that ought to be a consideration in this schedule, that the CAT -- other than not having people there at the same time doing similar things, which, you know, really would be occupied in another project?

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MR. IMBRO: Not necessarily. If the CAT is done prior to our type of audit, we try and pick up on the CAT findings, and so in the process I suppose this ought to have been done prior to the CAT.

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MR. THOMAS: It doesn't matter. The two are coordinated, in whatever order.

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MR. TWIGG: Where we are looking at the typical audit chronology, you will see what we have indicated as preliminary planning. It is obtaining the scope of completion of the various systems, getting input from the project, from the client, and so forth.

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1 The next step would be to prepare a draft audit
2 plan. And within the audit plan we would identify what
3 system we are going to look at, and we would identify in
4 more detail what we feel the scope of the audit should be.

5 And the scope of the audit is something which we
6 feel that we should get agreement on up front so that we
7 don't have problems later on as far as adding to the
8 scope.

9 I don't want to speak necessarily for Duquesne
10 Light, but this is a concern that the scope of the audit be
11 bounded, and we realize that when one goes and finds
12 problems in a particular area it is normal to expand the
13 scope and to determine the extent of those conditions. We
14 feel that is totally appropriate, and we understand that.

15 So that in this next --

16 MR. MARTIN: We would like to address that, and
17 maybe it isn't appropriate right here, but if there are some
18 determinations about a deficiency, what guidelines or rules
19 could be used for expanding or controlling the -- let's say
20 a judicious selection of which way to go.

21 If one calculation has difficulty, is it
22 appropriate to use the sampling method of that type of
23 calculation to assure ourselves that that hopefully was an
24 isolated case?

25 This is where we are coming from.

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MR. ANKRUM: We have used that in the past.

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MR. MARTIN: Yes.

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MR. ANKRUM: I don't believe we have ever gotten into a situation in the design area where a wall-to-wall review was necessary.

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MR. TWIGG: Right. Let me just continue in the area of the schedule.

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Mid-April, we would expect we would be formally into the audit preparation, preparing review plans and reviewing documents.

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About the 5th of May, we would start the active part of the audit and interviews with the project personnel. We have essentially the month of May that we have slotted for that activity.

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One week or maybe less will be involved in a site review. What we do at the site, we -- reviewing the actual hardware and the site is effective from getting a feeling for what the system is and how it relates with the other surroundings. That is very important.

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We also look at site activities that are performed at the site, the ENDCRs, changed documents, the nonconformance reports that we will be doing at the site, and also any other types of drawing preparation that would be done at the site.

25

This effort would be looking at within the

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1 particular system that we pick. So the week of 5/19 to 5/23
2 would be what we have presently scheduled for the site
3 review.

4 We have tentatively set up a post-audit
5 conference date of 6/24, which time extends to a period from
6 the end of May through June. We will be preparing a report
7 and a post-audit conference 6/24, and we issue the report
8 approximately July 17.

9 At that point we would go into the follow-up
10 phase, where we would be resolving whatever action items
11 that had not already been resolved.

12 And the action items, I am quite sure everyone is
13 familiar with it, but they are used to determine the extent
14 of the condition, the cause, and the corrective or
15 preventive actions that are appropriate.

16 In each case engineering assurance and the team
17 of individuals who are performing these verify as the
18 adequacy of the project response and verify as the
19 completion of the design activity that has to be resolved by
20 these -- from these action items.

21 MR. IMBRO: Let me ask a question to Duquesne.
22 How would you envision the NRC participation in
23 this audit?

24 MR. ANKRUM: Let's save that for later. I think
25 that is premature.

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1 MR. TWIGG: In conjunction with the audit or the
2 inputs that we use -- and I am talking about Phase II, where
3 we -- the individual audits that are performed are each
4 evaluated for corrective and preventive action for each of
5 the particular items.

6 In the evaluation report, we accumulate the data
7 together and we look for trends. We look for particular
8 areas that need additional attention.

9 Some of this work is done early on prior to the
10 audit itself, so that any potential problems we see on the
11 past audits that have more of a trend can be factored into
12 the fourth audit to resolve those conditions.

13 Likewise, after the completion of the fourth
14 audit, all the data is added together. We summarize the
15 data and we group it to see -- group it by cause, by types
16 of problems we find, then make recommendations based on all
17 the review of the data as viewed as approved.

18 MR. MARTIN: I think that is significant, that we
19 use the value of the knowledge we have gained from previous
20 audits, not only to establish the scope for this fourth
21 audit but to also take an overview at the end of the project
22 through the period of growth in the project.

23 MR. TWIGG: And we would expect that that total
24 effort will be completed by the first of November.

25 MR. EIFERT: Okay. I think that concludes our

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1 overview of what we are planning, and it is early in the
2 planning. We are really scheduled to get started on this
3 next month.

4 I will turn it back to John and Roger.

5 MR. TWIGG: Unless there's any questions.

6 And we have gone through it very superficially
7 because we know that some of you have been through part of
8 the process before.

9 MR. EAPEN: This is P.K. Eapen. I got two
10 questions.

11 Number one, how are you incorporating the
12 experiences you have gathered from other sites like Seabrook
13 and Nine Mile in developing this audit plan?

14 Number two, I had a lot of safety considerations,
15 and there is another aspect coming up out of the woodwork;
16 namely, probably the risk assessment.

17 Are you ascribing any merit to the causal
18 probability of this electric system?

19 That is my second question.

20 MR. TWIGG: The answer to the first question:
21 what we have done in engineering assurance, we have taken
22 all of the IDIs that have been performed and we have
23 reviewed the IDIs. We have also reviewed the CAs, and we
24 have entered these into a program where we can look at the
25 data and group the data, and we have tried to keep up with

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1 all the different new problems that are coming up.

2 So we do have a program where we go in and we
3 look at the IDIs and the CATs and use that information for
4 some of the detailed questions that we would be asking; also
5 the experience we have had most recently in Nine Mile and
6 Millstone. There are particular areas that we know that we
7 should be looking for.

8 The second question, maybe if you can clarify
9 that a little bit for me?

10 MR. EAPEN: Well, I don't know whether this
11 particular site has PRA or PSA study. My personal
12 experience in the past is when you look at the core melt
13 contribution probability for a given system it opens a few
14 extra eyes. You know, it opens up certain areas where
15 traditionally people did not spend a whole lot of time.

16 Disciplines are there, you know, that type of
17 information. There is a whole host of information like that
18 available in the industry today if you don't have your own
19 PRA or PSA.

