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NUCLEAR REGULATORY COMMISSION
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OFFICE OF THE
SECRETARY

COMMISSION DETERMINATION REGARDING PUBLIC DISCLOSURE
UNDER THE GOVERNMENT IN THE SUNSHINE ACT OF:

Transcript of Discussion of Budget
Reclama: NRR, RES, I&E
August 3, 1978

The Commission previously determined that the subject transcript should be withheld from public disclosure until the Commission's FY-80 Appropriation became law.

Following enactment into law of the Commission's FY-80 Appropriation, the Secretary of the Commission, upon the advice of the General Counsel, determined that the subject transcript should be released in its entirety.

Samuel J. Chirk
Secretary of the Commission

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ORIGINAL

NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF:

CLOSED MEETING

BUDGET MARKUP/RECLAMA

NRR - RES - I&E

(FY 80 Budget)

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P R O C E E D I N G S

CHAIRMAN HENDRIE: Very good. If we can come to order and start looking at our preliminary marks.

I guess the first -- since they seem to be at the table -- the first parties here are NRR. Harold?

MR. GOSSICK: As you recall the budget mark for NRR that the Commission came down on when we last met was 158 versus 189 that had been recommended and you asked, of course, that Harold come back and indicate what he could do with that. And further, to see what the additional impact might be in the event the Commission decided to go further and just number in the vicinity of 100 spaces instead of the 158, and also, where, if possible, dollars could be used instead of people.

So those are general points that Harold is prepared to address.

MR. DENTON: I passed out two sets of information. I want to discuss first the impact of the mark of 774. If I could have the first slide and just briefly start with the changes that the Commission made from the EDO marks and just run through them quickly. And then I have backup information on each one.

There was a decrease of 11 in the operating reactor unit, 2 in safeguards, 5 in case work, 10 in technical projects, 2 in advanced reactors, and 1 in training, for a

gsh 1 total decrease of an EDO mark of about 31 and \$70,000 was
2 put back in for safeguards and \$150,000 for technical
3 projects.

4 So let me go now to the impact on each decision
5 unit.

6 For the decrease of .11, if we process the same
7 amount of outstanding items that we propose to process, we
8 would have to have an additional 10 percent increase of
9 efficiency over the 20 percent that we already assume. If
10 you recall, we had assumed .12 man-years per amendment, down
11 from .15 that is currently in practice.

12 So in order to absorb this cut, we have to assume
13 .1, if we don't realize that additional efficiency, would
14 mean some increase in the backlog of operating amendments
15 during that year. Perhaps 60 to 100 amendments will be
16 added to the list.

17 COMMISSIONER AHEARNE: How big is the list now?

18 MR. DENTON: The list now is about 1300 actions
19 total. These were items I discussed in the first presentation.
20 I was sort of taking off from the first one to this one.

21 COMMISSIONER AHEARNE: So you might add 60 to the
22 list of 1500?

23 MR. DENTON: Yes. I thought the cut or the assumed
24 efficiency of 20 percent over our present practice was
25 pretty ambitious and I think to achieve the 10 would really

gsh 1 be pushing our capability to devise better ways of doing
2 business.

3 So I see when I talk about an even bigger cut,
4 I would not propose to affect this unit. I think 205 is
5 about the minimum that we can realistically hope to achieve
6 without having a big backlog occur.

7 And if during the year we find that we're just not
8 able to act on all the important ones, we might be able
9 to reprogram internally and let some of the lower decision
10 units slide a bit.

11 But I think, in fact, with the 774 mark, altogether,
12 I think it's a doable mark. It stretches.

13 COMMISSIONER AHEARNE: You think the 774 is doable?

14 MR. DENTON: Yes, sir. The safeguards mark was
15 the reduction of 2 people. Slide.

16 (Slide.)

17 COMMISSIONER AHEARNE: I just have to comment.
18 He just said 774 is doable. That might close the discussion.

19 (Laughter.)

20 MR. DENTON: That's fine with me. Probably the
21 group that is going to have the most difficulty is the
22 reduction of 2 in safeguards. There was some feeling that
23 overhead was perhaps high in the way the group was structured,
24 two branches and so forth. But they supervise a large
25 number of consultants and other people.

gsh 1 When you look at overhead in terms of the total
2 number of people in this unit, it's not really excessive.
3 What we think may happen if we're not able to achieve the
4 kinds of efficiencies, we hope that the implementation of
5 some of the regulations dealing with guard training and
6 qualifications, may take longer than we had hoped for.

7 COMMISSIONER KENNEDY: On the other hand, hopefully
8 there will be some improvement in the general safeguards
9 posture of the agency, which will — after all, this is a
10 year and a half from now longer and over that time, maybe
11 we can work that problem out.

12 MR. DENTON: The impact — we had asked for more
13 dollars to implement the IAEA arrangements.

14 (Slide.)

15 With the 70,000 — I don't have a separate sheet
16 on this. What we think it will do is if it comes into
17 being, we will be able to develop guidelines and we will be
18 able to implement the guidelines on the pretest basis, but
19 we would not with the present funding be able to extend it
20 to the several hundred plants that might eventually be
21 included. But it would get the program off on a test basis.

22 CHAIRMAN HENDRIE: Let's see. Harold, what does
23 that — if I look at the out-years, the office request was
24 for a big chunk of technical assistance money in '80 and
25 then dropped a factor of 2 on the request to '81, and went

gsh 1 practically to peanuts in '82.

2 MR. CASE: That reflects the IAEA work primarily
3 in '80, and guard training.

4 MR. STELLO: At the present time, we're relying
5 very heavy on using dollars to supplement what we have through
6 laboratories on 7355 guard training contingency planning,
7 the IAEA work.

8 According to the present schedules for those
9 activities, that particular workload should have essentially
10 been accomplished so that our reliance on a lot of dollars
11 to augment what we do should substantially decrease in the
12 out-years.

13 CHAIRMAN HENDRIE: Is there an implication that
14 there's about a third of a million dollar difference here in
15 '80 between the office request and the current mark?

16 Is the implication that some — all or some part
17 of that should roll forward to '81?

18 MR. DENTON: I think it is for the IAEA part. With
19 the current mark, we would only get the test part going and
20 it would take roughly the same funds sometime if it was
21 to be extended to all plants.

22 So I would propose that the cut in that set-aside
23 would show up again in '81 or '82 in order to fully implement
24 it. Isn't that correct, Vic?

25 MR. STELLO: We're really betting on if the treaty

gsh 1 comes in, how forceful we're going to be in implementing all
2 that's required by the treaty. Behind that big activity
3 is getting all the work together and all of the facilities
4 that we have to transmit over to them.

5 And it really depends on when that hits us and
6 what kind of schedule we want to give the IAEA for getting it
7 done. If we don't get it in '80 and we can't get it in '79,
8 the only thing we have left is to push it off into '81.

9 CHAIRMAN HENDRIE: How much of the 360 is IAEA?

10 MR. DENTON: All the set-aside was for IAEA in
11 this decision unit.

12 DR. HANAUER: 300 total was IAEA and it was all
13 in the 1980, wasn't it, Vic?

14 MR. STELLO: Yes.

15 DR. HANAUER: Originally, it was planned to do all
16 of that work in 1980.

17 MR. DENTON: So that would imply about 230 should
18 be in the out-years.

19 CHAIRMAN HENDRIE: Well, maybe the '81 safeguard
20 total ought to go up then to 800, which would be a plus
21 230. We'll be reviewing it again next year, but at least
22 at this point --

23 MR. DENTON: That's what we had requested. That
24 would permit, we think, full implementation of the program if
25 it passed.

gsh

1 (Commissioner Bradford enters the hearing room.)

2 COMMISSIONER KENNEDY: If it was at '81?

3 MR. DENTON: Either year. We had asked for it
4 in '80, thinking we could do it that year. But '81 —

5 MR. CASE: John, if you're going to talk about the
6 out-years, there was no SEP cut this year. It's not on
7 Harold's slide, so I really don't understand the basis for
8 your reductions in the out-years in the SEP.

9 CHAIRMAN HENDRIE: That was a compromise between
10 my trying to kill it and —

11 (Laughter.)

12 CHAIRMAN HENDRIE: That was the average of zero and
13 one.

14 (Laughter.)

15 MR. CASE: My argument would be obviously some work
16 has to be done on the reactors other than the first of that
17 one? I would argue — that being true, I don't think anyone
18 would disagree with it. Might as well keep the level the
19 same and get them done. Depending on how much you have to
20 do, you would do the larger number in '81, '82.

21 I would keep the level the same and do more reactors
22 if it's Commission's view to move in that direction rather
23 than cut down the number of people and string out the program.

24 CHAIRMAN HENDRIE: I'd sure like to be able to
25 show — let's see, how many decision units have we got?

gsh 1 140 or something like that? Gee, I'd like to have one that
2 appears to be going down at some time.

3 COMMISSIONER KENNEDY: You have to be sure of the
4 right one.

5 CHAIRMAN HENDRIE: Okay. We'll keep that in mind.

6 MR. DENTON: The next slide was on casework.

7 (Slide.)

8 MR. DENTON: Of which there was a cut of 5, and
9 that's not a big percentage in terms of the effort we put
10 into this. It might mean that the impact, to the extent
11 there was some, would come in a CP schedule which
12 would be slightly larger, but it would just be 5, a 2
13 percent change in schedule.

14 So not a big card to identify with any accuracy a
15 impact of a cut of 5.

16 On technical projects —

17 (Slide.)

18 — the Commission mark was 10 less than the EDO
19 mark. I think what this tells us is that we would take this
20 10 — out of all the various categories of technical projects
21 in categories As and Bs, we will concentrate on those of
22 major significance and maybe pick up 1 or 2 to reduce our
23 topical report efforts a little bit, reduce our NMSS assistants
24 by 10 —

25 COMMISSIONER KENNEDY: What's that going to do?

744.01.9

gsh 1 Cause NMSS to pick up the work?

2 MR. DENTON: We were budgeting 27 people. I think
3 we cut it by 3.

4 COMMISSIONER KENNEDY: I know, but what does that
5 do to NMSS?

6 MR. DENTON: It would stretch out their schedules
7 a little bit, this area, for things we review, and some of
8 the same impact if we had done — our casework.

9 But I think 3 out of, essentially, 30 was not
10 a very big impact on their schedules.

11 COMMISSIONER KENNEDY: I don't have any idea.

12 MR. DENTON: I think what it comes down to is we
13 just do things not quite as fast, so it's processing —

14 CHAIRMAN HENDRIE: Harold, the essence of what
15 you're saying on technical projects, isn't it that rather
16 than there being some identifiable subelement in technical
17 projects, that you would just cut out completely or move
18 out three years — you would take whatever reduction there
19 is and sort of spread it over the whole technical projects
20 area?

21 Now whether it's .7 man-years here or 1.3 there,
22 or 2 people or 3 in the NMSS. For fiscal '80, at this
23 juncture, is getting sort of well down in the noise, I would
24 think.

25 COMMISSIONER KENNEDY: 10 percent is somewhat more

gsh 1 than noise, usually.

2 MR. DENTON: It's 10 percent of 30 in this case,
3 or 27. So it's 3 people at the maximum out of 30. And like
4 in all the subdecision units, some of the effort is more
5 important than others.

6 So we would continue to provide NMSS full service
7 in those reviews that we thought were most important. But there
8 might be a uranium mill pond somewhere that wasn't urgent,
9 and we would do that one on a little slower schedule.

10 (Commissioner Bradford leaves the hearing room.)

11 So what I did on these 10 was cut out each one
12 of the little subunits, one, two, or three people. The
13 advance reactor mark was a decrease of two.

14 (Slide.)

15 What we would do is devote the effort that
16 is available to reviewing the operation of Fort St. Vrain
17 and put the remaining effort into reviewing the FFTF
18 start up and testing and there would be some delays in our
19 review of these rejected HTGRs and GCFR plants.

20 COMMISSIONER KENNEDY: How many of these 14 man
21 years are actually devoted to Fort St. Vrain?

22 MR. DENTON: That's an operating reactor which is
23 not in DOR. It's being handled by the subgroup and I think
24 it's 2 or 3 man-years.

25 MR. BOYD: I would say two professional man-years,

gsh 1 and then you weigh whatever is in budgetary purposes,
2 the support that you have, and take it from there.

