

NUCLEAR REGULATORY COMMISSION

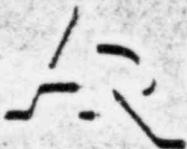
ORIGINAL

COMMISSION MEETING

05000 537

In the Matter of: PUBLIC MEETING
DISCUSSION OF CLINCH RIVER BREEDER REACTOR

DATE: February 12, 1982 PAGES: 1 - 81
AT: Washington, D. C.

ALDERSON  REPORTING

400 Virginia Ave., S.W. Washington, D. C. 20024

Telephone: (202) 554-2345

05000537

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DISCUSSION OF CLINCH RIVER BREEDER REACTOR

PUBLIC MEETING

Nuclear Regulatory Commission
Room 1130
1717 H Street, N. W.
Washington, D. C.

Friday, February 12, 1982

The Commission convened, pursuant to notice,
at 2:35 p.m.

BEFORE:

- NUNZIO PALLADINO, Chairman of the Commission
- VICTOR GILINSKY, Commissioner
- PETER BRADFORD, Commissioner
- JOHN AHEARNE, Commissioner
- THOMAS ROBERTS, Commissioner

STAFF MAKING PRESENTATIONS AT THE MEETING:

- S. CHILK
- L. BICKWIT
- M. MALSCH
- F. REMICK
- D. RATHBUN
- G. CUNNINGHAM
- P. LEECH
- S. FELD
- P. CHECK
- S. TRUBATCH
- S. TREBY

DISCLAIMER

This is an unofficial transcript of a meeting of the United States Nuclear Regulatory Commission held on February 12, 1982 in the Commission's offices at 1717 H Street, N. W., Washington, D. C. The meeting was open to public attendance and observation. This transcript has not been reviewed, corrected, or edited, and it may contain inaccuracies.

The transcript is intended solely for general informational purposes. As provided by 10 CFR 9.103, it is not part of the formal or informal record of decision of the matters discussed. Expressions of opinion in this transcript do not necessarily reflect final determinations or beliefs. No pleading or other paper may be filed with the Commission in any proceeding as the result of or addressed to any statement or argument contained herein, except as the Commission may authorize.

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

2 CHAIRMAN PALLADINO: The meeting will please
3 come to order.

4 This afternoon's meeting is a discussion of
5 the Clinch River breeder reactor. This afternoon we
6 will focus on the report of the Office of Policy
7 Evaluation analyzing responses to the request for
8 exemption to commence site preparation activities for
9 the Clinch River breeder reactor.

10 By way of background, on November 30, 1981,
11 the Department of Energy, DOE, for itself and on behalf
12 of its co-applicants, Project Management Corporation and
13 the Tennessee Valley Authority, requested the Nuclear
14 Regulatory Commission to grant an exemption from 10 CFR
15 50.10 pursuant to 10 CFR 50.12 to conduct site
16 preparation activities for the CRBR prior to the
17 issuance of a construction permit or a limited work
18 authorization.

19 DOE's proposed site preparation activities
20 include site clearing and grading, excavation and quarry
21 operations, the construction of temporary construction
22 related facilities, a barge facility and access road and
23 railroad spur and the installation of services,
24 including power, water, sewage and fire protection.

25 On December 24th the Commission, after

1 hearing from the participants in this matter, issued a
2 memorandum and order setting out its decision to review
3 and decide whether or not to grant the request for
4 exemption. The order further provided a schedule
5 whereby members of the public and government agencies
6 could file written comment on the exemption request.

7 Participants in the CRBR licensing proceeding
8 were asked to respond to specific questions and DOE was
9 requested to submit currently available documentation in
10 support of the exemption request.

11 The Commission staff offices, principally our
12 the Office of Policy Evaluation with the assistance of
13 others, were requested to prepare a report identifying
14 the technical and policy issues raised by the request.
15 They were also asked to summarize relevant background
16 information and positions of the participants on these
17 issues. The report has been prepared and is the subject
18 of today's meeting.

19 I would also like to mention that a public
20 hearing is scheduled for 10 a.m., February 16th, 1982,
21 in this room for the Commission to receive oral
22 presentations on the exemption request.

23 Now, unless there are further comments by
24 other Commissioners, I would propose turning the meeting
25 over to Dr. Forrest Remick, Director of the Office of

1 Policy Evaluation.

2 Forrest.

3 MR. REMICK: Thank you, Mr. Chairman.

4 The Commission in its order of 24 December
5 1981 that you referred to established procedures for
6 considering the merits of the exemption request for
7 certain site preparation activities at the CRBR site.

8 Those procedures indicated that the exemption
9 request would be considered in an informal proceeding
10 and involve written comments and oral presentations to
11 the Commission itself.

12 It identified the participants to the
13 proceeding as the applicants, the NRDC and Sierra Club,
14 and any other interested person who had filed written
15 comments in accordance with the procedure schedule. It
16 indicated that the NRC staff will not participate as a
17 party.

18 It required that the applicants file
19 supporting documentation by 31 December 1981, and it
20 required by 18 January 1982 that the applicants answer
21 11 Commission questions, that other participants could
22 file written comments and/or answers to Commission
23 questions and that government agencies, including the
24 Attorney General of Tennessee, could file comments. It
25 required that the response to comments and answers be

1 filed by 28 January '82, and required the Commission
2 staff report by 8 February 1982.

3 All of these requirements have been met, to
4 the best of my knowledge. The staff report, which you
5 have received, addresses each of the various factors of
6 10 CFR 50.12 that the Commission must consider and
7 balance in reaching a decision on the exemption request.

8 Briefly those factors are under 50.12(a):

9 The Commission may grant such exemptions from
10 the requirements of the regulations as it determines are
11 authorized by law that will not endanger life or
12 property or the common defense and security and that are
13 otherwise in the public interest.k

14 Then under 50.12(b), and this is abstracting
15 from those sections:

16 The Commission may grant such an exemption
17 upon considering and balancing the following factors:
18 Whether conduct of the proposed activities will give
19 rise to a significant adverse impact on the environment
20 and the nature and extent of such impact, if any;
21 whether redress of any adverse environmental impact from
22 conduct of the proposed activities can reasonably be
23 affected should such redress be necessary; whether
24 conduct of the proposed activities would foreclose
25 subsequent adoption of alternatives; and the effect of

1 delay in conducting such activities on the public
2 interest, including the power needs to be used by the
3 proposed facility, the availability of alternative
4 sources, if any, to meet those needs on a timely basis
5 and delay costs to the applicant and to the consumers.

6 The report also summarizes the various
7 responses to the Commission's questions. At this point
8 perhaps I would apologize that question 9 was intended
9 to be segmented into two parts and only one part got put
10 in the report, and I apologize for that. However, the
11 balance of that question is addressed in the earlier
12 sections of the report.

13 The report was prepared as a cooperative
14 effort of various staff offices. These included not
15 only Personnel and OPE, but the Office of General
16 Counsel and the Office of the Executive Legal Director
17 and experts from NRR, including some from the CRBR
18 Program Office. I wish to acknowledge the effort of
19 these various offices in getting the report to you on
20 time.

21 Now representatives of those offices are
22 present this afternoon to assist the Commission in the
23 discussion. Specifically joining me at the table are
24 Guy Cunningham from the Executive Legal Director's
25 Office, in fact the Director; Paul Leech from the CRB

1 Program Office; Sid Feld and Dennis Rathbun from OPE and
2 Marty Malsch from OGC.

3 I might point out in closing that there are
4 opposing views on the several factors such as
5 environmental impact, the redressability of that impact,
6 the foreclosure of the alternatives and the public
7 interest. These are addressed in the report, as I have
8 indicated.

9 COMMISSIONER AHEARNE: You mean, Forrest,
10 opposing views from the people that have submitted those?

11 MR. REMICK: Yes, that is right, from the
12 various participants.

13 COMMISSIONER AHEARNE: You had just finished
14 summarizing the staff help ---

15 (Laughter.)

16 MR. REMICK: I am sorry, no. I meant from the
17 participants. To the best of my knowledge, I don't know
18 of others.

19 However, looking at these various factors from
20 a technical and policy viewpoint, it appears that the
21 question of public interest rises as a major issue from
22 the perspective of how it should be balanced by the
23 Commission.

24 So with that, Mr. Chairman, I would suggest we
25 are open for questions.

1 CHAIRMAN PALLADINO: All right. Well, I
2 wonder if I might begin with one, and then I will my
3 colleagues an opportunity, but during the course of the
4 discussion I will have several other questions.

5 In your documents, only 2 of the 80 responses
6 favored ramping the exemption. Now I am aware of quite
7 a number of others that either were overlooked or were
8 discounted. For example, on December 17th we had a
9 letter from the Governor of the State of Tennessee
10 supporting the project. On December 15th we had a
11 letter signed by Howard Baker, Senator Sassar,
12 Congresswoman Bouquard and Congressman Duncan.

13 In addition, I am aware of letters from the
14 Town of Lake City, the City of Haramis, the Town of
15 Oliver Springs, State Representative Randy McNally and
16 the City of Kingston, all of which support this
17 exemption.

18 Yet, the implication is that only 2 out of 80
19 supported it, which leaves me with a question as to
20 whether not we caught all of those that came within the
21 right time frame.

22 MR. REMICK: I think, Mr. Chairman, the answer
23 is no, we didn't catch them all. Of course, that was a
24 snapshot of a particular of time, but also we looked at
25 only those that came in after the memorandum and order.

1 We did not include the others. But even doing that, I
2 believe there were some that we did not have copies of
3 and subsequently we ask that same question, are we
4 correct on that total number. For example, I am not
5 sure if you mentioned the City of Clinton which came in
6 on January 5th.

7 CHAIRMAN PALLADINO: I was aware of some of
8 these and I just have one of my staff trying to find
9 them all. But this is of quite some concern to me
10 because it implies that there was hardly anybody that
11 was interested in seeing this exemption granted. I
12 think that these are important letters and many of them
13 are from local people who have the most to bear in both
14 the onus and the beneficial aspects.

15 So I really think that the record ought to be
16 corrected. It is my impression that people who felt
17 they have already responded would not send that same
18 letter in just because a response period was given and
19 therefore should be included. As a matter of fact, two
20 of the letters were delivered right while we were in
21 session here early.

22 MR. REMICK: I can suggest that what we do,
23 and I am not sure where the official docket is, is this
24 in ELD, or who has the official docket where all these
25 things are. As I say, our original figures were based o

1 what we had received in the office. But we realized
2 that that might not be all of them, so we did some
3 additional checking and realized there are some that we
4 missed, although we did discard assumption after the
5 memorandum and order.

6 CHAIRMAN PALLADINO: Well, do we normally
7 discard any comments that came before that?

8 MR. REMICK: I can't answer that question.

9 MR. BICKWIT: I think we should incorporate
10 all of the comments in the docket because I think your
11 point is reasonable.

12 CHAIRMAN PALLADINO: All right. I think that
13 it would be worth re-examining this and correcting at
14 least that particular point.

