

Official Transcript of Proceedings
NUCLEAR REGULATORY COMMISSION
REVISED

Title: Advisory Committee on Nuclear Waste
159th Meeting

Docket Number: (not applicable)

Location: Rockville, Maryland

Date: Monday, April 18, 2005

Work Order No.: NRC-337

Pages 1-178

NEAL R. GROSS AND CO., INC.
Court Reporters and Transcribers
1323 Rhode Island Avenue, N.W.
Washington, D.C. 20005
(202) 234-4433

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

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

+ + + + +

ADVISORY COMMITTEE ON NUCLEAR WASTE

(ACNW)

159TH MEETING

+ + + + +

MONDAY,

APRIL 18, 2005

+ + + + +

ROCKVILLE, MARYLAND

+ + + + +

The Advisory Committee met at 1:30 p.m. in Room T-2B3 of the Nuclear Regulatory Commission, Two White Flint North, 11545 Rockville Pike, Dr. Michael T. Ryan, Chairman, presiding.

COMMITTEE MEMBERS:

MICHAEL T. RYAN, Chairman

ALLEN G. CROFF, Vice Chairman

JAMES H. CLARKE, Member

WILLIAM J. HINZE, Member

RUTH F. WEINER, Member

1 ACNW STAFF PRESENT:

2 NEIL M. COLEMAN

3 JOHN FLACK

4 LATIF HAMDAN

5 JOHN T. LARKINS

6 MICHAEL LEE

7 RICHARD K. MAJOR

8 RICHARD SAVIO

9 MICHAEL L. SCOTT

10 SHARON STEELE

11

12 NRC STAFF PRESENT:

13 ANDY CAMPBELL, NMSS

14 LARRY CAMPER, NMSS

15 SCOTT FLANDERS, NMSS

16 JAMES KENNEDY, NMSS

17 BILL REAMER, NMSS

18 JIM RUBENSTONE, NMSS

19 ASHOK THADANI, Deputy Executive Director for
20 Operations

21

22

23

24

25

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

A G E N D A

NMSS DIVISION DIRECTOR'S QUARTERLY PROGRAM

UPDATE 3

Mr. Bill Reamer

LOW LEVEL WASTE ANNUAL UPDATE 30

Mr. Lawrence Camper

ACNW WHITE PAPER ON LOW-LEVEL RADIOACTIVE

WASTE 82

DISCUSSION OF APRIL 14-15, 2005 VISIT TO

THE CENTER FOR NUCLEAR WASTE REGULATORY

ANALYSES (CNWRA) 123

ADJOURN 178

P R O C E E D I N G S

(1:31:26 p.m.)

CHAIRMAN RYAN: The meeting will come to order. Bill Reamer, welcome. We're here for the NMSS Division Director's Quarterly Program Update. Welcome.

MR. REAMER: Okay. Good to see everyone. As I go through my items, please feel free to interrupt me as we go along. I want to make sure that you get the information you expect from me.

The status of our activities all are oriented around the completion of pre-licensing, consultation activities with the Department in anticipation of a license application, which they have told us they will be prepared to submit in December of this year. That means conducting a review of the license application, that means formulating a position with respect to adopting the Environmental Impact Statement for the Yucca Mountain Repository, and that means preparation for adjudicatory hearings before the Licensing Board.

Also, we anticipate the need to be ready to conduct a limited amount of inspection activities aimed at supporting the license application review, including the capability to be able to respond to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 allegations that we receive once we get the license
2 application, assuming we reach a favorable decision to
3 docket and do the review.

4 Also, we anticipate ongoing performance
5 confirmation activities being carried out by the
6 Department, and an expectation that we will want to be
7 involved, at least in terms of monitoring those
8 activities, as well as continuing our own development
9 of understanding.

10 And related to the repository, of course,
11 are the activities in the Spent Fuel Project Office,
12 which involve review of the transportation packages
13 the Department will need to use in order to transport
14 fuel from defense sites, and potentially as well as
15 commercial sites to the repository.

16 And in that connection, you're aware and
17 hopefully have received, or will receive current
18 status of our package performance study activities, in
19 which the NRC would carry out a limited amount of
20 testing activities related to developing confidence
21 with respect to transportation packages.

22 As I said, our assumption is a license
23 application that the Department would be ready to file
24 in December of 2005. We also assume that EPA will
25 issue a proposed revision to the Yucca Mountain

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 standard, which I'll say more about in a minute.
2 Sometime in FY 2005, our understanding based on the
3 reports we've seen is that EPA is shooting for a
4 proposed rule in the summer of this year. And then a
5 final rule after comments have been received on that
6 rule evaluated, as well. And then we will need to
7 make changes to our own regulation, Part 63; because,
8 as you know, the law requires us to be consistent with
9 the Environmental Protection Agency Yucca Mountain
10 Standard. So we will need to do that, make those
11 changes to our Part 63 hopefully in parallel with the
12 EPA, rather than waiting until EPA has issued a final
13 rule before we commence any rulemaking activity.

14 Once we get the license application, we
15 will first make a decision whether to docket that
16 application. And also, as I said, whether to adopt
17 the final Environmental Impact Statement. If we make
18 a decision to docket the application, we will commence
19 a safety review that we have set and have planned for
20 completing in 18 months.

21 One question that may be on people's mind
22 is, do you anticipate a delay in the license
23 application? And my answer to that is what we have
24 been told by the Department is a license application
25 in December of 2005. There, obviously, are

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 uncertainties related to that, uncertainties
2 associated with the Department's obligation to certify
3 documents on the licensing support network;
4 uncertainties associated with the Environmental
5 Protection Agency activities in revising the Yucca
6 Mountain Standard; uncertainties with respect to
7 allegations, concerns related to data provided by
8 certain USGS scientists to the Department. And,
9 obviously, also concerns related to budget, which
10 always play a role in what activities can be carried
11 out. But since the Department has said their schedule
12 is December, 2005, that's what we are planning for;
13 that's what we have to be ready to handle.

14 If there were a delay, we would look in
15 various areas to make progress to use that delay to
16 our advantage. One would be with respect to the EPA
17 Standard, and the anticipation that additional
18 activities will be required of the Department and of
19 us based on what that standard proves to be. So I
20 would say work activities associated with the EPA
21 Standard would be one thing that would continue,
22 notwithstanding a delay.

23 Also, there may well be developments with
24 respect to the allegations on USGS that would result
25 in the Department completing the activities that they

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 plan to complete, and that may provide information
2 that we would want to look into, and prepare ourselves
3 for issues that will end up on our plate because of
4 these allegations.

5 Certainly, there are also lingering issues
6 related to the key technical issues, the bulk of which
7 we have reviewed and replied to the Department, but
8 there are a small number of key technical issue
9 agreements that still have open items that we would
10 want to follow-up on with the Department. And in the
11 pre-closure and design area, as well, my expectation
12 is that activities could continue there because the
13 state of those activities is not at the same state as
14 the post-closure activities, just because as a matter
15 of historical practice there was priority given to the
16 post-closure, rather than the pre-closure on the
17 Department's part.

18 Also, we want to continue our outreach
19 activities, our information activities with respect to
20 the people in Nevada who continue to have questions,
21 including what are the impacts and significance of a
22 delay in the license, and how will this affect NRC's
23 review. So we have requests from Inyo County to
24 already come and talk to them, because there are new
25 County Commissioners in Inyo County, and so the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 expectation is we will continue to have a need to
2 provide high-level waste communication activities, an
3 ongoing need.

4 If we can, we would be looking to
5 ultimately maintain the Yucca Mountain team, and that
6 might be, assuming how much notice we get of delay,
7 that might include options, such as being able to
8 situate high-level waste staff working on non-high-
9 level waste topics, non-high-level waste work;
10 adjusting our own hiring activities in light of
11 information on a delay. But both of those will take
12 advance notice from the Department in order to be able
13 to respond to them.

14 Turning then to the EPA Standard - as I've
15 said, the information we have is that EPA will issue
16 a proposed revision to the standard sometime this
17 summer. EPA has the responsibility to issue the Yucca
18 Mountain Standard. The Court of Appeals decision set
19 aside a portion of their standard. That had the
20 practical impact of invalidating that portion of our
21 standard, the 10,000-year compliance period, but with
22 respect to that, our standard is based on the EPA
23 Standard, so the ball is really in EPA's court.

24 We understand they are considering options
25 for revisions to the standard. There is an EPA docket

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that has been established on the EPA website with
2 respect to their activities. We want to continue to
3 stay in touch with what they're doing, because it
4 impacts what I suggested was at the staff level, our
5 aim, which is to move in parallel with EPA in revising
6 our regulations.

7 Moving on to a couple of additional
8 related topics, the --

9 CHAIRMAN RYAN: Bill, just before you step
10 away from the EPA Standard, is there any -- I mean, I
11 realize we're in a very preliminary stage. Is there
12 any shape in terms of the technical aspects of what's
13 forthcoming, or is it too early to be asking that
14 question?

15 MR. REAMER: Well, my understanding is EPA
16 is considering the options. Of course, at a staff
17 level, our view would be if it were legally
18 permissible, the 10,000-year compliance period is
19 adequate to protect public health and safety is the
20 right standard to be applied to Yucca Mountain.

21 Also, according to interactions that the
22 administration and EPA has had with stakeholders, it's
23 our understanding other options being considered
24 relate to a possible standard that would include a
25 10,000-year provision, and then a separate provision

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 with respect to peak dose. And there may be other
2 non-quantitative options that are on the table, as
3 well.

4 CHAIRMAN RYAN: So there's perhaps a
5 quantitative, as well as this new qualitative kind of
6 thinking for peak dose.

7 MR. REAMER: I think at this point,
8 they're looking at a range of options. That's my
9 understanding. Until the proposed rule is issued,
10 it's really speculative which option they choose to
11 pursue.

12 CHAIRMAN RYAN: Oh, I know. I realize
13 that that's true, but it's interesting the range
14 you've outlined is helpful. Thanks.

15 MR. REAMER: Sure.

16 MEMBER HINZE: Following up on that, if I
17 might; is the -- I understand that the EPA will be
18 holding hearings. Do you know when those will
19 commence, and will NRC be involved in these in any
20 way?

21 MR. REAMER: Are you talking about after
22 the rule is proposed?

23 MEMBER HINZE: After it is proposed,
24 right.

25 MR. REAMER: Okay. I don't have specific

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 information on that. I would not be surprised if EPA
2 held hearings, meetings - I'm not sure what term they
3 use; perhaps it's hearings - during the public comment
4 period. They did that, my recollection, when they
5 issued Part 197. It's a very good way to inform the
6 public about what's being proposed. It's a very good
7 way to receive public comments, which they will,
8 obviously, be interested in getting. So I wouldn't be
9 surprised if they would hold public hearings during
10 the comment period.

11 MEMBER HINZE: The changes that we might
12 anticipate to 63, will those also be by rulemaking?

13 MR. REAMER: They will require rulemaking,
14 yes. And so, something we would want to consider,
15 which sometimes I don't follow the path as quickly as
16 others, would be to be involved in those hearings with
17 EPA because they would relate to and involve our own
18 proposed regulation to be consistent with EPA, would
19 be the right way, I would think off the top of my
20 head, the right way to provide to the public the true
21 nature of the proposals that the two agencies are
22 making.

23 MEMBER HINZE: We learned last week at the
24 center that TSPA 501 is making provision for the out
25 years from 10,000-years as part of those changes. Are

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 there any other things that are being done to prepare
2 yourself for whatever the EPA comes up with?

3 MR. REAMER: Well, we're certainly looking
4 at what provisions in our own regulations would need
5 to be changed. The documents that would be associated
6 with that process, whether they range, obviously, from
7 the notice of proposed rulemaking, to the commission
8 paper that will obviously be involved, associated with
9 that. So we want to be ready to move in parallel with
10 EPA.

11 The main issue here involves the EPA
12 Standard, but we have to be consistent with that
13 standard, so to the extent that we can move in step
14 with EPA, I think that's desirable for us to do that.

15 MEMBER HINZE: Thank you.

16 MR. REAMER: A couple of other items I
17 want to mention. There are two petitions that the
18 State of Nevada has filed; one was filed - and they
19 both involve rulemaking. One was filed in March. It
20 requested the Commission to revisit the Commission's
21 Waste Confidence decision. I believe the Committee --
22 I don't know whether this committee membership has
23 been recently briefed on waste confidence, but I know
24 in the past we have provided information to the
25 committee on the waste confidence proceeding. But the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 state is proposing that the Commission undertake a
2 process that would change the current generic
3 findings, and issue a new generic finding that there's
4 reasonable assurance that all licensed spent fuel will
5 be removed from storage sites to some acceptable
6 disposal site before storage of spent fuel causes any
7 significant safety or environmental impact. The NRC
8 has that petition, obviously, under consideration.
9 The ball is in our court to decide on the next step
10 with respect to the petition.

11 Also, recently the state submitted a
12 petition on April 8 to amend our NEPA, National
13 Environmental Police Act regulations, Part 51, and
14 we're looking at that petition, as well. I'm not
15 intimately familiar with the details of the petition,
16 and I'm not sure -- I believe I saw a copy of a piece
17 of correspondence that at least the Committee has been
18 informed of the petition by the state, because of your
19 own planned activities. But a quick read; it appears
20 the state is arguing that the current regulations need
21 to be changed in order to be consistent with the
22 National Environmental Policy Act, so that would
23 require a review by us, including a legal review, of
24 the arguments being made in support of the April 8
25 petition by the state.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Addressing the environmental area, the
2 Department of Energy, as we know, issued a record of
3 decision based on the Yucca Mountain Repository about
4 a year ago to move forward with the Caliente rail
5 corridor proposal. They've also issued a notice of
6 intent to do an Environmental Impact Statement. We
7 expect a draft of that statement will be issued this
8 fiscal year. That decision, the state is contesting
9 in the Court of Appeals.

10 MEMBER WEINER: Before you go any further,
11 what is NRC's role in a routing decision like that to
12 proceed with Caliente corridor and issue an EIS?

13 MR. REAMER: Yes. Our basic role here
14 relates, I think, to first off, the adoption of the
15 repository EIS. The activities that the Department
16 proposes to take with respect to transportation, we
17 need to monitor those, because if there is any
18 information that would be regarded as new, significant
19 new information that would have a substantial impact
20 on the acceptability of the repository EIS, then that
21 would relate to our adoption decision. So our role is
22 clearly to monitor what's going on in the rail
23 corridor EIS, so that we're informed and prepared for
24 potential questions that might arise on the impact of
25 that activity on the repository EIS.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MEMBER WEINER: So you really consider
2 this proposed EIS on the rail corridor as part of the
3 Part 51 EIS.

4 MR. REAMER: The adoption decision that we
5 will need to make relates to the repository EIS. One
6 of the reasons that our regulations layout or set-out
7 as a reason why we would not be able to adopt is if
8 there is significant new information that goes to the
9 environmental bottom-line. So the rail corridor EIS,
10 as design activities -- really all of what DOE is
11 doing potentially relates to that can we adopt the
12 repository EIS. In that sense, the rail corridor EIS
13 is not part of the repository. It's a separate EIS,
14 but clearly, it's relevant to our adoption decision
15 for the repository EIS.

16 MEMBER WEINER: Thank you.

17 MR. REAMER: I wanted to talk a little
18 about quality assurance, because it's very much a
19 topic of interest. We've consistently told the
20 Department our expectation is that the license
21 application be complete and of high quality. A
22 quality license application includes data, models, and
23 software that are reliable, transparent, and
24 traceable.

25 Historically, the Department has had

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 problems in the QA area. They have done a good job
2 generally in identifying problems. They've had a more
3 difficult time in fixing those problems, so that they
4 don't recur.

5 Last year we conducted a field activity
6 that resulted in giving the Department our own
7 independent evaluation of certain analysis model
8 reports, and how they compared to our expectations on
9 quality. As a result, the Department engaged in an
10 integration review of a lot of its technical
11 information. And post-closure, our understanding is
12 they're considering the same kind of review with
13 respect to their pre-closure documents.

14 We think that the Department believes it
15 understands its QA issues, and that it's working to
16 solve those, so that we can have confidence that the
17 future activities for the repository, future design
18 activities, perhaps even extending out beyond design,
19 are conducted pursuant to a QA program that's sound
20 and adequately implemented.

21 CHAIRMAN RYAN: Bill, just a quick
22 question there. We had a briefing on this topic, and
23 as I recall, and correct me if I'm wrong, somebody -
24 but the DOE had done a lot of programmatic
25 improvements to their quality program as a result of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 your examination of data sets, and data packages, and
2 so forth, and they had done improvements to their
3 processes and systems. And I asked if there was any
4 planned test of those improvements, was there going to
5 be a second review or another round of evaluations.
6 And, of course, with the then impending end of the
7 year in 2004, that didn't seem like it would fit, but
8 I wonder have you thought about doing anything in that
9 area now?

10 MR. REAMER: We don't have current plans
11 to conduct another field-type activity. That was not
12 in our planning, obviously, for '05 we expected to
13 have a license application. It's something that I
14 wouldn't totally rule out based on the recent
15 activities involving USGS allegations, but at present,
16 we don't have plans for additional in-field
17 verification-type activities.

18 CHAIRMAN RYAN: Okay. Thanks.

19 MEMBER HINZE: If I may; you mentioned
20 KTIs. I am curious how you're approaching the
21 resolution of KTI open items with the DOE. Are you
22 meeting with DOE? Are there interchange of letters?
23 Are there technical sessions going on? How are you
24 approaching these, and what are the critical KTIs that
25 are left open in your mind?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. REAMER: We're still operating under
2 the understanding that existed in the second-half of
3 last year, in that our goal is to provide feedback to
4 the Department on all of the key technical issue
5 agreement responses that they finished providing to us
6 in late August/early September time frame.

7 We set as our first goal to provide
8 feedback on the 40 or so high-significance agreements.
9 We completed that sometime in January. My
10 recollection, obviously, is igneous remains a high-
11 significant agreement where we still have outstanding
12 issues to work. There may be some TSPA-related
13 issues, as well. I can't give you a specific answer
14 with respect to what issues remain open with respect
15 to the highs.

16 What we've heard recently is that the
17 Department may be able to interact with us, in light
18 of the fact that the license application date is now
19 December. They want to interact with us on some of
20 the specific KTI follow-up items that have been left
21 open, but what we are operating under really is the
22 understanding they gave us last summer; which is, that
23 they would intend to address our feedback, any
24 feedback in the license application, and not prior to
25 the application. So a long-winded way of saying

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 they've told us that our feedback will be addressed in
2 the license application. We have heard indications
3 that they may want to, on specific agreements, meet
4 before then.

5 MEMBER HINZE: If I might also, on these
6 pre-closure issues, could you enlighten us a little
7 more in terms of what kind of issues you're talking
8 about, and what are the ones that are principally on
9 your plate?

10 MR. REAMER: Yes. We gave DOE a letter
11 last October, and identified four or five issues, the
12 aircraft crash issue - I think we've probably provided
13 that letter to you. Since then, we've continued to
14 interact with DOE. We've urged the Department to put
15 itself in a position of being able to support public
16 interactions on pre-closure. What that will take,
17 however, is for the Department to complete documents,
18 because we want our interactions with the Department
19 as they relate to pre-closure documents to be with
20 respect to documents that are public, so we have an
21 expectation that there will be interactions and
22 meetings with the Department, but we don't have a firm
23 schedule at this point with respect to specific
24 interactions on specific dates.

25 MEMBER HINZE: These primarily deal with

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 waste-handling facilities?

2 MR. REAMER: Including waste-handling,
3 that's right.

4 MEMBER HINZE: Are there any design
5 aspects of the structure of the repository itself that
6 are involved in that?

7 MR. REAMER: Yes. Let me see if I can get
8 some help from staff that are here.

9 MR. KOKAJKO: Lawrence Kokajko, Deputy
10 Director of High-Level Waste. Part of the problem
11 that we had, if you've read the October letter, was
12 the fact that there was a paucity of design
13 information that we've been able to review thus far.
14 And DOE has acknowledged that, and are working
15 diligently to provide that.

16 We also have looked at other issues that
17 we think could be coming out of that fuel-handling and
18 aging facility area. If, for example, crane placement
19 and movements, repackaging of fuel, what it takes to
20 repackage in this particular environment, looking at
21 ventilation, perhaps a nitrogen blanket within the
22 cells themselves, and other related topics. But right
23 now, we don't have a lot of information to go on, but
24 we are looking at that now. And we are interacting
25 with DOE as they begin to get more information

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 available to us.

2 MEMBER HINZE: And you anticipate getting
3 more information before the license application, or
4 will this be in the license application? What's the
5 outcome? Excuse my ignorance, but --

6 MR. KOKAJKO: It will be in the license
7 application, but we also expect that DOE will provide
8 more information between now and LA. And we hope to
9 have technical exchanges on some of these topics.

10 MEMBER HINZE: Great. Thank you very
11 much.

12 MR. REAMER: And we've communicated to the
13 Department, and I think at a management level, they
14 agree that pre-licensing interaction with respect to
15 pre-closure can help identify and resolve issues, just
16 the way it's worked in post-closure. But first, the
17 information needs to be made available publicly in
18 order to have a fruitful interaction.

19 MEMBER HINZE: And you don't have any
20 schedule on that forthcoming from the DOE.

21 MR. REAMER: We don't have a firm
22 schedule. I believe that's correct.

23 UNIDENTIFIED: That is correct. We do not
24 have a firm schedule.

25 MR. REAMER: Okay. So a couple of more

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 comments on the QA issue. We were informed March 11
2 by the Department that the Department had discovered
3 emails dated in the 1998-1999 time frame that
4 suggested a failure to follow DOE Quality Assurance
5 procedures by the United States Geologic Survey
6 employees, as well as the possible falsification of
7 records, and possible misuse of funds by USGS.

8 At that time, we were told by the DOE that
9 the email related to data on infiltration of water
10 from the surface to the underground, that the
11 documents were discovered during the screening of
12 documents by DOE associated with the NRC's licensing
13 support network that the Department had notified its
14 Office of Inspector General, and we, of course, later
15 learned, also, that the Department of Interior
16 Inspector General has been notified, and both are
17 following up on investigatory activities.

18 The Department told us that they would be
19 assessing the technical implications of the discovery
20 on both their past activities related to site
21 suitability, as well as on the license application.
22 And that's pretty much where things stand there.

23 We will continue to monitor their
24 activities. Obviously, as I said, this issue will end
25 up with us, if there is a license application and a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 review. And so we want to continue to monitor what's
2 happening as the Department unfolds its follow-up
3 activities on the USGS allegations.

4 The last topic I'll talk about - actually,
5 I guess I have a couple. Well, we've already talked
6 about pre-closure, so I think I don't really have
7 anything more to offer there. But with respect to
8 risk-informing our activities, we do continue to
9 improve our understanding in the consequence modeling
10 area of the TPA code, trying to make improvements.
11 Obviously, the code and the usefulness of the code are
12 important, not only with respect to the 10,000-year
13 compliance period, but also if the compliance period
14 goes to peak dose, we will rely on the tool to assist
15 our own understanding and review with respect to a
16 post-10,000-year activity.