3 MR. DENTON: That was not a major impact except
4 on future advanced reactors.

5 CHAIRMAN HENDRIE: Let's see. When is FFTF due
6 to start up?

7 MR. BOYD: It's scheduled to be completed in theory
8 at the end of Fiscal '78.

9 CHAIRMAN HENDRIE: End of Fiscal '78.

10 MR. BOYD: In theory.

11 COMMISSIONER AHEARNE: In theory. Was it originally
12 supposed to start up in '75?

13 CHAIRMAN HENDRIE: Can you provide any late
14 enlightenment? John, what do you think?

15 Is the damn thing going to be running by '80?

16 (Laughter.)

17 COMMISSIONER AHEARNE: By '80 it ought to be.

18 CHAIRMAN HENDRIE: Well, that's only a year away.

19 COMMISSIONER AHEARNE: A year and a half?

20 CHAIRMAN HENDRIE: A year and two months.

21 MR. MURLEY: Mr. Chairman, they loaded sodium in
22 the secondary system last month and they're about a month
23 ahead of schedule, I believe. They intend to load sodium
24 in the primary system this fall and the schedule is, I believe
25 they go critical a year from now. And for the last three years

gsh 1 I think they've been pretty much on schedule.

2 CHAIRMAN HENDRIE: How did the secondary sodium
3 loading go?

4 MR. MURLEY: Fine. I think all three loops are
5 filled with sodium.

6 CHAIRMAN HENDRIE: That's a fairly good sign. If
7 they had kept the secondary piping clean enough, they can
8 load sodium without anything having it be a real crummy
9 mess.

10 It's a fairly favorable indication about the state
11 of things at the construction site.

12 COMMISSIONER KENNEDY: Could I just ask one question
13 on the last chart, which you haven't turned over yet, which
14 is training and correspondence?

15 (Slide.)

16 It said reducing the total to one man-year, bringing
17 the training to a level of about 2.5 percent of total
18 manpower.

19 How does that equate with the ratio of the rest
20 of the agency?

21 MR. CASE: I don't think there's any way to find
22 out. I've asked that question. The statistics are kept
23 that way.

24 MR. GOSSICK: I can't give you an answer,
25 Commissioner Kennedy.

gsh 1 COMMISSIONER KENNEDY: It ought to be easy. It's
2 only to try to find out how many man-years of training are
3 in each one of the principal offices.

4 They must have something.

5 DR. HANAUER: It's around. It's just not at
6 the table.

7 (Simultaneous discussion.)

8 COMMISSIONER KENNEDY: Well, let's ask him again.

9 MR. BARRY: I will get that information for you.

10 MR. DENTON: If we had our druthers, we would
11 prefer a level of 4 percent as being one week per man.

12 MR. CASE: It's my estimate it's quite low. I'll
13 try to check and see if I can't find out.

14 COMMISSIONER KENNEDY: If we can get some estimate —

15 MR. BARRY: Some agencies, it was specifically
16 articulated in the budget. You know, they want so many people
17 and they didn't do that as a matter of percent. In other
18 cases, they did it as a matter of percent. It was done both
19 ways, and we do have a training process.

20 MR. DIRCKS: Rather than look at projections, we
21 can get you passed —

22 MR. DENTON: Overall, I thought the biggest
23 impact of the Commission mark would be to put more pressure
24 on the operating reactor unit to find improvement and gain
25 that extra 10 percent. The rest of the mark could be scattered

gsh 1 among the units and as a small percentage of any one unit,
2 it's hard to identify it.

3 Now going to the question of how we would arrange
4 it if we were to go to 716 instead of 774 —

5 (Slide>)

6 — I think is an entirely — confronted with a
7 different task. This is one, Commissioner Bradford, you
8 asked about.

9 What I have got on the first slide is how I would
10 propose to allocate the additional cut of 58 in order to
11 reach a 716 mark. And from looking at this, you can tell
12 I wouldn't propose to cut the three units that we had
13 discussed, because as I showed on the earlier tables, they
14 assume certain efficiencies on top of the efficiencies
15 already assumed.

16 I think it would be unrealistic to assume we could
17 achieve a 50 percent increase in processing the OR amendments
18 and so forth on top of the 3240 that's in there.

19 So what I want to do now is walk you through the
20 units where I would propose to take the people from in order
21 to achieve the 716.

22 COMMISSIONER BRADFORD: Before you do that, Harold,
23 let me ask a question I should have asked a while ago.

24 In terms of the license amendments and the backlog,
25 what is their significance in terms of what's really going on

gsh 1 out there in the world? What's involved in those amendments?

2 Is it a matter of -- are they safety-related
3 types of amendments? If all the amendments were issued,
4 would there be a significant increase in the power levels
5 at which reactors could operate?

6 What do we gain by making sure that we get that
7 backlog cleared up?

8 MR. DENTON: I think it's a potpourri from issues
9 that we think are important, and they are the ones that
10 we have worked on and processed, the ones where the licensee
11 is spending more money than he thinks proper and he wants
12 to relocate or discontinue sampling, which to him is just
13 an economic incentive.

14 So, obviously, DOR has processed those that, in its
15 judgment, have a high safety significance. But let me ask
16 Vic to maybe give his views on how they do vary.

17 MR. STELLO: There are some amendments in there
18 which do related to power level, and those we generally
19 can get out on time. Those are the ones we manage to work
20 with, when we are, in fact, derating some for some reason or
21 another.

22 But as a general characterization of the outstanding
23 amendments, they all are "safety related." That's our
24 business, by definition.

25 MR. DENTON: Or environmental.

gsh 1 MR. STELLO: If you recall on the last presentation,
2 we tried to break those up and analyze them as to where
3 they come from. And you recall, we broke them up into
4 five different groups as to those that evolve from
5 regulations that the Commission passes that require us to
6 do something, or we have an event or an operating experience
7 in a facility where something undesirable happened in one
8 facility and it's clear it can or will happen in others.

9 The channel box problem is an illustration where
10 it was a safety problem. We had to derate a bunch of
11 BWRs, and we had to go and take the action, first to derate
12 them, get the problem resolved, both with the vendor and
13 the utilities, and then take another action to allow them
14 to come back up to power when they fixed and repaired them.

15 Those are the kinds of activities that we're
16 talking about. It evolved from generally things that directly
17 or indirectly are caused by an NRC action. And it could have
18 been caused because of something that happened in a facility
19 or by some deregulation, the whole spectrum.

20 COMMISSIONER BRADFORD: Okay. So when OMB is to
21 take the most likely place from which the question would come,
22 comes to you and says, okay, internal NRC considerations
23 aside, obviously, you want to get rid of your backlogs. You
24 are caught up on the paperwork. But in terms of all the
25 priorities facing the administration and the country, why are

gsh 1 these license amendments important? Who's going to be better
2 off and in what ways? What kind of an answer do we give
3 them?

4 MR. STELLO: The safety of the nuclear power plants
5 is my business -- that's what I'm doing. And these actions,
6 in principle, the bulk of them are for that purpose.

7 So in order for me to continue to assess the
8 safety of the plants involved, requirements for one reason
9 or another, I have got to implement them. I have got to
10 do what's needed for safety.

11 That's what I believe I'm doing. It might be
12 an arguable point, but that is my view.

13 MR. DENTON: But for the ones that go to Commission
14 action, such as in-service inspection, we don't attempt any
15 risk assessment or any look at the work, because that has
16 already been done in the way of proclaiming a regulation.
17 In terms of the ones where we're initiating action, because
18 of our operating experience or research results, that calls
19 for a judgment as to what the risk reduction potential is
20 in taking that action.

21 COMMISSIONER BRADFORD: What was the breakdown again
22 as between those which are in response to Commission
23 initiation and those which are the licensee's own? Obviously,
24 the ones which are responding to Commission initiation are
25 going to be more clearly safety related, consistent with

gsh 1 its response.

2 MR. DENTON: I think there were like 600 in total
3 of that category, approximately half of which we had
4 processed.

5 So like 300 would be in the backlog total.

6 MR. CASE: We'll get to the numbers, Commission
7 Bradford.

8 CHAIRMAN HENDRIE: Well, let's see. Out of 1777
9 amendments, there were 343 that have been -- let's see --
10 that are labelled plant unique license amendment actions.

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1 CHAIPMAN HENDRIE: The split is 75 environmental,
2 268 safety-related, generic review and manpower total for the
3 balance --

4 COMMISSIONER BRADFORD: How do you classify it if
5 somebody comes in and says, I think I can operate my plant at
6 a level of 20 or 30 megawatts higher than you're currently
7 allowing me, I'd like a license amendment? Is that safety-
8 related or environmental amendment?

9 MR. DENTON: That's safety-related.

10 COMMISSIONER BRADFORD: For classification purpose,
11 that is safety-related.

12 MR. DENTON: Because it requires a relook at the
13 safety aspects.

14 Let me look at the 75 on the environmental list. We
15 have reassigned all of those from DOR to DSE internally, and so
16 that backlog of 75 will be cleaned up by the time '80 rolls
17 around internally. So hopefully, by '80 we would not have a
18 backlog, except just due to the ones of that year.

19 MR. STELLO: Commissioner Bradford, let me make
20 clear, it's possible that the environmental restrictions on the
21 plant can in fact impose a derating. That derating is a result
22 of an environmental requirement. If it is, then it is derated
23 because of environmental requirement.

24 COMMISSIONER BRADFORD: And in that case, the amend-
25 ment --

1 MR. STELLO: They have to file an amendment, ask for
2 relief, because it's a license condition to get that license
3 condition changed so that they can up the power in the plant.
4 It could be a limit on the Delta T across the condensor or the
5 maximum temperature in the discharge canal, or whatever. For
6 whatever reasons are there, they would have to derate; that
7 would be an environmental amendment, and we process those as we
8 would license amendments. We don't make a distinction in terms
9 of our workload if it's environmental or if it's safety. If
10 the licensee is asking us for an amendment and he comes in and
11 he says, my power plant is going to have to be derated, we try
12 to the best of our ability to be responsive and give him the
13 service to allow that plant to operate if in fact we can justify
14 it, either on the basis of safety or environmental.

15 We do our best to take those actions and avoid any
16 delay in getting it done either way. I don't have an arbitrary
17 classification system that says if it's environmental and it's
18 derating a plant, I put it at the bottom of the pile. I don't
19 do that. It will get processed quickly.

20 COMMISSIONER BRADFORD: If you had to classify -- I
21 guess perhaps I've been somewhat misled by the safety-related
22 versus environmental-related. If you had to classify the
23 amendments in terms of primary purpose -- let me try to get
24 some idea of the categories they would fall into. Some would
25 have as their primary purpose, especially the ones in response

1 to Commission initiatives, improved safety. Some would have
2 improved plant efficiency or improved operating levels, plus
3 savings.

4 MR. DENTON: But we would not initiate those.

5 MR. CASE: All of those would be in the category of
6 licensee requests: increased power level, efficiency, don't
7 do this inspection because it's not necessary for safety
8 reasons.

9 COMMISSIONER BRADFORD: And then there are some that
10 would also have as their purpose diminished environmental
11 impacts. Any other categories, primary purpose categories?

12 MR. STELLO: I think we have tried to cut these amend-
13 ments in a variety of ways. We have tried, for budget purposes,
14 in two different ways. You have the source of where the
15 requirements evolve from, and I think you have that particular
16 breakdown in front of you. We have also tried to take another
17 cut at how they apply by reactor class, whether they are unique
18 to the reactors. And I think there are about 343 that are
19 licensee-unique on the plants. The rest of them fall into
20 generic categories and are either broad, across-the-board,
21 relating to all kinds of reactors, PWRs and BWRs, or they are
22 just vendor type oriented. There's an area ECCS model which
23 would only affect one vendor type, General Electric type
24 reactors, Westinghouse, whatever --

25 CHAIRMAN HENDRIE: But I think -- I don't perceive

1 any other categories. Does anybody else?

2 MR. CASE: I don't really see the category, your
3 last category, improved environment.

4 MR. HANAUER: There's one other --

5 COMMISSIONER BRADFORD: I'm assuming there is an
6 environmental category that's like a safety category. That is,
7 it might be Commission-initiated amendment, which -- for some
8 reason, am I wrong about that?

9 MR. CASE: I don't know of any. We evaluated FES. If
10 they determine that to be acceptable, if they stay within that,
11 we have no requirement to make them less than whatever is going
12 to be acceptable in the FES.

13 MR. DENTON: Unless you are putting radiation into
14 routine releases into that category. They tend to get set by
15 EPA and water quality standards and so forth, so they don't
16 change as fast. But I could see where they could be in that
17 category.