20 MR. TWIGG: Well, we have the studies that we
21 would review as far as the failure mode and the effects --

22 MR. EAPEN: That is right.

23 MR. TWIGG: -- on all of these, and we have
24 traditionally looked at portions of these as we go in and do
25 the audits.

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1 As far as failure rates and these type of things,
2 they traditionally have not been included within, I believe,
3 the IDIs or the IDVPs.

4 MR. EIFERT: You know, this is an audit of the
5 design process. It is not an effort to identify all of the
6 industry problems that may have occurred somewhere and
7 determine if it happens to apply or has been taken care of
8 with respect to the system. That is not what we are doing.

9 We use our experience and our intelligence to
10 look at the general areas where there have been concern, but
11 we don't use this as a way to investigate if this particular
12 plant would have a problem -- say, a problem that was
13 reported in, say, a Seabrook IDI.

14 MR. ANKRUM: I would like to reinforce that by
15 saying that this is a measure of how well the plant has been
16 designed, given the design that NRC requires in its
17 regulations and as the utility is committed to do in its
18 PSAR and FSAR, and those are the bases against which we
19 measure things.

20 If it is in the PSAR or FSAR, that is the basis
21 against which we are measuring the design process, and we
22 are not trying to measure how good this particular design
23 vis-a-vis some other design but how well did this design get
24 implemented within the scope of the licensee's commitments
25 and NRC's regulations.

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1 MR. TRIPP: Do you consider things like the
2 number of information requests, number of EMDs, and so forth
3 in selecting a system?

4 I mean, they might be an indicator that there was
5 a lot of problems with the engineering design when the field
6 tried to implement it.

7 MR. TWIGG: I think we are looking on a more
8 general basis. I think the systems we select based on the
9 criteria that we have mentioned here do not achieve all of
10 the criteria in a particular system that you would like.

11 The way that we look at ENDCRs and EMDs, we go in
12 and we are testing the implementation of the design process
13 of the work performed by the individual groups. In other
14 words, we are looking at electrical, ENDCRs, EMD, which is
15 our mechanical. We will be looking at the power,
16 calculating the power ENDCRs, structural ENDCRs.

17 So what we do is we go in and sample the design
18 process -- and that is what we are doing. We are sampling
19 or evaluating how effective that design process is. It is
20 very difficult to be able to -- if you go in and look for a
21 known problem area, you may not be doing justice to the type
22 of review which we are trying to perform.

23 MR. MARTIN: I might amplify that. In the
24 Duquesne design basis endorsement program that was initiated
25 and performed by our people, we looked at the installation

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1 specifications, particularly 977 and some that had a number
2 of ENDCRs -- this is engineering design change requests --
3 attached to them and incorporated, and we reviewed those
4 with special attention to make sure that they were updated
5 and that the information was timely and was incorporated in
6 the design and that that was not only design but also
7 governed field activities.

8 That is a little bit more than the engineering
9 phase. Actually it is some of the workmanship type of
10 things go into those specifications.

11 MR. TWIGG: The number of the ENDCRs in a
12 particular area is always a question of whether the design
13 was thought out as well in advance or not, also the
14 indication of an ENDCR that the problem was picked up and
15 identified, and we are looking for areas where the problem
16 may not have been picked up.

17 So that looking at the ENDCRs certainly has --
18 there is an influence on the design process there, but those
19 are the ones that have been picked up.

20 MR. MARTIN: Along this line, since we do have
21 the benefit of the presence of some of the region people,
22 what is the relationship -- for my information -- between
23 the headquarters I&E staff and the region?

24 I think I understand, but maybe if you could help
25 me. I realize that maybe the objective is more site

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1 related than it is base, home office design activities.

2 Is that correct?

3 MR. ANKRUM: No, not exactly. The relationship
4 in the design area is a little different than you would find
5 normal region-headquarters relationship.

6 The region has site responsibility of the plant,
7 retains site responsibility for the plant. However, again
8 following Diablo Canyon, one of the things we learned was
9 that the NRC really had never done technical inspections of
10 design and design process.

11 NRR reviewed the permittee's promises, if you
12 will, in the PSAR and FSAR, but no one ever checked to see
13 if those promises were actually implemented in the designs
14 themselves.

15 It was determined that that required such a
16 degree of specialization and talent that we couldn't put
17 that in each of the five regions, and so that inspection
18 capability was centralized in headquarters in I&E, as it
19 happened in the QA Branch. But there is no reason why it
20 couldn't have been in some other branch. It just happened
21 to be there.

22 And so we are performing a direct inspection
23 function for this design area strictly because we couldn't
24 afford to distribute that kind of talent throughout the
25 regions.

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1 And then let me go an extra step, and this now is
2 feeding into the licensing process, and it is similar to the
3 regional administrator's determination at the end of the
4 process that the plant has been constructed in accordance
5 with the design.

6 But the Division of Licensing also looks to I&E
7 headquarters for some input as to whether or not the design
8 to which the plant was constructed actually complies with
9 the licensee's commitments and NRC's regulations.

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1 So you will find that the region participates
2 with I&E on these design reviews so that the region --
3 because the region remains responsible for that plant. It
4 is in their region. But the repository of the design
5 expertise is within this group of people at I&E
6 headquarters.

7 MR. TRIPP: Roger -- I certainly don't disagree
8 with Ted -- what might have confused you a little bit here
9 is that, as you know, we in the region had the perception
10 that there was engineering/construction interface problems,
11 and we hit on that in the SALP area, and so we monitored
12 that area closer with your project than with most other
13 projects.

14 And we also, for example, then took a look at
15 some of the confirmation activities that Duquesne Light did
16 because we regarded that as part of the utility's overview
17 and control of your architect engineer.

18 We took quite an interest in the site engineering
19 activities because we saw them as a key link in this
20 interface process, and as you pointed out in your submittal,
21 we specifically looked at that one audit there that was
22 focusing on the site engineering activities. In fact, I was
23 personally involved with that.

24 Again, it was in the context of our larger
25 concern about the engineering/construction interface and the

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1 site engineering group has been the key link in that
2 interface.

3 We typically don't have a staffer do the detailed
4 design inspections that Ted is talking about.

5 MR. THOMAS: The region people have been involved
6 in the program, though, I believe. I think there was a
7 presentation made at the region headquarters on the design
8 confirmation program.

9 MR. MARTIN: Oh, yes. John is referring to our
10 presentation, in which we mentioned about our design
11 confirmation program. We will be -- initially approached
12 you people in the region to tell you that we were planning
13 this. That was prior to some of the difficulties of Diablo
14 Canyon.