15 COMMISSIONER AHEARNE: Sam, have you kept
16 those that came in even before we put out the order?

17 MR. CHILK: Yes, I am sure I have got them all.

18 COMMISSIONER AHEARNE: We probably ought to
19 put in anything that came in following the original
20 submission of the exemption request.

21 MR. CHILK: I will go through our records and
22 identify all of them.

23 CHAIRMAN PALLADINO: Now I can proceed with
24 other questions, but I will defer to some of my
25 colleagues. I hardly know where to begin except perhaps

1 at the beginning.

2 (Laughter.)

3 CHAIRMAN PALLADINO: Some of these items are
4 mentioned several times during the course of the
5 document. The first time I wrote a question had to do
6 with page 6 and then it also came about when I got to
7 page 14.

8 I would like to get OPE's assessment, of if
9 you want to quote the staff's assessment, the 1977 EIS.
10 It is not clear to me at the moment what needs changing
11 and what does not and have the conclusions changed?

12 MR. REMICK: I would suggest that perhaps Paul
13 Leech could answer that.

14 MR. LEECH: Mr. Chairman, we have of course
15 been the process of examining that same question for the
16 upcoming hearings on the construction permit. We have
17 been examining every part of the FES to see what data
18 has changed. Of course, in doing that we go through the
19 environmental report, talk with the applicant and all
20 that. There are many bits of information throughout the
21 whole document that have minor variations.

22 In terms of anything of great significance, I
23 can't say that we have discovered anything so far in our
24 review, and the review is not complete, I must caution,
25 that would change in any substantial way our conclusions

1 so far.

2 There are, however, still many things to look
3 at. For example, the fuel cycle is different than it
4 once was. The fuel cycle back when we wrote the
5 statement before depended upon some commercial
6 facilities such as Barnwell that were expected, and of
7 course it is all now a DOE fuel cycle. So we have asked
8 DOE to define what that fuel cycle would be and what
9 their estimates are of the impacts and we are in the
10 process of looking at that.

11 In terms of the alternative sites, you had a
12 number of decisions in cases like Seabrook and Pilgrim
13 which followed on the heels really or almost
14 simultaneously in a way overlapping with our review
15 before.

16 We did some things, I am sure, in similar
17 fashion, but not entirely so. So we have been looking
18 at the precedents that are set by those cases to see
19 whether our review back then was adequate to meet the
20 requirements legally today and we are in the process of
21 doing that.

22 The accident analysis has to be looked at
23 again because there are some changes in the design of
24 the core. Consequently, we need to look that over.
25 However, as I said before, except for these minor

1 variations throughout the document, so far we haven't
2 found anything to change our conclusions as far as we
3 know.

4 COMMISSIONER AHEARNE: You had mentioned
5 because of core changes, I guess that is the main
6 difference between the homogeneous and heterogeneous
7 core?

8 MR. LEECH: Right.

9 COMMISSIONER AHEARNE: How would that impact
10 on your EIS?

11 MR. LEECH: Well, Chapter 7 of all FES's has a
12 discussion of postulated plant accidents, the so-called
13 realistic look at the accidents. We had to just have
14 people re-examine the basis of those accidents. We did
15 do a rather large bounding source term at the time which
16 was analyzed.

17 COMMISSIONER AHEARNE: That is what bounds it.

18 MR. LEECH: Yes, and probably still bounds it.

19 COMMISSIONER AHEARNE: So it is more the scene
20 of to what extent the accident scenarios might change
21 because of the core changes?

22 MR. LEECH: Yes, mostly details.

23 CHAIRMAN PALLADINO: Now, let's see, is the
24 staff reviewing the 1977 EIS?

25 MR. LEECH: Yes, we started with that.

1 CHAIRMAN PALLADINO: And they will come up
2 with an observation as to whether any more needs to be
3 done?

4 MR. LEECH: Well, we at the present time are
5 not decided as to whether a document should be issued
6 for comment or not, but I believe our approach currently
7 is in the direction that we will issue some kind of a
8 document to update the information so that everyone will
9 understand that this is all we looked at and we have
10 come today's conclusions. They may be the exact same
11 conclusions or they may be slightly varied.

12 CHAIRMAN PALLADINO: When would this be done?

13 MR. LEECH: Our schedule presently is for
14 issuing that in June. We hope to beat that, but we are
15 presently scheduling that way.

16 CHAIRMAN PALLADINO: And what takes till
17 June? This sounded to me like you have already looked
18 at a number of aspects.

19 MR. LEECH: What takes till June is the
20 necessity still of receiving some information from DOE
21 and going through that material. The changes in the
22 environmental report, which were made between 1977 and
23 October 1 of '81 when we resumed our review, were
24 supplemented still further during the fall and currently
25 by several more amendments and we are expecting perhaps

1 two more yet that come in with some of the information
2 we have requested.

3 Until we get that, we can't tell you precisely
4 when it will be finished, but we expect it momentarily,
5 and when we do get it, then it is going to take an
6 effort to re-examine this with various kinds of manpower
7 throughout the agency.

8 COMMISSIONER ROBERTS: But based on what you
9 have seen to date you don't know of any shocking
10 surprises?

11 MR. LEECH: Not yet. I don't expect any
12 really.

13 COMMISSIONER ROBERTS: You are saying this is
14 essentially pro forma?

15 MR. LEECH: Well, I wouldn't say it is just
16 pro forma. We have got to be certainly carefully to
17 examine it.

18 CHAIRMAN PALLADINO: I also got the impression
19 that really is a parallel to the one that Commissioner
20 Roberts has, that some of the refinements would be
21 primarily a description of a changed situation, and only
22 if those situations lead to something unexpected would
23 you expect to see a change in the finding.

24 MR. LEECH: That is right. Of course, many
25 things about a site don't change really much at all, as

1 you might imagine.

2 COMMISSIONER AHEARNE: The one I guess I am
3 not clear on is to what extent are you going to have to
4 rely on redoing some cold runs on the core and, if you
5 do, do we have the codes redone for the core changes?

6 MR. LEECH: I am afraid you have reached a
7 point of unfamiliarity to me. Perhaps Bob Check would
8 answer that one.

9 MR. CHECK: Paul Check. I think we are moving
10 now from the kind of review that would be characteristic
11 of an environmental review. There is a peculiarity that
12 we need to address that comes upon us due to the passage
13 of time.

14 There is an interim policy statement on how we
15 are to handle matters of accidents beyond the design
16 basis. We are in the process of forging what we
17 consider to be a legally and technically sufficient
18 bridge between what was done before and what will be
19 examined fully and explained in great detail in our
20 safety review.

21 For the purposes for which we are gathered
22 here today I see not importance to attach to codes.

23 COMMISSIONER AHEARNE: On this update of
24 accident analysis that was mentioned in the Chapter 7,
25 you do not see that as being needed?

1 MR. CHECK: Well, I don't see it as a single
2 limiting thing. There are a number of things, as Paul
3 Leech has tried to explain, that we must do in order
4 that when in fact if all we do is affirm a previous
5 conclusion that we are in a technically and legally
6 sufficient condition to litigate.

7 COMMISSIONER AHEARNE: Pardon me for not
8 understanding. Let me see if I can reask my question.
9 Paul Leech mentioned that in Chapter 7 there are some
10 accident analyses. My question is, do you see that you
11 are going to have to do some cold runs to verify or do
12 anything on those accident analyses to update that
13 section, and, if you do, are the codes redesigned to
14 take the new core?

15 MR. CHECK: I think in terms of establishing
16 to our satisfaction what environmental consequences
17 there will be to accidents the codes that we have are
18 sufficient for that. What we need to do is affirm that
19 the source term is correct.

20 CHAIRMAN PALLADINO: Incidentally, on any
21 subject I would encourage any of you to chime in with
22 any questions because I am going through as the
23 questions occurred and I went through.

24 To change the subject, and I am not sure who
25 is going to answer, on page 7 where I think we talk

1 about NEPA requirements there is a statement that says
2 "The intervenors believe that an exemption under 50.12
3 has been granted only in exceptional and exigent
4 circumstances." I was wondering what is OPE's finding
5 on the Commission practice with regard to exemption
6 50.12?

7 MR. REMICK: Mr. Chairman, I think that is
8 more appropriate to OGC unless you specifically want
9 our's.

10 CHAIRMAN PALLADINO: You have quite a
11 discussion somewhere later on the present practice or
12 what the practice has been.

13 MR. REMICK: I think that was in the
14 memorandum and order. There was a discussion by the
15 Commission in a footnote addressing that. OPE did not
16 go anything in addition to that on that particular
17 item. In the memorandum and order footnote No. 2.

18 CHAIRMAN PALLADINO: Perhaps that is right.
19 You made no observation or drew any conclusion?

20 MR. REMICK: We did not do anything further
21 inasmuch as the Commission had addressed that in their
22 memorandum and order.

23 CHAIRMAN PALLADINO: On page 9 Mr. von
24 Hippel's position talks about nonproliferation
25 problems. Is that an issue in this exemption request?

1 MR. REMICK: Inasmuch as I believe it fits
2 under common defense and security, the question of
3 common defense and security.

4 CHAIRMAN PALLADINO: I wasn't aware that this
5 had been discussed in other aspects of this proceeding.
6 I think it is the only comment I got on that direction.

7 COMMISSIONER AHEARNE: You are concluding that
8 is the 50.12(a) common defense and security point?

9 MR. REMICK: Yes, that is right.

10 COMMISSIONER AHEARNE: I gather you were going
11 through a list of various laws or provisions.

12 MR. REMICK: That is correct, yes, and this
13 was an outside comment. It seemed to fit under that so
14 we included it and it seemed to apply to that particular
15 section. This was a comment by an interested party
16 making a comment and we thought it would fit under that.

17 CHAIRMAN PALLADINO: Well, it is specific
18 primarily to the breeder program and not necessarily to
19 Clinch River.

20 MR. REMICK: That is correct. The statement
21 addresses the breeder program and not specifically CRBR.

22 CHAIRMAN PALLADINO: On page 9 and then much
23 later on page 36 we get into costs, and I don't whether
24 to pick them up here or pick them up later. I guess
25 most of my comments eventually came out of page 36 where

1 the staff concludes that the actual cost of delay is
2 significantly less than the \$120 to \$240 million cited
3 by the applicants.

4 I wonder if you could expand on OPE's basis
5 for evaluating costs, because I do have some difficulty
6 in following it, and compare it with DCE's basis? Then
7 what is the basis for the conclusion on page 36.

8 MR. REMICK: Mr. Chairman, I would like to
9 defer to Dennis Rathbun and Sid Feld for that.

10 MR. RATHBUN: We have reviewed the applicants'
11 cost of delay estimates and the comments provided by the
12 intervenors. As we said in the report, we believe the
13 applicants' cost of delay emphasis delay costs from an
14 appropriations perspective, and it is from that
15 perspective that the applicants' analysis measures delay
16 cost.

17 COMMISSIONER AHEARNE: Dennis, what do you
18 mean from an appropriations perspective? Do you mean
19 they sum appropriations?

20 MR. RATHBUN: What we mean is from a financial
21 outlay perspective. What we are coming to, though, in
22 our own analysis is an adoption of a real resource flow
23 perspective.

