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BEFORE THE
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Before CHAIRMAN DONALD ALEXANDER

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BEFORE THE
DEPARTMENT OF ENERGY

NUCLEAR REGULATORY COMMISSION

WEDNESDAY

FEBRUARY 13, 1985

The above-entitled matter came on for Public
Hearing pursuant to notice, before CHAIRMAN DONALD
ALEXANDER, Department of Energy, at 1000 Independence
Avenue, NW, Room 6E 059, Washington, DC, at 8:30 AM.

APPEARANCES:

DONALD ALEXANDER, Chairman
LIEL S. CLANTON
JIM MECCA
JAY RHODERICK
TON BALLILLIEUL
RALPH STEIN
CHARLES HEAD
JEFF NELSEN
CAROL HANLON
EDWARD REDNIER
MARC FREI
DAVID SIEFKEN
BOB JACKSON
MICHAEL VOEGELE
R.W. KLINGENSMITH
LEE SCULLY
A. L. STEVENS
MICHAEL REVELLI
SETH M. COPLAN, NRC
MARC RHODES, NRC
HUBERT MILLER, NRC
JAMES R. WOLF, NRC

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P R O C E E D I N G S

(8:40 AM)

MR. STEIN: I'd like to welcome you to this meeting. The purpose of the meeting is to receive the Nuclear Regulatory Commission's comments on the Department's site characterization plan, annotated outline and to the extent possible reach a resolution with the NRC on their comments so that we can proceed the face lining of the annotated outline and the preparation of the site characterization plan.

As you know the Nuclear Waste Policy Act of 1982 calls for the Department to prepare a number of documents, including the guidelines environmental assessment, and site characterization plans, commission plan, project decision schedule, and other documents more closely associated with the final site selection.

These documents are on the critical path to the start of the detailed site characterization specifically the documents are the guidelines, environmental assessment, and site characterization plan.

The first two documents the guidelines and the environmental assessments are, have been released and are in the public domain. The environmental assessments, of course, are in the draft form.

Now along with the completion of the environmental

1 assessments, the site characterization plans are now a
2 critical path item, and agreement on the annotated outline
3 for the site characterization plan is in itself on the
4 critical path for completion of the site characterization
5 plan.

6 So I would like to return again to the purpose
7 of today's meeting which is to receive the NRC comments
8 on the site characterization plan annotated outline and
9 to the extent that we can hopefully, totally, reach
10 resolution with the Nuclear Regulatory Commission on those
11 comments where so we can proceed the case lining of the
12 annotated outline.

13 Today we are prepared to address your questions
14 or comments. We have representatives from our project
15 offices here whom we'll introduce shortly, to assist us
16 in today's meeting.

17 I would now like to introduce Don Alexander at
18 the end of the table and Carol Hanlon who will lead the
19 Department of Energy participants at today's meeting.

20 I am Ralph Stein responsible for Engineering and Licensing
21 Activities. But before I turn the meeting over to Don
22 Hu Miller I would appreciate it if you would introduce
23 your NRC participants and any introductory remarks you
24 might have for this session.

25 MR. MILLER: Ralph what I should probably do is

1 ask you to introduce all the DOE folks here today.

2 MR. STEIN: I will introduce them, those who
3 will directly participate only I'm leaving the introductions
4 to Don Alexander at the end of the table in accordance
5 with the agreed upon procedure that we had before we
6 came in here. Don has been working with the folks much
7 closer than I and I think that we ought to introduce them.

8 MR. MILLER: We received your letter in January,
9 I can't recall the day, but since that time we have given
10 the annotated outline a review. We have tapped our
11 technical people who are busy reviewing your EA's and
12 I would have to say that our review is best termed a best
13 level type review. I think having said that however we
14 can give you feedback and I think it should be a productive
15 meeting.

16 But at some later time there may be some things
17 we found that--but we will do the best we can. Let me
18 introduce the people from NRC here with me today right
19 at the outset. Seth Coplan to my left, the head of the
20 Nevada Test Site Project Section within my branch.
21 Marc Rhodes works for Seth, just to my right. Ed Rednier
22 is in the Regulations Section in my branch; and Jim Wolf
23 is from the Office of the Executive Legal Director.

24 Several things that I think are going to be
25 necessary to talk about today in connection with this

1 annotated outline, and in connection with your remarks
2 about this being on critical path are what types of
3 additional interactions between the DOE and NRC staffs
4 are necessary as you indeed prepare these FCP's and they
5 as you prepare to conduct site--the guidance from the
6 Commission to the staff is very clear in the respository
7 area, it is to absent safety issues, do not delay the
8 DOE program. And we take that, of course, very seriously
9 and we think it's important, even where you are making
10 decisions and taking steps that aren't shown in the large
11 milestone schedule, such as sinking the shaft, as you take
12 these steps such as the ones you are taking here now as
13 you commit to this annotated outline and do things like
14 that, that we feel it's important for us to avail ourselves
15 to you and to consult with you.

16 I think in the three previous meetings that I can
17 recall on the standard form and content guide, and I
18 think there has been at least three, because the form
19 and content goes way back, there inevitably arises certain
20 questions that you just can't settle from a general answer
21 on the spot and I think it'll probably be no different
22 today and I guess what I'm saying is that one of the
23 things we've got to be thinking about are what additional
24 types of interaction are needed in addition to this
25 meeting here.

1 Ed Regnier will lead the presentation of our
2 comments, and I think one of the things that I would ask
3 is that we did send over some comments as they stood the
4 other day. I still think that there are some things
5 we'd like to talk to you about and ask questions about
6 in your annotated outline, so while we will be giving a
7 presentation there will still be a lot of remarks, so
8 I'd ask your questions. I'm sure you'll have no problems
9 with that.

10 MR. STEIN: Of course we're very appreciate
11 of the NRC availing itself to provide us feedback on various
12 documents that we produce as questions come up. And we
13 are very interested, as you know, in trying to establish
14 a schedule, if you will, and the identification of items
15 for interaction and certainly we might be able to do that
16 as part of this interaction today.

17 I would ask you though if we could, because of
18 the importance of the annotated outline and trying to
19 resolve as much of it as we can that we focus on that
20 aspect of the meeting first and you know, hopefully
21 we'll pick up the remainder at the end of the day but
22 because of time we'll do it very promptly after the meeting
23 so. We do want to see how, if we can close on comments,
24 questions resolved the annotated outline so we can proceed.
25 With that I'd like to ask Don Alexander to take over the

1 DOE part of the meeting and to make the introductions and
2 the other presentation material that he has to discuss with
3 you today.

4 MR. ALEXANDER: I would like to open by saying
5 that on behalf of myself and the projects we are very
6 thankful that you have pulled together comments within a
7 period of less than 30 days. It was a valiant effort
8 and we appreciate it.

9 If you're in the wrong meeting, I want to make
10 sure that everybody knows that this is a meeting between
11 DOE and the NRC to discuss the annotated outline.

12 Representing the projects, we have Tom Ballieul,
13 of SRPO; Skip Klingensmith, contractor to SRPO; Jim Mecca
14 with DOE; Bob Wingham, a contractor; Gil Clanton from
15 Nevada; and Mike Voegele is a contractor.

16 We're going to organize our responses to your
17 comments through a number of spokespersons and we have
18 designated Tom Ballieul to represent comments in the area
19 of Geology.

20 Within the area of performance allocation which
21 is an important topic that you brought up many times
22 we've designated Leo Skully to take the lead on that.

23 Within the waste package area Mike Revelli is
24 going to be our spokesperson. And within the area of
25 quality assurance Jay Roderick is going to take the lead.

1 And in addition Mike Voegele will be acting on our behalf
2 to answer questions that will result from discussions on
3 chatèr eight.

4 Okay. I'm going to repeat some of the things
5 that Ralph said but I don't think there's any harm in
6 doing that. The purpose of the meeting today is to
7 present an overview of the annotated outline. The second
8 purpose is to receive your comments on the outline and
9 then to identify provisions of the annotated outline which
10 could lead to preparation of a condition site characteri-
11 zation plan. And then before we close today we'd like
12 to try and resolve if possible any of the concerned that
13 you might have on the outline.

14 Ralph talked about the critical timing of the
15 SCP and it's a real problem. The annotated outline is
16 on the critical path and continued project progress on
17 the preparation of the SCP's awaits baselining of the
18 annotated outline.

19 Prior to proceeding to sink shafts in any
20 candidate site DOE must make FCP's available to the NRC,
21 states, effected Indian tribes, and hold public hearings.

22 At the moment the schedule looks something
23 like this. On the 18th of January we completed our work
24 on the annotated outline. The meeting today will be
25 crucial and I'm showing it on the critical path because

1 it's important that we get your concurrence before we
2 proceed to write the chapters and come to closure on a
3 final document some times late this year. Over the
4 next several weeks we plan to baseline the document so
5 it's important that we integrate any of your comments
6 as soon as possible prior to baselining.

7 So there are two objectives of the meeting as
8 far as I'm concerned. They are to reach agreement that
9 the annotated outline will provide a framework for pre-
10 paration of acceptable site characterization plans and
11 to receive any NRC clarification of any section of DOE's
12 outline which you feel misinterpret Reg Guide 417.

13 You should have two documents in your hands.
14 There is this document which is bound and if you'll look
15 on the second page you'll find a revised outline. We've
16 left it very flexible and it should allow time to discuss
17 related FCC topics later in the day.

18 The agenda as we proceed through the day will
19 involve an introduction of development of the AL by Carol
20 Hanlon and then we'd ask that Ed Regnier presents the
21 comments by the Commission and we'd be involved then in
22 a series of clarifications on both sides.

23 Then we would propose that we break for lunch
24 and move into closed sessions so that we can try to
25 organize our costs versus your comments, and make some

1 proposals later in the day. We would reconvene at 1:30
2 if not sooner to start working out a resolution to the
3 comments, and then following that we would review the
4 meeting record and then as I say once we've signed off
5 on the outline or come to some sort of closure on the
6 outline we would then get into related FCP topics.
7 Okay. I'll turn the introduction over to Carol.

8 MS. HANLON: I just have a few brief comments
9 to make to set the overall tone and give some perspective
10 of the background; just to put the whole site characteriza-
11 tion plan into correct perspective. The requirements for
12 the plan under the Nuclear Waste Policy Act of 1982 as
13 well as Nuclear Regulatory Commission's 19 CFR 60
14 documents that provide additional guidance are not only
15 reg by 417 but we also looked at the NRC's job site
16 characterization analysis that was done for the B--site.

17 Of course the overall purpose of the site
18 characterizatin program and the data collection effort
19 are to support the findings of suitability that are
20 required both by the act and the Guidelines 10 CFR 960
21 to support the selection of sites for recommendation of
22 development of a repository providing both information
23 for the environmental impact statement safety analysis
24 report and finally to support the license authorization
25 application.

1 The purpose of developing a single generic
2 annotated outline was to provide and develop a consolidated
3 effort between all the projects that would be participat-
4 ing; to insure compliance with the guidelines we would be
5 following in according to the Nuclear Waste Policy Act
6 and the Reg Guide; to implement overall the Reg Guide
7 programmatic perspective; to develop consistent programwide
8 interpretations of different points in the Reg Guide; and
9 to insure an overall consistent presentation and format
10 of content of all the SCP's for all the projects.

11 In developing the annotated outline we based
12 it on the requirements of the act and on the Reg Guide.
13 The outline, the annotated outline presents the Department's
14 overall approach to implementing the Reg Guide and it
15 represents a consolidated generic approach which was
16 developed to be interactive, repetivie participation
17 with which repository projects and headquarters.

18 I think it's an important point that it's
19 intended to be entirely consistent with the Reg Guide.
20 I believe that there are no omissions, although there
21 are some--and deviations from the Reg Guide, so from
22 Department's interpretation of the Reg Guide to insure
23 overall programmatic consistency; to present more infor-
24 mation of greater clarity or detail than was requested by
25 the Reg Guide; and to facilitate the overall presentation

1 and flow of programmatic information.

2 As you've looked through the outline I'm sure
3 you've noticed that the structure does not--of 417. Part
4 A which is a description of the site; waste package; and
5 repository design are seven individual descriptive
6 chapters containing information and data collected to date,
7 and providing the basis for determining what future
8 test activities and studies and analyses should be per-
9 formed.

10 The organization of the descriptive chapters
11 has been changed just a bit to add introductory section,
12 a summary of reference to technical information required
13 by Reg Guide 417, and overall references.

14 Again part B an overall outline is very much
15 like the Reg Guide and presents the overall program
16 rationale and plans for acquiring additional information.
17 The main points that are followed in the organization of
18 chapter eight are giving the rationale for planning the
19 site characterization program; identifying issues to be
20 resolved; and information which will be required during
21 site characterization; outlining the planned tests,
22 analyses and studies and other sections which I simply
23 call logistics.

24 Again both Ralph and Don have mentioned the
25 purpose of the meeting and our hope in conducting this

1 meeting here with you. We hope to identify any incorrect
2 interpretations which we have made with Reg Guide 417;
3 identify any areas where the outline could lead to prepara-
4 tion of site characterization plans which the NRC would
5 feel are deficient and our overall objective is to reach
6 agreement with NRC that the outline is in fact an
7 acceptable interpretation of the Reg Guide.

8 MR. ALEXANDER: Okay. At this time I would
9 like to ask Ed to present the comments, if you would.
10 So Ed you have the floor.

11 MR. REGNIER: Good morning. I'm Ed Regnier of
12 the Nuclear Regulatory Commission. I would like to
13 start off by reviewing a little of the history of the
14 Reg guide 4.17 very carefully to sort of set the frame-
15 work for where we are and how we got to where we are.

16 Draft of Reg Guide 4.17 was issued in April.
17 I see already there's a typo. That was April of '81, 1981
18 it was originally issued. We had a meeting following that
19 during the summer with NRC and DOE to discuss the draft
20 of Reg Guide 4.17.

21 The final Reg Guide 4.17 was issued in July of
22 1982. Then in January of '83 the Nuclear Waste Policy
23 Act was enacted which changed somewhat the requirements
24 for site characterization plans and thus necessitated
25 a provision to the Reg Guide.

1 Now we issued the, we didn't formally issue, but
2 we made available to DOE a working draft of this revision
3 in July of '84. Now this revision consists primarily of
4 items of interest, or items which were requires to purport
5 consistency with the Nuclear Waste Policy Act.

6 These slides were in fact presented in a meeting
7 in July of '84 when we put out the, or made available
8 the first working draft of this revision. You see the
9 provision from the revisions based on the Nuclear Waste
10 Policy Act essentially follow, almost to the letter the
11 requirements that were changed in the Act as to site
12 screening and selection process is now addressed in the
13 environmental assessment so that part A is simply
14 deleted from the Reg Guide. Part A was what previously
15 dealed with site screening and selection process infor-
16 mation.

17 Now also as required by the Act plans for de-
18 contamination and decommissioning of candidate sites are
19 now required in the Reg Guide. Plans for the mitigation
20 of significant environmental impacts, site characterization
21 if the site is found unsuitable for development as a
22 repository are required.