15 MR. TRIPP: Well, that was in '83, and we were
16 already concerned about the engineering/construction
17 interface at that point in time, and so as I recall,
18 Duquesne Light came in to assure us that they were doing
19 something to look into this area and control this area.

20 MR. MARTIN: That was presented October 21st,
21 1983.

22 MR. DEL GAIZO: Can I just slide in a few things
23 here?

24 MR. MARTIN: Certainly.

25 MR. DEL GAIZO: A few quick questions before we

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1 go on.

2 Ted Del Gaizo, Westec Services.

3 The hazards analysis review you just finished, I
4 take it was high energy line break, seismic 2 over 1
5 flooding?

6 MR. MARTIN: Yes.

7 MR. TWIGG: That is correct, yes.

8 MR. DEL GAIZO: Was -- when the Stone & Webster
9 people who did it -- any of it that we have seen before in
10 Nine Mile, Millstone, or Vogle?

11 MR. TWIGG: No.

12 MR. DEL GAIZO: Thank you.

13 Just one other thing. You mentioned NUS did the
14 EQ review. You also said there was a third party review on
15 fluid systems.

16 Who did that? Can you tell us who did that?

17 MR. MARTIN: Quadrex.

18 MR. DEL GAIZO: Quadrex?

19 MR. MARTIN: Yes.

20 MR. DEL GAIZO: Okay, thanks.

21 That is all I have.

22 MR. MILLER: Ted, can I go back and ask a
23 question?

24 What has been the experience of other utilities
25 in terms of the breadth of the design reviews that they have

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1 performed in terms of the number of systems that they have
2 typically covered?

3 MR. ANKRUM: It has varied. I would say that
4 from what I have heard with the efforts on Beaver Valley 2
5 is consistent with what we have seen elsewhere. There are
6 other utilities that have done what would appear to be fewer
7 systems, but because they recognized that you couldn't
8 satisfy all questions of one system they would review parts
9 of other systems.

10 We have had utilities that have done more systems
11 because they found problems in the first one and it was
12 necessary to decide whether or not we had an isolated
13 incidence or whether there was a generic problem.

14 But the effort that Duquesne Light has undertaken
15 sounds consistent with that which other utilities have
16 undertaken. More than some, less than others. And the ones
17 that they are less than were ones that had problems.

18 MR. MARTIN: Well, I think we have talked about
19 an overview of our past activities and discussed the audit
20 plan, discussed the assistant report. We are to the
21 question of the NRC role, and we are interested -- do you
22 want to take that up now?

23 MR. ANKRUM: Sure. This is a good time.

24 MR. MARTIN: Whatever.

25 MR. ANKRUM: Well, let me summarize that then.

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1 As I mentioned earlier, we are obligated -- and
2 when I say "we" I mean I&E -- are obligated to give the
3 Division of Licensing some evaluation of design process and
4 whether or not the design process in fact resulted in a
5 design that complies with NRC's regulatory requirements and
6 your commitments.

7 That will take the form of either an SER or an
8 inspection report.

9 Now, we have several things that we could do.
10 The first thing we could do is we could do a direct
11 inspection, an IDI.

12 I don't favor that because you have undertaken a
13 considerable effort on your own, as you have described to
14 us, and in particular through the engineering assurance
15 program which, as you observed, is one that we are familiar
16 with, comfortable with, and believe that it effectively
17 answers the questions that are on the table.

18 So we would not desire to do an IDI. It is very
19 labor intensive on our part, and it would be duplicative of
20 what you have done.

21 The second thing we could do is come in and look
22 over your shoulder on the EAP and the other things that you
23 have done, and by looking over your shoulder I mean test the
24 implementation. We are not talking about changing your
25 schedules. We are not talking about changing necessarily

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1 what you are doing except that we would be pleased to review
2 in advance things which you plan and tell you whether or not
3 we think that in our opinion you are achieving what you are
4 setting out to achieve with what you are doing, and we would
5 endeavor to the greatest extent possible to stay off the
6 critical path, and we have managed to do that in every
7 instance. We have yet to have been on the critical path
8 towards a licensing decision.

9 So we can look over your shoulder of what you are
10 currently doing and then prepare an SER to the Division of
11 Licensing, giving them our opinion.

12 The third option we could do is essentially
13 send -- you know, if we did not look over your shoulder
14 during this process -- and it is similar to what we did at
15 Nine Mile Point 2, it is similar to what we did at Millstone
16 3 when I say look over your shoulder -- that if we don't do
17 that --

18 MR. THOMAS: Can we talk about that, please?

19 MR. ANKRUM: Sure, I will come back to that.

20 If we don't do that, then our third alternative
21 would be essentially to send an SER to NRR that says we have
22 reviewed on paper, we have reviewed your submittals of what
23 you were doing, and what you were doing has the elements of
24 answering the question that we have been asked to answer,
25 but that we have not reviewed the implementation and

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1 therefore we are not in a position to come to any conclusion
2 as to whether or not the design in fact -- it would say your
3 methodology could provide that answer, but having not looked
4 at the implementation, we can't tell you, Division of
5 Licensing, whether this has met the requirements or not
6 because we haven't looked at the implementation on it.

7 And one of the significant lessons of the past
8 few years, for our part, is that implementation is the key.
9 Wonderful plans are just that, plans, and it is the
10 implementation that delivers the product.

11 So as I see it, we have three alternatives. One
12 is an IDI, which we do not favor, but if we didn't take the
13 second path and NRR believed that the third path was not
14 satisfactory, or was not satisfactory on our part, then we
15 would have to go back to an IDI.

16 So those are the three options that are before us
17 at this point in time, and I would like some feedback from
18 you as to whether you would prefer to pursue any of those
19 three.

20 MR. THOMAS: Well, I would like to say a couple
21 of words. I was on the Nine Mile project last summer when
22 that in-depth technical audit was performed, and there was a
23 lot of work put in on it, a lot by everybody.

24 My concern is that there was like 29,000 hours
25 time of the auditors -- that was about 15,000 hours, and

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1 project people was about 14,000.

2 MR. MARTIN: These are Stone & Webster project
3 people and Stone & Webster auditing types. That was alone
4 for them.

5 MR. THOMAS: So that my concern is that seems
6 rather a lot. I don't know what it is in your experience.
7 Although that is a good process, I think we want to, you
8 know, do what we need to do for you to be able to provide
9 this assurance. So we want to cooperate and don't even want
10 to appear to be uncooperative because we are not.