18 MR. HANAUER: I would suggest there's one more cate-
19 gory, which is similar to the very first one you said, which is
20 initiated by the Commission, but not as a result of a regulation
21 change, but as the result of something we learned from operation
22 or from research, where we decide a certain class of plants, or
23 just usually it's a class of plants was to look at something that
24 we didn't look at before, or in a different way from the way
25 we looked at it before. And it's Commission-initiated, but it's

1 not as a result of a new regulation; it's a result of something
2 -- (Inaudible.)

3 MR. DENTON: I take it that the real thrust is some-
4 what like in the SEP program: What's the net effect on the
5 risk if we do them all or if we don't do them all? We have just
6 not gotten to the point where we're able to apply that very
7 exactly, and different people perceive different ones differently,
8 and it's sort of the process that combines the staff judgment,
9 the ACRS judgment, and other parties as to which ones are the
10 operating experience ones, in order to reach a level where
11 something is required of that without a real formal risk
12 assessment.

13 Only ones like ATWS get up to the point where we put
14 the time and attention into it and try to quantify the real
15 risk and savings possible.

16 COMMISSIONER BRADFORD: Why don't you go ahead with
17 the slide? I may want to come back to this, but I've taken you
18 rather far afield.

19 MR. DENTON: What I wanted to do in the next slide
20 is just show in summary fashion the impact of the 58 additional
21 cuts.

22 (Slide.)

23 And then I'll go into each one in more detail as you
24 desire. But in order to find the 58 additional slots to cut,
25 I went through all the subunits in these lower priority tasks

1 to see if they were ones where I could still maintain a viable
2 program, but still put less effort into it. And this table
3 shows the total impact of that 58. It means that we would
4 reduce about 30 percent of our level of effort in the standard
5 plan reviews, which tends to stretch out the schedules same
6 amount for the standard plants.

7 The early site review effort is the area I had to use
8 as the damper to absorb the 58 after I had made all the cuts
9 everywhere else that I could. And I had to reduce it by two-
10 thirds, which -- and the reason I cut standard plant reviews
11 different than early site reviews is, standard plants are
12 referenced even by customer applications. Early site reviews
13 tended to be done early in the process before there was a plant,
14 and perhaps stretching out early site reviews wouldn't have
15 quite the impact that it would at standard plant reviews.

16 But I want to point out that these two areas are two
17 of the areas that we have been touting as an eventual solution
18 to some of our problems.

19 COMMISSIONER AHEARNE: We now know -- (Inaudible.)

20 (Laughter.)

21 MR. DENTON: We have reduced the level of efforts in
22 licensing improvements a few people. We cut back about 50
23 percent in the standard review plan and audit calculations. We
24 reduced the advanced reactor level of effort to only Ft. St.
25 Vrain and FFTF. We reduced training a few more people down to

1 two percent of the total staff, and we reduced standard support
2 a little.

3 Maybe it would help if I just walked through the
4 derivation of these a little.

5 (Slide.)

6 As I said, early site review is the one area that we
7 took probably the biggest cut in. It was sort of a damper to
8 absorb the effects of the others. And I hit standards. Early
9 site reviews we reduced from 16 to 5, standard plant reviews from
10 48 to 33, and licensing improvements I cut from 12 to 10, in
11 order to get the total cut in case work of 28 that was necessary.

12 In the technical projects area --

13 (Slide.)

14 -- I reduced by 10, reducing it all in the technical
15 projects, the level of effort in the categories A and B. What
16 I'm reducing here is the level of effort through revising the
17 standard review plan and audit calculations done in DSS by about
18 half, in order to pick up ten.

19 (Slide.)

20 And advanced reactors in '80, I'm making a similar
21 cut to have just the maintenance activity on those two plants
22 and no capability to review advanced reactors in any different
23 design if they were to arise.

24 (Slide.)

25 In training and correspondence, I cut an additional

1 5 people out of that area to get down to two percent of the
2 effort in training, in each one of the directors' offices.

3 COMMISSIONER KENNEDY: I noted that you reduced the
4 standards by 28 percent. What's the actual effect of that?

5 (Slide.)

6 CHAIRMAN HENDRIE: You dropped it from 10 to 7 man-
7 years?

8 MR. DENTON: I think it means that we are just less
9 effective.

10 CHAIRMAN HENDRIE: I guess 11 to 8.

11 MR. DENTON: It means that it will feed back eventually
12 in '81 and '82 into our reviews, because a large amount of the
13 standard effort that goes into preparing Reg Guides and so
14 forth makes the licensing reviews simpler in later years. So
15 it would go to the effectiveness of our review in '81, '2, and
16 '3, would be my estimate.

17 Roger, would you like to quantify it?

18 MR. MATTSON: I recall that the 11 requests compares
19 to a current level on the order of 20. So there's already a
20 rather significant reduction. You recall also that we talked
21 to you about whether we would reduce our participation in the
22 standards efforts, and the Commission reacted rather negatively
23 to that. We decided not to do that to any great extent, to
24 review it and make sure we haven't got any fat, but not across-
25 the-boards to cut it back.

1 On cutting from 20 to 11 and 11 down to 8, we would
2 start to slow down considerably our participation in the review
3 and approval process for the Office of Standards Development
4 major work projects, and we would, at 8, have to cut into the
5 national standards participation. There's no way we could have
6 a viable standards program in the Office of Standards Develop-
7 ment that was in any way related to the licensing process and
8 continue 6 or 7 man-years in the national standards program.

9 MR. DENTON: I'm not advocating any of these cuts.

10 (Laughter.)

11 COMMISSIONER KENNEDY: I'm not suggesting you are.

12 MR. DENTON: We tried to avoid the Washington Monument
13 syndrome by cutting 58 out of operating reactors or safeguards,
14 or one of the high priority units. And we had considered care-
15 fully whether there was any further cuts in any of those ones
16 that we could handle. And I think, when you take the efficiency
17 we had already assumed, and then the additional efficiency
18 imposed by your mark in those areas, it would be really unrealis-
19 tic to expect any more improvements in those top three cate-
20 gories. So they had to come out of the bottom of the ZZBs,
21 and none of the units down there are units you can completely
22 cut to nothing. There's no activity I can find that we would do
23 so. In each area it was just a nickel and a dime to try to come
24 up with 58 total.

25 So I think the 58 -- the 716 would result in the kind

1 of chaos and confusion we have in the process today, actually.
2 We'd be switching reviews back and forth. We would just not
3 be doing the kind of job I think we ought to be doing. And it
4 would not have -- and the big impact would be in the early site
5 review in the standard plants area that we're trying to get on
6 the track of as an ultimate solution.

7 CHAIRMAN HENDRIE: Okay. Questions? Dick?

8 COMMISSIONER KENNEDY: No. Peter, you were thinking
9 about some further questions or --

10 COMMISSIONER BRADFORD: I have no objection, obvi-
11 ously, to go ahead to OMB and say: Here's what we feel we need
12 in order to get our house in order. This is the way we have
13 marked it up, and cut it every which-way. But it seems to me
14 it's incumbent on us at that point to be able to say why it's
15 so important to OMB that our house be in order, why life in a
16 little disarray here and there at the NRC is in fact less
17 tolerable to them than whatever other disarrays that they're
18 confronted with throughout the Federal Government.

19 Obviously, we're in no position to assess other
20 agencies. But it seems to me you have to be able to relate the
21 difficulties that individual branches or decision units that we
22 have will be having, to something that's important on their
23 agenda. That's a link that in some ways is as much our respon-
24 sibility as yours to make. But these things have to be thought
25 of in terms of what concrete difference they make out there.

1 MR. DENTON: I think it makes the difference in two
2 areas. When we are unable to review a plant like Diablo or
3 issue a license or decide to issue a license when it's finished,
4 the cost to the public of sitting unused is considerable, and
5 we've not really tried to convert those kinds of delays into
6 dollars. But they obviously run hundreds of thousands of dol-
7 lars a day in cost to the public.

8 And the other area is in terms of trying to quantify
9 the residual risk that is unsolved, that we would be getting to
10 if we had reduced the backlog, and we have not been able to do
11 that very well.

12 I think they are the two areas, either direct cost
13 due to our inability to meet the schedules otherwise and would
14 run up the cost in plants -- and at one time industry groups
15 were estimating that the kind of problems we have today were
16 adding something on the order of \$50 to \$60 million a plant,
17 which is ultimately borne by the taxpayers.

18 I'm not trying to quantify, convert this into dollars.
19 And I'm not at all sure that it's NRR's function to do so. What
20 you really have to do is to tell us what the situation looks
21 like from your point of view. And then it may be, though, that
22 somewhere within the agency it would be a useful exercise to
23 translate what NRR is telling us are the specific consequences
24 into -- maybe OPE is the place -- into some assessment of what
25 that really means.

1 CHAIRMAN HENDRIE: I think it would be useful -- it
2 sounds like it would be a useful exercise. I think NRR has to
3 participate in it.

4 COMMISSIONER BRADFORD: Oh, yes. I didn't mean to
5 exclude them. And in fact, I'd be delighted to have them do it.
6 But it does ask them some questions that may have an economic
7 and other dimension to them.

8 MR. DENTON: Like what is the cost of a 30 percent
9 slip in the time required to review a standard plant. It's a
10 question we don't have an answer to handy.

11 CHAIRMAN HENDRIE: Yes.

12 Other at the moment?

13 COMMISSIONER BRADFORD: No.

14 CHAIRMAN HENDRIE: John?

15 COMMISSIONER AHEARNE: Harold, are these mainly
16 professionals that you're adding --

17 MR. DENTON: The budget is total people and has
18 overhead reflected into it. But I think, Al, putting the budget
19 together, we were trying to keep a very low overhead of like
20 10 percent on the new additions.

21 COMMISSIONER AHEARNE: How rapidly do you think you
22 can expand, that is, hire competent people, get them in, mesh
23 them aboard?

24 MR. DENTON: We have gone through one growth period
25 of about this percentage in the past, and you really have to

1 work at it to do it efficiently. I would hope that we could
2 begin -- perhaps there's some system whereby we can begin in
3 '79 to hire against the '80 ceiling and spread the impact at.
4 But it would involve a big effort, especially in some specialized
5 areas, to find --

6 COMMISSIONER AHEARNE: I would expect one of the
7 issues OMB some people will raise is that even at your
8 reduced number, you're planning on expanding by about 25 percent
9 in one year.

10 MR. DENTON: I think that's about the maximum we could
11 do.

12 COMMISSIONER AHEARNE: Highly competent and trained
13 people. They will raise the question.

14 MR. GOSSICK: It takes an amount of recruiting effort.
15 But we get sort of ahead of time, as soon as we see generally
16 what's going to come out of Congress. And 25 percent, I would
17 say, stretches, but can be done.

18 COMMISSIONER AHEARNE: That's all I have.

19 CHAIRMAN HENDRIE: Thank you very much. Why don't we
20 just move on.

21 MR. GOSSICK: Are we going to take research next?

22 CHAIRMAN HENDRIE: Yes. Let me ask the Commissioners:
23 What's your appointment schedule look like across the noon
24 hour? We are running an hour behind. I don't feel badly about
25 it. I think the NRR discussion was an important one.

1 We have got research, I&E, ELD, ACRS --

2 MR. GOSSICK: ELD cancelled. Howard changed his mind.
3 He's going to live with what he has been offered.

4 CHAIRMAN HENDPIE: Staff changes mind. We only have
5 research and I&E.

6 We will adjourn until 2:00. Okay, we'll see you at
7 2:00. We'll reconvene at 2:00.

8 (Whereupon, at 12:50 p.m., the meeting was adjourned,
9 to reconvene at 2:00 p.m. the same day.)

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AFTERNOON SESSION

(2:15 p.m.)

CHAIRMAN HENDRIE: Why don't we go ahead.
Research?

MR. GOSSICK: Okay. The Commission asked, in particular -- coming back to decide, first of all, if

Saul was going to reclama anything, to come back and discuss that -- but specifically, to address the dollar amounts, or the level of contingency in the 3-D Program. I think that is the one that Commissioner Bradford asked for. He asked several questions with regard to that.

There was also an area with regard to this joint effort on BWR between GE, EPRI, and NRC on how we arrived at that, and why we should do that jointly; and secondly, how we arrived at the dollar amounts.