23 The criteria to be used to determine suitability
24 of the site pursuant to section 112.A are required--
25 through so called siting guidelines. Plans for on site

1 testing with radioactive material are required and plans
2 for any investigation activities that may effect isolation
3 capability of the site are required. And these are items
4 that were specifically asked for in the Nuclear Waste
5 Policy Act.

6 We also made a few other revisions, clarifica-
7 tions based on some of our experiences. Most of these
8 items we believe were simply additional clarification to
9 make clear what we were already requiring when we put
10 greater emphasis on describing the level of detail, the
11 data gathering, and analysis plans are required.

12 We tried to expand the description to the level
13 of detail, describing what we would in the way of a
14 conceptual design. We specifically empasized that we
15 wanted consistent component performance requirements
16 allocations specified and we put in discussions describing
17 our requirements for the scale and duration of testing
18 requirements and put in some other information which
19 would make it consistent for a site which may be in the
20 unsaturated zone and to clarify some of the geological
21 requirements.

22 As I say those previous slides were from the
23 meeting in July which was indicated in the background
24 history.

25 MR. STEIN: Excuse me Ed. It's a little hard

1 to see. Can we move it a bit?

2 MR. REGNIER: Yes. We provided to you a second
3 working draft of this revision one in October and that
4 is what we are working with still today. The issuance
5 of that, what we called a working draft as a proposed
6 has been held up pending the approval and issuance by
7 the Commission of the amendments to the procedural rule
8 of 10 CFR, part 60 that implement these same changes
9 required by the Nuclear Waste Policy Act in our regulation
10 as opposed to the Guide. Basically the Guide is expanded
11 detail on how to comply with the changed in the regulations.
12 Commission policies are not the issue; proposed guides
13 until the, proposed revisions to guides until the cor-
14 responding rule is published at least in draft.

15 Now the proposed amendment two part 60
16 that deals with this material was issued on January 17
17 in the Federal Register. That would be a very interesting
18 document I think you should all be sure to look at that
19 because that is the underlying framework on which all
20 this is based, so that the proposed revision, part 60
21 which is now up for public comment, issued in January 17
22 of the public comment period, in Mrch 17 by the proposed
23 rule.

24 Now that the proposed rule has been published
25 we have sent Reg Guide 4.17 to the printers and we expect

1 it to be published late this month some time. Now I
2 want to emphasize that our review of the annotated outline
3 because of the heavy work load on our staff for doing
4 the environmental assessments has been a limited review
5 of looking for major discrepancies with the Reg Guide.

6 We found that the format changes which are
7 made are fine. We have no problem with the reorganization
8 of parts of the outline and format changes. A lot of
9 instances those do reduce duplication and you can see
10 where they present things from a more logical point of
11 view from your perspective.

12 We do want to emphasize that the content of
13 Reg Guide 4.17 is still required, and having reviewed
14 it quickly the content of the annotated outlines does
15 seem generally complete with the exceptions based on
16 the comments that we will be going over today.

17 When your SCP comes in, here I want to emphasize
18 we will be comparing it for completeness with our Reg
19 Guide, not with the annotated outline. But it does
20 look like the annotated outline with the exception of
21 comments that we've made and the caveat that we've only
22 got a limited review will generally provide the information
23 required by the Reg Guide.

24 The comments on the, we have on the annotated
25 outline are listed in four general groups, and one comment

1 which I presume will be the subject of a fair amount of
2 discussion today is where I'm certain we have previously
3 failed to come to closure on an understanding of what
4 will be presented in the SCP, and that is on the question
5 of the system performance requirements being allocated
6 early.

7 As we read what you have in the annotated outline
8 it emphasizes or states that you will present the plans
9 for providing this allocation. Now we feel that actual
10 numerical values tentative allocation should be provided
11 in the SCP, so we will discuss that in more detail later.
12 Another area we feel is important where the annotated
13 outline does not appear to provide the necessary level of
14 detail of information some quality assurance requirements.
15 We also feel that's important and several of our specific
16 comments are based on that.

17 Again the specific comments outline where,
18 although I've said that the, the outline, the annotated
19 outline seems to generally provide the contents of the
20 Reg Guide. In our review going through it there were
21 places where it had been reorganized and stated one
22 section of the Reg Guide would be discussed and another
23 section of the annotated outline. Upon looking in the
24 annotated outline a fair amount of the detail from
25 the Reg Guide had been omitted.

1 One example of that was the geochemistry section
2 so that that, we're not certain whether this means you
3 don't plan on putting the information in there; whether
4 that's an oversight. Again we can discuss those later
5 on the specific comments.

6 Again I do want to say the requirements our
7 review has been not an exhaustive one, so that when we see
8 some of these places where some of the detail has been
9 left out we are somewhat concerned that we haven't
10 found them all and as far as we're concerned that's going
11 to be your responsibility to make sure that all the
12 detail content from Reg Guide 4.17 is reflected in the
13 SCP.

14 Then again there are several miscellaneous
15 comments. We have made some comments where you provided
16 a greater level of detail than we had requested in the
17 Reg Guide and based on that greater level of detail
18 based on new information we made a few comments that
19 look like if you're providing a greater level of infor-
20 mation some other items should be required even those
21 weren't specifically called out in the regulations.

22 So now we'd be ready to move into a discussion
23 of the specific comments. We have no more view graphs
24 so we can get the lights back on.

25 I guess the questioning procedure here, Ralph,

1 how you want to go about this. We can start from the
2 first topic and work our way down.

3 MR. STEIN: I think that's what we generally
4 had planned but I'll be sort of--as he has provided the
5 arrangement for responding to those comments that we
6 have as well as any other comments that are provided.
7 So Don, why don't you tell us what the arrangements are.

8 MR. ALEXANDER: What we'd like to do is tackle
9 the comments that you sent over yesterday first and
10 the way that we, I would like to deal with them is to
11 tackle them as subject areas. If you could go through,
12 for example, the first five or six that deal with geology
13 then I would defer a response to those for purposes of
14 getting clarification to Tom Ballieul. And likewise
15 we feel with performance allocation questions there, the
16 two at the bottom of the first page, and I guess one at
17 the top of the second page and I would defer those to
18 Leo Scully and likewise down the list.

19 So if we could start with the geological
20 recommendations that were made I think that would be the
21 easiest way to tackle the package. It turns out that,
22 for example, many of the comments we find easy to accept
23 and there are a couple we need to get further clarification
24 on the way they're worded.

25 MR. REGNIER: Alright first let me, before we

1 get started into that let me, there are two more comments
2 that we have come up with in the meantime which are best
3 assessed in the first part of your prepared analysis,
4 and one we would like. We would like to discuss in there
5 the significance from your view of the deletion of the
6 word definitive in an area of the general introduction
7 where we've asked for definitive plans and tests.

8 Then there was another item in there where we
9 had asked for an identification of all subcontractors
10 working on the program. Again we would like a discussion
11 on--that was difficult for you. That was one item which
12 you had said you provide the major contractors. We were
13 wondering why that was a problem. So if you add those two
14 to the list.

15 You had gotten our specific questions yesterday
16 and I had a chance to look through them. Maybe the best
17 approach is to sit down and have you people take a lead
18 in asking us for clarification of our comments.

19 MR. ALEXANDER: That's fine with us. In that
20 case I'd rather jump right into it and have Tom ask you
21 some questions of clarification and give you our position
22 on the geological comments first. So Tom if you could
23 go ahead.

24 MR. BAILLIEUL: I guess I might as well start at
25 the top with the first comment which was discussing

1 section 1.1 geomorphology and the Reg Guide had stated
2 that the SCP should discuss the application of geomorphology
3 to site screening and selection for characterization and
4 we had deleted that specific language from the annotated
5 outline. Our feeling has been that it's not really the
6 pupose of the SCP to restate all the history of the site
7 selection process, and your introductory remarks appear
8 to the NRC's intent as well in dropping part A from
9 the SCP in the revised Reg Guide.

10 We feel that there is a voluminous record that
11 has been developed in how geologic and other values
12 were applied to site selection and we've summarized this
13 history in the environmental assessments and there is a
14 section in the introduction of the SCP with reference
15 to that record.

16 Our position is more that we would like to have
17 the information in the SCP be focused on addressing the
18 issues that we've identified, rather than going back over
19 site selection history.

20 (Pause.)

21 MR. REGNIER: I think what we're going to have
22 to do here is we'll listen to what you've got to say.
23 We come here five people. We have our geologists who
24 would ordinarily be responding to you reviewing your--
25 today and so unless there's something on the fact of it

1 that we can comment back on let's just continue through
2 with your response and then when we caucus we can perhaps
3 even hit a few of the items; hit a few more items, but
4 why don't you just keep going.

5 MR. BAILLIEUL: Okay. That's the summary of
6 our concerns on the first comment. The second comment
7 which was need for a specific inclusion of surficial
8 geologic maps, isopact maps, and structured contour maps.

9 Surficial geological maps are called for in
10 section 1.1.2 of our annotated outline. We don't label
11 them as sufficient geologic maps. It's--maps of the
12 geomorphic units placed on the isotopographic base
13 but that is essentially a surficial geologic map.

14 We also would be putting in section 1.2.2
15 a map of geologic units as they are exposed to the
16 surface so that, those two pieces cover the whole
17 question of surficial geology.

18 Isopact maps, structure contour maps, other
19 possible data presentation formats are implicit in what
20 we're calling for in that list of items in section 1.2.2,
21 but we feel that it's very reasonable to take our seventh
22 bullet under 1.2.2 which is on page seven of the annotated
23 outline where we call for information on thickness and
24 spatial extent. We have no problem at all in adding a
25 parenthetical statement after that as is in the Reg Guide

1 calling for types of data display under this, and that
2 would be isopact map structure contour maps or other
3 appropriate data presentations for that. I think that
4 puts the words back into the outline--

5 Comment number three says that if it's not
6 covered elsewhere section 1.2.2 would be a good location
7 for summaries discussing other features of the various
8 stratigraphic units. We did go through an annotated
9 outline yesterday to identify those sections later on
10 in the AO where this information is presented in signifi-
11 cant detail. We have geologic data from sections 1.2, 1.3,
12 okay.

T1,s2 13 We also have the details on the hydrology of
14 the specific units and it's relationship to the strato-
15 graphic column we discussed in sections 361 petrographic
16 information in sections 1.2; 4.1.1; 4.1.1.3; and dis-
17 cussions of geochemical information relative to the rock
18 units in section 4.1.1.3.

19 So it appears that this comment was related
20 to the statement that if we hadn't covered it elsewhere
21 we would put it in section 1.2.2 and we feel that we
22 do have it elsewhere.

23 Comment number four is a statement that the Reg
24 Guide requires certain types of information to be presented
25 such as photographs, geophysical logs with the stratigraphic

1 units, and that the AO had not repeated the specific
2 requirements. What we would propose there is to include
3 a statement at the end of that first paragraph in our
4 section 1.2.2 which essentially says that in order to
5 support the discussions called for in this section a variety
6 of graphic displays may be used to illustrate salient
7 features of the stratigraphic section. These could include
8 such things as outcrop photographs, core photographs for
9 detailed portions of geophysical logs.

10 We do believe that detailed information on
11 cores that have been taken and on--geophysical surveys
12 will be available through the references that we will
13 provide in the SCP and in our introduction to the authors
14 of the SCP we do follow that specifically that this
15 information be made available at the time the SCP is
16 submitted or before.

17 Comment number five discusses subsurface drilling
18 and mining and states that the Reg Guide requires that
19 we include information regarding the documentation related
20 to calibration procedures and data massaging techniques
21 and to a discussion of the adequacy of the historical
22 record in determining the likelihood of undiscovered
23 wells, boreholes, excavations, etcetera.

24 We felt that we could understand and readily
25 handle the numbered item number two but we've got a need

1 for getting some additional clarification on that first
2 point. We realize that's wording directly out of the
3 revised Reg Guide but we have problems in understanding
4 just what that is referring to. Is it a request for
5 information regarding all the well log calibrated
6 procedures that are done for all bore holes; only for
7 those bore holes that we would use as information sources
8 for site characterization; or is it calling out for
9 the procedures related to our own bore hold drilling
10 activities.

11 And also this question of data massaging techni-
12 ques is that related to some type of data enhancement or
13 massaging that was conducted by the people who originally
14 drilled an oil and gas test well and we may have used
15 their data, or is that related to our own techniques for
16 interpreting the data that we may have collected for
17 an oil and gas test. We had trouble understanding what
18 that was really calling out, so it's very difficult
19 now to provide a specific response.

20 What we would suggest for the item number two,
21 would be to add an additional sentence into section 1.6
22 where we feel that a statement discussing the likelihood
23 of undiscovered wells is probably not a terribly useful
24 exercise because it's always difficult to assess how much
25 you don't know about something.

1 What we would propose to do is to add a sentence
2 into section 1.6 which then would become the new second
3 sentence, and this is on page 12 that would say completeness
4 of the historical record be examined in making this
5 tabulation would be discussed. So we will basically
6 describe the historical record that we did look at and
7 give some estimates as to how complete we feel that
8 record is based on the age of reporting requirements in
9 a stage and how early on a particular stage requires
10 specific reporting and review tests, things like that.

11 We also feel that we can provide some response
12 to that first numbered item about data massaging tech-
13 niques by inserting another sentence into section 1.6
14 stating that we will discuss the techniques that were
15 employed in collecting any data that we utilized from
16 say oil and gas tests and standard drill stem tests
17 were run. We would note that the tests that we were
18 drawing data from were the standard drill stem tests.
19 It's probably impossible to go back and recover calibration
20 procedures that may have been used for that particular
21 test.

22 Comment number six, is on section 1.7 requesting
23 that the annotated outline require more information than
24 we have currently, basically two points that the Reg
25 Guide had brought up on estimation of mineral resources.

1 We feel that with what we're presenting in
2 the annotated outline the type of discussion that we're
3 calling for, all the information that the Reg Guide asks
4 for is a logical derivation of that, because we will
5 be calling for an estimation of total resources; estimations
6 of specific resources; and a value for each specific
7 resource.

8 What we feel we can add to that to provide a
9 little bit more enhancement, I guess than the discussion
10 calls for the type of assessment method used in each
11 resource evaluation, and that should bring us back to
12 the level of information that the Reg Guide is calling
13 for.

14 Now those are the six comments that went into
15 chapter one. Do you want to have clarification after
16 you've caucused?

17 MR. REGNIER: Yes.

18 MR. ALEXANDER: I'm trying, I'm giving you a
19 copy of what we put together last night.

20 MR. STEIN: I guess that what we are planning
21 on doing. We've gone through our responses to your
22 questions in a particular area and try to ascribe to
23 you what we consider is the proper response to your
24 question; what we're adding and further explanation of
25 our comments on your comments, and what you intend to do,

1 as I understand, is you will now think about those and
2 caucus and come back and respond to us?

3 MR. MILLER: Yeah. I have to repeat again.
4 We're in the position where technical experts are back
5 home and notwithstanding to that we'll try to give you
6 a response but these people are technical and they've
7 got some pretty good ideas about what will satisfy the
8 folks back home. But I'd, maybe even if it involves
9 changing the gender around a little bit, that after you
10 go through this we could talk a little bit among our
11 selves so we can give you more direct feedback this
12 morning. It's up to you.