17 We are looking at the code's usefulness
18 with respect to peak dose, and whether there would be
19 any aspects of the code that would render it not
20 usable for peak dose. We haven't identified any such
21 problems. Our modifications have focused on two
22 areas, extending, as I said, the model to accommodate
23 simulations greater than its current capacity, which
24 is 100,000 years, and improving computational
25 efficiencies.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 So that pretty much covers what I had
2 intended to talk about. Are there any questions with
3 respect to any of my comments?

4 CHAIRMAN RYAN: Just one on our schedule,
5 Bill, if I may. Our letter-writing session this
6 morning ran a little long. We were going to consider
7 the time of period of compliance for a proposed
8 repository as an information exercise, and I think
9 we'll move that to our letter-writing session
10 tomorrow.

11 Mr. Malsch was here earlier. He wanted to
12 leave, and he left because we rescheduled it at that
13 time for -- he'll be here tomorrow. So just a quick
14 schedule change there, and your presentation is
15 helpful in that regard. Thank you. Anything else,
16 any other questions?

17 MEMBER HINZE: A quick one. TSPA 501,
18 when is that going to hit the street?

19 MR. REAMER: Andy, could you help me on
20 that?

21 MR. CAMPBELL: This is Andy Campbell. I'm
22 Chief of Performance Assessment Section for high-level
23 waste. Our planning right now is to have it ready for
24 the staff to evaluate issues with respect to the EPA
25 standard for the longer-term calculations, whenever

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that occurs. Then having a code ready for us to be
2 used in licensing, we're looking at the end of the
3 year as having that ready for our ability to use it in
4 licensing review. But right now, what we're focused
5 on is making sure we can actually run the calculations
6 out longer than 100,000 years.

7 MEMBER HINZE: In just a mechanistic
8 fashion, not necessarily changing of parameters and
9 coupling, and so forth.

10 MR. CAMPBELL: What we're looking at are,
11 we have been evaluating the parameter inputs to TPA
12 and making sure that there's a technical basis for
13 those inputs, but that's been an ongoing process that
14 we started last year. But we also intend to have that
15 completed the same time that the code is ready to be
16 run at these long time frames.

17 MEMBER HINZE: Thanks.

18 MR. REAMER: Any licensing decision would
19 have to be based on the EPA standard. The EPA
20 standard really would dictate what changes we would
21 need to make to our own review, and the tools we would
22 use in our review.

23 CHAIRMAN RYAN: Okay. Thanks, Bill. Any
24 other questions for Bill? Yes.

25 MEMBER WEINER: How will the ACNW be

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 involved in any Part 63 rulemaking?

2 MR. REAMER: I would imagine the same way
3 that the Committee was involved in the original rule;
4 which is, we provide the Committee information as
5 soon as our protocol allows us to provide it. In some
6 cases that may be pre-decisional documents, but we can
7 share that information on an understanding we have
8 with the Committee to keep the Committee informed. So
9 we do that, unless instructed otherwise by our
10 management. Once the EPA standard proposal becomes
11 more apparent, publicly apparent, it may be possible
12 for us to have an interaction with the Committee, as
13 well, with respect to how we would implement that in
14 our proposal.

15 MEMBER HINZE: One more if I might, Bill;
16 we had an interesting session at the center last week,
17 and a number of the things that we heard with regard
18 to igneous activity were pre-decisional. It makes it
19 a little difficult for us to comment on it. Is there
20 any time frame in mind where we might be able to hear
21 from the staff and the center where we might lead to
22 some formal response?

23 MR. REAMER: Are you talking specifically
24 about igneous activity in our schedule?

25 MEMBER HINZE: Yes.

1 MR. REAMER: I'm not sure whether we have
2 the right people here on our schedule to complete our
3 activities. If we do, come forward. If not, we'll
4 get you that information as soon as we can.

5 MEMBER HINZE: That's of quite importance
6 to us, because it's a matter of how we comment on our
7 research review, and upon the comments that the
8 Committee has made, and the EDO's response.

9 MR. REAMER: Yes. I understand.

10 MR. RUBENSTONE: This is Jim Rubenstone
11 from High-Level Waste Repository Safety. Bill, some
12 of that is really on a case-by-case basis, some of
13 what was discussed last week has to do with center-
14 deliverable products. And as those become available
15 to the public, then they're open for discussion.
16 Certainly, things that are being done with the TPA
17 code are tied to as the TPA code becomes available, so
18 I can't really give you a blanket answer on that.
19 It's really a kind of case-by-case.

20 CHAIRMAN RYAN: I think a request, Bill,
21 would be that as any of them become available, the
22 sooner the better in terms of us having the chance to
23 take a look, and at least being current with the
24 documentation. I know cycling briefings can be a
25 chore to get everybody scheduled properly, and impose

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 on them to prepare presentations, but if the documents
2 themselves can be brought forward concurrent with them
3 being available there, that would be a big step
4 forward. Thank you.

5 MR. REAMER: Every Center-deliverable has
6 a due date, and then we have an expected review time,
7 so I'm sure we can give you a schedule with respect to
8 specific deliverables.

9 CHAIRMAN RYAN: That would be real
10 helpful. That would help us plan a little bit, too.

11 MR. REAMER: Yes.

12 MEMBER WEINER: If I could just follow-up
13 on that; one of the things that we observed at the
14 center, which is their standard operating procedure,
15 is that when they get a result, they abstract it into
16 the code. And I was wondering if we had to wait until
17 TPA 5.0.1 or whatever the next release is, is fully
18 released, or would we have in order to discuss those
19 abstractions, or could we do it when the appropriate
20 documents are released?

21 MR. RUBENSTONE: Certainly, anything that
22 ends up in the TPA code, there's a supporting
23 document, one or more supporting documents that
24 describe that. For example, some of the work that's
25 being done on redistribution, we had a scoping

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 document that I believe is already publicly available
2 from last fall, and there's a follow-up on that being
3 prepared. So as each of those documents comes out, we
4 can certainly bring those forward. You don't have to
5 wait until the full code release is there. I mean,
6 the code gives you how it's implemented, and the
7 parameters, and the results. But the documents are
8 the technical basis for the abstraction, and those
9 will be well in advance of the final release of 5.01.

10 MEMBER WEINER: Thank you.

11 MR. CAMPBELL: Just one thing to add,
12 Ruth; this is Andy Campbell. Once we have a
13 deliverable date for the revised code, as it becomes
14 a public document, we can provide that. Now we have
15 a schedule, but we're working that schedule and
16 determining what that date will be, and we can get
17 back to you with that.

18 CHAIRMAN RYAN: Thanks. Other questions,
19 comments?

20 DR. LARKINS: Just a quick question. Is
21 there a schedule for the Commission to make a decision
22 on waste confidence?

23 MR. REAMER: Not to my knowledge, but let
24 check and get back to you after the meeting.

25 DR. LARKINS: Okay.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN RYAN: Bill, I think you're
2 right. This Committee makeup has not heard that, and
3 I guess I would just suggest that you might want to
4 work a briefing on that topic for the current makeup
5 of the Committee. That would be helpful.

6 MR. REAMER: Okay.

7 CHAIRMAN RYAN: Thank you. All right.
8 Thank you.

9 MR. REAMER: You're quite welcome.

10 CHAIRMAN RYAN: We all appreciate your
11 coming with us, and giving us a real informative
12 update on what's going on. I guess next up is Larry
13 Camper. Is that correct? Good afternoon. How are
14 you?

15 MR. CAMPER: Good afternoon. How are you?

16 CHAIRMAN RYAN: Fine, thanks.

17 MR. CAMPER: By the way, this is my first
18 day back from survey after three weeks, so you can't
19 beat me up too bad.

20 CHAIRMAN RYAN: We'll go easy.

21 MR. CAMPER: Good afternoon. It's a
22 pleasure to be with you. It's especially important
23 for me to be here because I took over the Division of
24 Waste Management and Environmental Protection on the
25 10th of January. And although I'm not new to the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Division, I had spent four years as a Branch Chief of
2 the Decommissioning Program, and then before coming to
3 the Division, I spent 20-months as the Deputy Director
4 of the Spent Fuel Project office, so I've been in and
5 about waste issues for quite some time now, but it's
6 interesting to be in this role.

7 I also think this is a good opportunity
8 today because, frankly, one of the things that I view
9 as a priority is to enhance the relationship between
10 my Division and this Committee. I think there's
11 always been a good working relationship between the
12 Committee and the Division, but I think we can make it
13 better. In fact, to that end, about two months ago or
14 so, shortly after I had come on board, John and I had
15 a conversation about that one evening in the gym about
16 what can we do to make the interaction between the
17 Division and the Committee - we were doing the
18 treadmill thing and conducting a little business - so
19 I do view it as a priority. And to that end, for
20 example, I intend to accompany you to your visit to
21 South Carolina. I would like to hear first-hand the
22 Committee's questions. I especially want to hear what
23 the Committee has on its mind in terms of the DOE
24 meeting on waste incidental to reprocessing. So I
25 look forward to that visit with you, and I think it

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 would be a good learning experience, first-hand.

2 When I learned of the meeting, the first
3 thing I asked myself is, if I were going to talk to
4 you about a few things, what would it be? And that's
5 before I saw your questions, and the format that you
6 wanted to hear about. But these are some of the
7 things that were on my mind. Needless to say, of
8 course, first is waste incidental to reprocessing, and
9 we'll talk much more about that here in a moment.
10 It's a big priority for us, and I'll cover it in some
11 detail in addressing your questions. And then also
12 later on, there's a presentation on the low-level
13 waste program, so you'll hear more about it then, as
14 well.

15 The National Low-Level Waste Program, it's
16 been a small program for us for some years now, about
17 three FTE, and it's been fairly quiet. But we see
18 things on the horizon that may change that, and you're
19 going to have a briefing following my presentation by
20 Scott Flanders, who is my Deputy for the Environment
21 Assessment Area in Low-Level Waste, and Jim Kennedy,
22 who is our resident expert on low-level waste issues.
23 It's been that way for a long time, so you'll hear
24 more about the program from the two of them following
25 me.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Greater-than-Class C- waste disposal -
2 there are things finally happening on GTCC. And
3 again, we'll talk to you more about that during Scott
4 and Jim's presentation. But yes, DOE is now making
5 some movement.

6 The Integrated Decommissioning Improvement
7 Plan, or IDIP; this is our comprehensive plan that we
8 are developing and implementing, which addresses a
9 wide array of changes to the Decommissioning Program.
10 I'll cover it in more detail in a bit; but briefly, it
11 grows out of the license termination rule analysis
12 that we did about two years ago now. And briefly,
13 it's a comprehensive plan to try to address a number
14 of major changes on the decommissioning front.

15 And then next is the legislative proposal
16 for NRC to regulate Radium and accelerator-produced
17 materials. The Commission sent this proposal to
18 Congress on March 30th of this year. It provides for
19 NRC authority over accelerator-produced materials,
20 discreet sources of Radium-226, and other discreet
21 sources of NORM that would pose a similar threat to
22 that of Radium-226. It specifically provides for
23 continued disposal of these materials at currently
24 used disposal facilities, like U.S. Ecology and
25 Hanford for Radium-226 sources.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 The Organization of Agreement States and
2 the Health Physics Society have developed their own
3 legislative proposal for these materials. It adds a
4 definition for discreet sources based upon the risk.
5 It permits disposal of these materials in mill tailing
6 impoundment. Now we understand that there may have
7 been or will shortly be some legislation introduced
8 that has been suggested by NEERS, that may be yet a
9 different approach than the Commission proposed in its
10 legislation, or that the OAS and HPS has proposed.
11 And one of the things that that particular legislation
12 would call for, whatever comes of it, would be that
13 the material could only be disposed of at AEA-
14 licensed sites, so that would be a departure from what
15 we have right now.

16 We have been briefed by the Organization
17 of Agreement States and the Health Physics Society on
18 their proposal, and I think basically what I would
19 suggest to the Committee is the same thing that I'm
20 suggesting to us, and that is stay tuned. Let's watch
21 this closely, and I expect we'll be talking about it
22 more in the near term.

23 Now in terms of the things that you
24 specifically wanted to hear about, I'll step through
25 your format and hopefully cover the waterfront, and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 we'll entertain questions. I would suggest that we
2 just go with questions along the way. That's probably
3 the simplest thing to do.

4 We do have a lot going on right now. The
5 first, of course, is Waste Incidental to Reprocessing,
6 or WIR. We have a lot of new responsibilities
7 regarding incidental waste under the National Defense
8 Authorization Act of the year 2005, which went into
9 effect in October or November of last year. The NDAA
10 requires DOE to consult with NRC on its non-high-level
11 waste determinations in South Carolina and Idaho. And
12 requires NRC to monitor DOE's waste disposal actions
13 to ensure that they meet the performance objectives of
14 10 CFR Part 61.

15 The legislation, as I said, was passed
16 recently, and the NRC and DOE staffs have been working
17 together already aggressively to determine priorities,
18 schedule, tasks, and resource needs. We've already
19 had three or four meetings with the DOE folks, a
20 couple of meetings with South Carolina, and we plan a
21 similar meeting with the folks out in Idaho in May, as
22 soon as the wintertime moves along a little bit.

23 These are very high priority activities
24 within both DOE and NRC. WE know, for example, in
25 talking with senior level managers at DOE, this is an

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 item of high interest for the Secretary himself,
2 Secretary Bodman, so it's necessarily getting a lot of
3 attention within the DOE organization. And similarly,
4 we know there's a lot of Commission interest in it.

5 The states have important roles with
6 regard to the DOE sites. WE've had, as I said, a
7 couple of meetings with South Carolina already. The
8 states want to be actively involved. They've made
9 that very clear. There is a permitting process that
10 goes on that's part of this, and the states want very
11 much to follow closely our interactions with DOE, and
12 look closely at the questions that we ask of DOE in
13 our review process. They are interested in
14 piggybacking on their technical concerns within our
15 review process, and our questions. And they have
16 asked us - certainly South Carolina has asked us - to
17 be involved in their public meetings associated with
18 the public permitting process, and we've agreed to do
19 that.

20 We're developing a Commission paper that
21 describes how we intend to carry out these activities,
22 and it will discuss our review approach, our
23 resources, our schedule, and our plans for stakeholder
24 interactions. This paper is due to the Commission at
25 the end of April, and we look forward to hearing their

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 opinions, of course, on our proposed approach. And we
2 would hope to make the Committee aware of that process
3 along the way. We do not plan to provide the paper to
4 the Committee for comment while under development.
5 There simply isn't time. We were given a very short
6 time line by the Commission following the annual waste
7 briefing back earlier in the year, but we certainly do
8 want to make the Committee aware of what is going on
9 in that Commission paper, and we plan to do that.

10 The first review under the NDAA will be
11 for the Salt Waste Processing and disposal at Savannah
12 River, which you are going to hear a lot more about,
13 of course, from the staff, and then while we're down
14 there in September. DOE has submitted that
15 determination for the Salt Stone on the 28th of
16 February, and we are currently conducting our
17 technical review of that submittal.

18 Due to the decreasing free working volume
19 in the tanks at the site, DOE has asked for our
20 review to be complete within six months, so you can
21 imagine that is, indeed, a very aggressive schedule.
22 In accordance with the schedule, we are hoping to
23 complete our request for additional information by the
24 end of May, and as recent as this morning, Scott
25 Flanders assured me that we are on schedule.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 The NDAA provides the applicable WIR
2 criteria, and these are the criteria that NRC staff is
3 using for its review. These criteria are somewhat
4 different from the criteria that have been previously
5 used in our reviews, but are not markedly different.
6 Therefore, our experience in conducting the waste
7 incidental reviews will be directly applicable in
8 carrying out our new responsibilities. It is very
9 fortunate, given the time line with this piece of
10 legislation and the responsibilities that we have,
11 that we have heretofore reviewed several non-high-
12 level waste determinations in the past, because we
13 were able to draw upon that experience, and we have
14 several staff members that were available to us that
15 have the right expertise. But at the same time, that
16 will not work in the future, and we are rapidly
17 gearing up to accommodate the reviews that are coming
18 down the pike.

19 The universe coming down the pike is
20 something on the order of five of these in play in the
21 next several fiscal years. We're obligated to
22 complete one this year, and then three in the two
23 subsequent fiscal years, so a lot of activity going on
24 there.

25 It is important to note that the NDAA does

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 not apply to the Hanford or West Valley sites, but
2 they are conducting a similar review for Hanford, but
3 we are conducting a similar review for Hanford under
4 a separate reimbursable agreement. We transmitted an
5 RAI to Hanford on the 19th of January, and we are also
6 involved with West Valley, under the West Valley
7 Demonstration Project Act. And we'll probably be
8 reviewing tank-related information later this year in
9 a pre-decisional draft EIS, which I'll mention more in
10 a moment.

11 As part of this process, we are planning
12 to develop a standard review plan for waste
13 determination reviews. The SRP will provide
14 consistency, and guidance to the NRC staff during its
15 reviews, as well as help the Department of Energy
16 understand what we need for those submittals to
17 contain.

18 Now I note that the Committee is planning
19 on having a working group on incidental waste in July,
20 so we're going to be working with the Committee staff
21 to develop an agenda, a speaker list, and so forth,
22 and we'll be interested in getting any of the
23 Committee's input on what you'd like to hear in that
24 July time frame. And the point that I would make with
25 regard to the standard review plan is that the July

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 meeting will be a very good opportunity for the staff
2 to convey information to the Committee about the
3 contents of the SRP, and to get the Committee's input,
4 so there will be a very viable and active role for you
5 to play in that time frame.

6 The NDAA also requires that the National
7 Academy of Science conduct a study of DOE's plans for
8 incidental waste that exceeds Class C concentrations
9 that DOE does not plan to send to a geologic
10 repository. The Academy has one-year to complete this
11 study, and we have given the Committee two
12 presentations, thus far, describing our previous
13 involvement with incidental waste, as well as
14 applicable reference documents, such as our previous
15 reviews. And we will remain involved with the
16 Committee as it carries out its study to completion,
17 and expect to meet with you several more times.

18 The next topic that I wanted to cover was
19 the Integrated Decommissioning Improvement Plan, the
20 IDIP.

21 DR. LARKINS: Before you move on to that,
22 you said the NAS study is one year, and you've been
23 working with them currently. What is the schedule for
24 completion of that?

25 MR. CAMPER: Well, it was one-year. The

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 legislation called for the study to be completed in
2 one-year, Scott. Do you know what their actual date
3 for completion is?

4 MR. FLANDERS: This is Scott Flanders,
5 Deputy Director of Division of Waste Management. I
6 don't know the specific schedule, but they were given
7 one-year from the enactment of the legislation, and
8 that was in the October time frame, with an interim
9 report due within six-months. So they're actively
10 working on the interim report right now.

11 MR. CAMPER: We want to interact with the
12 Committee for a lot of reasons. I mean, of course, we
13 want to provide the best information possible. We
14 want to make sure that the conclusions are as accurate
15 as possible, but also it's important to maintain an
16 awareness, because if you look at what the Committee
17 is charged to do, one could get the impression that it
18 arguably gets right at what we're asked to do. That's
19 part of our determinations, as well. So we clearly
20 want the Committee to understand the process that we
21 are following, to answer all their questions, and make
22 sure there's a good mutual understanding of what the
23 process involves.

24 DR. LARKINS: All right. Let me ask
25 another quick question. On the states' role, and you

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 said you want to work them on the permitting process,
2 does the state come in on the back-end of that, or
3 after you've made a finding?

4 MR. CAMPER: The states permitting process
5 --

6 DR. LARKINS: Unless Scott is going to
7 cover this; I don't want to pre-empt anything you're
8 going to say.

9 MR. CAMPER: Are you going to cover this,
10 Scott?

11 MR. FLANDERS: We weren't going to go into
12 this on our low-level waste discussion, so you can go
13 ahead answer, or I can answer.

14 MR. CAMPER: The states' permitting
15 process is actually being conducted in parallel to our
16 process. In fact, as I mentioned, John, they want to
17 make sure that their concerns that they need to
18 address in their permitting process are being
19 addressed within our RAIs, as well. And they would
20 like for us to participate in their public meetings
21 called for in their permitting process, because they
22 know that some of the technical issues that we're
23 getting at will also come up in that process, so it's
24 really going on in parallel.

25 Okay. The IDIP, the Integrated

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Decommissioning Improvement Plan, this combines
2 regulatory program management and Commission-directed
3 improvements. And it grows out of the regulatory
4 improvements that we identified as being needed in the
5 license termination rule analysis. If you go back a
6 couple of years ago, you might recall that we did an
7 in-depth analysis of the LTR. At that point, we had
8 about six or seven years of experience. It had gone
9 well overall, but we thought it could be done better.
10 One of the issues that emerged, for example, was
11 institutional controls. No one was going with a
12 restricted release. WE felt that the process embodied
13 within the regulations were fairly burdensome, and so
14 that was one of nine issues that we identified as
15 warranting further attention.

16 We have interacted with the Committee
17 along the way several times on the LTR analysis. We
18 did a briefing, for example, for you in October of
19 `04. WE have been coordinating with you in
20 preparation for the April stakeholder work shop, which
21 takes place later this week, which you're going to
22 attend, and we're very glad you're going to be there,
23 and hear first-hand the input that we're going to get.
24 And there are going to be breakout sessions where the
25 various guidance documents are going to be discussed,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 so you're going to get a chance to hear first-hand the
2 concerns of those that are out there doing the
3 decommissioning. By the way, we have more than 170
4 people registered for the workshop, so we're really
5 looking forward to it being a good process.

6 We are working toward a meeting with you
7 in June on the guidance. And what I think will be
8 ideal is we'll all hear first-hand what the industry
9 has on its mind in terms of things that can be
10 improved, and that will foster a better discussion
11 between the staff and the Committee then, when we talk
12 about how to improve the guidance. And you should be
13 positioned, I would think, to give us some pretty good
14 indications of improvements that we might make.

15 CHAIRMAN RYAN: Larry, just a quick
16 question on the format for the meeting.

17 MR. CAMPER: Sure.

18 CHAIRMAN RYAN: I know you're going to be
19 giving presentations and getting input. Is a record
20 going to be created of that, as well?

21 MR. CAMPER: What we're doing on Day One
22 is, we have several members of the staff taking notes,
23 extensive notes. Day Two will be a recorded meeting,
24 transcribed meeting.

25 CHAIRMAN RYAN: Okay. Thank you.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. CAMPER: That's a great question.

2 CHAIRMAN RYAN: I just wanted to get my
3 own pencil sharpened up for that.

4 MR. CAMPER: That's a great question
5 because one of the things that the people that attend
6 are going to want to know, and I'm going to say up
7 front - I mean, they're going to want to know what
8 we're going to do with all this, how will it be
9 addressed? And there are several mechanisms whereby
10 it will be addressed, and I'll cover that. But taking
11 extensive notes on Day One and recording the meeting
12 on Day Two.

13 CHAIRMAN RYAN: Just a quick comment, too;
14 I think on behalf of the Committee, this is a real
15 success from our point of view, too, and that we're
16 hopefully saving you cycling presentations two and
17 three times, or extra times just for us. And it does
18 give us an opportunity to fulfill part of our mission,
19 which is to obtain the public input. I think this
20 direct approach works for both of us.