And then thirdly, the Commission asked, you know, after we decided that we just had to make a large dollar reduction in the overall budget and tap Research for \$10 million, what were all of the gold watches that would appear if they were forced to come up with such an impact statement.

(Laughter.)

MR. GOSSICK: Sol is ready to take those two questions.

MR. LEVINE: I have a few Washington Monuments.

(Laughter.)

1 MR. LEVINE: We are not going to reclama the
2 Commission mark. but I would like to make a few points about
3 where we are. I am worried about our budget size in '80, and
4 in '81 also.

5 We have almost no flexibility in the budget at the
6 level we are getting, and we normally have had flexibility
7 which has permitted us to respond to urgent user requirements that
8 come up during the year. We will probably not have that without
9 really slowing down in other areas significantly.

10 We also have, in '80 and '81, large funding forward
11 for early funding for 3-D. While we have confidence in our
12 overall estimate, the early-year funding can change, the first
13 two-year funding can change somewhat.

14 In '80, we will be running LOFT operations with
15 nuclear heat, and God knows what we can find there. So I
16 argued for -- this will be a very unique experience -- I argued
17 that we really will be very tight in '80 and '81. I just want
18 you to know that.

19 About '81, I think, while we want to show a decrease
20 in our budget in '81, we have told you during the budget
21 review that we plan to program our budget down. We think a cut
22 in '81 of \$10 million is too much. I would suggest more like
23 a \$5 million cut.

24 I think '82 is all right.

25 CHAIRMAN HENDRIE: Say that last, again?

1 MR. LEVINE: In '81, you cut us \$10 million below
2 '80. I think that's too vast a cut, too large a cut for that
3 one year.

4 COMMISSIONER AHEARNE: Of course, you were increased
5 \$40 million in one year -- \$10- of the \$13 --

6 MR. LEVINE: \$10 million is inflation, and \$13- is
7 LOFT. There is \$23 million that's nonprogrammatic increase
8 so the real programmatic increase is \$12 million -- '79 to '80.

9 MR. BARRY: The Commission really didn't cut you
10 in the out years.

11 MR. LEVINE: Whoever did.

12 MR. BARRY: It was a combination of a BRG/EDO
13 recommendation. Okay? The Commission really hasn't addressed
14 the out years. You asked us to take a look at it, which we
15 have. We met on Friday -- the panel, headed up by Steve, and
16 some of my people, and Bill looked at it, and I looked at it,
17 and I guess, Lee, you've looked at it, haven't you?

18 We put some money back in in '81. We've increased
19 it. It still goes down, but we've got about \$4- or \$5 million
20 back into the budget for '81.

21 If you look at your '81 column number, the number
22 you will see is 179, 273.

23 COMMISSIONER AHEARNE: My only point I was trying
24 to make is that if you really find that coming down \$10 million
25 is too sharp, in one year, the normal budget reaction will be:

1 Well, reduce the increase in the previous year which is so
2 much larger, and that will smoothe it out.

3 MR. LEVINE: I have already addressed that matter.

4 MR. BARRY: We upped that number 185.2, and in '81

5 where you see the number 172.7. We've upped it to 177.4.

6 So though it does taper down, it doesn't taper down as much.

7 CHAIRMAN HENDRIE: Are you looking at the one
8 marked August 2nd?

9 MR. LEVINE: I'm suggesting that the 185.323
10 ought to be more like 190 is what I'm suggesting.

11 COMMISSIONER AHEARNE: This is FY '81?

12 CHAIRMAN HENDRIE: Let's talk some more about the
13 '80 program.

14 MR. LEVINE: These are just opening remarks. I
15 would like to make another remark about SAFER people. It is
16 very hard to find an obvious formula to decide how many people
17 you need in the management section projects. That has always
18 been one of great difficulty.

19 On an overall office basis, we are running about
20 one man per million dollars, counting overhead. SAFER is
21 much higher than that. It is about 1.6 or so. SAFER does not
22 have any big projects like LOFT or V.F.
23 which require much fewer -- like a quarter of a man per million
24 dollars.

25 It is multi-discipline. It encompasses all the

1 disciplines of RSR, plus the environmental disciplines, and
2 the health disciplines, and the safeguards disciplines, so it
3 has a multitude of disciplines, and a multitude of projects
4 to manage.

5 It also has a very large coordination effort within
6 the offices of NRC. It has to coordinate heavily with
7 Standards, NRR, and NMSS, and with all those disciplines,
8 while RSR coordinates principally with NRR -- somewhat with
9 Standards, but mostly with NRR.

10 Now, I'm not going to ask for the amount of people
11 back, but I am going to tell you we are going to try to do
12 everything we can to improve our efficiency by consolidating
13 contracts -- but it is going to be very difficult.

14 I suggest the trend is going to be: As we close
15 down big projects in RSR, that they are going to need more
16 people per dollar, too. Because if you look at the real
17 work that is going on in RSR and SAFER, they are very busy
18 and they are being criticized for not being responsible enough
19 to user offices, which has some effect on their performance,
20 of course, and it has some effect on the BRG's perception of
21 their performance.

22 It is just a matter of: There are not enough
23 people there. We will go with it for one more year, and we
24 will try to see what we can do by improving efficiency and
25 coming back in '81 with a better story, if we can.

1 CHAIRMAN HENDRIE: Okay.

2 COMMISSIONER AHEARNE: Sol, embedded in your Fast
3 Breeder Reactor Program, do you have any vision of the future
4 of what is going to be coming on, and what you are preparing
5 for it?

6 MR. LEVINE: We have sort of been holding level for
7 the last couple of years. We have converted our program from
8 one that was principally directed toward LMFBR, to make it
9 more generic in terms of gathering --

10 COMMISSIONER AHEARNE: You are going up about 10
11 percent in the coming year.

12 MR. LEVINE: And that is almost level.

13 Most of that is in the gas-cooled reactor. It is
14 coming from congressional pressure to put more money in the
15 gas-cooled reactor. The breeder is essentially level. The
16 breeder program was converted, a year or so ago, to address
17 generic questions in fast reactor safety that would be appli-
18 cable to any kind of fast reactor -- gas, or sodium.

19 COMMISSIONER AHEARNE: You have got what kind of
20 an inflation factor built in?

21 MR. LEVINE: 6 percent.

22 MR. BARRY: In the breeder, that is all that is in
23 there, 6 percent inflation.

24 MR. HANAUER: And one setaside -- the loop design,
25 the 500K for the loop design; nothing but inflation in that.

1 MR. BARRY: Yes, you're right.

2 MR. LEVINE: And we see it -- We're projecting some
3 growth in '81 on the basis that, during '80, there might be a
4 decision to go with the breeder, so that is the basis for
5 that growth in '81, the out years.

6 COMMISSIONER BRADFORD: Is there any indication
7 that there is actual interest in gas-cooled reactors, outside
8 of Congress, in the rest of the country?

9 MR. LEVINE: Yes. There is a group of utilities
10 that have been formed -- the "Gas-Cooled Reactor Associates,"
11 or something --

12 COMMISSIONER BRADFORD: Yes.

13 MR. LEVINE: And that includes GA, and so on. They
14 are going to try to set up an arrangement with DOE to get a
15 reactor started. The question is: What is the probability
16 that that will occur?

17 COMMISSIONER AHEARNE: I would say it is very
18 little. I think the driving impetus really is coming from the
19 company that used to make the gas-cooled reactor, and I think
20 the general sense is that, unless there were a restoration to
21 the previous forecast growth curve for power -- the previous
22 five years ago growth curve -- the market just is not going to
23 be there.

24 As a result, there is little chance of the DOE
25 putting in the funding.

1 MR. LEVINE: That is right.

2 MR. DIRCKS: We got the latest letter forecast from
3 DOE I think dated July 31st, and they had a footnote against
4 the gas cooled. It just said that heavy U.S. financial commit-
5 ment was required. So they just are slipping that thing out
6 of the forecast.

7 COMMISSIONER AHEARNE: Right.

8 MR. LEVINE: But there is heavy congressional pres-
9 sure for us to do work in this area.

10 MR. HANAUER: On the other hand, when the Commission
11 was briefed by the gas cooled people a few weeks ago, after
12 the briefing I asked them how much federal money was required
13 to make these programs go. For the gas-cooled thermal reactor,
14 the estimate was a minimum of \$3- or \$400 million of federal
15 money. For the gas-cooled breeder, it was higher.

16 MR. LEVINE: And that is what the problem is going
17 to be.

18 COMMISSIONER AHEARNE: And I'm sure that the congress-
19 sional pressure might fade rapidly with those numbers.

20 MR. LEVINE: Yes, but it is also coming from OMB,
21 too. They want us to show a little bit of increase, so we are
22 showing a little bit of an increase.

23 The Senate authorization bill -- our authorization
24 bill in the Senate for '79 adds a million-and-a-half dollars
25 in gas-cooled research.

1 CHAIRMAN HENDRIE: If that authorization bill goes
2 through as it stands, it is going to be a bit of an inconven-
3 ience because they have mandated that the assignment is for
4 people and dollars, and the amount, we think, is excessive
5 to keep a reasonable level in the gas program. And, you know,
6 it is just going to be --

7 COMMISSIONER AHEARNE: Is that also an appropriation?

8 MR. BARRY: In the House. The House appropriation
9 supported the House authorization.

10 MR. LEVINE: But nobody put in the extra money for
11 it.

12 MR. BARRY: And then they cut us on top of that.

13 MR. LEVINE: So it is money we will have to use --
14 (Simultaneous discussion.)

15 CHAIRMAN HENDRIE: Okay, did you say anything about
16 what our options are, or should be, if we dump this 195 for 10?

17 MR. LEVINE: That was the second subject I was
18 going to talk about after I tried to answer the questions.

19 CHAIRMAN HENDRIE: Are there other questions,
20 then?

21 MR. LEVINE: The questions -- we have some a priori
22 questions.

23 CHAIRMAN HENDRIE: I see. I see, you are in the
24 middle of those?

25 MR. LEVINE: I was just going to start those.

1 CHAIRMAN HENDRIE: It seemed to be that things
2 were running down. I was looking for some place for the
3 meeting to go.

4 (Laughter.)

5 CHAIRMAN HENDRIE: If you have something in mind,
6 why make haste.

7 MR. LEVINE: I have two things in mind, and I will
8 start them now. First we got the three questions asked -- I
9 believe all from Commissioner Bradford:

10 What is the NRC's share of the proposed BWR
11 Cooperative Countercurrent Reflood Program? Why are we putting
12 up 42 percent, and GE and EPRI presumably putting up somewhat
13 less?

14 And the answer is: In all the contracts we have
15 negotiated with industry -- of which there have been two or
16 three -- the principle is that we go in at one-third each,
17 but in practice it has come out differently. The reason being,
18 that the vendor has always contributed his facilities -- either
19 steam supplies or equipment, or both -- and in this particular
20 case, for instance, GE is building \$3 million worth of stuff
21 that we are not involved in.

22 We will -- the program we are talking about is to
23 pay the operating cost for the experiment. So when you start
24 trying to negotiate all this out, this is the way it has come
25 out.

1 CHAIRMAN HENDRIE: If you took GE's cost which does
2 not appear in the 3-way split, and add that, and then divide
3 by three --

4 MR. LEVINE: They have the largest share.

5 (Commissioner Kennedy enters the meeting.)

6 MR. LEVINE: I was going to give you the numbers
7 that we are projecting for the counter current reflood program.
8 We are projecting a cost of \$14 million, plus \$3 million of
9 GE's money, which would make it \$17 million. Of that, if we
10 just go with the three (?) percent, we will put up \$5.8 mil-
11 lion, GE will put up \$6.5 million, including that \$3 million,
12 and EPRI will put up \$4.7 million.

13 Now the reason we cannot get EPRI higher than that,
14 say, to split it with us, is that EPRI simply will not go
15 above a one-third share, by order of their Board of Directors.
16 You can try to change that, if you wish. It will be difficult.

17 But that is the history of the way this thing has
18 gone.

19 COMMISSIONER BRADFORD: What makes it important for
20 us to put up a substantial share of the project at all?

21 MR. LEVINE: That's the second question: "Why
22 don't we ask GE to do it all?"

23 And our answer to that goes like this: Everybody
24 feels that there is some confirmatory information needed on
25 core spray distribution -- when they start spraying the water

1 on top of the core, how does it really go?