11 At the same time, you recognize that we are
12 between a rock and a hard place here, in a way, because I am
13 sure you have heard of PUC auditors and folks like that --

14 MR. ANKRUM: Absolutely.

15 MR. THOMAS: -- that are around.

16 So we would like to -- I would like to and I
17 think that is Roger's position also -- we would like to
18 reach a meeting of the minds and agreement here where you
19 can do what you have to do, yet we can still be responsive
20 and be assured that we have been prudent, that we have done
21 what we had to do. And maybe things are not absolutely
22 mandatory but were prudent to do in expansions.

23 So we would really like in the over-the-shoulder
24 thing -- that seems to be the reasonable solution here -- is
25 a middle ground, I think, though three, I don't know how we

1 OMTbur would do Item 3, frankly.

2 Do you? Have you ever done Item 3?

3 MR. ANKRUM: No, never done 3. In fact, you
4 would stick out like a sore thumb.

5 MR. THOMAS: I don't know what that means even,
6 frankly.

7 MR. ANKRUM: Neither do we. Neither do we.

8 Given the questions that we received from the
9 Commission, the Commission might wel' not accept that on the
10 path of the licensing. On the other hand, the Commission
11 might accept it on the path of the licensing.

12 I don't know. It has never happened. Unplowed
13 ground, and I agree with you that the Option 2 is the
14 preferred, and we are perfectly willing to work with you in
15 advance on your audit plan and basically come to an
16 agreement ahead of time that what you are doing, what you
17 plan to do meets the objectives.

18 Now, if it turns out we can't agree at that point
19 in time, our subsequent evaluation will simply be
20 qualified. To the degree to which we are able to come to a
21 conclusion, that is how much of a conclusion we will come
22 to.

23 If we feel that what you are doing isn't
24 sufficient to answer one particular question, then our SER
25 would say in this particular question we don't believe that

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1 the audit effort was sufficient to answer and answer the
2 question.

3 On the other hand, we may come to an agreement on
4 an overall plan of attack that completely addresses the
5 questions that are on the table, and I would like to
6 basically turn that question over to Gene Imbro and Ted Del
7 Gaizo and our team that does this and basically work
8 together with your team and come up with a review of what
9 you plan to do and where we would fit in and come up with
10 the bottom line.

11 Now, as to the number of hours necessary, I think
12 it would be premature to say so many thousand hours are
13 needed to answer the question because every utility is
14 unique. You have done a number of things already, and you
15 may have dealt with many of the issues that have had to be
16 dealt with at the last minute at other utilities.

17 So we have not looked in great detail at what you
18 have done. We basically have your letter at this point in
19 time, and the next step in our view would be the planning
20 for how we would integrate with your schedule that you have
21 given us and a discussion as to whether or not that what you
22 have planned to do, if implemented as you plan to implement
23 it, will allow us to write the comprehensive SER to the
24 Division of Licensing.

25 MR. THOMAS: I am sure we can reach agreement.

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1 I don't want to say that we can't. I am sure we can.

2 However, you know, assuming that for some reason
3 then we didn't, or whatever, just go back and explore the
4 third alternative, which looks like kicks you back to the
5 first alternative, which is you say no alternative at all,
6 but the IDI.

7 I guess it would go back to are you obligated by
8 the Commission, or whatever the rule citation might be, to
9 provide that assurance or not assurance? If you can't
10 provide assurance, is that in effect saying that -- I mean,
11 you can't -- you got to either say yes or no, that it is
12 adequate or not, I assume.

13 MR. ANKRUM: Well, the Commission's rules
14 obligate you to do a design which complies with the FSAR,
15 PSAR, NRC's regulations, and what we would be facing is can
16 we, the staff, offer independent testimony to the
17 Commissioners that in fact your design does meet those
18 obligations?

19 That is the bottom line, and that is really where
20 we have been going with all of the plants -- is can we, the
21 staff, give some independent testimony -- and by
22 independent, I mean separate and apart from your
23 assertions -- and arrive at that independent testimony
24 through our own inspections or reviews of what you have
25 done? Can we tell them that you in fact have complied with

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1 NRC's regulations?

2 MR. THOMAS: That you have taken independent look
3 and you can say from your own knowledge --

4 MR. ANKRUM: That is right.

5 MR. THOMAS: -- that you are satisfied with what
6 went on there?

7 MR. ANKRUM: And Option 3 is for us to say, from
8 our own knowledge we can come to no conclusion because we
9 haven't done the things that are necessary to come to that
10 conclusion.

11 MR. THOMAS: The question then is: is that an
12 essential piece of the licensing puzzle?

13 MR. ANKRUM: I cannot answer that question. All
14 I can tell you is that the Commission -- following Diablo
15 Canyon, the Commissioners wanted that independent look -- or
16 I shouldn't say the independent look -- but that independent
17 assurance from the staff.

18 Whether or not enough time has passed and enough
19 water is now over the dam and enough experience has been
20 gained by the Commission in this area that they no longer
21 feel they need that is a question for the Commission to
22 decide.

23 But I want to make sure that you understand that
24 we are not talking about new regulatory requirements. It is
25 the existing ones and the Commission desiring a finding by

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1 the staff that staff is independently able to conclude that
2 those regulations have been complied with.

3 MR. THOMAS: I understand. Well, then that --

4 MR. MILLER: Making a finding of reasonable
5 assurance, to put it simply, and your question really might
6 be: is there anything in a review plan or in regulation
7 that specifically calls for the staff to do something? And
8 the answer is no.

9 MR. THOMAS: Now, I am not trying to play lawyer
10 with you. What I am really getting at is, you know, if -- I
11 mean, if you don't do something like Option 2, it sounds
12 like that you are going to have to do Option 1.

13 Because I have obviously asked you the question,
14 you have got to provide an answer.

15 MR. ANKRUM: I can't tell you we would have to do
16 it. I can only tell you that if the Commission didn't
17 accept the Option 3 answer we would have to do Option 1. If
18 the Commission will accept --

19 MR. THOMAS: Prior to obtaining a license?

20 MR. ANKRUM: Prior to obtaining a license.

21 MR. THOMAS: Which may, you know, if we go down
22 this t al --

23 MR. ANKRUM: Put you on the critical path.

24 MR. THOMAS: -- and can't conclude on Option 2 or
25 3, then that might take some time?

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MR. ANKRUM: Exactly.

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You are ploughing uncharted ground because heretofore, since Diablo Canyon, the Commission has asked the staff to provide this assurance.