24 What I will do is go through and summarize the
25 elements of the applicants' estimate of cost of delay

1 and how we come out on each one of those from the
2 perspective of what we have included here on page 36.

3 We think that the delay costs should be
4 measured in real resource terms with recognition for the
5 time value of money. Now the applicants in their
6 January 28th submission endorse the time value of money
7 concept, that is a discounted cash flow approach.

8 Let me just summarize the principal elements
9 of their estimate of cost of delay for you. There are
10 four constituents in that.

11 The first is net savings on anticipated
12 expenditures. In their analysis, the applicants'
13 analysis of January 28th they showed that to be a net
14 benefit from deferral of \$30.2 million.

15 CHAIRMAN PALLADINO: Could you explain that to
16 me? Are you saying that if you don't spend money you
17 have a saving?

18 MR. REMICK: In effect it is a negative, yes,
19 sir.

20 CHAIRMAN PALLADINO: But I don't understand
21 that. If they didn't do the project at all they would
22 save even more money.

23 (Laughter.)

24 MR. REMICK: I guess the question is if one
25 lays out the cash flow over the years ahead and working

1 the problem the way the applicants did, that is
2 escalating the projected annual expenditures at an
3 assumed eight percent rate, and then discounting at 11
4 percent to reflect a time preference of money, they came
5 up with, by their own estimate, a benefit from deferral
6 of \$30.2 million. We will come back to that in just a
7 moment.

8 CHAIRMAN PALLADINO: I have a hard time
9 understanding that.

10 MR. RATHBUN: I can understand that.

11 COMMISSIONER AHEARNE: You are going to come
12 back to that?

13 MR. RATHBUN: Yes. The second element is
14 interest on past expenditures which the applicant has
15 estimated at \$189.9 million.

16 The third element is loss due to deferral of
17 revenue and that means electricity generation when the
18 CRBRP comes on line which they estimate in January 28th
19 at \$5.9 million.

20 The last entry is increased management and
21 overhead costs and I understand storage costs of \$42.3
22 million.

23 The sum of all those is \$207.9 million.

24 In the January 28th piece the applicants
25 discounted the projected expenditures and found that for

1 project expenditures the delay cost was \$30.2 million of
2 benefit.

3 I will come back to that, and let me proceed
4 on.

5 In the applicants' revised January 28th cost
6 estimate, in Chart A which precedes page 31, the cost of
7 delay attributable to inflation is prepared by taking
8 the anticipated future expenditures by year and assuming
9 increased costs at an eight percent escalation and a
10 one-year delay.

11 CHAIRMAN PALLADINO: You have a table that
12 precedes page 31?

13 MR. RATHBUN: It is Chart A.

14 COMMISSIONER AHEARNE: This is in the January
15 28th.

16 CHAIRMAN PALLADINO: Oh, I am sorry.

17 MR. RATHBUN: Yes, January 28th. Comparing
18 the two expenditure streams in a present worth context,
19 these two cash flow streams are discounted by an 11
20 percent factor to account for the time preference of
21 money.

22 For the anticipated project expenditures we
23 believe that the applicants' methodology in the
24 treatment of inflation and the resulting estimate of a
25 \$30 million savings from delay appears to be reasonable.

1 CHAIRMAN PALLADINO: Have you got a question
2 on this?

3 COMMISSIONER AHEARNE: If he is passing Chart
4 A.

5 MR. RATHBUN: We will come back to it.

6 COMMISSIONER AHEARNE: Are you still on Chart
7 A?

8 MR. RATHBUN: I would like to go on through
9 and then we will come back to that \$30 million.

10 For the project management overhead the
11 applicant has projected increased direct manpower at 643
12 staff-years total for all of the various management teams
13 as a result of the one-year delay.

14 Based upon staff and overhead charge rates are
15 costs ranging from \$36.6 thousand per year to \$110.5
16 thousand per staff-year. The applicant estimates the
17 management and overhead cost of delay at \$42.3 million
18 per year. This estimates includes roughly \$500,000 for
19 storage, maintenance and inspection costs.

20 As we suggested in the staff paper, to the
21 extent that these management resources could be
22 reassigned to other projective uses, that and the
23 estimate prepared in present value terms, we think this
24 estimate may be in the upper bound.

25 CHAIRMAN PALLADINO: Are you suggesting that

1 they should not have the management teams and should not
2 store this stuff?

3 MR. RATHBUN: No, sir. We are saying that
4 rather than have 643 staff-years, and say that this is a
5 cost of delay and it is a legitimate cost entry item,
6 but I think the thing that one would want to do is try
7 and make sure that the people are used as productively
8 as possible so that it is not charged on the account of
9 cost of delay.

10 CHAIRMAN PALLADINO: Well, the alternative you
11 have is to disband the management team, but then you
12 have to introduce other costs.

13 MR. RATHBUN: That is right. That is exactly
14 right. That is why we have some reluctance to make some
15 estimate as to how much reduction might be possible
16 there. DOE maintains that they should continue these
17 management teams in place.

18 COMMISSIONER AHEARNE: This is 643 staff-years?

19 MR. RATHBUN: Yes, sir.

20 CHAIRMAN PALLADINO: You said this is on the
21 high side of your estimate?

22 MR. RATHBUN: I think that our position is
23 that it is an upper bound. One might ring something out
24 of that, but I am not quite sure how much.

25 CHAIRMAN PALLADINO: How do you establish that

1 it is upper bound? Have you made a separate analysis,
2 or have you got somebody else to do a separate analysis,
3 or is there some intuition that says that it is an upper
4 bound?

5 MR. FELD: Well, we considered two factors in
6 that conclusion.

7 The first was what Dennis already alluded to,
8 the recognition that there appeared to be a possibility
9 that these man-years of management could be doing
10 something productive during this delay period that
11 result in some type of a net benefit to the Clinch River
12 project. To the extent that they could improve the
13 Clinch River design or make other quests more effective
14 or improve the Clinch River project itself, then there
15 is a compensating benefit associated with this cost and
16 it should be deducted from this incremental cost.

17 CHAIRMAN PALLADINO: Now you are making the
18 presumption that they are not satisfied with the design
19 and that it should be re-examined? I am not sure what
20 presumptions you are making because you can speculate.
21 You know, you can make a lot of work if you want to make
22 work, but it is not necessarily of benefit.

23 COMMISSIONER GILINSKY: Well, it appears the
24 way it is being treated, if I understand it correctly,
25 is that all of these people are just sitting doing

1 absolutely nothing.

2 CHAIRMAN PALLADINO: They are babysitting the
3 situation, which sometimes takes quite a bit of time,
4 and I think this is a real cost.

5 Now I don't know what assumptions you are
6 making and what assumptions they are making about the
7 utilization of this staff, but I don't think one can
8 just sit here and speculate and say, well, they could
9 have been doing something useful and then say that is
10 the upper bound. In other words, I am really not
11 convinced that we have examined the situation well
12 enough to make some of the statements we are making.

13 COMMISSIONER AHEARNE: Sid, excuse me. Did we
14 have any kind of detail as to what those people would be
15 doing? Was there a work breakout for those individuals?

16 MR. FELD: Not really, no, but there was a
17 second element to our conclusion that this would be an
18 upper bound.

19 COMMISSIONER GILINSKY: Let me ask you this.
20 Is that number fixed by what the Chairman called the
21 babysitting requirements or is that some larger number
22 which reflects the fact that you have to keep the team
23 around and you don't want to break it up? I mean it
24 would be that difference that would be interesting to
25 understand.

1 CHAIRMAN PALLADINO: Was there any question
2 raised with the applicant as to whether or not they have
3 already subtracted the benefit that they might gain?

4 MR. FELD: We were able to follow through very
5 carefully the calculations that the applicant made and
6 it was quite clear that there wasn't any deduction made
7 for any type of net benefit that could be achieved
8 during this period.

9 CHAIRMAN PALLADINO: But was that specifically
10 explored?

11 MR. FELD: Just to the extent that the
12 calculations showed that they were just looking at it.

13 CHAIRMAN PALLADINO: Well, what assumption do
14 you make out of this \$42.3 million? What is it that you
15 do think could be saved, \$2 million, \$3 million, \$40
16 million?

17 MR. FELD: Well, we really haven't done an
18 independent estimate. I think our position is that, you
19 know, we are looking here. In this particular instance
20 we are looking at a real cost of delay and there is
21 going to be some real incremental resource commitment to
22 Clinch River as a result of the delay. But we were
23 arguing that it would appear to be less than this number
24 because of the potential for net benefits to be derived
25 from this additional work that they would be doing.

1 CHAIRMAN PALLADINO: Even after you went
2 through all their numbers you got 207 and then they gave
3 a range of 120 to 240.

4 MR. RATHBUN: 120 to 240, yes, sir.

5 CHAIRMAN PALLADINO: That is quite a range.

6 MR. RATHBUN: I think we should bear in mind
7 there was one element which I don't think was present in
8 their analysis. They discounted the projected
9 expenditures for the rest of the plant except for the
10 management and overhead expenses. Those were not
11 discounted. If one did discount it, it certainly would
12 be less than the \$42.3 million.

13 CHAIRMAN PALLADINO: What do you mean by
14 discounting?

15 MR. RATHBUN: Well, in effect just simply to
16 recognize that a dollar today is worth more than a
17 dollar tomorrow. These staff-related expenses do occur
18 over the next several years and they would really fall
19 in the same cash flow with discounting category as the
20 projected plant expenditures which were discounted in
21 Chart A.

22 CHAIRMAN PALLADINO: How do you discount your
23 management costs, because probably they are going to go
24 up, and are they going up at about the same rate as what
25 you would discount them?

1 MR. RATHBUN: Possibly, but generally the way
2 that type of problem is handled is to look at the cash
3 flows on an annual basis and to make an allowance for
4 inflation, as they estimate eight percent, then to
5 reflect the factor that you just cited and then to
6 discount those at some appropriate rate. They used 11
7 percent. That means in effect that the real discount
8 rate is the difference between the two, or three
9 percent.

10 COMMISSIONER GILINSKY: The basic point is
11 that to make comparisons you have to be working with
12 dollars in the same year. When you say discounting that
13 is what they mean.

14 CHAIRMAN PALLADINO: But I want to make sure
15 that they add a cost. You know here I am not sure that
16 eight percent is right and I am not sure that eleven
17 percent is right. The eight percent sounds to me more
18 like about eleven percent and the eleven sounds more
19 like eight, but that is an uncertainty factor. But to
20 say therefore that they are underestimated gives me a
21 little bit of a problem because you are making
22 assumptions in both the discounting rate and the ---

23 MR. RATHBUN: I guess the discounting to
24 present values, as Commissioner Gilinsky points out,
25 doesn't really trouble me. The productive reassignment

1 is to me anyway more troublesome because I really don't
2 know and I don't think we have the information at hand
3 to show just exactly what kind of flexibility there is.

4 COMMISSIONER ROBERTS: Well then I don't think
5 you would have enough information to make a judgment.

6 MR. RATHBUN: Well, except with respect, I
7 suppose, Commissioner Roberts, to the discounting factor.

8 COMMISSIONER GILINSKY: As I understand what
9 this is doing is it is trying to deal consistently with
10 the numbers that we have been given. He is not
11 generating new numbers.