21 MR. CAMPER: Sure.

22 CHAIRMAN RYAN: We appreciate the
23 collaboration to get that rolling.

24 MR. CAMPER: Well, you're quite welcome.

25 We are trying to use the IDIP to improve

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 communications. For example, we have put together a
2 web page and a brochure that will convey more
3 information about the decommissioning process. We're
4 looking at revising our program performance measures,
5 and more closely tracking our resources; what does it
6 actually cost to review a decommissioning plan, or a
7 license termination plan, and how can we reduce that
8 cost over time?

9 There are a number of Commission-directed
10 improvements that we're looking at as part of the
11 IDIP. The Commission, for example, in the briefing
12 last fall expressed a great deal of interest in
13 Lessons Learned. Commissioner Merrifield was speaking
14 to the gathering on Thursday morning, and the
15 Commissioner has had a lot of interest in Lessons
16 Learned. The concern the Commission has is, we've had
17 a lot of success today in decommissioning, and
18 especially on the reactor side. We've had several
19 reactors that are now going through the process, but
20 the fact of the matter is, because of all the
21 renewals, we're going to go into a hiatus. And how do
22 we ensure that that information carries forth for the
23 next 15, 20, 25, 30 years when these other reactors
24 need to go into decommissioning? So getting Lessons
25 Learned memorialized, and getting the word out there

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 is something that's important.

2 I mentioned we'll be briefing the
3 Committee in June on the Lessons Learned feedback, and
4 looking for some very active discussion with you on
5 how to make the guidance better. Again, I would
6 reiterate what you said, Mr. Chairman, in terms of
7 your being there this week and hearing first-hand.
8 We're glad you're going to be there.

9 A Low-Level Waste Hearing - Senator
10 Domenici stated in a hearing last September that he
11 was going to look into legislation to revise the Low-
12 Level Radioactive Waste Policy Act, as amended. I
13 think all of you know that the Senator is concerned
14 about the fact that there really had been no new low-
15 level waste disposal sites developed for many, many
16 years now. Barnwell closing in 2008 causes the
17 Senator some concern. We don't have a definitive word
18 yet as to if and when that hearing will take place.

19 Clearly, if it does, we'll have a lot of
20 preparation to do. I would think there would be an
21 opportunity there to discuss with the Committee the
22 types of information that we're gathering, and gain
23 perspectives as we prepare for such a hearing. I
24 would view that as an important role. And we're just
25 going to stand by and see what happens.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 The National Academy and the GAO reports -
2 later this year both organizations will issue reports.
3 The National Academy's on low-activity waste, and the
4 GAO on the safety and security of Class B and C low-
5 level waste. This is a follow-on to their earlier
6 report which, as you know, we had a number of
7 extensive comments on.

8 We certainly could be affected. It's
9 always difficult to imagine not being affected by NAS
10 reports, or GAO reports, so we certainly thing
11 something will come out of that, don't know what, but
12 again, stay tuned.

13 You asked about international activities,
14 and how the ACNW expertise could be overlaid on
15 international activities, and what we learn from
16 international work. I would agree that there is a
17 benefit to be gained there, and certain thoughts come
18 to my mind as to how we might do that.

19 Now I think that we need to have a follow-
20 on working discussion about how to do this. But, for
21 example, I'm heading over this weekend for the Waste
22 Advisory Safety Committee (WASC 19) meeting at IAEA.
23 I do that twice a year in my role as the Division
24 Director.

25 We get a lot of documents that are going

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 to be discussed at these WASC meetings. I mean,
2 typically the stack of documents is three or four
3 inches thick. We get them starting in January-
4 February, sometimes as late as March for a meeting
5 taking place in April. But it is certainly possible
6 that we could give some Committee review of those
7 documents, as well.

8 We use our staff to do that. We have a
9 couple of consultants that help us to do that. We
10 have used the Center in the past. We don't currently,
11 but we have in the past. But possibly there's a role
12 to be played there. Now the only caveat that I would
13 offer, is it's a lot of documents and a tight
14 schedule, but that's a possibility.

15 We're doing a lot of work right now on the
16 Joint Convention. The next national report will be
17 provided in Vienna next May. The working group has
18 put together the current version of the draft for
19 review. There is a lot of work going on. It is
20 certainly possible that sometime during the summer we
21 could brief the Committee on the Joint Convention
22 preparation report, and get your thoughts on that.
23 But again, by the August-September time frame, we've
24 really got to be finalizing the draft, because there
25 are meetings in November where it's all being put

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 together, the bow is being put on the package, and
2 we're getting ready to send it over to IAEA. But I
3 would think that there's a possibility there during
4 the summertime.

5 I think that the Committee should be added
6 to recipients for the staff's international trip
7 report. As you know, we put out an early 30-day
8 notice that we're going to go on some international
9 activity; generally, what it's about. We then come
10 back following that meeting and post a seven-day trip
11 report, which is a quick look. An then 30-days after
12 the meeting, we provide a more in-depth report. I
13 think that would be a way for the Committee to have a
14 better awareness of what's going on internationally.

15 CHAIRMAN RYAN: Larry, at the end there
16 may be one or two key ones that a briefing might
17 result from, from one of those trip reports a little
18 bit more detail and interactively. I think we've
19 identified a couple of opportunities just from a quick
20 look that seems like ones that would be interesting to
21 hear the gory details on that one, for example, so
22 that might fall out of it.

23 MR. CAMPER: All right.

24 CHAIRMAN RYAN: I might add, too, that the
25 Committee travels typically internationally every

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 other year or so, and we're going to have a
2 Subcommittee going to Japan in May, and we'll be happy
3 to share our trip report with you, of course, in the
4 same.

5 MR. CAMPER: Good. Okay. I think you
6 know there's a lot of staff involvement in several
7 areas internationally. We're closing working with the
8 ICRP on some of its activities; particularly on
9 environmental protection. The NEA, the Nuclear Energy
10 Agency in Paris, Margaret Federline has been actively
11 involved in that for some time. She actually chairs
12 the Radioactive Waste Committee of the NEA, and has
13 done that for several years. Obviously, the IAEA, in
14 terms of advisory committees.

15 There are various international
16 conferences that we actively participate. For
17 example, several of us are participating in the ICEM
18 '05 conference in September. Karen Cyr, the General
19 Counsel, is actually going to that meeting as one of
20 the plenary speakers. So there's a lot of
21 international activities, and I would think that
22 during your meetings as an agenda item, we could
23 certainly provide, if nothing else, a brief overview
24 of what's going on, make sure you get these reports
25 that I've cited already, and try to answer questions

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that you might have, and figure out which of these
2 things is of most interest to you.

3 CHAIRMAN RYAN: And I'm sure you're aware
4 of it, but the SRM from the Commission directed us to
5 be cognizant of the ICRP developments and as we know
6 two of those foundation documents hit the web, I
7 guess, last week and we're planning on reviewing those
8 and making comments together and so forth.

9 MR. CAMPER: Right. Exactly. Good. And
10 again, I think if you'd like this something that we
11 could discuss in a separate meeting more operationally
12 just how to do this in a better coordinated fashion,
13 but at least, I think that will give you some ideas
14 about how we might do this.

15 Risk-informing activities in NMSS. What
16 I'll try to do is speak specifically to what is going
17 on within my division. I think you know there are
18 some activities going on NMSS-wide in terms of a
19 guidance document having been developed. I understand
20 you either have been or you're going to hear from
21 Dennis Damon about what's going on in NMSS in terms of
22 risk informing. So I'll talk a little bit more about
23 what we're doing.

24 We are obviously following the guidance
25 document that's been developed and that is a process

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 document that the staff steps through to determine
2 what level of risk-informed process best applies. But
3 let me speak to it in practical terms of what we're
4 actually trying to do. The IDIP is a process that we
5 believe is risk-informed and we're going to be
6 discussing that extensively in the upcoming workshop
7 on Wednesday and Thursday of this week.

8 Basically, what we're trying to do is to
9 help us become more efficient and by placing the
10 appropriate level of regulatory concern where the
11 highest risk activities are being carried out. I
12 think you're aware, for example, that we've made a
13 number of changes in our inspection process where we
14 actually go during higher risk activities in the
15 commissioning process and we cut out a number of
16 routine things and therefore, save some resources. So
17 we're going to use the whole IDIP process to make our
18 efforts more risk-informed.

19 Some examples that come to mind for
20 instances are the use of realistic scenarios for end
21 uses of sites theretofore. In the past, I think an
22 awful lot of applicants defaulted to the resident
23 farmer scenario as did our staff because it was very
24 difficult to predict what was going on a thousand
25 years out. In the LTR analysis, one of the things we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 suggested was to look at near-term scenarios, say, on
2 the order of tens to one hundreds of years as opposed
3 to defaulting the resident farmer. It makes a big
4 difference.

5 Phased institutional controls. I mean the
6 fact of the matter is every site doesn't need to have
7 the same kind of institutional control. It's a
8 function of risk of what's actually at the site.

9 Intentional mixing of soils was discussed
10 in the LTR analysis in a subsequent paper to the
11 Commission.

12 Within the waste incidental to
13 reprocessing activities, we think that could be risk
14 informed. We do have a good performance-based
15 standard in Part 61, Subpart C. We're trying to bring
16 that to bear as much as possible in the wear reviews.

17 On the low waste front, we're making
18 efforts not to regulate based on the origin of the
19 waste but rather upon the waste risk that is posed.
20 There are number of things going on, the use of RCRA
21 cells for example which is taking place in our EPA
22 advanced notice of proposed rulemaking which we've
23 been working with EPA on

24 Using and approving 10 CFR 20.2002
25 disposals, we have done that recently with some

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Connecticut Yankee waste going out to Idaho. We've
2 done it in the past with Big Rock Point. So there is
3 a mechanism there that if you bring risk to bear it
4 provides a pathway for disposal of waste.

5 We do look forward to the Committee's
6 white paper on low level waste and what we can learn
7 from further informing Part 61. A big question that
8 comes in terms of risk informing is if GTCC ever does
9 advance what's the right level of regulatory pressure
10 to bring to bear on that. I mean it's not high level
11 waste and it's not low level waste. It's something in
12 between. So what would be the best approach in terms
13 of risk?

14 Integration of the ACNW action plan into
15 the NMSS operation plan. We already --

16 CHAIRMAN RYAN: Before you leave the risk-
17 informing if I may, Larry, I think the Committee and
18 my predecessors as you all know John Garrick is
19 interested in risk questions and I think we continue
20 in that interest as a committee. We did recognize the
21 staff group that was involved in the risk-informing
22 activities that I guess is no longer constituted as a
23 group.

24 I think our key question is all the things
25 you mentioned in terms of seeing risk-informing

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 approaches applied. But then the second question for
2 us becomes a consistency question. Is it done the
3 same way across the board?

4 So if we ask the question in a lot of
5 different briefings, it's not that we don't think that
6 folks are doing it. I think it's an issue of is there
7 consistency. Do we see a pattern of it's going well
8 or a pattern where one might be different? Maybe it's
9 different for a good reason. So it's that kind of an
10 interest that has us asking that question a lot.

11 MR. REAMER: Well, I think it's a fair
12 question. It's a challenging question. It's a
13 question that I worry about because if I had ten
14 different reviewers --

15 CHAIRMAN RYAN: Exactly.

16 MR. REAMER: -- are they all doing it
17 consistently.

18 CHAIRMAN RYAN: And then one guidance
19 document probably isn't going to be as broad or as
20 detailed as it might need to be to cover all
21 contingencies and so forth.

22 MR. REAMER: And frankly, people interpret
23 guidance somewhat differently.

24 CHAIRMAN RYAN: A little differently.
25 That's really our interest.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. REAMER: Yes, they bring their own
2 biases to bear and what have you. So consistency is
3 a good point.

4 CHAIRMAN RYAN: Integrating the ACNW
5 action plan into the respected NMSS operating plan.
6 Whatever commitments we make to the Commission
7 obviously or to the Committee, we do carry as line
8 items in our operating plan with due dates,
9 responsible persons and organizations. We are open to
10 including others. We need to be mindful, of course,
11 that certain commitments and schedules that are made
12 to the Commission, we have little or no flexibility on
13 that unless we seek an extension.

14 But we are certainly amenable to looking
15 at your plans and our operating plans and doing what
16 we can to make sure they are in sync. And again, that
17 may be something that we can discuss in the more
18 operationally-oriented discussion.

19 MR. REAMER: Just another comment there if
20 I may. I think that we've done an awful lot of
21 planning so far. It's going well. I think the more
22 we work on it the better our interaction becomes and
23 smoother for everybody in terms of our schedule and
24 your schedules, of course, and all that.

25 CHAIRMAN RYAN: Right.

1 MR. REAMER: I'd be remiss if I didn't
2 recognize Sam Jones for his on-going help in getting
3 our calendar up and running. He works very hard at it
4 and it's working. So we appreciate it.

5 CHAIRMAN RYAN: Good. Thank you.

6 DR. LARKINS: I have a comment. I think
7 one of the things we'd like to see in the future is
8 that when there is a request or a schedule developed
9 for particular items that we let the Commission know
10 that they're going to seek advice or we'd like advice
11 from the ACNW that they need to build it into the
12 staff's schedule.

13 MR. REAMER: Okay. And, John, we agree
14 with that. It's worthwhile. As you know, they don't
15 often give us the time we want and we go back, but I
16 think it's worthwhile to emphasize the need for
17 interactions and we can certainly do that.

18 In terms of aligning priorities between
19 the Committee and NMSS, as you know, the Commission
20 often sets our priorities and those are givens, of
21 course, just as it is for you. We want to be
22 cognizant of what priorities the Commission is giving
23 you in your Tier 1 areas and make sure we work
24 together on them.

25 I think the issues there is how do we best

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 coordinate so that the Committee can add value and
2 this is John's point precisely. I think I would
3 suggest again an operational discussion. I actually
4 have an idea for how we might do that here in a
5 moment. I think we need to consider a periodic
6 meeting between the Committee chair and the division
7 directors to discuss tasks and priorities and frankly,
8 I think we ought to do that a couple times a year.

9 I think there might be value in fact in
10 the chair or certain members of the Committee coming
11 to a Leadership Team Meeting. The Leadership Team is
12 the NMSS division directors and put this topic on the
13 table and let's discuss with the division directors
14 how we might best facilitate this kind of
15 coordination. But I think that it is an area where we
16 can all do a better job.

17 With regards to recent SRMs, I'll cover
18 obviously those in my division only. We did get an
19 SRM on the waste arena briefing which took place on
20 the 28th of February. The staff is to keep the
21 Commission informed on DOE/GTCC strategies. The staff
22 is to recommend NRC's potential role especially with
23 respect to an EIS.

24 We are currently developing a Commission
25 paper laying out what we believe to be the appropriate

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 role regarding the EIS. We've had management meetings
2 with NMSS on that and would hope to get that paper up
3 to the Commission in May. We had not planned to
4 coordinate that particular paper with the Committee.
5 It's a policy kind of thing in terms of what level the
6 staff should be involved in the EIS. It's a question
7 of are we going a commenting agency on the EIS or are
8 we going to be a cooperating agency on the EIS and
9 what are the pros and cons and we have gotten sort of
10 mixed signals at this point from the various
11 commissioners on their preference on that.

12 DR. LARKINS: At some point, are you going
13 to be looking at potential options to facilitate the
14 handling of greater than Class C?

15 MR. REAMER: Well, the immediate question
16 on the table in the paper is this question of what to
17 do about the EIS. Now as far as what to do about
18 GTCC, a lot of that will unfold in the preferred
19 alternative within the EIS. From the staff's
20 standpoint, and we've made this clear already, we
21 think there's value of being involved along the way of
22 the process.

23 However, there are some concerns given
24 that ultimately we would have to license a GTCC
25 facility should we be a cooperating agency versus a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 commenting agency. What we're going to do is focus
2 upon that first, John, and lay out pros and cons and
3 make a recommendation to the Commission. Then we'll
4 be dealing with what is the process for the GTCC
5 facility in the EIS as you look at referral terms.

6 DR. LARKINS: I was thinking since you are
7 going to have to license or sort of file or make some
8 review, you might have preferred options that the
9 staff would prefer that makes sense be that from a
10 risk perspective or dose perspective.

11 MR. REAMER: Right.

12 DR. LARKINS: So at some point, are you
13 thinking about trying to develop something along that
14 line?

15 MR. REAMER: As we review the EIS, we'll
16 look at that. Scott, do you want to comment in terms
17 of the EIS itself? Do you want to add to that at all?

18 MR. FLANDERS: Again, it will greatly
19 depend on the role we're playing whether we're a
20 cooperating agency or a commenting agency. But
21 certainly in the context of being a cooperating
22 agency, we would be able to review the different
23 proposals and look at what kind of criteria we would
24 need to establish in order to license at your
25 facility.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 If we're a commenting agency again, we
2 would comment on the document, but regardless of what
3 role, we need to begin to think about the appropriate
4 criteria which we would license at your facility. We
5 think there's certain advantages of us being a
6 cooperating agency which would facilitate that
7 process. But we are going to have to start thinking
8 about that and as we do that, I believe it would be
9 appropriate for us to come and talk to ACNW as we're
10 getting more and more into it.

11 MR. REAMER: I mean clearly there's value
12 in -- Ultimately, if you had an EIS that you could
13 adopt, there's efficiency in that that we can develop
14 around the EIS if need be and EIS, of course, will
15 support the licensing action whatever that pathway is.
16 But from an efficiency standpoint, we think there's
17 value.

18 Now that has to be juxtaposed against
19 concerns about being a cooperating agency because
20 ultimately, we're going to be a licensing agency. And
21 we are a cooperating agency at West Valley, but the
22 distinction there is we're not licensing something out
23 there at this point as compared to GTCC.

24 DR. LARKINS: Yes. My whole point was
25 that it makes sense to push. I mean it's an

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 opportunity here to make some advancements in this
2 greater than Class C issues that's been going on for
3 20 plus years. It seems like the agency might want to
4 take a little proactive role in trying to advance some
5 particular option that makes sense from a risk or dose
6 perspective.

7 MR. REAMER: I think your point is
8 something we certainly should think more diligently
9 about as we prepare the Commission paper.

10 CHAIRMAN RYAN: You mentioned U.S. Ecology
11 and it brings to mind that they did some special
12 determination, for example, for a reactor vessel. I
13 know sometimes sealed sources are exempted in barn
14 wall even though they calculate on the basis of the
15 little foil Class C if you take the foil and the
16 source holder and the gadget. So things like that are
17 done.

18 I wonder if there's an information
19 gathering step in there that might be beneficial to
20 gather that experience all in one place of how greater
21 than Class C waste has been addressed before. I'm
22 also just recalling that there is a BTP on averaging,
23 for example, of light types of irradiated hardware
24 where one portion may be greater and one portion is
25 less and the average is less than Class C and the high

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 and the low is going to span no more, I think, it's a
2 factor of ten if I recall correctly and those kinds of
3 things. I wonder if the Committee could have any role
4 for example in one of our working group meetings where
5 we try and bring that real live experience where
6 people have dealt with this whether it's a state
7 regulator for the disposal sites or NRC staff in terms
8 of --

9 DR. LARKINS: Well, I'll give you the
10 simple answer. I would think so because I think the
11 more we know about what the practices have been,
12 what's out there, how to best deal with it, the better
13 off we are. And again, if I understood correctly, the
14 DOE schedule is not exactly clear at this point. So
15 it's down the line a bit, but it might not be too
16 early to start thinking about such a working group
17 meeting.

18 MR. FLANDERS: Right now, DOE's schedule
19 is uncertain but one of the activities they recognize
20 is really to try and get a handle on potential
21 inventories and some of the issues that you raised
22 really drives to the issue of really how much of an
23 inventory do you really have for a facility for
24 greater than Class C.

25 CHAIRMAN RYAN: The other aspect of it too

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that I think about when I think of greater than Class
2 C is the commercial versus DOE and there's a bit of a
3 split there in terms of who has greater than Class C
4 waste and so on. It really would be an interesting
5 exercise to look at reactors as a license type and
6 then other non-reactor licensees and see where the
7 action is so to speak. Putting that together and
8 bringing in the practitioners to have an open meeting
9 on that topic might be ultimately efficient and
10 helpful for you all.

11 MR. FLANDERS: I agree.

12 MR. REAMER: You'll hear no objection from
13 us. I think that's a good idea. On waste incidental
14 to reprocessing, we are to inform the Commission of
15 our plans for open and closed meetings. That's
16 something we heard a lot from the Commission during
17 the waste briefing. We're going to make the
18 Commission aware of our overall process and the level
19 of resources that will be used for the waste
20 incidental to reprocessing initiative. That paper is
21 currently in the works. It's due at the end of the
22 month.

23 Again, we have not seen the need for an
24 ACNW review on that because it's primarily an
25 operational type of paper. But again, I point out

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that I think where the real opportunity for technical
2 input is on the standard review plan which we would
3 talk with the Committee about this summer. In the
4 Commission paper, we reference the fact that we are
5 developing a standard review plan. So there's an
6 opportunity as I mentioned before.

7 We are to keep the Commission informed on
8 emerging issues and technologies that give rise to
9 near-term policy issues and demands of resources, for
10 example, in low level waste arena. We're going to
11 monitor that closely and react accordingly. We don't
12 see issues right now but again the Congressional
13 hearing is something that may prompt prompt action.

14 We have an SRM. Of course, you have an
15 SRM on the 5th of April from your meeting with the
16 Commission in which the Commission just finished a
17 review of proposed rulemaking on the disposition of
18 solid materials. Our division prepared the EIS for
19 that rulemaking and we want to work with you as needed
20 in your review to discuss the background behind the
21 Environmental Impact Statement.

22 The Commission looks for the Committee's
23 white paper on low level waste issues as we do, too,
24 of course and we would like to review that or discuss
25 it with you along the way as appropriate given your

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 timing. Efforts in low level waste at large, Jim and
2 Scott will talk about that in much more detail in a
3 few minutes.

4 Decommissioning guidance, we've discussed
5 this already. You're being at the meeting this week.
6 Hearing first-hand that our subsequent meeting in the
7 summertime. We look forward to those interactions.

8 West Valley and involvement in West Valley
9 by the Committee, I know that you're planning a one-
10 day site visit and workshop in October as we speak
11 near the site.

12 You're curious as to how the pre NRC and
13 DOE performance assessments are progressing to make
14 this meeting possible. That's a great question.
15 Unfortunately, as I sit here today, I don't know. I'll
16 know better in August. We're looking to get the draft
17 EIS from DOE in August. So we'll have a much better
18 handle on the performance assessment's status at that
19 time.

20 What I would envision sometime during
21 August or September, we need to be talking
22 aggressively about the contents of that. Now we have
23 to be careful because this is something that would
24 need to take place between the Committee and the staff
25 as opposed to a normal ACNW meeting with DOE which

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 would be public because it's pre decisional
2 information. So I think that the way to do this is
3 between the staff and the Committee as to the status
4 of the performance assessment and then we can make a
5 call in the August/September timeframe as to whether
6 or not it's going to be prudent and timely for the
7 Committee to go out and do the workshop in October.
8 I think that's how we're going to need to proceed on
9 that.