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If we tell the Commission we can't provide that assurance, the Commission then will have to decide whether or not they are accepting the information you are providing or whether or not they will go back to the staff and say, I am sorry, we have to have that, and I can't predict what the Commission will do.

10

11

MR. THOMAS: A couple other questions. Duquesne Light has done a number of things, as Roger has outlined here. You know, they have been a responsive owner and responsible owner as the NRC continues to urge owners to become more in charge, more directive in all their projects.

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It sounds as if though you can't take credit for Duquesne Light and 12 independent design reviews, the 12 different contractors. That couldn't be part of your decision because obviously that is not your own firsthand knowledge that things were right, even after you had done all that.

22

23

MR. ANKRUM: If you are willing --

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MR. THOMAS: Should that be a discouragement to the utility to do that sort of thing in the future?

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MR. ANKRUM: Not at all. Not at all.

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MR. THOMAS: Why not?

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MR. ANKRUM: If you are willing to go before the Commission and say here are the things that we did and not have us standing next to you saying we looked at those and, by god, they did them and they did them right, then --

MR. THOMAS: But it doesn't meet your requirements for this sort of firsthand knowledge of your own?

MR. ANKRUM: No. I am saying if we go back and looked over your shoulder, we would be standing next to you before the Commission saying, yes, they did all those things and we agree that all those things achieved exactly what they think they achieved.

Okay, that is one step.

The other path is you can stand before the Commission and tell them that without the staff's corroboration, and the Commission may very well accept your assertions because you are a responsible licensee and you have done all these things.

MR. THOMAS: Yes.

MR. ANKRUM: It is simply a judgment call on your part --

MR. THOMAS: So you would say --

MR. ANKRUM: -- as to whether or not you want

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1 the staff standing next to you before the Commission.

2 MR. THOMAS: And you could say we have no opinion
3 because we haven't investigated it?

4 MR. ANKRUM: That is right. We wouldn't say you
5 didn't do it, we wouldn't say you did do it. We would say
6 we have no opinion because we --

7 MR. THOMAS: So you are not required to come to a
8 conclusion then; that is all you are saying?

9 MR. ANKRUM: I am saying we are not required to
10 come to the conclusion and therefore --

11 MR. THOMAS: Well, is that different than the
12 construction? Because someone has to come to a conclusion
13 it was constructed according to plans and specs?

14 MR. ANKRUM: That is right.

15 MR. THOMAS: So that is different in that sense,
16 is that right?

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1 MR. ANKRUM: Well, the Commission ultimately
2 makes the decision, not the Staff.

3 MR. MILLER: I see.

4 MR. ANKRUM: The Staff makes the recommendation
5 to the Commission. The Commission has to conclude that you
6 have designed your plant in accordance with the
7 regulations. The Commission has to make that decision. The
8 Staff doesn't have to make that decision. The Staff may be
9 willing to come to that conclusion, based on your assertions
10 without an independent move from the Staff. Somebody does
11 have to come to that conclusion, and it is the
12 Commissioners.

13 MR. MILLER: I think what you are focusing on is
14 the ultimate decision. The Staff, of course, makes a
15 recommendation to the Commission.

16 MR. THOMAS: Well, you do make a statement,
17 though, I think you said earlier, about the construction
18 side. Yes, that you have, in fact, met all the published
19 requirements.

20 MR. MILLER: Before it ever comes down to the
21 Commission, the Staff will have to make some sort of a
22 determination.

23 MR. THOMAS: It looks like you you would at least
24 have to come to the conclusion that at least it wasn't
25 wrong.

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(Laughter.)

I'm not trying to argue with you here or be argumentative. I am just trying to understand. This is a big impact on the project. It would get into the larger things at Nine Mile, because it wasn't just the hours, directly applied, but it was the impact on the project at the time. And I am not trying to cop, you know, the "poor boy" plea either, but it is a fact.

MR. MARTIN: One of the concerns that we have, of course, is that if a plan is established and can be adhered to with guidelines, it would prohibit -- what is the term they use -- oh, frivolous changes in the program. I am trying to think of the lawyers term, but nevertheless, if -- the more that is known about the scope than the less effect it has on the policymaking in the upper levels of supervision, because it is more than just going through the motions. If you have a plan established and you have the people identified to support that, then you have your work program set out. But if there were other areas -- if you could identify something that is significant, to the point that it would require some changing program, yes. But I think the criteria -- and establishing that criteria is very important. How significant that must be, because then you have to bring in man-hours and manpower, which are dedicated for some other location.

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1 You have slice of time for this audit program,
2 and these people are dedicated, as we have done with the CAT
3 audits and other type of audits, these EA audits. The
4 people are not available for the day-to-day work in this
5 final push to construction. You are well aware of this.

6 I think the most significant thing that we felt
7 about -- and John has shared this with me in the Nine Mile
8 situation, is that the scope had expanded significantly.

9 Is that a correct statement?

10 MR. THOMAS: Well, that's correct.

11 First of all, I think we started out there, and I
12 know that Dick was part of that, and I know your folks were
13 involved too.

14 The estimate -- you know, I think it is like 5000
15 or 7000 hours in the beginning, and it ended up, the final
16 -- I don't think the final one is in yet. The last number I
17 heard off that project was like 29,000, which you are
18 looking at \$1.5 million plus whatever.

19 It seemed like that it had a growth to it. And I
20 wasn't as directly involved as Mr. Twigg, but at the same
21 time, I was aware that for weeks, you know, that the boards
22 were filled with findings and resolutions and people that
23 were trying finish designing of support construction were
24 also involved in that. And recognizing that you can't do
25 this without some impact.

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1 MR. MILLER: Well, John, can I ask you a
2 question about your number?

3 MR. THOMAS: Sure. You go ahead and ask anything
4 you want. I really don't have that document, but that's --

5 MR. MILLER: No, I am just curious, because what
6 you are basically saying is that you had to review plans,
7 and that review for the addition of NRC participation
8 expanded significantly. And you mentioned something like
9 from 5000 to 29,000 hours.

10 Is that your estimate of --

11 MR. IMBRO: I think you compare a little bit
12 apples and oranges here, because I don't think that whole
13 29,000 hours, as you said, was really EA audit time.

14 MR. THOMAS: No, it wasn't, Dave. About half of
15 that was EA audit time, but half of that was the project
16 hours, you know, providing information, answers.