12 CHAIRMAN PALLADINO: But, aside from numbers,
13 there is a statement saying they can put them to work.
14 I have been involved in projects that were delayed and I
15 have been kept busy. We made more studies and we made
16 more studies ---

17 (Laughter.)

18 CHAIRMAN PALLADINO: --- and put out a report,
19 but it did not advance the project. Now if you want to
20 say therefore we got a benefit, it wasn't to the
21 project, and it is a chargeable cost against the project
22 to say, well, the project paid for somebody else's
23 benefit and it did not pay for the benefit of that
24 project.

25 MR. RATHBUN: I guess that is why as between

1 the two factors the one that I would lean a little bit
2 more heavily on is the discounting factor because to me
3 that is clear.

4 CHAIRMAN PALLADINO: That is about three
5 percent using your numbers.

6 COMMISSIONER AHEARNE: Do you have any comment
7 on the two factors that they used, the eight and eleven
8 percent? Why should they not as a first approximation
9 take them as the same?

10 COMMISSIONER GILINSKY: You would be saying
11 that there is no discount.

12 MR. RATHBUN: No discounting at all. I could
13 take them at 10 percent.

14 COMMISSIONER GILINSKY: That takes up back to
15 the Corps of Engineers.

16 MR. RATHBUN: At 10 percent in real terms
17 which would mean eight percent and escalation at 18
18 percent as a discount rate.

19 COMMISSIONER GILINSKY: Let's see, OMB I think
20 proposes a real discount rate of 10 percent for
21 evaluating regulatory actions for one thing.

22 COMMISSIONER AHEARNE: They have a variety of
23 discount rates for personnel services, for hardware
24 purchases and there is a wide range. I was just more
25 asking did you have any comments on the choice that they

1 made? Did they really choose those two or were they
2 trying to redo a calculation that NRDC had done?

3 MR. FELD: The eight percent escalation rate
4 was their choosing, and that number has been a part of
5 their cost escalations going back to certainly '77 when
6 the staff did the initial FES.

7 The eleven percent cost of money was the
8 number that NRDC has used to provide an illustrative
9 example. The NRDC went on to say that based on current
10 money costs to the government for long-term bonds and
11 notes that they felt the more appropriate rate would be
12 14 percent which would essentially double the real
13 discount rate from three to six and therefore double the
14 savings associated with these expenditures.

15 CHAIRMAN PALLADINO: Well, go ahead, Dennis.

16 MR. RATHBUN: We have a couple more to go
17 through.

18 CHAIRMAN PALLADINO: I think you have more on
19 this point.

20 COMMISSIONER AHEARNE: Well, I was going back
21 to the management question. In the absence of any
22 detailed information on what the people would be doing,
23 was there any detailed information on the 643
24 staff-years? Is the 643 staff-years the one year?

25 MR. RATHBUN: I think that is correct because

1 they just simply displaced in time the ---

2 COMMISSIONER AHEARNE: Sid.

3 MR. FELD: Technically it appears as if the
4 applicant is treating the 643 years delay as the
5 management that is going to be on hand during the delay
6 period, that is during this 1982-83 twelve-month
7 period. However, when you look at the tables that they
8 have prepared for each of the management teams, it is
9 clear that there are differences in management levels
10 over each of these eight or nine years that are going
11 out over the future.

12 Therefore, that is really technically the
13 correct way to view the differences as they are
14 occurring over time and that is why we were taking the
15 position that it would be then appropriate to apply a
16 discount range to these differences to come up with the
17 present worth value of this management cost.

18 COMMISSIONER AHEARNE: Can you speak to
19 whether or not in the year of delay, are they on a
20 build-up or are they currently at the level that they
21 would stay at?

22 MR. FELD: They are typically on a build-up.

23 COMMISSIONER AHEARNE: Thank you.

24 CHAIRMAN PALLADINO: Do you want to go on?

25 COMMISSIONER ROBERTS: Well, I ---

1 CHAIRMAN PALLADINO: Oh, I am sorry, Tom.

2 COMMISSIONER ROBERTS: --- didn't make my
3 point or it wasn't acknowledged. I not arguing about
4 the choice of what sort of numbers you want to use. I
5 just take exception with the statement "Management or
6 overhead costs should be reduced to reflect the
7 possibility. . . ." That is absolute crystal balling
8 and we don't have those answers. You don't have enough
9 information to qualify that in any way, and that is not
10 a criticism of your abilities, but you just don't have
11 the information.

12 COMMISSIONER BRADFORD: But if you don't do
13 that you are also assuming something. You are assuming
14 that all of those man-years will be from the point of
15 view of the project completely wasted, every one of
16 them, every day, every second. You are using a number
17 and the number you are using is zero. They are
18 acknowledging there is uncertainty in terms of how much
19 you reduce it by, but what they are saying is that zero
20 is no better a number for that factor than any other.

21 COMMISSIONER BRADFORD: But this question of
22 benefit to the project or benefit to something else,
23 which in the first place nobody ever put money for. So
24 these benefits may be for things that Congress never
25 intended.

1 COMMISSIONER BRADFORD: Sure.

2 CHAIRMAN PALLADINO: I don't see how it could
3 benefit the project.

4 COMMISSIONER BRADFORD: Well, one just doesn't
5 know, but it is hard for me to believe that all those
6 people on salary for all that time would do absolutely
7 nothing that was of any benefit to the project.

8 CHAIRMAN PALLADINO: Oh, they have a lot of
9 reports to read and they have management documents to
10 fill out, they have personnel problems ---

11 (Laughter.)

12 COMMISSIONER BRADFORD: I am sure there are a
13 lot of ways to waste time on Clinch River.

14 CHAIRMAN PALLADINO: No, I meant on any
15 project and there is no need to waste time. That is my
16 point.

17 COMMISSIONER AHEARNE: Since we are still on
18 the way the people are spending their time, can you get
19 a sense from the information you have, for their year of
20 deferral are they holding off the build-up? Sid
21 mentioned that they are on a build-up.

22 MR. RATHBUN: Let me just call attention to
23 the January 18th DOE submission and they have these logs
24 in there and you ought to take a look at pages 53 and
25 54. You can get a sense, Commissioner, as you point up,

1 that there is a substantial build-up at least in some of
2 the elements.

3 COMMISSIONER AHEARNE: Well, the problem I had
4 there was that the chart started at 382.

5 COMMISSIONER ROBERTS: You mean in the hopeful
6 circumstance that an extension will be granted.

7 COMMISSIONER AHEARNE: It started in March of
8 '82 so I couldn't tell, but that is all you have.

9 CHAIRMAN PALLADINO: Do you want to go on with
10 the rest of the costs?

11 MR. RATHBUN: The next item is deferral of
12 revenues that come from electricity generation. In the
13 January 28th submission the applicants provided a
14 present worth estimate of \$5.9 million from loss of
15 revenue, deferral in revenue really from electricity
16 generation due to a one-year delay. We agree with the
17 applicant that the deferred benefits which would result
18 from not granting the exemption costs constitute a real
19 cost of delay.

20 CHAIRMAN PALLADINO: What was it?

21 MR. RATHBUN: \$5.9 million.

22 COMMISSIONER AHEARNE: Once under the
23 current, and I am not sure whether it is a contract or
24 what it is, once the plant would be built and operating
25 the electricity would go into the TVA system, correct?

1 MR. RATHBUN: Yes, sir.

2 COMMISSIONER AHEARNE: To whom would the
3 revenues go?

4 MR. RATHBUN: I will defer to Sid on that.

5 MR. FELD: Presumably they would go into the
6 Clinch River account. When you look at the Clinch River
7 cost estimates for the total project you see costs going
8 out through 1994, and for the periods when the plant is
9 on line there are deductions for the revenues that are
10 being received from the sale of electricity.

11 COMMISSIONER AHEARNE: Well, in the Clinch
12 River account, but on the input side of the Clinch River
13 account there are two contributions. There is one that
14 is through the Congressional appropriation and there is
15 another through the contributions of the utilities.

16 Now in the Clinch River account then does this
17 return also flow back or is it split?

18 MR. FELD: I do not know the answer to that.
19 The cost analyses that we are looking at are looking at
20 Clinch River as a single entity.

21 COMMISSIONER BRADFORD: Before you leave that
22 one, just offhand this is power that is going to be sold
23 into the TVA system? Now that system is cancelling
24 nuclear plants.

25 CHAIRMAN PALLADINO: Is what?

1 COMMISSIONER BRADFORD: Cancelling and
2 deferring nuclear plants continuously for three or four
3 years now. Why does it need this one? Why is this one
4 any more beneficial than all the ones it is cancelling?

5 MR. FELD: There is really no presumption that
6 they need the electricity. The agreement with TVA is
7 that they will purchase the electricity from the Clinch
8 River reactor for what it would cost them at the margin
9 to have generated that electricity on their own system.
10 So they will be displacing their highest cost energy
11 from their system and purchasing this.

12 COMMISSIONER BRADFORD: So that if in fact
13 that electricity is costing more than it is being sold
14 for then somebody is losing money.

15 MR. FELD: Correct.

16 COMMISSIONER BRADFORD: And if that were the
17 case then how could one look only at the benefit to TVA
18 without looking at the loss to the seller who I take it
19 is ultimately the taxpayer?

20 MR. RATHBUN: What you are really looking at
21 is the net rather than the revenues. That number is
22 case in terms of the gross revenues.

23 COMMISSIONER BRADFORD: So there is no net
24 calculation made?

25 MR. RATHBUN: Not to my knowledge.

1 COMMISSIONER GILINSKY: The operating expenses
2 aren't in there?

3 MR. RATHBUN: That is correct.

4 Let me go on. The thing that I think we found
5 most troublesome. Our most important concern on the
6 applicants' delay cost analysis centers on the interest
7 part for the project. It is expenditures and interest.
8 In the January 28th submission the applicant estimates
9 expenditures and interest to 1982 of \$1.73 billion.
10 This was arrived at by capitalizing previous
11 expenditures back into the Seventies, I think really
12 beginning in 1974, at an 11 percent rate. The applicant
13 then estimates an annual interest expense for 1982 of
14 \$189.9 million as their estimate of the cost of delay.

15 Our view is that the interest on capital in
16 1982, imputed or otherwise, would be \$189.9 million
17 based on an 11 percent interest rate.

18 However, our reservation is whether the \$189.9
19 million is a cost of delay. It is a cost, but we don't
20 think that it is a delay cost and we would not have
21 included this item in the cost of delay because it will
22 be incurred regardless of whether the exemption is
23 granted or not.

24 The opportunity foregone in the event of delay
25 would be the deferral in the revenues and the R&D

1 benefits from earlier operation of the CRBRP plant. In
2 this regard we cite two references to bolster our
3 position on that. One is Professors Grant and Ireson's
4 "Principles of Engineering Economy." The other is from
5 DOE's "Estmates of the Cost of Delay in Operating
6 Licenses for Nuclear Plants." I can go through a little
7 bit of either one or both if you wish.