10 CHAIRMAN RYAN: And to be fair, we
11 appreciate your flexibility here as the schedule is
12 not necessarily yours to control based on when the EIS
13 comes into you. We recognize that's not something you
14 dragged out just because you wanted to. It's based on
15 the schedule of DOE and the EIS. Thanks.

16 MR. REAMER: Right.

17 DR. LARKINS: I was going to say one of
18 the points, one of the areas of emphasize, is on the
19 methodology of the staff and if you are using similar
20 methodology for the performance assessment. Last time
21 we had a discussion as such and we did make a
22 commitment also to keep my service (PH) and others
23 informed or involved to the extent practical.

24 MR. REAMER: Okay. Well, I think again
25 during August/September we should be talking to staff-

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 to-Committee and we'll see what we have in the
2 submittal side and then we'll figure out where we are
3 and see if it's going to be worthwhile to regroup in
4 October.

5 MR. FLANDERS: About what you said,
6 clearly one of the important things we need to keep in
7 mind is the fact that the document we're going to get,
8 the draft EIS we're going to get in August, is pre
9 decisional.

10 MR. REAMER: Right.

11 MR. FLANDERS: So in terms of thinking
12 about a workshop, we need to think about what can and
13 can't be discussed recognizing that it is pre
14 decisional at that point. Their schedule for making
15 it public is not until the summer of '06.

16 MR. REAMER: Yes. That's why I'm
17 suggesting that we would have a staff-to-Committee
18 discussion and then also the pre decisional
19 considerations in a workshop.

20 Let me wind down as I started out by
21 saying that I certainly welcome this opportunity to
22 talk with the Committee. I sincerely do feel that
23 what the Committee does, the work that you do, is
24 important. It can help our program. I would like to
25 work very closely with the Committee to enhance the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 relationship, to improve the relationship, which has
2 always been good, but we can make it better and
3 frankly, to help the Committee do the work the
4 Commission has asked you to do and for you to help us
5 do the work that they've asked us to do.

6 I see a need for several or at least one
7 or two perhaps operational discussions to go into some
8 more detail into some of these things and
9 particularly, coordinating your plan, coordinating the
10 operating plan, try and figure out how we can best
11 communicate on some of these things. I really do
12 think this idea of the Committee chair talking with
13 the Executive Leadership Team, once or twice a year
14 and then talking with the division directors about how
15 best to facilitate the work of the Committee and the
16 work that we have would be of value. So I look
17 forward to our interactions in the future and
18 appreciate the opportunity to be here and answer any
19 questions you might have.

20 DR. LARKINS: I was going to say. I think
21 we are on the schedule to meet with the Executive
22 Leadership Team sometime in May.

23 MR. REAMER: Good.

24 DR. LARKINS: I see Sam shaking his head
25 yes. The other question I was going to raise is we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 met with the Commission and we talked about looking at
2 West Valley. They mentioned that there were some
3 other sites that are recently going through
4 decommissioning that may be good for a learning
5 perspective before you fully launched into a complex
6 site. Maybe some opportunity here about some recent
7 experiences with some simpler sites would be good.

8 MR. REAMER: Yes, we can do that. We
9 truly have a population of 43 complex sites on the
10 books right now. Most of these are very old Legacy
11 sites, old uranium and thorium processing sites. Most
12 all of them are very complicated, groundwater
13 contamination, previous spills, lots of issues. So we
14 could perhaps identify two or three of the ones that
15 would be most useable in terms of learning for West
16 Valley. We could do that.

17 DR. LARKINS: Yes. We talked about one
18 time Sequoyah.

19 MR. REAMER: There's a good one.

20 DR. LARKINS: Although it probably may not
21 be a simple site.

22 MR. REAMER: No.

23 MR. LEE: Yes, John. We have a request in
24 to NMSS to give us a little look/see as to what is the
25 transition from a simple decommissioning site to a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 complex and we were hoping that in that presentation
2 we can get some examples of how you make that leap.

3 CHAIRMAN RYAN: Okay. In addition, that
4 could be a large or small site or lots of license
5 material or not so much. But I think, too, we're
6 trying to get some input from industry practitioners
7 in the working session that Jim Clarke is organizing.
8 So we can hear that even though it might be a small
9 site there may be site features or facility features
10 that make it more complicated than not. So there's
11 those aspects we maybe will hear a little bit about
12 too. It's not necessarily the quantity of material
13 under license, but maybe even the setting itself.

14 MR. REAMER: It is the setting. To a
15 large degree, it is the setting.

16 CHAIRMAN RYAN: Because, you know, big
17 decisions are made on are we going to have to take out
18 the hillside and make that low level waste or is it
19 some other disposition pathway or is it left in place.
20 You know those are big swings in terms of financial
21 costs, but it all comes back to the same reason and
22 complexity.

23 MR. REAMER: Yes. I think in addition to
24 hearing about two or three of the more complex or the
25 complex sites might also have some value in terms of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 hearing about certain sites where we were able to have
2 the site successfully remediated or removed from the
3 previous STMP. In certain cases, it's not just about
4 remediation. It's about correct and proper dose
5 modeling and what is the best scenario.

6 One comes to mind recently, for example,
7 Kiski Valley Water Authority in Pennsylvania. I mean
8 the bottomline was after an awful lot of time had gone
9 by, an awful lot of staff effort, an awful lot of
10 effort by the Water Authority, the fact of the matter
11 is when you ran the dose modeling on it you found that
12 it was suitable for release as it was. You did not
13 need further remediation.

14 So it's not just about the size or the
15 saedas about site specifics. It's about operational
16 events that occurred. We can provide the Committee
17 with a pretty reasonable cross section of sites to
18 help John with that point.

19 CHAIRMAN RYAN: And again, I think one of
20 our speakers in the workshop will be a state regulator
21 that has done decommissionings on exactly the kind of
22 lines that you're talking about. So I think that will
23 all come together as a good package of information to
24 go forward with.

25 MR. REAMER: And really, they have a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 different perspective, frankly, than we do
2 particularly in Pennsylvania. I recall vividly
3 meeting with one of the under secretaries up there in
4 Pennsylvania and he pointed out to me. He said, "You
5 know your dose standard is all fine and good. But
6 remember something happened here in 1979 that drives
7 this to a large degree." So they have perspectives
8 and concerns that are different than ours.

9 CHAIRMAN RYAN: Any other questions?

10 VICE CHAIRMAN CROFF: When you were
11 talking about wear early on, did I understand you to
12 say you've planned some public meetings down at
13 Savannah River to get input?

14 MR. REAMER: No, we have not. We are
15 meeting with DOE and we had a meeting with DOE. We'll
16 continue to have technical exchanges with DOE. The
17 Commission has expressed interest in seeing those
18 meetings to the maximum extent possible be public
19 meetings. Most of those meetings will take place
20 here.

21 The public meeting I was referring to in
22 South Carolina is that the State of South Carolina
23 issues a permit. For disposal that takes place on
24 site, they issue a permit for that disposal situation
25 to occur. They have a permitting process. Part of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 their permitting process is a public meeting or public
2 meetings. We have agreed to participate in those
3 public meetings. We would do the same thing with
4 Idaho if so asked. So there will be public meetings
5 that will take place between us and DOE.

6 One of the sensitivities that you get into
7 is do all of those public meetings have to be open to
8 the public. Are there certain meetings that should be
9 government-to-government or should they all be public?
10 So what we're trying to do in this paper to the
11 Commission is articulate what our preferred approach
12 is, but clearly, there's a great deal of interest of
13 the Commission of seeing to the extent possible that
14 the meetings be open publicly. We supported that.
15 It's just a question of do they all need to be and if
16 not, what criteria would demarcate.

17 VICE CHAIRMAN CROFF: Okay. Thanks.

18 CHAIRMAN RYAN: Other questions?

19 MEMBER CLARKE: One quick question. I
20 think I heard you say that so far none of your
21 decommissioning sites have involved restrictive
22 access.

23 MR. REAMER: Restrictive release.

24 MEMBER CLARKE: Restrictive release.

25 MR. REAMER: None have. We have never had

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 a site go from A to Z pursuant to restrictive release.
2 We had a couple of starts. Molycorp at one point was
3 pursuing it through a private enterprise scenario.
4 They decided not to. Pretty much what you look at is
5 is if you look at the commitments that the provider of
6 the institution controls has to put in place for the
7 long term, there's a lot of liability implied and
8 state governments and local municipalities were not
9 prepared to do that nor was the private enterprise
10 scenario.

11 So what we have done in the LTR analysis
12 is to ask ourselves why is that and do we need to have
13 the same level of institutional controls for all
14 sites. It used to be if it's restrictive release it
15 had to be all. I think there were six criteria in the
16 license termination rule. Well, is that really
17 necessary or should it be driven in a phased approach
18 as a function of risk? What materials are at the
19 site? What is the extent of contamination? What does
20 it dose out and therefore, determine the appropriate
21 level of institutional controls accordingly?

22 Or, for example, should there be some sort
23 of license in perpetuity? Or should we play a larger
24 role in providing some sort of institutional control
25 or oversight for the future? But no one, no site,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 ever went from A to Z.

2 MEMBER CLARKE: Thank you.

3 MS. STEELE: I have a question. You
4 mentioned that your organization performed the EIS on
5 clearance? Could you give us the status on the
6 rulemaking package?

7 MR. REAMER: Scott, I'll defer to you.
8 You're probably up on it more than I am.

9 MR. FLANDERS: The rulemaking package is
10 with the Commission and my understanding is that the
11 Commission made that publicly available today.

12 MS. STEELE: They did?

13 MR. REAMER: Today, yes. That's right.

14 MS. STEELE: So we should be getting a
15 copy of it, the package, soon I guess. Would there be
16 -- We're planning on getting a briefing from NMSS on
17 the rulemaking package, but I was wondering if we
18 should probably try to pursue a briefing from your
19 organization on the EIS.

20 MR. REAMER: Yes. That's what I was
21 indicating in my comments. I think that we should do
22 that. I think you should hear from us directly
23 without the EIS.

24 MS. STEELE: Right. So maybe -- Okay. On
25 the topic of EIS, also you are preparing the EIS for

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 USEC, U.S. Enrichment Facility. Is that an area we
2 can expect to be briefed on as well when the draft is
3 available?

4 MR. FLANDERS: I would recommend for both
5 of those that we would do one briefing in the context
6 where you can hear about the safety review as well as
7 the environmental review at one time. We would come
8 and make the presentation on the EIS. But I think for
9 efficiencies and discussion of information too, I
10 think it would make sense to time those together. So
11 when the folks from NMSS come to talk about the
12 rulemaking, it would make sense for us to come and
13 talk about the EIS at the same time. The same is true
14 for USEC.

15 MR. REAMER: Do them both at the same
16 time?

17 MR. FLANDERS: Do the safety and the
18 environmental reviews at the same time.

19 MS. STEELE: Yes. Both divisions brief on
20 the same topic.

21 MR. FLANDERS: Exactly. Right.

22 MS. STEELE: Thank you.

23 CHAIRMAN RYAN: Other questions?

24 Comments?

25 MR. REAMER: Great.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN RYAN: Thanks very much.

2 MR. REAMER: You're quite welcome.

3 CHAIRMAN RYAN: We appreciate it.

4 MR. REAMER: Sure.

5 CHAIRMAN RYAN: Gentlemen, welcome.

6 (Chorus of thank yous.)

7 CHAIRMAN RYAN: Who starts?

8 MR. FLANDERS: Before I turn it over to
9 Jim to lead the discussion and walk us through the
10 slides, I just wanted to take a moment to expand on a
11 couple of points that Larry made and he pointed out
12 that we anticipate a fair amount of activity in low
13 level waste coming down the horizon. We think that as
14 a result of that the time of this briefing is very
15 good.

16 You know in recent years there's been an
17 increased focus on low level waste given the current
18 situation that we have. I think at the last ACNW
19 meeting, Dr. Ryan, you gave a good presentation that
20 clearly articulated what the current situation is.

21 CHAIRMAN RYAN: I felt comfortable because
22 Jim was there to correct me if I made a mistake.

23 MR. FLANDERS: And because that current
24 environment that we have around low level waste and
25 some of the concerns as to whether licensees or the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 majority of licensees will have a disposal home for a
2 Class B and C waste. The question about a disposal
3 home for greater than Class C waste, some of the
4 concerns around the current construct of our system of
5 regulating low level waste are the laws that are in
6 place and is it one that looked at from a risk
7 conformed perspective.

8 There's a great deal of question as a
9 result of the current environment. GAO is looking at
10 some issues in terms of the adequate disposal of ***
11 3:08:49 looking at things from a risk perspective.
12 We've been engaged in a number of those activities.

13 What Jim's discussion will focus on is
14 talk about some of the current activities that we have
15 going on. We believe that within the construct of our
16 statutory requirements and Jim will talk a little bit
17 about that, we are trying to do as much as we can to
18 help facilitate low level waste disposal. It's been
19 our position that we prefer disposal over storage and
20 to the extent we can within our statutory requirement
21 we think we're trying to achieve that.

22 We also believe that our activities have
23 been risk-informed and Jim will talk to you a little
24 bit about some of the activities. Larry touched on a
25 few things, the 20.2002 type of disposals that we're

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 looking at that we feel are risk-informed.

2 So I think just in summary right now our
3 program is fairly small. We anticipate it growing
4 some. As a part of our efforts, we're trying to plan
5 for that. We're trying to take actions and that
6 clearly is to help improve the current situation and
7 to make sure our activities are risk-informed. So
8 with that kind of an introduction, I'll let Jim talk
9 about the state of our current activities.

10 CHAIRMAN RYAN: Great. Just a quick
11 question or comment there too. I think the Committee
12 recognizes and it was in response, I believe, to one
13 of Commissioner McGaffigan's comments to me at the
14 Commission briefing that a lot of people kind of leap
15 to the answer "Oh, let's redo the law." I think that
16 there's a good record of "Well, maybe that's the last
17 step or option."

18 You can look at license conditions and you
19 can look at regulatory guidance and you can look at
20 the regulation language itself and there's four
21 options in there. I think sometimes the
22 straightforward fix of a license condition or a
23 regulatory guidance document that helps folks
24 understand the intent are very useful tools to
25 consider along the way. It's in that context we're

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 thinking about this white paper. Hopefully, you guys
2 will stick around for the next session because we have
3 a pretty detailed outline and your views of that will
4 be very helpful too. Jim.

5 MR. KENNEDY: Okay. Well, thank you for
6 having me here today for the Annual Low Level Waste
7 Program update. I think it's been a bit more than a
8 year, but hopefully we can have these more frequently
9 and maybe annually in the future.

10 These are the topics that I'd like to
11 cover. The National Low Level Waste Program again
12 both Larry and Scott talked about your summary of it
13 at the March meeting, Mike. So I won't dwell on that
14 too long because you gave a good summary.

15 I also want to give you an overview of the
16 NRC's Low Level Waste Program and particularly make
17 the point that our program here at NRC pretty much
18 tracks the national program and what's happening on
19 the national scale. You'll see that more vividly
20 later on. Then I'll talk about some specific
21 activities in NRC's program, specific things that
22 we're doing today and then finally, some conclusions
23 and especially where ACNW might be able to contribute
24 and make our work better and add value to the work
25 that we're doing.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 You'll see after you hear our presentation
2 today that we're in an anticipatory mode. A couple of
3 times we've heard about these two big studies that are
4 going to be completed this year, the GAO study on B/C
5 waste storage and also the National Academy study. So
6 we're anticipating and expecting and even planning I
7 would say for some recommendations that might affect
8 us from those reports.

9 I will try to be brief since we've talked
10 about this already. But the future of low level waste
11 disposal in the U.S. continues to remain uncertain and
12 it is becoming more uncertain. Barnwell's going to be
13 closing or expected to close to out-of-compact
14 generators in 2008. What that means is low level
15 waste generators in some 30 odd states in the U.S.
16 will no longer have a place to dispose of their Class
17 B and C waste. So they'll have to be storing it.

18 At the same time, the Hanford facility,
19 the U.S. Ecology facility out at Hanford, it's going
20 to remain open until 2060, I believe, is the plan, but
21 there's no indication whatsoever that that facility is
22 ever going to open to low level waste generators out
23 of the Rocky Mountain and Northwest compacts.

24 I think most everybody knows that
25 Envirocare is accepting Class A waste today and that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 they with their change of ownership about six weeks
2 ago decided that they would not pursue their Class B/C
3 initiative. They had gotten license for disposal of
4 Class B and C waste out there, but needed approval
5 from the governor and the legislature, but have
6 decided to not pursue that. So they are expected to
7 be a Class A facility indefinitely as far as I know.

8 Of course, we also know about the license
9 application down in Texas for the Waste Control
10 Specialist facility (WCS). That would be a full
11 service facility except in Class A, B and C waste.
12 The application was submitted last August and Texas
13 has to make a decision on it in 2007. So the
14 application is under review.

15 Another big question with that facility is
16 whether they would ever accept any out-of-compact
17 waste. It is a compact facility. Texas compact has
18 just two states, Texas of course and the State of
19 Vermont and the compact can approve out-of-compact
20 waste, but it's not at all clear that they would ever
21 do that. They have that authority but very much up in
22 the air whether they would do that if the facility
23 were to be licensed and to go into operation.

24 Finally, greater than Class C disposal,
25 I'll talk a little bit more about that later. But DOE

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 is taking some specific steps now. They mentioned it
2 in their testimony at the Senate September 30th
3 hearing that Senator Domenici chaired. They mentioned
4 that they were starting to take action and indeed,
5 we've had a couple of meetings with them since that
6 time talking about their EIS process for greater than
7 Class C disposal. So there is some hope that
8 something will be happening on that in the near
9 future, some public documents.

10 Again, some developments later this year
11 that could impact us in a big way. The General
12 Accountability Office report on storage of Class B and
13 C waste, the Congressional interest that might occur
14 as a result of the hearing last September 30th where
15 Senator Domenici said he might be holding hearings
16 this year to look into revisiting the Low Level Waste
17 Policy Act and finally, the National Academy's study
18 on Low Activity Waste Disposal.

19 More on the National Program, low activity
20 waste is receiving increased attention. There is no
21 definition of low activity waste at this point, but
22 what we mean by it or what I mean by it today is waste
23 at the low end of the low level waste spectrum, say,
24 roughly ten percent of Class A. There are no numbers
25 associated with it but generally, it's waste that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 comes from decommissioning, a large scale
2 decommissioning, like nuclear power plants, rubble,
3 contaminated building debris and so forth. Low
4 activity waste also can go beyond low level waste and
5 it can include things like mill tailing and TENORM and
6 so forth. And that's a definition that is also used
7 by certain people.

8 In any case, it's getting increased
9 attention. The IAEA had a symposium on low activity
10 disposal back in December over in Cordoba and Margaret
11 Federline of NMSS participated in that in a big way.
12 I think you got a copy of the paper that she gave as
13 part of the background for this meeting today. You
14 also know, most of you know anyway, that the NCRP in
15 their annual meeting back on March 30th and 31st had
16 as the topic low activity waste disposal. So it's
17 getting a lot of attention

18 And it's also causing some thing that
19 we're doing on it here on the staff, one of which is
20 the use of RCRA facilities for disposal of low
21 activity waste and by that way, I mean primarily
22 decommissioning waste or the low end of low level
23 waste. For example, when Commissioner Merrifield was
24 here back in March, he mentioned the Big Rock Point,
25 20.2002 authorization whereby that nuclear plant out

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 in Michigan worked with the state and local officials
2 and got approval under 10 CFR 20.2002 to dispose of
3 debris and concrete and so forth from the nuclear
4 plant at a RCRA Subtitle D municipal landfill
5 facility up in northern Michigan.

6 Also the Army Corps of Engineers for years
7 beginning back in about 1999 or 2000 has been
8 disposing of FUSRAP waste. That is a low activity
9 mill tailings at RCRA facilities. And that whole
10 topic has just been getting increased attention too
11 because of the EPA Advanced Notice of Proposed
12 Rulemaking that was issued in November 2003 where they
13 proposed and laid out and discussed the national
14 framework for disposal of these kinds of wastes.

15 Now when they define low activity waste,
16 they had a boarder definition than I've used today.
17 They included TENORM in their definition. They
18 included conventional low level waste. Probably they
19 also had FUSRAP as well. In any case, they were
20 looking at and are still looking at a national
21 framework that would be embodied in the rulemaking
22 that would describe conditions under which low
23 activity waste could be disposed of in RCRA Subtitle
24 C hazardous waste facilities.

25 There's a lot of interest in that.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 They've received some thousand or more comments on it.
2 There's a lot of controversy about it. They haven't
3 made a decision as to whether to proceed with that
4 rulemaking or not, but they are at least on a path
5 towards developing some guidance and doing some
6 modeling for that work. I'll talk more about that
7 later.

8 But coming back to the national low level
9 waste program, I think it's of interest to take a
10 quote from a letter that we wrote to GAO last year,
11 just about a year ago. The General Accountability
12 Office published a report last June that looked at the
13 national low level waste disposal situation and in
14 commenting on a copy of the draft that we saw for that
15 report, this was signed out by the EDO, we stated the
16 following: "We also believe that although the current
17 disposal system in the U.S. is safe, it is not
18 generally considered to be reliable, that is,
19 generators don't have good assurance that disposal
20 will be available to them over the next five or ten
21 years or cost effective." And we're kind of nudging
22 folks in the direction of looking at better ways of
23 having a national disposal system, the Low Level Waste
24 Policy Act, in particular.

25 GAO had recommended that we go to Congress

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 when we felt the situation was in such a state that
2 Congress needed to take action to change the
3 legislation. We disagree with that recommendation
4 because there's a lot of information that we don't
5 have as a result of our limited statutory
6 responsibility. But we did make this statement that
7 we thought it's probably time to look at the national
8 system and we also, I believe as I recall, recommended
9 the GAO look into it because they have the authority
10 to gather the kind of data and look at the kind of
11 policy issues that we don't have.

12 Well, I've been working in this division
13 for 20 years and I've been involved in low level waste
14 disposal for 15. So I came up with this chart and
15 it's to explain and show how our NRC low level waste
16 program has tracked what's going on nationally. What
17 I've done here is put in some, what I consider to be,
18 major milestones in the national program over the
19 last, my goodness, 35 years or so. Long time.

20 The first one is in the late 1960s and
21 early 1970s. The first commercial low level waste
22 sites were licensed. There were six altogether that
23 were licensed, some by agreement states, some by NRC.
24 In the 70s and late 70s, some of those sites leaked.
25 Three of those sites leaked rather and as a result,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 NRC began promulgating a rulemaking in the late 1970s,
2 Part 61, to address some of the performance problems
3 that we had seen in these sites and we had a big
4 effort in the late 1970s and early 1980s putting
5 together Part 61.

6 There was a concern in the late 1970s
7 about generators having no place to dispose of low
8 level waste and states at that time pressed for
9 passage of the Low Level Waste Policy Act of 1980
10 which eventually was passed. Not much happened in the
11 first five years after it was passed. In 1985,
12 Congress amended it to include within it specific
13 milestones and incentives and penalties for the states
14 to encourage them to develop new sites around the
15 country and form regional compacts.