17 MR. IMBRO: I think the other point is, too, that
18 I mean, you were going to conduct an audit anyway, so you
19 would have had -- you know, while I am sure NRC added
20 something to that, I can't -- I don't know exactly how much
21 that is. So I think it's really -- you know, a little
22 unfair to --

23 MR. THOMAS: No, I am not here to accuse
24 anybody. I am not here to do that. That's not the
25 purpose. I am just saying, what we would like to do, to go

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1 on with what we have here, is to -- as Roger has indicated -
2 is to sit down, you know, plan this in a cooperative way and
3 reach agreement on how we are going to decide things in the
4 future. And when there is something that leads to you --
5 well, maybe a requirement. Maybe you've found a great big
6 hole somewhere, and you do need to go back and redo, but
7 let's kind of elevate that to the management level and not
8 sort of have management from the bottom up, of what the
9 scope, in fact, ought to be.

10 MR. ANKRUM: Well, let me add a couple of --

11 MR. THOMAS: I'm not even saying that that
12 happened, but you know what happened.

13 MR. ANKRUM: Let me add a couple of comments.
14 The first is that we have found through our experience over
15 the last couple of years that -- and this includes us in the
16 very beginning -- there's been a underestimation of the
17 amount of time necessary to do the job properly.

18 MR. THOMAS: Of course, we need to define the
19 job; right?

20 MR. ANKRUM: Well, to answer the question.

21 MR. THOMAS: Right.

22 MR. ANKRUM: The number of hours that it has
23 taken to answer the question in a rigorous way, has been
24 underestimated by every utility and was underestimated by
25 the NRC when it first started its IDIs. That's just a flat

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1 statement.

2 MR. THOMAS: Would our track record influence
3 favorably that number of hours?

4 MR. ANKRUM: Well, I think the fact that you have
5 done the number of reviews that you have done in the past
6 will definitely affect that, and what we need to do is delve
7 into all of the audit reports and the paperwork associated
8 with those prior reviews, and then look over your shoulder
9 while you are actually doing one, so that we can offer
10 independent testimony to how you implement these things, and
11 I have a suspicion that you have done a significant amount
12 of work already which other utilities had to do at the last
13 minute.

14 And so without our people getting into this in
15 detail, I can say that it appears that you have done a
16 significant amount of effort, and we want to make sure that
17 you are getting credit for all of that effort in coming up
18 with the final conclusion.

19 I also want to add one more thing, and that is
20 that when you start these efforts to define the scope in
21 advance and you define the criteria for elevating an issue,
22 first of all, I will assure you that those things are
23 handled at the senior level in NRC. Secondly, if a
24 significant item is identified during the review, then at
25 that point in time, the number of hours involved become a

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1 function of the issue and the issue resolution. And you are
2 now off the planned path, as it were.

3 Now the reason the number of hours escalate has
4 typically been that some issues are identified in the first
5 review, and in order to determine whether or not those are
6 isolated instances or whether they are generic has required
7 more hours than was originally budgeted.

8 MR. THOMAS: I think that was a major factor in
9 the Nine Mile One.

10 MR. ANKRUM: Now, I will also say that in every
11 instance to date, we have been able to -- with the exception
12 of one -- we have been able, with those additional reviews,
13 to bound the the problems identified and establish that they
14 were isolated instances and were not generic to the design,
15 which is very important to not have an indeterminate case.
16 No one wants an indeterminate case.

17 We have been able -- we feel we have been very
18 successful in settling whether or not something is generic
19 or an isolated instance, and that is where the unbudgeted
20 hours come from in settling that.

21 Now I think that the path we are on here is
22 basically Option 2, and we are perfectly willing to sit down
23 and agree with you in advance about scope, agree with you in
24 advance on a methodology for escalating issues and to
25 basically follow your schedule, so that we don't become a

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1 critical path item.

2 The best way to work that out is probably by
3 getting the people who are going to actually do these things
4 together and hammer them out.

5 MR. THOMAS: Would it be best, in your opinion,
6 if we -- you know, as Dick Twigg has indicated, we have gone
7 through some preliminary planning and have given some
8 consideration to certain systems as candidate systems.

9 Would it be better, in your experience, that we
10 would maybe flesh that out a little more and then come back
11 for a sit down, kind of working session? You went through
12 this a number of times, I gather.

13 What would be your recommendation?

14 MR. GRIMES: Can we caucus just for a moment?

15 MR. ANKRUM: Certainly.

16 MR. THOMAS: Sure.

17 MR. TAM: If you need a caucus, why don't we take
18 a break?

19 (Recess.)

20 MR. TAM: During the half hour break we had the
21 opportunity to caucus and came to some conclusions.

22 Do you want to talk about those conclusions?

23 MR. IMBRO: Well, I think the next step for NRC
24 is that we would like to conduct an inspection, perhaps at
25 Stone & Webster would be the most convenient place or

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1 at Duquesne Light headquarters, however you want to do it,
2 to inspect the scope of the forthcoming audit. And at that
3 time we can sit down with you folks, and you know, come to
4 some agreement as to what the scope of the audit will be.

5 . Also we would like to ask that prior to this we
6 receive the three previous SWEC audits, so that we can more
7 accurately assess the scope of the review that has already
8 been done and have some basis to determine what additional
9 needs to be looked at in this final audit.

10 MR. EIFERT: Okay, if I can ask a couple of
11 questions.

12 MR. IMBRO: Sure.

13 MR. EIFERT: The inspection of the scope, as you
14 indicated, you anticipate that that would be conducted at
15 the point where we had an approved audit plan, as well as
16 prepared check lists.

17 Is that the proper understanding?

18 MR. IMBRO: No, I think we would like to come in
19 a little bit before. I am not sure what you mean by
20 "approved audit plan." Do you mean approved by NRC?

21 MR. EIFERT: Approved by us.

22 MR. IMBRO: Approved by you? Yes. Yes, I guess
23 when you come to a conclusion, SWEC and Duquesne as, you
24 know, what you feel comfortable in doing. Then I think that
25 is the appropriate time for NRC to get involved, and we can

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1 make an assessment to whether or not you think that will
2 cover the areas the previous three audits didn't cover.

3 MR. EIFERT: Okay, and a point of clarification,
4 with respect to the third audit that we've conducted on the
5 hazards program. The audit is completed, but that report is
6 not issued yet. It is in final draft form and will be
7 issued very soon here, but if we respond to your request for
8 the three previous audits, we may transmit the first two
9 without the third one, and with the third one to follow
10 shortly thereafter.

11 MR. IMBRO: That would be all right. We would
12 also be willing to accept the final draft, if you choose to
13 send it. That is certainly your decision.