2 This experiment that GE is building will address
3 that answer, only. But we are also interested -- and so is
4 NRR -- in counter current reflood information. That is, how
5 does this spray go down through the core while the core is
6 sending steam in droplets up? And we need that information
7 for our best-estimate code so we can determine what the margins
8 are between the evaluation model codes and the best-estimate
9 codes.

10 So we have a heavier interest in that, and GE has
11 a light interest in that -- a lighter interest in that. So
12 that is the reason for us getting involved in this.

13 Now there is no question that one could ask them
14 to do the whole thing. Whether they would or not is another
15 matter.

16 COMMISSIONER BRADFORD: Is there any relationship
17 between the amount of effort necessary to generate the informa-
18 tion that is especially useful to us, and our share of the
19 project?

20 MR. LEVINE: Well, the way the project is -- we're
21 thinking about the project -- we will use all the information
22 that comes from it.

23 COMMISSIONER BRADFORD: Right. But you have named
24 a couple of dispute items that are especially important to us,
25 and probably less important to the others.

1 MR. LEVINE: Well, one is important -- well, these
2 matters are all important to everyone. It is only a question
3 of degree. Everyone would certainly like to understand core
4 spray distribution better, and that is a rather -- somewhat of
5 an uncertainty in our evaluation models.

6 In terms of best-estimate models, we would all like
7 to understand counter current reflood much better than we now
8 understand it. So I would say that, for instance, NRR and GE
9 have a very heavy interest in the core spray distribution. We
10 and GE and EPRI have about an equal interest in the counter
11 current reflood. But NRR has not asked them to do the
12 counter current reflood experiment -- but it would be done.
13 One could ask them to do it.

14 COMMISSIONER KENNEDY: Suppose that GE and EPRI
15 refused to put any money into this exercise. What level of
16 priority would this entire experiment have on our side?

17 MR. LEVINE: It would still be a high-priority item
18 because it's been an outstanding issue for some years. There
19 are a number of our consultants who keep raising this question.
20 It relates principally to the following:

21 If you have a small, cross-sectional area which
22 you are trying to get steam -- water down through, and steam
23 and water are coming up, it is possible for the steam and
24 water that are coming up to levitate that water and keep it
25 from coming down. The question is: When you have a 12-foot

1 core, is that possible? You can make a simple calculation,
2 based on the small model, which says it will levitate all the
3 water, and nobody believes it. But there is no data, and one
4 would like to have some data. So it is a rather high-priority
5 matter in terms of estimating what really happens.

6 COMMISSIONER BRADFORD: For present licensing
7 purposes, we -- what do we assume happens?

8 MR. LEVINE: In counter-current reflood -- who's
9 here? Does anybody know that answer?

10 CHAIRMAN HENDRIE: We assume the water gets down
11 the channels and cools the channel boxes.

12 MR. LEVINE: But one doesn't know that very well,
13 because one can make calculations. But say it doesn't get
14 down the channels.

15 COMMISSIONER KENNEDY: What we are trying to do is
16 ascertain which is true, thus confirming --

17 MR. HANAUER: Confirmatory, in that way. We assume
18 that -- with this very large core, that we can go down around
19 the edge, even though this levitation occurs in the center,
20 and that seems like a pretty good bet.

21 But, like so many "pretty good bets," it needs
22 confirmation, which is why we are willing to put some money
23 in this program, and then we can get the data we need, and it
24 is publicly available, and all that good stuff, without our
25 having to have done it ourselves.

1 COMMISSIONER BRADFORD: What would be the conse-
2 quences of finding that in fact the 12-foot --

3 MR. HANAUER: If the water doesn't go down at all,
4 then the GE reactor is in considerable trouble, and a number
5 of them would have to be derated. That's the worst result.

6 MR. LEVINE: There are other core cooling systems.
7 This is one of the redundant systems, so it is not a total
8 failure question.

9 MR. DENTON: We discussed this at some length,
10 before we commented to Saul on it. I think our views go like
11 this: Part of this GE experiment we have requested that they
12 do, and that is the part -- core spray distribution
13 they're doing, we consider we need that for licensing.

14 When Saul asked us: Would we support not doing
15 the EBTF and cancelling the multitest facility -- what was that?

16 MR. LEVINE: Multipurpose test facility.

17 MR. DENTON: Multipurpose test facility. We asked
18 the staff to review this and said -- and what the answer is
19 back from the people who use these codes are: yes, we can
20 go along and turn down the level of effort into LOFT research
21 the way Saul has proposed, but we need confirming information
22 in several specific areas, and this was one of those specific
23 areas where the staff felt that if it were not going to get
24 any more research done in this area.

25 They wanted to get this as part of the final wrapup

1 and be satisfied that all bases had been touched.

2 MR. LEVINE: One area is PCC bypass, and the other
3 is counter-current reflood.

4 MR. DENTON: And I think Saul agreed we would extend the
5 count to do something in these areas to allow the staff to concur
6 with him that no further big facilities needed to be built,
7 providing the small ones could confirm certain discreet elements
8 where the margin was still not certain.

9 But the only part that we needed for licensing --
10 continual licensing -- is the part that we are requiring
11 GE to do on their own, and they are paying for that part. So
12 what we are getting is the piggyback confirmatory research that
13 might be done at some other facility.

14 This seems to be a very reasonable way to get that
15 piece of information.

16 MR. LEVINE: It seems to be to our best advantage
17 to get it this way.

18 CHAIRMAN HENDRIE: You get something else out of it,
19 too, Peter. If GE does it in response to a Commission request,
20 they will go off and set up the experiment. We will have
21 access to it in a reasonable way. They won't slam the doors
22 on us, you know, and pull the shades, and not let us see any-
23 thing until they publish a report. We can control that, and
24 they won't try to do that.

25 So we would have reasonable access to the experiment.

1 But it would be a GE -- sort of total-GE thing. Now you take
2 that information and you have to have confidence that it's
3 sound stuff, and there's no implication here that there will
4 be any sort of deliberate cheating. But just, you know, did
5 the people who put the experiment together and took the data
6 think of all the things that we might have thought about?

7 For instance, being one of the proprietors of the
8 experiment gives you an access. You put your contract people
9 in there --

10 MR. LEVINE: And our code people, who are the
11 ones who would use the table --

12 CHAIRMAN HENDRIE: Code people, who would work
13 along with it. And the extent to which it can have a status --
14 more nearly, NRC produced -- independently produced confirmatory
15 information -- well, it's not quite that, clearly; but it is
16 also clearly a cut different than information produced essen-
17 tially solely by the vendor and presented to us, and on which
18 we had a chance to make a couple of trips to look at the
19 apparatus.

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1 MR. LEVINE: And it gives us very real control
2 over the design and operation of the experiment. We have
3 the final say-so.

4 COMMISSIONER BRADFORD: But if that were the only
5 consideration, we would not have to put up 42 percent
6 of the cost.

7 MR. LEVINE: On the other hand, if we had to
8 do it ourselves, we'd have to pay the whole cost. That's
9 another side of it. You can argue about the percentage.

10 COMMISSIONER BRADFORD: How does this work out in
11 the licensing process?

12 GE presents the information in support of a
13 license application from a particular utility?

14 MR. DENTON: Yes.

15 CHAIRMAN HENDRIE: Probably several applications.

16 MR. DENTON: Well, classes of facilities of a
17 general type where this information exists. Well, GE
18 provides this same information through each of the
19 vendors.

20 MR. LEVINE: They also publish a technical
21 report under this contract which is made publicly available
22 as part of our program, so it comes in in two ways, as a
23 research project report and as -- then it comes in through
24 the vendors through the licensing process.

25 MR. DENTON: But I think what we were able to do

david2 1 for research was define what areas we think additional
2 conformatory data or knowledge is necessary to close out
3 lot of ECCS questions, and we have identified three areas
4 to Saul and then we met with him to see how he proposed to
5 answer those three through arrangements such as this
6 and some change in the 3D program, and so forth, and we agreed
7 with him that that's a reasonable way to get the answers.

8 With his agreement to provide that kind of
9 information, my staff was able to say: we see no need for
10 further major facilities, because these three areas are
11 the only three areas where we have any question concerning
12 the degree of margins and that we would support no further
13 big facilities going on.

14 We were dealing with GE earlier on this facility
15 under discussion. In an entirely separate context they were
16 proposing to build and demonstrate to us the core spray
17 distribution issue apart from any ECCS issue.

18 COMMISSIONER BRADFORD: Supposing you had in a
19 licensing proceeding, someone raises the question that you
20 both have been discussing, that is: what would happen to
21 the spray coming down. Will it get through one or get
22 through?

23 MR. DENTON: We think our codes are sufficiently
24 conservative to predict the core temperatures.

25 COMMISSIONER BRADFORD: Okay, but after the

david3 1 experiment is done, the same question comes up. Does
2 the staff put in a witness who testifies based on this
3 experiment?

4 MR. DENTON: Yes.

5 MR. LEVINE: Yes, or sometimes our consultants
6 testify. Either way.

7 COMMISSIONER BRADFORD: And GE would also have a
8 witnessbe available or EPRI one available to the utilities,
9 to the future applicants?

10 MR. DENTON: Yes, that is correct.

11 COMMISSIONER BRADFORD: I haven't really thought
12 through at all the conflicts and implications of this, but
13 I think it's somewhere -- someone in ELD has --

14 MR. LEVINE: And the Commission has too. The matter
15 came before the Commission, I guess, different members.

16 COMMISSIONER BRADFORD: Yes, there are Commissions
17 and commissions.

18 COMMISSIONER KENNEDY: Only one of us.

19 MR. LEVINE: Only one, that's correct.

20 COMMISSIONER KENNEDY: Victor is not here.

21 MR. LEVINE: And it was decided with certain
22 ways of running it with our control and observers, et cetera,
23 it was okay.

24 COMMISSIONER BRADFORD: This one, or this was
25 the Westinghouse-BWR arrangement?

david4 1 MR. LEVINE: It was a policy paper covering
2 general arrangements with industry, not each one. But each
3 one is considered separately by the Commission. And this
4 will come back to the Commission if we get the organization,
5 will come back to the Commission when we are prepared to let
6 the contract.

7 COMMISSIONER KENNEDY: In the context of a specific
8 contract with legal implications of a contract spelled out
9 by the ELD.

10 MR. LEVINE: Yes.

11 MR. MURLEY: I might make a point on that. But
12 along with the contract approval, the Commission will have to
13 specifically make a waiver of conflict of interest. Now,
14 that was done for the past two contracts.

15 COMMISSIONER BRADFORD: Not a finding that there's
16 no conflict, but a waiver?

17 MR. MURLEY: That's right, and there are certain
18 guidelines under which this can be done.

19 CHAIRMAN HENDRIE: Other questions and comments?
20 Exploration?

21 MR. LEVINE: There's another answer to a third
22 question.

23 COMMISSIONER BRADFORD: Yes.

24 MR. LEVINE: How is the 40 percent contingency for
25 the 3D project cost estimate developed, and isn't 20 percent

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or more normal estimate?

Well, we estimated the cost by providing a 10 percent contingency on the scope of the project and 30 percent general contingency on the overall.

COMMISSIONER BRADFORD: That much isn't clear.

MR. LEVINE: Now, the reason for that we have found when you're early on on a project of this magnitude that the scope isn't really -- you can't pin down the scope and our estimate is that the 10 percent contingency is reasonable. The project is very largely defined but not quite fully defined in terms of scope, so we have 10 percent contingency for that.

The 30 percent contingency is not abnormal for projects of this kind. Most of our costs on this project are associated with developing and furnishing very complex new kinds of instrumentation which is still underway. The development -- we're furnishing some already, but the development of some is still underway.

We have a lot of code analysis to do, and one can't estimate precisely the number of runs that will have to be made. It depends on what happens in the experiments. So, I think a 30 percent general contingency is reasonable for this kind of a project.

COMMISSIONER BRADFORD: Is there a rule of thumb that you use on research contracts?

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MR. LEVINE: Tom, what we use on --

MR. MURLEY: For a construction concept in the early stages of conceptual design, 30 percent is right. We don't have any construction responsibilities for this project, but our contract in this case, Oak Ridge recommended 30 percent.

MR. LEVINE: For the instrumentation.

MR. MURLEY: Mainly because we're building instruments and agreeing to furnish them to Germany and Japan that have never been built before.

MR. LEVINE: And we also have to make up for failures, things that failed during the program. We'll have to furnish replacements.

One needs a sizable contingency.