13 MR. STEIN: Well of course what we'd like
14 very much is to try to close the greatest possible extent
15 of the outline so I would hope that you're able to
16 respond to our positions and our comments relative to
17 your colleagues.

18 MR. MILLER: Right.

19 MR. STEIN: Thanks.

20 MR. ALEXANDER: Yeah, and there's no reason
21 why we can't provide the NRC folks with telephones. If
22 there's a technical issue that you really need to have
23 answered by somebody back at the NRC we'll make it
24 available during the caucus period to get the clarification.

25 Now I'd like to move on to the difficult subject

1 of performance allocation. Leo Scully would then give
2 you our response to those three items related to that
3 subject. Leo.

4 MR. SCHULLY: The comment seven deals with
5 section 6.3A and the comment points out the fact
6 that 6.3 refers to section 8.35 chapter eight and the
7 request for information not provided in those two
8 sections.

9 We agreed. The wording of those two sections
10 did not convey our intentions with respect to the alloca-
11 tion of prohibitive values--

12 We do intend to provide more--allocations. The
13 one thing that I don't want to do is imply with our work
14 that we can provide performance allocation to the detail
15 that we can't provide.

16 As you can imagine with the state of the
17 designs not all components have even been identified let
18 alone being able to allocate performance to all those
19 components. So we certainly will proceed down through
20 that structure as far as we possibly can and then--
21 reasonable point in time.

22 MR. MILLER: Can I ask questions here, because
23 this is, if there's one important technical position
24 that the NRC staff has had for the past few years it is
25 this one. Our ability to settle up with you folks and to

1 give you feedback to say we think that your plans are
2 well focused or that they're going to be adequate for
3 licensing critically depends upon your taking the flex-
4 ibility that--60 gives you, trade off one component against
5 another, and I'd be interested in purusing how far you
6 think you're going to be able to get in the hierarchy
7 of issues and information needs or to put it differently
8 how far beyond the overall system do you believe you'll
9 be able to get in terms of specifying what you're inclined
10 to get out of each of the components.

11 MR. SCHULLY: At what point?

12 MR. MILLER: At the time of the FCP. In other
13 words what you're saying is that you're going to have
14 performance allocation specified. You're not certain
15 how far down from the overall system you'll be able to
16 go in terms of laying out that performance allocation.
17 What is your best guess.

18 MR. SCHULLY: When you put it in that category
19 of best guess I think I can answer that particular
20 question. Specification for engineers is a very precise
21 meaning so that there are a rigid set of specifications--
22 so when you say specifications that implies very precise
23 things to me.

24 In this particular case I think we've, we can
25 assign tentative specifications or tentative values

1 I'll say half way down through our structure--but the
2 bottom end of the design is not there. So it's clear
3 we can't go beyond that point. I say tentative specifica-
4 tions or values because the top part of the structure
5 because we do wish to use that flexibility in 62 trade
6 off one system with another system to arrive at the
7 overall components goal. So I'm reluctant to use specifi-
8 cation--assignment of--values. We sort of can't do that.

9 MR. MILLER: Of course the key word here is
10 tentative.

11 MR. SCHULLY: That's right.

12 MR. MILLER: We recognize that, at the beginning
13 of site characterization we're actually going to explore
14 these sites and find out what they're worth and notwith-
15 standing that however, there is a need to settle, for
16 example, questions such as what kind of testing in the
17 underground facility if any will be needed to deal with
18 the questions of thermal effects, and again your answer
19 there depends tremendously on how much credit you'd
20 expect to be taking for the near field, the very near
21 field around the packages and so I trust that at least
22 at that level will be expressing some intent with respect
23 to how much credit you intend to take for the host rock
24 or the--of host rock that could be disturbed by you;
25 how much assigned to the engineer--system.

1 MR. SCHULLY: We certainly have established
2 already some tentative values such as aerial--rock
3 structure. We will continue to work that problem and
4 continue to move that assignment--more systems and sub-
5 systems within the repository site. But I would expect
6 that those numbers would fluctuate; change back and
7 forth as the design evolves.

8 The performance allocation is very--with the
9 design process. That's not necessarily to say that we
10 can't establish reasonable and meaningful experiments
11 to collect the proper data that we need to perform the
12 design; whether the design of a shift is six feet, or
13 16 feet, or 26 feet we know what properties we need from
14 the site and that generally goes to experiments and
15 tests to gain that particular data and in that just the
16 design--

17 MR. MILLER: Let me see if I can approach it
18 this way. That helps me. It sounds like the types of
19 things your talking about specifying and the examples
20 you've given to a great extent the kind of physical
21 things that have to be specified in a design. Part 60
22 is largely a performance based regulation and the kind
23 of allocation that we're talking about, of course, in
24 these, in our comments is of performance, related to
25 performance focused on the performance objectives of

1 60 and 111 or 60 112 whichever the section is in our
2 regulation. Are you anticipating specifying that in
3 performance, not just dimensions of the shaft and aerial
4 power density. Those are important things to have in
5 mind as you consider the plans, but it's well what part
6 of the burden of the, that the overall system will carry
7 in meeting the EPA's standards, and meeting our other
8 performance objectives.

9 MR. STEIN: May I say something? I think it
10 was the last time we met we were on emission plan comments
11 and as part of that Don Alexander presented our plans
12 for establishing or developing and establishing formal
13 allocation of the standards and various components.

14 That general outline is basically what we intend
15 to follow and will reflect that in the contents of the
16 SCP. We will to the greatest extent that we can put
17 tentative performance allocations in the SCP. As you
18 know the SCP is, when it's issued, is not, is not
19 finished. It's the SCP that we provide that triggers
20 our--to proceed towards exploratory shaft but it does
21 the Act does require for updating it every six months.
22 And during each one of those successive updates we intend
23 to focus more and more on the tentative allocations and
24 try to make it more and more precise until we finally
25 get what the performance allocation--

1 From your point of view you want to use those
2 performance allocations to see what the importance is
3 of the various testing that is going to be performed.
4 And we recognize that and we want to do the same thing.
5 So it is important to us that we're, I don't think at
6 this point we're in a position to be more definitive than
7 what I have said as far as performance allocation.

8 MR. MILLER: Yeah, we're not looking for the--
9 now. I guess I'm not certain what you're saying however
10 about whether or not the allocation of performance will
11 be in the FCP or it won't be?

12 MR. STEIN: I said it will be and incorporated
13 into the initial--of the SCP--hopefully we'll have perfor-
14 mance allocation numerical values for all the components
15 and that's what they're asking. I don't know--by the time
16 the SCP is issued.

17 MR. MILLER: Let me--

18 MR. STEIN: Do you think it's important that
19 there be definitive performance allocation for each
20 component of the system--the SCP had come out in accordance
21 with the schedule?

22 MR. MILLER: A simple answer is yes, and if
23 you go back to when we first started identifying this
24 it was when we received the SCR and there are all these
25 potential licensing information leaks that one can talk

1 about. And folks in the DOE side are identifying those.
2 Our people are looking at that and trying to figure out
3 well is this a figure or not, and we kept coming back
4 to well not knowing what your intents is with respect to,
5 not just the things in the--but questions about the scale
6 and strategy of bore holes testing. Sort of what kind
7 of credit are you going to take for pieces of geology
8 in the--system, it is very hard for us to be giving you
9 comments, because our intent is not to ask for anything
10 more than what's necessary and to ask for all that's
11 sufficient, or all that's necessary.

12 We can't do that very well without that and
13 it's been a theme every comment we've made on the--
14 document, mission plan comment, our Janaury letter of
15 last year, so yes it is our feeling that that is needed.

16 MR. STEIN: Is that the simple answer or the
17 complex answer?

18 MR. MILLER: The simple answer is that we have
19 asked for it and it's not something we raise here for
20 the first time today, and if you don't have it you don't
21 have it. But I think the consequence of that is that
22 NRC staff is going to decide that's one of the things
23 that might be important, which might be a lot of things
24 more than you'll ultimately have to deal with. But
25 that's the approach we have to take. It makes your job

1 harder, I guess.

2 MR. STEIN: Well I don't know that it makes it
3 harder. When we talk about things that are tentative,
4 you know, that can be so weak that one questions it's
5 value. We can always put something together that is
6 tentative--say well it's subject to change which is a
7 tentative hold on the--subject. We're trying to make the
8 SCP as meaningful as we can and so we want to put as
9 much precision in the SCP as we possibly can. So I
10 think that our objectives are the same, and I--

11 MR. MILLER: I'm not so--

12 MR. STEIN: But I'm not ready at this point,
13 David, to say just what the performance allocations will
14 be, but it's laid out in this annotated outline here says
15 we are going to provide the performance allocations.

16 MR. ALEXANDER: If it would help you out I would
17 refer you to section 8352, page 63, there's an introductory
18 paragraph there that I think captures a lot of what you're
19 asking for, and it was our feeling that because it was
20 performance allocation or performance goals are so funda-
21 mental in the assessment of the overall performance of a
22 system we felt strongly that rather than deal with it
23 either in chapter six or in chapter seven that we would
24 pull it all up into our planning section. So that's the
25 reason why we put it all in 835.

1 Now in our discussions yesterday the fellows
2 had no problem with putting a section back into six and
3 seven which would be somewhat synonymous with the 6.7
4 in the Reg Guide, which by the way was only in the design
5 section and we felt also should be in the waste package
6 section, had no qualms about identifying as far as
7 practicable some of the numerical performance goals.
8 So, but we also feel that 8352 and the subsequent sections
9 cover a lot of the things that you're asking for. But
10 we're willing to go either way. So I wanted to give
11 you a kind of an overview of where we stood yesterday.

12 MR. MILLER: I think that what I would recommend
13 everybody to, well our best statement of what I'm talking
14 about here I think is in our common submission letter.
15 It's very precise. And we recognize one of the things
16 you tried to in fact put into that comment is recognition
17 of what you're saying about how early on you get limited
18 information and you can't do what you'd like to do which
19 is a performance assessment, and on the basis of the
20 performance assessment allocate the performance of the
21 various components of the system.

22 However, what we think is going to be needed is
23 the establishment of performance objectives, criteria,
24 whatever you want to call it, with a healthy redundancy
25 among them, because starting out you've got uncertainty

1 about each of these factors and I guess it's our view
2 that it'd be wrong to start off with an allocation among
3 the complements of the system which would have you coming
4 out just meeting the EPA's standard. A lot of things
5 can go the other way.

6 Now the judgement call is yours and you know,
7 we're, we stopped at a level of descriptiveness that we
8 felt was appropriate in the rule and you've got to now take
9 the next step, but recognizing that these won't be finely
10 tuned and supported in the same way you do it after
11 you've done site--we feel it is important to set some
12 targets, and you can always back off of those as you learn
13 more about the system, and as you learn that the--
14 geology is as good as you thought it was, or better than
15 we thought it was and--back here. But there are times
16 with a lot of these things, and if some targets aren't
17 set early it leaves you in a situation where at the end
18 it might not add up. It's just performance of the
19 various components won't add up to what has to be.

20 That's the reasoning that we've brought to
21 this, and I guess Ralph waht you're saying is you're going
22 to do the best you can is what I hear.

23 MR. ALEXANDER: A recommendation is that maybe
24 you could give us an example of what you clearly would
25 consider to be a component and what you would consider to

1 be an assignment of a value, and appropriate value to
2 that component.

3 MR. STEIN: Well I think that that's what I was
4 going to ask.

5 MR. ALEXANDER: See there might be, some people,
6 like I feel we might be just missing each other in terms
7 of what exactly we mean by performance allocation.

8 MR. MILLER: I think in the meeting we had on
9 this, based on meeting a year ago, we laid out what we
10 thought were basic components, and again we've always
11 said that it's your fault as to how you want to split
12 this thing up, but kind of strikes you, and it has to
13 sum up, coincide with the question you're trying to
14 answer. The question you're trying to answer is what
15 should be scaled of hydrologic of testing. What should
16 be the scale of any investigations underground, and I
17 think that you've got to chop up the system at least into
18 components that will allow you to answer those kinds of
19 specific questions.

20 I would refer back to the pictures and the
21 diagrams we used in the Commission plan meeting a year
22 ago, where we talked about this question of how we would
23 see breaking the system up.

24 MR. ALEXANDER: Let me try an example on you
25 and see if we're all on common ground. One that I've used

1 a number of times with groups that we met on this
2 question is that, for example, you want to be able with
3 your cannister to withstand a lithostatic and hydrostatic
4 pressure that will be exerted on that can.

5 Therefore you might design that can in such a
6 way that it would be able to resist that loading and in
7 fact you would, as they're doing it right now, you would
8 over design it, as you mentioned earlier. And so you
9 might pick up, you might start off with a six centimeter
10 thick walled can. But in the course of doing your perfor-
11 mance assessment of that can you may find out that one
12 centimeter was quite adequate.

13 The question then, you know, that stems from
14 that is do we lose some credibility, with the public,
15 if we move dramatically say from a six centimeter can
16 down to a one centimeter can. There's a lot of hesitation
17 on our part to put forth a number that is so over designed
18 that it pins us down later on in the licensing process.

19 MR. MILLER: Oh you're going back to what Neil
20 was talking about earlier and that's specifying the
21 thicknesses and physical dimensions and so on and I think
22 you'll be doing that. You did it in the SCR for--there
23 was some description of cannister even in the--and thick-
24 nesses, and such. I assume you'll be doing that.

25 And I guess I'm going back to this discussion of

1 performance allocation and--

2 MR. STEIN: The--performance allocation does
3 relate to the design of the system, those parts of the
4 system that we can control. And I guess basically what
5 we want to do is get together the best performance alloca-
6 tion--that we can but we don't want to be premature in
7 assigning some value that subsequently has to change
8 dramatically or would change dramatically.

9 I think that that in itself creates a lot of
10 problems. I'm sensitive to why you're interested in this
11 and I would ask you to be sensitive too to the potential
12 of assigning performance goals prematurely.

13 Now just what is premature is something that
14 needs to be worked out and that's, well that's what we're
15 still working on as far as putting the contents together
16 of the SCP.

17 But I think as Don points out, we have
18 attempted to satisfy your needs that, and your desire
19 for performance and our own too, by providing you with
20 a rather detailed outline of just what our intent is
21 in section 8.352.

22 MR. MILLER: I think this is something we can
23 talk about a bit more in the caucus. I hear what you're
24 saying and I think you hear what we're saying. It is
25 important though to keep a distinction, make a distinction

1 between things that are related and that is these physical
2 dimensions, the physical specification of design type
3 things and performance goals, and the things that are
4 stated in terms of related EPA standard and the performance
5 objection of part 60 are definitely related. So I think
6 that, okay.

7 MR. ALEXANDER: Alright. I guess we'd like to
8 let Leo continue on the same course. Two more comments
9 to answer. We're going to run out of time.

10 MR. SCHULLY: Comment number eight addresses
11 section 8.352 and I believe we've actually discussed the
12 first part of the question at some length. Going on to
13 the second part of the question we agreed with the
14 comments and will add some wording into section 8.3 that
15 stipulates we will establish a relationship between the
16 site characterization program and the system performance
17 roles.