14 MR. TAM: Do you have any idea when you can send
15 it, approximately?

16 MR. EIFERT: Within three or four weeks,
17 approximately.

18 MR. WANG: Also may I ask that when we go to
19 Duquesne Light for the inspection, we would like to have a
20 copy of your preliminary plan, audit plan or approval --
21 whatever you want to call it, and we would like to have it
22 at least a week or so to study ourselves, before we can
23 discuss it with you.

24 MR. MARTIN: This is prior to your visit?

25 MR. WANG: Right; right. Otherwise, we will

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1 spend two or three days just reading this plan.

2 MR. BEATTY: Do you have any check lists or
3 attribute lists of things that you would be looking for in
4 our audit, we could use to help define our scope?

5 MR. THOMAS: Like on your IDIs, you number them.
6 Do you have some kind of things that we could, you know,
7 anticipate some of your questions or requirements?

8 MR. IMBRO: Okay. Generally, we like to do a
9 comprehensive review covering the major disciplines as we
10 see them, which is instrumentation and control, electric
11 power, mechanical systems, piping and pipe stresses,
12 component review and civil structural.

13 That is -- typically, we like to look at each of
14 those five areas and be able to come a conclusion in each of
15 them. We understand that you have done previous reviews,
16 and I guess to the extent that your previous reviews have
17 covered these areas, you know, that will -- you know, give
18 us a handle on the scope of the final review. But I guess
19 -- you know, we'd like to be able to come a conclusion in
20 each of those areas, and we would like to be able to use the
21 previous audits that you've done, you know, to the extent we
22 can.

23 MR. EIFERT: Yes. I would like to make a couple
24 more comments about scope and how we are going to try to
25 identify and manage the audit to a given scope.

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1 Before the break, we talked about our past
2 experiences, the past Stone & Webster experiences performing
3 these, and we talked about the increase in the effort, and I
4 think it is fair to say that after our planning meetings in
5 the past, we identified a level of effort that we thought it
6 would taken and essentially that level of effort doubled,
7 okay, in completing these. And there's a lot of factors
8 that contributed to that.

9 For example, I don't think that we anticipated
10 that we would have to document the audit itself to make it
11 auditable, as you would require to make your decisions, and
12 we understand that now, that we didn't in the past, and we
13 understand the need for that, and we don't have a problem
14 with that. And certainly, we have learned ways to be more
15 efficient and still being totally effective in the audit
16 process, as well.

17 Our experiences indicate, though, that there was
18 increased scope in certain areas that are very obvious. We
19 had an example where a structure was added, for example. We
20 had an area where an additional sample of pipe supports were
21 added. In those kinds of areas, we felt -- at least my
22 judgment was that we probably didn't need them. And I will
23 qualify that, because we didn't study it. Based on our
24 interactions with you, the decision was made to proceed and
25 do those, and those were rather obvious increased scope

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1 kinds of things.

2 We are going to be looking at how we can manage
3 and be conscious of those and make an appropriate decision
4 in this case, before we go on and perform additional
5 inspection or auditing in that area.

6 Another area that is very, very difficult to
7 quantify, and we touched on it this morning in the
8 discussion, when the question was raised, do we use input
9 from IDIs and other experience to identify attributes to
10 look at. I believe in our past experiences there were items
11 like that where your staff and your consultants, based on
12 their experience, were aware of specific problems or
13 specific concerns that either have been identified by others
14 and maybe identified by themselves in other inspections that
15 they have been performing and in reviewing our specific work
16 plan or audit plant completion activities in a given
17 discipline would ask another question.

18 There is no way I can quantify those. I don't
19 know if there were ten of those or were there were fifty of
20 those. But each of those probably took from ten to twenty
21 hours to answer the individual questions. That is where it
22 is really difficult to control. I think we have to be
23 conscious of that and aware of that, that we don't turn the
24 audit into a specific identified problem in the
25 investigation process, but we need to be conscious of that

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1 when we establish some sort of a mechanism to control
2 scope.

3 MR. IMBRO: I guess we -- you know, we certainly
4 would like to tie the scope down as much as possible, before
5 we start this final audit. Hopefully, we -- if the systems
6 you choose are systems where there are no industry problems,
7 we would anticipate that you would be looking into those,
8 just as a matter of prudence.

9 But I guess to comment on the increased scope, I
10 think that perhaps some of the increase in scope was
11 initially to achieve comprehensive reviews in those previous
12 audits. So there is that part, and in addition, I think
13 that maybe some of the increase in scope came from the fact
14 that SWEC themselves did a creditable job of their audit and
15 possibly identified areas that needed to be pursued a little
16 bit further. So I think it is kind of something that ou
17 need to do, if you find - in the process of the audit find
18 things that you consider problems, you obviously have the
19 responsibility to follow them up and come to some conclusion
20 whether they are generic and what to do with them.

21 I think the question of scope, it's a hard thing
22 to judge when you first sit down, and maybe people, you know
23 tend to be somewhat optimistic and say that we're going to
24 accomplish this in X number of hours, and when they finally
25 get into the thing, it's X plus some delta, and I think

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1 since we've participated with SWEC before and SWEC has done
2 a number of these audits on their own, that we probably have
3 a better handle on what the final number or total scope is
4 going to be, in terms of when people try not to, you know --

5 MR. THOMAS: We don't want to hammer this scope
6 issue, you know, to death now. We just wanted to bring it
7 up. As long as we can manage it. We know that you can't be
8 definitive in all its detail. If we can just find a way to
9 manage, you know, adds to it. That is really all we are
10 saying, so that we can make sure that the management, you
11 know, agrees with the fact that you ought to do this or
12 that. And I think we can reach a suitable arrangement
13 there.

14 Now that is really my concern, to find a way to
15 manage it and not just let it happen. That is really what
16 the point is.

17 MR. EIFERT: Another question I would like to
18 raise on scope, and we haven't finalized our scope, but one
19 of the things that I would like to consider when we are
20 defining the scope is, for example, do we really need to do
21 a full structural design evaluation as part of this audit?
22 We have, in the past, and I am not familiar with all the
23 IDIs and other IDVAs, and I don't know to what extent that
24 they've looked at the full structural area, but my
25 subjective feeling, okay, as we start this planning process

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1 is that the structural area, in many respects in the
2 industry, hasn't been the problem area that the systems
3 equipments have been, and so if you are going to expend your
4 resources, we want to expend our resources looking at the
5 most likely areas where we will have a quality added.