16 After that happened, there was a
17 tremendous amount of work that happened in the states
18 in developing new sites. At one point or over the
19 next ten years, there were 12 siting programs at one
20 time or another that were existence ranging from site
21 screening in certain states all the way to the
22 issuance of a license out at the Ward Valley site in
23 California. They went through the entire site
24 screening process and licensing process and so forth,
25 although that site was eventually abandoned.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 What all that meant for us in the low
2 level waste program is in the 1985 Amendments Act, NRC
3 was given a lot of responsibility to develop an
4 emergency access rule whereby we define the provisions
5 under which generators could get access to one of
6 these compact facilities that they would normally be
7 closed out it. We were also to develop criteria for
8 alternative disposal methods, alternatives to shallow
9 land burial. We did that. We were also to develop
10 plans and procedures for licensing a low level waste
11 facility and we did that. So we had a tremendous
12 amount of work in the late 1980s and early 1990s on
13 low level waste disposal and in fact, I think you
14 mentioned us in our talk last March, Mike. We
15 actually had a branch at that time devoted to low
16 level waste with some 20 plus staff members involved
17 in it.

18 Another thing that was going on at that
19 time was NRC had to budget for, we were expecting that
20 we might get a license application from one of the
21 three non-agreement states who were involved in low
22 level waste siting. They were Michigan, Connecticut
23 and New Jersey and all of them looked at sites to
24 varying degrees. Michigan had a fairly extensive site
25 screening program as did Connecticut and we had to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 budget in case a license application were to come in
2 for one of those sites.

3 And finally, we had a fair amount of
4 technical assistance work that we gave to those states
5 that were very much actively involved in trying to
6 license the site like Nebraska, like Ward Valley,
7 North Carolina to a degree and so we provided some
8 extensive technical assistance to those different
9 programs. We had a very, very large program at that
10 time.

11 Now what happened is that the new
12 development programs for new sites eventually wound
13 down. A number of sites, their programs were
14 terminated for various reasons and in 1996/1997 the
15 Commission in the strategic assessment that it did at
16 that time decided that it was time to scale back our
17 program as well. So we went from some 20 FTE down to
18 three FTE at that time and that's where we remain
19 today at about three FTE, maybe not even that. I'm
20 not sure. So we've had a very small low level waste
21 program for some almost ten years now and we're just
22 a part of a section actually.

23 I think it's worthwhile to point out too
24 that at the same time the low level waste program in
25 the U.S. was winding down, the clean-up programs in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the U.S. were gearing up. Of course, there was the
2 DOE program which started in the late 1980s when they
3 closed down a lot of their operations for developing
4 nuclear materials. That's had a big impact and also
5 NRC in the late 1980s and early 1990s in particular in
6 response to Congressional concerns established its
7 Site Decommissioning Management Program. That
8 continues today, not with that name, but with the new
9 name and the new program of Complex Site
10 Decommissioning Program which now contains some 43
11 material sites and 17 reactor sites that are
12 undergoing decommissioning and that work has geared
13 up.

14 The Decommissioning group used to be a
15 couple of people, kind of like the low level waste
16 back in the late 1980s. It then became a section.
17 Then in early 1990s, it became a branch and it
18 continues to be an entire branch or directorate today.
19 So the work there has increased a lot.

20 There's one thing particularly worth
21 mentioning about the increase in the clean-up programs
22 and that is that the low level waste stream unlike the
23 time before the clean-up programs when the low level
24 waste stream was primarily operational waste from our
25 licensees, the low level waste stream has changed to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 one where not only is it operational waste, but it's
2 also now the very, very large volumes of low activity
3 waste from decommissioning and from clean-up of
4 contaminated sites that really aren't designed for a
5 place like Barnwell and licensees can't afford to send
6 them to a place like Barnwell either. So there's been
7 a demand for a different kind of facility that's able
8 to accept low activity waste, to dispose of them
9 safely and to be an economic alternative as well.

10 One last slide before I get into NRC's
11 specific program. This is a chart that Carl
12 Papariello presented in testimony to Congress in July
13 of 2000 before the Senate Environment and Public Works
14 Committee and it presents the relative specific
15 activity for the various types of radioactive waste in
16 comparison with soil. 11e(2) byproduct is up at the
17 top. Next comes low level waste which has a very,
18 very wide range of radioactivity. Even after 100
19 years and a lot of decay has occurred, that bar for
20 radioactive waste is still going to be about half the
21 length that it is right now because of the activity of
22 some of the long-lived radionuclides like carbon 14,
23 iodine 129 and technetium 99.

24 NARM and TENORM, TENORM in particular, can
25 also be extremely hot up to 100,000 picocuries for a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 gram or so and most of that, a lot of that, is uranium
2 thorium and radium, all very long-lived. Then there's
3 exempt source material which is defined in our
4 regulations as unimportant quantities of source
5 material, less than 0.05 percent source material, in
6 other words. We also included spent reactor fuel just
7 for comparison and I should note just because we
8 mention WIR today that this chart does not include
9 high level waste for reprocessing. If it did, you
10 would see of course that some of the high level waste
11 has very low specific activity and goes sufficiently
12 low that it can be disposed of near the surface as
13 Congress has said we can do in the legislation that it
14 passed last fall.

15 CHAIRMAN RYAN: Jim, before you move from
16 that slide, I think there's a point that sometimes
17 escapes the discussion. I know you know it well as do
18 others in the room, but it's interesting when you see
19 that list and the activity measure that it's clear as
20 bell that those are all source-based kinds of
21 definitions and sorting.

22 MR. KENNEDY: Absolutely.

23 CHAIRMAN RYAN: Where it came from and
24 what its name is is how we sorted them out, not the
25 radioactive material content and I pick on that a bit

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 just because I think we all agree that the risk is
2 more related to the radioactivity issues in terms of
3 how much and what's the half life mix and chemical and
4 transport properties and so on the environment and has
5 very little to do with where it came from but by an
6 origin definition.

7 MR. KENNEDY: Absolutely. Yes. What this
8 chart suggests is low activity waste particularly down
9 in this region here, above soil levels ten times, 100
10 times, I don't know the exact number but there is a
11 number of materials there, mill tailings, 11e(2)
12 byproduct material, FUSRAP or so-called pre-78 mill
13 tailings, low level waste, TENORM. They all have
14 roughly the same specific activity. They all have
15 long-lived radionuclides and this chart suggests that
16 they could all be managed in a similar way and a safe
17 way.

18 Yet the laws for example pretty much
19 require that uranium mill tailings go to a mill
20 tailing site, some exceptions. Low level waste go to
21 a Part 61 facility, again some exceptions. And
22 NARM/TENORM or TENORM in particular is regulated by
23 the states. Some of it goes to RCRA municipal
24 landfills. Some goes to hazardous waste landfills.
25 It's managed in different ways.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 So the purpose of this is just to
2 illustrate that these things are similar. They have
3 different names and different origins, but this meant
4 to suggest that they can be managed in similar ways in
5 some cases. One of our goals frankly has been to, as
6 best as we can under the existing laws which erect
7 some of these barriers between these wastes, is to
8 work around this and to dispose of waste in a more
9 risk-informed way.

10 CHAIRMAN RYAN: Jim, just as I see this
11 chart, that would be helpful to us as we think about
12 our white paper if we could get a hold of the entire
13 testimony that Dr. Papariello gave at that time.

14 MR. KENNEDY: Sure.

15 CHAIRMAN RYAN: That would be a great
16 thing to get a hold of for us to read as well. Thank
17 you.

18 MR. KENNEDY: Just a little more on
19 history. You're aware of the National Academy study
20 that's ongoing on low activity waste. Well, about
21 three days or so after Carl gave his testimony on the
22 Hill that's when the National Academy's Kevin Crowley
23 came up with a prospectus for examining low activity
24 waste that really used this as a point of departure
25 and said, "Here's a problem and here's how the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 National Academy thinks we can do a study to make
2 things better."

3 Finally, we'll get to some of our
4 specifics. In our role in low level waste disposal,
5 we have two statutes under which we operate, the
6 Atomic Energy Act of course and dating and safety
7 responsibilities. We also had some specific
8 responsibilities that I mentioned earlier under the
9 Low Level Waste Policy Act developing an
10 infrastructure basically for licensing of low level
11 waste sites. We also had responsibility under the Act
12 for licensing a GTCC disposal facility and finally,
13 after many years it looks like we're going to be
14 taking some action on that which I'll discuss further.

15 I think it's also important to point out
16 that the Commission and the strategic plan that was
17 issued last year covering the period 2004 through 2009
18 identified this means to support our safety strategy.
19 They said we should assess the key issues affecting
20 safe management of civilian low level waste disposal
21 to ensure that potential disruption and access to the
22 three licensed disposal sites does not adversely
23 affect licensee's ability to operate safely and
24 decommission their plant safely. So that's a broad
25 framework under which we're operating here.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Here are some of the specific things that
2 we're doing. First, we're beginning a process to
3 revise our low level waste storage guidance in
4 anticipation of Barnwell closing in a few years and
5 most U.S. generators not having access for disposal of
6 their Class B and C waste. Some of our guidance is
7 almost 25 years old. Different pieces of it have been
8 issued at different times, some for reactor licensees,
9 some for material licensees and so forth. We believe
10 it would be helpful to consolidate that guidance.

11 There almost may be some new security
12 issues where it would be helpful to take the new
13 security guidance and put that into the storage
14 guidance and finally, we could probably more risk-
15 inform our storage guidance as well. We know we can
16 do that with Part 61, but it's, like I said, some of
17 the storage guidance is 25 years old and I think we've
18 probably learned a lot since then and there's some
19 improvements that we can make.

20 Now in 1994, we undertook a similar
21 effort. We did develop some draft guidance for
22 storage. We consolidated the reactor guidance and all
23 the other materials guidance and so forth. We
24 published a Commission paper, sent it up to the
25 Commission. The Commission said send it out for

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 public comment and just after that happened, the State
2 of South Carolina decided that they weren't going to
3 close. They had plans for closing in 1995 and just
4 after we published that Commission paper, the State of
5 South Carolina, I believe they got a new governor, and
6 he decided to keep the facility open.

7 CHAIRMAN RYAN: Governor Beasley seceded
8 South Carolina for the second time. He left the
9 Southeast Compact and developed the Revenue Plan
10 through the fees to take waste in the nation.

11 MR. KENNEDY: Right. And so we put that
12 effort on the back burner. That Commission paper is
13 still out there. It has a draft of the consolidated
14 guidance that we had proposed at that time and that's
15 going to be our starting point.

16 CHAIRMAN RYAN: Jim, one additional point
17 to think about on this area I think is the states of
18 course as you well know have a big role because they
19 have many, many licensees and apart from the potential
20 for a couple of states, all the licensing and siting
21 activities have been in agreement states.

22 MR. KENNEDY: Yes.

23 CHAIRMAN RYAN: So that's a little bit of
24 a different twist than for example having the reactor
25 obligations directly to the NRC in all states all

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 locations. So what's your plan to involve CRCPD or
2 OAS or states on an individual basis? I'm sure you're
3 thinking about that. Could you give us your thoughts
4 there?

5 MR. KENNEDY: Well, we're thinking about
6 it. I don't have any specific plans yet, but that's
7 definitely something that we will do because we're
8 here at headquarters. We're not out there licensing
9 these facilities like the states are. I, for example,
10 worked on the CRCPD working group on TENORM and my
11 goodness, there's just so much to learn from other
12 folks that we don't know about.

13 CHAIRMAN RYAN: To that end as we think
14 about our white paper and move it forward, there's a
15 potential for us to invite states in and maybe hear
16 some of their views on our working paper and see if
17 that might be helpful to you all. So we'll coordinate
18 on that in that regard as well.

19 MR. KENNEDY: Absolutely. Another effort
20 that we're just beginning given the interest in
21 20.2002 alternate disposals is coming up an NMSS
22 process for reviewing 10 CFR 20.2002 disposal
23 requests. Right now, we do process some occasionally
24 but what we want to do is write down the process for
25 our own staff, kind of a standard review plan.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 We also want to make guidance available to
2 licensees and generators and folks who may be using
3 20.2002 in the future so they know what the staff
4 needs and so that we can do these more efficiently and
5 in a more timely way. On Wednesday of this week at
6 the Decommissioning workshop, we have a breakout
7 session whereby we'll be meeting with the stakeholders
8 and telling them about this and also asking them where
9 we need to make improvements, how we can do things
10 better, what issues we need to address regarding these
11 disposals.

12 Related to that, of course, as I mentioned
13 earlier is EPA's ANPR on low activity waste although
14 it's unclear whether they're actually going to go
15 ahead with a rulemaking on that. They are continuing
16 to do work on it. We are coordinating with them to a
17 degree. They are thinking for example of perhaps
18 developing guidance on disposal of radioactive
19 materials in RCRA landfills and we are working with
20 them on that and look forward to whatever they might
21 come up with.

22 Regarding GTCC disposal, we talked a
23 little bit about this but we are engaging DOE on their
24 NEPA process. The first step that they're going to
25 take is to issue an advanced notice of intent to go

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 through the NEPA process. Right now, we have a
2 Commission paper on GTCC disposal that talks about
3 whether we should be a commenting agency or a
4 cooperating agency and we're expecting that there's
5 going to be quite a bit more work on that in the
6 future.

7 Finally, the GAO and National Academy
8 studies, of course, they're upcoming, but we've also
9 been working closely with both organizations for the
10 last year, actually even longer than that in the case
11 of the National Academy, providing them information
12 and most recently, we sent a fairly long response to
13 the National Academy just a week ago today. They were
14 asking for the most up-to-date information on what
15 we're doing with respect to low activity waste and so
16 we sent a long response back to them last Monday
17 describing that so that they can use that in preparing
18 their final report. But that's required some effort
19 to give them the information that they need to do
20 their work.

21 CHAIRMAN RYAN: Jim, just before you leave
22 that, I want to just pick your brain a bit on the
23 connection between the definitions in 10 CFR 61 for
24 Class C which of course creates the greater than Class
25 C and then how do you see the relationship between

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that traditional Class AVC low level waste than
2 greater than Class C.

3 Let me sharpen the pencil a bit. If you
4 think about risk-informing low level waste and dealing
5 with, as you pointed out, the dilute LAW, low activity
6 waste, and then we gather information on this exempt
7 small sources that just by concentration are greater
8 than Class C, where do you see -- I mean I see those
9 as kind of a continuum and not two distinct issues
10 even though from a legislative perspective they're
11 distinct issues. It's interesting to think about
12 that. Do you have any thoughts along those lines? If
13 you change one, you could change the other, I guess,
14 is my main point.

15 MR. KENNEDY: Yes.

16 CHAIRMAN RYAN: And they're not unrelated.

17 MR. KENNEDY: Exactly.

18 CHAIRMAN RYAN: And of course, greater
19 than Class C shows up in WIR and shows up on its own
20 in DOE's effort. It shows up as the boundary in low
21 level waste. It's in a number of places.

22 MR. KENNEDY: Well, I think that's one
23 area where we can engage you and maybe get some
24 thoughts from you as well as we get into this GTCC EIS
25 and also further down the road to licensing criteria

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 once they choose an alternative and so forth. We'd be
2 interested in talking about that.

3 CHAIRMAN RYAN: It's something I don't
4 have an answer to but it's, I think, an interesting
5 exercise to think about it because of the fact that if
6 you push on one side of that balloon, it will be go
7 out on the other.

8 MR. KENNEDY: Yes. Maybe we can push on
9 this side too. We are constrained by the laws and the
10 regulations, but maybe there is some flexibility
11 there. We're using as much flexibility as we have
12 under law and regulation and in accordance with
13 protecting safety on the low end and conceptually, I
14 think we'd want to do the same thing on the high end,
15 too.

16 CHAIRMAN RYAN: And where it kind of comes
17 to a focus for me, I'll just offer this to think
18 about, there's nothing we need to decide at the
19 moment, but if you think about a concentration limit,
20 high, medium or low, it's not the risk. The
21 concentration is not the risk.

22 MR. FLANDERS: I think one of the things
23 -- I'm sorry.

24 CHAIRMAN RYAN: That's all right. I was
25 going to say the reason it's not is if you have a very

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 high concentration but a very small quantity, that's
2 a whole lot different than 10,000-curie source of
3 something else that's the size of a pencil point or
4 something. So it's the total amount of radioactive
5 material that's more directly, I think, reflective of
6 the risks. So I just recognize that the concentration
7 system, while very practical in terms of what we
8 measure and can demonstrate for compliance purposes
9 and shipping and all the rest of the things we need to
10 do, it's really not as clean a measure of the risk as
11 the quantity. So just something to think about and I
12 think as we develop our thinking on this white paper,
13 that might be a topic we'll try and struggle with a
14 bit.

15 MR. FLANDERS: If I could just add to
16 Jim's answer just a little bit, one of the things to
17 keep in mind is the construct of Part 61 where it has
18 a provision, 61.58, that allows for alternate
19 concentration criteria which focuses more on the risk
20 in terms of satisfying the performance objectives. So
21 one thing to keep in mind and a part of that thinking
22 is the current construct which allows for some of a
23 risk perspective in terms of actually be able to
24 satisfy the performance objectives.

25 CHAIRMAN RYAN: And that's a good point.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 That's what I'm trying to explore as a fact that even
2 though the concentration system is pretty clearly
3 spelled out in the two tables, it's not absolute by
4 the very provisions you cited.

5 MR. FLANDERS: One of the things I would
6 also encourage you and you guys may already be very
7 familiar with it, but it's often sometimes good to go
8 back and look at the draft generic environmental
9 impact statement for the Part 61 rulemaking which in
10 some ways kind of laid out some of the logic behind
11 the concentrations that were picked as A, B and C and
12 some of the disposal requirements, the stability
13 packaging type requirements that allowed one to use
14 that table more to screen if you will.

15 CHAIRMAN RYAN: It was hard to find, but
16 I think we, all the members, have copies of that
17 draft.

18 MR. FLANDERS: It gives a good perspective
19 on how they came out with those.

20 CHAIRMAN RYAN: You're right. It's
21 absolutely, there's clarity in that draft EIS.

22 MR. KENNEDY: Okay. Moving on. Some of
23 the other things that we do to varying degrees is
24 provide technical assistance to the agreement states
25 and that's been a large effort over some of the years

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 when low level waste siting was going on and
2 licensing. Right now, it's a very small part of what
3 we do. Perhaps Texas will request assistance for
4 their facility as it's going through review, but we've
5 had no such request yet.

6 We also do IMPEPs of the states. That is
7 we participate on the IMPEPs for the states that have
8 low level waste sites. That is South Carolina, Utah
9 and Washington. Our staff is a member of the team.

10 We also do international work. There's a
11 little bit of import/export licensing. We also
12 participate in international standards, development
13 and review and on that topic, for example, one thing
14 we're very interested in is that the IAEA is going
15 ahead and revising their waste classification standard
16 to include a new class called low activity waste. So
17 that's of great interest to us and we'll be following
18 that and commenting on that.

19 Another thing I'd like to point out in
20 terms of breaking down walls and going back to that
21 bar chart is what I've noticed in the years that I
22 worked in low level waste is that it's seems to me
23 that we've broken down some of the walls and we just
24 don't talk about low level waste in Part 61 anymore.
25 It seems to much more defuse and diverse and although

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 we still have a long way to go, much more risk-
2 informed. For example, we work with the WIR group and
3 the low level waste folks, including myself, will be
4 in the same section as the WIR people. We've worked
5 on TENORM, the CRCPD standard or suggested state
6 regulation for TENORM, Part N. We were a member of
7 the working group for that and brought insights from
8 what we know about decommissioning and low level waste
9 disposal to that effort.

10 And finally, of course, there is the
11 disposition of solid materials rulemaking which is
12 ongoing and our group, particularly Scott's group, the
13 environmental group, has been involved in that
14 preparing the EIS. It's related to low activity
15 waste. For example, the NCRP Annual Meeting, half of
16 the presentations down there at that meeting were on
17 disposition of solid materials and half were on low
18 level waste disposal. So they're closely related.

19 MR. HAMDAN: Jim, this really brings the
20 question that it seems to me that every time we hear
21 talks about low-level waste, this included, you seem
22 to looking at little threes, three here, three there.
23 The question I have for since you have all this
24 experience with low level waste, did anybody do a
25 study, I'm not looking for an opinion but a real

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 study, as to why for example the compacts did not work
2 to identify the real reasons why we still have a
3 problem like 25 years after the legislation has
4 passed? Then if you had that study, then you know
5 what needs to be fixed and you go out and try to fix
6 it as opposed to we have WIR, we have greater than
7 Class C waste, we have Mr. Papariello's chart and if
8 everybody talks this up, we could do it. I want to
9 know if somebody looked at the forest through the
10 trees and identified what the problem or the problems
11 are and use that as a road map to what needs to be
12 done and then go ahead and do it.

13 MR. KENNEDY: The closest that I've seen
14 to it and, Mike, maybe you can add something here is
15 the GAO in their June 1999 report which looked into
16 the failure of the National Program and all the money
17 that had been spent and so forth and I don't remember
18 the exact words that they used but they basically said
19 political factors were probably the biggest reason why
20 it didn't work. Now that's a general statement.
21 There are lots of different factors and different
22 reasons why different sites weren't licensed, but you
23 need to look at the language in their report.

24 MR. FLACK: Yes, Jim. There's been at
25 least to my recollection two, possibly three, GAO

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 reports that have looked at issues related to the
2 implementation of the National Low Level Waste
3 Program. It's just not one in particular but there
4 are several reasons. If Latif gets a hold of those
5 and becomes familiar with them, he may have to scratch
6 his itch.

7 CHAIRMAN RYAN: I think, Latif, there have
8 been some credible studies, the GAO reports, and there
9 are several of them that address it in one form or
10 fashion and having been a participant at that time
11 during some of those sitings, it was interest to
12 recognize a few things. One is there was no, with the
13 exception of perhaps California, no real vocal
14 constituency that said "I want one of these" or "I
15 need one of these." That was one. I mean utilities
16 were not as vocal as for example the Cal Rad group and
17 continues to be on low level waste. So the
18 constituency aspect of it was one.

19 Two, getting back to more things and
20 perhaps we can address in our activities together on
21 low level waste with the staff is the siting criteria
22 if you read them carefully tend to be, some very
23 clear. If you're in a flood plain, that's no good.
24 If you're out of the flood plain maps by the Corps of
25 Engineers, that is good.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 But others tend to be a little vague. The
2 site must be capable of being monitored, modeled and
3 analyzed. Okay. What does that mean? I think part
4 of the licensing juggernaut that happened in the
5 states that the ball of interpreting what those meant
6 kept getting bigger and bigger and ended up with
7 literally \$150 million or \$200 million bill for sites
8 that that is in license development and so forth to
9 where you have to say, "What's the economics of this?"
10 If you have a \$200 million investment you have to
11 write down, that's a pretty expensive per cubic foot
12 charge.