18 Comment nine deals with the lack of the word,
19 or the use of the word guidelines rather than the NRC
20 performance objectives and we agree with the comment.
21 We will make the appropriate corrections to the section.
22 I believe that deals with those questions.

23 MR. ALEXANDER: Thank you, Leo. Another major
24 point that Ed brought up in his discussion and we're
25 interested in also trying to clarify for you are the

1 questions related to waste package and geochemistry and
2 Mike Revelli would write some comments on those.

3 MR. REVELLI: Thank you Don. Comments number
4 10 and 11 are the two that related to geochemistry and
5 the package sections of the annotated outline. The
6 first of those comments number ten is section 4.7, the
7 title, excuse me, section 7.4, the title should be changed
8 to Waste Package and Near Field Geochemistry Research
9 and Development Status to reflect the inclusion in this
10 section of some geochemistry information requested by
11 section four of the Reg Guide, and on our comment sheet
12 you'll see that we agreed with that. In fact it was not
13 our intent to exclude a discussion of relevant geochemical
14 processes in the waste package deal there.

15 And we will change the title of that section
16 7.4 to read Research and Development Status, Waste
17 Package Design and Geochemical Reactions.

18 The next comment, number 11 in section 7.4, it's
19 really, can really be broken down into what I think are
20 three comments, three separate comments.

21 The first is a correlation between the Reg
22 Guide and the annotated outline indicates that several
23 topics covered in Reg guide section 4.2 would be covered
24 in section 7.4 of the AO. However report details from
25 the Reg guide in 4.2 do not appear in the AO in 7.4.

1 And in taking a closer look at that we agree with your
2 observations taht some of the details that were lumped
3 together in the Reg Guide in geochemistry were intended
4 to be split out into the appropriate subsections.

5 That includes the far field geochemistry that
6 is discussed in section 4, chapter 4. There is also a
7 repository scale or intermediate scale regarding the back-
8 fill and the seals, the chemistry of the seals. That's
9 discussed now and we have indicated that in chapter 6 and
10 then of course the geochemistry on waste package scale
11 is clarified in chapter seven.

12 What we have done is make some changes of the
13 text in these sections and those revisions are indicated
14 on pages 13 and 14 to show how those, how that logic can
15 be traced through the subsections or where to look for
16 the appropriate scale geochemical discussions.

17 The second comment elaborates on the first part
18 and thus the conent of 7.4 are not adequate to insure
19 that the information on your field geochemistry specified
20 in 4.17 will be presented in either section 4 or section,
21 4.2 or 7.4 of the AO.

22 We felt that when this new identification of
23 where this scale related geochemical concerns were
24 discussed that chapter, or section 7.4 does indeed address
25 all the relevant geochemical processes of ongoing waste

1 package scale and what we have tried to do there is take
2 the geochemistry section that's described in section 4.2
3 of the Reg Guide and correlate that with where in the
4 annotated outline those topics are discussed and that
5 correlation table is presented on page 13 of the comments.

6 Lastly the comment is that a format for chapter
7 seven like the one used in section 4.1 would help assure
8 that the information requested would be provided. In
9 looking at 4.1, well let me start the other way. We feel
10 that the purpose of chapter seven is to both integrate
11 both the physical and the geochemical processes that are
12 involved in the design effort and we feel that using a
13 format similar to 4.1 of the annotated outline would over-
14 emphasize just the geochemical aspects of the waste
15 package R&D program. But it is our intent to cover all
16 of the relevant geochemical processes or interactions
17 applicable to the waste package scale in chapter 7; the
18 repository scale in chapter 6; and the far field in
19 chapter 4.

20 MR. ALEXANDER: Do you have any need for clarifi-
21 cation of any of that discussion? I think it's all there.
22 Look very carefully to make sure that all the geochemistry
23 was carefully covered. I think it's all there. Okay.
24 Moving on to QA.
25

T2,s1

1 MR. RHODERICK: Well we have comment 12 and it
2 has to do with the QA's during site explorations, and
3 if you will look in the annotated outline we cover under
4 8.6.4.1 quality assurance during site exploration, and
5 it seemed that the NRC comment seemed to indicate that
6 they felt as if we were not going to give enough detail
7 in this section as they would like to see.

8 Now we would suggest that we would delete in
9 the second sentence the word general to give you more
10 of an indication that we don't intend to give you a
11 general overview, but intend to identify what quality
12 assurance programs were in place during the site screening
13 phase of our program.

14 As far as that data being used in the licensing
15 application DOE realizes that if we do use information
16 that was collected during the site screening phase that
17 it will be DOE's responsibility or the burden of proof
18 to demonstrate that that data is of adequate quality.

19 Since 10 CFR 50, appendix B is identified in
20 part 60 it is to be applied to site characterization and
21 everything beyond that, in some instances in our program
22 a stringent appendix B program may not have been applied
23 to some of our site screening activities.

24 We do realize that if we include that information
25 in our license application we will have to demonstrate the

1 quality of that data.

2 Your next comment had to do with section 8.6.6
3 and identifies that in that section we only discussed
4 16 of the 18 QA criteria. Our response to that would be
5 that the QA criteria one and two which is the organizational
6 QA program are adequately covered in section 8.6.1; 6.2;
7 and 6.3, which discuss the organization and the QA programs
8 for DOE.

9 We would propose to add a sentence in section
10 8.6.6 to clarify this which would read, "Since two of the
11 18 criteria of appendix B have been previously covered
12 the remaining 16 criteria will be discussed in this sec-
13 tion," and go on to say this includes and identify the
14 16 criteria.

15 Your comment 14 deals with the quality assurance
16 program to be implemented for the design of the repository.
17 Section 8.6.4.3 we identify that we will discuss the
18 quality assurance program to be applied to repository
19 and waste package design.

20 You may be having trouble with the word general
21 again. We would delete general and if necessary we could
22 add a sentence saying this section will describe how the
23 QA criteria three which is the design control criteria
24 will be implemented in the design process.

25 Your last comment had to do with the use of

1 NQA, one, under the heading of "Regulatory Requirement."
2 That's in section 8.6.2. We agree with your comment that
3 NQA one is not a regulatory requirement and we propose to
4 change the heading for 8.6.2 to just read requirements for
5 the quality assurance program.

6 MR. ALEXANDER: I propose that before we adjourn
7 for closed sessions that we'd like to add to or repeat
8 the last or any additional comments that you might have
9 so we walk away with a complete set. So if you just go
10 over the two that you've raised.

11 (Pause.)

12 MR. MILLER: Ed there are a couple of additional
13 things that we can ask you now. It's a question about
14 your outline and recent comments. We may have more after
15 we get a chance to talk among ourselves on what we heard
16 this morning.

17 MR. REGNIER: Let me, particularly, the ones
18 I mentioned previously were in reference to, I think
19 they're most easily referenced on your comparison on
20 page 82, which is on page roman numeral 11 of the Reg
21 Guide, particularly where you've deleted the word defini-
22 tive. We'd like some discussion as to what you think the
23 significance of that is.

24 And also then on page 83 of the comparison and
25 page roman numeral 12 of the Reg Guide on the deletion of

1 the requirement to provide all the principal consultants
2 and outside contractors and research groups to identify
3 them. We're wondering if, why that would be a problem.

4 MR. ALEXANDER: Don't have any others? Then
5 I recommend that we move to our closed sessions. Want
6 to give you an opportunity to make any phone calls that
7 you might need to make and offer you my office 7F 088,
8 if you need to use that.

9 MR. HEAD: There are other offices up there
10 without telephones for working.

11 MR. ALEXANDER: Yeah. I think it might be more
12 convenient if you were using 6 A 110 which is right down
13 the hall I believe. It's around the corner.

14 MR. HEAD: Who has the key?

15 MR. ALEXANDER: I can escort them over there.
16 I'll take them over. They can use our offices upstairs
17 if they prefer not to use 6A 110. I think that might be
18 easier for you to work up there.

19 (Whereupon at 10:40 AM, the meeting was
20 adjourned to meet in closed sessions and reconvene in
21 meeting at 1:30 PM.)
22
23
24
25

T2,s2

A F T E R N O O N S E S S I O N

(1:30 PM)

MR. ALEXANDER: Before the meeting returns to the specifics of the AO, I would like to make sure we all understand the scope of the SCP update I referred to earlier.

Following submittal of the SCP, the DOE will periodically report site characterization activities to the NRC, the States, and the public. The specific means by which the DOE will accomplish such reporting has been referred to as SCP progress reports, SCP updates, and other terms. Whatever term may be used, the intent of the DOE is to report site characterization progress in the words of the Act, "... not less than once every six months to the Commission and to either the Governor and Legislature of the State in which such candidate site is located, or the governing body of the affected Indian tribe where such candidate site is located, as the case may be, on the nature and extent of such activities and the information developed from such activities."

So, the first speaker then would be Mike Voegele who would talk to us a little bit about our position on why we deleted the word definitive and proposed modification of the wording. Mike.

MR. VOEGELE: Do they have copies of our--

1 MR. ALEXANDER: Yeah, they have copies of it.

2 MR. VOEGELE: We have a two paragraph response
3 here and it's an either or situation. If you buy off on
4 the first part there's no need to go to the second part.
5 If you have trouble with the first part we'll offer the
6 second part up as well.

7 We, the word definitive was removed from the
8 annotated outline text because most of the members in
9 the working group who prepared the annotated outline
10 text felt it would not be appropriate to classify each
11 text as being definitive.

12 We recognize the material you're after has to
13 be explicit and detailed and it's also recognized that
14 all plans and procedures will not be complete in time for
15 submittal of the SCP. I'm interested in your reaction
16 to that.

17 MR. MILLER: Well I want to jump ahead a little,
18 but I think the second part of this sounds very good to
19 us.

20 MR. VOEGELE: Okay. Well then that's our
21 caveat. Basically we felt that if you wanted the word
22 definitive remain in our annotated outline we needed to
23 add a couple of sentences which showed you what we felt
24 definitive is. The sentence that we came up with were
25 where the word definitive is acceptable--one explicit

1 one, to note explicit description of test procedures;
2 two, for prelicensing consultation between DOE and the
3 NRC, and two recognize the maturation process of phased
4 approach and testing which reflects and responds to the
5 results of ongoing systems--assessment. Those words
6 actually bring back 417 and we were focusing on those
7 words when we decided that we really--we interpreted
8 definitive.

9 MR. MILLER: You don't mean definitive in the
10 sense that you never change it, and that's why we had
11 that long paragraph in the, in the Department Content Guide
12 talking about flexibility. So I would prefer to keep
13 it in and welcome public comment. It'd make it easier.

14 MR. VOEGELE: Okay. I believe what we concluded
15 this morning was that this is either to be a footnote or
16 an additional sentence or paragraph.

17 MR. MILLER: I want to raise some questions here.
18 about your outline on this same subject. The chapter 8 was
19 reformatted substantially from what we had in the Guide
20 certainly. I think in many respects it's greatly improved
21 formatting.

22 We gave a lot of attention however to chapter
23 8 in our, I guess, revision to a number of points which
24 from our experience on the Hanford SCR and from other
25 things we concluded were emphasized, and it relates to this

1 question of level of detail; question of definitiveness.

2 In, and the concern we have, the question I'd
3 like to ask relates to the stuff that's in our Reg Guide
4 in both the general section which kind of introduced
5 as generally what we're looking for with respect to plans,
6 and carries through even a more detailed session which
7 describes more specifically what we'd like to see as you
8 present plans.

9 And specifically they relate to the concern
10 that for every test ou run there are certain limitations,
11 and so it's very important to talk about what the limita-
12 tions of various tests are, and if you see, you'll see
13 that phrase throughout that each part of chapter 8, you
14 see it in the introduction. You see it in the next level
15 of chapter 8. you see it in the details, in fact I think
16 in tables 8.1 where we ask for, where we kind of lay out
17 an illustrative format for presenting your plans.

18 Related to that discussion that for every test
19 you run you can talk about, you can associate a certain
20 precision or accuracy with a test a measurement of the
21 solubility, or a measurement of a hydrologic parameter
22 and so on.

23 And then related to that another important
24 point that we raised was the need to address significant
25 options in your, that you face in laying out these peak

1 programs. You can get information in different ways
2 and of course what the staff is looking for are, is have
3 the investigators considered various options or did they
4 pick up the first thing that came to their mind and
5 measure it that way.

6 These are the kinds of things that cause everybody
7 fits if they're not addressed in some way in the licensing.
8 And they're all related; limitations of tests; precision
9 and accuracy associated with these tests and then what
10 are optional ways to reduce the uncertainties to get
11 the level of precision and accuracy we need.

12 We note that in the front part of the outline
13 in the introduction you did in fact pick up verbatim
14 the words we had in the front talking about kinds of
15 questions the staff will have in mind when they review
16 the document and those were to show up there. But, given
17 the experience in the past we think it's very important
18 that when you get to each of the detailed sections of
19 8.3 where you talk about the plans of the site, repository,
20 ceiling, and so on, performance assessment and so on
21 that you identify the need to address a few points.

22 Now maybe the thing to do is turn it around
23 and ask you what was it in our section 8.3 and 8.4 and
24 in our table 8.1 that you, what was the reason for not
25 including those points? Is there a problem you have with

1 including that?

2 MR. ALEXANDER: I'm going to defer the question
3 to Mike Voegele.

4 MR. VOEGELE: If you don't mind I'd like to
5 just step back a little bit and try to give you some
6 feeling as to why we rearranged chapter 8 and then try
7 to go from there.

8 First of all we, it was made very clear this
9 morning, that the reason we undertook this annotated
10 outline exercise was to make sure that all three of
11 the projects we're going to be writing SCP's gave you
12 a document which was based on similar understanding, so
13 that we didn't run into a situation where the SCP's
14 didn't even look remotely alike because they'd been
15 interpreted differently. Okay. That's the only basis
16 we really have for undertaking writing something in
17 addition to Reg Guide 417.

18 Now when we did that, when we made that step
19 we recognized that perhaps a lot of, there's a lot of
20 difference in the way in which programs--and USI projects
21 in particular approached the concept of what is issue
22 definition, and issue resolution.

23 And so basically that was the focal point of
24 where we were writing around chapter 8, why we had to
25 do this.

1 The, I can answer one of your questions directly.
2 There was no intent to suggest that table 8.1 was not an
3 adequate way in our viewpoint to present the data. But
4 not having done that and not having had it reviewed our
5 main reaction was to not limit the way in which we
6 presented this data.

7 The detailed aspects of that, I guess the bottom
8 line of what I'm telling you is that it's highly likely
9 that you'll see the test plans written up according to
10 the formatted table 8.11. That's not something you should
11 not expect to happen. That's something you should probably,
12 stop me if I'm wrong, it's something you should expect
13 to happen.

14 MR. MILLER: Yeah.

15 MR. VOEGELE: Alright. And there was no
16 reason for not including that 8.1 format in our annotated
17 outline other than the fact that we were playing with a
18 lot more in our plans for writing up these test plans
19 than what was included in table, your table 8.1.