6 There have been other activities, as Duquesne
7 Light has identified in their letter, which have addressed
8 this area. I am wondering if we propose, if we look at it,
9 and we conclude ourself, which we haven't yet, that we would
10 rather not look at structure in depth, but for example, look
11 at the interface and the load reconciliation programs, for
12 example, and bound the structural area like that, if we go
13 back and look at this, what kind of consideration would that
14 get and what kind of information would we need for you to be
15 able to accept something like that?

16 MR. IMBRO: I don't know. I guess it is hard to
17 answer at this point. I would like to, you know, first of
18 all, we noted that there was some structural review done in
19 the previous audits, and we would like to look at that.

20 MR. EIFERT: And I haven't looked at that -- I
21 haven't either at this point.

22 MR. WANG: They are pretty much in-depth. This
23 is the fourth one. You can save some time there, but,
24 however, if the previous three just did what you just did
25 you just said, you have to do something to show us this

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1 structure was done right.

2 MR. MARTIN: We'd like to offer the Duquesne
3 Light design confirmation review program. That was one of
4 the areas that we concentrated on, particularly on the
5 concrete design. I think the question we're asking is that
6 the concrete design in determining the adequacy of the
7 building under a seismic event maybe has significance, but
8 the total loading, the incremental loading, the final
9 loading on the columns, due to the changes during the
10 construction of the plant, the necessity to add it,
11 additional pieces of equipment. That would seem to be an
12 area that would be of more value. There is a changing sort
13 of thing in the classical up front concrete design review,
14 the review of those calculations.

15 MR. IMBRO: Well, I would tend to agree with you
16 that structural has not really been an area where we found
17 significant problems, and where we did find some
18 discrepancies, generally, the designs are so conservative
19 that the problems disappear anyway.

20 So I guess what I am saying is, I would be
21 amenable to looking at, you know, some proposal on your part
22 and a little less work in the civil structural area.

23 MR. EIFERT: We will come back to you with a
24 recommendation.

25 MR. DEL GAIZO: Yes. I think along these lines

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1 the sooner that we have the scope inspection the better,
2 before, you know, you what is intended before you get in
3 concrete. Because I think once we get a chance to look at
4 these old audits, and I look through the list, I see names
5 of people that we have known and seen in the past, and I
6 know are very good auditors. And I think when we get into
7 some of the details of this stuff, we can probably reach
8 several agreements on things that should or shouldn't be in
9 here, and the sooner we do it the better.

10 I think you should give us your best shot and
11 your recommendation of what you think and the basis for it
12 and, you now, obviously, we want to give you all the credit
13 we can for what has been done. We don't need to retread
14 that ground.

15 MR. THOMAS: We would like to do that too.
16 Particularly, I think Duquesne Light has done considerably
17 more than a lot of owners have and done their own reviews.
18 They have a lot good engineers and experience, and that
19 would be a same if we couldn't take some credit for that at
20 least. So we do want to do that.

21 I think what we would like to, I guess -- I don't
22 know if this is the proper time to sum up, but I think our
23 feeling is the next step would be for us to go back and, you
24 know, review and digest what we have heard here and then get
25 together and come back with a suggested schedule for doing

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1 exactly as you said, to come up with our draft audit plan
2 and suggestion that we get together the next time to discuss
3 this and reach agreement on how we are going to do these
4 things and what we are going to do.

5 Does that seem reasonable to you?

6 MR. TAM: Yes -- the next thing we would like to
7 do is inspect your plant.

8 MR. THOMAS: Well, we would come up with at
9 least a tentative schedule of how we see it, of when we
10 would submit certain things and talk, but we don't want to
11 waste your time just, you know, sitting in a place out of
12 town reading things that you could read here. So you need
13 to know that tentative thing, and we need to know if that
14 suits your needs.

15 MR. MARTIN: What mechanism should we use for
16 providing you the three previous reports and the preliminary
17 audit plan or program for completion of this audit? You've
18 asked for that, and you've asked to review the scope, which
19 would be in the program plan. Is it sufficient to provide
20 that material written -- I mean, to send it to you and then
21 have your meeting in Boston? Is that --

22 MR. IMBRO: Yes. That would probably be
23 preferable.

24 MR. MARTIN: All right. We can -- is that on the
25 docket and that sort of thing? Is that the way we handle

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1 it or -- if we are sending you a a copy of something that
2 says "Draft Copy of So-and-So"? How do you choose to have
3 it? We would like to do it the most direct and easy and
4 convenient way.

5 MR. IMBRO: It would be preferable to have it on
6 the docket, I think, but particularly if, you know, we're
7 going to try and use previous audits for a basis for
8 determining the scope of this one, I think it is probably
9 preferable to send the usual letter.

10 MR. TAM: We can not really review undocketed
11 material.

12 MR. MILLER: Let me ask a point of clarification
13 here. The three previous audits that you are talking about
14 were the SWEC audits, and you were talking about the
15 additional work that Duquesne has done, the reviews in this
16 concrete area.

17 Would it be advantageous to get some of that
18 other information, so you can build on that as well or not?

19 MR. DEL GAIZO: Well, I think the point is
20 whatever they are using for the basis to say that they don't
21 need to do X, they should send it. If it is Duquesne's,
22 maybe it is NUS. I don't think we would want to get it all,
23 because we would have to spend all our time going through
24 it, so if you could focus us in on what your basis is for
25 certain recommendation, that is what we need.

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MR. IMBRO: I think the thing you need to recognize, you know, whatever it is you send us, it should be auditable to us, or else it is really not of much relevance.

From our previous experience with SWEC, you know, they do things that have been auditable to us in the past, and I think we can have some confidence in looking at those documents. And Duquesne Light documents, I have no experience with.

MR. TAM: Okay. Any more comments?

MR. MARTIN: We thank you for the time and the understanding that we have had with you.

MR. TAM: This hearing is adjourned.

(Whereupon, at 11:40 a.m. the meeting was adjourned.)

CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceedings before the UNITED STATES NUCLEAR REGULATORY COMMISSION in the matter of:

NAME OF PROCEEDING: MEETING OF NRC STAFF AND DUQUESNE
LIGHT COMPANY ON
BEAVER VALLEY UNIT 2
ENGINEERING ASSURANCE PROGRAM

DOCKET NO.:

PLACE: BETHESDA, MARYLAND

DATE: FRIDAY, FEBRUARY 28, 1986

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

(sig)

(TYPED)

Joseph R. Maggio
JOSEPH R. MAGGIO

Official Reporter
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