13 Then I think, frankly, that the reason
14 event that dialed the siting back had nothing to do
15 with GAO studies of these kind of technical issues but
16 really was the South Carolina decision in Beasley's
17 administration to reopen Barnwell to the nation with
18 exception of North Carolina. It basically, and, Jim,
19 correct me if I'm wrong, but the dial-in from about
20 nine to one just like that.

21 MEMBER WEINER: Latif, there are also a
22 number of, in the peer-reviewed literature,
23 sociological studies. I know some of the authors of
24 various siting events.

25 CHAIRMAN RYAN: Right, you are. There's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 a whole of question of the public acceptance aspect of
2 it as well.

3 MEMBER WEINER: There's a whole
4 literature.

5 MR. HAMDAN: Can I follow up with this
6 one? But if this is the case. If we have studies,
7 the GAO boards and also there's -- Is anyone following
8 up on any of that or is part of the problem that
9 there's no one entity who is the switchman. We have
10 too cooks or too many people responsible. What is it?

11 CHAIRMAN RYAN: Well, we'll get into a
12 little bit more detail than perhaps we have time for
13 now. But the other aspect of it that's concurrent
14 with this whole siting business is the fact that
15 generators and particularly utilities that were 85
16 percent of the commercial volume went into a mode
17 where they were being deregulated and therefore, were
18 looking at every aspect of their operations and then
19 themselves looking at risk informing and risk analysis
20 methods and volumes are dramatically decreased.
21 Dramatically decreased.

22 Barnwell used to receive 1.2 million cubic
23 feet per year just like clockwork. That was the
24 license limit. Now they receive 30,000 cubic feet a
25 year. That's a big drop. And then Envirocare has the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 low activity waste piece of the -- I don't want to
2 say, marketplace. That's not quite right. The
3 characteristics of how the industry is managing these
4 materials has changed a lot, too. So it's not just
5 that I mean that Texas sees the marketplace and I'm
6 sure they wouldn't have invest there. But we'll see
7 how that one comes out and it may be water seeking its
8 own level.

9 I guess I would suggest while that's
10 interesting our focus ought to be on how to have a
11 better process and a clearer and more risk-informed
12 and transparent process for users, for generators and
13 for folks that may want to develop activities in this
14 arena. But it's a good question.

15 MR. HAMDAN: Okay. Thank you.

16 MR. KENNEDY: Okay. Well, I'm about done
17 here. Just a couple of conclusions. One, the low
18 level waste program we believe tracks the national
19 program. At least, that's historically what's
20 happened.

21 We have some specific activities underway
22 to address the issues that we see. They include the
23 need for storage guidance, the need for better
24 guidance on 20.2002 disposals for low activity waste.
25 It includes greater than Class C disposal and the EIS

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that DOE will be developing in the near future we
2 expect.

3 We're expecting some perhaps major
4 developments later this year as a result of the
5 recommendations and the GAO and NAS reports. We'll be
6 interested in seeing those and seeing what they have
7 to say and how they might affect us.

8 Finally, we look forward to your input and
9 involvement in the future on some of these issues and
10 we look forward to working with you on that.

11 CHAIRMAN RYAN: Great. Questions?

12 MEMBER WEINER: Just a couple. Since
13 according to your second slide, NRC is concerned about
14 access to disposal facilities. What can NRC do about
15 it and where does NRC fit into the access question?

16 MR. KENNEDY: I guess a couple of things.
17 First, I would really agree with what Mike had to say
18 just a few minutes ago and that is about making our
19 regulatory framework and our processes as risk
20 informed and processes as transparent and efficient as
21 we can possibly make them.

22 Beyond that, on some of these other issues
23 regarding why the national program hasn't worked and
24 issues that go beyond health and safety and so forth,
25 we have a role in that and we might, for example, as

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 we did in 1980s provide testimony to Congress for
2 example on what our view is and some of the things we
3 know about. But there's at least historically we've
4 not done a whole lot in terms of getting into some of
5 these other issues that affect the success of the
6 national program.

7 MEMBER WEINER: Thanks.

8 DR. LARKINS: There is something in the
9 regulations that allows for emergency access.

10 MR. KENNEDY: Yes.

11 DR. LARKINS: It has never been exercised
12 as far as I know.

13 MR. KENNEDY: It's a very high threshold.

14 CHAIRMAN RYAN: Correct me if I'm wrong
15 because I haven't read it in years, but I think the
16 provision is the licensee with the material for which
17 you're seeking disposal has to demonstrate the
18 emergency access.

19 MEMBER WEINER: Yes.

20 MR. KENNEDY: Mike.

21 CHAIRMAN RYAN: I'm sorry. Forgive me.
22 The licensee has to demonstrate "I have to get rid of
23 this now because..."

24 MR. KENNEDY: Right. It has to be now and
25 it has to be based on the health and safety.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN RYAN: That's the burden of the
2 licensee with this material. That was your question,
3 Ruth, I think.

4 MEMBER WEINER: Yes.

5 MR. KENNEDY: Oh. Okay. But it's very
6 high threshold and it has to be an imminent health and
7 safety issue that would cause us to order a compact
8 facility to open up to somebody outside of the
9 compact.

10 CHAIRMAN RYAN: But statutorily, the NRC
11 has that authority.

12 MR. KENNEDY: Right.

13 MEMBER WEINER: Yes.

14 MEMBER HINZE: A quickie, Jim, if I might.
15 Who is going to be paying attention or who was
16 directed to pay attention to the Academy's report and
17 when can we anticipate the Academy report?

18 MR. KENNEDY: Well, that's our division.
19 It's Larry, Scott, myself and I can tell you on up the
20 line Jack Strosnider, Margaret Federline, we're all
21 very interested and the Commission as well.

22 MR. FLANDERS: And we're not exactly sure
23 the timeframe. We know that we just recently got a
24 request as Jim mentioned to respond to some additional
25 questions on a questionnaire. So it appears as though

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 they're moving forward and finalizing the report, but
2 we don't have a definite timeframe for when that's
3 going to be done.

4 MEMBER HINZE: Slow.

5 MR. KENNEDY: We'll really just have to
6 see what they say about our programs and where we can
7 improve and what they think we should do and go from
8 there. But again, we look forward to talking to you
9 about those.

10 MEMBER HINZE: Thank you.

11 CHAIRMAN RYAN: Any other questions?

12 MR. THADANI: This might be an old issue.
13 So please tell me. Just tell me to go read A, B, C.
14 That might be good enough. But the Commission issued
15 a white paper back in 1999 on reactors initiatives and
16 it had to do with definitions of what do we mean by
17 risk-informed and they're performance-based
18 initiatives. Do we have a definition that you and
19 other divisions utilize in terms of risk-informing
20 activities? I'm sort of anxious to ask you this
21 question by what Mike said on concentrations and is
22 there some sort of consistency amongst the divisions,
23 first, in understanding where we want to be and the
24 role of quantification, if any, in that. They would
25 useful to get a better understanding of that.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. FLANDERS: Yes. NMSS is as a whole at
2 one point had a risk task group. It actually went and
3 looked at risk-informing activities across NMSS and
4 generated a series of documents which now that the
5 group is no longer in place, but it's been provided to
6 each of the divisions as the guidance as to how they
7 go about doing that to carry out risk-informing
8 activities. So it has been looked at across NMSS.

9 Whether they go to a quantitative, I guess
10 the nature of NMSS is slightly different in the
11 reactor world and the data associated with it in terms
12 of being able to try to quantify a specific risk value
13 is a little bit different than in the reactor world
14 where you could establish 10^{-6} , etc. So it's slightly
15 different but we do have standard guidance that we use
16 for risk informing. I don't know if that answers your
17 question.

18 MR. THADANI: Yes. I'd be interested in
19 looking at it sometime.

20 MR. FLANDERS: Okay.

21 MR. THADANI: Thank you.

22 CHAIRMAN RYAN: Ashok, I think that's a
23 focal point for us as well to think about those. I
24 mean we very much hold the risk white paper in hand
25 when we think about these things and I think the kind

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 of question that we'll be thinking about too. It is
2 through making it risk informed that we get the
3 transparency and clarity and simplicity and conformity
4 I think. So we'll be thinking some more about that.

5 MR. THADANI: Thank you.

6 MR. FLACK: Excuse me. Mike, just to
7 follow up on that a little bit and it's a good
8 question.

9 CHAIRMAN RYAN: Sure. Just tell us who
10 you are, John.

11 MR. FLACK: Oh, I'm sorry. I'm John
12 Flack, ACRS staff. What I think we haven't done in
13 this area which ERACDA (PH) did do earlier was develop
14 something like a cornerstone approach that when
15 applied did actually capture public confidence in the
16 senses that there were various barriers that protected
17 the public health and safety and folded on top of
18 that, you do have a risk-informed approach. It
19 followed very nicely because the way the cornerstones
20 were set up almost followed what a PRA would do. And
21 maybe there's something here that could be done or
22 developed for the non-reactor side of things. But I
23 had never seen that done before and it may be
24 something new.

25 CHAIRMAN RYAN: Yes, actually I think it

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 would be helpful to the Committee to get some of that
2 documentation that could help us understand that and
3 again I quickly emphasize that I believe that that may
4 be applicable for one part of what NMSS licenses but
5 it may not be broadly applicable. So I want you to
6 understand we're thinking about this as a concept now
7 and not necessarily something that should be accepted
8 carte blanche and we do recognize that different areas
9 within NMSS have different needs.

10 I mean you certainly don't want to spend
11 as much time and resources on small sealed sources
12 that may be in a laboratory as compared to a low level
13 waste site or some low level launch facility. Yes,
14 that would be helpful. Latif.

15 MR. HAMDAN: Yes. Mike, I just want to
16 add that the Commission paper which we talked about
17 this morning that was submitted to the Commission in
18 September/October timeframe by Dennis Damon includes
19 a staff guidance on implementation of risk insights
20 across the NMSS programs and the Commission provided
21 the staff with an SRM and we have been after Dennis to
22 do a staff briefing so that we can look at the
23 guidance but we haven't had much success yet.

24 CHAIRMAN RYAN: Well, hopefully, we'll get
25 there on that. Is that it? Any other questions?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Comments? Well, thank you, gentlemen, for a very
2 informative presentation this afternoon.

3 MR. KENNEDY: Thank you.

4 CHAIRMAN RYAN: We really appreciate it
5 and we'll look forward to working with you on the
6 white paper and other things coming down the line.

7 MR. KENNEDY: Yes.

8 CHAIRMAN RYAN: Thank you. We're
9 scheduled for a short break. I'm going to say why
10 don't we just cut it to ten minutes and get back about
11 4:15 p.m. and get rolling on the next topic. Thank
12 you. Off the record.

13 (Whereupon, the foregoing matter went off
14 the record at 4:05 p.m. and went back on
15 the record at 4:19 p.m.)

16 CHAIRMAN RYAN: I think the outline review
17 can be relatively short and then we'll just move into
18 the last agenda item for the day which will be the
19 Center visit and a report from the subcommittee that
20 went down in that information gathering. So without
21 further ado, I think what we tried to do, Sharon,
22 thank you for all your help in getting this done,
23 we've tried to expand it to the next small step which
24 is to cover the origins and history of low level waste
25 topics that we're going to cover in writing, the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 elements and the regulation could be improved perhaps
2 by a risk-informed approach and those kind of things
3 and the elements of low level waste practice that
4 could be improved, again, I think more in terms of
5 some of the issues we covered in talking with Jim and
6 Scott today and then the regulatory interfaces,
7 technical and non-technical issues and it's the
8 question that I asked Jim about, which is, you know,
9 how does the low level waste piece touch all these
10 other pieces and I think I captured all the parts that
11 I had as input from all the committee discussion we
12 had last month.

13 I think you all had this in advance of the
14 meeting and have it now, so speak now or let us begin
15 writing and developing the written material and we'll
16 go on.

17 MS. STEELE: Certainly Item 4 was
18 generated based on the discussion last time.

19 CHAIRMAN RYAN: Yes.

20 MS. STEELE: However, Items 1G and H were
21 added after the meeting.

22 CHAIRMAN RYAN: Items 1G and H.

23 MS. STEELE: And those have to do with the
24 Atomic Energy Act and how they influenced the low
25 level waste.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN RYAN: Yeah, I know, I mean, this
2 is kind of a composite with a few added things. Thank
3 you, though. What I think Sharon is saying, simply,
4 is that you guys gave us some input and I added a
5 couple more when we got done to make this one up.
6 Thank you. You know, frankly, G and H are critically
7 important because it is those fundamental definitions
8 that were not risk informed in any way, shape or form
9 that are the basis for what we have today. So it's
10 important that a lot of folks don't go back that far
11 in reading the history.

12 MEMBER WEINER: Is there some documented
13 decision around 1960 that made low level -- commercial
14 low level waste a commercial enterprise and not a
15 federal enterprise?

16 MS. STEELE: I think it was the 1954 Act
17 that --

18 MEMBER WEINER: Oh, okay, thank you.
19 That's -- I just wondered.

20 MS. STEELE: And as we go through you'll
21 see I had problems trying to get anything since 1946
22 that applies to low level waste.

23 CHAIRMAN RYAN: There was no such thing.

24 MS. STEELE: Right, and I forgot how it
25 was treated.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN RYAN: Yeah, it would then be --
2 you know, what is now the DOE side that would have it
3 from the old AEC but it would be, you know, archival
4 and hard to get, I'm sure.

5 MS. STEELE: Right, some of that -- right.

6 CHAIRMAN RYAN: Yeah, Dave did a nice job
7 on that --

8 MEMBER WEINER: That's a very good paper.

9 CHAIRMAN RYAN: And --

10 MR. THADANI: Does Sam Walker's book on
11 permissible dose get into that?

12 MS. STEELE: Some of it. I got some of
13 the stuff --

14 CHAIRMAN RYAN: Yeah, that's a good
15 resource for a piece of it but again, I think that the
16 focus is the definitions that carry forward are -- and
17 the reason for their origins is helpful to understand.
18 Some of the other issues we can touch on as well.

19 MS. STEELE: Okay, so we're okay with the
20 outline?

21 CHAIRMAN RYAN: Any other comments?

22 VICE CHAIRMAN CROFF: Before you mentioned
23 --

24 MS. STEELE: I didn't realize we were
25 recording.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN RYAN: Yeah, Allen has the floor.

2 VICE CHAIRMAN CROFF: Before in the low
3 level waste session you mentioned the business of
4 discussing how to implement whichever direction, in
5 other words, law, regulation, guidance, whatever. And
6 I don't see that mentioned in here.

7 CHAIRMAN RYAN: You're right. I think
8 what I had attempted to do here was to get the meat of
9 the history and the details on paper and then I think
10 we need to maybe study that piece and deliberate, you
11 know, as a committee on what do we do with this now.

12 VICE CHAIRMAN CROFF: Okay.

13 CHAIRMAN RYAN: So I think there's a great
14 big five that says, you know, steps forward or you
15 know, things of that kind. So --

16 VICE CHAIRMAN CROFF: Okay, with that,
17 it's fine.

18 CHAIRMAN RYAN: I didn't want to prejudge
19 it because, you know, we've got the answer until we do
20 the work.

21 VICE CHAIRMAN CROFF: Right.

22 CHAIRMAN RYAN: Okay, but you're exactly
23 right.

24 VICE CHAIRMAN CROFF: I was wanting no
25 more than a reminder saying we need to think about

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that.

2 CHAIRMAN RYAN: Yeah, put down a five, you
3 know, the next step.

4 MS. STEELE: The placeholder is Item 5?

5 CHAIRMAN RYAN: Yeah. Any other comments?

6 MEMBER WEINER: Just coming off of Latif's
7 comment earlier, would we want to put in a small
8 section on public responses to these things or
9 reaction or general reaction in the Low Level Waste
10 Policy Act because that has really driven the
11 implementation of that Act?

12 MEMBER WEINER: Well, you know, I guess my
13 own view Ruth, is no for two reasons. One is, I
14 wouldn't want to dilute that issue. It has its own
15 legs to stand on, so I would think we would want to
16 treat that as a serious and separate issue. And
17 second, that's not why the Act hasn't been
18 implemented. The real -- as I mentioned in discussing
19 it with Jim, the real focal point of when siting
20 efforts dial down very quickly was when South Carolina
21 became available to the rest of the nation with the
22 Beasley decision in 1990, I mean, '96. That's when it
23 changed. It changed just like that. (Snaps fingers).
24 So I think that's an important topic, and I guess my
25 own view, you know, and I'll just exempt myself, I

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 don't have the expertise to write that and I don't
2 know that we do as a committee, so I think that's an
3 important topic that needs to stand on its own. Fair
4 enough?

5 MEMBER WEINER: Actually, I agree with
6 you. I just raised the question because of this part
7 of this, but I would not put it in there either.

8 CHAIRMAN RYAN: Right, okay, we're in
9 agreement.

10 MEMBER HINZE: What's going to be done
11 with this now? Do you want any assistance in any
12 areas?

13 MS. STEELE: Yes.

14 CHAIRMAN RYAN: I'll tell you what, let me
15 work with Sharon and come up with a plan because we're
16 now gathering bibliography and things of that sort and
17 if we maybe get stated and pass out, you know, a rough
18 cut, that's in text, you know, we can maybe -- let's
19 go one more step and then we'll holler for help.
20 How's that?

21 MEMBER HINZE: Fine.

22 MEMBER WEINER: Great.

23 MS. STEELE: So we're going to -- we're
24 done with the outline and we're going to move into --

25 DR. LARKINS: Can I make one comment,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 sorry?

2 CHAIRMAN RYAN: Certainly.

3 DR. LARKINS: I was looking at if this is
4 still the same correct outline, we talk about origins
5 and history and things like that, it seems like you
6 ought to state something up front what the over-
7 arching or the objective is and then develop into a
8 little bit of background.

9 CHAIRMAN RYAN: Sure.

10 DR. LARKINS: But sort of state what the
11 problem is up front with -- where you might be going
12 with this issue and then sort of roll into history,
13 background.

14 CHAIRMAN RYAN: And I think capturing some
15 of the discussion we had among Scott, Jim and the
16 committee today will be helpful in that regard.

17 DR. LARKINS: Yes.

18 CHAIRMAN RYAN: Yeah, I agree.

19 MEMBER WEINER: One thing that I found al
20 little bit confusing is the classification system
21 itself is not particularly well risk informed. And I
22 mean you point out the inadvertent intruder scenario
23 and Class C and greater than Class C but this
24 actually, isn't there an application to the whole
25 classification system that it could be better risk

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 informed?

2 CHAIRMAN RYAN: I think the issue isn't
3 could it be better risk informed. Let me say your
4 question a different way and maybe we'll agree again.
5 I think when you think about concentration as a metric
6 of risk, there is a range of concentration for, you
7 know, significant quantities and material where it
8 works fine. If you're dealing with, you know, one-
9 curie sources that are sealed or you're dealing with
10 iron exchange resin from a power plant or solidified
11 stuff and some concrete that has to be stabilized
12 according to the BTP rules for stabilization, some
13 hardware over a pretty wide range of materials, you
14 can say, well, we're managing occupational risk and
15 we're managing inventory risk that is the spectrum of
16 radionuclides in low level waste, particularly from
17 commercial sources, it's fairly constant. Two-thirds
18 of the inventory is cobalt-60, seven percent cesium,
19 three percent is nickel-63 and then it trails off from
20 there. So that's good but at the very low end, there
21 have been cases where waste has been solidified with
22 fly ash that has more radioactivity than the waste and
23 there are cases where sealed sources based on just the
24 source classify as greater an Class C but have a
25 trivial quantity less than a millicurie of activity.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 So my point is, is that as a metric, total
2 activity is more -- tracks more appropriately with
3 risk but from an operational standpoint, concentration
4 is a practically, easily measured thing. That way I
5 don't have to be calculating, well, I have 38.62 cubic
6 feet and the density is 2.6 grams per cubic centimeter
7 and what does that give me for total activity? I
8 report the concentration, I'm done. So it's a
9 practical measure that works over a fairly wide range
10 but at the extremes, which is what we're touching on,
11 greater than Class C and low activity waste, it breaks
12 down, and I think it's helpful if we can artfully
13 point that out in this paper.

14 MEMBER WEINER: Okay, again, we agree. I
15 just couldn't find that in the outline.

16 CHAIRMAN RYAN: Well, it will be on the
17 transcripts and I can copy it.

18 MEMBER WEINER: Okay, all right.

19 CHAIRMAN RYAN: So we've got it.

20 DR. LARKINS: And there was a staff paper,
21 I guess, that they had prepared about the problems
22 with the compacts, the Low Level Waste Policy Act of
23 1985 as amended and we should -- Jim, I think you made
24 reference to that. We should get a copy of that and
25 have that also as source material.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN RYAN: Oh, sure, yeah,
2 absolutely, yeah. No, that's -- absolutely.

3 MS. STEELE: From Jim Kennedy?

4 DR. LARKINS: From Jim Kennedy.

5 CHAIRMAN RYAN: Okay.

6 MS. STEELE: The only other comment I have
7 on the outline is that perhaps, Section 1 should be in
8 chronological order.

9 CHAIRMAN RYAN: We'll fix it.

10 MS. STEELE: Okay.

11 CHAIRMAN RYAN: I mean, that's kind of a
12 detail. I just want to make sure we cover the bases.
13 The other -- you know, another thing to think about,
14 I think is that in the purpose and scope, I agree
15 that's very important. He's weighing something.

16 DR. LARKINS: You said scope and I just
17 started weighing the outline. It's about the size of
18 the paper.

19 CHAIRMAN RYAN: I felt that. Is that I
20 think it's -- we need to kind of stick to the
21 technical knitting here. I think a lot of speculation
22 about compacts and why they did this or why they did
23 that or did they fail or, you know, even the word
24 "failure" is not appropriate for this. A technical
25 review of the basis for regulations earlier on and now

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 later on, and just the history of what the rules were
2 is important, but speculating about what broke and who
3 broke it is probably not at all --

4 DR. LARKINS: You would save a lot of
5 trees that way.

6 CHAIRMAN RYAN: Yeah. So --

7 DR. LARKINS: Sam, do you want to comment?

8 CHAIRMAN RYAN: Would you tell us who you
9 are, please for the record, Sam?

10 MR. JONES: I'm sorry, I'm Sam Jones. You
11 might want to add the proposed rule to your list, yah.
12 You have the final regulations, the final rule.

13 CHAIRMAN RYAN: New initiatives or merging
14 initiatives, is that --

15 MR. JONES: No, no, no, no, on the origin
16 and history of low level waste regulations.

17 MS. STEELE: Yeah, on the C.

18 MR. JONES: You should add the proposed
19 regulations.

20 MS. STEELE: Proposed recommended --

21 MR. JONES: No, proposed rules and
22 regulations.

23 CHAIRMAN RYAN: What proposed rule?

24 MR. KENNEDY: For Part 61 you mean, I
25 think, right?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. JONES: Yeah, uh-huh.