8 CHAIRMAN PALLADINO: Could I put it into lay
9 terms?

10 (Laughter.)

11 MR. RATHBUN: Sure.

12 CHAIRMAN PALLADINO: If I start a business and
13 I invest \$500,000 in it and I am paying a high interest
14 because I borrowed most of the money and a delay comes
15 about because of licensing or something or other and I
16 am delayed a year. Now to me that is a real cost, all
17 that interest that I paid.

18 MR. RATHBUN: It certainly is.

19 CHAIRMAN PALLADINO: And even if it happened
20 last year and I was delayed two years and here I am
21 talking about this year, it is still a real cost. Now
22 why should you exclude that? I could go bankrupt while
23 I was waiting for that to happen.

24 (Laughter.)

25 MR. RATHBUN: You certainly could, and we are

1 not saying that a person, an individual or a firm could
2 have a major cash flow problem.

3 CHAIRMAN PALLADINO: It sounds like a cost
4 problem to me as well as a cash flow problem.

5 MR. RATHBUN: Yes, sir, that is right, and we
6 haven't said that there isn't a financial or monetary
7 cost associated with that.

8 Assume you borrowed \$100,000 to buy a
9 condominium and you borrowed it at 15 percent. After a
10 simple first approximation the carrying charges on that
11 investment are \$15,000 a year. You are going to rent
12 this facility or this condominium and the question
13 before you is whether you can rent it this year or rent
14 it next year. You are going to have to pay the \$15,000
15 in either case. Let's assume that it rents for
16 \$20,000. The real delay is whether you get the \$20,000
17 beginning this year or the \$20,000 beginning next year.

18 COMMISSIONER GILINSKY: The cost of delay.

19 MR. RATHBUN: That is the cost of delay. That
20 is exactly right. That is the opportunity foregone, the
21 \$20,000 that you weren't able to get.

22 But if you did a discounted cash flow and you
23 had \$100,000 of sunk investment from this point forward
24 and your cash flow for the first case would be \$15,000
25 in interest, on the one hand, and \$20,000 from time zero

1 for gross revenues, on the other, and then for cash flow
2 "B" you would have the same \$15,000 to pay in that
3 scenario and a delay of one year of \$20,000 in the
4 receipts.

5 CHAIRMAN PALLADINO: You are making an
6 assumption that this condominium has a forever life. It
7 doesn't. These two years cut down from the life. It is
8 a real loss.

9 COMMISSIONER GILINSKY: But it is discounted
10 at the other end.

11 CHAIRMAN PALLADINO: No, it is not. It is a
12 real loss. You can't have it both ways and pretend it
13 is going to be lost forever and then say, well, you will
14 eventually recover your money.

15 COMMISSIONER BRADFORD: But the two years
16 don't cut down from the other end.

17 COMMISSIONER GILINSKY: They cut down very
18 little because when you come back at 11 percent a year,
19 back to the present, they don't matter a whole lot.

20 CHAIRMAN PALLADINO: I am going to defer to
21 more expert people, but it doesn't quite make sense to
22 me.

23 MR. RATHBUN: I understand.

24 (Laughter.)

25 COMMISSIONER AHEARNE: You are right, it is

1 very analogous to the cost of delay.

2 COMMISSIONER GILINSKY: The real point is that
3 you have to look at the difference between two courses
4 of action.

5 CHAIRMAN PALLADINO: There is also something
6 that is not analogous to this situation. The government
7 is doing this to buy background. If it weren't for
8 revenue it might have done something different, but it
9 is trying to buy something of value presumably and that
10 is why the Congress is doing it. So you can't quite
11 measure it in terms of this piddling little amount of
12 money they are going to get in. It is really in terms
13 of what it is costing to delay the project.

14 MR. RATHBUN: It is the research and
15 development benefits and they are not quantifiable.

16 CHAIRMAN PALLADINO: Well, one one to
17 represent them is by this investment cost and the cost
18 of the interest.

19 MR. RATHBUN: No, sir, I don't think so.

20 CHAIRMAN PALLADINO: I don't want to make a
21 debate out of it here, but I would be willing to sit
22 down with the Professor that wrote that book.

23 (Laughter.)

24 CHAIRMAN PALLADINO: No, seriously, because we
25 are trying to make an analogue out of one situation that

1 is different in this situation. But maybe having
2 brought up the point is enough for the time being.

3 COMMISSIONER AHEARNE: I will have to admit,
4 Dennis, I am on your side in this one.

5 MR. RATHBUN: Thank you, Commissioner.

6 (Laughter.)

7 CHAIRMAN PALLADINO: But I do want to make the
8 point that it is not analogous to saying I am going to
9 get that \$20,000 a year and we are going to end up
10 deferring it. I have got to pay this cost anyhow. I am
11 paying this cost and I am not getting my results,
12 whatever the avowed results of the Congress is.

13 COMMISSIONER AHEARNE: That is true, but the
14 results are in a different currency. The results are a
15 variety of things but they aren't ---

16 CHAIRMAN PALLADINO: Well, maybe it isn't \$189
17 million, maybe it is only \$89 million. All I am saying
18 is the 120 to 240 ---

19 COMMISSIONER GILINSKY: It shows up on both
20 sides of the equation.

21 COMMISSIONER AHEARNE: On the dollars.

22 COMMISSIONER GILINSKY: Yes.

23 COMMISSIONER AHEARNE: The point that Joe is
24 making is that if you do build the plant and get it
25 running a year earlier you get your results a year

1 earlier.

2 COMMISSIONER GILINSKY: Well, that isn't
3 factored in here at all.

4 CHAIRMAN PALLADINO: I am trying to equate it
5 here.

6 COMMISSIONER GILINSKY: That is right, that is
7 a whole separate argument. What Dennis is dealing with
8 is, you might say, a bookkeeping argument that has been
9 presented by DOE, and it turns out it doesn't stand up.

10 CHAIRMAN PALLADINO: Well, no. It does stand
11 up, but you have to put it in my context.

12 (Laughter.)

13 CHAIRMAN PALLADINO: The context the DOE is
14 putting it in, they are not putting in the fact that
15 they are trying to get money from a condominium.

16 COMMISSIONER BRADFORD: The DOE actually put
17 it in the context of nuclear power plants.

18 COMMISSIONER AHEARNE: Well, the way they
19 presented it, there is really a lot more at stake than
20 dollar costs, that you have invested this money ---

21 CHAIRMAN PALLADINO: And I think it is a real
22 dollar cost.

23 COMMISSIONER AHEARNE: The money that is spent
24 is a real dollar cost. That is true.

25 CHAIRMAN PALLADINO: Well, I don't know how

1 long to debate this, but I would appreciate some
2 evidence that shows that 120 to 240 is not a realistic
3 range.

4 COMMISSIONER GILINSKY: Or is.

5 CHAIRMAN PALLADINO: And I think it is a
6 realistic range.

7 COMMISSIONER AHEARNE: I guess I would have to
8 come out on the side of Dennis' argument, and I don't
9 think it is realistic based on it.

10 COMMISSIONER GILINSKY: Let me ask you, Joe,
11 when you say 120 or 240, or whatever the numbers are,
12 are you factoring in what you think the knowledge that
13 would be gained is worth, or are you following through
14 their argument? See, they have got a column of figures
15 that adds up to those numbers.

16 CHAIRMAN PALLADINO: It says that "In
17 addition, carrying charges on monies already expended
18 should be excluded." That is all you have concluded,
19 and I say no, they should not.

20 (Laughter.)

21 CHAIRMAN PALLADINO: The reason being is that
22 the analogue is not the condominium analogue. It is a
23 different circumstance and you are trying to buy some
24 information experience and you are getting it a year
25 late, and because you deferred it this is a real cost.

1 COMMISSIONER GILINSKY: But the world starts
2 anew every day. What has happened has happened. All
3 you can do is affect the future.

4 CHAIRMAN PALLADINO: But it is now that they
5 are spending the money.

6 COMMISSIONER BRADFORD: Not that money
7 though. That money was already spent.

8 CHAIRMAN PALLADINO: All the money?

9 COMMISSIONER AHEARNE: Yes, this money is all
10 spent.

11 MR. RATHBUN: This is interest on monies
12 already spent, carrying costs, the financial carrying
13 costs on monies already spent.

14 CHAIRMAN PALLADINO: It is not for this time
15 frame in which we are talking?

16 COMMISSIONER AHEARNE: No.

17 MR. RATHBUN: No.

18 COMMISSIONER BRADFORD: The interest would
19 have to be paid during this time frame but there is no
20 flexibility to it.

21 COMMISSIONER AHEARNE: The money has already
22 been spent.

23 CHAIRMAN PALLADINO: The interest is what I am
24 talking about.

25 MR. RATHBUN: Well, they capitalized the

1 previous expenditures and came up with \$1.73 billion.
2 At an 11 percent carrying cost rate they arrived at ---

3 COMMISSIONER AHEARNE: If the government was
4 not run as a deficit would there be any interest costs?

5 (Laughter.)

6 MR. RATHBUN: You could say imputed or debt
7 finance.

8 COMMISSIONER AHEARNE: Joe was talking about
9 money actually spent and I was ---

10 (Laughter.)

11 CHAIRMAN PALLADINO: Well, maybe we ought to
12 go on, Dennis, but I would appreciate if you have some
13 clear way of supporting that 120 to 240 it would help
14 me.

15 COMMISSIONER ROBERTS: Well, not to put words
16 in your mouth, but you mean clarify the significantly
17 less than the 120 to 240. Is that what you are asking?

18 CHAIRMAN PALLADINO: Yes.

19 MR. RATHBUN: I will summarize. I said at the
20 beginning that when one added the four elements of cost
21 of delay from the applicant one came to \$207.9 million
22 which they argued was within the range of \$120 to \$240
23 million.

24 We had, as I said, reservations about the
25 interest on past expenditures of \$189.9 million. If one

1 decided that that was not a charge which should be
2 included, then an adjusted cost of delay would be \$19
3 million rather than \$207.9 million.

4 CHAIRMAN PALLADINO: What happened to the \$43
5 million?

6 MR. RATHBUN: That is one of the elements in
7 the 207.

8 COMMISSIONER AHEARNE: There was a \$30 million
9 saving.

10 MR. RATHBUN: An \$18 million.

11 CHAIRMAN PALLADINO: I don't understand. How
12 do you get a saving? It sounds to me like you are
13 taking two apples out of a barrel.

14 COMMISSIONER GILINSKY: That was DOE's number.

15 MR. RATHBUN: Let me just say, the \$30.2
16 million came from the applicant and that is a benefit
17 from delay. I would draw attention to the Chart A in
18 that regard. As you can see, in that Chart A they have
19 shown their anticipated expenditures during the years of
20 expenditure, 1982 through 1995. They applied a present
21 worth factor to the first entry, the first line in that
22 Chart A, and then they have worked a second problem, the
23 delay problem, with a one-year delay with eight percent
24 escalation. That is to say, the \$70.7 million in 1982
25 becomes \$76.4 million in '93, and similarly \$165.8

1 million becomes \$179.1 million, and so forth and so on.
2 Then they discount that time series at an 11 percent
3 present worth factor again and they compare the two
4 present worths in order to obtain their estimate of cost
5 of delay.