20 MR. MILLER: Okay. Well let me go back to what
21 I said before. The format is not as important to us--

22 MR. VOEGELE: Right.

23 MR. MILLER: --as the content and the specific
24 points I'm making here is not so much--

25 MR. VOEGELE: I've got that.

1 MR. MILLER: About the form but the content
2 of why, what was the reason for not carrying through with
3 the sections, that the people who are actually going to
4 go off and work on this have kind of in front of them
5 a check list, if you will, of things that have to put
6 into their description of plans; not carry through
7 this concept of explicitly addressing the potential
8 limitations of various, of the test methods that are
9 going to be employed--that I foresee as an alternative.

10 Those are the first questions that NRC staff
11 will always ask when reviewing what is the worth of this
12 data.

13 MR. VOEGELE: Okay. To take those two specific
14 details you asked for, with respect to the first one you
15 will find it explicitly spelled out in our text. Okay.
16 For example on page 55--

17 MR. MILLER: Where is there?

18 MR. VOEGELE: Okay, we're talking about that.
19 This is general guidance for the way in which one would
20 write up a test program to fall under, for instance,
21 this was the site program, or the--

22 MR. MILLER: Can I make a suggestion?

23 MR. VOEGELE: Sure.

24 MR. MILLER: It would be, we recognize that
25 you picked up again the general words that we had in our

1 general section in chapter 8 on page 55. That's supposed
2 to be carried through across the board.

3 I would suggest that we come to the next level
4 for each of the five areas that you've gotten this
5 thing broken down in terms of--that you pick up again
6 the question of--

7 MR. VOEGELE: Limitations?

8 MR. MILLER: Of explicitly addressing limita-
9 tions.

10 MR. VOEGELE: And options.

11 MR. MILLER: Describing the level of precision
12 and accuracy and discussing significant--when you look at
13 our chapter, our section in chapter 8 you'll see it covered
14 at each level of detail.

15 MR. VOEGELE: Okay.

16 MR. MILLER: The broad level of detail.

17 MR. VOEGELE: There's no problem. This, you
18 will notice page 55 is an introductory section, and
19 each subsection of 8.3--be inserted literally in each of
20 those sections. That's not a problem.

21 MR. MILLER: So in the more detailed description
22 you've said in those--

23 MR. VOEGELE: We could put those items in there,
24 yes.

25 MR. MILLER: That would resolve the concern then.

1 MR. VOEGELE: Fine. That relates to this
2 question of level of detail and that question always
3 comes back to us well what do you mean? What kind of
4 detail are you looking for and that's why I bring this
5 up in that connection. Let me see if there's anything
6 else that relates to this question of tentative level of
7 detail.

8 The other phrase that we picked up is not
9 carrying through to each level in this, in your outline
10 is addressing the representativeness of data. That ties
11 in with limitation and--you see it's in here in the general
12 introduction. But again I think it's kind of important
13 because of the way you do your work, like we do our work
14 at--and people going off and working by themselves for
15 awhile.

16 MR. ALEXANDER: My guess is that way that the
17 writing would be managed, particularly with regard to
18 8.3 is that each of the individuals responsible for
19 writing, let's say 8.3.1 or 8.3.2 would be given that
20 frontice piece and they would work from that and the
21 detail, I think, consistently throughout. That was our
22 intention all along and that's why we pulled all the common
23 ground up front. So I think there was every intent--

24 MR. VOEGELE: Could we resolve your concerns,
25

1 rather than retyping page 55 for each of these four
2 locations we've selected by making the first bullet a
3 reference to subsections--to this page full of bullets to
4 make sure that we followed these general guidance topics
5 and in addition follow that. Or would you rather see more
6 pages of text?

7 MR. MILLER: I'm here sort of representing a wide
8 staff of folks who, the folks who created 8.1 to begin
9 with and I know they feel very strongly, this is not
10 something that was settled in our preliminary conference.
11 They felt pretty strongly about the need that have in
12 there a kind of check list, begin at each level a generic
13 level, and then the level that you're sure the people
14 preparing the plant will have in front of them when they
15 walk through. So whatever way you do that, whether you
16 tie it back to a reference, I'm not talking about a lot of
17 words.

18 Even if you see it now, even by the way you
19 layout 8.3 there is repetition--there are elements that
20 you repeat: wide test study analysis--results will be
21 used and I think we're not asking for any different than
22 that. We're trying to be reasonable.

23 MR. VOEGELE: Just tried to err on the side
24 of redundancy just to make sure we covered all the bases.

25 MR. MILLER: In the--already done that.

1 MR. VOEGELE: Can I jump ahead to the third
2 comment that I've got here, a question on listing of
3 contractors I'd like to refer that to Tom Baillieul.
4 Tom if you don't mind I'd like you to represent us on
5 comment 16 which is on the back.

6 MR. BAILLIEUL: I guess our feeling on the reason
7 why we were not calling for a specific listing of all the
8 contractors down through the lower levels for the SCP was
9 the fact that through the course of site characterization
10 the subcontractors that will be associated with various
11 aspects of the research program are likely to change
12 and therefore it's not really practical to try to list
13 them all in the SCP and in the updates.

14 Much more important we feel to discuss who the
15 fine contractors are--research organizations that are
16 not likely to change. We do intend to have all the
17 information on subcontractors made available to the NRC
18 through their on-site representatives, and this can be
19 updated as need to be, as these groups change. And we'd
20 also like to point out that all the subcontractors will
21 be subject to the QA programs developed by the prime
22 contractors, as these two-way requirements flow down
23 to them and as appropriate all the subcontractors will
24 be subject to QA audits. It's just if you list them,
25 if you try to make a definitive list it's going to change

1 on you.

2 MR. MILLER: We have no problem.

3 MR. ALEXANDER: Okay. Then let's move back to
4 Leo Scully and talk about recommended--for performance
5 allocation question one more time. Leo, the second page.

6 MR. SCULLY: Needless to say we had another
7 spirited discussion, a long series of spirited discussions,
8 and actually our conclusions based upon our assumption
9 that these people are really concentrating on post closure
10 aspects of the performance allocation.

11 So we would suggest going back to section 8.3.5.2
12 and adding in the footnote that you see in your handout
13 there, with respect to performance, preliminary perfor-
14 mance--will be provided in the SCP. Then we don't need
15 to introduce the paragraph in section 6.3.8. or 7.2.

16 MR. MILLER: Where exactly would that--

17 MR. SCULLY: Well if you look at the third line
18 where it reads, "...to describe the performance goal,"
19 we would ask--the goals portion and put a footnote at the
20 bottom to the effect limited performance goals will be
21 provided in the SCP. It talks about plans where we will
22 provide the preliminary--

23 MR. MILLER: I think that faced with--what
24 I'd like to do is come back and ask you some questions
25 about what you provided us at lunch time in these notes

1 here that relates to this same thing.

2 MR. SCULLY: Okay.

3 MR. MILLER: We talked about replacing, not I
4 don't know how many people have copies, typewritten
5 material which stated our comments--provided to you
6 today. This one on performance it says, it talks about
7 replacing the text of 638 with the following and it goes
8 on for about three or four paragraphs.

9 MR. SCULLY: Right.

10 MR. MILLER: And it talks about their--numerical
11 values will be provided. This would also be done in
12 addition to what ou're talking about. Is that right?

13 MR. SCULLY: Well based upon the conversation
14 this morning we developed the opinion that you are more
15 concerned with the post--preliminary numbers.

16 MR. BAILLIEUL: In other words this original
17 response to the base--is based on our understanding that
18 you were more interested in the preclosure design standards.

19 MR. SCULLY: Right.

20 MR. MILLER: Well we're interested in both.
21 I think our comment this morning sounded as if you were
22 concentrating mainly on preclosure and our comment in
23 response to that was that that's fine. That'll undoubtedly
24 be even a part of what you provide in the way of conceptual
25 design.

1 But what we're looking for is in fact this
2 post closure part of the allocation of performance for
3 the post closure period. So our emphasizing that was in
4 more response to what I thought you were saying. We're
5 interested in both.

6 MR. SCULLY: Okay.

7 MR. MILLER: But what, we focused on this during
8 the lunch hour and what I'd like to do is ask a few
9 questions about what's written here.

10 MR. SCULLY: Okay.

11 MR. MILLER: Now I guess I should read this
12 because I don't think this is something everybody has.
13 Is that correct? Page seven is what I'm--

14 MR. SCULLY: Right.

15 MR. MILLER: I think the key paragraph here
16 is the one, the first one that talks about preliminary
17 numerical values with performance goal design criteria
18 to--systems will be provided to--repository, and it goes
19 on from there. The design involved will be divided to
20 a complement level.

21 I guess our question, our first response is
22 that sounds like what we're after. But we have questions
23 about what do you mean by repository systems, and what
24 do you mean by components. Again it's this question
25 of how far down do you expect--

1 MR. SCULLY: Okay.

2 MR. MILLER: How do you expect to be breaking
3 this thing up. If you'll comment on what you had in mind;
4 what those two phrases say.

5 MR. SCULLY: To me there is more than one level
6 of systems and there's more than one level of components
7 in a sense. There are some systems within a system--
8 okay. We can go part way down through that hierarchy in
9 systems and subsystems but in many cases we don't have
10 components even refined in the design at this particular
11 point, so we really can't assign those values for an
12 undefined component. You can't reach that level initially.
13 Initially it's the design involved in components and
14 possibly even more levels--then we can divide the
15 previously assigned values into lower levels of resistance
16 and eventually to components.

17 MR. MILLER: What are some examples of what
18 you're thinking of here, both with respect to natural
19 systems and the engineering system.

20 MR. SCULLY: Well let me take the engineering
21 system for example. You will have safety related communi-
22 cation systems across the site. For example to tie
23 different facilities together and into say, a control
24 situation. Within a particular building you may have
25 a subsystem of collection, data collection instrumentation

1 control--and so forth that ties into the main system.
2 Within a particular room you'll have smaller levels of
3 systems or, until you eventually get to the transducers.
4 That would be an example where you have a subsystem
5 within a system that--

6 MR. MILLER: That's preclosure.

7 MR. SCULLY: That's preclosure, yeah. And so
8 you have different levels of systems and eventually you
9 get to components. If you look at all the different
10 types of things like that you can see--ventilation systems
11 again preclosure thing, so you end up with a total
12 ventilation system within that you have a surface system.
13 You have an underground system. Within that you'll have
14 mining systems, and you'll have waste storage systems.
15 So you have different degrees of systems within a system
16 and eventually you get to the component.

17 We can work part way down through that structure
18 but we can't get to the bottom level. We can't assign
19 component values at this particular point. Eventually we
20 will. That's what the design involves.

21 MR. STEIN: Let me see if I can--in times of
22 safety there's an engineer value system, he has a system
23 for the performance goals of the system and again from
24 that performance goal for a system that involves more
25 performance goals for individual components in that

1 system, like performance goals for the waste--for the
2 waste cannister; for the waste packages that is around
3 it; for the backfill. Is that it?

4 MR. MILLER: Yes. We're interested in both
5 what Leo was talking about which is related to what's
6 on the cue list, preclosure. They break it down into
7 two parts, preclosure--

8 You were talking about trying to identify what's
9 important preclosure, and that's the essential to estab-
10 lishing the "cue list." But then also post closure
11 it's doing exactly what you're talking about Ralph.
12 In that context what does the repository system and
13 component mean in the paragraph that you proposed here?
14 See repository system, what is it you had in mind post
15 closure?

16 MR. SCULLY: I'm trying to think back to your
17 examples on--emission plan meeting, trying to break down
18 the systems.

19 MR. ALEXANDER: Well in the post closure level
20 basically what Ralph just identified is in my opinion
21 the essence of the kinds of subsystems that I think
22 many of us have talked about dealing with.

23 For example the site on a repository wide
24 scale, a site itself could be treated as a subsystem.
25 Within the site you might break the subsystem down into

1 factors like the hydrologic system versus the geochemical
2 retardation that might be involved in reducing releases
3 to the accessible environment, etcetera.

4 And so in a post closure sense it's basically
5 what Ralph defined. And whereas in the preclosure sense
6 it's actually what Leo defined. And one of our fall back
7 positions was that if this is what you had in mind we
8 would feel comfortable in putting in the paragraph that
9 we developed for the preclosure kinds of things in six
10 and seven. And I'll also put in this one liner, whatever
11 it is, this footnote to eight so that we have covered all
12 those bases. And I think that we have to caveat it by
13 saying we can only go as far as we can go by the time
14 the SCP is issued and there will definitely be refinement
15 with time.

16 And so if you look at eight in particular the
17 way that it's organized allows us to go through a refine-
18 ment process and I think it's very important that we
19 maintain that flexibility through time. And you and your
20 documents have noted that it's an iterative process and
21 we're going to have to go through that process. And so
22 I think if we make the additions that were recommended,
23 this one that we've added plus the ones this morning, we
24 can be comfortable with it. With the caveat that we can
25 only go as far as we can defend it.

1 MR. MILLER: Well I understand that and that's
2 kind of why we're kind of, we've been repeating ourselves
3 a little bit on what definitely the issue is, but I'm
4 focusing on specific words here that are in your paragraph.
5 I'm trying to understand, if what you have in mind in the
6 way of repository systems, I think have been discussed.
7 There are subsystems, let's say the subsystem of the site
8 is hydrology component, the geochemistry component, and so
9 on, I think that's the kind of thing we're looking for.

10 If you have in mind that being a component
11 which this paragraph suggests, kind of comes later than
12 I think we do have a diconnect. See I'm trying to focus
13 on what are examples you had in mind by repository
14 systems and if your meaning is you're talking about what
15 Ralph talked about, that would be satisfactory.

16 MR. STEIN: Again, let me go back to where we
17 were talking about before. We want to provide as much
18 information as we can in the SCP. We don't want to put in
19 component values prematurely. We don't want to put in
20 numbers that might have to undergo changes. That's what
21 the concern is if we break it down too far. We need to
22 talk about, we talk about the system we talk about what
23 the Reg Guides say for--system. Obviously that is a
24 requirement. That is a performance goal. That or better.

25 The EPA standard for an overall site is a

1 performance goal, and I think that--helps. It's a
2 question of breaking it down into smaller components
3 and putting performance goals into smaller components
4 and I feel somewhat uncertain about. But I understand
5 completely your desires and I would like to tell you that
6 to the extent that we can we want to do the same thing.

7 MR. WOLF: --the broadest level of the EPA
8 standard and that is the component values. Whereas a
9 large part of what we're talking, the allocation perfor-
10 mance goes directly to the regulation in part six where
11 it says there are certain values or such other numbers
12 as the Commission may specify or approve. And it's that
13 level in between that is so critical because if, for
14 example, ground water travel time, you're thinking of
15 the system with respect to this is not a thousand here
16 but 800, that effects how we approach our review and look
17 at everything specifically. So it's absolutely essential
18 that there be a focus on allocation performance, specifi-
19 cally in terms of closed part of the regulations, that
20 commonly there is some discretion. Do you want the
21 Commission, do you think that you will ask the Commission
22 to exercise that discretion, and if so what did you think?
23 How much modification of the numbers in part 60 are you
24 thinking about, as you approach the site characterization
25 program. That's, I'm not sure--

1 MR. MILLER: Well that's one issue and that
2 is one thing that we can be looking for. But beyond even
3 that what Jim is talking about is specifically in the
4 waste package area, the range that allows for, that is
5 stated on lifetime. There is a--given for, given on the
6 travel time; given on even release from nuclear--systems
7 and I think what he's saying is if you've got an intent
8 now--even tentative of taking a--to prove that you
9 can get by with less than say a thousand year cannister
10 than that ought to be--less than ten to the minus five
11 is a release rate or greater I say to put forward.