COMMISSIONER BRADFORD: If we only allowed to -- instead of 30, 20 or 15 percent and in fact that it turned out to be the right number, what would happen?

You'd have to reprogram back to us?

MR. LEVINE: We're funding the thing not on a total estimated cost basis, but on a per year basis. So, we'll come in every year and tell you what we think we need that year, and a contingency will be taken up in that way.

COMMISSIONER KENNEDY: I don't think that answers your question, does it?

COMMISSIONER BRADFORD: I'm trying to figure out --

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1 MR. LEVINE: It sort of says the contingency would
2 be whatever it comes out to be.

3 MR. GOSSICK: What would your situation be if they
4 knocked the contingency allowance down here --

5 MR. LEVINE: It wouldn't affect 80 at all, because
6 the contingency is in the out years.

7 MR. GOSSICK: Then why isn't 80?

8 MR. LEVINE: Because we can now estimate our 80 costs
9 quite well.

10 COMMISSIONER KENNEDY: Wait a minute, you've got your
11 '80 costs --

12 COMMISSIONER BRADFORD: The better estimator they
13 are, the less justification I would think there would be for
14 30 percent contingency.

15 MR. LEVINE: Tom, can you do better than I am with
16 this?

17 (Laughter.)

18 MR. GOSSICK: I think you lost 30 percent.

19 COMMISSIONER KENNEDY: If your estimates are so close,
20 why do you need the 30 percent contingency is his question.

21 (Laughter.)

22 MR. MURLEY: May I explain how the costs are
23 estimated?

24 COMMISSIONER BRADFORD: Yes.

25 MR. MURLEY: We have the scope now that's fairly

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1 well defined, because it's going to be the appendix to an
2 international agreement. We sent out these scopes to
3 our three laboratories; Los Alamos is going to be doing
4 most of the computer analysis, plus something called the
5 Stores Land, which is very highly developmental. Idaho
6 is providing most of what I call off the shelf hardware. It's
7 stuff they provided for LOFT in semi-scale already, and Oak
8 ridge is doing the very highly developmental work.

9 They came back and wrote back their estimates
10 for us including various contingencies and various
11 escalation rates.

12 We put them on a common basis, and it turned out
13 that it was a \$50 million estimate without contingency.
14 But it did include escalation. So we, that is, my staff
15 and I added the 40 percent on the basis that Saul mentioned.
16 That's our estimate for the total cost of the project
17 through about fiscal '85, I believe it comes, or '86.

18 Now, if you were to cut back the total amount that
19 you gave us, okay. In fiscal '80 you would have a severe
20 impact because we are planning on that money, that 13.1
21 plus I'll probably have to reprogram some from -- I don't
22 know quite where yet. That would affect our delivery of
23 instruments to German and Japan.

24 CHAIRMAN HENDRIE: In the 13.1 or whatever for
25 fiscal '80, how much of that do you regard as contingency?

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MR. MURLEY: There's about a million is all in that year.

CHAIRMAN HENDRIE: A million?

MR. MURLEY: Yes.

CHAIRMAN HENDRIE: Out of 13.1?

MR. MURLEY: Yes.

CHAIRMAN HENDRIE: So the fiscal '80 estimate has a one part in 13 or about seven percent contingency is your best guess at this time.

MR. MURLEY: Yes. And the reason for that is as Saul said, we know in fiscal '80 what we're going to delivery. As we go further out in the out years, it's not as well defined. It's fuzzier and we start to get into the more highly developmental instruments that Oak Ridge is --

CHAIRMAN HENDRIE: Are you going to regard your fiscal '81 request, for instance, as having a substantially larger contingency in it?

MR. MURLEY: Yes.

CHAIRMAN HENDRIE: And '82 perhaps more?

MR. LEVINE: Yes.

COMMISSIONER KENNEDY: So I'm sure I understand, if you got 40 percent contingency on the total package which is over a -- what is it? three to four year period?

CHAIRMAN HENDRIE: More than that.

MR. MURLEY: At least six years.

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2 COMMISSIONER KENNEDY: And you've only got 7 percent
3 contingency on that piece of the package in the first year.
4 The percentage that's contingency in the succeeding years must
5 be a good deal more than 40 percent.

6 MR. MURLEY: Yes.

7 MR. LEVINE: But that's why I said the contingency.
8 Since you're asking for the money on a per year basis.
9 When we come back for our '81 budget, we'll have a much
10 better handle on that '81 budget, and we'll ask for some
11 contingency associated with that. The amount of contingency
12 we'll ask for there will depend on how confident we are in
13 being able to estimate that year's budget. That's what I
14 was really trying to say before.

15 CHAIRMAN HENDRIE: And we're not authorizing --

16 MR. LEVINE: You're not authorizing 40 percent
17 contingency.

18 CHAIRMAN HENDRIE: To an extent we are, because
19 we're doing '81-'82. On the other hand, we're going to redo
20 '81 next year, so we'll get a crack at it.

21 COMMISSIONER KENNEDY: More important, you're committing
22 money now which isn't going to turn in the hardware. In
23 '80 you're going to be talking about hardware --

24 MR. LEVINE: The '80 money will turn into hardware.

25 COMMISSIONER KENNEDY: In '81, maybe '82. Right?

MR. LEVINE: Mostly in '81.

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COMMISSIONER KENNEDY: So the hardware that you are committing, the 13.1 --

MR. LEVINE: Well, there's analysis in that too, not just hardware.

COMMISSIONER KENNEDY: Well, whatever the hardware component of that is, in 1980, the contingency that will really apply to it won't appear until your 1981 budget, because only then will you really know what it's really going to cost you to deliver that hardware.

Isn't that right?

So, what we're saying is, to get back to Peter's question, is what you are buying now is a contingency commitment a year or two years from now and you don't know what that's going to be, and that's not in this number.

MR. LEVINE: That's right.

MR. MURLEY: Just one point on this --

COMMISSIONER KENNEDY: But having committed yourself to spend that kind of money, now you have also committed yourself to some X amount of contingency in those succeeding years.

MR. MURLEY: right.

MR. LEVINE: But we don't know exactly what it's going to be.

COMMISSIONER KENNEDY: That's X, but it's there, whatever it is.

MR. MURLEY: We wanted to be fair and open and tell you that we think it's a \$70 million and not a 50 million,

1 and that's why we even got into the discussion.

2 COMMISSIONER AHEARNE: Saul, is your money
3 . no-year money?

4 MR. LEVINE: Yes, it's no-year money.

5 It could come out much less, 30 percent.

6 I have one more subject to discuss, if you're
7 ready.

8 CHAIRMAN HENDRIE: Please go on.

9 MR. LEVINE: This is the impact on our program of the 10 million

10 (Distributes documents to the Commission members.)
11 cut that you asked us to consider. I have listed the program elements and how
12 much you would take out of them. In systems engineering and code
13 development, both involved reductions in our program on
14 improved safety research, one, to accelerate semi-scale
15 for \$2 million and a half million in code. The other part of
16 the half million dollars in systems engineering is some
17 operational safety research where we will just slow things
18 done, water hammer and safety valves.

19 I'm sure we'll hear screams from NRR. In LOFT
20 we will slow down some fuel procurement which will cause a
21 potential delay in LOFT testing.

22 COMMISSIONER KENNEDY: What does that mean, potential
23 delay?

24 MR. LEVINE: Well, what we're not certain of is
25 the rate on which LOFT fuel will fail and require replacement.

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COMMISSIONER KENNEDY: What's the worst case?

CHAIRMAN HENDRIE: The core is shut.

MR. LEVINE: The whole core is shut.

COMMISSIONER KENNEDY: And what would this \$1 million do to offset that problem.

CHAIRMAN HENDRIE: Not a hell of a lot.

COMMISSIONER KENNEDY: That's exactly the point, not much, is the answer.

MR. MURLEY: A core costs about \$3 million, three to 3-1/2 million, and this would -- what we would do is defer it enough months that we could defer the payment, because we only have to pay on delivery. I really can't tell you --

COMMISSIONER KENNEDY: So if you didn't have that million dollars, it really wouldn't do anything except defer payments.

MR. MURLEY: No, it would defer delivery.

CHAIRMAN HENDRIE: Slow down the delivery of fuel, hence the schedule, if you needed the fuel.

MR. LEVINE: We would just tell them to keep it until we can pay them for it.

MR. MURLEY: We are planning right now one core every year, which is one core --

COMMISSIONER KENNEDY: How much of this fuel are they going to manufacture without your commitment or funds to the manufacturer of the fuel?

In other words, you tell me all you have to do

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1 is tell them to keep it. We won't pay you for it.

2 MR. LEVINE: Or delay the manufacturer the
3 last --

4 COMMISSIONER KENNEDY: That's different.
5 Which is it?

6 MR. LEVINE: I think it's the latter.

7 COMMISSIONER KENNEDY: You tell them not to manufacture.
8 What's the manufacturing time?

9 CHAIRMAN HENDRIE: At the end of the string.

10 MR. MURLEY: I'm not sure I understand the total
11 question. They don't start until we give them authorization.

12 COMMISSIONER KENNEDY: That's right.

13 MR. MURLEY: but we don't necessarily have the
14 total cost of the core in hand at the time, because there
15 are progress payments and termination charges. We could stop
16 them at any time and they'd say fine, pay us termination
17 charges.

18 What we can do is delay delivery.

19 MR. LEVINE: We have been able to do this in the
20 past and asked them to deliver this portion of the core
21 next year, and it's working.

22 COMMISSIONER KENNEDY: All right. Larry, are

23 MR. BARRY: Are we buying our cores based on having
24 a spare available at all times?

25 MR. LEVINE: Yes.

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1 COMMISSIONER KENNEDY: Actually, it's more
2 than that, isn't it? You have got not only a machine. You've
3 got a spare core that is one that is actually available, and
4 you have got one which is in process.

5 MR. LEVINE: In process.

6 COMMISSIONER KENNEDY: So, you really have two
7 plus cores in being at all times, except at one point, and
8 that is when the one core is used up and is being removed,
9 at which point you only have two cores, one that you're
10 taking out of storage and putting in a machine, and the
11 other one is coming out of the plant going to storage.

12 Right?

13 MR. LEVINE: Yes.

14 COMMISSIONER KENNEDY: That's the least you ever
15 get to.

16 MR. LEVINE: Is that right, Tom?

17 MR. MURLEY: That's generally right. We have one
18 on hand right now, for example, as a spare, and we have one that's
19 into design and will soon go into fabrication.

20 MR. LEVINE: And there's one in the reactor.

21 MR. MURLEY: And there's one in the reactor.

22 COMMISSIONER KENNEDY: That's right.

23 MR. MURLEY: Now, we are planning on the basis
24 that we will damage a core every year, one core a year,
25 and we'll have to replace it, so we think we're into an

1 equilibrium situation, and we budgeted for that.

2 If anything goes wrong, like we fail at every
3 test instead of every other test, then we're in trouble, and
4 we haven't budgeted for it. We would have to do something.

5 MR. LEVINE: In site technology we are suggesting
6 reluctantly a million dollar cut in which the seismic
7 safety margin --

8 COMMISSIONER KENNEDY: Back to the code
9 development. I'm sorry, it's peanuts, but it says it will
10 be delayed how long?

11 MR. LEVINE: Until we get the money.

12 See, this half million dollars --

13 COMMISSIONER KENNEDY: You don't develop it
14 instantaneously.

15 MR. LEVINE: This half million dollars is associated
16 with a \$2 million cut in systems engineering. It was a
17 combined project in which we accelerate semi-scale
18 conversion to do alternate ECCS research, have it done fast.
19 It's already planned, this would put more shifts on to get
20 it done faster. We would have to make some code
21 modifications to precalculate these conditions before we
22 run the tests, so the \$2-1/2 million goes together.

23 Site technology, seismic safety margins program
24 will be slowed down, and this would apply some information
25 needed for NRR, and their systematic evaluation program.

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There might be some lag there.

Advanced converters we're suggesting a million dollars cut in gas and this would delay not resolution, but it would delay gathering data on the graphite oxidation problem for Ft. St. Vrain.

Safeguards, \$800,000 cut, which would make us unresponsive to a number of NMSS requests, sabotage our spent fuel shipping casks, theft of SNM in transit, design features in facilities which could enhance effectiveness of material control and development of performance indicators for effectiveness of material control and accounting systems.