6 They find that the delay case is actually less
7 expensive than the spend now case. They delay case has
8 a present worth of \$1.09 billion compared to the spend
9 now of \$1.12 billion. The difference between the two is
10 a benefit from their analysis of \$30.2 million.

11 CHAIRMAN PALLADINO: Well, I often use m
12 homey type of check points. What we are saying is if we
13 delay this thing we are going to get benefit. There is
14 no cost or there is very minimal cost. I will bet you
15 that had we completed this project eight years ago we
16 would have saved a hell of a lot of money in this
17 country. I find it very difficult to say, therefore,
18 one year is really no big deal and we are not going to
19 lose any money but not delaying it. I think we are
20 losing money hand over fist.

21 MR. RATHBUN: I guess it is possible that they
22 underestimated the escalation rate.

23 CHAIRMAN PALLADINO: I don't know what it is,
24 but I just know that if you keep a budget going long
25 enough it kills you and it takes a lot of money and you

1 don't get your results. If you get it done is a hurry
2 you get your results. I am not convinced that this
3 isn't the realistic number. Of course, I am taking into
4 account my point of view about getting results in a time
5 frame where I can make effective use of the money.

6 Well, maybe we ought to go on to other
7 questions. I have got some more.

8 COMMISSIONER AHEARNE: I was going to say that
9 as far as the costs and making them clear, I suspect
10 that the underlying problem is that Dennis can't make
11 the DOE's estimates any clearer because he has explained
12 here is the way they got to their number.

13 COMMISSIONER GILINSKY: Yes. He is working
14 with a list of specific entries.

15 COMMISSIONER AHEARNE: And he has explained
16 how they got there. Then whether or not one accepts
17 their argument is more judgemental rather than a
18 clarification.

19 CHAIRMAN PALLADINO: But they did have
20 carrying charges on money already expended.

21 MR. RATHBUN: Yes, sir. That was the major
22 item.

23 CHAIRMAN PALLADINO: And you saying they
24 should be excluded.

25 MR. RATHBUN: Yes, sir, that is our position.

1 CHAIRMAN PALLADINO: That is where I am having
2 some difficulty.

3 Do you have any other questions?

4 COMMISSIONER AHEARNE: If you are going to
5 shift away from costs.

6 CHAIRMAN PALLADINO: Yes, I am shifting away
7 from costs.

8 COMMISSIONER AHEARNE: Let me ask you another
9 question on the costs. The structure of this
10 arrangement, DOE is a co-applicant with TVA and Project
11 Management Corporation; is that correct?

12 MR. RATHBUN: Yes.

13 COMMISSIONER AHEARNE: PMC is the manager for
14 the organization; is that also correct?

15 MR. LEECH: I am not certain that you would
16 characterize it that way now. It was in the beginning.

17 COMMISSIONER AHEARNE: How would you
18 characterize it now?

19 MR. LEETH: I think DOE today is the lead
20 applicant.

21 COMMISSIONER AHEARNE: What is the
22 relationship between those three groups which will get
23 back to the question of the body of people managing. So
24 what is the relationship of those three?

25 MR. LEECH: I will do my best to answer that

1 though I haven't researched it lately. It is my
2 understanding that DOE is the lead applicant today.
3 Whether they manage all the facilities at the Oak Ridge
4 Office, I can't say. I believe the top person there is
5 a DOE person, but Project Management people are there
6 and they man the thing. There are about 23 people from
7 TVA and about 23 people, as I remember, from I thought
8 it was Commonwealth Edison.

9 COMMISSIONER AHEARNE: That is the other big
10 one.

11 MR. LEECH: Yes, and a sprinkling of a few
12 people from elsewhere in the industry.

13 COMMISSIONER AHEARNE: Are those people
14 employees of TVA and employees of Commonwealth?

15 MR. LEECH: Yes, they are employees of those
16 organizations that are there.

17 COMMISSIONER AHEARNE: Project Management is
18 an umbrella under which they sit?

19 MR. LEECH: Well, yes, it is an amalgamation
20 of all these utility interests.

21 COMMISSIONER AHEARNE: So the mangement
22 structure is each person then has a joint label,
23 PMC/Commonwealth Edison and PMC/TVA?

24 MR. LEECH: Except they don't go around with
25 the TVA label.

1 COMMISSIONER AHEARNE: Whose payroll are they
2 on?

3 MR. LEECH: I don't know for sure. I believe
4 it is a Clinch River project payroll, but I am not sure
5 of that. I believe it is that, the PMC payroll, but I
6 am not certain of that. I think some of these other
7 people who come from other utilities, the sprinkling, are
8 on the payrolls of those utilities. But I believe the
9 TVA/Commonwealth people or DOE people are in effect all
10 in the project payroll.

11 MR. CUNNINGHAM: It has been some time since I
12 saw this, Commissioner Ahearne, but it is clear to me
13 that the DOE people are paid by DOE.

14 COMMISSIONER AHEARNE: I would think so.

15 MR. CUNNINGHAM: The Project Management
16 Corporation, exactly who is on its payroll and who might
17 be on TVA's, I am not sure of.

18 COMMISSIONER AHEARNE: Is the structure that
19 Project Management Corporation is a contractor for DOE?

20 MR. CUNNINGHAM: No, it is a partner in this
21 tripartite agreement.

22 COMMISSIONER AHEARNE: Is there a board then
23 that is the joint director?

24 MR. CUNNINGHAM: There is an overall board
25 structure but I am not sure who the members are.

1 COMMISSIONER AHEARNE: Now you mentioned about
2 40 people, 46 or so. The rest of the 600 are Project
3 Management's?

4 MR. LEECH: There are a lot of contractor
5 people around there, like Stone and Webster people and
6 Burns and Rowe and others that are there.

7 COMMISSIONER AHEARNE: I see. So the 600
8 staff-years are not Project Management Corporation's
9 staff-years?

10 MR. FELD: That 643 man-years is a compilation
11 of about six or seven different management teams, Stone
12 and Webster and GE.

13 COMMISSIONER AHEARNE: Thank you. That is all.

14 CHAIRMAN PALLADINO: I have a little question
15 on page 21 where "The staff therefore recommends that
16 the applicant be required, prior to initiation of site
17 preparation, to conduct a mussel survey in the vicinity
18 of site, report the results to the NRC and revise the
19 water runoff control measures as necessary to protect
20 the mussels."

21 How long would such a survey take?

22 MR. LEECH: I understand it would only take a
23 matter of a few days.

24 CHAIRMAN PALLADINO: Only a few days?

25 MR. LEECH: Yes.

1 CHAIRMAN PALLADINO: Because I was wondering,
2 if that was a long-time proposition, how that sat with
3 your conclusion that your observations are no different
4 with regard to the environmental situation now as they
5 were before? But this is only a few days?

6 MR. LEECH: Only a few days, and this is only
7 to verify our tentative conclusion that these mussels do
8 not exist in that location.

9 COMMISSIONER AHEARNE: What would happen if
10 you found them?

11 MR. LEECH: If we found them, then I assume we
12 would have to go through some analysis of what
13 probability would be of an impact on the project by the
14 mussels.

15 COMMISSIONER AHEARNE: So your few-day
16 estimate is really a negative finding as the net impact?

17 MR. LEECH: The few days is only to see if the
18 mussels are there.

19 (Laughter.)

20 CHAIRMAN PALLADINO: If they are there, then
21 would this be a departure from what was found in '77?
22 It this a new wrinkle?

23 MR. LEECH: This is a new wrinkle. This comes
24 up from the Fish and Wildlife Service that identifies
25 these items as being on their particular list of

1 threatened and endangered species.

2 CHAIRMAN PALLADINO: So this is a new wrinkle.

3 MR. LEECH: I should explain that today,
4 contrary to what we did some years ago, we have a
5 procedure by which we contact Fish and Wildlife on every
6 project. So currently we will do it again if a project
7 revives, as this one did. They will look into their
8 computer program and pick out what currently is the
9 information registers for a certain area, basically a
10 county I think of the United States, and out comes this
11 information. Then it is up to the applicant or in our
12 case the regulatory agency to analyze or review or find
13 out the information.

14 COMMISSIONER AHEARNE: You say that it
15 something new. Was that not done previously?

16 MR. LEECH: I don't really remember that.
17 Certainly I don't remember these mussels being discussed
18 before.

19 CHAIRMAN PALLADINO: I am going to pose an
20 example, but I have a broader question. My specific
21 reference is on page 23. Several times statements are
22 made, and I use this as an example, "The staff believes
23 that additional teachers may be required."

24 COMMISSIONER GILINSKY: Additional what?

25 CHAIRMAN PALLADINO: Additional teachers,

1 speaking about the socio-economic impact.

2 In another one it says "However, water
3 distribution and wastewater collection systems may
4 require limited expansion" I was wondering,
5 have we made some specific studies or are these just an
6 intuitive feel?

7 MR. LEECH: Well, if I can take one of those
8 at a time.

9 CHAIRMAN PALLADINO: Take the teachers.

10 MR. LEECH: There is another staff member who
11 isn't here today who will look at this, but as I
12 understand it, we are talking now about a county where
13 the schools are already slightly overburdened. I
14 presume teachers and facilities are already ---

15 CHAIRMAN PALLADINO: --- slightly overburdened.

16 MR. LEECH: That is what it says in this one
17 county.

18 CHAIRMAN PALLADINO: The problem I found, and
19 maybe it is peculiar to Pennsylvania, but the school
20 bound population is going down. They are closing
21 schools in our town left and right.

22 MR. LEECH: May I point out on the previous
23 page 22, the first sentence of the bottom paragraph says
24 "Schools in Western Knox County could experience slight
25 increases in existing overutilized conditions from the

1 addition of approximately 65 students." This comes in
2 DOE's own statement of information to us. I am not
3 certain it is in the SPAR document, but it is in
4 information that has been submitted at least in our
5 updating of the FES.

6 Now because it is already overutilized, then
7 just common sense tells you that you may need some
8 teachers to deal with these additional students. But
9 apparently that overutilization, at least in our
10 reviewer's estimate, is not so much that you can't
11 accommodate physically, the physical rooms and desks and
12 all that, these students. There are not a lot of
13 students.

14 CHAIRMAN PALLADINO: Having coming from the
15 education picture and being familiar with what has
16 happened in one state, it surprised me to see that these
17 are overcrowded or that they are growing.

18 The other is if you are not going to add more
19 rooms you don't usually put two teachers in a room
20 except in certain kinds of activities.

21 I was more interested in when you say "may"
22 you feel that you have investigated them.

23 MR. LEECH: I think these are conclusions
24 drawn from a general discussion of the situation and not
25 going to the schools themselves in trying to figure that

1 out.

2 CHAIRMAN PALLADINO: I am going to ask one
3 more and then I am going to quit.

4 On page 24, and I am now on noise, there is a
5 statement that "Consequently, the noise at that
6 residence," and there is a residence that is relatively
7 close by, "might be greater than the 'clearly
8 acceptable" level when the rock drills are in
9 operation." Is this different from the 1977 situation?