12 But even beyond that when you take the engineer
13 system that is in fact regulated for the waste package
14 you do have a number of complements and what this whole
15 thing boils down to is a question of what are the issues
16 that we haven't resolved with respect to waste, with
17 respect to packing. What data do we have to collect?
18 What tests need to be run and that's where our people
19 are going to be having a very difficult time trying to
20 comment to you if in fact they don't have an idea of
21 how much reliance you expect to be putting in waste
22 form that is against, waste cannister as against the
23 packing around it.

24 So it's at the level that Jim was talking about
25 and even more detailed than that that we feel we need some

1 sense of where you're coming from and where you're inclined
2 to aim in order to be able to comment on how much is enough.

3 MR. STEIN: How about, for the purposes of this
4 meeting in the annotated outline itself other than the
5 explanation and the closure on understanding each other--
6 use the annotated outline which is generally satisfactory
7 as it is now and--is not being the subject of a special
8 discussion between us in the near future, and really try
9 to close on it then.

10 Because, you know, the comment that Jim made
11 I think is very helpful, at least one part and I think
12 if we're closing we're not missing each other by very far
13 but I think we need to have more discussion. And I think
14 that what we're trying to do right now is focus on
15 whether these words are of general scope of the subject
16 so that we can proceed with the preparation of the
17 document, recognizing that the contents still need to be
18 defined, you know, not the outline.

19 The outline is okay, and I think that we can
20 close on some of the contents that are near term and--
21 barrier.

22 MR. MILLER: Yes. In fact what I'm trying to
23 aim at, come to closure today. If we can't come to
24 closure today that's fine. The key words here are what
25 do you mean by repository system. What do you mean by

1 component and I think if we get past, we'll just spend
2 a lot more time discussing it. But that'll have to be
3 a caveat because our answer is that okay; are these
4 words okay is we're not sure.

5 MR. STEIN: I understand what you're saying.
6 But we need to have some more--on this. I think that
7 the words generally, I think will serve the purposes
8 of moving ahead. The specifics of the interpretation
9 of them is a subject that can be worthwhile to cover
10 in more detail in the near future.

11 MR. MILLER: I think in the near future, for
12 your benefit, and you don't want to have it hanging over
13 your head the spectre that--throw back at you.

14 MR. STEIN: No. As you know we're trying to
15 arrange a whole series of meetings with--topics. This
16 is a--

17 MR. ALEXANDER: Can I just summarize where I
18 think we ought to be on this issue? We are quite willing
19 to add in a statement to eight which I think covers your
20 concern about how things are to come into compliance
21 with the regulations. And I would like to point out for
22 Jim's benefit that we had a considerable discussion with
23 that, because of sensitivity to that. And on page 65 of
24 our outline, although it's maybe not as explicit as you'd
25 like it to be, in 8353 we show how the performance

1 assessment calculations are brought all together at the
2 end of this section which goes through the allocation
3 business, and we pull it all together and show whether or
4 not we can comply with the regulations. So we are very
5 you know, very keyed into the need to do that.

6 Now with respect to preclosure items then I
7 would recommend that we adopt words similar to what
8 Leo has already pulled together to make sure that the
9 base is there. And I think if we've done that in six and
10 seven, added a line in eight I think we have gone about
11 as far as is productive for today.

12 MR. MILLER: Yeah, I think just for the record
13 here, the folks who are not following our discussions
14 on the QA earlier, a central issue in our QA discussions
15 has been the need for DOE to develop a rationale for
16 the Q list, and that's directly tied to what you were
17 talking about. We would expect, I guess, to see that in
18 the SCP. You say you're going to provide that. There
19 would be discussions as you go ahead and produce that
20 before the SCP comes in.

21 But I guess the way to leave this then to
22 summarize from our point of view is I think we'd like to
23 see the word that you gave us in page seven, in addition
24 to the footnote. The thing you gave us would have proposed
25 throwing this thing out and just a simple footnote.

1 I guess it would be helpful to ask to keep
2 these words in the footnote too, and then we'll discuss
3 what those mean.

4 MR. ALEXANDER: I think we've completed all
5 of our comment, Mike?

6 MR. VOEGELE: I was wondering if we could just
7 go back to the definitive question again, the question
8 on definitive. We had a short caucus here across
9 the table while you were attacking performance allocation
10 and our memories are sort of a little more refreshed than
11 they were and it seems to our recollection that it was
12 the principal investigator contact in the table in 8.1
13 that was giving us the trouble and not the content.

14 And if you would accept, we would propose
15 putting something like--back in our annotated outline
16 and the part that you might expect to see changed would
17 be at the bottom part, the contact and investigators
18 where we would go for wording much like we were talking
19 about--

20 MR. MILLER: I think that sounds fine. I think
21 the one thing that accompanied table 8.1 and I'd have to
22 go back and look at it, so it was where there were some
23 other sections that were talking about specific and
24 options which I don't think show up in 8.1. So look at
25 the text as well. I think you'll find the key words that

1 I was focusing on, and if it's a combination of going
2 back to 8.1 and picking up that other thing.

3 MR. VOEGELE: There was never any intent to
4 lose any of those documents.

5 MR. MILLER: Let me just say it's our impression
6 that a good faith effort has been, it's clearly typicated
7 by the way you laid this outline out, and I don't think
8 that there's any question on our part that there was
9 any intent to kind of gloss over stuff that we had. That
10 jumps out at us is that you made a big effort.

11 MR. STEIN: It has been a big effort.

12 MR. MILLER: There is one thing that I'd like
13 to go back and follow up on from what you were discussing
14 before and that has to do with issuance. This is the
15 other thing that strikes us about chapter eight and in
16 the revisions. In the reformatting of it we're afraid
17 something else has kind of fallen out.

18 Now again what I'm going to talk about is in
19 certain sections of your outline but we don't think it
20 has the emphasis that it needs and that is explicit
21 tie back to 10 CFR 60 as kind of the basis for the
22 rack out of issues.

23 Again if you look throughout chapter 8 in the
24 introduction and then the next level of introduction and
25 even the details you'll see repeatedly the time issued

1 back to the specific findings that we have to make against
2 all those performance objectives criteria requirements of
3 part six, and I think if you'll look, I could give
4 examples of where I think stuff that's in our Reg Guide
5 does not carry through in your outline if you'd like.

6 MR. VOEGELE: I'd like to pursue it. Again
7 there was no deliberate attempt to downplay 10 CFR 60, and
8 I guess I'd like to call your attention to our table, our
9 table one as on page 54.

10 MR. MILLER: Sure.

11 MR. VOEGELE: And basically what we were talking
12 about doing is basing our discussion on the mission
13 plan issues as being the upper most level that we have
14 to deal with and branching out whatever way we felt was
15 comfortable in presenting our program. We would perhaps
16 use our system requirements--and WSM probably use their
17 issues hierarchy. And then using something like the
18 correlation matrix to help tie some of this together.

19 Now we've only showed the mission plan issues
20 10 CFR 960 and Reg Guide 417 on this table. We've also
21 noted that we could tie these things to tests. We could
22 tie them to references for data needs--system requirements,
23 and certainly 10 CFR is in that mission. That was an
24 error on our part. The tables are done.
25

T3,sl

1 MR. MILLER: I'm sure you folks have spent as
2 much time, probably more time than we have on how you
3 rack out issues. It seems like we're constantly trying
4 to do that, and know that you rack them out in a whole
5 lot of different ways, and I think people often misunder-
6 stand what we're saying about rack out of issues.

7 For example comments on the issues, say technical
8 division that we put out, seem to suggest the folks
9 thought that we thought you had to rack things out in
10 that way.

11 We tried to say that's not the case. So, but
12 the one thing that we do think is important is however
13 you rack them out that one correlation you must have is
14 a correlation factor--

15 MR. VOEGELE: Okay. Let me just put your mind
16 at ease. I think--people I can't speak for them because
17 they weren't--certainly used ten CFR 60--
18 requirements--

19 MR. MILLER: Absolutely.

20 MR. VOEGELE: Okay. And the NNWSI issues
21 hierarchy now has 10 CFR 60 very clearly--we're trying
22 to determine the information needs of the design and
23 compliance. It's not been lost. If we can emphasize
24 it, probably references and data needs would be a good
25 place to say that's what we, that's one of the places where

1 10 CFR 60 would be in there. But I'm willing to put
2 10 CFR 60 in that list it's there and it will be shown.

3 MR. MILLER: That's what I thought. I mean
4 it's implied definitely, but I would say 8212 would be a
5 place to put it and in your table 8.1, it's your table
6 8.1 it's less important for us to see a tracking by Reg
7 Guide 417 which is just kind of a generalized disciplinary--
8 less important to track by that than again sections of
9 CFR 60. Those are the things that you and we are going
10 to have to go into the hearing room and systematically
11 tick off and suggest the Board--be met. I guess enough
12 said on that.

13 MR. KLINGENSMITH: Are you suggesting that we
14 add another column here?

15 MR. MILLER: Yeah. Less important that you pick
16 up those nine areas that are described in 417 and correlate
17 with those, because that's just a kind of a suggested
18 way of racking things out. You've chosen five categories
19 that's fine; but the correlation with CFR 60.

20 Let me talk to you about the ISTP's for a
21 minute. You talked in your section here about having
22 cross-correlation with those 8.2.1. That's fine. I
23 think, we would not think that that would be necessary
24 for you to have these cross-tie with those. Those
25 technical positions were kind of us telling everybody

1 here's the benchmark we're going to use when we receive
2 your list of issues. And we won't be looking to see if we
3 worded ours exactly the same as yours. We're going to be
4 doing what we did in the--SDR which is where, from which
5 those ISTP's are largely taken.

6 We took that and we looked at the list of
7 issues submitted by--and we made sure that they covered
8 the same ground. And our conclusion was, understand that
9 we were very critical about certain aspects of that
10 document. We did think that the ground covered in terms
11 of rack out of the issues, but they were quite good. So
12 it's up to you if you want to go back and go to those
13 ISTP's and so a cross-correlation. You'd probably end
14 up with a lot of cross-comparison charts and at least for
15 our purposes we would need to see that.

16 We'll be doing that ourselves but I don't think
17 that, that's not a requirement.

18 MR. VOEGELE: There's another point that drives
19 the inclusion of something like the ISTP in these cor-
20 relation tables and it unfortunately is going to raise the
21 question of performance allocation once again. But if we
22 get as far as we now think we will get before the SCP is
23 out, we intend to have at least a preliminary sensitivity
24 study on the street that helps us make some statement about
25 which components of our system are the most important and

1 it'll probably be compared very closely to the 10 CFR 60
2 guidelines, and we would also then be using that infor-
3 mation to make some comments relative to the ISTP's such
4 that our preliminary sensitivity studies for instance show
5 that this issue is not as important as that issue and that's
6 some of the data that we have to sift when we're trying to
7 rank which elements of our site program, our characteriza-
8 tion program are the most important where the money has
9 to be spent first. So they come in from that viewpoint
10 as well. It's not just an exercise in making sure we all
11 say the same thing.

12 MR. MILLER: I'm very glad to hear that, because
13 one of the things we're saying in our response back to
14 your response on our ISTP's is that we don't think that
15 you, at least the way the thing is written, understand
16 what we were trying to do in those ISTP's.

17 One of the comments was that you don't give us
18 any sense of priority. And our response is going to be
19 precisely. We can't put things in perspective without
20 knowing how important waste form is. There are gads
21 of questions in there that I can see as just being crossed
22 out as not relevant because your plans are to go this
23 way or go that way. And it would sound as if you're saying
24 you're going to try to do some sensitivity studies and
25 coupled with your plans for laying out performance,

1 hopefully you and we can start putting some priorities
2 on some of these things and that's--

3 MR. ALEXANDER: I need to interject a little bit.
4 In 835 we clearly in the stepwise, I won't call it a
5 stepwise procedure because some of these bullets can
6 occur at different times, they're not exactly step wide
7 would call for sensitivity studies. Now it may be that
8 in the case of the data they will have had a sensitivity
9 study out on the street, but I want to point out that
10 Mike in his last few comments was referring strictly to
11 Nevada. I don't know if NEVA (ph) would have the same
12 sort of sensitivity study out on the street. They happen
13 to have some other documents that are in draft form that
14 deal with the same kind of question, but I'm not sure
15 that they're going to have it out on the street. So I
16 wanted to make it clear that Mike is speaking for Nevada.

17 MR. VOEGELE: Well it's an ideal embodied in
18 section 8.3.

19 MR. ALEXANDER: Either way it's something we're
20 shooting for. Okay, if we don't make it the first time
21 we're going to make it and we're going to do the best job
22 we can.

23 MR. VOEGELE: Well that's what I wanted to make
24 clear. And I'm not certain you know, where Buick (ph)
25 will be when they issue their SCP. The comment I was

1 going to make is very similar and that is what we're
2 saying here as we're talking around the room is that
3 we've all got ideas. We recognize there's something
4 spinning around here in front of us, and somebody has to
5 take the first step and jump on it, okay. That first
6 step may be a sensitivity study which can then lead to
7 something like the performance allocation and which can
8 then lead to some sort of focus into the research program
9 and begin that area that we recognize a lot of workshop
10 time for the next couple of years, when we begin to tell
11 you why we're doing something and we hear why you don't
12 think we should be doing it that way. But it has to be
13 started somewhere, and it's not a series. It doesn't
14 seem to be a series.

15 MR. ALEXANDER: No, it isn't.

16 MR. VOEGELE: It seems to have a lot of parallels
17 going on at once. It's very difficult to judge where the
18 appropriate place to jump out is, so we're starting,
19 Nevada is going to start with this.

20 MR. MILLER: That's very important, because
21 what we're expecting, a lot of those things that were
22 in those ISTP's are going to be relatively easy to
23 document resolution of, or document as being irrelevant,
24 not on the basis of sophisticated, high detailed sensitivity
25 studies but just broad statement of intent on the

1 part of DOE. All we're trying to say is that your letter
2 basically said NRC didn't give any priority in this
3 thing. It asks a very long list of questions and the
4 answer is exactly. That's exactly the approach we took,
5 and the approach we will continue to take and must take
6 if we and you are to stay out of trouble as far as being
7 able to have this thing to go forward successfully and
8 not late in the game be finding things that were never
9 addressed.

10 MR. VOEGELE: There's input being formulated
11 for a second on the ISTP, and I think the Allen might
12 want to comment on it, we've at least been talking about
13 the same kinds of things that we've just been talking about
14 and I'll try to explain to you how these things fit into
15 the general role of our, the evolutionary nature of our
16 program. Comment on that?