COMMISSIONER KENNEDY: As for this one and the next two which total \$3-1/2 million, if you were to take these cuts and distribute them in this way, what would NMSS's reaction be? Would they then reprogram some of their own money in their tech assistance programs to cover some part of this?

In other words, I guess the question I have is what priority are they placing. They're the user. You're not.

MR. LEVINE: I have not discussed this with NMSS.

COMMISSIONER KENNEDY: How can you cut out some of the work you're doing for them, if we don't --

MR. LEVINE: All the work we're doing is for them. essentially all the safeguards work we are doing is for them.

1 COMMISSIONER KENNEDY: I guess we need to know what
2 their reaction to this would be and --

3 MR. LEVINE: You realize I am not recommending we
4 take these cuts.

5 COMMISSIONER KENNEDY: I understand that. But since
6 you said if we took \$10 million out of here, this is what you
7 would do, I guess we would need to know what that would do to
8 them since it would not do anything to you. Isn't that right?

9 MR. LEVINE: Yes.

10 COMMISSIONER KENNEDY: Can somebody tell us the answer?

11 MR. LEVINE: I cannot give you the answer.

12 MR. DENTON: At least one area where we would be con-
13 cerned about the cut in NRR. That's seismic safety margin. That's
14 part of the SEP program, the major source of difficulty
15 of the NRR impact. That is the one I would least like to see.

16 COMMISSIONER KENNEDY: Suppose it were cut, Harold.
17 Go to my other question. Now, looking at your own program sup-
18 port money, how much of it would you feel you would divert from
19 other purposes into this program because of its priority, to
20 recover from a cut against research?

21 MR. DENTON: I think we would largely make up a cut
22 somehow.

23 COMMISSIONER KENNEDY: In other words, you place that
24 in a sort of Class A priority?

25 MR. DENTON: That is correct.

1 COMMISSIONER KENNEDY: I would like to know the
2 answer to that given by NMSS for \$3-1/2 million, which is one-
3 third of the total cut.

4 MR. GOSSICK: I will find out.

5 CHAIRMAN HENDRIE: Good.

6 Other questions?

7 MR. LEVINE: Well, there is a second sheet, which
8 covers \$2 million in waste management. I guess you want to hear
9 about that?

10 COMMISSIONER KENNEDY: Yes, that is part of my \$2-1/2
11 million.

12 MR. LEVINE: Half a million in risk assessment, in
13 which we would be delaying a significant amount of work related
14 to looking at standardized plants and development of human-error
15 accident risk assessment, and studies of the application of risk
16 assessment techniques to high-level waste and spent-fuel
17 isolation.

18 COMMISSIONER BRADFORD: (Inaudible.)

19 (Laughter.)

20 MR. LEVINE: I did not hear what you said.

21 CHAIRMAN HENDRIE: It is a quarter of a percent.

22 COMMISSIONER BRADFORD: There seems to be a universal
23 tendency to take cuts in the standardization program.

24 COMMISSIONER KENNEDY: Remember the gold watches?

25 (Laughter.)

1 CHAIRMAN HENDRIE: Other comments, John?

2 Dick?

3 COMMISSIONER AHEARNE: No.

4 COMMISSIONER KENNEDY: No.

5 CHAIRMAN HENDRIE: Peter?

6 COMMISSIONER BRADFORD: No.

7 COMMISSIONER AHEARNE: Sol, what is the OMB attitude
8 in general, to the research program?

9 MR. LEVINE: They have given us very good support.
10 We have given them two kinds of briefings every year. One of
11 them is sort of a informal briefing, where we get into great
12 detail, much more detail than in the Commission briefing, almost
13 as much detail as in the BRT review. And then, we have the
14 formal briefing.

15 They have given us very good support. They always
16 cut us a little bit, but they generally support us very strongly.

17 They set aside in fiscal '78 \$50 million for EBTF,
18 which we are not asking for now -- excuse me, fiscal '79, which
19 we are not asking for now because we have appropriated that work
20 in the 3-D program.

21 So, in a sense, we have saved some \$50 million.

22 COMMISSIONER AHEARNE: You say they have set aside in '79?

23 MR. LEVINE: Based on our thinking that we want --

24 COMMISSIONER AHEARNE: It was in the budget?

25 MR. LEVINE: It was not shown. It was somewhere in

1 the background. They had it set aside for us.

2 COMMISSIONER AHEARNE: It is not in this
3 156?

4 MR. COOPER: That amount is not shown in our budget
5 in NRC or any other specific budget. But in the overall figures
6 for the budget, it is included in the president's reserve.

7 COMMISSIONER AHEARNE: I guess the gist of my ques-
8 tion there was: I was just wondering if they basically give you
9 strong support but give you a
10 that's a different --

11 MR. LEVINE: I guess that is essentially what it has
12 been.

13 MR. BARRY: That is what has been taking place.

14 MR. LEVINE: And that is one of the things that
15 bothers me about our overall budget. Between their cut and the
16 congressional cut we are likely to get, we will be lower in '80
17 than we were in '79, and we really should not be.

18 Don't forget, you have to subtract inflation and
19 picking up a half a year -- it is about \$12 million.

20 COMMISSIONER AHEARNE: You started with 40 and take
21 out --

22 MR. LEVINE: We went from -- it's about 35.

23 COMMISSIONER AHEARNE: It is \$156 million.

24 MR. LEVINE: I am talking about program support dol-
25 lars, and that went from \$150 million to \$185 million, which is

1 \$35 million.

2 COMMISSIONER AHEARNE: What are the rest of the
3 moneys?

4 MR. LEVINE: People and equipment costs.

5 CHAIRMAN HENDRIE: \$10 million in equipment?

6 MR. LEVINE: That runs relatively constant. So,
7 the real increase in program support is \$35 million. And of
8 that, \$23 million is not growth in programs; it is inflation
9 and picking up a half a year fall-off. There is only \$12 mil-
10 lion on top of that, and we will probably lose that. And I do
11 not think we can afford it.

12 But if you have a hard problem, we will try to live
13 with it.

14 CHAIRMAN HENDRIE: Okay, I suggest we go on and hear
15 the next office, if we may.

16 Lee will have an answer back on this other thing.

XX 17 Now, let's see, with regard to I&E, we asked the
18 question, didn't we, and you were prepared to go inspect some-
19 body this afternoon, rather than coming down here, actually?

20 MR. DAVIS: Oh, surely.

21 What we were asked was to assess the impact of a cut
22 in our fiscal year '80, projected strength from 739 to 727, and
23 from 739 to 715.

24 What I would like to do this afternoon, first, is to
25 really give a few remarks as background and then move into those

1 areas where we have analyzed our decision units to see where we
2 could accept a good cut or where the impact would be.

3 If you will notice from the first page of the hand-
4 out, I&E believes that we have a very austere request, as it now
5 stands, with 739. We have no growth in fiscal year '78, '79.
6 Our only increase in '80 is for continuing program and that
7 recognizes efficiencies. And our gross projection, of course,
8 is using NRC workload figures.

9 The fiscal year '80 request of 739 does recognize
10 these anticipated efficiencies from the resident inspection pro-
11 gram. If we did not have those efficiencies, did not recognize
12 those efficiencies, our request would be somewhere on the order
13 of about 750-755.

14 You asked this morning, Mr. Chairman, for a decision
15 unit where there was a reduction. Our decision unit on train-
16 ing does forecast a reduction from '78 to '80, and '80 is a
17 reduced value in there from 18 in '79 to 14 in fiscal year '80.

18 Also recognizing the austere nature of the budget
19 process over the last few years, I&E has reduced its overhead
20 for better management. We have separated our indirect overhead
21 and had a budgeted reduction in each year of our proposed budget
22 in this indirect overhead. We are also projecting a decrease
23 in our direct overhead.

24 Any further reduction in our overhead, we believe,
25 will have a direct impact on our mission performance.

1 The vendor program, which was a matter of some con-
2 cern to OMB last year, remains constant through fiscal year 1980.
3 Our projection from '78, '79, '80, at 29, because it is still
4 in an unevaluated stage.

5 So, we believe, in developing our '80 budget we have
6 recognized deficiencies, we have recognized the austerity which
7 is placed upon us. We have no new initiatives. We intend to
8 implement nothing new in 1980 which requires additional man-
9 power resources.

10 In addition, we have budgeted no reserve for new work.
11 If NRR does get the increase which is under consideration for
12 them, at least a portion of the work product of that increase
13 will probably be requirements on licensees, which we would be
14 called upon to inspect. We have not considered that in our
15 budget projection.

16 COMMISSIONER KENNEDY: But would that mean more
17 inspection time necessarily?

18 MR. DAVIS: It may or it may not. But we have not
19 projected it all. It probably would. If there is more to
20 inspect, it would generally take more time.

21 COMMISSIONER KENNEDY: Or would it simply mean that
22 would be one more thing which would be checked within an already
23 established given amount of time, inspection time?

24 MR. DAVIS: Well, it would mean you would have to --
25 since our time is fairly severely scheduled now, it would mean

1 some redistribution of that time to absorb that.

2 COMMISSIONER KENNEDY: Which would mean no more peo-
3 ple.

4 MR. DAVIS: Or maybe some more people.

5 COMMISSIONER KENNEDY: Yes. There are two options.

6 MR. DAVIS: Yes, sir. Replace something else with
7 this, or get more strength. Right, sir. But we have not ana-
8 lyzed that in this budget.

9 Currently, we are engaged in an effort with NRR,
10 really, under Dr. Hanauer to look for some agency efficiencies.
11 NRR and I&E, in some instances, have been performing similar
12 work but from very different perspectives, and we are attempt-
13 ing to identify some method whereby at least a portion of that
14 work can be accomplished once to serve both purposes.

15 The major impact of this will be in '79, but there
16 would probably be some spillover of this in 1980. We hope to
17 be able to accomplish it by five to 10 man-years of work which
18 NRR has been able to do with only small incremental increase in
19 I&E manpower.

20 We believe if our budget is reduced further than it
21 is now, that we will lose any flexibility in this particular
22 area of working with it.

23 COMMISSIONER KENNEDY: An equivalent of another five
24 man-years? Are you just shifting it?

25 MR. DAVIS: No, sir. We think that this is work that

1 they have done and we have done from two very different per-
2 spectives, but we hope to be able to do it once to serve both
3 efforts.

4 COMMISSIONER KENNEDY: Well, then, the increase in
5 your own manpower to take this up will not equate with the loss?

6 MR. D. IS: Right, sir, it will not equate.

7 And of course, I&E has been studied over the years,
8 and essentially all the studies have ended up recommending more.
9 We have sought to respond to this recommendation for more by
10 decreased efficiencies. We do think we have increased signifi-
11 cantly, efficiencies, and, of course, any reduction in the pro-
12 grammatic impact of a new budget cut means less for us at this
13 point in time, which is counter to those recommendations.

14 I think another matter, if we step back and look at
15 the perception of the budget, that a large increase in NRR and
16 no or very limited increase in I&E might create a certain per-
17 ception to those outside the agency.

18 Such budget action may raise concerns about the
19 priorities of the agency. Those unfamiliar with the basis of
20 the NRR increases may believe that the agency is more interested
21 in licensing actions than they are in assuring that the licensee
22 is complying with requirements placed on them, which is, of
23 course, a perception matter.

24 COMMISSIONER BRADFORD: Did you notice any real rush
25 to draw the opposite conclusion last year?

1 MR. DAVIS: I am sorry, sir?

2 COMMISSIONER BRADFORD: Did you notice any real rush
3 to draw the opposite conclusion last year?

4 (Laughter.)

5 MR. DAVIS: No, sir, I did not.

6 COMMISSIONER KENNEDY: That does not belie his state-
7 ment, though.

8 COMMISSIONER BRADFORD: Over two years' time, I think
9 we come out about right.

10 (Laughter.)

11 MR. DAVIS: Very well, then, lastly, of course, the
12 739, which we did budget very tightly, is what we need to do the
13 job.

14 But in light of your interest in where we would cut
15 if we had to cut, the next chart shows our basic budget, the
16 overview.

17 And then the third chart shows those decision units
18 from which we would have reductions.

19 We would first reduce in the safeguards area by five
20 positions. The basic impact of this: They would all come out
21 of our high-enriched uranium facility inspection, reduces the
22 manpower assigned to that particular effort by about 15 percent.
23 The basic results of this, or impact, would be to compromise
24 our react capability; that is, responding to things, to events
25 when things go wrong.