10 MR. LEECH: No, it isn't.

11 CHAIRMAN PALLADINO: It isn't. Okay. I
12 thought maybe there was something amiss.

13 Why don't I let somebody else ask some
14 questions.

15 COMMISSIONER AHEARNE: In the \$120 to \$240
16 million they talked about a possible one-year delay, and
17 then they went on, and then the \$240 million was on the
18 basis of possibly a two-year delay. The one-year delay,
19 is that an estimate that we gave them and they are using
20 this as a postulated one-year, or is it the staff
21 position that the difference between an exemption and an
22 LWA-1 is one year?

23 MR. REMICK: There are three cases, as I
24 recall. They took the assumption of starting April 1.
25 Then they took what was the staff's best estimate for an

1 LWA-1. Then everything I read was exactly just say
2 suppose we add a year to that, and I cannot find any
3 justification for adding a year. They got a spectrum of
4 months there which I scratched out, 16 to 17 months, 28
5 to 29, and then they said, well, let's figure 12 to 24.
6 That is how I interpreted their words when I read it
7 several times what they had stated.

8 For some reason they appeared to select the
9 one-year delay on top of what the staff said. I do not
10 know why, and I don't know if anybody from the Program
11 Office knows. That puzzled me also, and I figured out
12 then, as I say, a spectrum of months from when they then
13 chose 12 to 24. On the basis of that using \$20 million
14 a month they came up with \$120 million.

15 COMMISSIONER AHEARNE: Are you saying that the
16 LWA-1 is the staff's best estimate of when that would
17 occur? Is that correct?

18 MR. LEECH: At that time that they made up
19 this document it was based upon our estimate of an
20 LWA-1. Our schedule would produce an FES and from there
21 I am sure DOE then extrapolated their own schedule for
22 hearings and all that to get to an LWA-1.

23 COMMISSIONER AHEARNE: I see. You didn't give
24 them an LWA-1 time?

25 MR. LEECH: No. Well, I have to think now.

1 Maybe we did. At least we discussed it, we know that.
2 Whether they modified that in making their choice, I
3 don't know.

4 COMMISSIONER AHEARNE: What is our best
5 estimate of an LWA-1 now? Is the one year an accurate
6 estimate?

7 MR. LEECH: I didn't bring our schedule with
8 me, I am afraid.

9 MR. CHECK: I am afraid I wasn't paying
10 attention at the very beginning of this conversation.

11 (Laughter.)

12 COMMISSIONER AHEARNE: DOE is talking about a
13 one-year delay which I gather is from April 1 of this
14 year to a time when they would say ---

15 MR. CHECK: The middle of next year, the
16 middle of '83.

17 COMMISSIONER AHEARNE: Yes, and that is when
18 an LWA-1 would issue.

19 MR. CHECK: Under earlier assumptions there
20 was to be a CP granted in the middle of '84 and an LWA-1
21 in the middle of '83.

22 COMMISSIONER AHEARNE: My question though is
23 how good is that on our current thinking? Is it true
24 that it would be a one-year delay between granting the
25 exemption and getting to an LWA-1?

1 MR. CHECK: Yes, I think it is as good as any
2 assumption or any projection I could make.

3 COMMISSIONER AHEARNE: So our current
4 projection would still characterize that as a year?

5 MR. CHECK: Yes.

6 COMMISSIONER AHEARNE: Now the second thing,
7 are they assuming that the progress of the construction
8 following would still be the same?

9 MR. CHECK: Let me say it in my words. I know
10 it is their plan that if they get the exemption they
11 will do the 12 or 14 months work that that entails and
12 then they will begin construction of a different kind,
13 which is the beginning of the plant proper for those 12
14 months.

15 COMMISSIONER AHEARNE: The period of time
16 between exemption to plant construction is approximately
17 the same as the period of time between LWA-1 and plant
18 construction?

19 MR. CHECK: There will do site preparation
20 activities from March of '82 until the summer of '83.

21 COMMISSIONER AHEARNE: Let me try to ask the
22 question more clearly.

23 If we agree that it is approximately one year
24 between exemption to LWA-1, those two paths, do you also
25 agree that the difference between when the plant would

1 be ready to operate is one year?

2 MR. CHECK: Yes, that is an assumption. Yes.

3 COMMISSIONER AHEARNE: Do you agree with that?

4 MR. CHECK: I agree with that, yes.

5 COMMISSIONER ROBERTS: You are saying that the

6 lack of the granting of the exemption will increase the

7 length of the project by a year?

8 MR. CHECK: Yes, I believe that is the whole

9 plan. It is the whole project.

10 COMMISSIONER AHEARNE: Well, I understand

11 their plan. I am not asking what DOE projects.

12 MR. CHECK: I understand.

13 COMMISSIONER AHEARNE: I am asking what NRC

14 projects.

15 MR. CHECK: On the basis of the analysis we

16 have done, yes.

17 MR. REMICK: Commissioner Ahearne, I am not

18 sure I am reading you completely and perhaps I am

19 misunderstanding what you are saying. Basically their

20 assumptions were assuming an exemption in March or early

21 April. If they did, they indicated that they presumed

22 the LWA-1 would be in August or September '83 which is

23 16 to 17 months. Then the one year, they said, and then

24 their other case was to add a year to that making it 28

25 to 29 months.

1 COMMISSIONER ROBERTS: Well, that is different.

2 COMMISSIONER AHEARNE: But I think Mr. Check
3 just said the best estimate is one year.

4 MR. CHECK: I am talking nominally.

5 (Laughter.)

6 MR. CHECK: I must be missing the point that
7 you are trying to make.

8 COMMISSIONER AHEARNE: I was asking what is
9 our best estimate of how long it would take from now to
10 when an LWA-1 would issue, and I think you said about a
11 year.

12 MR. CHECK: I said a year and several months.
13 It would be to the middle of 1983. I believe our early
14 schedules showed that it would be accomplished ---

15 COMMISSIONER AHEARNE: I was just wondering
16 whether you had better estimates now because the answer
17 seemed to be originally, and that is several months ago,
18 and you have been having many meetings with DOE, and I
19 thought perhaps you would have a better estimate.

20 MR. CHECK: I don't have the schedule in front
21 of me, but to the extent I am recalling correctly, that
22 schedule is just as good today.

23 MR. TREBY: My name is Stewart Treby. Maybe I
24 can help. I am the attorney in the Office of the
25 Executive Legal Director's Office who would be involved

1 in trying the case. We have in fact had a prehearing
2 conference with the Licensing Board, and at that
3 prehearing conference we indicated to them the dates tht
4 the staff's documents would be out would be June of '82
5 for the environmental document and July of '82 for our
6 safety document or an update of the safety evaluation
7 report.

8 In order to issue an LWA-1 you would have to
9 have findings on the environmental case and the site
10 suitability report, that is, is this site suitable for a
11 facility of the general size and type.

12 If our documents are out in this time frame, I
13 think it is a reasonable assumption that we would be
14 able to then get to hearing and perhaps get a decision
15 by early '83 in which case it would be a one-year delay
16 if they started in '82.

17 COMMISSIONER AHEARNE: Let me ask another
18 question on your report. On page A-9 you have the point
19 under "Hardship." You have the point "The applicants
20 could not have applied sooner for an exemption because
21 no money had been appropriated by Congress to carry out
22 the activities."

23 Now I don't know whether that is an OPE
24 question or a General Counsel question, but is that, to
25 the best of your understanding of the law, is that

1 correct that they could not apply?

2 MR. CUNNINGHAM: Well, off the top of my
3 head ---

4 (Laughter.)

5 MR. CUNNINGHAM: Off the top of my head, Mr.
6 Aherne, I see no obstacle to their having applied. The
7 problem would be if they got it and they couldn't use
8 it, and the Commission might well ask why are you
9 applying?

10 COMMISSIONER AHEARNE: I understand that. I
11 was just speaking to the question of they could not
12 apply.

13 MR. CUNNINGHAM: I think there is probably no
14 legal obstacle to their applying, a practical obstacle.

15 COMMISSIONER ROBERTS: You are not accusing
16 them of a material false statement of fact, are you?

17 (Laughter.)

18 COMMISSIONER AHEARNE: I hadn't thought of it
19 that way.

20 (Laughter.)

21 COMMISSIONER AHEARNE: All right, on page
22 46 ---

23 COMMISSIONER ROBERTS: Excuse me. On this
24 point, this is the NRC write-up.

25 COMMISSIONER AHEARNE: No, no.

1 COMMISSIONER ROBERTS: This is our summation
2 of their position.

3 COMMISSIONER AHEARNE: Yes.

4 COMMISSIONER ROBERTS: So I mean I think we
5 ought to be careful if you want to pursue that. I don't
6 know whether they said they could not have applied. In
7 the practical sense it is like our arguing whether we
8 are going to schedule TMI restart.

9 COMMISSIONER AHEARNE: Sure. I will have to
10 go back and read exactly what they say. If they did say
11 exactly that, then on Tuesday I would expect to ask them.

12 On page 46 you have the statement following
13 the quotation, you say "There is debate in the Senate
14 indicating that at least that body was on notice that
15 DOE intended to apply for a waiver of certain licensing
16 requirements."

17 I wonder if you could address which licensing
18 requirements DOE had indicated they would apply for a
19 waiver of?

20 MR. TRUBATCH: I wrote that piece. No. That
21 is why it was written in those terms. It would have
22 been neater had they specified that it was left open.

23 COMMISSIONER AHEARNE: Wait, Sheldon. It says
24 ". . .that body was on notice that DOE intended to apply
25 for a waiver of certain licensing requirements."

1 MR. TRUBATCH: That is because I can't
2 remember which Senator got up and in his speech brought
3 that up as an issue.

4 COMMISSIONER AHEARNE: The one that I could
5 find was Senator Humphrey and he seemed to be referring
6 to the letter that Bill Dircks had written to the GAO in
7 which Dircks had said that the only way we could make
8 this tighter schedule was if the Congress were to waive
9 the NEPA requirements.

10 MR. TRUBATCH: Well, I don't recall the
11 circumstances now.

12 CHAIRMAN PALLADINO: Have you got any other
13 questions?

14 COMMISSIONER BRADFORD: I do, but it doesn't
15 need to interrupt John's.

16 COMMISSIONER AHEARNE: No, I was pausing here.

17 COMMISSIONER BRADFORD: I was curious, and I
18 think it has been done before, but what is the current
19 estimate of the difference in staff resource
20 requirements whether we grant the exemption or not?

21 That is, how much more effort do you have to put in over
22 the next couple of years if the exemption is granted?

23 MR. CHECK: I don't recall discussing it in
24 those terms.

25 COMMISSIONER BRADFORD: Well, if you haven't

1 discussed it before, can you do it now?

2 MR. CHECK: It is not that I neglected to, but
3 I don't believe it was a factor. Although in saying
4 that, I acknowledge that when we talked about this we
5 had not given as much study of the path which assumes
6 exemption.