17 MR. ALEXANDER: Mike I think it might be a
18 good idea if we moved up the ISTP's and treated them later
19 in the day if we could and get back to the annotated
20 outline. I think it's urgent that we try to come to
21 closure on what we want to say or agree to with respect
22 to the outline today. And the reason obviously that we
23 have a lot of people in town this week is that we try
24 to do just that. And so rather than talk about these
25 other subjects that can come up in subsequent meetings we

1 prefer to get right back to the outline. So could we
2 start going through the rebuttal that you have now Hub.

3 MR. MILLER: Okay. Let me see if there's
4 anything else on our general list. We talked about the
5 issues. Okay, I think there are some other questions
6 that we need to take up on chapter 8, but why don't you
7 go ahead with those.

8 MR. REGNIER: Alright. We'll start through from
9 number one. That's easy we agree with your resolution.
10 There it appears that the reference to site screening
11 and selection information did not get eliminated through
12 the rest of the site screening and selection material
13 in our first go 'round.

14 On comment number two with the addition under
15 goal seven specifying this particular items that's
16 acceptable to us also. The information would be included
17 in those other sections, which is fine.

18 Maybe this is a good point to make one general
19 comment. I hope that that request and when the SCP's come
20 out they will have a helpful correlation between the
21 SCP in the Reg Guide to enable our particular technical
22 sections to find the information if they're interested.
23 For instance our geochemist or geologists to find say
24 geochemistry information.

25 Our original outline had it arranged for our

1 convenience to that the geochemist could find all the
2 geochemistry information in one chapter. For our con-
3 venience it'd be most useful if a similar correlation
4 was showed for all that information that was listed in
5 that chapter to be found. It'd save an enormous amount
6 of time.

7 MR. ALEXANDER: We'd be pleased to do that.

8 MR. REGNIER: Okay. On comment number three it
9 looks like you've got all the data that we requested
10 listed presented elsewhere but it looks like it'd be
11 scattered through several sections, and were hoping
12 that there'd be a unit by unit summary which would cor-
13 relate that various information for particular units, it's
14 what we were addressing in our comment, if that's possible
15 that that would be useful. I did note that we didn't
16 specifically demand that in our written guide. If there is
17 some way to provide a correlation for each unit of all
18 this diverse information that would be--let me refer that
19 to Tom Baillieul who dealt with this issue earlier.

20 MR. BAILLIEUL: The only problem I would have
21 with that is trying to figure out how to do it so that
22 you don't wind up with problems that you are starting
23 to summarize say if, under the discussion of--you're
24 trying to summarize the hydrologic characteristics of
25 that unit before you presented the detail. And somebody

1 says wait a second. How do you know it's that anyway
2 and you may end up confusing the issue as much as you
3 try to clarify it. I can't off the top of my head think
4 of a good way to present a summary statement for each
5 lithologic unit unless somewhere you can put a table or
6 something of salient features, get a fold out stratographic
7 column here with lithologic units here, the major water
8 bearing properties, and major minerologic characteristics
9 or something, which I think for--we had a couple tables
10 like that. And that is a possible way of providing summary
11 information.

12 MR. REGNIER: Okay. That's not a requirement or
13 it's not essential, but it would be a convenience if
14 there's some way convenient to do that.

15 MR. BAILLIEUL: We will note that and see what
16 we can do.

17 MR. REGNIER: Thank you. Comment four on
18 provisions of data on the various geophysical laws and so
19 forth, your response there, your revision would be
20 acceptable to us with the provisions that the somewhat
21 more detailed specific wording that's in our section
22 in the fourth line, the typically saying driller logs,
23 geologic, lithologic, and geophysical logs, and core
24 photographs would be inserted in your last sentence in
25 your discussions there where detailed information on core

1 and bore hole geophysical surveys would be available.
2 If that would read, instead of geophysical surveys, it
3 would read the driller logs, lithologic and geophysical
4 logs and core photographs will be available.

5 MR. BAILLIEUL: I would have absolutely no
6 problem will pulling that out.

7 MR. ALEXANDER: Alright, let's move on. We
8 solved that one.

9 MR. REGNIER: On comment number five let me
10 address the easiest one first and that is the second item,
11 turning our request for the determination of the likelihood
12 of undiscovered wells in the area. We agree that that's
13 somewhat speculative. We would like to get a little
14 better, a little more quantative background, quantative
15 information on that.

16 We would agree with your revisions on insert
17 to sentence one in section 1.6 on the completeness of
18 the historical record examined--if you would add after
19 completeness the word and reliability, so that it would
20 read the completeness and reliability of the historical
21 record examined--

22 MR. ALEXANDER: I think before we are able to
23 do that, we'd need some clarification on what we mean
24 by reliability. If you mean that we need to assess a
25 probablistic sense--

1 MR. REGNIER: No.

2 MR. ALEXANDER: --sentence.

3 MR. REGNIER: Quite possibly we come to a
4 different term--

5 MR. BAILLIEUL: --completeness and accuracy of
6 the historical record. If the records were kept in 1920
7 are they found now in shoe boxes and--

8 MR. REGNIER: That is get a little more quanta-
9 tive feel for it then just touching bases and how complete
10 is it.

11 MR. BAILLIEUL: That would be fine.

12 MR. ALEXANDER: Where would you propose that we
13 add the word accuracy.

14 MR. REGNIER: That would be completeness and
15 accuracy.

16 MR. ALEXANDER: Okay.

17 MR. REGNIER: Of the historical record.

18 Now I'm able to provide a little more enlightenment on
19 what we are requesting in number one documentation related
20 to calibration procedures data massaging techniques.

21 In particular we're looking for calibration
22 curves on an actual instrument that we use; type of
23 information that we're looking for; actual instrumentation
24 checks are based on sort of a QA type information on
25 to give us a feel for the accuracy and, rather than,

1 and precision of the data and the validity of the
2 techniques that were used.

3 Now we don't need that for all the data all the
4 drill holes and all the data. What we really need on
5 that is, it's a representative or critical data for tests
6 and holes, to give us a general, we don't have to have
7 that, we don't have to have calibration curves or data
8 on all the drill holes. If you've got 20 drill holes
9 in an area and they're done in a similar manner one
10 example is fine. The idea is to get a representative
11 example for some particular test it's really critical.

12 MR. BAILLIEUL: My feeling on that would be
13 as we go into here, one of our areas, if we are using
14 information say gathered on oil and gas tests done at
15 some time in the past the type of information you're
16 asking for may not exist; probably doesn't. And what
17 we would be doing is if we felt there was a critical area,
18 some critical thing we're trying to test we would put
19 down a series of test wells to become the representative
20 case and to the extent that it confirms the regional
21 findings we would then have some confidence in the values
22 that we adopted from this broader data sample, and we
23 would provide you with all the calibration procedures
24 and everything from our own tests; exhaustive details.

25 MR. REGNIER: That's right. If the data does not

1 exist obviously we can't provide it. There's no question
2 about that. If some previous testing and that information
3 is not available there's no problem, obviously it cannot
4 be provided. For the tests that you have run or where
5 they are available an instrumentation, check data, on
6 a representative basis. So you can add that type of
7 caveat to that statement, and I hope you retain it to
8 reinsert it with the qualifications it's for representative
9 critical tests if the data is available.

10 MR. ALEXANDER: Any of the staff have any
11 objection to that? It seems like a reasonable approach
12 to me. Okay.

13 MR. BAILLIEUL: It's just going to be a matter
14 of wordsmithing so we don't box ourselves into a catch-22.

15 MR. ALEXANDER: Thank you.

16 MR. REGNIER: Okay, comment six refers to the
17 estimation of mineral resources--come back to our approp-
18 riate section in the Reg Guide. In the Reg Guide we call
19 out the request for five particular items. One the
20 quantity of reasources; two the cut-off values; three
21 the present growth value of each substance; four the
22 present net value of each substance; five the unit values
23 of the minerals evaluated.

24 Now the first two you responded to exactly;
25 the quantity resources and the cut-off value using the

1 estimation. However in the third and fourth items your
2 outline really only calls for the value of each resource.
3 Now what we have in the Reg Guide is very similar to the
4 requirements which are in the regulation in 10 CFR, part
5 60 .21. In 10 CFR, part 60 .21 we require that both the
6 gross and the net values of the resources be provided
7 including extraction and marketing costs. So these, these
8 items, I think really should be, well they will have to
9 be provided. I think it would be useful if the words
10 in the Reg Guide, presenting a greater detail requiring
11 net value and gross value be retained.

12 MR. ALEXANDER: And having done that kind of
13 analysis before myself I don't see that as being a big
14 deal.

15 MR. BAILLIEUL: I think that was very much the
16 intent when we called out for the value of each resource.

17 MR. REGNIER: As long as that's understood
18 that that is a requirement we'll have to live with that.

19 MR. BAILLIEUL: It's in 10 CFR 60.

20 MR. ALEXANDER: Why don't we just go ahead and
21 expand that our term value to include gross net and--

22 MR. BAILLIEUL: Value parenthesis gross net,
23 and unit--

24 MR. ALEXANDER: Yeah, to be sure it doesn't fall
25 through the crack. Okay.

1 MR. REGNIER: Well I'm going to jump on to
2 number ten instead, you're going to get the others, right?
3 Well--performance assessment in seven, eight, and nine.
4 I will jump onto ten where you agreed to incorporate our
5 suggested change, no problem with that.

6 Now comment 11 the, on the geochemical, geo-
7 chemistry information again it's a question of the, we
8 don't have any problem with the format you're using.
9 To jump over to your page 13 in your comments where you
10 say that, I mean comments on the format, you don't really
11 have a problem with the format, and it looks like generally
12 the changes that are being made pick up most of the items
13 in the beginning, to check back an item by item check
14 for instance checking in the, see our sections, check
15 back to our section 4.2. Our section 4.2 does call out a
16 few more detailed requirements than would be reflected
17 in some of the sections listed here on your page 12 of
18 the comments, the backfill seals, waste packing placement
19 and so forth, again would be, I think as you say the
20 intent is to cover everything that we're looking for and
21 I don't think we've got any fundamental problems here
22 except that--well for instance you're adding the section
23 633. In 635 for instance you're adding the geochemical
24 characteristics of the sealed material will be described
25 as well as the participated chemical interactions, among

1 the--materials, ground water, host rock, and backfill
2 under--conditions, which I presume would encompass what
3 we're asking for in 4.2 but again it might be better to
4 make that, make the inserts in these various sections
5 follow more closely the wording in 4.2 where we've asked
6 for some specific piece of information that still didn't
7 get reflected. We've asked for, describe anticipated
8 chemical composition in the form of the waste, the
9 solubility of the waste formed in ground water on the
10 various anticipated environmental conditions e.g.,
11 temperature, oxidation states, species released by the--
12 of the waste--under anticipated conditions.

13 Those things that would go into--your section
14 on waste form in chapter seven, those specific words I
15 don't believe are still reflected and the same applies
16 to the top of page 35 in our draft guide where requests
17 the anticipated chemical and mineralogical composition of
18 any barrier, the solubilities of these barriers, and
19 the anticipated chemical conditions and any changes,
20 speciation imposed on radionuclides released and so
21 forth.

22 I think it would help if you go back and you
23 pick up some of those exact words and plug them into this
24 other section. It takes really no longer and it may be in
25 addition to the general statements you've got would make

1 sure that none of these things--your general approach is
2 fine.

3 MR. ALEXANDER: Let me ask Ken Sisinsky to
4 give us a little bit of background as to why some of
5 that wording may or may not, why it was left out. Ken
6 was involved with the initial workshop that we had on
7 this subject which involved the moving of some of the
8 information from four to seven..

9 MR. SISINKSY: I'd like to assure you that
10 only specific items called for in 4.2 are in fact places
11 in the AO where they have been listed, speciation etcetera
12 do appear in the outline--in 4.2 not of course identical
13 annotated outline since they have been modified somewhat
14 to fit the text of the chapter in which they reside.
15 The specific items of information are called for there.

16 MR. REGNIER: Good. My look was rather hurried
17 looking for exact quotes. If the material is all there--
18 that's fine then. Alright, Seth any others.

19 MR. MILLER: We're not through QA yet, I think
20 that the main business.

21 MR. ALEXANDER: That's what remains.

22 MR. MILLER: Okay, the first question in QA had
23 to do with stating the quality, or describing the quality
24 assurance programs that were utilized during site explora-
25 tion, and I think your response is reasonable. The, again,

1 referring to the ongoing discussions in the QA area one
2 of the key issues is how do we qualify existing data;
3 how do we qualify secondary, third, the secondary data,
4 the data not collected by--there is a whole area there
5 that has to be sorted out. The response is reasonable.

6 On the next item this reference to only 16 of
7 the 18 criteria your response is to point out that
8 organizations--cover other sections, that's reasonable.

9 On the coverage of design work in QA, for
10 coverage of design we're obviously a QA program again
11 your response in good and I particularly think that the
12 deletion of the word general is helpful to us. Discussions
13 of QA are ongoing and I think that they will be forced
14 to a level of detail like that by the fact that they've
15 got a review point out and that's the subject--it auto-
16 matically covers that whole business of design; how that's
17 treated or covered by QA.

18 And the last item had to do with in NQA1 in
19 the title of that section.

20 MR. REGNIER: One more for the record, Seth just
21 handed me comment number nine which wasn't performance
22 assessment, it was changing the word guidelines--
23 performance objectives. You agreed with us and are
24 making the change and that's fine with us.

25 MR. MILLER: There is an area that I want to go

1 back to in chapter 8. It's something that was not
2 raised in our comments but it's very important, and
3 it's even important to us today as we struggle from our
4 side over resources, and what should we be planning for
5 in terms of interaction. It had to do with section 8.5
6 milestone, decision points, and schedule. And I think
7 what I'd like to do is just take a moment and describe our
8 review process again as it's now called for in the rule,
9 as the amended rule would change that review process
10 because, where I'm headed is this section here is something
11 that effectively we need to have even before the SCP is
12 written, if you will. We need to know what the content
13 of that is, because there are a lot of things that you
14 do in your program where you've got to get a long lead
15 time and we've got to make decisions way back here if
16 you are to get a shaft down a year from now, and what
17 we're, this is going to be a very important section to
18 us.

19 I'm not sure that the project decision schedule
20 is going to be at a level of detail, in fact I don't
21 even expect it will be at a level of detail that will
22 identify all of these things, but it's important to us
23 to know where these decision, the internal DOE decision
24 points are so that we're not given, not a position where
25 we're claiming we're not holding you up but it's a

1 practical matter. We don't get a chance to comment on
2 what you're doing until way after it's really a settled
3 issue in your mind.

4 Let me, if I could use the machine there.
5 I take it all of you know what the regulation says but
6 let me repeat, just kind of cover this quickly. By the
7 current part 60 the--was issued prior to the act. The
8 process for this early interaction was--and yet because
9 before the Act there was no opportunity in either the law
10 or in our regulations or in your regulations, or in your
11 procedures for there to be input from the public, from
12 the states on your plans.