2 CHAIRMAN RYAN: I'm sorry, Sam, I'm not
3 catching what you want us to put in.

4 MR. JONES: On the origin and history of
5 low level waste regulations you have a list of items.

6 CHAIRMAN RYAN: Right, we have the draft
7 EIS, the final EAS and the regulations.

8 MR. JONES: Wasn't it proposed
9 regulations?

10 CHAIRMAN RYAN: What would be the added
11 part of the proposed versus the final?

12 MR. JONES: Well, there could be comments
13 in the statements of consideration that were in there.

14 CHAIRMAN RYAN: Okay, yes, statements of
15 consideration is probably a key. So, yes.

16 MR. JONES: Right, that wouldn't carry
17 necessarily to the final rule.

18 CHAIRMAN RYAN: Yeah, now, I'm with you.
19 I guess my thought is the final regulations say,
20 "Here's what it is, here's how it got there", so
21 covered in there so we don't miss it.

22 MR. KENNEDY: Mike, another one, do you
23 have the GTCC rule that was promulgated in 1989 up
24 there?

25 CHAIRMAN RYAN: We do not and we should.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. KENNEDY: Right, because both the
2 proposed and final for that, because that's got all
3 kinds of good discussion on risk informing and
4 everything.

5 CHAIRMAN RYAN: Right. Jim, maybe you
6 could help us hunt those up.

7 MR. KENNEDY: Yeah.

8 CHAIRMAN RYAN: Anything else?

9 MR. THADANI: Are you going to go to
10 Element 2 or --

11 CHAIRMAN RYAN: Oh, we can, sure.

12 MR. THADANI: No, I just have a question
13 actually on Element 2, which is Item C refers to the
14 principles of realistic conservatism, those principles
15 are documented where?

16 CHAIRMAN RYAN: I would say the White
17 Paper would be a great place to start.

18 MR. THADANI: All right, I was going
19 there.

20 CHAIRMAN RYAN: That was a little quiz,
21 wasn't it.

22 MR. THADANI: Yes.

23 CHAIRMAN RYAN: No, I mean, that's where,
24 you know, the committee has a lot of history, as you
25 well know and where we are in that and I think those

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 are the guiding principles that will form our
2 discussion of the topic.

3 MR. THADANI: Thank you.

4 CHAIRMAN RYAN: Anything else, 2, 3, or 4?
5 Yes, sir. If you would just tell us who you are and
6 who you are with and --

7 MR. LIEBERMAN: Jim Lieberman, I'm a
8 former NRC employee retired by now I'm with --
9 basically a consultant for various people. But the
10 Commission recently issued a Commission Decision LES
11 that involved the definition of Classes and the
12 performance objectives giving some history of Part 61
13 which is very helpful to this whole subject you might
14 want to look at.

15 CHAIRMAN RYAN: Okay, thank you. And I
16 think you have a -- you know, the LES, this document,
17 which was it? Do you know what that is?

18 DR. LARKINS: He's talking about the
19 Louisiana Energy Systems --

20 CHAIRMAN RYAN: Oh, okay, all right, thank
21 you. Okay, thank you. Good.

22 VICE CHAIRMAN CROFF: We're getting a lot
23 of help.

24 CHAIRMAN RYAN: Well, and I think it will
25 naturally expand as we, you know, for example, think

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 about what agreement states might have done. I mean,
2 just one nuance is that South Carolina has in its
3 state regulations that storage shall be a last resort.
4 Very clearly, they don't want a licensed storage.
5 They only want a licensed disposal. So there are a
6 little tidbits like that, I guess, in state
7 regulations that will be interesting to see if we
8 leave those in at all or how we address them. So
9 there's a broad spectrum of things to think about
10 which is the whole point of doing it, to pull it all
11 together.

12 Again, any other questions or comments?

13 MR. HAMDAN: Mike, are you going to say
14 anything about Barnwell, for example?

15 CHAIRMAN RYAN: You know, how we weave it
16 in and frankly at this point my thinking is, is that
17 Barnwell or another site in particular shouldn't be
18 our focus to get started. Let's get started with
19 this, and then I think if there is a practical
20 examples part that we might want to think about, we
21 would need to, I think get updated information from
22 all the facilities that are involved and that takes on
23 a broader scope of site visits and so forth. I'm not
24 too sure that we want to -- that could be a separate
25 piece but -- and I recognize there's some information

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that's of value but, clearly, I think the documents
2 that could inform us are their current licenses and
3 those are publicly available for all the facilities,
4 licenses and permits. So maybe that's the stopping
5 point is to think about how they're licensed and
6 permitted at the moment. But we can see if that's an
7 appendix or, you know, something we want to address or
8 not.

9 MR. HAMDAN: I was thinking, you may want
10 to have an appendix to Element -- to Number 3 or
11 something because you -- maybe you don't like this
12 closely either.

13 CHAIRMAN RYAN: Let's see.

14 MR. FLACK: Mike, just one question on the
15 -- you know, we always discuss the issue about concen
16 -- cumulative dose versus individual dose.

17 CHAIRMAN RYAN: Right.

18 MR. FLACK: Is that something that should
19 be handled outside this paper or --

20 CHAIRMAN RYAN: Oh, yeah, absolutely.

21 MR. FLACK: Yeah, it's too big, yeah.

22 CHAIRMAN RYAN: Yeah, collective dose is
23 meaningless at the typical levels associated with the
24 regulation. That's an independent issue from low
25 level waste.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MEMBER WEINER: Do you intend to include
2 the attempt to regulate or to have a below regulatory
3 concern regulation in this paper?

4 CHAIRMAN RYAN: No, again, I don't think
5 the issue is for us to try and set a policy or offer
6 a policy. Our issue is to explore the facts and
7 history here so we can maybe tickle out of it ways to
8 risk inform NMSS activities or, you know, regulatory
9 work of one kind or another. I don't think that's --

10 VICE CHAIRMAN CROFF: Mike, BRC is in
11 here.

12 CHAIRMAN RYAN: Huh? It is in there as a
13 regulatory -- that's fine.

14 MEMBER WEINER: Yeah, that's fine. That
15 answers my question.

16 VICE CHAIRMAN CROFF: That answers the
17 question.

18 CHAIRMAN RYAN: That's history. Oh, I
19 thought you meant in terms of product at the end. I'm
20 sorry.

21 MEMBER WEINER: No, I couldn't fine it.
22 That was the only question.

23 CHAIRMAN RYAN: Yes.

24 MR. LIEBERMAN: Jim Lieberman again.
25 Based on my experience at NRC, some additional

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 thoughts came to mind. One is, the relationships
2 between Part 61 and the Commission's License
3 Termination Rule, 25 millirems, 100 millirems, 1,000
4 for institute controls versus 100 years for
5 institutional controls. The regulations have
6 different premises but you might want to look at the
7 differences and similarities.

8 CHAIRMAN RYAN: Well, again, I think
9 that's helpful to just document as the fact of what it
10 is and then I think the focus for us is to take the
11 risk informing principles and explore it a bit, again
12 for the purpose of just laying out what the landscape
13 looks like. I mean, it is striking when you go back
14 to the early definitions in 46 that the word "safety"
15 is mentioned in the Atomic Energy Act four times,
16 four, three with regard to dynamite and once with
17 regard to, you know, occupational sanitation, you
18 know, at AEC facilities, sewer treatment plants. So
19 it's -- you know, again, I think the fact that source
20 byproduct and special nuclear material have drifted
21 forward from a safeguard and security and control
22 standpoint, you know, into this risk-informed
23 environment is really the focus.

24 The number isn't exactly the focus but
25 it's interesting that, you know, they end up at

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 different end points for different reasons. Anything
2 else? Sir?

3 MR. LEE: I see on Items 2D, 2F and 2H,
4 these are talked, I think in one form or another in
5 NUREG-1573, so --

6 CHAIRMAN RYAN: Great.

7 MR. LEE: -- you folks might just want to
8 give some consideration to that.

9 CHAIRMAN RYAN: That's us folks.

10 MR. LEE: Excuse me, us folks, thank you.
11 We need to give consideration to that because it's a
12 three-part document that's well written and of course,
13 Mr. Jim Lieberman, formerly of the Office of General
14 Counsel, had a lot to do and say about that. So --

15 CHAIRMAN RYAN: Yeah, okay.

16 MEMBER WEINER: 1573?

17 MR. LEE: 1573.

18 CHAIRMAN RYAN: Thank you.

19 MR. LEE: I encourage it.

20 CHAIRMAN RYAN: Say one, say all, anything
21 else? Well, on we go.

22 MS. STEELE: On we go. I've distributed
23 some more trees. This document here is Section 1 of
24 the outline, the origins and history and I took some
25 freedom to suggest some background information if we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 needed it. And they fall into a couple of areas. One
2 of them talks about old practices, previous to 1970.
3 Here's the other thing; the way I laid out my outline,
4 there are a lot of bullets and I'm hoping that it
5 would make it easy for you to say -- when you go
6 through it to say, "This has nothing to do with this,
7 just take it out", or, "Yes, continue development on
8 that particular theme".

9 And so we went ahead and had it numbered,
10 except there's a line number that you see associated
11 with a bullet that shouldn't be in here. And we'll
12 try to get through as much as we can until 5:00.

13 CHAIRMAN RYAN: I'm going to make a
14 suggestion.

15 MS. STEELE: Sure.

16 CHAIRMAN RYAN: I mean, this is the first
17 time all the members have seen it, right?

18 MS. STEELE: The notebook, okay.

19 CHAIRMAN RYAN: The notebook. Have you
20 all been through this or not?

21 VICE CHAIRMAN CROFF: Scanned it.

22 MEMBER HINZE: Scanned it.

23 CHAIRMAN RYAN: Scanned it. So, you know,
24 let's let everybody digest it overnight perhaps and
25 bring you a mark-up tomorrow.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MS. STEELE: Oh, great, that sounds good.

2 CHAIRMAN RYAN: You know, rather than sit
3 here and let everybody read through it, that will be
4 a little bit more efficient and we can press ahead.

5 MS. STEELE: That's true, okay.

6 VICE CHAIRMAN CROFF: And the question on
7 the table on this --

8 CHAIRMAN RYAN: The question on the table
9 is --

10 VICE CHAIRMAN CROFF: -- are these the
11 right topics and things to discuss?

12 MS. STEELE: Right.

13 CHAIRMAN RYAN: And of course the two are,
14 this is a key point, make a star. This is not
15 important, cross it out and we'll press on.

16 MS. STEELE: Okay.

17 MEMBER WEINER: I have one comment if we
18 can go back briefly to the outline. The Nuclear Waste
19 Policy Act was 1982, not 1980, the first page, 1S.

20 MS. STEELE: Yes.

21 CHAIRMAN RYAN: The Low Level Waste Policy
22 Act was --

23 MEMBER WEINER: The Low Level Waste Policy
24 Act was 1980, Nuclear Waste Policy Act was 1982.

25 CHAIRMAN RYAN: Gotcha, thanks.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MS. STEELE: Yes, it's correct in my
2 outline.

3 MEMBER WEINER: Okay, good.

4 MS. STEELE: So that makes it right.
5 Okay.

6 CHAIRMAN RYAN: All right, so on we go.
7 I guess the goal is to have --

8 MEMBER WEINER: Okay, we take this home.

9 CHAIRMAN RYAN: Okay, a fairly well
10 developed text by say June, you know, with something
11 in May for committee members to perhaps just comment
12 on an early draft and then we'll explore it in our
13 June meeting.

14 MS. STEELE: What about -- you're
15 referring to just the first section? What about the
16 other sections?

17 CHAIRMAN RYAN: I'm thinking the whole
18 thing.

19 MS. STEELE: Okay. All right.

20 CHAIRMAN RYAN: It's not -- I don't think
21 it will be that hard to pull it together but we can
22 just start writing seriously on it and get rolling.

23 MS. STEELE: Okay, so a good first draft
24 you're saying for the entire document --

25 CHAIRMAN RYAN: Yes.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MS. STEELE: -- okay, before the June
2 meeting.

3 CHAIRMAN RYAN: On we go.

4 MS. STEELE: Okay.

5 CHAIRMAN RYAN: Next is Ruth, your report
6 on your subcommittee on discussion on the April 14th
7 and 15th visit to the Center for Nuclear Waste
8 Regulatory Analysis.

9 MEMBER WEINER: Jim, very kindly printed
10 out the -- it's on the --

11 CHAIRMAN RYAN: Can we have these to hand
12 out to everybody or --

13 MEMBER WEINER: It's on the D drive under
14 Weiner and it's a PowerPoint presentation. Yeah. And
15 it's not very long. In fact, you can see how long it
16 is here. I can't -- with the light shining on it, I
17 can't see it.

18 CHAIRMAN RYAN: Actually, can we just kill
19 the lights up there?

20 MEMBER WEINER: Yeah, can we kill the
21 lights and I can maybe help you -- I can't see it all.
22 All right, please excuse the primitive PowerPoint, it
23 was mine. I briefly summarized the points from our
24 visit to the Center that did not deal with
25 predecisional work and I believe everything that's on

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 these slides refers to something that is -- has been
2 published or is public information.

3 May I have the next one? And please other
4 people chime in, feel free, Bill, Jim, to chime in
5 when I get something wrong. Okay, the attendees were
6 myself, Bill Hinze and Jim Clarke and the two
7 consultants, Bruce Marsh and Paul Shewmon. ACNW staff
8 was Richard Savio, Sharon Steele and Jenny Gallo and
9 we had a number of NMSS staff and people present on
10 video conference and I didn't list all the names
11 because there were quite a few and they were in and
12 out.

13 Neil was extremely helpful. He was
14 present on the video con and I have to say that Tim
15 McCartin who was present for most of it, was also
16 extremely helpful. Next slide, please.

17 Okay, this was our agenda. I can ask Jim
18 to comment on the lab tour. I did not go on that and
19 he went on the lab tour and discussed the
20 decommissioning work with Dick Savio and then there
21 was a GoldSim demonstration that Jim and I and Dick
22 attended. Do you want to say anything about the
23 decommissioning at this point?

24 MEMBER CLARKE: Just that it was a very
25 informative discussion concerning the models, the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 codes that they're looking at, at this time, the pros
2 and cons of each and we had on video, I think we had
3 John Russell and we had Bobby Eid.

4 MEMBER WEINER: Uh-huh.

5 DR. LARKINS: Which codes are they using
6 for decommissioning?

7 MEMBER WEINER: Oh, for decommissioning?

8 MEMBER CLARKE: Yeah, the ones that we
9 heard the most about were MEPAS, GENII, RESRAD 5 and
10 GoldSim.

11 MEMBER WEINER: They also showed us
12 briefly how GoldSim was being used for the Yucca
13 Mountain Performance Assessment and I thought the
14 GoldSim demonstration was excellent and was -- it's a
15 very useful tool.

16 MEMBER CLARKE: The RESRAD model was the
17 most recent. I think it's called RESRAD-OFFSITE, the
18 one that has probablistic capabilities. I may have
19 gotten the number wrong but it's the RESRAD-OFFSITE.

20 MEMBER WEINER: April 14th was devoted
21 entirely to a discussion of igneous activity and at
22 that we didn't get through it. The only break in that
23 agenda was that at lunch -- they had lunch brought in
24 -- the ACNW members and consultants met with Budhi
25 Sagar and Wes Patrick to discuss Commissioner

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 Merrifield's request. Wes, at that point, gave us --
2 since I'm not going to say any more about it after
3 this, Wes shared with us a slide presentation that he
4 had of the Center's capabilities and essentially,
5 they -- what the Center itself doesn't have in the way
6 of expertise or feel they can add in the way of
7 expertise, they use Southwest Research Institute and
8 that is mostly for the engineering aspect, mechanical
9 engineering, electrical engineering and so on.

10 They have either on staff or as
11 consultants, they cover virtually all of the areas
12 that deal with high level waste and with radioactive
13 waste period, and with decommissioning. Basically,
14 they try to cover the waterfront. Their contract is
15 -- the conditions under which the Center operates are
16 very closely constrained at the present time by their
17 contract with NRC.

18 MEMBER CLARKE: Charter.

19 MEMBER WEINER: Yeah, their charter and
20 they also made the point that it has been -- when it
21 has been suggested that the charter be amended in some
22 way, there has also been a discussion at that time of
23 amending the charter and putting it up for bid again.

24 CHAIRMAN RYAN: That's perhaps a little
25 out of our areas.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MEMBER WEINER: Yeah, that's way out of
2 our area. They wanted us to know. This was mostly a
3 luncheon where Wes primarily told us about the Center.
4 We contributed very little.

5 April 15th we finished up with igneous
6 activity but we took the corrosion chemistry and waste
7 package issues first in order to accommodate Dr.
8 Schewmon who had an early flight out. We also heard
9 about their work in near-field chemistry retardation
10 and radionuclide mobility. We wrapped up the igneous
11 activity discussion probabilities of igneous activity
12 and spent a short time on spent fuel dissolution.

13 At the end of the meeting Wes and Budhi
14 requested our feedback. I did not make a slide of
15 that but we essentially thanked them for -- thanked
16 them for the presentations and gave them our
17 impression which will come up on the next slide. Can
18 I have the next slide, please? Next one. Okay.

19 I wrote down a number of points that had
20 occurred to me, circulated these to the ACNW members
21 and consultants, asked for their input. This morning
22 I checked it out with Neil Coleman who gave me some
23 additional insights and corrections and we also
24 subsequent to this morning's discussion in the P&P, I
25 also made some changes. I'd just like to go through

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 and again, please other people who were there add --
2 jump in.

3 First of all, they were very forthcoming
4 and responsive to our questions and concerns.

5 MEMBER HINZE: Well, that's the first
6 place I'd disagree.

7 MEMBER WEINER: Bill, I was being nice.

8 MEMBER HINZE: I know you were.

9 CHAIRMAN RYAN: We need a clear picture.

10 MEMBER HINZE: I think it was uneven. I
11 think that's a fair statement to make. There were
12 some areas where there was a clear responsive concern
13 with the questions. There were other areas where this
14 was not evident.

15 MEMBER CLARKE: I have to agree.

16 MEMBER WEINER: Yeah, I would agree also
17 with one caveat. I think they thought that -- they
18 thought they were being forthcoming but the actual
19 responses were, of course, uneven. We still have the
20 -- that gets me to the second bullet. Although there
21 was extensive discussion and I'd rather say that than
22 full of the Center's modeling of an igneous event and
23 its consequences, we still have a number of questions
24 about it. However, I think the presentations were,
25 indeed, a marked improvement over what we heard at the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 working group session in Las Vegas.

2 MEMBER HINZE: That's I'd agree with,
3 right.

4 MEMBER WEINER: Okay, I was going to say
5 you disagree with that one, too? The Center --

6 DR. LARKINS: But you did hear all of the
7 work that they're doing, right?

8 MEMBER WEINER: We heard a great deal of
9 work and we heard a lot of --

10 MEMBER HINZE: How can we evaluate that?
11 I mean, you know, we don't know all that they're
12 doing, but they told us that they were -- that we were
13 hearing all that they were doing.

14 CHAIRMAN RYAN: One thing that would help
15 and we don't have to do it at this session but we had
16 a list of questions going in.

17 MEMBER WEINER: Yes, and you have those
18 questions. We did go --

19 CHAIRMAN RYAN: Let me finish.

20 MEMBER WEINER: I'm sorry.

21 CHAIRMAN RYAN: And seeing whether those
22 questions were answered or not and for the ones that
23 were answered, what the answer was would be helpful.

24 MEMBER WEINER: Yeah, we can do that.

25 Actually we started to do that but sort of ran out of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 time and I would be happy to do a crosswalk with this
2 and the questions and ask Bill and Jim for their
3 input.

4 CHAIRMAN RYAN: I wouldn't just ask Jim
5 and Bill. I'd ask the folks that participated, the
6 consultants and so forth.

7 MEMBER WEINER: And the consultants as
8 well.

9 CHAIRMAN RYAN: But to me, a lot of work
10 went into that question set and that's where -- you
11 know, the kind of summary stuff here is fine but did
12 we get a specific answer to this question and that
13 question is really where the rubber meets the road.

14 MR. HAMDAN: Actually, if I may, when we
15 say we still have some questions, it's not clear as to
16 whether you asked the questions and you get answers or
17 they --

18 MEMBER WEINER: They did not answer our
19 questions fully. I cannot say beyond that at this
20 point.

21 CHAIRMAN RYAN: Again, we asked --

22 MEMBER WEINER: Well, get into that.

23 CHAIRMAN RYAN: -- specific questions.

24 Did we get an answer or not. It's a real clear way to
25 lay it out and, you know, if there's some remaining

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 those are the ones you'll say didn't get an answer.

2 MEMBER WEINER: Okay.

3 CHAIRMAN RYAN: So I'm really interested
4 in the fact that we produced this question set and if
5 they were answered or not.

6 MEMBER WEINER: Yeah. The Center -- Bill
7 referred this morning at the P&P to the first slide
8 they showed. They appeared to use a risk insights
9 approach to rank the potential impact of the different
10 processes in an igneous event as high risk, moderate
11 risk and low risk but their criteria didn't appear to
12 be either internally consistent or consistent with
13 past approaches. And I thank Jim very kindly for
14 pointing out that they didn't seem to use risk
15 insights to evaluate the contribution of risk to
16 various transport processes in the geosphere.

17 We suggested at the time and this is part
18 of our suggestion, that consistent criteria be
19 developed that they use the risk insights baseline
20 report and that they then use their consistent
21 criteria to rank the contribution of different
22 processes associated with an igneous event and I think
23 they should go that throughout their work.

24 I mean, we happen to do this in
25 association with the igneous event.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 MR. TRAPP: Ruth?

2 MEMBER WEINER: Yes.

3 MR. TRAPP: John Trapp. I would like very
4 much to know where this is coming from, because what
5 we are doing and what we did all the way through is
6 completely follow the risk insight report.

7 MEMBER WEINER: I'm going to bounce that
8 one to Dr. Hinze. He knows more about this than I do.

9 MEMBER HINZE: Well, I think that an
10 example of this -- of the concern of us that attended
11 this was as an example, would be the interaction of
12 the magma with the waste. The -- that appeared as a
13 high risk item. That was mentioned to us as a high
14 risk item because there is a difference between the --
15 there might be a difference between the Center and the
16 staff and the DOE. And apparently, you know, there is
17 a connect between -- if there's a difference between
18 DOE and the NRC, then there is uncertainty in there
19 but that doesn't seem like a consistent way to apply
20 the risk insight. That was one of our concerns.

21 MEMBER WEINER: Yeah, without the chart
22 here, I can point to other things that we pointed to
23 at the time and I don't say that -- I don't know
24 whether -- how or whether the risk insights based on
25 the report was used. It was just that the rankings

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 seemed to be inconsistent and those rankings are
2 critical to license review.

3 Welcome Bruce Marsh. I'm going through
4 the -- a summary of what we learned at the Center and
5 please feel free to jump in with comments any time.

6 MR. MARSH: Yeah, the way I understood
7 these rankings is that they had -- for most of the
8 processes, they had some dispersion of understanding
9 of their own right, which they took as an uncertainty
10 and then they actually compared it to the DOE, which
11 they took as another sort of extreme, perhaps, or
12 difference and so they based it on that.

13 However, the overall uncertainty, I
14 thought was -- that Ruth was talking about was
15 evaluated in another way or a little less certain way.