1 COMMISSIONER KENNEDY: We always respond to events
2 when things go wrong.

3 MR. DAVIS: Yes, sir, we always do something when
4 things go wrong.

5 COMMISSIONER KENNEDY: So, tell me what it means.
6 (Laughter.)

7 MR. DAVIS: It may make a necessary change in thresh-
8 old. We now have an extremely --

9 COMMISSIONER KENNEDY: Have a bigger thing to go
10 wrong?

11 MR. DAVIS: Yes, sir. We respond to about anything
12 now.

13 And so, consequently, this would cause us to adjust
14 our threshold to respond.

15 Another thing, of course, is --

16 COMMISSIONER KENNEDY: Tell me what that means, in
17 real terms.

18 MR. DAVIS: Okay. We respond now to any --

19 COMMISSIONER KENNEDY: And what it is affecting, the
20 perception you were talking about?

21 MR. DAVIS: It is mainly perception.

22 COMMISSIONER KENNEDY: Perception, or real?

23 MR. DAVIS: Mainly perception. We respond now -- as
24 I say, we have a very low threshold response to events, allega-
25 tions, or anything that goes wrong in the industry. Basically,

1 to build confidence for the agency.

2 And if we reduce our high-enriched uranium inspection
3 force by about 15 percent, we will have to begin, we believe,
4 not to respond to some type of allegations, events.

5 COMMISSIONER KENNEDY: Such as?

6 MR. DAVIS: Such as an allegation of -- well, not
7 respond very promptly. We will pick them up in the next inspec-
8 tion when we go out -- an allegation that the "guards are not
9 properly trained," this type of allegation. Rather than go out
10 on a special effort, we would wait and pick it up -- perhaps
11 pick it up at the next inspection, depending on the allegation.

12 But it is a lot of perception, but we think a lot of
13 our effort in I&E is to build the perception that we are pro-
14 tecting the public in this agency. I think our effort is very
15 noticeable for that, and we do respond to things which we would
16 have a hard time justifying on a real technical basis as to
17 whether there is a problem or not.

18 The next thing we would do in that particular area is
19 to stretch or extend our inspection frequencies. What this
20 would do would be to lower our knowledge of plant conditions and
21 thereby decrease our confidence in the correction of licensee
22 actions.

23 At the current time, we routinely inspect these
24 facilities on a semiannual basis for some conditions, on an
25 annual basis for other conditions, with slide inspections. But

1 there would be a reduction of five in that area.

2 The next reduction we would make would be five in our
3 fuel facilities and material safety inspections. This reduces
4 by about 14 percent the staff assigned to materials inspections.
5 In fiscal year 1979, the Commission directed that we eliminate
6 our backlog of overdue inspections and by removing these five
7 people from our staff for that particular effort, it would
8 eliminate our efforts in backlog reduction and permit the back-
9 log to accumulate.

10 In this particular area, we would not programmatically
11 extend the intervals of inspection, since they are quite lengthy
12 at the present time.

13 In reactor operations --

14 COMMISSIONER KENNEDY: Let's put those two statements
15 together and see what I come up with.

16 It is going to extend the backlog, but it is not
17 going to extend the time between inspections; is that what you
18 are saying?

19 MR. DAVIS: Now, what I am saying: We have a pro-
20 gram which defines the time between inspections, and we would
21 not programmatically say, rather than see a licensee once every
22 years, extend it to once every seven years.

23 COMMISSIONER KENNEDY: I see.

24 MR. DAVIS: They are joined, of course. So, once
25 every six years, which defines if they are overdue.

1 COMMISSIONER KENNEDY: They are certainly not due
2 until every six years.

3 MR. DAVIS: Right. But we would not change our pro-
4 gram and say it is now okay to be overdue.

5 The next reduction will be in our reactor operations.
6 Currently, we have about -- we spend or have a goal of 20 percent
7 of what we call "independent inspection efforts," which means
8 that when our inspectors are on site, 20 percent of their time
9 on site is not laid out in the inspection plan to look at
10 specific items, and consequently, they use this 20 percent goal
11 time to look at those areas which are of technical interest, to
12 follow leads, to exercise technical judgment, to seek soft areas
13 in the licensee's operation.

14 We actually spend about 17 percent of our time doing
15 this at the present time. This is very professionally satisfy-
16 ing to our individuals. We do identify problems by this particu-
17 lar effort. We believe that this effort has contributed a great
18 deal to the lack of dissent in I&E because it does give pro-
19 fessional satisfaction.

20 But if we were to reduce this, it would be one area
21 we would reduce, of course --

22 COMMISSIONER KENNEDY: What is the relationship
23 between this effort and the effort of operating reactors in their
24 own field work, NRR operating reactors?

25 MR. DAVIS: NRR, when they go out and look at plants?

1 COMMISSIONER KENNEDY: Yes.

2 MR. DAVIS: They go out, as I understand it, to
3 determine whether those requirements which you are placing on
4 a plant suit the plant.

5 Then, when we go out, we determine whether the
6 licensee is meeting the requirements placed on them.

7 Now, one of the areas we are looking at, as I men-
8 tioned, as a manpower saving, under Dr. Hanauer, is some way to
9 do this with one effort.

10 The next area we would reduce in reactor operations,
11 there would be some reduction in the depth of the inspection.
12 Here again, we would inspect -- stretch inspection intervals.
13 We would examine the impact of this reduction on our resident
14 manning schedule. We would reduce, and it may even eliminate,
15 our ability to cooperate with NRR in seeking these agency
16 efficiencies.

17 It would reduce our ability to inspect new require-
18 ments which may result from an NRR staff increase.

19 The last chart is merely a summary of the options
20 which lay out what I previously discussed, a 739 going with the
21 current budget. We do believe that is an austere budget. It
22 does permit us to perform our program as described. It does
23 recognize efficiencies which we have now. It involves no new
24 initiatives regarding utilizing manpower.

25 The reduction by 12 to 727 would reduce our

1 high-enriched uranium inspections, would reduce our flexibility
2 to absorb any new workloads, and it would permit our backlog
3 materials inspections to again grow.

4 The no-growth of 715 would do all of the above, plus
5 reduce our reactor inspection flexibility and, over the long run,
6 may be somewhat counterproductive if we could not cooperate with
7 NRR in seeking these efficiencies.

8 We do strongly urge that we proceed with the 739 in
9 I&E.

10 CHAIRMAN HENDRIE: Okay.

11 Questions?

12 COMMISSIONER AHEARNE: Yes, I have got a couple,
13 if I could.

14 John, are you maintaining this schedule that you
15 people put out last year on moving into the resident instructor
16 program?

17 MR. DAVIS: We will be fully implemented in 1981.

18 Now, the character of the program has changed some-
19 what from our original thoughts. We will not have an inspector
20 at each site. We will not have inspectors at reactors in early
21 construction.

22 We will have one at each operating site and at sites
23 in test and start-up and at late construction.

24 COMMISSIONER AHEARNE: When you say you will not have
25 one at each site, you mean you will not have it at the site in

1 the early, but once it is in operation?

2 MR. DAVIS: Yes, sir, we will have one at each site
3 where there is an operating reactor when fully implemented.

4 COMMISSIONER AHEARNE: And the schedule on which you
5 will be moving into that is?

6 MR. DAVIS: It will be completed in '81. We will
7 have one at each of those in '81, and then, as each new site
8 becomes operating or enters into the proper state --

9 MR. GOSSICK: Tell the Commission where we are in '78.

10 MR. DAVIS: In '78, we will have 20 reactor sites
11 manned.

12 COMMISSIONER AHEARNE: You mentioned in your brief
13 description there that earlier OMB was interested in the vendor
14 program. As I read McIntyre's letter --

15 MR. DAVIS: They are still interested in it.

16 COMMISSIONER AHEARNE: They are still?

17 Pardon me for going back over material which I am
18 sure you have covered earlier, but if you would just take a
19 minute to tell me, how are you coming on the two reports that
20 OMB appears to expect?

21 MR. DAVIS: OMB has the draft report on the vendor
22 inspection program right now. In fact, they commented to us
23 yesterday on it, and we reacted to their comments. That report
24 should be in the hands of the Commissioners this month.

1 The other report on the resident inspection program
2 is due in '80. Thus, we have about a year. That particular
3 letters misses a letter. There is another letter.

4 COMMISSIONER AHEARNE: A later letter?

5 MR. DAVIS: There is an earlier letter which sets
6 a different date, which the author of that letter was not aware
7 of, but we talked with the author.

8 COMMISSIONER AHEARNE: I know the signer of this
9 letter. OMB is not --

10 MR. DAVIS: That is what we were currently informed,
11 that they were not holding us to the evaluation letter, the
12 date on that letter.

13 COMMISSIONER AHEARNE: From their comments on the
14 vendor inspector paper, do you detect any shifting of their
15 extreme opposition to it?

16 MR. DAVIS: I would say maybe a slight degree of
17 softening. They have asked us a question which we hope to be
18 able to respond to to show some real benefits.

19 In other words, they want to see some hard-number type
20 things.

21 COMMISSIONER AHEARNE: It appears to me that is what
22 they said last year.

23 MR. DAVIS: Well, they would like to see some -- we
24 gave them some, but we gave them examples, and now they are
25 seeking something more than examples.

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gsh 1 COMMISSIONER AHEARNE: As I recall last year,
2 their attitude was, you can't prove it has any value;
3 therefore, you should have zero people in it.

4 CHAIRMAN HENDRIE: My God. If that becomes the --
5 well, so long, fellows.

6 (Laughter.)

7 COMMISSIONER AHEARNE: As I recall from last year,
8 at least there was some impression on the OMB side that the
9 previous head of I&E had made an agreement that if the
10 supplemental number was given, that then that 715 would be
11 held to as a constant number for several years into the
12 future.

13 MR. DAVIS: In developing this budget, it was
14 held -- let's see. It was held to the second year. We're
15 in the third year from the 715.

16 COMMISSIONER BRADFORD: Several of you means more
17 than one?

18 COMMISSIONER AHEARNE: Except that at least the
19 impression I got from two individuals that were a party to
20 that agreement was that that would hold through at least '80.
21 And I was just wondering what your reaction was?

22 MR. DAVIS: Well, as they were developing the budget
23 the budget was severely cut within our own office by our
24 director, Dr. Volgenau. And in looking at the manpower
25 figures, looking at the growth, particularly in the area which

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gsh 1 absorbs much of our effort -- that is test and start-up --
2 he believed that the figure that we ended up with of 739
3 is very austere.

4 COMMISSIONER AHEARNE: I guess all I'm really saying
5 is that I think you should expect when you go over with
6 the number that's above 715, and vendor inspectors included,
7 an automatic reduction to get to the 715, because there are
8 some people over there who really believe that there was an
9 agreement at 715.

10 That's all I have.

11 MR. GOSSICK: We're kind of pressed on the other
12 side, of course, by the GAO, you know, who's coming out with
13 a report for vendor inspection.

14 MR. DAVIS: Every study we've come out with asks
15 for more -- not we come out with; everybody comes out with
16 except OMB.

17 COMMISSIONER AHEARNE: I'm personally much more
18 sympathetic to your 739-type number.

19 MR. DAVIS: It is a growth recognizing efficiency.

20 CHAIRMAN HENDRIE: All right. Can you report to
21 us the word from the far reaches of Silver Spring?

22 MR. GOSSICK: Right. I talked to Dr. Smith and read
23 the items off that were listed here --

24 CHAIRMAN HENDRIE: Thank you, John.

25 MR. GOSSICK: Cliff's attitude is that these are

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1 items or matters that he wants to see done. He feels that
2 they're important to him. He does not feel, however, that
3 he has, you know, adequate tech assistance money to sort
4 of reprogram and do it or do some part of it if the
5 research dollars get cut because he feels that he's got his
6 tech assistance dollars staked out on items that he needs
7 on a near-term basis.

8 These are looked at as perhaps somewhat longer
9 term, but items that he supports and thinks are important to
10 his program.

11 CHAIRMAN HENDRIE: Okay. I'll tell you what I think
12 we ought to do. We ought to take about a two-minute stretch
13 because if I don't get up and walk around the table, I'm
14 going to slide right under it and go to sleep. And that's
15 not a very good condition in which to make a mark-up.

16 And then we ought to cut down the poker game to
17 us, the comptroller, the EDO, the secretary, and the budget
18 review group, contingent, and thank everybody else very much,
19 and cut it up. Okay?

20 (Whereupon, at 3:35 p.m., the hearing was adjourned.)

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