7 COMMISSIONER AHEARNE: I believe it was Harold
8 Denton who might have mentioned it, or somebody from NRR
9 in talking to the ACRS made a comment that at least
10 could be interpreted as ---

11 MR. CHECK: --- that more would be required.

12 COMMISSIONER AHEARNE: Yes.

13 COMMISSIONER GILINSKY: Or at least it would
14 be required earlier.

15 MR. CHECK: I certainly acknowledge that,
16 yes. There is going to be redistribution of effort and
17 it may in fact turn out that more effort will be spent.

18 COMMISSIONER BRADFORD: Can you describe the
19 redistribution then?

20 MR. CHECK: Well, it is under the assumption
21 that there will be a request for the LWA-2 to follow on
22 to the exemption.

23 COMMISSIONER BRADFORD: Right.

24 MR. CHECK: In order for us to be in a
25 position to approve that kind of activity we have to

1 identify the safety issues related to the work, that
2 early stage of construction of the plant proper that
3 will take place beginning in the middle of '83, identify
4 those issues and resolve them in time to go to hearing
5 and adjudicate them.

6 COMMISSIONER GILINSKY: But in very rough
7 terms what would be the difference, say, over the next
8 year in your staff level between the two cases, case one
9 of say granting an exemption, and case two of not
10 granting an exemption in rough terms?

11 MR. CHECK: I have not identified a figure.
12 It may be as much as a man or two. But I haven't
13 identified it yet. I have not told my management what I
14 need.

15 COMMISSIONER GILINSKY: You are saying the
16 difference between granting an exemption or not granting
17 an exemption in terms of its impact on your reviewers is
18 one and perhaps two persons over the next year?

19 MR. CHECK: Yes. It is as yet indeterminate
20 because I have not identified the particular issues that
21 I need to resolve more quickly than I had planned to.

22 COMMISSIONER GILINSKY: What is your overall
23 staff size?

24 MR. CHECK: I beg your pardon?

25 COMMISSIONER GILINSKY: What is your overall

1 staff size that you are projecting, say, over the next
2 year?

3 MR. CHECK: In the office itself it is 15 and
4 we are just now approaching ceiling. Full-time
5 equivalence is something different for the year, but
6 nominally 15, and for the office it is 25. For NRR it
7 is 25.

8 COMMISSIONER GILINSKY: Let's see, what is the
9 difference between your staff and the office?

10 MR. CHECK: Nuclear Reactor Regulation is the
11 office that I am in and we rely upon expert reviewers in
12 the technical review groups that are sprinkled around.

13 CHAIRMAN PALLADINO: So you are saying you
14 have 15 in your office and you drawing another 10?

15 MR. CHECK: Another ten, yes.

16 COMMISSIONER ROBERTS: So the one man-year is
17 an increase of four percent?

18 MR. CHECK: That is because I was pressed for
19 a guess.

20 COMMISSIONER ROBERTS: Okay.

21 MR. CHECK: At the moment I have not
22 identified. I have not specifically put a manpower
23 figure on that.

24 COMMISSIONER AHEARNE: Was your rise to 15
25 predicated upon getting ready for the exemption request?

1 MR. CHECK: No. It was the traditional path.

2 COMMISSIONER BRADFORD: Paul, somehow the one
3 man-year doesn't feel right to me.

4 MR. CHECK: I withdraw it.

5 (Laughter.)

6 COMMISSIONER BRADFORD: The trouble with that
7 of course is that if it does feel right to somebody else
8 you will have to reinstate it again.

9 (Laughter.)

10 MR. CHECK: You asked for a guess and I
11 guessed. That is a guess. I have not done the analysis.

12 COMMISSIONER BRADFORD: Is there a greater
13 pick-up in effort later on that would be moved back in
14 time by the granting of the exemption, or is the 15 in
15 your shop and 25 in NRR about the maximum overall level
16 of effort that would go into licensing Clinch River?

17 MR. CHECK: The figures that Denton has
18 discussed with you on an earlier occasion, the 25, was
19 for the granting of a CP, at least the first year of
20 that activity. Now if we are faced with doing some
21 pieces of work that we had identified sooner than we had
22 planned to, it may require us to spend a little more.

23 COMMISSIONER BRADFORD: If the exemption were
24 granted and things go as you see them for now through
25 the granting of the CP, what is the maximum level of

1 effort that would be required for any one year during
2 that period?

3 MR. CHECK: I believe, if I recall the
4 projections correctly, that this 25 was the maximum.

5 COMMISSIONER BRADFORD: So you really are
6 already at pretty close to the maximum.

7 COMMISSIONER GILINSKY: You have got 25 people
8 employed now full time, or I mean the equivalent of 25
9 people employed?

10 MR. CHECK: Yes, give or take a bit. As I
11 say, we are coming up.

12 COMMISSIONER BRADFORD: Is that also true for
13 the contractual level of effort? Do you have a fair
14 amount of review going on outside of NRC?

15 MR. CHECK: Oh, yes, we have.

16 COMMISSIONER BRADFORD: Is that also at about
17 its peak annual level now?

18 MR. CHECK: The current projections show that
19 the fiscal '82 is the peak year, yes.

20 COMMISSIONER BRADFORD: How much is involved?

21 MR. CHECK: It is around \$2 million. It is a
22 bit under. We had talked in terms of two and a half and
23 we haven't spent that much.

24 COMMISSIONER ROBERTS: In the same vein,
25 forget the timeliness, but is there a difference between

1 the resources to be expended, total resources expended
2 between the two scenarios, the granting of the exemption
3 contrasted to the "normal procedure"? Would you make
4 any differentiation?

5 MR. CHECK: You are going to get me back to
6 the man I had trouble with.

7 (Laughter.)

8 COMMISSIONER ROBERTS: Okay.

9 MR. CHECK: There may be.

10 COMMISSIONER ROBERTS: I am ignoring the
11 passage of time. That related to whether you might have
12 to do some things earlier than later.

13 MR. CHECK: That is what exemption does to us.

14 COMMISSIONER ROBERTS: Okay, I understand.
15 That is not the question I am asking. The total, and
16 put it in man-years, the total expenditures, will they
17 differ depending on which scenario might be followed?

18 MR. CHECK: I am afraid I don't see the
19 difference in the questions.

20 COMMISSIONER BRADFORD: I think that question
21 is the one I asked you.

22 COMMISSIONER ROBERTS: You were asking the
23 same thing.

24 COMMISSIONER BRADFORD: Yes, I think I asked
25 that question first and, Paul, you said that you just

1 didn't have a feel for that.

2 MR. CHECK: I do not know at the moment
3 whether the acceleration that we are going to have to
4 undergo will cause us to spend more than we would
5 otherwise if we played it on the traditional path.

6 CHAIRMAN PALLADINO: I am going to ask one more
7 question, and that is on page 28 where it says "The
8 current staff opinion is that affected areas of the site
9 could be restored essentially to their present
10 conditions of vegetation and animal life, but that
11 perfect restoration of the topography could not be
12 achieved."

13 Is it necessary to achieve perfect restoration
14 of topography, and what is perfect restoration?

15 (Laughter.)

16 CHAIRMAN PALLADINO: And I raise this because
17 every once in a while I get the feeling here that you
18 almost say it is okay but then it isn't, and I use this
19 as one that caught my eye.

20 MR. LEECH: I will give you a first answer.
21 If you want it expanded, I will get the man that is in
22 the back of the room.

23 I believe our point here is that to try and
24 exactly restore the site after you have moved all that
25 rock and all that dirt would be a rather difficult thing

1 to do and actually it isn't necessary from an ecological
2 point of view. From the point of view of simply trying
3 to make the place look nice again and cover it with
4 trees you don't really have to restore this saddle
5 arrangement that is there now.

6 CHAIRMAN PALLADINO: As a matter of fact,
7 sometimes one improves the topography.

8 MR. LEECH: But, on the other hand, if by
9 chance you have insisted that it be restored to its
10 original condition, then of course they would have to
11 presumably put the saddle back there. So that has been
12 addressed.

13 CHAIRMAN PALLADINO: But perfect restoration
14 you don't feel is necessary?

15 MR. LEECH: Not from an ecological point of
16 view.

17 MR. CUNNINGHAM: Nor from a legal point of
18 view. I mean the question comes at all because
19 redressability is one of our four criteria which you
20 balance.

21 CHAIRMAN PALLADINO: I am just trying to
22 understand it.

23 John, do you have more questions?

24 COMMISSIONER AHEARNE: Yes. I wonder if it
25 would be possible, and I am not sure from whom in the

1 staff, to get the best estimate of the time difference
2 to construction, completion and in between granting the
3 exemption and going the LWA-1 route? Now I realize you
4 have to make some assumptions, and the assumption I
5 would make is there are no problems. The reason I make
6 that assumption is because if there turned out to be
7 serious problems we shouldn't grant the exemption
8 anyway. So I make the assumption that there are no
9 serious problems and I would like the staff's best
10 estimate of the time difference.

11 MR. CUNNINGHAM: Certainly, we can provide
12 that.

13 COMMISSIONER AHEARNE: The second question is
14 in going through the legislative history did you find
15 much that addressed licenseability, the question of
16 licenseability, the criteria that should be applied?

17 MR. MALSCH: I think the answer is no. It has
18 been assumed to be licenseable as a 104(b) demonstration
19 project from the inception. There has been very little
20 by way of detailed discussion of criteria or licensing
21 standards and no discussion certainly specifically of
22 granting, denying or availability of exemptions.

23 COMMISSIONER AHEARNE: Or even the details of
24 the kind of criteria that they would be talking about.

25 MR. MALSCH: I don't think so.

1 COMMISSIONER AHEARNE: The last question would
2 be on A-25. It is really with the assumption that you
3 have you are describing the UCS position, and I wanted
4 to ask whether anybody else had any points similar to
5 that.

6 It says the UCS stated that the applicants'
7 filing of the request indicates they are most interested
8 in seeing that tangible activity takes place before the
9 beginning of the '83 Congressional budget cycle.

10 Was there anything in DOE's filings that would
11 give you that same sense?

12 MR. MALSCH: I don't remember seeing
13 anything. I didn't look at them specifically for that
14 kind of material.

15 CHAIRMAN PALLADINO: Wasn't there a statement
16 by Silverstein, was it?

17 COMMISSIONER AHEARNE: Well, he said if we
18 don't get it by March of '82 the project would be dead
19 in the water. We asked him specifically what he meant
20 by dead in the water and I didn't recall this being an
21 issue that he addressed in response.

22 MR. REMICK: I don't recall seeing a response
23 either to that.

24 CHAIRMAN PALLADINO: Well, I thank you very
25 much. This is a very interesting report.

1 Thank you and I appreciate your coming down.

2 We will stand adjourned.

3 (Whereupon, at 3:20 p.m., the meeting

4 adjourned.)

5

* * *

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

NUCLEAR REGULATORY COMMISSION

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

in the matter of: PUBLIC MEETING - DISCUSSION OF CLINCH RIVER BREEDER
REACTOR

Date of Proceeding: February 12, 1982

Docket Number: _____

Place of Proceeding: Washington, D. C.

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

Mary C. Simons

Official Reporter (Typed)

Mary C Simons

Official Reporter (Signature)