16 MR. TRAPP: All I would suggest is that
17 you go back to the risk insight baseline report and if
18 you can find anything in that risk insight baseline
19 report than is different than what we presented please
20 let me know because it is not.

21 MEMBER WEINER: Sure.

22 CHAIRMAN RYAN: John, that's -- I'm glad
23 you said that because I was going to maybe put a
24 little bit more meat on it than we can have in a
25 bullet or two on the slide to get ahold of that, so I

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 appreciate that, thank you.

2 MR. TRAPP: Well, the same thing and Bruce
3 already mentioned the questions that weren't answered,
4 I really would like to know what they are.

5 MEMBER WEINER: Yes.

6 CHAIRMAN RYAN: I mean, because we did a
7 lot of work with the Center and the staff to present
8 those in advance. I think in fairness, we need to be
9 diligent about going through what we thought we heard
10 and what we thought was answered and what might be
11 remaining. So that seems like the fair way to do it.

12 MEMBER WEINER: I do -- in fairness to the
13 group that went, we left there -- some of us left
14 there Friday evening, some of left there Saturday.

15 CHAIRMAN RYAN: I'm not complaining about
16 the timing. But we do need to bring it to closure and
17 that's the way to do it.

18 MEMBER WEINER: Okay. Can I have the next
19 slide, please? These are some of the points that were
20 made. Not all of the points. We were very careful to
21 stay in these bullets with public information. The
22 model for the interaction between the magma and the
23 waste package is extremely conservative. No credit is
24 taken for the waste package or cladding and the model
25 is that all spent fuel contents are released.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 The method by which the package
2 disintegrates is not clear. The model is accepted by
3 NRC and the Center because -- largely because of the
4 conservatism. Our recommendation is that NRC modeling
5 be consistent in approach to accepting or rejecting
6 the model and be based on sound science rather than
7 primarily on conservatism. And again, I want to give
8 credit where credit is due to Dr. Clarke unconditional
9 acceptance of an extremely conservative model may have
10 unforeseen ramifications.

11 The Center approach to modeling an igneous
12 event overall should be consistent in accepting or
13 rejecting a model and I would ask particularly Bruce
14 and Bill to comment on anything I haven't included in
15 that, that I should have included.

16 CHAIRMAN RYAN: Bruce, go ahead.

17 MR. MARSH: Yes. Ruth has pretty much
18 summed it up. However, the incorporation of this
19 material in magma and the dispersal downstream, et
20 cetera, therefore, follows on this conservative
21 approach and so that also then turns out to be a
22 conservative process and we also learned, for example,
23 that the -- there are more than just pellets in these
24 high density pellets. There's a lot of glass in these
25 containers. Fifty percent of it more or less, which

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 has the same kind of consistency and density overall
2 is the magma itself and so when we include this later
3 on in the ash dispersal and we take into account the
4 detailed density variations, especially using
5 particles -- pellets that are very dense, latching on
6 to pieces of magma and then if they're disbursed in a
7 plume, instead of treating it all as pellets, we have
8 this glass material and this actually then is another
9 conservatism that's based -- built into this.

10 One of the concerns we have is that
11 somewhere along the lines when this becomes all open
12 and public that there are people who are going to look
13 at this, for example, then talk about the canisters in
14 detail and they're going to say, "What, you look at
15 this and couldn't you have done a little better than
16 this on things". So in other words, when it becomes
17 a public document, more or less, it -- this could be
18 an embarrassing situation if DOE, for example is
19 forced to consider a more realistic model and the NRC
20 was forced to do it also and so it would be nice to be
21 a little bit ahead of the curve on this and have it
22 based on sound science as Jim says.

23 VICE CHAIRMAN CROFF: In listening to
24 this, I'm not coming away with a clear picture. Are
25 they modeling the magma package interaction and it's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 just very conservative or is there simply no model?

2 MR. MARSH: This is equivalent to having
3 a dump truck dump the pellets as a load just into the
4 shaft.

5 VICE CHAIRMAN CROFF: Basically, the
6 package does not exist basically.

7 MR. MARSH: Basically.

8 MEMBER WEINER: Yeah, they take no credit
9 for a package, right.

10 MEMBER HINZE: Apparently what has
11 happened, Allen, is that the DOE has assumed that this
12 problem is intractable and as a result, they have
13 taken the approach that everything will be available
14 and the canister has no impact upon it and the waste
15 characteristics, either glass or the spent nuclear
16 fuel has no characteristics on it. And the NRC has
17 said, "All right, this is a conservative approach.
18 We're going to accept this because we have a lot of
19 problems on our plate and we don't want to put our
20 resources, the NRC's resources, into a problem in
21 which there is -- which the DOE has accepted the
22 conservatism and which there is also a very difficult
23 problem, a thermo-mechanical problem.

24 VICE CHAIRMAN CROFF: And let me go just
25 a bit further. In the third bullet, the method by

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 which the package disintegrates, does that mean you
2 ask the question of the staff down there, do you have
3 any understanding how such -- how it might really
4 interact with the package and they said, no, or
5 something like that?

6 MR. MARSH: Well, actually, we talked to
7 basically as part material science, we had a
8 presentation, very good, very excellent, coherent
9 presentations and it appears that everyone knows a lot
10 about these containers in detail; melting point,
11 material, corrosive abilities, what the stresses are,
12 the pedestal it's on, et cetera, however that really
13 isn't being considered in terms of the magma
14 interaction.

15 CHAIRMAN RYAN: From an assessment point
16 of view, you know, I sure can appreciate the problem
17 of trying to -- what fraction of the radioactive
18 material becomes involved in the consequence scenario.
19 That's the hard question to answer, is it one percent,
20 half a percent, or 100 percent? The bounding
21 analysis, okay, says it's 100 percent, it can't be
22 more than 100 percent. So but that's fraught, to my
23 way of thinking with difficulty. So I guess when I
24 think about it, I come back to, you know, the idea of
25 well, okay, let's, you know, look at some kind of a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 mean or an average or a median or a mode or whatever
2 you want to look at, but some assessment of
3 distributions around it.

4 MEMBER HINZE: Well, it may even be right,
5 you know. I mean, it may be 100 percent. We don't
6 know that.

7 CHAIRMAN RYAN: Well, we don't know it is
8 or it isn't. That's really -- and I guess I just --
9 I mean, that's where the root of my question comes in
10 is, if, for example, it's not 100 percent, it's lower,
11 do you get the same ranking?

12 MR. MARSH: The Center really has the
13 ability -- they really understand these containers
14 very well, and it was our understanding that if you
15 don't consider something like this, there may be
16 actually other ramifications that if you follow
17 through the model in detail, that a partial digestion
18 or the failure, how it fails, you actually may come
19 across other subsidiary processes that have never been
20 considered that actually may be possible regardless of
21 how it's incorporated. For example, the container
22 bursting just due to heating up the air inside or
23 things like this and you come across other processes
24 that by just saying, "Okay, we assume it's all
25 incorporated", there actually may be subsidiary things

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 that we haven't even thought of that may be involved
2 regardless of how much or how it's incorporated.

3 So it was our feeling that it would be
4 useful, perhaps, at least to know what's involved in
5 terms of the basic science so that there are no
6 surprises down the road.

7 MEMBER WEINER: Can I have the next one,
8 the next slide, please?

9 VICE CHAIRMAN CROFF: Let me ask, let me
10 follow this on. EPRI and where was it, we were in Las
11 Vegas, made a presentation and their contention was
12 the release fraction from the package was zero.

13 MEMBER WEINER: Yeah.

14 VICE CHAIRMAN CROFF: Has CNWRA looked at
15 the EPRI analysis? Do they have an opinion on that?

16 MEMBER WEINER: I can only relate to sort
17 of off-line conversation I had in Las Vegas. And
18 they're --

19 CHAIRMAN RYAN: They only heard it for the
20 first time.

21 MEMBER WEINER: They only heard it for the
22 first time there so they really hadn't looked at it
23 and we did not raise the question, that's very true.

24 MR. TRAPP: If I may make one comment on
25 that, please, the EPRI assumption is very similar to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 the original DOE assumption which we challenged them
2 on. DOE then came back and said, "We can't support
3 this assumption", which is when they went to the
4 complete package failure. So --

5 CHAIRMAN RYAN: You're saying the EPRI
6 assumption is what DOE later abandoned.

7 MR. TRAPP: Yes.

8 CHAIRMAN RYAN: Okay, thank you.

9 MEMBER WEINER: Can I have the next slide?
10 Okay, this is Bruce's point. The Center's approach
11 doesn't include solidification of magma. They just
12 assumed magma behaves like a liquid. Thermal
13 calculations of magma in drifts and canisters and heat
14 transfer from magma to canisters should be revisited
15 to improve realism. Apparently the decay heat from
16 fuel is not a significant heat source in this. Bruce,
17 do you want to comment any further on that?

18 MR. MARSH: Yes, they've actually
19 undergone some modeling with the people in Bristol and
20 they're very interesting illustrative models for fluid
21 that bubbles in moving around and going into the
22 drifts and coming back out and things, but these
23 actually give an impression, an experience that you
24 can base further thinking on and that's what these
25 models are. They're basically illustrative as Hill

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 told us all about and that's good on that point of
2 view.

3 However, summification is perhaps the
4 major factor in magma transfer, so if we're looking
5 for experiences and some insight into how magma will
6 behave in a drift, it's absolutely the most essential
7 thing to include and it bears on this whole canister
8 problem, too, and how they'll interact with the
9 canisters. So you can start out with simple modeling.
10 And I think the Center is able to do this probably
11 themselves and there's some interaction with other
12 folks and it covers another base area that is
13 basically murky and left sort of undecided and
14 unexplored and this could have other ramifications
15 also in this area. It's good to be, I think, the head
16 of the curve on this and be pre-emptive in terms of
17 experience and understanding, insight into what's
18 coming on down the line.

19 MEMBER WEINER: The next two bullets deal
20 with the remobilization model which was presented but
21 at this point, there were -- although we were given
22 some information, it's at this point, pre-decisional
23 information and the model has not yet been released.
24 So all I wanted to say about it was that we heard
25 about it. It's certainly a major improvement over the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 considerations that were presented in Las Vegas.

2 CHAIRMAN RYAN: Is that in the
3 documentation that's coming out shortly or --

4 MR. TRAPP: The remobilization, there
5 should be a second report on that some time, I believe
6 it's late July the report will be coming is. So then
7 it will be available probably a month from then.

8 CHAIRMAN RYAN: Great, okay, that would be
9 helpful.

10 MEMBER HINZE: We saw nothing in this that
11 would lead us to any conclusion that anything is wrong
12 with it. It looks quite appropriate.

13 CHAIRMAN RYAN: Well, again, I think when
14 we get the document and study it --

15 MR. TRAPP: It's definitely this fiscal
16 year.

17 CHAIRMAN RYAN: Yeah.

18 MEMBER WEINER: Next slide, please. Okay,
19 this -- this is really part of the remobilization
20 model. The consequence modeling is much improved
21 compared to the presentations at the working group
22 meeting in Las Vegas. We discussed the particle size
23 question and the Center does consider a median
24 respirable diameter of 10 microns, but some studies
25 indicate that there is a range -- and again, the rest

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 of this has not yet been released and I think we need
2 to revisit it when it is released.

3 The presentation on corrosion chemistry,
4 on radionuclide mobility and on spent fuel dissolution
5 were absolutely outstanding. They were clearly
6 presented. This was a case, I think Bill you will
7 agree, that our questions were answered right spot on
8 and the Center does its own laboratory work in these
9 areas. And what they do is they abstract the
10 experimental results into the performance assessment
11 codes in a timely and efficient fashion and we will
12 know more about this when TPA 5.0.1 is released.
13 Right now they're still working on abstracting these
14 codes and the last bullet is --

15 CHAIRMAN RYAN: Before you leave this,
16 I've got a question up on the top and maybe it's to
17 John or the staff here, on the 10 micron question,
18 that's a pretty particle size for an average. Is
19 that age over time in modeling or will that be
20 addressed in the report?

21 MR. TRAPP: Is this 10 micron the
22 discussion of dose or is this a discussion of waste?

23 CHAIRMAN RYAN: No, just behavior and
24 practice.

25 MR. TRAPP: No, I just want to make sure

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 which question it is.

2 MEMBER WEINER: Yeah, that was that
3 discussion.

4 CHAIRMAN RYAN: Yeah, it' the Center --

5 MR. TRAPP: It's dose?

6 CHAIRMAN RYAN: No, as you make material
7 airborne --

8 MR. TRAPP: Is this a discussion dealing
9 with a dose --

10 CHAIRMAN RYAN: No.

11 MR. TRAPP: -- calculation or is this --

12 MEMBER WEINER: Well, it was at the
13 Center.

14 CHAIRMAN RYAN: Well, I mean, what I'm
15 asking you is may be a little different question is --

16 MR. TRAPP: If you're talking the waste,
17 it's basically -- that goes into this, it's basically
18 10 microns, plus or minus one log unit.

19 MEMBER WEINER: Yeah.

20 CHAIRMAN RYAN: I'm sorry.

21 MR. TRAPP: It's 10 microns, plus or minus
22 one log unit for the waste, that's what you're talking
23 about.

24 CHAIRMAN RYAN: Right, but I'm asking a
25 slightly different question. And I'm trying to see if

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 it's in the report or not. If you create an airborne
2 aerosol, over time it ages and some material will
3 settle out or move on or disburse by whatever driver
4 is there and typically what happens, unless there's a
5 new continuing contribution to source, that tendency
6 of the particle size distribution is to drift
7 downward. Is that kind of modeling included in the
8 change of particle size distribution is a function of
9 time and driver?

10 MR. TRAPP: That change as least as far as
11 igneous activity is recognized but no, it is not
12 brought it. It is strictly based on the measurements
13 which have been made at active volcanos.

14 CHAIRMAN RYAN: So it's a fixed value for
15 the average; is that -- do I understand right?

16 MR. TRAPP: Yes.

17 CHAIRMAN RYAN: Okay, so aging of the
18 distribution isn't taken in all the time. Okay.

19 MEMBER WEINER: I think again, we should
20 revisit some of --

21 CHAIRMAN RYAN: No, if that's in the
22 documentation, I'll wait to get it but I just wanted
23 to pose the question.

24 MEMBER CLARKE: Ten microns is plus or
25 minus one log unit.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 CHAIRMAN RYAN: Yeah, I got it, okay,
2 thanks.

3 MEMBER WEINER: Okay, that's -- I believe
4 that's my last slide, isn't it?

5 MEMBER CLARKE: In very general terms what
6 are they doing in spent fuel dissolution?

7 MEMBER WEINER: Take that one off. Go
8 back. Yeah, go back. Okay, that's it. I didn't want
9 to -- I wanted to take that last slide off. Okay.
10 This is our report. I don't think at this point, that
11 we -- unless we want to write a very general letter,
12 I'm not sure that we have enough -- certainly, without
13 going through the questions, we don't have enough for
14 a letter.

15 CHAIRMAN RYAN: Well, I think, you know,
16 frankly the Center put a lot of work and the staff did
17 here. I think we owe it to that effort to document
18 that answers to the questions and our satisfaction
19 with them and whether that's a letter or a report or
20 what we need to do that. This isn't going to cover it
21 for me.

22 MEMBER WEINER: Okay, yeah, that would --

23 DR. LARKINS: Yeah, I agree. You know, in
24 the Commission meeting when you said you were going to
25 the Center and visit and see what they were doing in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 this area so at some point --

2 CHAIRMAN RYAN: Yeah, we owe the
3 Commission a letter because we said we would, you
4 know, inform them of the visit and these folks put in
5 an awful lot of work and we need to be diligent in
6 responding to their effort.

7 MEMBER WEINER: Okay, I will take it on
8 myself to coordinate going through the questions and
9 finding which ones were answered and which ones were
10 not. I would ask for some guidance on -- since we did
11 hear per-decisional information, I would ask for --
12 since this was not just a small group of the
13 Committee, I would ask for some guidance, a lot of
14 guidance as to what to put in a draft letter, what we
15 should put in at this point.

16 CHAIRMAN RYAN: Well, you know, you could
17 certainly, I think, as you prepare the responses,
18 discuss with staff what they feel is pre-decisional
19 and they can help you identify things that are pre-
20 decisional and we can just say pre-decisional answers.
21 So, you know, everybody understands we've heard it but
22 it will come out when it's after that pre-decision
23 step.

24 MEMBER WEINER: Is that acceptable to
25 everybody else?

1 CHAIRMAN RYAN: I'm just trying to throw
2 out ideas. I mean, you know --

3 MEMBER HINZE: I don't think we should
4 start writing a letter at this point. What we ought
5 to do is make certain that we are -- the consultants
6 and the members that were there, are in agreement or
7 if not, state it explicitly why we are not in
8 agreement on the answers to these questions and then
9 when we have those answers, we should run through
10 them, we run them through the staff to make certain
11 that we are not stepping on pre-decisional toes and
12 then we can move on from there.

13 MEMBER WEINER: Yeah, that's exactly what
14 I want to do.

15 CHAIRMAN RYAN: That's good.

16 MEMBER WEINER: That says it all. Okay.

17 MR. SAVIO: Excuse me. One approach to it
18 is that we could create our own pre-decisional
19 document. We just can't discuss it with --

20 CHAIRMAN RYAN: I'll defer to however the
21 mechanism needs to be done but you know, I think --

22 DR. LARKINS: I don't think that's a good
23 idea.

24 MEMBER WEINER: Well, I don't agree with
25 that.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 DR. LARKINS: A draft of what you think
2 should be in there and have the staff take a look at
3 it. It may be by the time the committee gets back to
4 act on this, some of these documents will be released
5 and therefore, can be discussed and it will be far
6 better than trying to create a pre-decisional document
7 that doesn't, to me, do any good in this area.

8 MEMBER WEINER: Well, I think Mike is
9 right. Given the amount of work the Center put in and
10 the amount of time we spent there, I do think we need
11 to get together and formulate a document to the
12 Commission.

13 DR. LARKINS: Well, John mentioned some of
14 these things will be available June/July time frame,
15 so if that's the case we should be able to make
16 reference to it.

17 MR. TRAPP: They will be, part of them
18 available in the July time frame. It's going to take
19 about a month for us to get through. There's one
20 report which is some place in our mail room which I
21 should be able to get ro in about a month. Some of
22 them will be September, so I mean, there's going to be
23 things coming through.

24 CHAIRMAN RYAN: And again, I think, I mean
25 to me if this pre-decisional stuff that they've

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 documented in an answer we can identify it and do it
2 when it comes along, but my emphasis is, you know,
3 these folks put in tremendous effort to answer
4 specific questions. We need to document the specific
5 answers we got and what we feel about them very
6 clearly so that, you know, that work is recognized and
7 appreciated.

8 MEMBER WEINER: Yeah, and by the way, we
9 communicated that.

10 CHAIRMAN RYAN: Okay, and again, you know,
11 I think, you just got done last Friday and this is a
12 preliminary view of what you thought and there are
13 some areas where you feel comfortable and some areas
14 where you perhaps have additional questions and we
15 need to go through the rigorous, you know, process of
16 getting that done on paper.

17 MR. SCOTT: Mike Scott, ACR staff. I just
18 wanted to ask, so are we looking at a trip report now
19 and a letter later? Is that what's on the menu?

20 CHAIRMAN RYAN: Something like that, yeah.
21 And again, the trip report is the answer to the
22 questions we asked.

23 MEMBER WEINER: Yes.

24 MEMBER HINZE: Well, I think what we
25 should do is we should -- in the trip report, go the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 one step further and come up with the implications,
2 try to summarize what those implications are in terms
3 of the concerns that we expressed to the Commission in
4 our March meeting with them.

5 MEMBER WEINER: I think that's a good
6 idea. To the extent that we can do this without
7 stepping on pre-decisional toes.

8 MEMBER CLARKE: And I think we should say
9 now as Mike said, they did put in a tremendous effort
10 and they had a major commitment of time and staff and
11 --

12 CHAIRMAN RYAN: And it's not just the
13 Center. Folks here at NRC, you know, are trying to be
14 responsive and helpful and we appreciate and recognize
15 that as well.

16 MEMBER WEINER: And by the way, I want to
17 thank all the people who were here and sat through
18 this on the TV and on the tele-con because they were
19 extremely helpful.

20 CHAIRMAN RYAN: Are we done?

21 MEMBER WEINER: As far as I know.

22 CHAIRMAN RYAN: Anything else?

23 MS. STEELE: Yes, I would like to have 15
24 minutes back from my time. On the low level waste
25 issue, given that we have to come up with a draft in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 May, I think it would be useful to develop a scope
2 statement to help us -- to insure that we stay within
3 the lines.

4 CHAIRMAN RYAN: If you will indulge me, I
5 will write one tonight --

6 MS. STEELE: Okay.

7 CHAIRMAN RYAN: -- and provide it tomorrow
8 but having us all sit here and write a paragraph, it's
9 not an effective use of everybody's time.

10 MS. STEELE: Okay, no, that's fine.

11 CHAIRMAN RYAN: So, you know, I hear you
12 but it's late and you know, lots of folks have stuff
13 to do and I just don't think that's really an
14 efficient way to make that paragraph. I can probably
15 get it done pretty quick, but you're right, it does
16 need to be done and we need some concurrence on that
17 before we depart for the week. So, all right. Well,
18 I don't want you to go away mad.

19 MS. STEELE: No, that's fine.

20 DR. LARKINS: Now, we've heard the thought
21 on the igneous thing. It may be well to put out a
22 short trip report just to sort of document that you
23 went there and what things were discussed and then to
24 have a draft of what comment, issues were there and
25 then have a chance to air it with the staff and public

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 maybe in July.

2 CHAIRMAN RYAN: Sure.

3 DR. LARKINS: If that's the right time.
4 I don't see the urgency to push something out if there
5 are still issues that haven't been reconciled.

6 CHAIRMAN RYAN: Well, and the other aspect
7 of it is, maybe that's what we put out, you know, is
8 John's left, I guess but the schedule of, you know,
9 what documents are coming forth, when and how we're
10 going to inform ourselves with those documents and so
11 forth, that's a good schedule to have.

12 MR. RUBENSTONE: Mike, Jim Rubenstone,
13 NRC. We had the discussion and we did identify
14 specific documents that relate to what you heard last
15 week and we're going to get you that list of documents
16 hopefully tomorrow.

17 CHAIRMAN RYAN: So maybe we just integrate
18 that in a little trip report and then, you know, it
19 puts something on the record of what happened and give
20 us a map forward.

21 DR. LARKINS: Yeah, I think my point is,
22 it's better to put out something which is more
23 complete even if you have to do it, July, September
24 time frame, which sort of covers the whole gambit of
25 issues related to consequence analysis rather than

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS
1323 RHODE ISLAND AVE., N.W.
WASHINGTON, D.C. 20005-3701

1 trying to get something out which will still have some
2 holes or questions in it.

3 CHAIRMAN RYAN: Okay. Good plan. Is
4 there anything else for the record, for the meeting?
5 Motion to adjourn.

6 DR. LARKINS: So moved.

7 CHAIRMAN RYAN: So moved, thank you.

8 (Whereupon, at 5:24 p.m. the above
9 entitled matter concluded.)

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25