13 The NRC set up a two step review process.

14 That is we would review your SCR and let me just--let
15 me call it the SCP. We would review your SCP, the same
16 document, we would issue a draft position analysis for
17 public comment and for comment by the states, and after
18 that we would take those comments and issue a final
19 site characterization analysis and an opinion of the
20 Director of the Office of Nuclear Material Safety and
21 Safeguards about your plans, and the time frame there
22 was about ten months.

23 Now given that there was opportunity for the
24 states and others to participate in separation of guide-
25 lines, environmental assessments, decisions regarding site

1 nomination and selection, site characterization and
2 given the fact that by law you are required to hold hearings
3 on your site characterization plan, it of course doesn't
4 make sense for NRC, but we and the staff don't feel, the
5 Commission has stated it's policy on this as well in
6 issuing the rule, doesn't feel it makes sense to have
7 us continue to get comments on off site characterization
8 analysis. It--about clear channels now, directly to you,
9 DOE what their concern is. Still feel--taken about five
10 months to review the site characterization plan.

11 Now this is an issue and we expect that many
12 people commenting on our rule change will say that we
13 should step two--we know definitely that certain folks
14 feel very strongly that we need to continue to have this
15 public comment process on our site characterization
16 analysis.

17 Assuming that the rule however will be as we
18 proposed it, we're talking about five months. Your plans
19 as we have heard them are to go through the steps that
20 are required by the Act, this issuance of the site
21 characterization plans and holding of the hearings and
22 resolution of those comments which relate to the shaft
23 and go through the steps and then begin the shaft
24 constructions; not necessarily wait for analysis.

25 And then the last meeting on site characterization

1 plan the question came up from you folks that it was
2 our position with respect to your doing that. Another
3 issue that's out there is why isn't DOE treating this more
4 as an approval, as a full approval. That is you don't
5 start--high visibility of shaft construction until NRC
6 has done any site characterization analysis.

7 Our position has always been it's a legal
8 question and it's your own, and we are not, and we
9 have not argued that your call--issues that you will
10 proceed the shaft construction prior to the analysis.

11 I think what we'd then have to talk about,
12 however, is what happens back here and during this stage
13 before you initiate shaft construction. I might add other
14 important work. I mean people tend to focus on shaft
15 because that is kind of symbolic start of the site
16 characterization. It's the big event, but as I under-
17 stand it at some sites they plan to continue to do bore
18 hole testing. There's a plan to in fact, well continue
19 seismic surveys, continue to investigate site all through-
20 out this period. And again our position is that's fine
21 by us. But what is important to us if we are to hold
22 up our end of the deal, if we are to meet what the
23 Commission has told us we got to meet and that is the
24 --critical path, I think we, it's essential to us that
25 we do what the procedural agreement between NRC and DOE

1 calls for and there are some key words in there about
2 prior consultation. That is before the time when you
3 up way back here, you're going to construct the shaft this
4 way as opposed to going that way. You're going to blind
5 bore the shaft as opposed to constructed by conventional
6 or by drill and blast techniques which have a decision
7 which has significant impact on regulatory issues.

8 We think it's important to take up those
9 issues at the time you're really making the decisions, and
10 we assume that you work like we do it takes a long time
11 to get a contract in place, so you've got a lot of lead
12 time on these things.

13 And the thing we want to avoid is the situation
14 where we're holding you up down here, because we're
15 asking questions about how you did a lot of those things.

16 Now Ralph and I and Bill and--talked with
17 Davis, Brouche about the need to have consultation on
18 these points. There's no disagreement on the need to
19 have consultation, kind of as you go along in making
20 these decisions. And you folks understand what I'm saying
21 here.

22 I guess what I'd like to do next is talk about
23 what we think some of these issues are.

24 MR. ALEXANDER: I think Hub, I would prefer to
25 stick with our agenda this morning and that is to try to

1 close on the outline if we could and then jump into
2 the remaining subjects which are the kinds of things
3 that you're bringing up right now. I felt that our
4 group supports that position. I think everyone here
5 on the DOE side at least feels that it's most urgent
6 that we complete that part of the day's effort and then
7 if you want to launch into these discussions in detail.

8 MR. MILLER: Yeah, I'm not, I'm talking about
9 your section 8.5. And I'm talking about--I think we
10 touched on all the specific points. Unless you've got
11 some more from your side.

T3,s2 12 MR. STEIN: I think it's clear that we support
13 our interactions with NRC, workshops, prior consultation,
14 to the extent we can we see that your comments are
15 included in the document. Try not to get so far ahead
16 of your review of our activities as, by the time you get
17 a chance to review them it'll be too far down stream.

18 Although in some cases the decision had been
19 made years ago in certain things and you are aware of
20 those. For example the types of, the technique for
21 drilling and b-width as opposed to sinking it conven-
22 tionally.

23 MR. MILLER: That was documented in our review.
24 In fact that's one that's an example, you know, you look
25 in the record and no one asks the question did the NRC look

1 at that at the time when it was not academic.

2 MR. STEIN: But the point is that--to close on
3 this discussion, but if we have essentially completed the
4 ineractions, of generally on the annotated outline then
5 I would like to bring that to a close and then pick the
6 other subject up.

7 MR. MILLER: There are a couple of items on
8 this list which relate to this annotated outline. Let me
9 pick up the ones that I, I'm not trying to change the
10 agenda on you, okay. I'm trying to, these things are
11 related but they're not, this is a different issue than
12 what we're talking about.

13 Every meeting we've been in on form and content,
14 and I can remember one in Nevada two years ago always
15 gets into this question of what do you want in conceptual
16 design. You hear the question what is the conceptual
17 design and then the question of what specific thing do
18 you want specified and did you want the thickness of
19 the wall, the wall thickness on the cannister.

20 Every meeting we've ever had on that gets into
21 that question and you think we've done a generally good
22 job of picking up things that we had in our guide and
23 even going beyond that into this technical position we
24 have out on this matter.

25 But there still is a question nagging in the

1 back of my mind having already discussed this many times,
2 that short of your folks and whether it's--to meet short of
3 some consultation the folks preparing the SCP's with
4 our people. I don't know how you're going to prepare
5 the SCP's and have much confidence that you'll shift
6 the mark in terms of providing us information on conceptual
7 design. There's a lot of stuff we're not interested in,
8 and so I think there's got to be, I don't think it helps
9 us to leave the room here thinking we all agree with
10 each other. If we don't talk about where we think the
11 potential rough parts are going to be and I think one
12 in particular is this question of conceptual design infor-
13 mation.

14 And I would propose essentially on that one
15 just as we are saying on this question of performance goals
16 we've got open issues coming out of this meeting, I
17 think. Now you haven't raised questions in this conceptual
18 design thing and I was a little surprised that you haven't,
19 because every other meeting you have.

20 But I would be willing to bet that when the
21 folks actually begin to prepare these sections they
22 will run across a lot of things, where you'd be wondering
23 what you guys had in mind.

24 MR. ALEXANDER: I guess the bottom line is does
25 the outline, the annotated outline which is just no more

1 than that, does the outline provide us with the proper
2 pigeon holes to deal with those questions and if it does
3 then I think we can move to close the meeting. If it
4 doesn't then we need to add some new headings.

5 MR. HEAD: Maybe I'm misunderstanding what
6 you're getting at but you seem to be suggesting that we
7 have further meetings on the SCP as they're written and
8 developed in the early draft forms to check.

9 MR. MILLER: I'm going to turn it around.
10 I'm going to say that we will avail ourselves to you.
11 This is the way we've always put it. We'll avail out-
12 selves to you as these questions come up.

13 MR. HEAD: As we run into problems and need
14 your clarification.

15 MR. MILLER: Yes, right.

16 MR. HEAD: And it's our intent to get that.

17 MR. MILLER: What we need from our side though
18 is some sense from you folks on what you think you're going
19 to need, because we are sitting back on our side trying
20 to plan from our point of view. We're, we've got a number
21 of elements in our program, the main one is reacting to
22 you folks, servicing you folks, and so it's crucial that
23 we are able to know what your intent is and where you think
24 you're what you think you're going to do over this next
25 six to nine months. And even setting aside things like

1 constructing the shaft and doing testing, talking just
2 about the preparation of the SCP, maybe it's your feeling
3 that you're totally confident that you're not going to
4 have to consult with us much. I would doubt that that's
5 what you would say but if you do have that, I've got to
6 have some sense of what that kind of interaction might
7 consist of, so we could support that.

8 MR. HEAD: You mean you want us to get the topics
9 so we can try to schedule the meetings right here and
10 now. I mean we had in mind starting into this process when
11 we started having problems getting on the phone with
12 you and setting up the meeting.

13 MR. MILLER: I don't want to be in the position
14 to have them say we struggled to meet this. I don't
15 want to be in the position to have you say well we just
16 can't support it. And I'm not looking for specific
17 dates here. I think what you're suggesting is am I asking
18 for dates--

19 MR. HEAD: We don't even necessarily know
20 what the specific topics are at this point.

21 MR. STEIN: I think, I would like to know Hub
22 are there any gaps in this right now. The question that
23 you are raising and the matter that you are raising is
24 one that we have talked about in the past and I think that
25 we need to have a definition, schedule, scope of the

1 interactions over the next year or so was the SCP is
2 being developed. And that seems to me to be a separate
3 topic which I'd be very happy to discuss. What I'd
4 like to know is are there any gaps in here now that
5 need to be corrected. If there are we want to take the
6 time to correct these. If not then I would like to get
7 this part of the agenda closed, and then proceed on to
8 the next topics that you're speaking.

9 MR. MILLER: I know what you're saying.
10 I guess the question is how do you want to document this.
11 Of course there's been a recording here.

12 MR. STEIN: But we've also changed some specific
13 words and in the meeting minutes I think it would be
14 useful for us to try to, both for you and for us to
15 kind of document what we agreed to or not. We've written
16 up some responses to your responses. I would suggest
17 that in order to nail this down we in fact--pieces of
18 paper--

19 MR. ALEXANDER: The other item, of course that
20 we passed on to you during, or just before the break was
21 a meeting summary and I think it would be an appropriate
22 time now to get your response to this. I'm sure you've
23 got some recommended word changes to it and if we could
24 go over that I think we could then, all the rest of the
25 documentation with respect to the agreements that we just

1 went through should fall right into place and we can
2 have certain people complete that package while we get
3 into some of these other subjects. Did you have an
4 opportunity to--

5 MR. STEIN: Yeah, we looked at it, and basically
6 what it needs is the kind of caveats we talked about
7 and to identify the open issues that come out of this
8 meeting.

9 MR. MILLER: Yeah I think that's perfectly
10 appropriate. We've written up some words as Ed was
11 talking on things we discussed right after lunch.
12 So we've already taken a shot at doing that.

13 MR. ALEXANDER: I think we ought to go ahead
14 and do just that and I think is there any need for
15 further recording of the meeting?

16 MR. MILLER: Let me just ask one further
17 thing of you, Ralph. Let me ask you about your plans
18 for the SCP, your timing of the SCP and your plans with
19 respect to ongoing investigation. Do you feel as though
20 you just simply have to put this off until the other
21 session, in connection with this milestone decision
22 points in the schedule; the things in your site characteri-
23 zation program which effectively start the way where
24 you have the three sites selected, how much of the site
25 characterization program will have already taken place,

1 if you will when the, before the FCP is issued? Is
2 there a way to generalize on that? I don't expect that
3 you'll just pull out of the field and stop all of the
4 work that you're doing. Is there a way to generalize on
5 what you'll be doing.

6 MR. STEIN: There may be a way to generalize
7 on that but I would be hard pressed at this point to
8 put a specific value on it. Obviously we feel that we have
9 done enough site characterization to support the EA's
10 and the nomination, the nomination recommendation. But
11 you know beyond saying that at this point I just can't
12 make that statement, the statement that says what it is
13 that will be available between now and the time the SCP's
14 are issued.

15 There is work under way at the site, plus
16 we're participating in some of--at the sites and we
17 know that that's occurring and that will form part of
18 the database and that will be used.

19 But just how much of the site characterization--
20 at that time I just couldn't quantify that at this point.
21 Now let me just say one more thing and we can proceed.
22 As far as our plans for the EA, the actually scheduling,
23 we gave you an overall, I'm sorry for the SCP, we gave
24 you an overall schedule for the SCP. If you'll bear
25 in mind that's a snapshot in time. That's today. There

1 are activities that are new term activities, participation
2 by a project at headquarters to develop a detailed
3 schedule for the development--of the SCP's and that's
4 occurring very soon. I'm not sure of the exact time
5 but it may be as early as next week, I think, that kind
6 of activity is under way.

7
8 It does appear--term we would be able to
9 provide you, in fact we would have to provide you with
10 a detailed schedule of our plans for preparing the FCP
11 and from that detailed schedule and the input from the
12 projects we would then be in a position to discuss with
13 you the scheduling of these workshops and interactions
14 with NRC on the activities that we have underway for
15 you there for development of the SCP.

16 But beyond that at this session this meeting
17 today the only thing that I can refer you to is the
18 schedule that you saw earlier today which, as I say is
19 a snapshot in time.

20 PARTICIPANT: Projects agree with that?

21 MR. MECCA: Generally it's a proper characteri-
22 zation. The only other thing is that--at least has
23 provided some schedules, I think it's for site--mostly,
24 because there are other people wanting to know what kind
25 of work goes on at least on a weekly to monthly basis,
and some that I think has been given to the states and to

1 the NRC.

2 MR. MILLER: Yeah, I'm sure my project--is
3 seeking these to see--

4 MR. STEIN: Well--DOE headquarters. Didn't give
5 that to me.

6 MR. MECCA: Yeah, there are other people asking
7 for that and we've provided it.

8 MR. STEIN: Well we have to work, it's basically,
9 we have to work. We're treating this activity as a
10 program and we need to work the schedules and we recognize
11 a strong need for interacting with NRC because we want
12 you to be in accord with us as to--these activities during
13 preparation.

14 MR. MILLER: The only additional thing I'm
15 saying here is recognize our need to be able to plan.
16 I mean we're totally at your mercy here. And we recognize
17 that you've got shifting schedules and so on, but we
18 sit there at your mercy.

19 MR. STEIN: Bob.

20 MR. ALEXANDER: Yeah, I think it's appropriate
21 now to discontinue recording the meeting, and I would
22 recommend that Ralph, Jeff Nelson, Carol and myself sit
23 down with the four of you and work out the detailed
24 agreement and then we would offer that to the group
25

1 to make sure that there aren't any problems that the
2 project might see in the wording that we use, but I
3 think it would be most efficient if just the four of
4 us on each side work it out.

5 Jeff has taken all the notes for the projects
6 and I think it would be appropriate to have Jeff pull it
7 together.

8 If that's agreeable to everyone let's do that.

9 (Whereupon at 3:00 PM, this portion of the
10 meeting was concluded.)
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C E R T I F I C A T E

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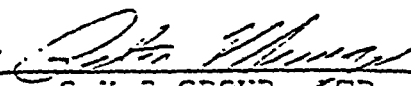
in the matter of: Public Hearing Before Chairman Donald
Alexander

Docket Number: _____

Place: Washington, D.C.

Date: February 13, 1985

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